

Annual Summary Report 2022

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EXP. 06/30/23
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STATE OF CALIFORNIA

Order No. R3-2017-0003
MRP 2020-0122
Advanced Water Purification Facility
& Groundwater Replenishment Project

Monterey One Water
Providing Cooperative Water Solutions

Prepared For:	**Central Coast Regional Water Quality Control Board and State Water Resources Control Board, Division of Drinking Water**
Submitted By:	**Monterey One Water**
Date:	**April 27, 2023**

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2022 Annual Summary Report

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1.0 INTRODUCTION

Mr. James Bishop
Engineering Geologist, PG
Central Coast Regional Water Quality Control Board
Waste Discharge Requirement (WDR) Program
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

Ms. Sherly Rosilela, P.E.
Senior Water Resource Control Engineer
Technical Operations Section
State Water Resources Control Board
Division of Drinking Water
1001 "I" Street, 17th Floor
Sacramento, CA 95814

Subject: 2022 Pure Water Monterey Groundwater Replenishment Project Annual Summary Report, WDR/WRR No. 2017-0003, MRP No 2022-0122

Monterey One Water (M1W) was issued Waste Discharge Requirements and Water Recycling Requirement (WDR/WRRs) Order No. R3-2017-0003 on March 9, 2017, authorizing the treatment of recycled water at the Pure Water Monterey (PWM) Advanced Water Purification Facility (AWPF), and establishing monitoring and reporting program (MRP) requirements to ensure treatment process integrity and compliance with the requirements of Title 22 of the California Code of Regulations (CCR) for Groundwater Reuse and Replenishment Projects (GRRPs). Initial Project startup operations began on February 6, 2020.

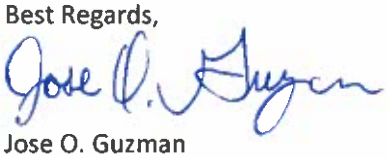
Reporting requirement III(4) of the WDR/WRR requires that M1W submit an Annual Summary Report ("Annual Report") to the Central Coast Regional Water Quality Control Board (Regional Water Board) and the State Water Resources Control Board, Division of Drinking Water (DDW) no later than April 30th for the period of January 1 – December 31.

M1W is pleased to present this third Annual Report covering the period of January 1, 2022 to December 31, 2022. Highlights in the 2022 calendar year include:

- Startup and commissioning of deep injection well (DIW)-3 and DIW-4
- Initiation of intrinsic and added tracer studies of DIW-3 and DIW-4
- DDW acceptance of 4.6 months minimum underground travel time, assuming 4,300 acre-feet per year (AFY) injection
- Receipt of revised MRP 2020-0122 received 9/13/2022 including monitoring program reductions and injection volume reporting transition from a calendar year to water year (October 1 – September 30) basis

These highlights and other information summarizing the third successful year of AWPF operations are discussed throughout the Annual Report. Should you have any questions regarding the contents of this report, please contact me at JoseG@my1water.org or (831) 883-6183.

Best Regards,



Jose O. Guzman
Chief Plant Operator
Monterey One Water

1.1 Transmittal Sheet

California Regional Water Quality Control Board
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obsipo, CA 93401
Submit this Self Monitoring Report to: centralcoast@waterboards.ca.gov

Document Date: 4/27/2023

FACILITY NAME: Monterey One Water

FACILITY ADDRESS: 14811 Del Monte Blvd
Marina, CA 93933

CONTACT PERSON: Jose O. Guzman

JOB TITLE: Chief Plant Operator

PHONE NUMBER: 831-883-6183

EMAIL: joseg@my1water.org

WDR ORDER (Permit) Number: R3-2017-003

WDID NUMBER: 3 270417589

PERMITTED FLOW (see facility WDR Permit): 5,000,000 gpd

AVERAGE WASTEWATER FLOW (over monitoring period): 5,257,373 gpd

TYPE OF REPORT: ☒ **Annual** ☐ **Semiannual** ☐ **Quarterly** ☐ **Monthly** ☐ **Other:**

REPORTING PERIOD: 1/1/2022 **TO** 12/31/2022

MONITORING PERFORMED DURING THIS PERIOD (check all that apply):

☒ **Groundwater**	☒ **Lab Reports**	☒ **Recycled Water**
☒ **Treatment System Effluent**	☐ **Solids Disposal**	☐ **Disposal Area**
☒ **Treatment System Influent**	☐ **Water Supply**	☐ **Use Area**
☒ **Source Water Monitoring**	☐ **Other:**	

Violation(s) during this monitoring period? ☒ **YES** ☐ **NO**

Parameter(s) in Violation: *Pursuant to Standard Provisions*[1] *see footnote on next page, monitoring reports must contain date of violation, explanation of cause and corrective actions planned or taken to prevent recurrence. Please include parameter(s) and date(s) of violation in space provided below. If space is insufficient, include an independent discussion containing explanation of cause and corrective action within monitoring report.*

There was one instance of non-compliance in CY 2022 which resulted in the violation of a secondary drinking water MCL. MW-1AS experienced an exceedance of manganese; however, it was not the result of Project water. See Section 5.1 of this Summary Report for information.

Discharger Comments:

Submit this self-monitoring report to centralcoast@waterboards.ca.gov in search-able PDF format. Include attached cover sheet and signature page. DO NOT submit via US mail.

In accordance with the Standard Provisions[1] and Reporting Requirements, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision following a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my knowledge of the person(s) who manage the system, or those directly responsible for data gathering, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Print Name: Jose O. Guzman Title: Chief Plant Operator

Signature:* Jose O. Guzman Digitally signed by Jose O. Guzman DN: cn=Jose O. Guzman gn=Jose O. Guzman c=US United States l=US United States o=Monterey One Water ou=Operations e=joseg@my1water.org Reason: I am the author of this document Location: Date: 2023-04-27 10:56-07:00 Date: 4/27/2023

*All reports shall be signed by one of the following:

a. For a corporation: by a principle executive officer of at least the level of vice president.

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.

c. For a public agency: by either a principle executive officer or ranking elected official.

d. For a LLC: either a member or manager given signing authority by the operating agreement of LLC.

e. a "duly authorized representative" of one of the above.

[1] Electronic access to Standard Provisions: https://www.waterboards.ca.gov/centralcoast/board_decisions/docs/wdr_standard_provisions_2013.pdf

1.2 Background

Monterey One Water (M1W) in partnership with the Monterey Peninsula Water Management District (MPWMD) developed the Pure Water Monterey Groundwater Replenishment Project (Project) to deliver up to 3,700 acre-feet per year (AFY) of purified recycled water to replenish the Seaside Groundwater Basin (Seaside Basin) in Monterey County.

The Project includes an Advanced Water Purification Facility (AWPF), Product Water Pipeline, Source Water Diversions, and Injection Well Facilities (IWF). The AWPF, located adjacent to M1W's Regional Treatment Plant (RTP), has a design capacity of 5 million gallons per day (MGD) and consists of ozone pre-treatment, low-pressure membrane filtration (MF), reverse osmosis (RO) treatment, advanced oxidation, product water stabilization, and chloramination. Purified recycled water produced at the AWPF, also referred to as "product water (PW)," is conveyed by a pipeline constructed in partnership with, and operated and maintained by, Marina Coast Water District (MCWD) to the Seaside Basin for groundwater recharge using both deep injection wells (DIW) and vadose zone wells (VZW). The injected purified recycled water comingles with groundwater and is stored for future urban use, including use as a potable water source.

AWPF operations and replenishment of the Seaside Basin by groundwater injection are regulated by Waste Discharge Requirements and Water Recycling Requirements (WDR/WRR) Order No. R3-2017-0003 and associated Monitoring and Reporting Program (MRP) No. R3-2020-0122[1] issued by the Central Coast Regional Water Quality Control Board (Regional Water Board) in collaboration with the State Water Resources Control Board (State Water Board) Division of Drinking Water (DDW).

The RO concentrate generated at the AWPF is discharged to M1W's ocean outfall, regulated by Regional Water Board Order No. R3-2018-00017, National Pollutant Discharge Elimination System (NPDES) No. CA0048551. Secondary wastewater effluent not utilized for the AWPF or tertiary treatment for agricultural reuse at the Salinas Valley Reclamation Project (SVRP) along with hauled saline waste are also sent to the ocean outfall. M1W submits an Annual Report to the Regional Water Board detailing compliance with the NPDES permit under separate cover. Other AWPF waste streams from the waste equalization (EQ) basin are diverted to the RTP headworks or the RTP sludge thickening process for treatment.

[1]On 9/13/2022 M1W received a revised MRP from the Regional Water Board which included reductions to the monitoring frequency for several constituents. The revised MRP also modified the order in which constituents appear. Notes have been added to applicable tables in this report to reflect those changes, and the order of the tables and figures has been modified to match the order reflected in the most recent revised MRP issued. In addition, the revised MRP modified injection volume reporting from a calendar year (January 1 – December 31) to water year (October 1 – September 30) basis.

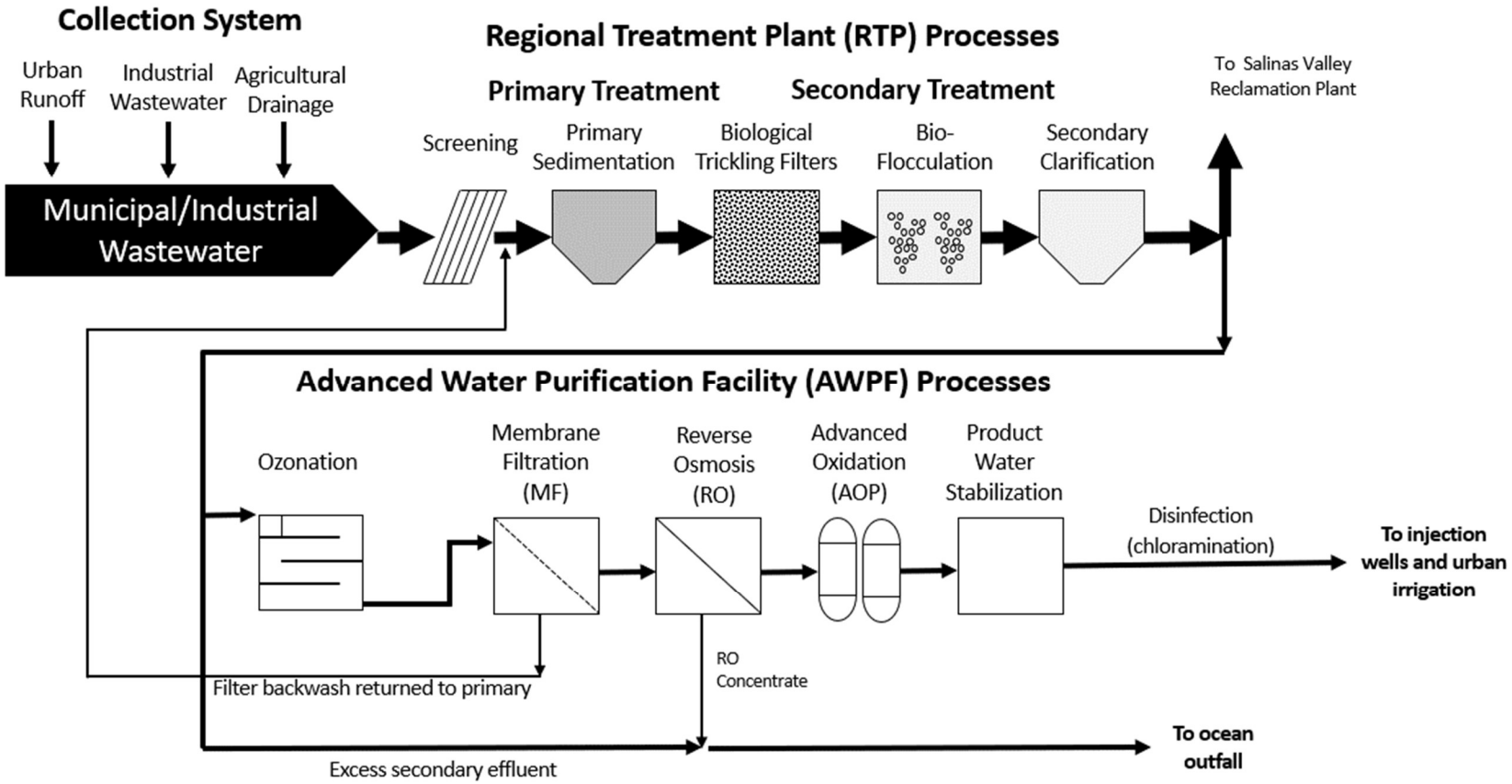


Figure A. Flow Schematic

The IWF are located in the eastern boundary of the City of Seaside, approximately 1.5 miles inland from Monterey Bay, in an area within the Northern Inland Subarea of the Seaside Basin. Currently, there are two VZWs in the Paso Robles aquifer and four DIWs in the Santa Margarita aquifer.



Figure B. Map of RTP, AWPF, and IWF

1.3 Annual Summary Report Requirements

Annual Summary Reports must contain a discussion of the previous calendar year's analytical results, as well as graphical and tabular summaries of the analytical data per Section III.4 of the MRP, which states:

Annual Summary Reports: shall include, at a minimum, the following information:

a. *M1W must provide a summary on the makeup of source waters (municipal wastewater, agricultural wash water, Blanco Drain, and Reclamation Ditch) entering the Regional Treatment Plant in the annual report to DDW and Central Coast Regional Board required per Title 22 section 60320.228(a). At a minimum, the summary must include discussion on the following items:*
   i. *The priority of source water usage for the period reported and the basis for the priority;*
   ii. *A summary of monthly volume for each source water type; and*
   iii. *An evaluation of which demand scenario best fit the volumes observed during reporting period (Drought, Normal/Wet Full Reserve, Normal/Wet Building Reserve).*
b. *Tabular and graphical summaries of the monitoring data obtained during the previous calendar year;*
c. *A summary of compliance status with all monitoring requirements during the previous calendar year;*
d. *For any non-compliance during the previous calendar year, a description of:*
   i. *the date, duration, and nature of the violation;*
   ii. *a summary of any corrective actions and/or suspensions of subsurface application of recycled water resulting from a violation; and*
   iii. *if uncorrected, a schedule for and summary of all pending and completed remedial actions;*
e. *Any detections of monitored chemicals or contaminants, and any observed trends in the monitoring wells;*
f. *Information pertaining to the vertical and horizontal migration of the recharge water plume;*
g. *Title 22 drinking water quality data for the nearest drinking water supply well;*
h. *A description of any changes in the operation of any unit processes or facilities;*
i. *The estimated quantity and quality of the recycled water to be utilized for the next calendar year;*
j. *A list of the analytical methods used for each test and associated laboratory quality assurance/quality control procedures shall be included. The report shall identify the laboratories used by M1W to monitor compliance with this Order, their status of certification, and provide a summary of proficiency test;*
k. *A list of current operating personnel, their responsibilities, and their corresponding grade of certification.*
l. *The Annual Report shall be prepared by a properly qualified engineer registered and licensed in California and experienced in the field of wastewater or water treatment; and*
m. *A summary of monitoring reports, reporting and trend analysis, to describe the changes in water quality and contrast them to background measurements for all constituents exceeding MCLs or where concentration trends increase after the addition of recycled water. Specifically describe*

studies or investigations made to identify the source, fate and transport path of constituents which exceed the MCL at the monitoring wells.

n. *M1W must submit to DDW and the Central Coast Water Board a summary of coordination activities with Marina Coast Water District on the operation and maintenance of the Product Water Pipeline and the Purified Water Reservoir necessary for protection of the product water for injection. At a minimum, M1W must be kept informed of the status of testing and maintenance of backflow preventers on the Product Water Pipeline, occurrence of backflow incidents (if any), and maintenance activities of the Purified Water Reservoir*

o. *The annual volume of AWPF recycled water injected into the Seaside Basin (based on California water year, which is October 1 – September 30)*

This Annual Summary Report is organized to provide the above-outlined information. Please note that the Volumetric Annual Report required per the Water Quality Control Policy for Recycled Water ("Recycled Water Policy") is submitted under separate cover to the Regional Water Board and DDW and may be accessed via the GeoTracker Database. See **Appendix D** for access instructions.

1.4 Monitoring Requirements

Project monitoring requirements as outlined in the MRP are as follows:

M1W shall monitor the flow and quality of the following according to the manner and frequency specified in this MRP:

a. *Influent to the AWPF – At a location before clarified secondary effluent enters the ozone pre-treatment system of the AWPF;*

b. *Prior to RO – At a location where all membrane filtration effluent streams are combined prior to RO treatment;*

c. *After RO – At a location after RO treatment where all RO effluent streams are combined prior to AOP treatment;*

d. *AWPF Recycled Water – At a location downstream of the last chemical injection point and prior to well injection;*

e. *Upon approval by the Central Coast Water Board and DDW, if potable water is used as a diluent, blend of recycled water and diluent water; and*

f. *Groundwater Monitoring Wells (ID#'s) – MW-2D, MW-2AD, MW-2AS, MW1D, MW-1S, MW-1AD, MW-1AS. (7 total).*

Monitoring reports must include, but not limited to, the following:

a. *Analytical results;*
b. *Location of each sampling station where representative samples are obtained, including a map, at a scale of 1-inch equals 1,200 feet or less, that clearly identifies the locations of all injection wells, project monitoring wells, and production wells;*

c. *Analytical test methods used and the corresponding minimum reporting levels (MRLs);*
d. *Name(s) of the laboratory, which conducted the analyses;*
e. *Copy of laboratory certifications by the DDW's Environmental Laboratory Accreditation Program (ELAP);*
f. *Quality assurance and control information, including documentation of chain of custody; and,*
g. *Maximum contaminant level (MCL), notification level, response level, DDW Condition or Recycled Water Discharge Limit.*

1.5 Monitoring Locations

There are eleven monitoring locations, including seven groundwater monitoring wells listed in **Table A**, Sampling Locations, which includes the Primary Station (PS) Code, and latitude/longitude information. Maps illustrating the AWPF on-site monitoring locations, and the groundwater monitoring wells are provided in **Figure C** and **Figure D,** respectively.

Table A. Sampling Locations

	Site Description	Sample ID	PS Code	Latitude	Longitude
1	Influent to the AWPF	AWPF Influent	CA2790002_301_301	36.7070	-121.7711
2	Prior to RO	AWPF RO Feed	CA2790002_302_302	36.7069	-121.7722
3	After RO (Prior to AOP)	AWPF RO Permeate	CA2790002_303_303	36.7068	-121.7725
4	AWPF Recycled Water	AWPF Product Water	CA2790002_300_300	36.7062	-121.7725
5	Groundwater Monitoring Wells (MW-1D)	MW-1D SANTA MARGARITA	CA2790002_203_203	36.6183	-121.8143
6	Groundwater Monitoring Wells (MW-1S)	MW-1S PASO ROBLES	CA2790002_204_204	36.6183	-121.8143
7	Groundwater Monitoring Wells (MW-1AD)	MW-1AD SANTA MARGARITA	CA2790002_205_205	36.6198	-121.8149
8	Groundwater Monitoring Wells (MW-1AS)	MW-1AS PASO ROBLES	CA2790002_206_206	36.6197	-121.8150
9	Groundwater Monitoring Wells (MW-2D)	MW-2D SANTA MARGARITA	CA2790002_207_207	36.6168	-121.8171
10	Groundwater Monitoring Wells (MW-2AS)	MW-2AS PASO ROBLES	CA2790002_209_209	36.6182	-121.8168
11	Groundwater Monitoring Wells (MW-2AD)	MW-2AD SANTA MARGARITA	CA2790002_210_210	36.6182	-121.8168
Note: Per the MRP, M1W will include monitoring if potable water is used as a diluent. In 2022, no potable water was used as a diluent.					



Figure C. Map of AWPF On-Site Monitoring Locations

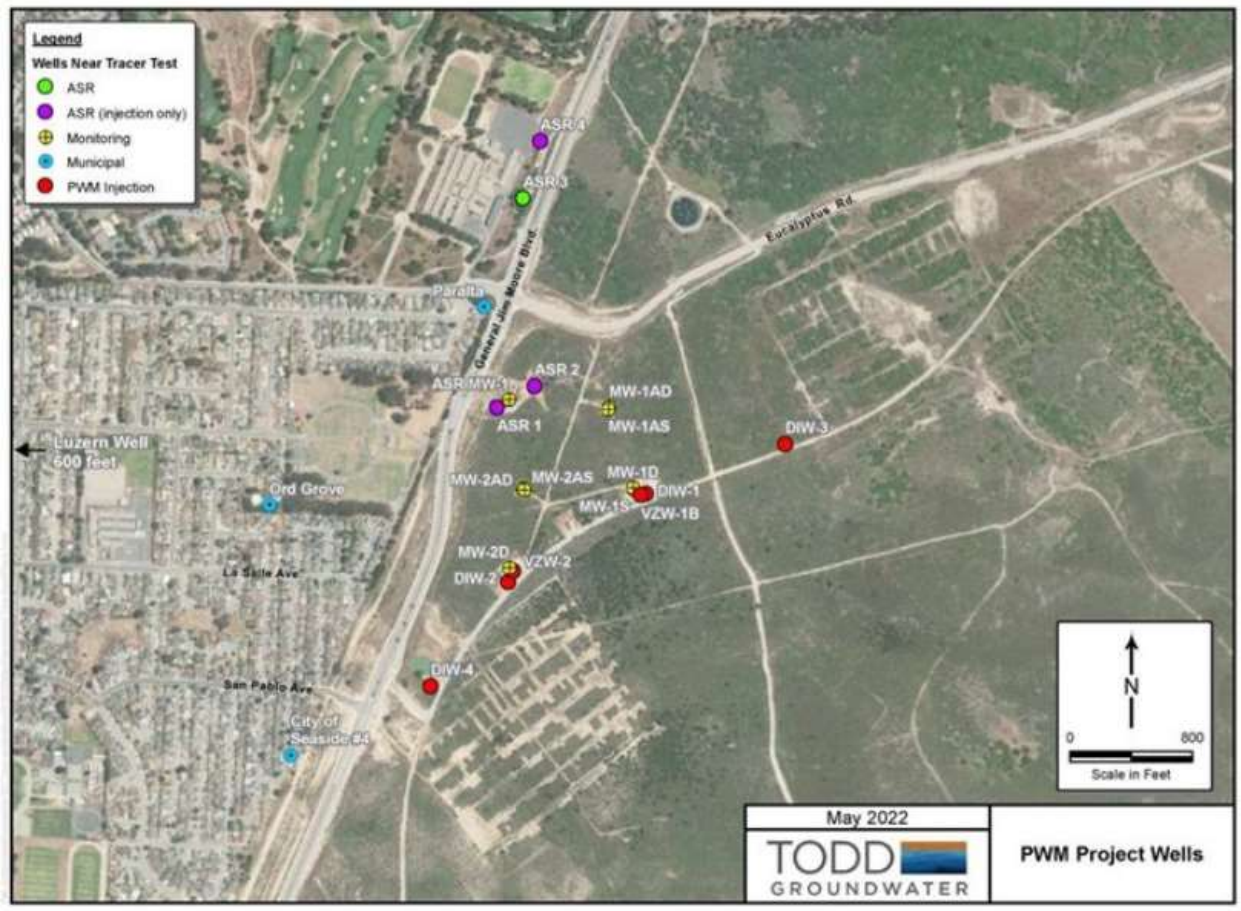


Figure D. Map of Groundwater Monitoring Well Locations

1.6 Acronyms

Acronym/Abbreviation	Term
AFY	Acre-Feet/Year
AWPF	Advanced Water Purification Facility
$CBOD_5$	Carbonaceous Biochemical Oxygen Demand
CEC	Constituents of Emerging Concern
DDW	State Water Resources Control Board, Division of Drinking Water
DIW	Deep Injection Well
DNQ	Detected, but Not Quantified
DTW	Depth to Water
ELAP	California Environmental Laboratory Accreditation Program
GWR	Groundwater Replenishment
IWF	Injection Well Facilities
LSI	Langelier Saturation Index
M1W	Monterey One Water
MCL	Maximum Contaminant Level
MCWD	Marina Coast Water District
MCWRA	Monterey County Water Resources Agency
MDL	Minimum Detection Level
MGD	Million Gallons Per Day
MPN	Most Probable Number
MPWMD	Monterey Peninsula Water Management District
MRL	Minimum Reporting Level
MS4	Municipal Separate Storm Sewer System
MTL	Monitoring Trigger Levels
MW	Monitoring Well
ND	Not Detected
NL	Notification Level
NTU	Nephelometric Turbidity Units
P3PS	Pond 3 Pump Station (Salinas Stormwater Projects)
Project	Pure Water Monterey Groundwater Replenishment Project
PS Codes	Primary Station Codes
PWM	Pure Water Monterey
PWPS	Product Water Pump Station
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RDL	Reporting Detection Limit
Recycled Water Policy	Water Quality Control Policy for Recycled Water
Regional Water Board	Central Coast Regional Water Quality Control Board
RL	Response Level
RO	Reverse Osmosis
RTP	Regional Treatment Plant
RWDL	Recycled Water Discharge Limit
SAPS	Salinas Pump Station
Seaside Basin	Seaside Groundwater Basin
State Water Board	State Water Resources Control Board
SVRP	Salinas Valley Reclamation Project
TDS	Total Dissolved Solids
Title 22	California Code of Regulations, Title 22
TKN	Total Kjeldahl Nitrogen
TOC	Total Organic Carbon
TSS	Total Suspended Solids
UV	Ultraviolet
UVT	UV Transmittance
VZW	Vadose Zone Well

2.0 SOURCE WATERS INFLUENT TO THE RTP

M1W must provide a summary on the makeup of source waters (municipal wastewater, agricultural wash water, Blanco Drain, and Reclamation Ditch) entering the Regional Treatment Plant in the annual report to DDW and Central Coast Regional Board required per Title 22 section 60320.228(a). At a minimum, the summary must include discussion on the following items:

i. The priority of source water usage for the period reported and the basis for the priority;
ii. A summary of monthly volume for each source water type; and
iii. An evaluation of which demand scenario best fit the volumes observed during reporting period (Drought, Normal/Wet Full Reserve, Normal/Wet Building Reserve).

This section provides a summary of the makeup of source waters (municipal wastewater, industrial wastewater (IWW), Blanco Drain, and Reclamation Ditch) entering the RTP in 2022.

2.1 Priority of Source Waters

During 2022, a combination of municipal wastewater flows and new source waters consistently met the secondary effluent needs for influent to both recycling facilities (SVRP[2] and the AWPF). M1W has developed a prioritization for the new source waters to meet the needs during times of low municipal wastewater flows and peak recycled water demands. M1W operators have the ability to divert additional source waters into the conveyance system and treatment facilities. M1W typically utilizes diversions in the following priority which is based on operational cost and ease of conveyance and treatment:

1. Surface water in the Reclamation Ditch near Davis Road west of Salinas;
2. Surface water in the Blanco Drain near the Salinas River;
3. Industrial Wastewater (also referred to as "Agricultural Wash Water") which can be diverted directly to the Salinas Pump Station (SAPS), pre-aeration treatment; and/or
4. Effluent at the Salinas Industrial Wastewater Treatment Facility which his diverted to M1W's interceptor using the Pond 3 Pump Station (P3PS) after treatment.[3]

Diversion of surface water from the Reclamation Ditch and Blanco Drain are subject to conditions of applicable water rights permits (SWRCB Water Rights Permits Nos. 21377 and 21376). This prioritization is subject to change based on operational considerations and the need for maintenance.

[2] The SVRP is a water reclamation facility producing Title 22 Disinfected Tertiary recycled water for agricultural irrigation in the Castroville Seawater Intrusion Project (CSIP) distribution system.
[3] As of the date of this report, M1W and the City of Salinas had not yet reached a long-term agreement for the conveyance and utilization of treated IWW via the P3PS.

2.2 Summary of Monthly Volumes

Monthly volumes of source waters influent to the RTP in 2022 are provided in **Table 1.** All 1,283.8 acre-feet of diverted interruptible source water became influent to the RTP primary and secondary treatment processes. The diversions occurred while AWPF was operating. In 2022, all new source waters were diverted for recycling and beneficial reuse by the Project or by the SVRP for agricultural irrigation in CSIP.

Table 1. RTP INF – Monthly Source Water Volumes Influent to the RTP (MG)

Month	Total Influent to the RTP[1]	Total Municipal Wastewater[1]	New Source Waters			
			Reclamation Ditch Diversions	Blanco Drain Diversions	Salinas IWW Treatment Facility Pond 3 Diversions	Salinas IWW to Salinas Pump Station Diversions
January	513.50	478.81	-	-	34.69	-
February	433.94	432.40	-	-	-	1.54
March	487.18	476.24	0.87	2.43	7.64	-
April	567.32	500.17	6.88	4.36	52.03	3.88
May	565.27	519.34	1.62	18.61	25.71	-
June	724.58	598.90	1.00	54.10	69.23	1.34
July	625.15	550.67	0.27	9.35	62.59	2.28
August	564.17	529.58	-	-	-	34.59
September	522.55	501.07	-	-	-	21.48
October	496.93	495.09	-	-	-	1.84
November	488.05	488.05	-	-	-	-
December	544.61	544.61	-	-	-	-
Total	**6,533.26**	**6,114.93**	**10.65**	**88.85**	**251.88**	**66.95**

[1]Volumes do not include de minimis on-site wastewater, liquid waste hauled to site, ReGen Monterey (formerly Monterey Regional Waste Management District) domestic wastewater, or backwash from the Salinas River Diversion Facility, which enter the plant downstream of the flowmeter.

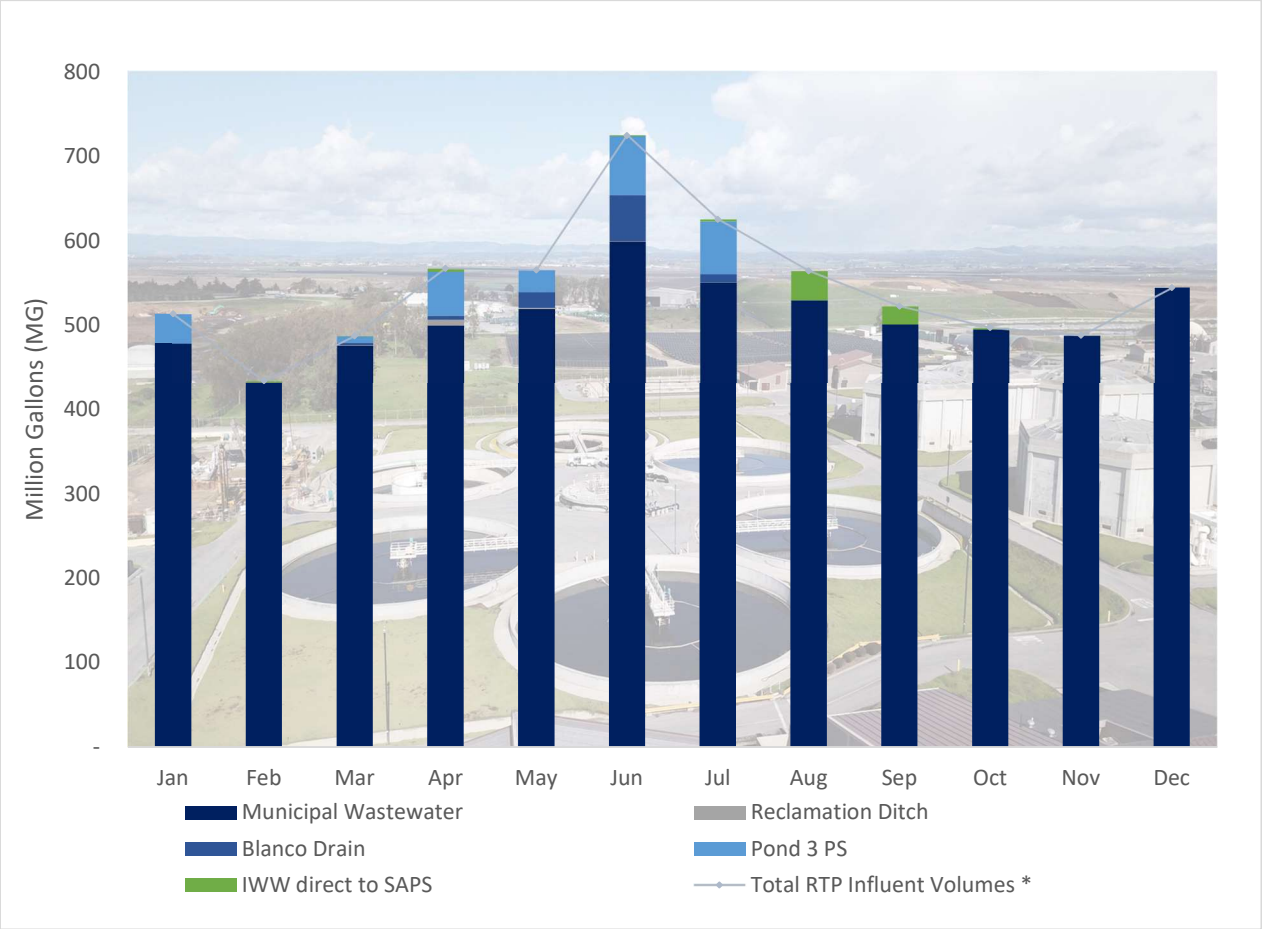


Figure 1. RTP INF – Monthly Source Water Volumes Influent to the RTP (MG)

2.3 Demand Scenario Discussion

During 2022, M1W continued to work to produce and inject as much purified recycled water as possible. The source water scenario was considered a "Wet Year/Building Operating Reserve." A volume of 6.9 acre feet delivered to the Seaside Basin was added to the operating reserve for Monterey Peninsula potable supplies for a total operating reserve of 1,207.3 acre feet as of December 31, 2022. M1W has not produced or injected water for the "Drought Reserve" for CSIP to date as Monterey County Water Resources Agency (MCWRA) has not committed to fund the new source water facilities or diversions. MCWD began utilizing purified recycled water for urban irrigation within their Regional Urban Water Augmentation Project (RUWAP) system in November 2022, totaling 7.65 AF (2.1 MG). See **Section 10.0** of this report, and the Recycled Water Policy Volumetric Annual Report submitted to the Regional Water Board and DDW provides more information.

3.0 TABULAR AND GRAPHICAL SUMMARIES OF MONITORING DATA

Tabular and graphical summaries of the monitoring data obtained during the previous calendar year…

Data is organized based on the order in which required parameters appear in the revised MRP issued September 13, 2022.

3.1 Flow Volumes

3.1.1 AWPF Influent - Secondary Effluent from the RTP

Table 2. AWPF INF – Daily Average Secondary effluent from the RTP (MGD)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	5.70	4.83	5.19	5.75	6.08	5.27	4.51	5.05	4.72	6.21	4.37	5.10
2	5.07	6.12	5.19	5.92	6.33	3.97	4.58	4.98	5.48	5.99	4.77	6.37
3	5.21	5.40	5.44	5.93	5.18	4.95	5.13	4.98	4.92	6.04	4.38	6.32
4	5.97	4.81	4.66	6.02	5.09	0.85	5.09	4.68	4.94	6.25	5.36	6.62
5	4.77	5.84	5.95	5.83	1.55	2.77	2.97	5.04	5.07	5.99	5.57	3.55
6	5.57	5.36	5.67	4.70	5.73	4.46	4.56	4.92	4.99	5.88	5.86	6.40
7	4.80	3.88	4.98	5.58	6.25	4.34	3.57	4.85	4.40	6.14	5.75	5.87
8	5.71	6.19	4.74	5.93	5.96	4.56	2.51	4.92	4.92	5.90	4.95	6.50
9	5.60	3.96	5.29	6.02	5.75	4.98	2.20	4.84	5.52	6.14	5.64	6.29
10	4.85	6.16	5.18	6.07	6.13	4.79	4.54	4.99	4.89	6.37	5.82	6.33
11	4.93	3.68	4.77	5.98	5.67	5.23	4.94	4.62	5.10	5.82	5.87	6.32
12	5.09	5.47	5.60	6.25	5.13	4.91	4.86	3.25	5.03	5.73	5.83	6.12
13	5.30	5.91	4.95	6.18	4.93	4.74	3.21	2.37	4.78	4.89	5.76	6.36
14	4.90	5.07	4.71	6.12	3.51	4.81	4.52	4.27	5.05	3.64	5.78	5.91
15	5.61	6.06	4.82	6.54	2.66	4.77	4.92	5.16	4.79	5.96	6.26	6.57
16	5.55	5.98	6.27	5.65	3.75	4.78	4.89	5.34	5.11	5.91	5.98	6.44
17	4.85	5.30	6.02	6.49	3.98	4.89	4.91	2.47	5.01	5.80	6.35	6.44
18	5.69	4.49	5.69	6.10	3.86	4.82	5.48	3.96	4.95	5.97	6.52	6.39
19	4.87	5.52	6.23	6.04	3.85	5.20	4.43	4.77	4.92	5.89	6.53	5.37
20	5.52	5.31	5.92	5.64	3.87	4.85	4.78	4.99	5.30	1.95	6.85	5.88
21	4.59	4.56	4.62	6.28	3.96	5.01	4.00	5.09	5.31	5.98	6.30	6.72
22	5.63	5.63	5.39	6.17	4.26	2.53	4.60	5.63	5.88	5.91	6.36	7.05
23	5.62	4.84	5.92	6.14	4.03	2.61	5.14	4.80	5.79	6.26	6.65	7.17
24	4.81	4.99	5.86	6.15	4.01	2.75	4.93	5.37	5.66	6.04	6.68	7.07
25	3.47	4.91	5.71	6.32	3.86	3.70	5.20	4.58	6.55	6.45	6.37	7.01
26	5.26	5.57	5.93	5.49	4.97	5.22	4.95	4.56	5.87	4.53	5.86	6.86
27	5.11	5.50	6.15	5.32	5.01	5.29	3.97	3.66	5.80	-	6.69	7.12
28	5.11	4.32	6.05	6.48	5.16	4.85	3.13	5.03	5.97	3.78	4.81	6.77
29	5.73		5.90	6.32	5.12	5.06	4.15	5.09	5.81	4.89	6.50	7.03
30	5.61		5.97	5.97	5.38	4.91	5.05	5.23	5.58	4.97	5.94	7.09
31	4.45		5.54		4.91		5.18	4.67		4.73		7.07

SCADA: AWPF440FQI1005.Total_Yesterday_rpt

Note: 6/4/2022 and 10/27/2022 AWPF was out of operation due to utility power outage.

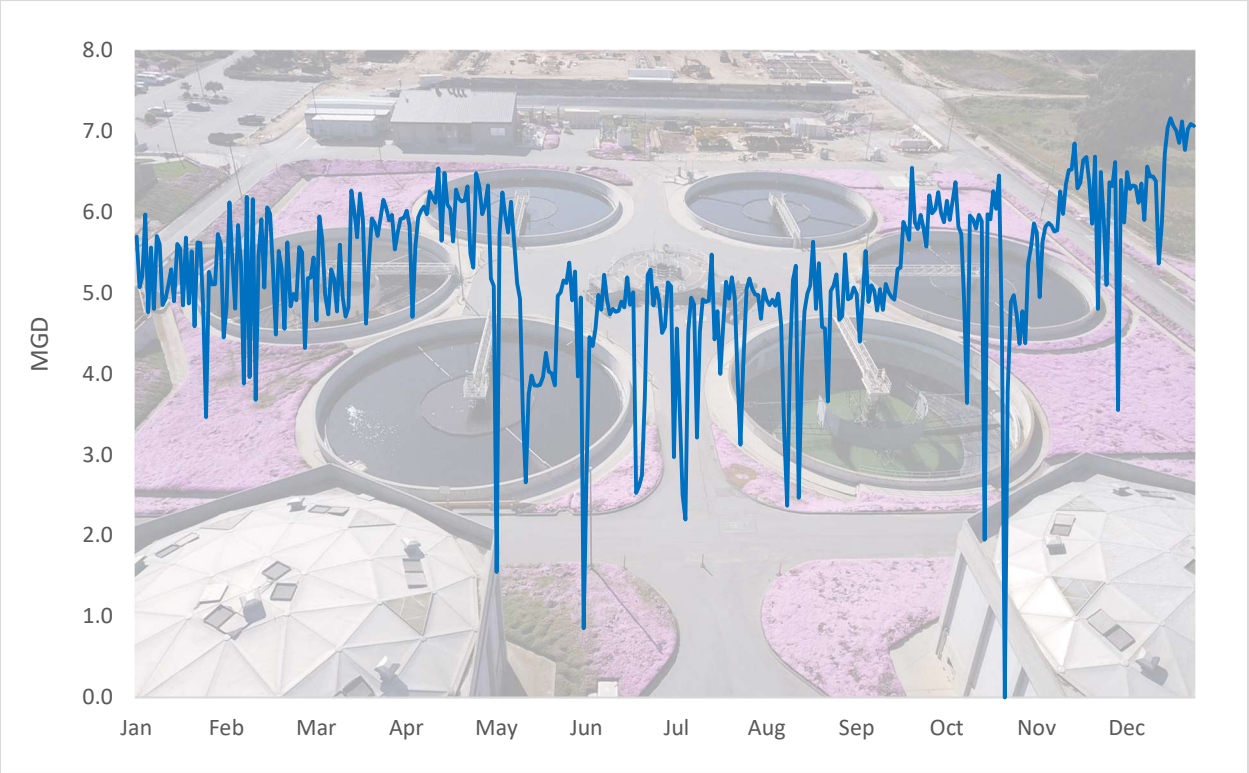


Figure 2. AWPF INF – Daily Average Secondary Effluent from the RTP (MGD)

3.1.2 Waste EQ Effluent Discharged into the RTP

Table 3. Waste EQ – Daily Average Waste EQ Effluent Discharged to the RTP Headworks (MGD)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.95	0.91	0.94	0.92	0.92	0.90	0.81	0.91	1.00	0.92	0.83	0.99
2	0.89	1.01	0.95	0.85	0.91	0.78	0.80	0.91	0.98	0.92	0.91	1.07
3	0.92	0.95	0.97	0.88	0.84	0.84	0.85	0.91	0.91	0.95	0.89	1.02
4	0.98	0.85	0.90	0.94	0.96	0.27	0.86	0.89	0.90	0.98	0.95	1.11
5	0.83	0.95	0.91	0.99	0.41	0.57	0.69	0.91	0.92	0.93	0.96	0.60
6	0.93	0.90	0.89	0.83	0.99	0.79	0.80	0.89	0.97	0.89	0.99	1.06
7	0.89	0.76	0.88	0.95	1.03	0.84	0.73	0.89	0.91	0.95	0.99	1.05
8	0.95	1.07	0.81	1.02	0.95	0.90	0.59	0.93	0.95	0.91	0.91	1.08
9	0.91	0.78	0.87	0.97	0.96	0.84	0.53	0.98	1.02	0.92	0.99	1.07
10	0.86	1.01	0.89	0.99	1.01	0.85	0.77	0.95	0.91	0.98	1.00	1.06
11	0.89	0.90	0.85	1.02	0.96	0.87	0.85	0.90	0.96	0.92	1.01	1.07
12	0.91	1.02	0.89	1.02	0.94	0.82	0.85	0.74	0.95	0.95	0.99	1.09
13	0.93	1.00	0.79	1.03	0.88	0.81	0.68	0.62	0.93	0.77	0.98	1.06
14	0.87	0.91	0.81	1.03	0.70	0.81	0.81	0.81	0.93	1.35	0.97	1.04
15	0.92	1.01	0.87	1.05	0.61	0.81	0.84	0.93	0.92	0.92	1.05	1.12
16	0.99	1.06	0.99	1.03	0.72	0.84	0.79	0.96	0.96	0.89	1.01	1.13
17	0.89	0.88	0.98	1.01	0.74	0.85	0.82	0.66	0.86	0.92	1.04	1.11
18	0.97	0.79	0.96	1.00	0.73	0.80	0.90	0.81	0.85	0.96	1.03	1.06
19	0.93	0.85	0.98	1.01	0.74	0.84	0.78	0.90	0.91	0.95	1.06	1.03
20	0.95	0.86	0.93	0.89	0.74	0.84	0.85	0.90	0.98	0.32	1.11	1.07
21	0.85	0.80	0.82	0.95	0.73	0.86	0.76	0.92	0.94	0.93	1.01	1.14
22	0.92	0.91	0.91	0.93	0.76	0.59	0.83	0.97	0.94	0.90	1.03	1.14
23	0.95	0.84	0.96	0.92	0.77	0.62	0.89	0.86	0.92	1.03	1.08	1.15
24	0.84	0.83	0.99	0.90	0.76	0.63	0.85	1.01	0.86	1.01	1.08	1.13
25	0.63	0.86	0.97	0.93	0.74	0.71	0.90	0.84	0.96	1.30	1.01	1.14
26	0.96	0.88	0.92	0.92	0.86	0.89	0.87	0.88	0.92	1.01	1.05	1.15
27	0.96	0.86	0.95	0.93	0.86	0.92	0.79	0.92	0.86	-	1.06	1.14
28	0.90	0.79	0.93	0.99	0.84	0.84	0.75	0.92	0.94	0.73	0.93	1.13
29	0.93		0.88	1.03	0.82	0.86	0.85	0.94	0.89	0.93	1.07	1.12
30	0.92		0.91	0.92	0.87	0.83	0.88	0.96	0.96	0.93	1.04	1.09
31	0.84		0.86		0.82		0.93	0.93		0.93		1.23

SCADA: AWPF495FQI1005.Total_Yesterday

Note: 6/4/2022 and 10/27/2022 AWPF was out of operation due to utility power outage.

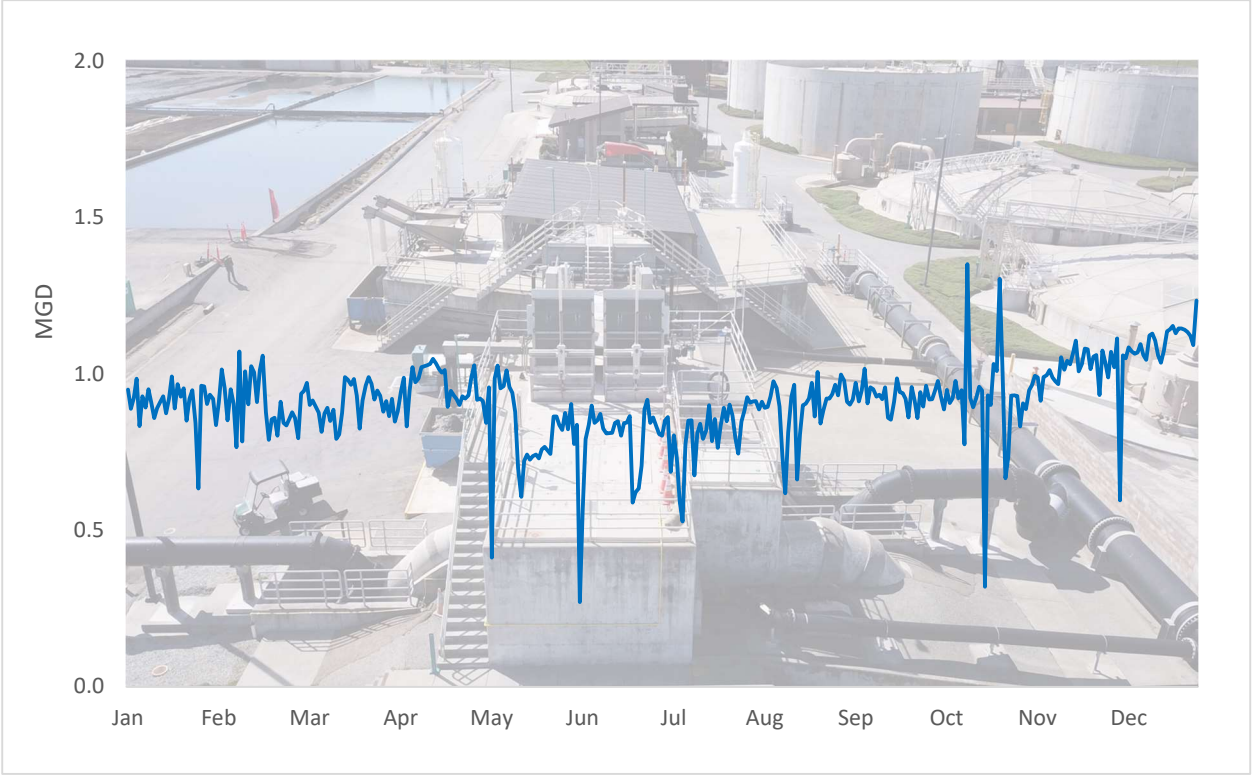


Figure 3. Waste EQ – Daily Average Waste EQ Effluent Discharged to the RTP Headworks (MGD)

3.1.3 AWPF Recycled Water Injected into the Seaside Basin

Table 4. INJ – Daily Average AWPF Recycled Water Injected into the Seaside Basin (MG)[4]

	WY 2022												WY 2023		
	CY 2022			CY 2023											
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	3.30	3.21	3.39	3.48	3.50	3.25	4.03	4.06	3.45	3.27	3.25	3.12	4.15	2.81	3.95
2	3.27	3.05	3.32	3.47	3.52	3.49	4.02	4.06	2.90	3.35	3.14	3.30	4.14	2.96	3.11
3	3.26	1.63	3.43	3.47	3.18	3.16	4.02	3.83	2.96	3.37	3.26	3.32	4.07	2.84	4.23
4	3.28	3.08	3.24	3.29	3.48	3.49	3.78	3.68	1.47	3.04	3.10	3.32	3.94	3.42	4.23
5	3.10	3.19	3.44	3.36	3.50	3.51	3.97	0.67	1.07	1.90	3.23	3.31	4.12	3.70	4.23
6	3.26	3.09	3.45	3.49	3.50	3.51	3.02	3.73	2.57	2.91	3.23	3.22	3.90	3.03	2.44
7	3.11	3.12	3.31	3.29	3.18	3.19	3.69	4.02	2.86	2.57	3.22	3.24	4.14	2.21	4.19
8	3.27	2.89	3.50	3.50	3.52	3.07	4.05	4.02	3.09	1.51	3.22	3.07	4.13	1.98	3.93
9	3.27	3.03	3.39	3.50	3.18	3.43	4.05	3.81	3.16	1.33	3.09	3.22	4.12	1.91	4.16
10	3.29	3.23	3.49	3.48	3.54	3.09	4.04	3.98	3.29	2.64	3.22	3.22	4.13	3.83	4.16
11	3.26	3.15	3.48	3.18	2.67	3.43	3.87	3.97	3.29	3.40	3.07	3.26	4.02	3.82	4.16
12	3.09	3.26	3.48	3.50	3.05	3.43	4.11	3.55	3.29	3.21	2.34	3.26	4.08	3.81	4.15
13	3.10	3.26	3.47	3.19	3.52	3.43	4.11	3.06	3.28	2.30	1.51	3.14	3.81	3.81	4.04
14	3.15	3.28	3.29	3.50	3.49	2.97	3.79	2.11	3.14	2.61	2.42	3.28	4.03	3.67	4.15
15	3.13	3.26	3.50	3.50	2.30	3.51	4.19	1.85	3.28	3.27	3.40	3.14	4.03	4.00	3.96
16	3.10	3.12	3.38	3.51	2.63	4.00	3.81	2.42	3.11	3.18	3.23	3.31	4.03	4.01	4.21
17	3.25	3.32	3.47	3.16	3.17	3.80	4.07	2.52	3.27	3.32	2.03	3.31	4.03	4.37	4.21
18	2.41	3.22	3.48	3.49	1.81	3.71	2.98	2.52	3.28	3.34	2.14	3.31	3.94	4.13	4.21
19	2.32	3.31	3.50	3.49	4.83	3.96	4.12	2.42	3.27	3.32	3.37	3.30	4.11	4.48	4.21
20	3.17	3.32	3.48	3.18	3.49	3.94	4.10	2.54	3.27	2.83	3.37	3.25	3.14	4.47	3.81
21	3.01	3.32	3.30	3.50	3.17	3.44	3.95	2.74	3.15	2.29	3.37	3.35	4.06	3.83	3.65
22	3.18	2.94	3.46	3.51	3.50	3.58	4.12	3.07	1.79	3.24	3.37	3.91	4.07	3.88	4.29
23	3.23	3.17	3.35	3.51	3.50	3.70	4.13	2.32	1.72	3.26	3.22	3.89	4.07	4.14	4.70
24	3.22	3.34	3.48	3.16	2.96	3.85	4.13	2.50	1.81	3.27	3.33	4.12	3.62	4.14	4.64
25	3.04	3.21	3.50	2.36	3.48	4.00	3.94	2.77	2.22	3.26	3.16	4.12	3.62	4.13	4.73
26	3.07	3.33	1.48	3.50	3.49	3.99	4.13	2.98	3.33	3.16	3.30	3.88	3.16	3.71	4.72
27	3.19	3.35	1.70	3.18	3.50	3.98	3.66	3.48	3.34	2.53	1.82	4.01	-	4.21	4.58
28	3.19	3.35	3.11	3.50	3.30	3.79	3.92	3.47	3.16	1.90	3.35	4.09	2.28	2.96	4.73
29	3.21	3.34	3.33	3.51		3.99	4.12	3.46	3.30	2.87	3.34	3.88	3.02	4.19	4.42
30	3.21	3.15	3.34	3.52		4.02	4.06	3.43	3.12	3.40	3.14	3.77	3.01	4.37	4.65
31	3.21		3.20	3.18		3.69		3.27		3.40	3.34		3.01		4.64

SCADA, [InjWell_FIT_104.Val]
[InjWell_FIT_204.Val]
[InjWell_FIT_137.Val]
[InjWell_FIT_237.Val]

WY-22 (MG): 1,188.5
WY-22 (AF): 3,647.3

WY-23 (MG): 352.3
WY-23 (AF): 1,081.2

Note: 6/4/2022 and 10/27/2022 AWPF was out of operation due to utility power outage.

[4]Per the revised MRP 2020-0122 issued on September 13, 2022, the annual reported volume of AWPF recycled water injected into the Seaside Basin is based on California WY, which is October 1 – September 30. From January 1, 2022 – December 31, 2022, M1W injected 3,828 acre-feet into the Seaside Basin.

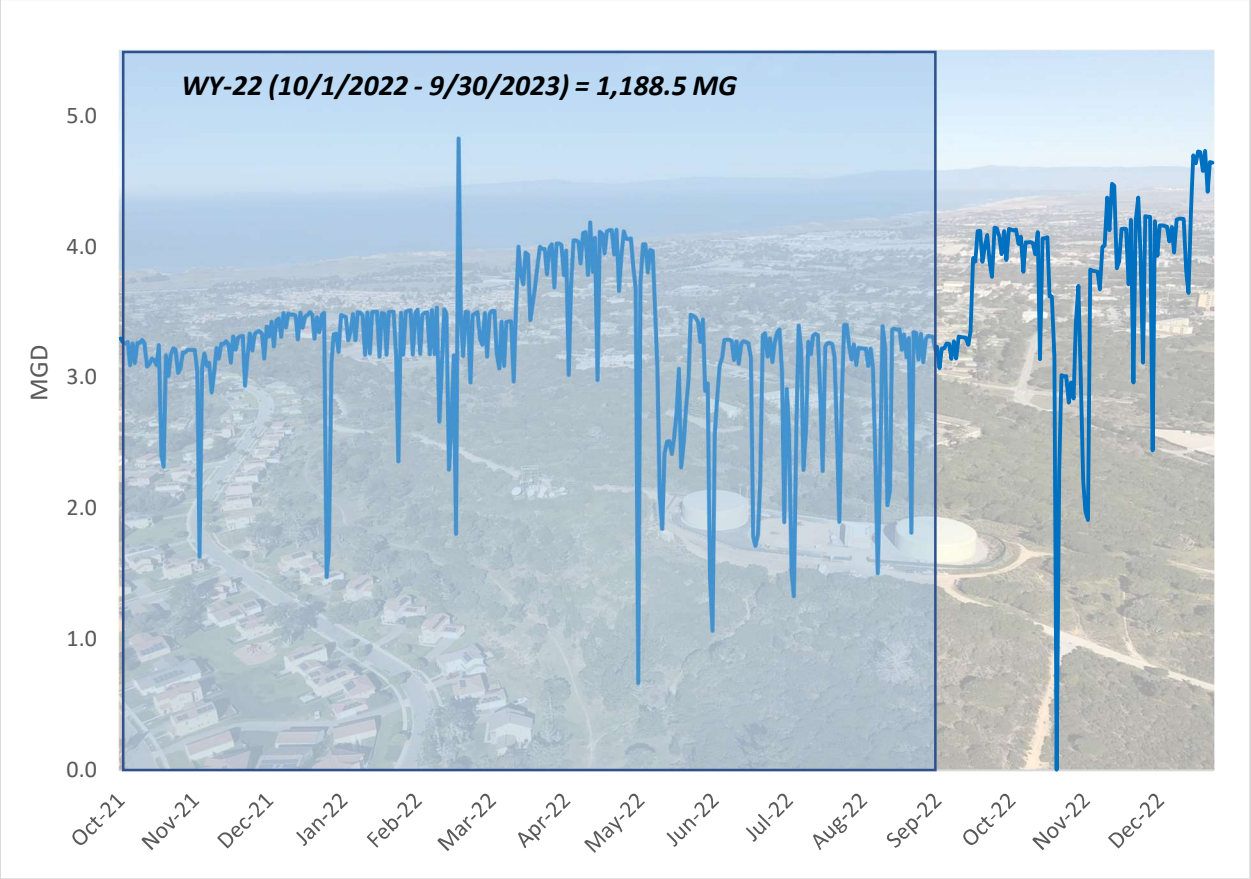


Figure 4. INJ – Daily Average AWPF Recycled Water Injected into the Seaside Basin (MG)

3.1.4 RO Concentrate Sent to the Ocean Outfall

Table 5. RTP EFF – Daily Average RO Concentrate Sent to the Ocean Outfall (MGD)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.91	0.76	0.83	0.94	0.98	0.85	0.72	0.81	0.74	1.01	0.69	0.93
2	0.79	0.98	0.83	0.97	1.04	0.63	0.73	0.80	0.88	0.97	0.76	0.79
3	0.83	0.87	0.86	0.97	0.85	0.80	0.82	0.79	0.78	0.99	0.69	1.02
4	0.95	0.76	0.75	0.97	0.81	0.14	0.82	0.75	0.79	1.01	0.84	1.01
5	0.76	0.93	0.96	0.93	0.24	0.45	0.46	0.81	0.81	0.97	0.89	1.05
6	0.89	0.85	0.91	0.75	0.93	0.71	0.73	0.78	0.79	0.97	0.98	0.56
7	0.76	0.60	0.79	0.89	1.00	0.71	0.56	0.78	0.70	1.00	0.93	1.04
8	0.90	0.98	0.75	0.94	0.97	0.73	0.38	0.79	0.78	0.96	0.92	0.92
9	0.90	0.62	0.85	0.97	0.92	0.80	0.33	0.77	0.88	0.99	0.77	1.04
10	0.77	0.99	0.82	0.97	0.99	0.77	0.74	0.80	0.78	1.03	0.90	1.00
11	0.78	0.52	0.76	0.96	0.92	0.85	0.79	0.73	0.81	0.94	0.93	1.01
12	0.81	0.88	0.90	1.00	0.84	0.80	0.78	0.51	0.81	0.92	0.93	1.00
13	0.84	0.94	0.79	0.99	0.79	0.76	0.50	0.35	0.77	0.00	0.93	0.96
14	0.79	0.80	0.76	0.98	0.54	0.78	0.72	0.68	0.80	1.41	0.91	1.01
15	0.90	0.97	0.76	1.05	0.41	0.77	0.79	0.82	0.76	0.96	0.93	0.93
16	0.89	0.95	1.01	0.89	0.60	0.77	0.79	0.85	0.82	0.96	1.00	1.04
17	0.76	0.85	0.98	1.04	0.64	0.79	0.79	0.37	0.80	0.94	0.95	1.02
18	0.91	0.72	0.91	0.99	0.61	0.78	0.89	0.63	0.79	0.97	1.02	1.02
19	0.76	0.90	1.00	0.97	0.61	0.84	0.71	0.76	0.78	0.96	1.04	1.01
20	0.87	0.85	0.96	0.92	0.62	0.78	0.77	0.79	0.83	0.96	1.05	0.84
21	0.73	0.72	0.73	1.02	0.63	0.81	0.64	0.81	0.87	0.96	1.09	0.92
22	0.90	0.91	0.86	1.02	0.68	0.38	0.74	0.91	0.95	0.99	1.01	1.09
23	0.89	0.77	0.94	1.00	0.65	0.41	0.84	0.77	0.93	0.97	1.01	1.12
24	0.76	0.80	0.94	1.00	0.64	0.42	0.79	0.85	0.91	0.00	1.06	1.14
25	0.55	0.79	0.90	1.03	0.61	0.59	0.83	0.74	1.07	1.02	1.06	1.13
26	0.83	0.90	0.95	0.89	0.80	0.86	0.79	0.73	0.95	0.72	1.02	1.12
27	0.82	0.88	1.00	0.85	0.81	0.85	0.62	0.59	0.95	-	0.91	1.11
28	0.81	0.68	0.99	1.04	0.83	0.78	0.48	0.80	0.97	0.61	1.08	1.14
29	0.92		0.96	1.02	0.83	0.81	0.65	0.81	0.94	0.77	0.76	1.07
30	0.90		0.97	0.97	0.87	0.79	0.82	0.84	0.92	0.77	1.05	1.12
31	0.70		0.90		0.80		0.83	0.75		0.74		1.13

SCADA: RO_Conc_TOT.OldTotal

Note: 6/4/2022 and 10/27/2022 AWPF was out of operation due to utility power outage.

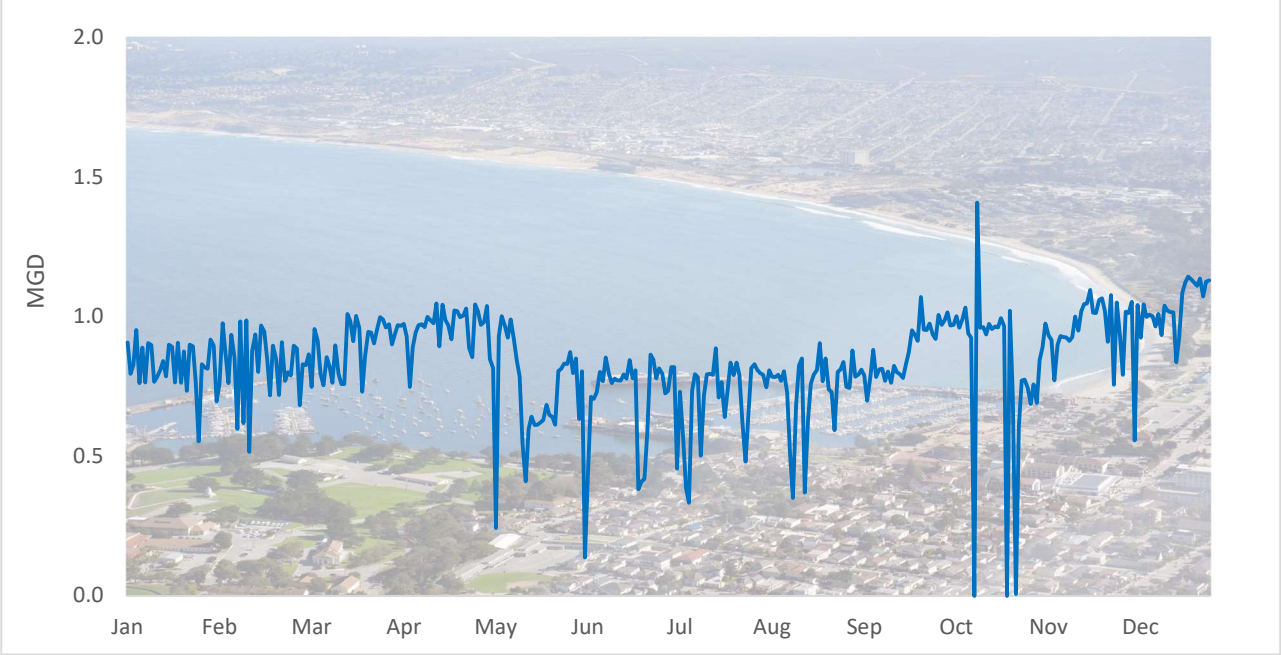


Figure 5. RTP EFF – Daily Average RO Concentrate Sent to the Ocean Outfall (MGD)

3.1.5 AWPF Non-Production Statement

There was one period of AWPF non-production in calendar year 2022. AWPF production ceased on October 26, 2022, at 6:09 pm due to prolonged utility power outage and resumed on October 28, 2022, at 12:01 am.

3.2 Date and Time of Sampling and Analyses

Dates and times of sampling and analyses for compliance samples analyzed by M1W's Laboratory, in addition to the analytical methods used were provided in AWPF Quarterly Monitoring Reports. See **Section 11.0** and **Appendix A** and **Appendix B** for additional laboratory information including laboratories utilized, ELAP certificates, analytical methods, contact laboratory QA/QC procedures, and proficiency test documentation. Note that Contract Lab Reports and COCs were provided in the 2022 Quarterly Reports, available via GeoTracker. See **Appendix D** for instructions for accessing those, and other Project reports. See also **Appendix E** for M1W data qualifiers.

3.3 Analytical Results

All analytical results of samples collected during the monitoring period of the:

- *i. AWPF Influent,*
- *ii. RO Feed Water (prior to RO),*
- *iii. AWPF Recycled Water, and*
- *iv. Groundwater*

3.3.1 AWPF Influent

AWPF Influent Monitoring

a. *Monitoring is required to determine compliance with water quality conditions and standards and assess AWPF performance.*
b. *The influent sampling station is located before clarified secondary effluent from the RTP enters the ozone pre-treatment system of the AWPF. Influent samples shall be obtained on the same day that stabilized advanced treated recycled water samples are obtained. The date and time of sampling shall be reported with the analytical values determined. Table M-2 constitutes the influent monitoring program.*

Table M-2: Influent Monitoring

Constituents	Units	Type of Sample	Minimum Frequency of Analysis
Ammonia-N	mg/L	24-hour composite	Weekly
$CBOD_5$	mg/L	24-hour composite	Weekly
Boron	mg/L	24-hour composite	Weekly
Chloride	mg/L	24-hour composite	Weekly
Nitrate-N	mg/L	24-hour composite	Weekly
Nitrite-N	mg/L	24-hour composite	Weekly
pH	pH units	Metered	Continuous
Sodium	mg/L	24-hour composite	Weekly
Sulfate	mg/L	24-hour composite	Weekly
Total Suspended Solids	mg/L	24-hour composite	Weekly
Total coliform	MPN/100	grab	Weekly
Total Dissolve Solids	mg/L	24-hour composite	Weekly
Total flow	mgd	Metered	Continuous[1]
Total Kjeldahl Nitrogen-N	mg/L	24-hour composite	Weekly
Total Nitrogen[2]	mg/L	24-hour composite	Weekly
Total Organic Carbon (TOC)	mg/L	24-hour composite	Weekly
Turbidity	NTU	Metered	Continuous[3]
UV transmittance	%	24-hour composite	Weekly

[1] For those pollutants that are continuously monitored, M1W shall report the monthly minimum and maximum, and daily average values.
[2] Total Nitrogen includes nitrate-N, nitrite-N, ammonia-N, and organic-N.
[3] May change to grab after M1W demonstrates that grab sampling is adequate.

Table 6. AWPF INF – Weekly Ammonia-N (mg/L)

Week	Ammonia-N mg/L
1	-
2	32.4
3	37.8
4	37.2
5	31.7
6	37.8
7	40.1
8	36.4
9	39.6
10	44.5
11	39.8
12	40.2
13	39.1
14	37.0
15	34.8
16	37.3
17	32.9
18	37.3
19	34.1
20	40.6
21	36.6
22	36.5
23	35.5
24	39.0
25	34.1
26	31.8
27	33.5
28	34.8
29	35.5
30	35.6
31	37.8
32	40.6
33	41.2
34	44.1
35	44.2
36	46.2
37	35.0
38	40.4
39	40.9
40	38.4
41	39.2
42	40.7
43	39.3
44	37.9
45	35.6
46	37.7
47	36.8
48	37.9
49	40.3
50	33.8
51	25.0
52	32.8
53[5]	40.6

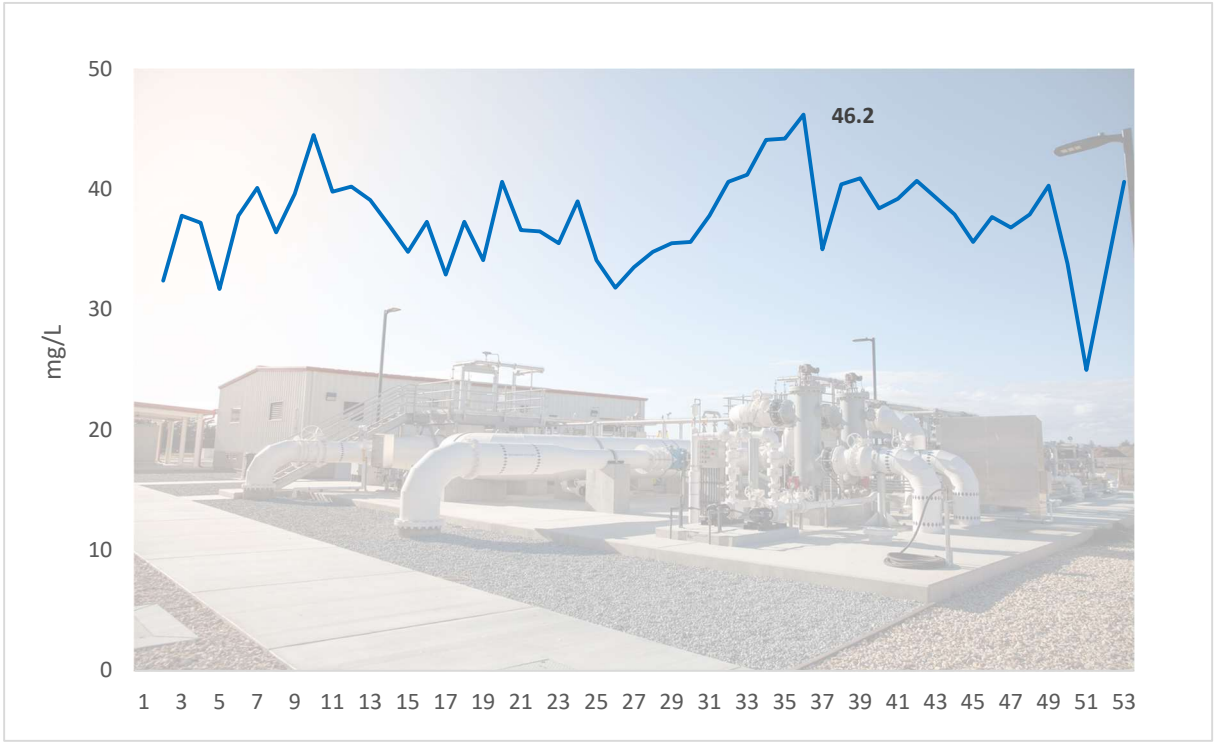


Figure 6. AWPF INF – Weekly Ammonia-N (mg/L)

[5] Week 1 of 2022 spanned Sunday December 26, 2021, to Saturday January 1, 2022; representative sample was collected and reported in the 2021 Annual Summary Report as Week 53. This is applicable to all weekly monitoring.

Table 7. AWPF INF – Weekly $CBOD_5$ (mg/L)

Week	CBOD5 mg/L	Week	CBOD5 mg/L	Week	CBOD5 mg/L
1	-	18	10	36	5
2	9	19	9	37	3
3	22	20	9	38	5
4	6	21	9	39	11
5	12	22	5	40	5
6	18	23	4	41	6
7	21	24	12	42	10
8	7	25	13	43	13
9	6	26	10	44	12
10	9	27	6	45	19
11	12	28	19	46	15
12	12	29	22	47	4
13	13	30	13	48	5
14	8	31	8	49	7
15	14	32	22	50	7
16	14	33	16	51	7
17	9	34	5	52	5
		35	3	53	9



Figure 7. AWPF INF – Weekly $CBOD_5$ (mg/L)

Table 8. AWPF INF – Weekly Boron (mg/L)

Week	Boron mg/L
1	-
2	0.3
3	0.3
4	0.4
5	0.4
6	0.4
7	0.4
8	0.4
9	0.4
10	0.4
11	0.4
12	0.4
13	0.4
14	0.4
15	0.4
16	0.4
17	0.3

Week	Boron mg/L
18	0.4
19	0.4
20	0.4
21	0.4
22	0.4
23	0.4
24	0.4
25	0. 5
26	0.4
27	0.4
28	0.4
29	0.4
30	0.4
31	0.5
32	0.5
33	0.5
34	0.5
35	0.5

Week	Boron mg/L
36	0.5
37	0.4
38	0.5
39	0.5
40	0.5
41	0.5
42	0.5
43	0.5
44	0.5
45	0.5
46	0.5
47	0.5
48	0.5
49	0.4
50	0.4
51	0.4
52	0.4
53	0.4



Figure 8. AWPF INF – Weekly Boron (mg/L)

Table 9. AWPF INF – Weekly Chloride (mg/L)

Week	Chloride mg/L
1	-
2	253
3	249
4	269
5	245
6	253
7	267
8	256
9	258
10	253
11	272
12	258
13	264
14	266
15	261
16	265
17	247

Week	Chloride mg/L
18	257
19	248
20	266
21	255
22	258
23	266
24	254
25	263
26	260
27	268
28	256
29	256
30	273
31	261
32	273
33	269
34	267
35	272

Week	Chloride mg/L
36	278
37	280
38	277
39	269
40	273
41	263
42	274
43	277
44	289
45	272
46	263
47	252
48	284
49	300
50	242
51	205
52	256
53	282



Figure 9. AWPF INF – Weekly Chloride (mg/L)

Table 10. AWPF INF – Weekly Nitrate-N (mg/L)

Week	Nitrate-N mg/L
1	-
2	1.1
3	0.9
4	1.1
5	1.1
6	ND 0.4
7	1.8
8	ND 0.4
9	ND 0.4
10	ND 0.4
11	ND 0.4
12	ND 0.4
13	ND 0.4
14	ND 0.4
15	ND 0.4
16	ND 0.4
17	ND 0.4
18	0.9
19	ND 0.4
20	ND 0.4
21	ND 0.4
22	ND 0.4
23	ND 0.4
24	ND 0.4
25	ND 0.4
26	ND 0.4
27	ND 0.4
28	ND 0.4
29	ND 0.4
30	ND 0.4
31	DNQ 0.02
32	ND 0.4
33	ND 0.4
34	ND 0.4
35	ND 0.4
36	ND 0.4
37	0.8
38	0.6
39	ND 0.4
40	ND 0.4
41	0.5
42	0.9
43	0.8
44	1.8
45	1.6
46	1.2
47	1.2
48	2.9
49	2.9
50	1.4
51	1.2
52	2.0
53	2.3



Figure 10. AWPF INF – Weekly Nitrate-N (mg/L)

Table 11. AWPF INF – Weekly Nitrite-N (mg/L)

Week	Nitrite-N mg/L
1	-
2	ND 0.4
3	ND 0.4
4	ND 0.4
5	ND 0.4
6	ND 0.4
7	ND 0.02
8	ND 0.4
9	ND 0.4
10	ND 0.4
11	ND 0.4
12	ND 0.4
13	ND 0.4
14	ND 0.4
15	ND 0.4
16	ND 0.4
17	ND 0.4

Week	Nitrite-N mg/L
18	ND 0.4
19	ND 0.4
20	ND 0.4
21	ND 0.4
22	ND 0.4
23	ND 0.4
24	ND 0.4
25	ND 0.4
26	0.7
27	ND 0.4
28	ND 0.4
29	ND 0.4
30	ND 0.4
31	ND 0.02
32	ND 0.4
33	ND 0.4
34	ND 0.4
35	ND 0.4

Week	Nitrite-N mg/L
36	ND 0.4
37	2.9
38	2.2
39	ND 0.4
40	2.4
41	2.3
42	3.3
43	1.6
44	2.6
45	2.4
46	1.3
47	0.9
48	2.0
49	2.0
50	2.0
51	1.7
52	2.2
53	2.2

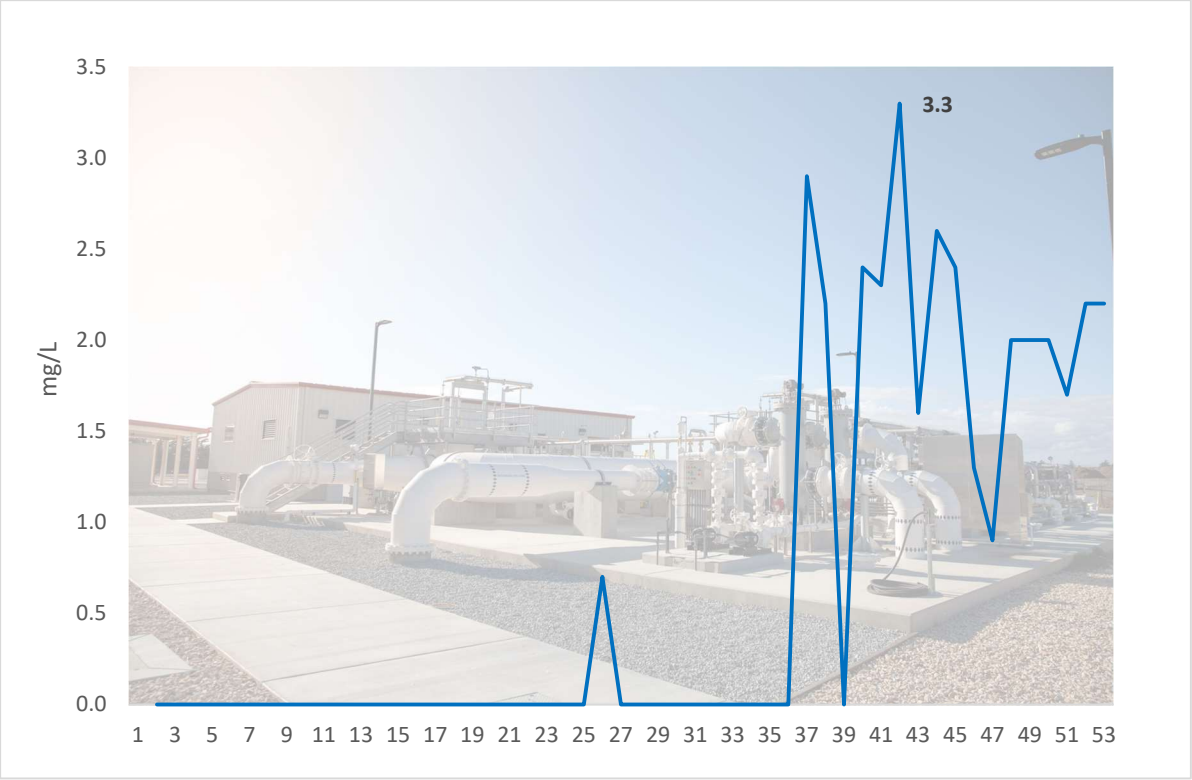


Figure 11. AWPF INF – Weekly Nitrite-N (mg/L)

Table 12. AWPF INF – Daily Average pH

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	7.7	7.4	7.5	7.5	7.6	7.7	7.7	7.5	7.6	7.5	7.6	7.6
2	7.7	7.4	7.5	7.6	7.6	7.7	7.7	7.5	7.6	7.5	7.5	7.6
3	7.7	7.4	7.5	7.6	7.6	7.7	7.7	7.5	7.6	7.6	7.6	7.6
4	7.7	7.5	7.6	7.6	7.6	7.7	7.7	7.5	7.6	7.6	7.6	7.6
5	7.7	7.4	7.6	7.6	7.7	7.7	7.7	7.5	7.6	7.6	7.6	7.6
6	7.7	7.4	7.5	7.6	7.6	7.7	7.7	7.5	7.5	7.6	7.6	7.6
7	7.7	7.5	7.5	7.6	7.6	7.7	7.7	7.5	7.5	7.6	7.6	7.6
8	7.7	7.4	7.6	7.6	7.6	7.7	7.7	7.5	7.5	7.6	7.5	7.6
9	7.7	7.5	7.6	7.6	7.6	7.7	7.7	7.5	7.5	7.5	7.6	7.6
10	7.7	7.4	7.5	7.6	7.6	7.7	7.7	7.5	7.6	7.6	7.6	7.5
11	7.7	7.5	7.5	7.6	7.6	7.7	7.7	7.5	7.5	7.6	7.6	7.5
12	7.7	7.4	7.5	7.6	7.6	7.7	7.7	7.5	7.6	7.6	7.6	7.5
13	7.7	7.5	7.5	7.6	7.6	7.7	7.7	7.5	7.6	7.6	7.6	7.6
14	7.7	7.5	7.5	7.5	7.6	7.7	7.5	7.5	7.6	7.6	7.6	7.6
15	7.7	7.5	7.5	7.6	7.6	7.7	7.4	7.6	7.5	7.6	7.6	7.3
16	7.7	7.5	7.5	7.6	7.6	7.7	7.4	7.5	7.6	7.6	7.6	7.1
17	7.7	7.5	7.5	7.5	7.6	7.7	7.4	7.5	7.6	7.6	7.6	7.1
18	7.7	7.5	7.5	7.6	7.6	7.7	7.4	7.5	7.6	7.6	7.6	7.1
19	7.7	7.5	7.5	7.6	7.6	7.7	7.4	7.6	7.6	7.6	7.6	7.1
20	7.7	7.5	7.5	7.6	7.6	7.7	7.4	7.5	7.6	7.6	7.6	7.1
21	7.5	7.5	7.5	7.6	7.6	7.7	7.5	7.6	7.6	7.6	7.6	7.1
22	7.4	7.5	7.5	7.5	7.6	7.7	7.5	7.6	7.6	7.6	7.6	7.1
23	7.3	7.5	7.5	7.5	7.6	7.7	7.5	7.6	7.6	7.6	7.6	7.1
24	7.4	7.5	7.5	7.5	7.7	7.7	7.5	7.5	7.6	7.6	7.5	7.1
25	7.4	7.5	7.5	7.5	7.7	7.7	7.5	7.5	7.5	7.6	7.6	7.2
26	7.4	7.5	7.5	7.6	7.7	7.7	7.5	7.6	7.6	7.6	7.6	7.1
27	7.4	7.5	7.5	7.6	7.7	7.7	7.5	7.6	7.5	-	7.6	7.0
28	7.4	7.5	7.5	7.6	7.7	7.8	7.5	7.6	7.6	7.6	7.6	7.1
29	7.4		7.5	7.5	7.7	7.8	7.5	7.6	7.5	7.6	7.6	7.1
30	7.4		7.5	7.6	7.7	7.7	7.5	7.6	7.5	7.6	7.6	7.1
31	7.4		7.5		7.7		7.5	7.6		7.6		7.1

SCADA: AWPF_SW_pH_AY_rpt

Note: 10/27/2022 AWPF was out of operation due to utility power outage.

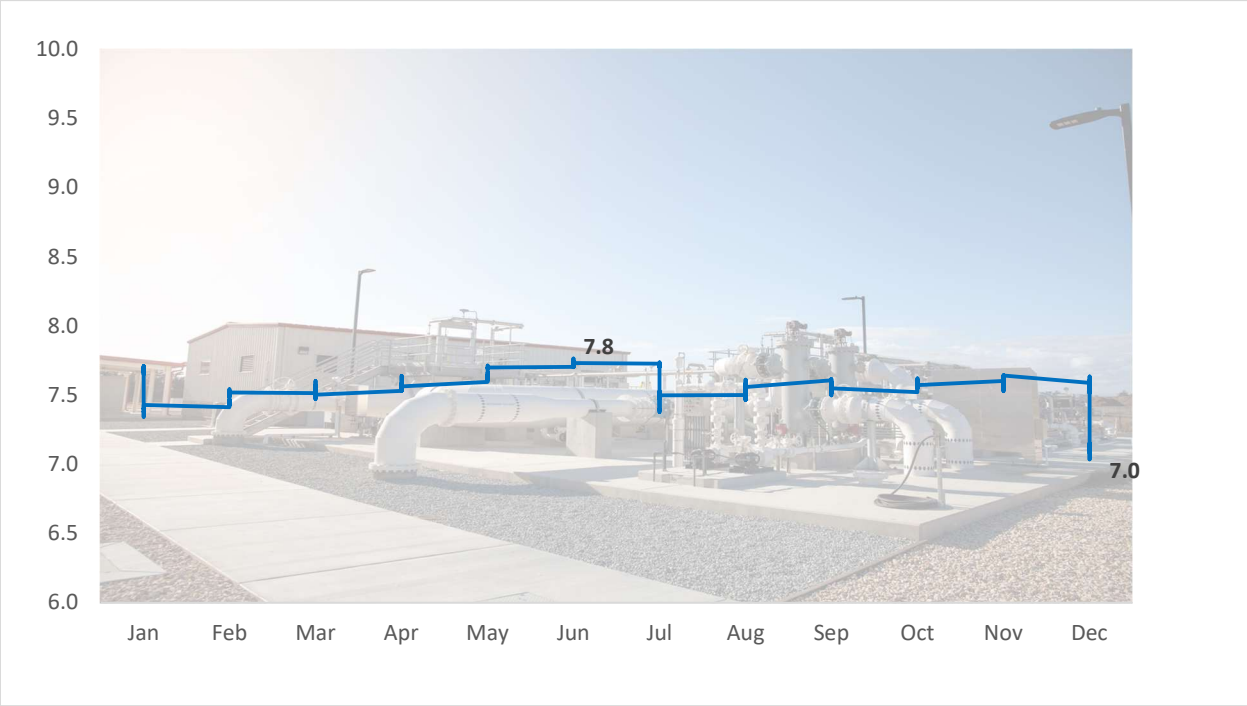


Figure 12. AWPF INF – Daily Average pH

Table 13. AWPF INF – Monthly Min and Max pH

Month	Min	Max
January	7.3	7.7
February	7.4	7.5
March	7.5	7.6
April	7.5	7.6
May	7.6	7.7
June	7.7	7.8
July	7.4	7.7
August	7.5	7.6
September	7.5	7.6
October	7.5	7.6
November	7.5	7.6
December	7.0	7.6

Calculated

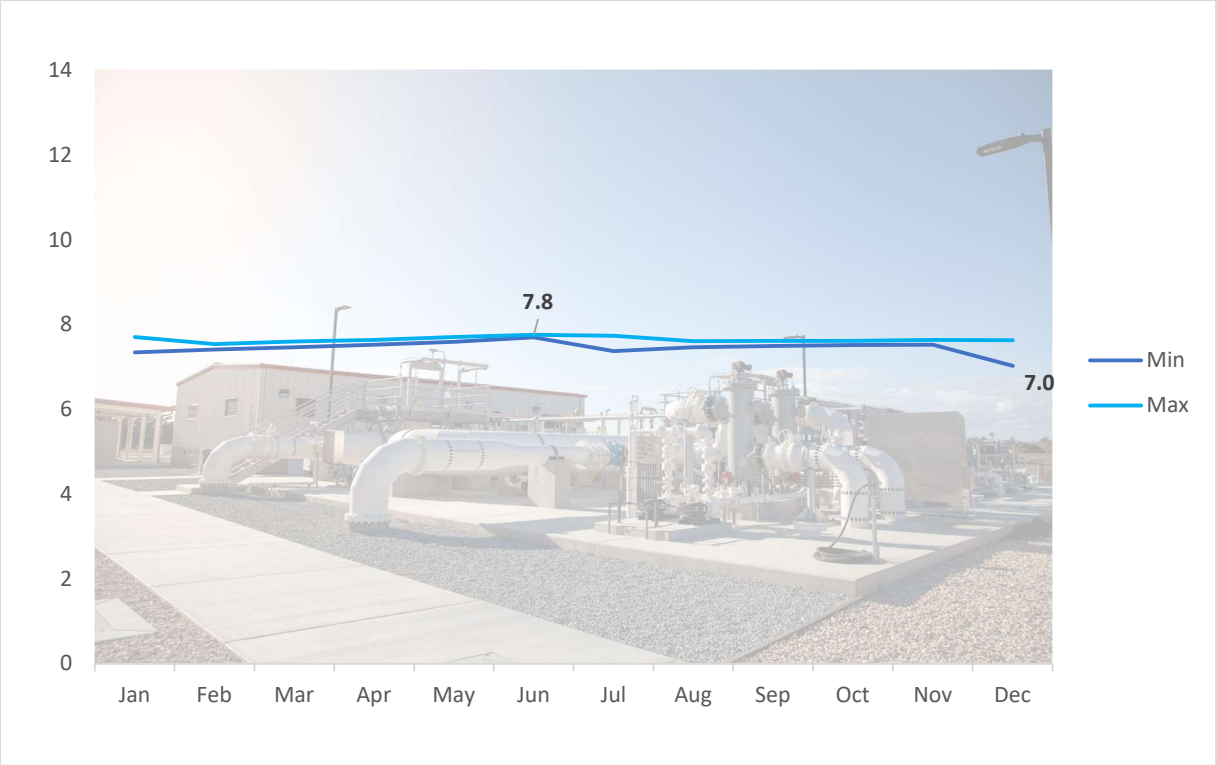


Figure 13. AWPF INF – Monthly Min and Max pH

Table 14. AWPF INF – Weekly Sodium (mg/L)

Week	Sodium mg/L	Week	Sodium mg/L	Week	Sodium mg/L
1	-	18	157	36	170
2	159	19	160	37	167
3	170	20	173	38	181
4	171	21	189	39	191
5	159	22	177	40	179
6	156	23	188	41	161
7	167	24	176	42	172
8	163	25	185	43	174
9	181	26	187	44	177
10	175	27	183	45	182
11	186	28	177	46	172
12	170	29	183	47	167
13	171	30	189	48	174
14	163	31	186	49	151
15	169	32	188	50	154
16	170	33	191	51	134
17	122	34	172	52	157
		35	175	53	166



Figure 14. AWPF INF – Weekly Sodium (mg/L)

Table 15. AWPF INF – Weekly Sulfate (mg/L)

Week	Sulfate mg/L	Week	Sulfate mg/L	Week	Sulfate mg/L
1	-	18	82	36	99
2	85	19	97	37	93
3	99	20	105	38	102
4	95	21	100	39	94
5	94	22	95	40	97
6	87	23	151	41	96
7	80	24	106	42	96
8	92	25	126	43	91
9	93	26	144	44	89
10	84	27	135	45	92
11	93	28	96	46	91
12	95	29	61	47	89
13	88	30	105	48	86
14	103	31	110	49	87
15	89	32	77	50	86
16	89	33	73	51	84
17	98	34	96	52	93
		35	101	53	85



Figure 15. AWPF INF – Weekly Sulfate (mg/L)

Table 16. AWPF INF – Weekly TSS (mg/L)

Week	TSS mg/L	Week	TSS mg/L	Week	TSS mg/L
l1	-	18	4.4	36	3.1
2	4.5	19	6.9	37	1.6
3	6.1	20	1.6	38	3.1
4	7.3	21	1.4	39	8.2
5	4.8	22	3.0	40	3.8
6	5.6	23	1.6	41	3.0
7	4.7	24	6.8	42	3.4
8	2.8	25	3.6	43	5.3
9	4.8	26	3.1	44	7.1
10	2.9	27	2.2	45	6.8
11	5.7	28	2.9	46	6.4
12	6.7	29	2.9	47	2.0
13	8.4	30	2.6	48	2.8
14	6.2	31	7.8	49	3.0
15	5.1	32	4.5	50	4.4
16	5.8	33	5.4	51	3.5
17	5.5	34	3.1	52	2.5
		35	1.7	53	3.7

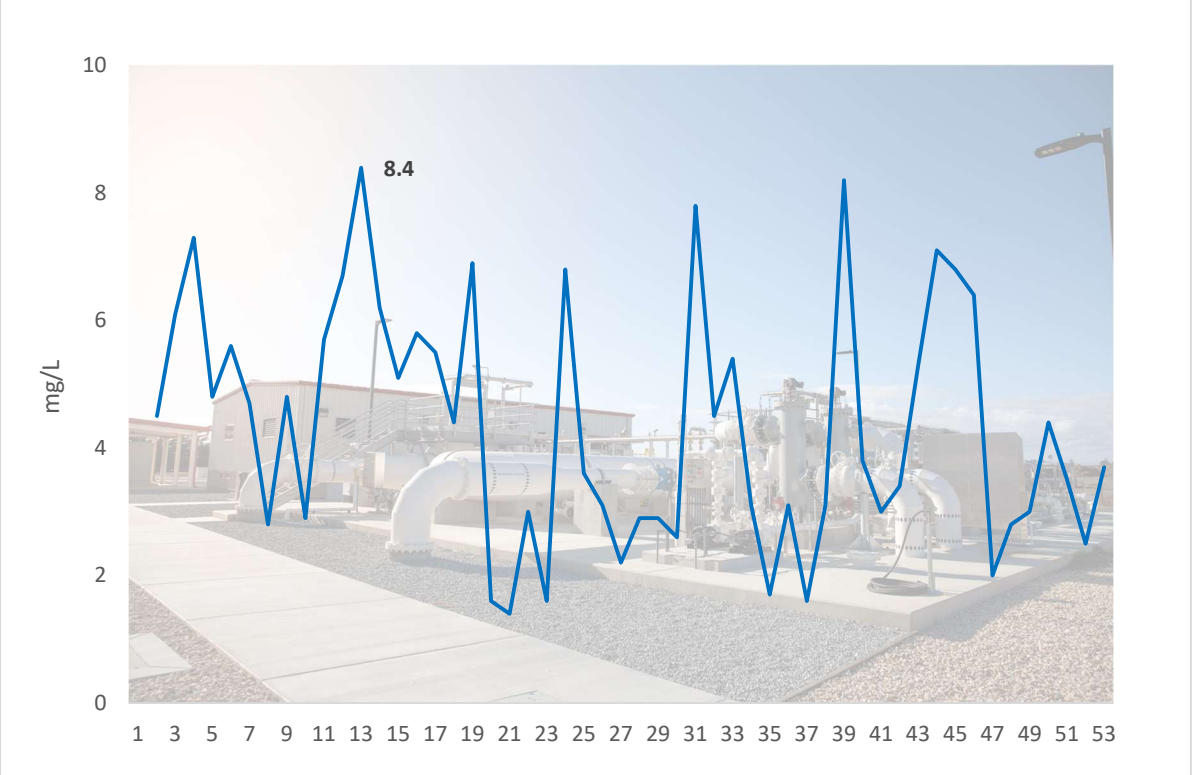


Figure 16. AWPF INF – Weekly TSS (mg/L)

Table 17. AWPF INF – Weekly Total Coliform (MPN/100mL)

Week	Total Coliform MPN/100mL	Week	Total Coliform MPN/100mL	Week	Total Coliform MPN/100mL
1	-	18	637,000	36	591,000
2	727,000	19	959,000	37	7,270,000
3	712,000	20	275,000	38	1,780,000
4	457,000	21	1,935,000	39	5,794,000
5	443,000	22	882,000	40	1,334,000
6	909,000	23	529,000	41	1,500,000
7	3,260,000	24	19,863,000	42	2,851,000
8	1,145,000	25	546,000	43	2,755,000
9	959,000	26	794,000	44	1,354,000
10	727,000	27	373,000	45	1,334,000
11	733,000	28	249,000	46	1,664,000
12	932,000	29	738,000	47	504,000
13	813,000	30	350,000	48	576,000
14	556,000	31	1,935,000	49	1,112,000
15	4,352,000	32	1,670,000	50	537,000
16	1,354,000	33	959,000	51	2,489,000
17	565,000	34	1,178,000	52	703,000
		35	985,000	53	932,000



Figure 17. AWPF INF – Weekly Total Coliform (MPN/100 mL)

Table 18. AWPF INF – Weekly TDS (mg/L)

Week	TDS mg/L	Week	TDS mg/L	Week	TDS mg/L
1	-	18	816	36	867
2	800	19	840	37	860
3	828	20	872	38	880
4	857	21	836	39	822
5	807	22	864	40	840
6	816	23	968	41	826
7	860	24	880	42	816
8	832	25	940	43	748
9	852	26	960	44	810
10	824	27	932	45	816
11	860	28	870	46	812
12	844	29	860	47	766
13	824	30	853	48	792
14	856	31	868	49	904
15	848	32	870	50	748
16	844	33	852	51	626
17	823	34	868	52	762
		35	858	53	884



Figure 18. AWPF INF – Weekly TDS (mg/L)

See Table 2 and Figure 2 for AWPF INF – Daily Total Flow (MGD)

Table 19. AWPF INF – Monthly Min and Max Flow (MGD)

Month	Min	Max
January	3.47	5.97
February	3.68	6.19
March	4.62	6.27
April	4.70	6.54
May	1.55	6.33
June	0.85	5.29
July	2.20	5.48
August	2.37	5.63
September	4.40	6.55
October	1.95	6.45
November	4.37	6.85
December	3.55	7.17

Calculated

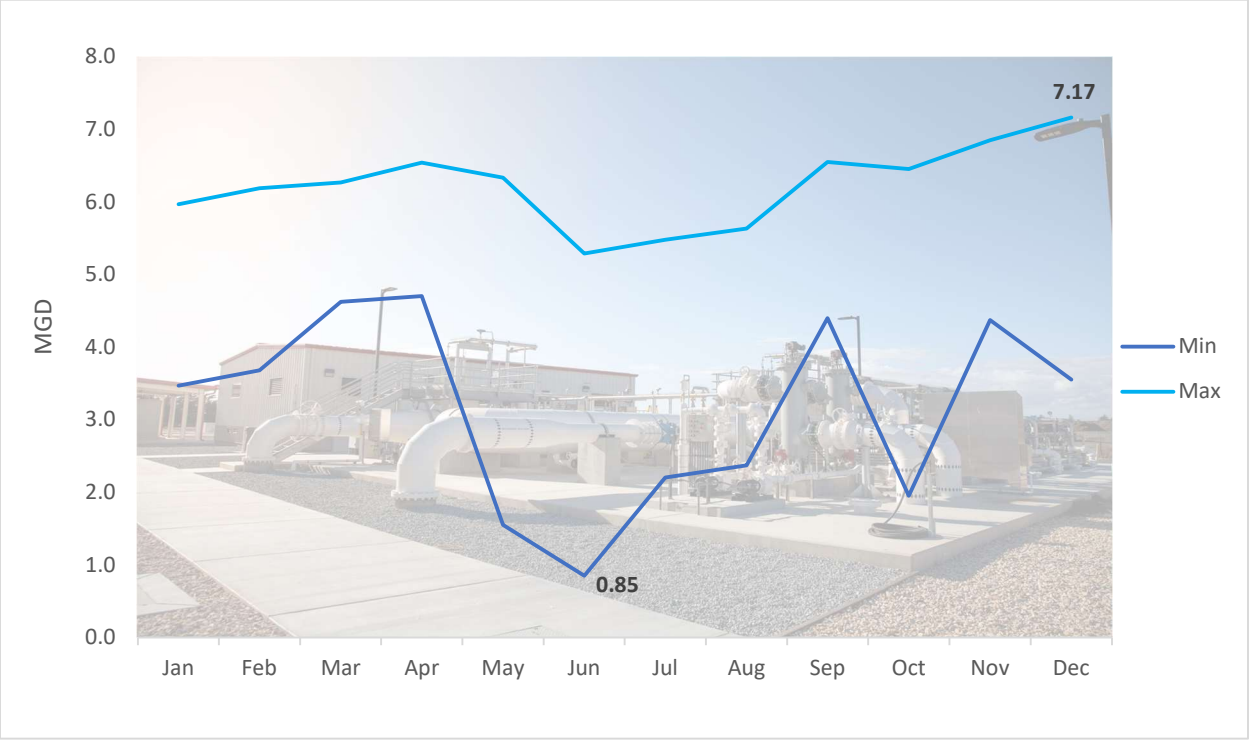


Figure 19. AWPF INF – Monthly Min and Max Flow (MGD)

Table 20. AWPF INF – Weekly Total Kjeldahl Nitrogen-N (mg/L)

Week	TKN mg/L	Week	TKN mg/L	Week	TKN mg/L
1	-	18	41.4	36	51.7
2	37.3	19	38.7	37	42.7
3	41.1	20	45.3	38	47.1
4	43.8	21	40.1	39	48.4
5	40.4	22	39.3	40	44.0
6	45.4	23	40.0	41	42.2
7	47.5	24	43.5	42	43.8
8	43.7	25	39.4	43	43.9
9	48.4	26	38.5	44	43.4
10	49.3	27	37.1	45	41.3
11	51.1	28	42.7	46	46.3
12	46.2	29	42.5	47	42.9
13	48.3	30	42.9	48	41.7
14	45.8	31	40.1	49	45.5
15	48.6	32	48.1	50	38.8
16	47.0	33	49.6	51	28.7
17	42.9	34	46.0	52	37.1
		35	49.3	53	50.1



Figure 20. AWPF INF – Weekly Total Kjeldahl Nitrogen-N (mg/L)

Table 21. AWPF INF – Weekly Total Nitrogen (mg/L)

Week	Total Nitrogen mg/L	Week	Total Nitrogen mg/L	Week	Total Nitrogen mg/L
1	-	18	41.4	36	51.7
2	38.1	19	38.7	37	44.1
3	41.1	20	45.3	38	48.7
4	43.8	21	40.1	39	48.4
5	40.4	22	39.3	40	46.4
6	45.4	23	40.0	41	45.0
7	47.8	24	43.5	42	48.0
8	43.7	25	39.4	43	46.3
9	48.4	26	39.1	44	47.8
10	49.3	27	37.1	45	45.3
11	51.1	28	42.7	46	48.8
12	46.2	29	42.5	47	45.0
13	48.3	30	42.9	48	46.6
14	45.8	31	40.3	49	50.4
15	48.6	32	48.1	50	42.2
16	47.0	33	49.6	51	31.6
17	42.9	34	46.0	52	41.3
		35	49.3	53	54.6

Total Nitrogen includes Nitrate-N, Nitrite-N, Ammonia-N and Organic-N.



Figure 21. AWPF INF – Weekly Total Nitrogen (mg/L)

Table 22. AWPF INF – Weekly TOC (mg/L)

Week	TOC mg/L	Week	TOC mg/L	Week	TOC mg/L
1	-	18	18	36	4.7
2	12	19	18	37	14.0
3	17	20	17	38	17.5
4	12	21	19	39	20.8
5	16	22	17	40	20
6	16	23	15	41	20
7	24	24	20	42	19
8	13	25	18	43	18
9	11	26	16	44	23
10	20	27	18	45	21.9
11	14	28	21	46	22.7
12	12	29	25	47	14.6
13	12	30	21	48	17.4
14	16	31	18	49	18.0
15	23	32	37	50	17.9
16	23	33	23	51	17.0
17	16	34	18	52	16.4
		35	5.4	53	20.5



Figure 22. AWPF INF – Weekly TOC (mg/L)

Table 23. AWPF INF – Daily Average Turbidity (NTU)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	3.6	4.7	5.6	6.8	4.6	4.8	4.2	4.3	5.1	4.6	5.6	4.0
2	4.1	5.0	6.0	7.6	5.1	4.5	4.3	4.3	5.4	4.9	4.7	4.3
3	4.4	4.9	5.3	7.1	5.3	4.5	4.0	3.8	5.4	4.8	5.0	4.2
4	4.3	5.9	5.3	7.8	4.5	6.4	4.6	3.9	5.1	4.9	4.7	3.5
5	4.0	5.9	5.9	7.2	4.0	5.6	3.7	3.6	5.2	4.7	4.4	3.4
6	4.1	5.8	5.8	8.4	4.7	4.9	3.8	3.6	6.1	4.1	4.3	3.6
7	4.5	5.4	5.3	6.7	4.4	4.7	4.3	3.3	5.9	4.5	4.7	3.6
8	5.0	4.9	5.7	6.6	4.7	4.5	4.4	3.7	5.3	4.5	4.5	3.7
9	4.6	5.5	10.3	7.8	4.5	4.3	4.3	3.9	3.5	4.7	4.2	4.3
10	5.0	5.1	6.6	7.0	4.6	5.0	4.5	3.8	4.4	4.8	4.4	4.8
11	5.1	5.3	5.7	6.9	4.8	4.5	4.4	3.2	4.1	4.7	4.2	4.0
12	4.7	4.9	5.0	6.5	5.0	4.6	4.6	3.6	3.9	4.6	4.3	3.5
13	4.3	5.3	5.3	6.8	4.6	4.2	4.3	3.9	4.3	4.0	4.6	3.4
14	4.5	5.0	4.8	8.5	4.3	4.5	4.5	4.0	4.1	4.7	5.0	3.6
15	4.5	4.7	5.2	6.5	4.7	4.5	4.5	4.2	4.4	4.8	4.9	3.8
16	4.0	4.8	5.3	6.4	4.9	4.7	4.6	3.9	3.9	4.7	4.9	3.8
17	4.3	4.7	5.2	5.8	5.0	5.0	5.1	3.9	4.3	4.5	4.8	3.8
18	4.1	5.1	5.2	6.1	5.0	5.6	5.0	3.9	4.2	4.4	4.0	3.9
19	4.1	5.3	5.1	6.3	4.8	5.6	5.4	3.6	4.5	4.2	3.6	3.7
20	4.2	5.4	5.3	6.3	4.7	6.0	5.8	4.0	3.4	3.5	3.5	3.6
21	4.3	5.2	5.6	6.8	4.5	5.9	5.7	4.4	3.9	4.2	3.9	3.6
22	4.4	5.8	5.9	6.1	4.4	5.1	5.5	4.2	3.7	3.9	3.7	3.5
23	4.5	6.0	5.5	5.1	4.8	4.2	6.3	4.4	3.8	4.5	4.1	3.4
24	4.9	6.1	5.8	4.9	5.0	4.5	6.4	5.1	4.3	4.4	3.7	3.3
25	4.5	6.0	5.9	5.5	4.7	4.9	5.9	4.7	4.6	4.6	3.9	3.4
26	4.5	6.4	6.3	5.6	4.3	5.1	5.4	5.1	4.6	4.4	4.0	5.5
27	4.6	5.4	6.8	5.1	4.3	4.4	4.6	5.9	4.8	-	3.9	4.2
28	4.7	5.5	6.3	5.5	4.4	4.6	3.9	5.3	4.5	4.9	4.5	3.8
29	4.7		6.7	5.1	4.7	4.2	4.1	5.2	4.4	5.3	4.0	3.8
30	4.8		6.4	4.7	4.9	4.3	4.3	5.3	3.8	4.9	4.4	4.1
31	5.4		6.5		5.3		4.2	5.3		5.1		3.3

SCADA: AWPF_SW_Turb_AY_rpt

Note: 10/27/2022 AWPF was out of operation due to utility power outage.

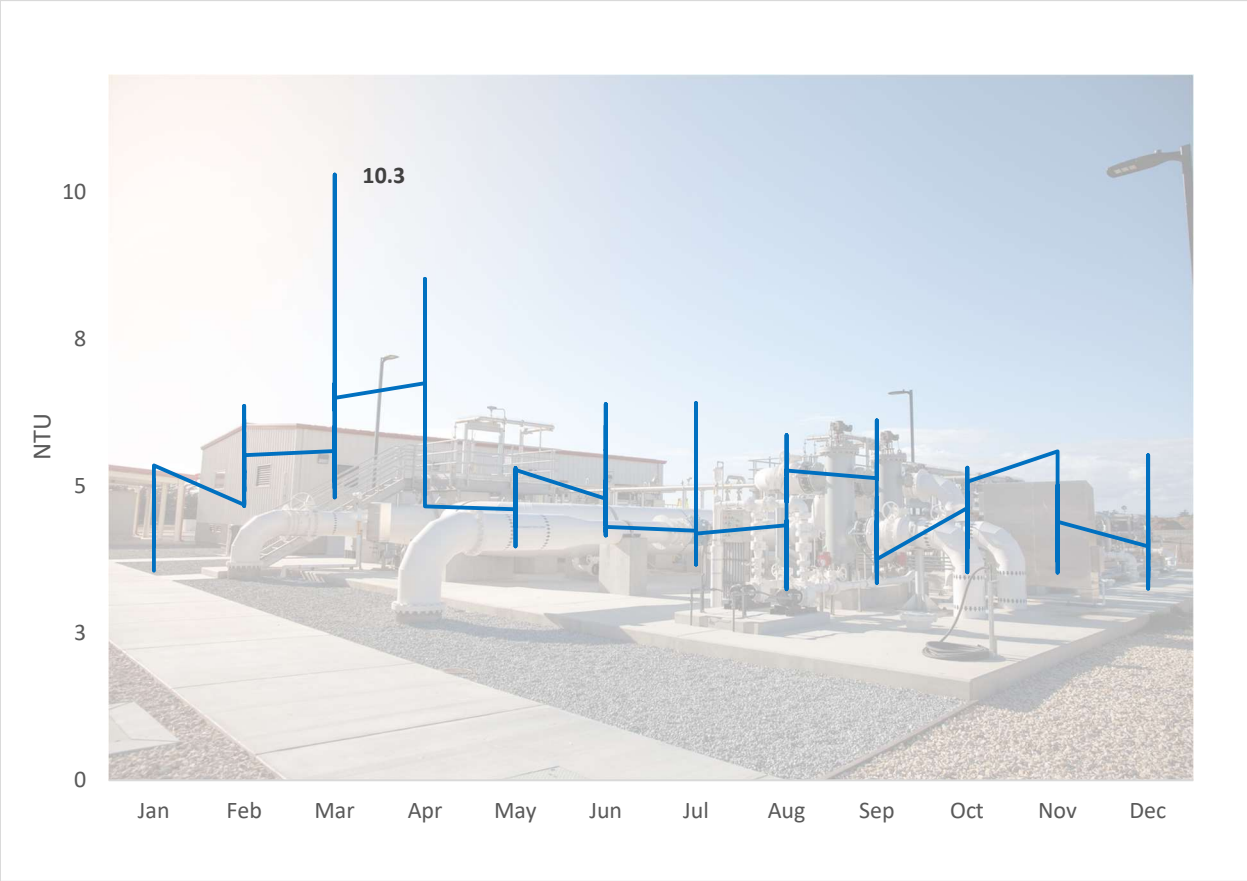


Figure 23. AWPF INF – Daily Average Turbidity (NTU)

Table 24. AWPF INF – Monthly Min and Max Turbidity (NTU)

Month	Min	Max
January	3.6	5.4
February	4.7	6.4
March	4.8	10.3
April	4.7	8.5
May	4.0	5.3
June	4.2	6.4
July	3.7	6.4
August	3.2	5.9
September	3.4	6.1
October	3.5	5.3
November	3.5	5.6
December	3.3	5.5

Calculated

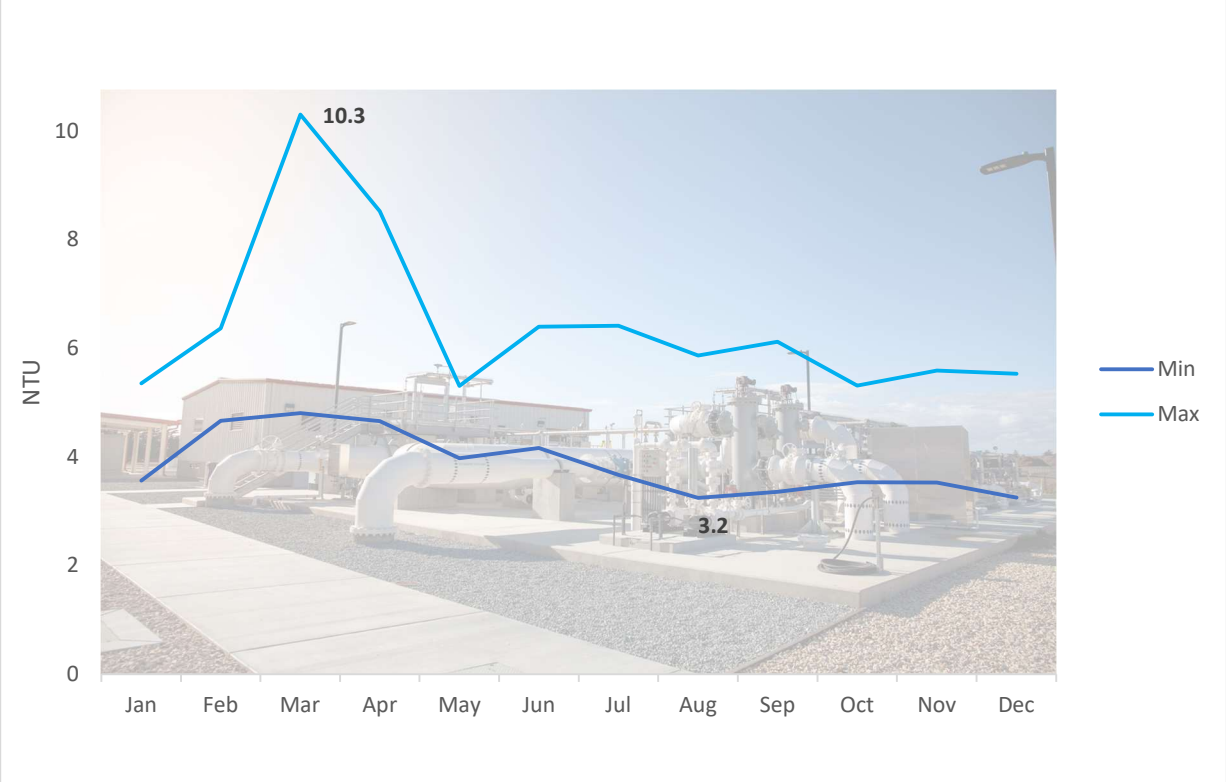


Figure 24. AWPF INF – Monthly Min and Max Turbidity (NTU)

Table 25. AWPF INF – Weekly UV Transmittance (%)

Week	UVT %	Week	UVT %	Week	UVT %
1	-	18	58.2	36	53.2
2	44.4	19	58.9	37	58.2
3	60.5	20	58.6	38	57.5
4	56.0	21	57.8	39	48.5
5	61.6	22	58.8	40	56.5
6	57.8	23	60.4	41	57.0
7	61.0	24	57.1	42	57.1
8	59.8	25	59.7	43	54.8
9	58.4	26	60.4	44	55.7
10	58.1	27	61.1	45	57.1
11	57.4	28	60.6	46	57.3
12	58.0	29	56.0	47	59.9
13	57.6	30	57.8	48	59.0
14	59.4	31	54.2	49	55.8
15	55.3	32	50.1	50	57.9
16	58.1	33	56.4	51	55.6
17	59.0	34	57.1	52	57.6
		35	57.2	53	58.3

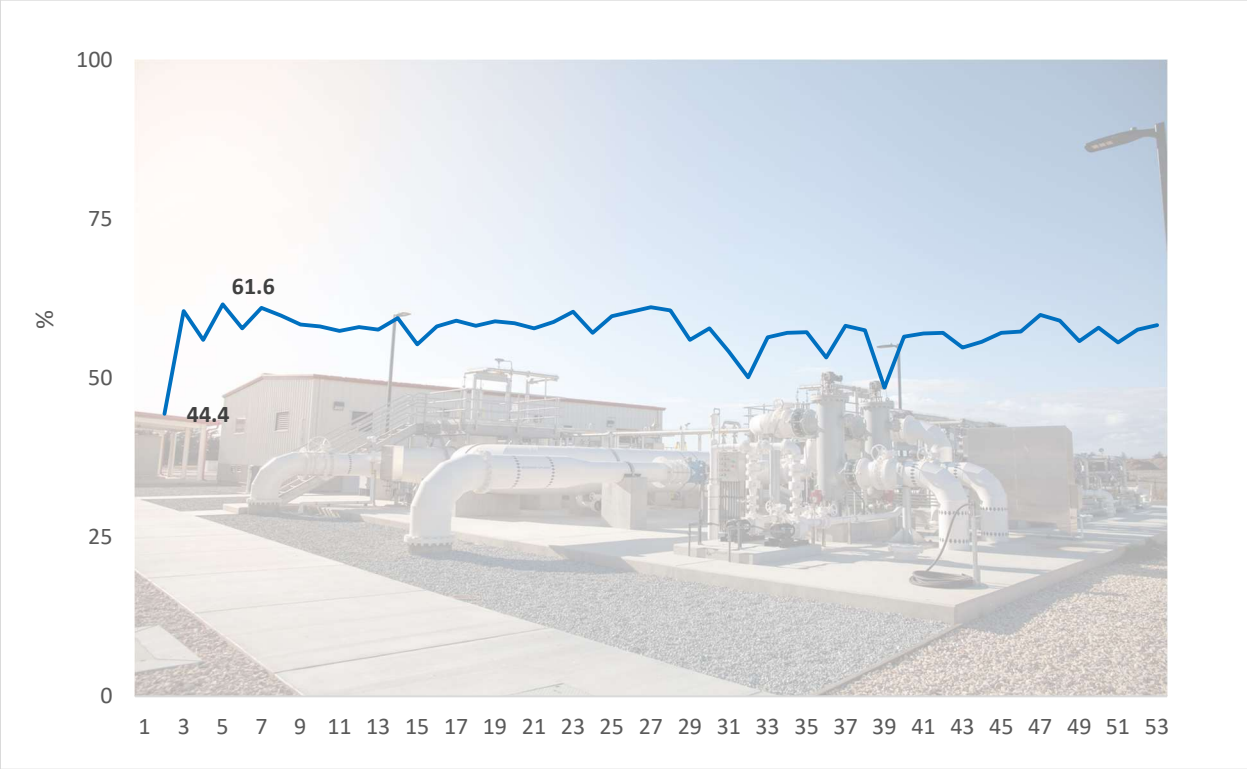


Figure 25. AWPF INF – Weekly UV Transmittance (%)

3.3.2 AWPF Recycled Water (Product Water)

AWPF recycled water monitoring is required to:

i. Determine compliance with the conditions of the Order;

ii. Identify operational problems and aid in improving facility performance; and,

iii. Provide information on recycled water characteristics and flows for use in interpreting water quality and biological data. Samples shall be collected downstream of the last chemical injection point, with the exception of constituents specified in Tables M-12, M-12a, M-13 and M-13a. Should the need for a change in the sampling station(s) arise in the future, M1W shall seek approval of the proposed station by the Executive Officer prior to use.

Tables M-3a and Table M-3b shall constitute the recycled water monitoring program. After the first full year of monitoring, M1W shall compile results and may submit a proposed reduced monitoring program to DDW and the Central Coast Water Board for review and approval.

Analytical results of samples collected during the monitoring period as outlined in M-3a through M-13 are included herein. Results of CEC monitoring per Tables M-13 and M-13a are provided consistent with the PWM CEC Quality Assurance Project Plan (QAPP).[6]

Throughout **Section 3.3.2** and **3.3.4** relevant water quality standards are called out in graphical representations of monitoring data by way of solid, dashed, or dotted red lines meant to delineate the type of limit by which the AWPF PW or Groundwater (GW) data is analyzed for compliance. Note that compliance with drinking water standards is determined based on "compliance intervals" (e.g., running annual average) as stipulated by CCR Title 22 and 40 CFR 141-143. Thus, in some instances while a single sample may exceed a water quality standard, it does not necessarily constitute a violation. See **Table 134-a Table 134-b** and **Table 134-c** for an assessment of 2022 compliance.

See the following definitions per the State Water Board[7] and the line type used to demarcate them.

- **Drinking Water Maximum Contaminant Level (MCL):** maximum permissible concentration of a contaminant established by DDW pursuant to H&SC §116275(c)(1) and (d) or the EPA pursuant to the Safe Drinking Water Act. Drinking Water MCLs are applicable to regulated water supply systems and at the tap, enforceable by DDW and local health departments. In California, MCLs, both primary and secondary, are applicable to groundwater and surface water resources when they are specifically referenced as Water Quality Objectives (see below).
    - **Primary MCL, *Solid Line*:** MCL established for the protection of human health

[6] On October 10, 2022, the Recycled Water Policy QAO notified M1W of the approval of a US-based laboratory for the use of the AhR bioassay. As of the date of this report, M1W is in the process of updating the QAPP for submittal to DDW and the Regional Water Board. Upon approval of the revised QAPP, M1W will initiate the Initial Monitoring Phase for AhR.

[7] "A Compilation of Water Quality Goals: 17th Edition, SWRCB (January 2016). https://www.waterboards.ca.gov/water_issues/programs/water_quality_goals/docs/wq_goals_text.pdf

- **Secondary MCL, *Dashed Line*:** MCL established for consumer preferences/aesthetics

- **Notification Level (NL), *Dotted Line*:** formerly referred to as "Action Levels" represent the health-based concentration of a contaminant established by DDW pursuant to H&SC §16455. NLs are non-regulatory, health-based advisories established as precautionary measures for contaminants that may be considered candidates for establishment of MCLs but have not yet undergone/completed the regulatory standard setting process and are not drinking water standards.

- **Water Quality Objective (WQO), *Dotted Line*:** numeric limitations defined by the Water Quality Control Plan for the Central Coast Basin ("Basin Plan")[8] to protect beneficial uses of water.

- **Permit Limit, *Dotted Line*:** water quality standard applicable to the Project by condition of the WDR/WRR or MRP, also referred to as "Recycled Water Discharge Limit (RWDL)."



[8] Basin Plans are master policy documents that contain descriptions of legal, technical and programmatic bases for water quality regulation in a region, including designation of beneficial uses and WQOs necessary to protect them.

Table M-3a: Recycled Water Discharge Limits Monitoring				
Constituent/Parameters	**Units**	**Type of Sample**	**Minimum Frequency of Analysis[4]**	**Reference Table Number**
Conductivity	µmhos/cm	Metered	Continuous	M-3
Total chlorine residual	mg/L	Metered	Continuous	M-3
Total recycled water flow	mgd	Metered	Continuous	M-3
UV dose for each reactor	mJ/cm^2	Metered	Continuous	-
UV Transmittance[5]	%	Metered	Continuous	-
pH	pH units	Metered	Continuous	M-3
Arsenic	µg/L	Grab	Quarterly	M-3
Boron	µg/L	Grab	Quarterly	M-3
Chromium - Total	µg/L	Grab	Quarterly	M-3
Total Nitrogen	mg/L	Grab	Weekly[6]	M-3
Nitrate-N	mg/L	Grab	Weekly	M-3
Total Kjeldahl Nitrogen-N	mg/L	Grab	Weekly	M-3
Total coliform	MPN/100 ml	Grab	Daily	M-3
Total Organic Carbon	mg/L	Metered[8]	Continuous[7]	M-3

[4] If the results of any of the above constituents with quarterly sampling schedules exceed their respective Primary MCLs or Notification Levels, M1W shall initiate monthly monitoring for the constituent(s) that exceeded the MCL(s) or NL(s) until DDW and the Central Coast Water Board approve a reduction in monitoring.
[5] Samples shall be collected at the influent point to the UV system.
[6] If a weekly total nitrogen sample exceeds an average of 5 mg/L based on the past 12 months of data, or if the average of result and its confirmation sample (taken within 24 hours of receipt of the initial result) exceed 10 mg/L, M1W shall resume monitoring two samples per week at least three days apart until DDW and the Central Coast Water Board approve a reduction in monitoring.
[7] Refer to DDW letter dated September 25, 2020. If the PWPS TOC analyzer is offline, hourly grab samples for 24 consecutive hours (collected once per week) will be accepted in lieu of continuous online TOC measurements. If the PWPS TOC analyzer is off-line for more than one (1) week, provide a discussion for the cause and steps taken to bring TOC analyzer back online in the required monthly and quarterly water quality monitoring reports.

Table M-3b: Recycled Water Discharge Limits Monitoring				
Constituents	Units	Sample Type	Sample Frequency	**Table with Constituents**
Turbidity	NTU	Metered	Continuous[8]	M-3b
Remaining Inorganics with Primary MCLs	µg/L	Grab	Quarterly[9]	M-4
Asbestos	µg/L	Grab	Once in 3 Years [10]	M-3b

Constituent/Parameters with Secondary MCLs	Various	Grab	Annually	M-5
Radioactivity	pCi/L	Grab	Quarterly [11]	M-6
Regulated organic chemicals	µg/L	Grab	Quarterly[12]	M-7
Disinfection byproducts	µg/L	Grab	Quarterly[12]	M-8
General physical	various	Grab	Annually	M-9
General minerals	µg/L	Grab	Annually	M-9
Chlorate	µg/L	Grab	Monthly	M-3b
Remaining Constituents with Notification Levels	µg/L	Grab	Quarterly[12]	M-10
Remaining Priority Pollutants	µg/L	Grab	Annually	M-11
Constituents of Emerging Concern (CECs)	ng/L	Grab	Varies	M-12
Surrogates	various	Varies	Varies	M-13
Lead and Copper	mg/L	Grab	Quarterly	M-3b

[8] For those constituents that are continuously monitored, M1W shall report the daily minimum, maximum, and average values.
[9] As required in Table M-3a, nitrate and total nitrogen must be sampled weekly to evaluate compliance with recycled water discharge limits. The weekly nitrite and nitrate + nitrite results used to calculate total nitrogen must be reported as individual constituent values to evaluate compliance with Primary MCLs. The remaining constituents in Table M-4 must be sampled quarterly. However, if the results of any of the above constituents exceed their respective Primary MCLs or Notification Levels, M1W shall initiate monthly monitoring for the constituent(s) that exceeded the MCL(s) or NL(s) until DDW and the Central Coast Water Board approve a reduction in monitoring.
[10] If an asbestos sample exceeds the Primary MCL, M1W shall resume quarterly monitoring until DDW and the Central Coast Water Board approve a reduction in monitoring.
[11] If the results of Gross Alpha Particle Activity, Gross Beta Article Activity, combined Radium-226 and Radium-228, Tritium, Strontium-90, and/or Uranium exceed their respective Primary MCLs, M1W shall initiate monthly monitoring for the constituent(s) that exceeded the MCL(s) until DDW and the Central Coast Water Board approve a reduction in monitoring.
[12] If the results of any of the above constituents exceed their respective Primary MCLs or Notification Levels, M1W shall initiate monthly monitoring for the constituent(s) that exceeded the MCL(s) or NL(s) until DDW and the Central Coast Water Board approve a reduction in monitoring.

Table M-4: Remaining Inorganics with Primary MCLs		
Constituents		
Aluminum	Chromium (Total)	Nitrite (as nitrogen)
Antimony	Cyanide	Nitrate + Nitrite
Arsenic	Fluoride	Perchlorate
Barium	Mercury	Selenium
Beryllium	Nickel	Thallium
Cadmium	Nitrate (as nitrogen)	

Table M-5: Constituents/Parameters with Secondary MCLs		
Constituents		
Aluminum	Manganese	Sulfate
Chloride	Methyl-tert-butyl-ether (MTBE)	Thiobencarb
Color	Odor – Threshold	Total Dissolved Solids
Copper	Silver	Turbidity
Foam Agents (MBAS)	Specific Conductance	Zinc
Iron	Sodium	

Table M-6: Radioactivity		
Constituents		
Gross Alpha Particle Activity (Including Radium-226 but Excluding Radon and Uranium)	Combined Radium-226 and Radium-228	Tritium
Gross Beta Particle Activity	Uranium	Strontium-90

Table M-7: Regulated Organics		
Constituents		
(a) Volatile Organic Chemicals	1,1,1-Trichloroethane	Diquat
Benzene	1,1,2-Trichloroethane	Endothall
Carbon Tetrachloride (CTC)	Trichloroethylene (TCE)	Endrin
1,2-Dichlorobenzene	Trichlorofluoromethane	Ethylene Dibromide (EDB)
1,4-Dichlorobenzene	1,1,2-Trichloro-1,2,2- Trifluoroethane	Glyphosate
1,1-Dichloroethane	Vinyl Chloride	Heptachlor
1,2-Dichloroethane (1,2-DCA)	Xylenes (o,m,p)	Heptachlor Epoxide
1,1-Dichloroethene (1,1-DCE)	**(b) Synthetic Organic Chemicals**	Hexachlorobenzene
cis-1,2-Dichloroethylene	1,2,3 Trichloropropane	Hexachlorocyclopentadiene
trans-1,2-Dichloroethylene	Alachlor	Lindane
Dichloromethane	Atrazine	Methoxychlor
1,2-Dichloropropane	Bentazon	Molinate
1,3-Dichloropropene	Benzo(a)pyrene	Oxamyl
Ethylbenzene	Carbofuran	Pentachlorophenol
Methyl-tert-butyl-ether (MTBE)	Chlordane	Picloram
Monochlorobenzene	Dalapon	Polychlorinated Biphenyls
Styrene	1,2-Dibromo-3-chloropropane (DBCP)	Simazine
1,1,2,2-Tetrachloroethane	2,4-Dichlorophenoxyacetic acid (2,4-D)	Thiobencarb
Tetrachloroethylene (PCE)	Di(2-ethylhexyl)adipate	Toxaphene
Toluene	Di(2-ethylhexyl)phthalate	2,3,7,8-TCDD (Dioxin)
1,2,4-Trichlorobenzene	Dinoseb	2,4,5-TP (Silvex)

Table M-8: Disinfection Byproducts		
Constituents		
Total Trihalomethanes[13] (TTHM)	Haloacetic Acid (five) (HAA5)	Bromate
Bromodichloromethane	Monochloroacetic acid	Chlorite
Bromoform	Dichloroacetic acid	
Chloroform	Trichloroacetic acid	
Dibromochloromethane	Monobromoacetic acid	
	Dibromoacetic acid	

[13] Laboratory must report bromoform, chloroform, dichlorobromomethane, and chlorodibromomethane individually to make up the total trihalomethanes for MCL compliance determination.

Table M-9: General Physical and General Minerals
Constituents
Calcium
Potassium
Corrosivity
Total Hardness

Table M-10: Remaining Constituents with Notification Levels			
Constituents	**Units**	**Type of Sample**	**Minimum Frequency of Analysis[14]**
Boron	µg/L	Grab	Quarterly
n-Butylbenzene	µg/L	Grab	Quarterly
sec-Butylbenzene	µg/L	Grab	Quarterly
tert-Butylbenzene	µg/L	Grab	Quarterly
Carbon disulfide	µg/L	Grab	Quarterly
2-Chlorotoluene	µg/L	Grab	Quarterly
4-Chlorotoluene	µg/L	Grab	Quarterly
Diazinon	µg/L	Grab	Quarterly
Dichlorodifluoromethane (Freon 12)	µg/L	Grab	Quarterly
1,4-Dioxane	µg/L	Grab	Quarterly
Ethylene glycol	µg/L	Grab	Quarterly
Formaldehyde	µg/L	Grab	Quarterly
HMX	µg/L	Grab	Quarterly
Isopropylbenzene	µg/L	Grab	Quarterly
Manganese	µg/L	Grab	**Quarterly**
Methyl isobutyl ketone (MIBK)	µg/L	Grab	Quarterly
Naphthalene	µg/L	Grab	Quarterly
n-Nitrosodiethyamine (NDEA)	µg/L	Grab	Quarterly
n-Nitrosodimethylamine (NDMA)	µg/L	Grab	Quarterly
n-Nitrosodi-n-propylamine (NDPA)	µg/L	Grab	Quarterly
Perfluorooctane sulfonate (PFOS)	µg/L	Grab	Quarterly
Perfluorooctanoic acid (PFOA)	µg/L	Grab	Quarterly
Propachlor	µg/L	Grab	Quarterly
n-Propylbenzene	µg/L	Grab	Quarterly
RDX	µg/L	Grab	Quarterly
Tertiary butyl alcohol (TBA)	µg/L	Grab	Quarterly
1,2,4-Trimethylbenzene	µg/L	Grab	Quarterly
1,3,5-Trimethylbenzene	µg/L	Grab	Quarterly
2,4,6-Trinitrotoluene (TNT)	µg/L	Grab	Quarterly
Vanadium	µg/L	Grab	Quarterly

[14] If the results of any of the above constituents exceed their respective Notification Levels, M1W shall initiate monthly monitoring for the constituent(s) that exceeded the MCL(s) or NL(s) until DDW and the Central Coast Water Board approve a reduction in monitoring.

Table M-11: Remaining Priority Pollutants		
Constituents		
Pesticides	**Metals**	Di-n-butyl phthalate
Aldrin	Chromium III	Di-n-octyl phthalate
Dieldrin		Diethyl phthalate
4,4'-DDT	**Base/Neutral Extractables**	Dimethyl phthalate
4,4'-DDE	Acenaphthene	Benzo(a)anthracene
4,4'-DDD	Benzidine	Benzo(b)fluoranthene
Alpha-endosulfan	Hexachloroethane	Benzo(k)fluoranthene
Beta-endosulfan	Bis(2-chloroethyl)ether	Chrysene
Endosulfan sulfate	2-chloronaphthalene	Acenaphthylene
Endrin aldehyde	1,3-dichlorobenzene	Anthracene
Alpha-BHC	3,3'-dichlorobenzidine	1,12-benzoperylene
Beta-BHC	2,4-dinitrotoluene	Fluorene
Delta-BHC	2,6-dinitrotoluene	Phenanthrene
Acid Extractables	1,2-diphenylhydrazine	1,2,5,6-dibenzanthracene
2,4,6-trichlorophenol	Fluoranthene	Indeno(1,2,3-cd)pyrene
P-chloro-m-cresol	4-chlorophenyl phenyl ether	Pyrene
2-chlorophenol	4-bromophenyl phenyl ether	**Volatile Organics**
2,4-dichlorophenol	Bis(2- chloroisopropyl) ether	Acrolein
2,4-dimethylphenol	Bis(2- chloroethoxyl)methane	Acrylonitrile
2-nitrophenol	Hexachlorobutadiene	Chlorobenzene
4-nitrophenol	Isophorone	Chloroethane
2,4-dinitrophenol	Nitrobenzene	1,1-dichloroethylene
4,6-dinitro-o-cresol	N-nitrosodiphenylamine	Methyl chloride
Phenol	Bis(2- ethylhexyl)phthalate	Methyl bromide
2-chloroethyl vinyl ether	Butyl benzyl phthalate	

Table M-12: Constituents of Emerging Concern							
						Monitoring Locations	
Constituent	Relevance/ Indicator Type	Type of Sample	Minimum Frequency	Monitoring Trigger Level (µg/L)	Reporting Limit (µg/L)	Prior to RO	AWPF Recycled Water
1,4-Dioxane	Health	grab	Quarterly	1	0.1	-	X
n-Nitrosodimethylamine (NDMA)	Health & Performance	grab	Quarterly	0.010	0.002	X	X
Perfluorooctane sulfonate (PFOS)	Health	grab	Quarterly	0.013	0.0065	-	X
Perfluorooctanoic acid (PFOA)	Health	grab	Quarterly	0.014	0.007	-	X
n-Nitrosomorpholine (NMOR)	Health	grab	Quarterly	0.012	0.002	-	X
Sucralose	Performance	grab	Quarterly	-	0.1	X	X
Sulfamethoxazole	Performance	grab	Quarterly	-	0.01	X	X

Table M-12a: DDW Specified Chemicals					
Constituent	Type of Sample	Minimum Frequency [15]	Sample Location-Prior to RO	Sample Location-Prior to AOP	Sample Location-AWPF Recycled Water
2,3,5,6-tetrachloroterephthalate (DCPA)	grab	Quarterly	X	X	X
Albuterol	grab	Quarterly	-	-	X
Caffeine	grab	Quarterly	-	-	X
Carbadox	grab	Quarterly	-	-	X
Chloropicrin	grab	Quarterly	X	X	X
Chloropyrifos	grab	Quarterly	-	-	X
Chlorothalonil	grab	Quarterly	-	-	X
Erythromycin	grab	Quarterly	-	-	X
Fluoxetine	grab	Quarterly	-	-	X
Iohexol	grab	Quarterly	-	-	X
Quinoline	grab	Quarterly	X	X	X
Triclosan	grab	Quarterly	-	-	X

[15] M1W may apply for reduced monitoring of these constituents after 1 year of data is collected

Table M-13 : Surrogates for CECs				
			Monitoring Locations	
Constituent	Type of Sample	Minimum Frequency	Prior to RO	AWPF Recycled Water
Electrical Conductivity	Online	Continuous	X	X
UV Absorbance	Grab	Quarterly	-	X
Total Organic Carbon (TOC)	Grab	Quarterly	-	X

Table M-13a : Bioanalytical Screening Tools				
Constituent	Minimum Frequency	Reporting Limit (ng/L)	Monitoring Trigger Level (ng/L)	Monitoring Locations
Estrogen receptor-α (ER-α)	Quarterly	0.5	3.5	AWPF Recycled Water.
Aryl hydrocarbon receptor (AhR)	Quarterly	0.5	0.5	AWPF Recycled Water.

Table 26. AWPF PW – Daily Average Conductivity (µS/cm)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	206	213	202	223	205	206	209	219	215	166	220	224
2	201	225	199	222	212	201	218	186	225	158	216	212
3	203	213	206	219	227	210	215	165	240	192	215	222
4	201	206	205	217	225	212	214	187	235	244	220	212
5	193	212	217	215	233	219	195	221	237	241	216	208
6	200	208	200	216	226	210	192	179	227	236	212	208
7	192	208	194	213	219	221	216	202	226	234	216	205
8	197	230	203	223	209	224	216	197	229	228	219	207
9	193	222	220	231	206	231	210	214	231	223	207	215
10	186	228	218	229	205	222	225	215	233	226	212	222
11	198	218	209	222	200	215	204	220	234	219	215	202
12	207	221	210	224	195	211	216	247	229	210	212	195
13	215	217	210	220	193	223	204	219	219	232	210	198
14	213	214	207	218	186	222	194	228	220	245	207	200
15	210	213	205	218	184	217	205	234	222	245	210	204
16	209	210	210	213	200	217	184	227	226	239	212	204
17	202	211	207	207	221	203	199	215	218	237	208	204
18	204	202	217	205	220	207	209	213	218	236	209	202
19	202	208	231	204	220	194	195	219	217	238	214	206
20	205	207	228	206	218	203	204	215	207	229	234	214
21	196	206	218	229	219	199	200	216	201	227	235	217
22	195	219	221	219	216	207	216	220	205	223	234	219
23	190	216	222	222	215	240	217	219	200	219	233	218
24	194	212	224	219	219	233	209	223	188	220	229	216
25	226	205	218	216	217	206	209	225	176	231	223	212
26	219	209	219	208	214	201	204	223	183	238	228	215
27	229	209	213	199	217	210	213	232	174	-	223	203
28	229	201	210	200	212	220	208	234	177	241	222	180
29	228		206	201	206	208	214	231	172	234	234	198
30	224		217	201	202	197	216	217	186	226	231	207
31	213		224		206		206	209		223		202

SCADA: AWPF_PW_Cond_AY_rpt

Note: 10/27/2022 AWPF was out of operation due to utility power outage.



Figure 26. AWPF PW – Daily Average Conductivity (µS/cm)

Table 27. AWPF PW – Daily Min Conductivity (µS/cm)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	201	181	192	213	191	184	188	191	207	153	197	181
2	181	219	185	212	184	181	198	166	205	152	209	210
3	181	203	195	200	218	183	175	157	153	151	174	202
4	194	186	183	147	214	210	170	154	214	235	209	198
5	183	202	198	200	229	210	176	194	210	229	194	201
6	193	201	194	211	214	188	179	144	214	234	200	194
7	179	189	172	193	207	199	200	160	205	220	197	182
8	126	218	194	190	196	149	193	121	216	201	180	195
9	188	189	204	154	196	202	187	199	196	198	196	212
10	175	217	211	219	199	102	205	177	214	216	208	194
11	172	191	196	183	191	208	175	198	212	210	204	190
12	187	199	206	220	176	186	195	206	213	145	205	185
13	201	209	206	214	181	199	142	148	209	219	200	191
14	189	192	184	210	98	195	164	196	192	224	190	174
15	207	196	168	213	172	191	181	221	208	185	188	178
16	117	189	194	164	171	185	141	204	205	215	190	192
17	190	206	185	187	201	190	166	203	208	131	191	188
18	197	180	160	192	201	185	202	203	203	222	186	154
19	184	197	203	190	199	123	138	208	200	222	224	201
20	198	202	204	186	190	179	110	208	189	182	224	203
21	184	171	203	194	204	166	174	209	177	213	225	176
22	188	207	151	139	194	196	195	212	87	215	202	200
23	177	163	213	211	196	204	196	206	150	213	218	112
24	159	193	210	215	201	213	190	208	160	208	216	189
25	213	191	198	211	199	195	158	186	170	204	214	190
26	209	204	215	196	126	185	150	208	174	220	218	170
27	219	191	207	190	134	207	152	221	145	-	210	171
28	208	180	197	168	165	199	186	210	159	232	220	177
29	223		185	195	141	176	191	218	137	220	206	187
30	195		171	197	193	187	184	198	158	217	202	133
31	177		212		190		196	91		195		168

SCADA: AWPF_PW_Cond_MY_rpt

Note: 10/27/2022 AWPF was out of operation due to utility power outage.



Figure 27. AWPF PW – Daily Min Conductivity (µS/cm)

Table 28. AWPF PW – Daily Max Conductivity (µS/cm)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	214	228	225	232	211	214	228	231	238	191	230	233
2	217	228	228	229	229	213	229	229	255	162	230	229
3	211	224	222	226	241	220	221	176	255	250	227	227
4	212	218	231	225	242	222	222	222	249	251	228	216
5	204	222	247	224	245	236	218	241	246	246	225	217
6	208	220	211	227	238	232	206	241	242	249	231	218
7	205	239	207	222	227	239	226	241	242	241	229	218
8	204	240	215	237	218	243	222	241	244	240	219	228
9	200	237	229	238	215	248	218	238	244	231	220	232
10	200	238	229	236	214	248	236	243	246	231	220	224
11	208	232	223	232	210	225	237	243	247	230	220	204
12	221	237	218	228	207	218	231	346	245	238	216	206
13	222	231	216	226	207	242	233	240	237	249	214	205
14	232	225	215	225	200	242	230	245	236	255	215	211
15	218	226	217	226	203	234	223	245	234	255	217	211
16	218	221	216	221	231	234	223	241	235	251	219	214
17	219	221	216	212	237	231	220	239	228	250	221	215
18	215	216	233	217	236	221	220	224	225	253	241	229
19	211	218	235	214	232	221	216	224	238	253	242	240
20	212	216	233	229	231	223	217	222	215	240	242	242
21	241	234	233	233	232	223	224	225	217	241	242	225
22	205	234	234	231	229	211	232	237	211	234	244	222
23	201	227	227	227	224	250	232	235	208	230	244	225
24	213	226	230	225	229	244	223	232	196	229	236	221
25	231	215	228	223	232	237	221	235	186	245	238	225
26	235	217	224	226	230	213	226	235	190	246	236	222
27	239	218	220	226	226	215	226	241	190	-	239	190
28	241	219	216	206	222	236	231	247	188	260	240	207
29	237		212	207	214	237	231	247	176	241	240	214
30	233		231	208	209	205	232	230	199	237	237	210
31	229		231		214		222	237		231		195

SCADA: AWPF_PW_Cond_MaxY_rpt

Note: 10/27/2022 AWPF was out of operation due to utility power outage.



Figure 28. AWPF PW – Daily Max Conductivity (µS/cm)

Table 29. AWPF PW – Daily Average Total Chlorine Residual (mg/L)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	3.80	3.80	3.71	4.35	4.20	3.95	3.85	3.93	3.97	3.97	4.12	3.97
2	3.44	3.94	3.78	4.32	4.25	3.92	3.91	4.10	3.95	3.94	4.02	3.91
3	3.04	3.94	3.91	4.31	4.21	3.88	3.92	4.11	3.71	3.86	3.91	3.95
4	3.03	3.78	4.00	4.33	4.08	3.59	3.94	4.12	3.71	3.97	4.06	3.88
5	3.09	3.77	3.92	4.34	4.08	3.75	3.67	4.02	3.83	3.93	3.76	3.96
6	3.88	3.75	3.91	4.48	4.42	3.79	3.85	3.85	3.93	3.95	3.58	3.96
7	3.76	3.85	3.78	4.42	4.33	3.75	4.05	3.87	4.06	3.93	3.79	4.00
8	4.06	3.97	4.26	4.30	4.37	3.76	4.02	3.95	4.04	3.92	4.15	4.06
9	4.16	3.97	4.19	4.00	4.26	3.76	4.01	4.00	4.03	3.92	4.03	4.04
10	4.15	3.99	4.28	3.99	3.98	3.84	4.10	3.92	4.04	3.93	4.01	3.98
11	4.00	3.95	4.24	4.07	3.99	3.93	4.12	3.14	3.97	3.91	3.97	3.92
12	3.76	3.92	4.53	4.30	4.02	4.05	4.08	3.59	4.02	3.85	3.93	3.92
13	4.02	4.00	4.59	4.27	4.00	4.12	4.02	3.58	3.91	3.86	3.92	4.01
14	4.07	4.11	4.28	4.22	3.90	4.16	4.12	3.72	3.78	3.80	3.93	4.02
15	4.16	4.16	3.99	3.66	3.89	4.13	3.96	3.75	3.79	3.98	3.96	4.06
16	4.05	3.97	4.00	3.39	3.83	4.14	3.82	3.73	3.96	3.97	4.02	3.95
17	4.04	3.98	4.03	3.40	3.61	4.15	3.80	3.56	3.88	3.95	4.02	3.89
18	4.26	3.95	3.99	3.53	3.60	3.96	3.87	3.55	3.90	3.92	4.02	3.79
19	4.24	3.91	4.73	3.50	3.62	3.97	3.87	3.83	4.02	3.84	4.00	3.79
20	4.09	3.89	3.63	3.52	3.62	4.09	3.95	3.93	4.03	4.00	3.99	3.78
21	4.11	3.94	3.32	3.50	3.84	4.01	3.97	3.99	4.19	4.14	3.89	3.94
22	4.06	3.94	3.73	3.76	4.00	3.70	4.08	3.95	4.18	4.15	3.87	4.16
23	4.08	3.90	3.74	4.24	3.97	3.73	4.12	3.73	4.15	4.15	3.87	4.13
24	3.98	3.95	4.10	4.20	3.95	3.83	4.06	3.66	4.20	4.12	3.98	4.10
25	3.90	3.78	4.34	4.17	3.90	3.79	3.99	4.04	4.22	4.11	3.96	4.10
26	4.00	3.71	4.30	4.23	3.99	3.84	3.76	4.01	4.19	4.14	3.95	4.20
27	4.16	3.64	4.28	4.19	4.02	3.91	3.89	4.17	3.81	-	3.97	3.99
28	4.23	3.60	4.33	4.19	4.00	3.87	4.09	4.05	3.84	4.42	3.94	4.03
29	3.87		4.38	4.20	3.97	3.91	4.22	3.79	3.96	4.18	3.44	4.06
30	3.88		4.36	4.23	3.99	3.91	3.96	3.45	4.14	4.18	3.98	4.04
31	3.84		4.31		3.95		4.05	3.87		4.11		4.02

SCADA: AWPF_PW_CL_AY_rpt

Note: 10/27/2022 AWPF was out of operation due to utility power outage.



Figure 29. AWPF PW – Daily Average Total Chlorine Residual (mg/L)

Table 30. AWPF PW – Daily Min Total Chlorine Residual (mg/L)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	3.02	3.00	3.34	4.23	4.07	3.14	3.34	3.01	3.40	3.78	3.92	3.66
2	3.01	3.15	3.41	4.16	4.07	3.06	3.74	3.88	3.62	3.72	3.78	3.61
3	2.91	3.13	3.58	4.14	3.94	3.49	3.79	3.29	3.31	3.40	3.61	3.49
4	2.88	2.83	3.62	4.22	3.84	3.54	3.82	3.83	3.36	3.81	3.85	3.60
5	2.87	3.70	3.60	2.39	2.12	2.78	3.10	3.20	3.27	3.69	3.55	3.13
6	3.72	3.67	2.80	4.14	4.25	3.44	2.74	3.43	3.56	3.47	3.40	3.51
7	3.31	2.99	2.98	4.13	4.17	2.95	3.59	2.49	3.73	3.66	3.70	3.58
8	3.54	3.23	3.33	3.90	4.19	3.46	3.76	2.44	3.89	3.60	3.61	3.64
9	4.06	3.78	3.16	3.78	3.15	3.44	3.92	2.88	3.36	3.64	3.72	3.77
10	3.71	3.83	3.10	3.68	3.83	3.46	3.58	3.38	3.85	3.44	3.77	3.61
11	2.69	3.77	3.13	1.98	3.71	3.71	3.67	0.79	3.80	3.56	3.78	3.48
12	2.17	3.46	3.23	1.57	3.56	3.70	3.69	3.01	3.80	3.67	3.71	3.84
13	3.23	3.89	3.10	1.59	3.85	3.71	3.31	3.50	3.62	1.05	3.42	3.78
14	3.37	3.35	3.94	1.45	3.53	3.78	3.71	3.54	3.55	3.29	3.75	3.85
15	4.05	3.83	3.72	3.30	3.58	3.78	3.15	2.77	3.55	3.73	3.72	3.72
16	3.68	2.75	3.68	2.76	2.79	3.81	3.44	3.37	2.95	3.71	3.55	3.64
17	3.36	3.28	3.36	3.07	3.40	3.24	3.42	2.55	3.48	3.60	3.54	3.66
18	2.84	3.31	3.23	2.75	3.33	3.48	3.73	2.77	3.43	3.52	3.80	3.48
19	3.15	3.56	3.86	3.35	3.41	3.58	3.16	3.54	3.44	3.60	3.57	3.51
20	2.97	3.77	3.27	3.39	3.43	3.57	3.39	3.73	3.53	3.74	3.46	3.33
21	2.23	3.75	3.14	3.28	3.38	3.82	3.40	3.93	3.52	3.70	3.63	3.83
22	3.86	2.88	3.43	2.81	3.74	2.64	3.50	3.79	3.79	3.87	3.58	3.76
23	4.00	3.07	2.77	4.09	3.57	3.52	3.69	3.06	3.88	3.93	3.81	3.92
24	2.27	3.73	3.11	4.10	3.63	3.69	3.56	3.05	3.91	3.86	3.67	3.90
25	3.38	3.20	4.17	3.81	3.55	3.33	3.65	3.68	3.90	3.42	3.74	4.00
26	3.83	3.41	3.63	3.96	3.48	3.39	3.29	3.75	3.71	3.93	3.82	3.43
27	3.07	3.55	3.05	3.70	3.51	3.65	2.59	2.91	3.37	-	3.50	3.76
28	3.71	3.31	3.99	4.09	2.75	3.45	3.47	3.79	3.59	2.04	3.68	3.75
29	3.78		4.00	3.44	3.74	3.52	3.98	3.29	3.51	4.08	3.61	3.80
30	3.80		3.92	4.10	1.33	3.75	3.20	2.80	3.55	4.03	3.75	3.84
31	3.67		4.00		3.75		3.55	3.39		3.80		3.80

SCADA: AWPF_PW_CL_MY_rpt

Note: 10/27/2022 AWPF was out of operation due to utility power outage.

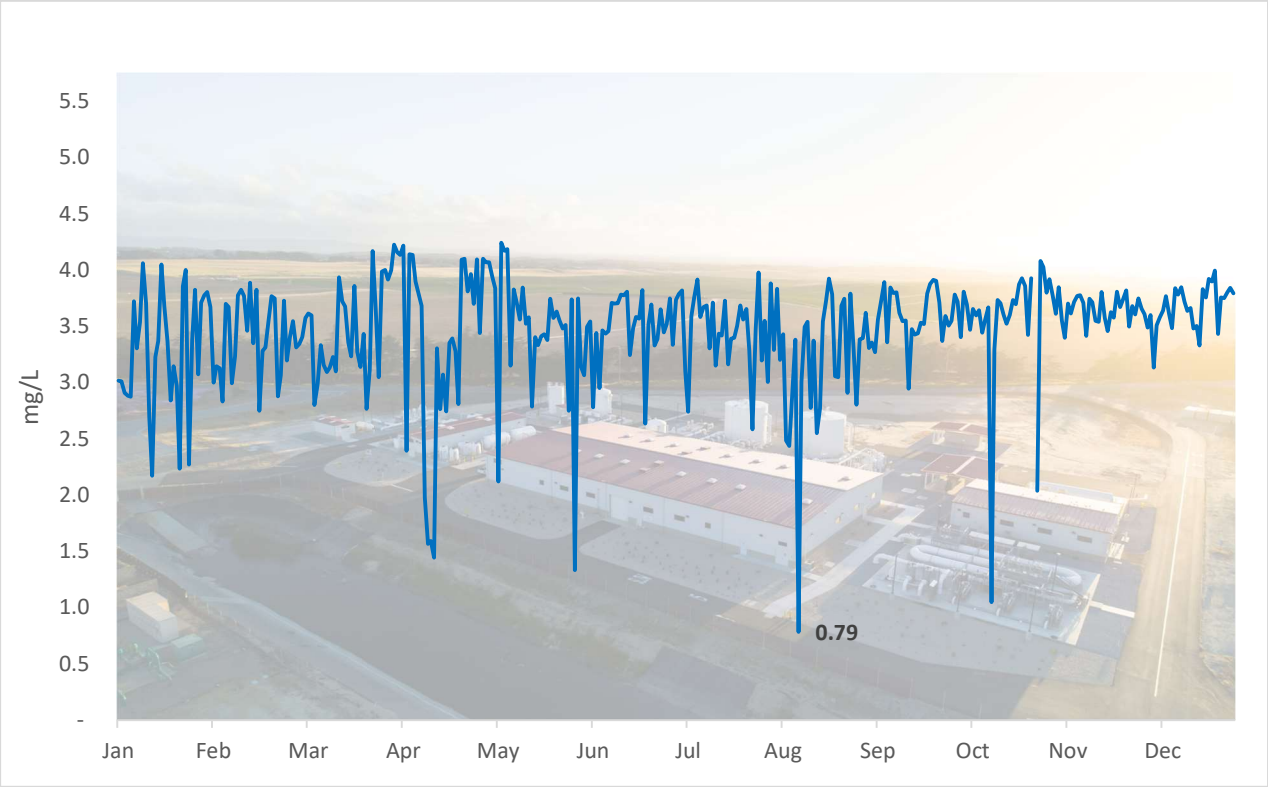


Figure 30. AWPF PW – Daily Min Total Chlorine Residual (mg/L)

Table 31. AWPF PW – Daily Max Total Chlorine Residual (mg/L)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	3.93	3.96	4.06	4.56	4.31	4.08	4.12	4.56	4.15	4.08	4.32	4.09
2	3.97	4.02	4.08	4.50	4.54	4.11	4.01	4.47	4.31	4.16	4.25	4.26
3	3.26	4.23	4.10	4.53	4.52	4.23	4.09	4.41	3.85	4.18	4.16	4.20
4	3.11	3.95	4.37	4.52	4.54	3.88	4.13	4.38	3.92	4.16	4.19	4.23
5	3.73	3.84	4.38	4.52	13.35	8.75	4.14	4.53	4.20	4.11	4.17	4.11
6	3.95	3.83	4.00	7.31	4.62	4.13	4.26	4.19	4.37	4.14	4.25	4.35
7	4.18	4.09	4.26	4.63	4.53	3.98	4.64	4.62	4.32	4.23	4.54	6.93
8	4.24	4.08	4.40	4.58	4.58	4.05	4.75	4.95	4.22	4.15	4.38	4.47
9	4.27	4.09	4.44	4.19	4.52	4.04	4.47	4.98	4.25	4.10	4.25	4.32
10	4.54	4.10	4.51	4.10	4.16	4.15	4.33	4.36	4.22	4.16	4.13	4.16
11	4.35	4.08	4.51	4.34	4.28	4.29	4.42	3.86	4.11	4.15	4.10	4.15
12	4.23	4.04	4.67	4.90	4.27	4.47	4.34	3.77	4.23	4.24	4.03	4.18
13	4.20	4.16	4.75	4.71	4.17	4.33	4.48	3.83	4.24	4.49	4.06	4.22
14	5.27	4.32	4.87	4.68	4.18	4.37	4.46	3.96	3.98	4.04	4.10	4.22
15	4.24	4.67	4.17	4.24	4.18	4.31	4.33	3.97	4.02	4.27	4.20	4.33
16	4.23	4.59	4.27	3.80	4.19	4.41	4.02	3.87	4.39	4.27	4.40	4.24
17	4.27	4.12	4.24	3.61	3.82	4.32	4.01	3.76	4.24	4.34	4.51	4.21
18	4.66	4.22	4.31	3.84	3.85	4.24	4.22	3.86	4.30	4.22	4.22	4.21
19	4.80	4.07	5.13	3.73	3.84	4.16	4.19	4.00	4.48	4.16	4.32	4.53
20	4.30	4.03	5.02	3.69	3.83	4.43	4.46	4.04	4.28	3.96	4.19	4.61
21	4.47	4.30	3.80	3.72	4.21	4.34	4.47	4.17	4.58	4.29	4.13	4.54
22	4.24	4.02	3.86	4.27	4.17	3.93	4.39	4.10	4.48	4.30	4.12	4.45
23	4.31	4.21	3.93	4.37	4.25	3.92	4.38	4.06	4.44	4.29	4.25	4.24
24	4.40	4.18	4.55	4.42	4.18	4.15	4.38	4.15	4.60	4.43	4.19	4.30
25	4.03	4.04	4.44	4.57	4.10	4.07	4.44	4.23	4.47	4.38	4.24	4.72
26	4.10	3.81	4.41	4.57	5.92	4.13	4.00	4.39	4.43	4.35	5.35	4.31
27	4.69	3.72	4.45	4.49	4.20	4.02	4.52	7.01	4.14	-	4.24	4.26
28	4.61	3.82	4.55	4.34	4.24	4.06	5.29	4.27	3.97	7.62	4.13	4.44
29	4.11		4.47	4.53	4.22	4.17	5.18	4.27	4.20	4.31	5.04	4.20
30	3.94		4.50	4.40	4.18	4.16	4.40	3.86	4.48	4.35	4.25	4.13
31	3.94		4.49		4.20		4.58	4.43		4.29		4.31

SCADA: AWPF_PW_CL_MaxY_rpt

Note: 10/27/2022 AWPF was out of operation due to utility power outage.

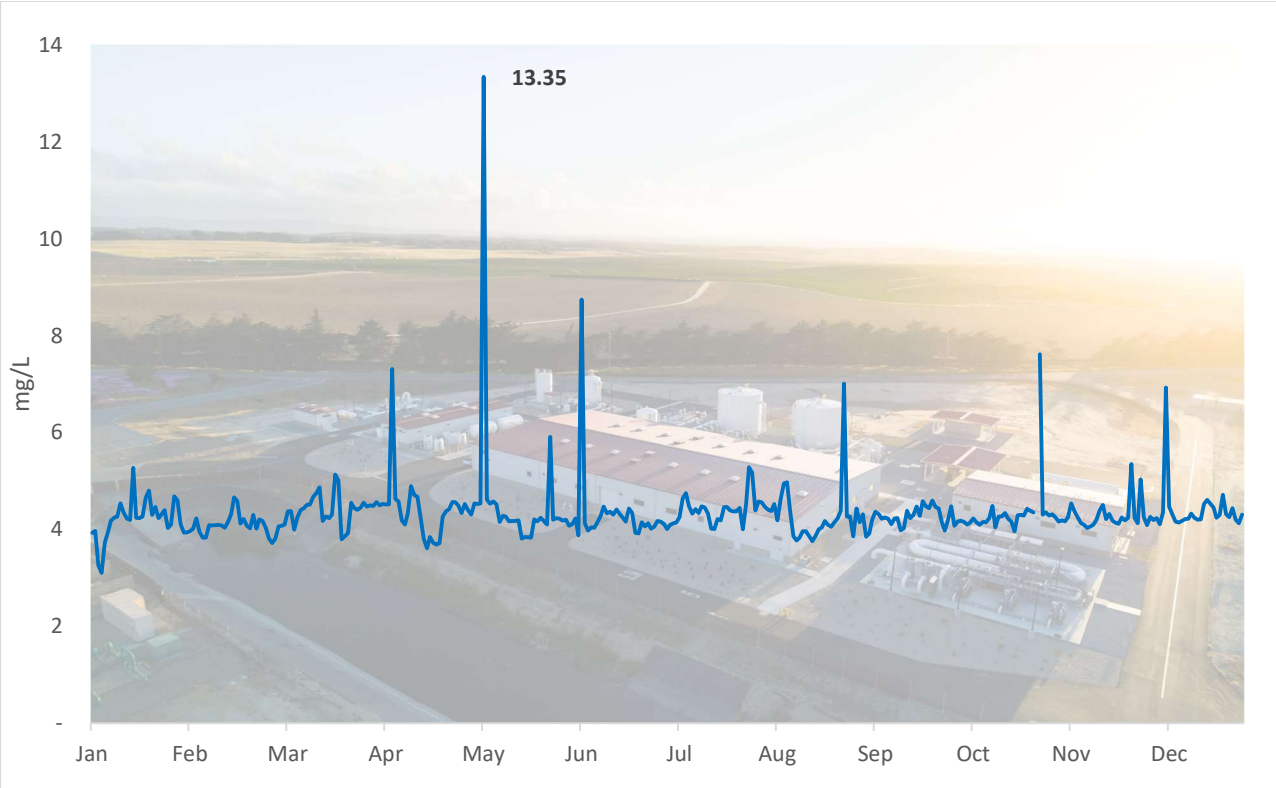


Figure 31. AWPF PW – Daily Max Total Chlorine Residual (mg/L)

Table 32. AWPF PW – Daily Average Total Recycled Water Flow (MGD)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	3.61	3.33	3.04	3.79	3.99	3.85	2.72	3.44	3.01	4.39	3.00	4.38
2	3.78	3.63	3.27	3.93	4.06	3.35	3.11	3.33	3.03	4.20	2.84	3.89
3	3.25	4.06	3.26	3.82	3.99	3.34	2.85	3.26	3.61	4.05	3.06	3.25
4	3.90	3.48	3.33	3.79	3.24	3.61	3.37	3.24	3.24	4.01	2.79	4.25
5	3.91	3.68	3.23	3.90	3.25	2.66	3.35	3.08	3.28	4.23	3.49	4.24
6	3.71	3.86	4.01	3.91	3.25	3.42	2.55	3.32	3.33	4.02	3.70	4.39
7	3.63	3.58	3.80	3.60	3.86	3.53	2.97	3.23	3.19	4.48	3.91	4.54
8	3.68	2.34	3.63	3.79	4.11	2.96	2.24	3.20	2.85	4.14	3.88	4.34
9	3.74	4.08	2.83	3.69	3.99	3.28	1.53	3.18	3.21	4.01	3.81	4.23
10	3.72	2.63	3.65	3.74	3.77	3.64	1.41	3.10	3.61	4.15	3.21	4.34
11	3.73	4.08	3.41	3.74	3.71	3.51	3.03	3.24	3.24	4.29	3.71	4.17
12	3.19	2.45	3.31	3.73	3.76	3.75	3.26	2.94	3.35	3.90	3.85	4.18
13	3.82	3.59	3.71	4.08	3.34	3.55	3.18	2.02	3.29	3.85	3.85	4.17
14	3.41	3.85	3.44	4.02	3.18	3.43	2.05	1.47	3.13	3.64	3.86	4.00
15	3.53	3.70	3.51	3.87	2.08	3.59	2.98	2.81	3.30	4.34	3.77	4.21
16	3.74	3.99	3.10	3.86	2.20	3.59	3.27	3.40	3.12	4.01	3.84	3.85
17	3.56	3.91	4.13	3.21	3.12	3.50	3.28	3.43	3.34	4.00	4.13	4.34
18	3.59	3.50	4.03	3.93	3.24	3.65	3.28	1.52	3.30	3.87	3.95	4.26
19	3.67	3.45	3.91	4.00	3.05	3.68	3.67	2.55	3.26	3.95	4.25	4.23
20	3.53	3.69	4.13	3.80	3.05	3.95	3.49	3.13	3.20	3.95	4.37	4.24
21	3.58	3.49	3.82	3.68	3.09	3.72	3.15	3.31	3.41	4.34	4.37	3.41
22	3.60	3.66	3.02	4.17	3.14	3.62	2.60	3.37	3.58	4.02	4.55	3.80
23	3.74	3.77	3.47	4.09	2.93	1.64	3.01	3.73	3.94	4.01	4.22	4.55
24	3.68	3.67	3.81	4.09	2.98	1.78	3.41	3.18	3.88	4.15	4.23	4.67
25	3.50	3.17	3.79	4.11	3.09	1.95	3.27	3.49	3.84	4.05	4.43	4.79
26	3.87	3.64	3.67	3.79	2.96	3.31	3.44	3.08	4.43	3.91	4.45	4.76
27	3.34	3.71	3.95	3.46	3.31	3.79	3.23	2.98	3.94	-	4.27	4.67
28	3.27	3.61	4.09	3.32	3.82	3.46	2.78	3.80	3.95	4.06	4.14	4.54
29	3.72		4.02	4.37	3.94	3.55	1.94	3.32	3.97	3.38	4.50	4.76
30	3.81		3.94	3.94	3.92	3.78	2.70	3.34	3.90	3.17	3.88	4.48
31	3.71		3.79		3.94		3.37	3.41		3.18		4.71

SCADA: .AWPF_PW_Flow_AY_rpt

Values based on average PW flowrate (gpm).

Note: 10/27/2022 AWPF was out of operation due to utility power outage.

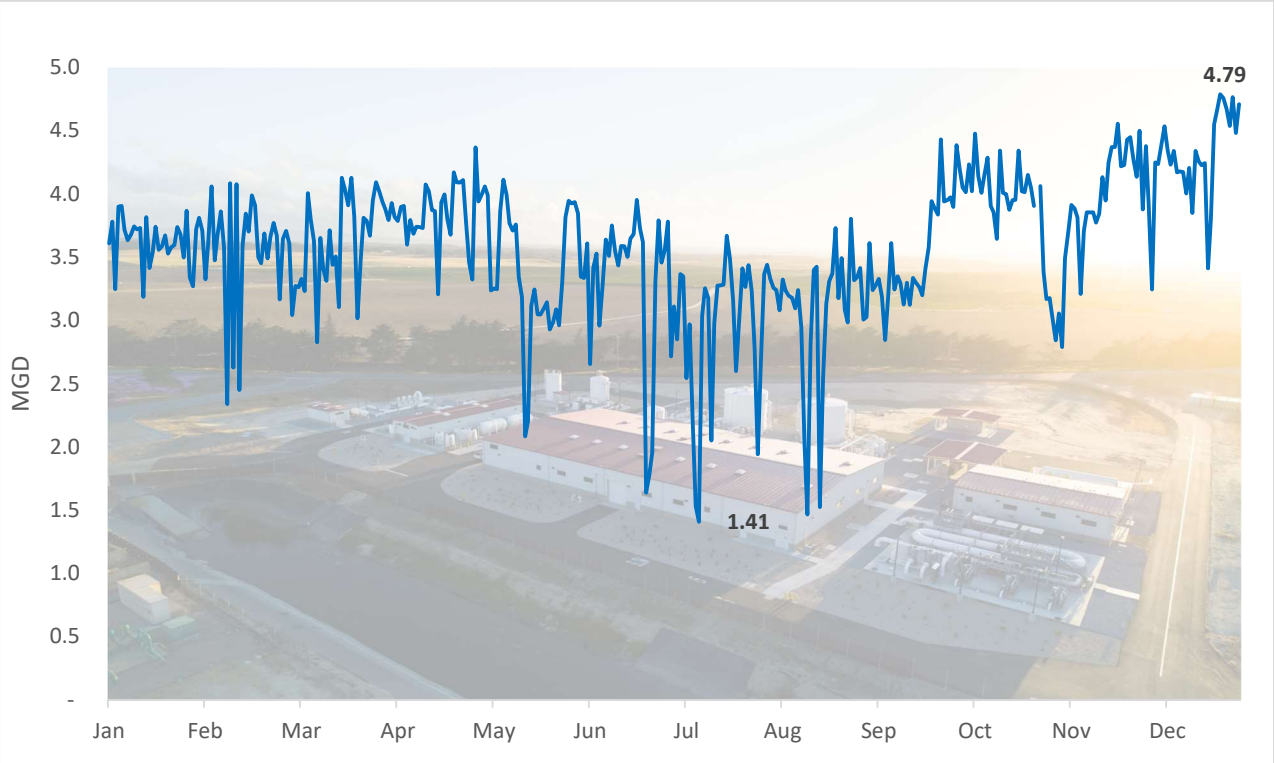


Figure 32. AWPF PW – Daily Average Total Recycled Water Flow (MGD)

Table 33. AWPF PW – Daily Min Total Recycled Water Flow (MGD)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.62	0.60	0.51	1.54	2.96	0.60	1.27	1.33	0.57	0.00	0.54	2.90
2	3.27	0.63	2.06	1.36	3.00	1.28	0.57	0.53	0.57	2.96	0.54	2.86
3	2.96	2.77	1.71	2.00	2.95	0.54	1.37	0.54	1.35	2.86	1.53	0.54
4	0.63	1.36	1.14	1.67	1.01	0.59	1.89	0.57	0.56	0.66	0.56	2.59
5	1.62	0.62	0.63	1.98	2.31	0.92	1.75	0.02	0.60	2.95	1.48	2.60
6	0.62	2.98	3.40	1.52	0.02	0.03	0.36	0.57	0.58	2.92	1.62	2.87
7	3.05	3.24	3.31	0.03	0.66	0.59	0.54	0.59	0.51	0.04	1.61	0.00
8	0.58	1.31	0.54	0.61	3.02	0.32	0.55	0.58	0.54	1.83	0.32	1.91
9	3.31	2.69	1.34	1.43	3.25	0.56	0.53	0.55	0.56	1.83	0.00	0.00
10	3.29	1.34	0.58	2.03	2.98	0.60	0.54	1.34	0.54	1.99	0.45	1.60
11	0.60	3.18	1.36	1.83	2.94	0.60	0.54	1.30	0.74	1.95	0.53	2.57
12	0.54	0.02	0.56	0.71	1.33	0.61	0.55	0.59	0.37	1.96	1.55	1.70
13	0.64	0.03	3.06	2.96	0.62	0.62	0.59	0.55	0.39	0.00	1.56	2.62
14	1.39	3.09	2.87	1.52	2.59	0.59	0.33	0.59	0.56	0.33	1.53	2.48
15	0.01	0.01	0.06	1.53	0.53	0.60	0.57	0.58	0.58	1.94	1.30	2.61
16	3.07	1.19	1.44	2.90	0.54	0.61	0.57	0.57	0.59	1.93	1.58	0.52
17	0.01	0.01	1.34	0.62	0.57	0.57	0.57	0.59	0.56	1.57	1.53	2.60
18	0.63	2.81	0.58	2.87	0.53	0.62	0.62	0.72	0.62	1.49	2.84	2.56
19	1.39	0.01	0.41	0.28	0.55	0.64	1.86	0.58	0.61	0.77	2.71	2.60
20	0.56	2.87	3.02	3.01	0.53	0.61	0.00	0.58	0.54	1.97	3.08	2.86
21	2.54	3.00	3.13	3.05	0.36	0.62	0.00	1.66	0.58	3.85	2.68	2.34
22	0.62	0.64	0.59	2.97	0.59	0.65	0.53	1.74	0.00	2.71	1.95	2.46
23	3.07	3.04	1.75	0.68	1.35	0.65	0.53	1.93	1.92	2.83	2.93	0.49
24	1.15	0.02	2.69	2.99	0.53	0.56	0.54	0.56	2.93	2.76	3.21	0.40
25	0.62	1.37	1.65	2.97	0.53	0.94	0.59	0.53	2.89	0.00	3.22	3.98
26	0.00	0.57	2.07	1.97	0.00	0.58	0.58	0.00	1.55	0.57	3.29	3.89
27	1.24	3.10	2.99	1.88	0.04	0.70	0.52	0.56	1.35	-	2.93	1.09
28	1.36	2.98	1.37	2.04	0.59	2.87	0.00	0.00	2.83	0.00	0.00	0.50
29	0.00		0.64	3.90	0.78	0.62	0.54	0.58	0.61	0.00	3.19	3.68
30	3.04		2.91	3.00	0.71	0.60	1.24	0.57	2.93	1.49	0.00	3.20
31	3.25		1.40		0.76		0.60	0.56		1.33		3.68

SCADA: .AWPF_PW_Flow_MY_rpt

Values based on average PW flowrate (gpm).

Note: 10/27/2022 AWPF was out of operation due to utility power outage.

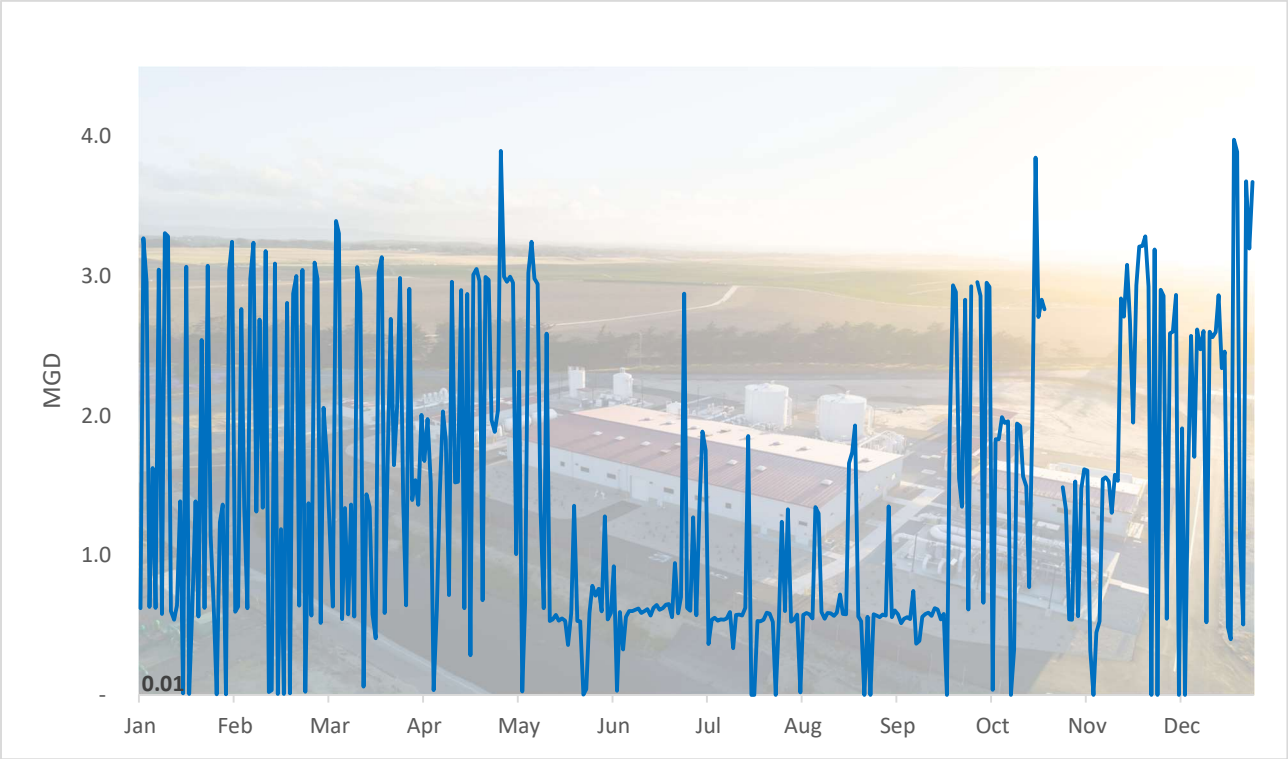


Figure 33. AWPF PW – Daily Min Total Recycled Water Flow (MGD)

Table 34. AWPF PW – Daily Maximum Total Recycled Water Flow (MGD)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	4.48	4.46	4.64	4.69	4.61	4.61	4.37	4.40	4.75	5.30	3.97	5.04
2	4.25	4.46	4.60	4.63	4.76	4.59	4.31	5.04	4.59	4.75	4.24	4.95
3	4.19	4.39	4.65	4.63	4.94	4.55	4.22	4.52	4.68	4.79	3.68	4.95
4	4.46	4.58	4.61	4.64	4.95	4.59	4.42	4.60	4.42	4.95	4.35	5.00
5	4.57	4.46	4.28	4.62	4.86	4.35	4.35	4.57	4.60	4.83	4.16	4.99
6	4.36	4.35	4.31	4.64	5.51	4.62	4.17	4.43	4.58	4.97	4.17	4.96
7	4.36	4.25	4.26	5.27	4.77	4.55	4.36	4.60	4.39	4.96	4.17	4.96
8	4.99	4.50	4.64	4.69	4.62	4.08	4.26	4.60	4.29	4.97	6.01	4.94
9	4.24	4.62	4.62	4.63	4.60	4.25	4.57	4.74	4.74	4.79	7.70	4.96
10	4.22	4.59	5.03	4.65	4.61	4.43	4.41	4.58	4.61	4.78	6.40	4.96
11	4.47	4.63	4.38	4.64	4.93	4.42	4.40	4.54	4.44	4.79	5.22	4.95
12	4.39	4.60	4.16	4.66	4.59	4.39	4.36	4.36	4.62	4.76	4.18	4.95
13	4.49	5.11	4.32	4.63	4.39	4.42	4.42	4.43	4.79	5.29	4.17	4.96
14	4.49	4.40	4.36	4.62	4.40	4.34	4.42	4.40	4.72	4.83	4.17	4.94
15	4.25	4.98	4.63	4.63	4.36	4.36	4.42	4.57	4.59	4.94	4.53	4.95
16	4.33	6.73	4.38	4.98	4.33	4.40	4.42	4.28	4.41	4.76	4.24	4.97
17	4.97	8.04	4.65	5.29	4.21	4.38	4.38	4.37	4.92	4.78	4.93	4.96
18	4.49	4.27	4.94	5.08	4.37	4.38	4.46	4.38	4.61	4.96	4.94	4.95
19	4.58	4.46	4.63	7.92	4.31	4.35	6.03	4.58	4.61	4.75	4.96	4.94
20	4.46	4.40	4.63	4.90	4.27	4.64	4.43	4.59	4.91	4.70	4.99	4.94
21	5.33	4.37	4.70	5.02	4.37	4.60	4.60	4.03	4.61	4.77	4.96	4.96
22	4.41	4.62	4.12	4.92	4.37	4.87	4.38	4.07	4.96	4.73	4.99	4.97
23	4.42	4.24	4.38	4.98	4.22	4.83	4.43	4.25	4.93	4.61	4.97	4.95
24	4.52	5.02	4.62	4.96	4.40	4.36	4.58	4.58	4.95	4.85	4.95	5.48
25	4.47	4.48	4.61	4.62	4.59	4.42	4.41	4.63	4.97	7.39	4.96	4.96
26	5.01	4.37	4.28	4.95	5.28	4.98	4.43	4.70	4.94	4.95	4.97	4.95
27	4.39	4.30	4.30	4.92	4.51	4.94	4.39	4.71	4.94	-	4.94	4.95
28	4.26	4.34	4.63	5.01	4.39	4.22	4.33	4.77	4.94	4.87	5.18	5.00
29	4.47		4.62	4.83	4.36	4.38	4.36	4.71	4.97	5.41	4.98	4.95
30	4.41		4.62	4.94	4.42	4.40	4.40	4.26	4.96	3.73	5.18	4.95
31	4.19		4.96		4.43		4.41	4.63		3.78		4.94

SCADA: .AWPF_PW_Flow_MaxY_rpt

Values based on average PW flowrate (gpm).

Note: 10/27/2022 AWPF was out of operation due to utility power outage.



Figure 34. AWPF PW – Daily Max Total Recycled Water Flow (MGD)

Table 35. AWPF PW – Daily Average UV Dose for Reactor 1 (mJ/cm²)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2,421	2,424	2,429	2,422	-	2,423	-	-	2,387	-	-	2,202
2	2,426	2,420	2,433	2,438	-	2,421	-	-	2,268	-	-	2,460
3	2,480	2,421	2,441	2,461	-	2,425	-	2,261	2,333	-	2,269	2,178
4	2,450	2,423	2,421	2,459	-	2,425	-	2,345	2,362	-	-	2,186
5	2,444	2,436	2,423	2,459	2,421	2,389	-	2,256	2,389	-	-	2,172
6	2,422	2,421	2,421	-	2,428	-	2,746	2,249	2,403	-	-	2,152
7	2,481	2,427	2,421	-	-	2,392	-	2,263	2,483	-	-	2,186
8	-	2,421	2,424	2,375	-	2,434	-	2,272	2,455	-	2,262	2,170
9	-	2,425	2,431	-	2,424	-	-	-	-	-	-	-
10	2,481	2,420	-	-	2,426	-	-	2,258	2,431	-	2,237	2,180
11	2,514	2,449	-	-	2,436	-	-	2,274	2,211	-	2,119	2,190
12	2,510	2,435	-	-	2,435	-	-	-	2,226	-	2,117	2,185
13	2,499	2,434	-	-	-	-	-	2,271	2,235	-	2,120	2,206
14	2,449	2,683	-	-	-	-	-	2,264	2,392	-	2,148	2,179
15	2,424	-	-	-	2,434	-	-	2,284	2,432	-	2,154	2,280
16	2,456	-	-	2,600	2,411	-	-	-	2,417	-	2,149	2,157
17	2,594	2,440	-	-	2,423	-	-	2,581	2,371	-	2,204	2,176
18	2,593	2,480	-	2,433	2,434	-	-	2,746	2,353	2,213	2,167	2,184
19	2,586	-	-	-	2,439	-	-	-	2,385	2,209	2,137	2,178
20	2,465	-	-	2,436	-	-	2,721	-	2,364	2,202	2,151	2,298
21	2,602	2,459	-	-	-	-	-	-	2,400	2,194	2,134	2,263
22	-	2,435	-	2,436	-	-	-	-	2,262	2,194	2,119	2,184
23	-	2,427	-	2,422	-	-	-	-	2,226	2,194	2,154	2,109
24	-	2,423	2,420	-	-	3,083	-	-	2,233	2,926	2,114	2,108
25	-	2,444	2,428	-	2,412	2,917	-	2,538	2,187	2,206	2,116	2,124
26	2,514	2,443	2,426	-	2,473	2,879	-	2,499	2,244	2,268	2,153	2,161
27	2,426	2,442	2,454	-	-	2,545	-	2,385	2,232	-	2,143	2,200
28	-	2,435	2,467	-	-	2,750	2,701	2,380	2,212	2,512	2,105	2,126
29	-		2,426	-	-	-	2,250	2,360	2,210	-	2,139	2,206
30	-		-	-	-	-	-	2,382	2,214	-	2,121	2,153
31	-		-		2,428		-	2,376		3,269		2,102

SCADA: [AWPF471AI0101_AIn.Val]

Note: Dashes indicate unit was offline.

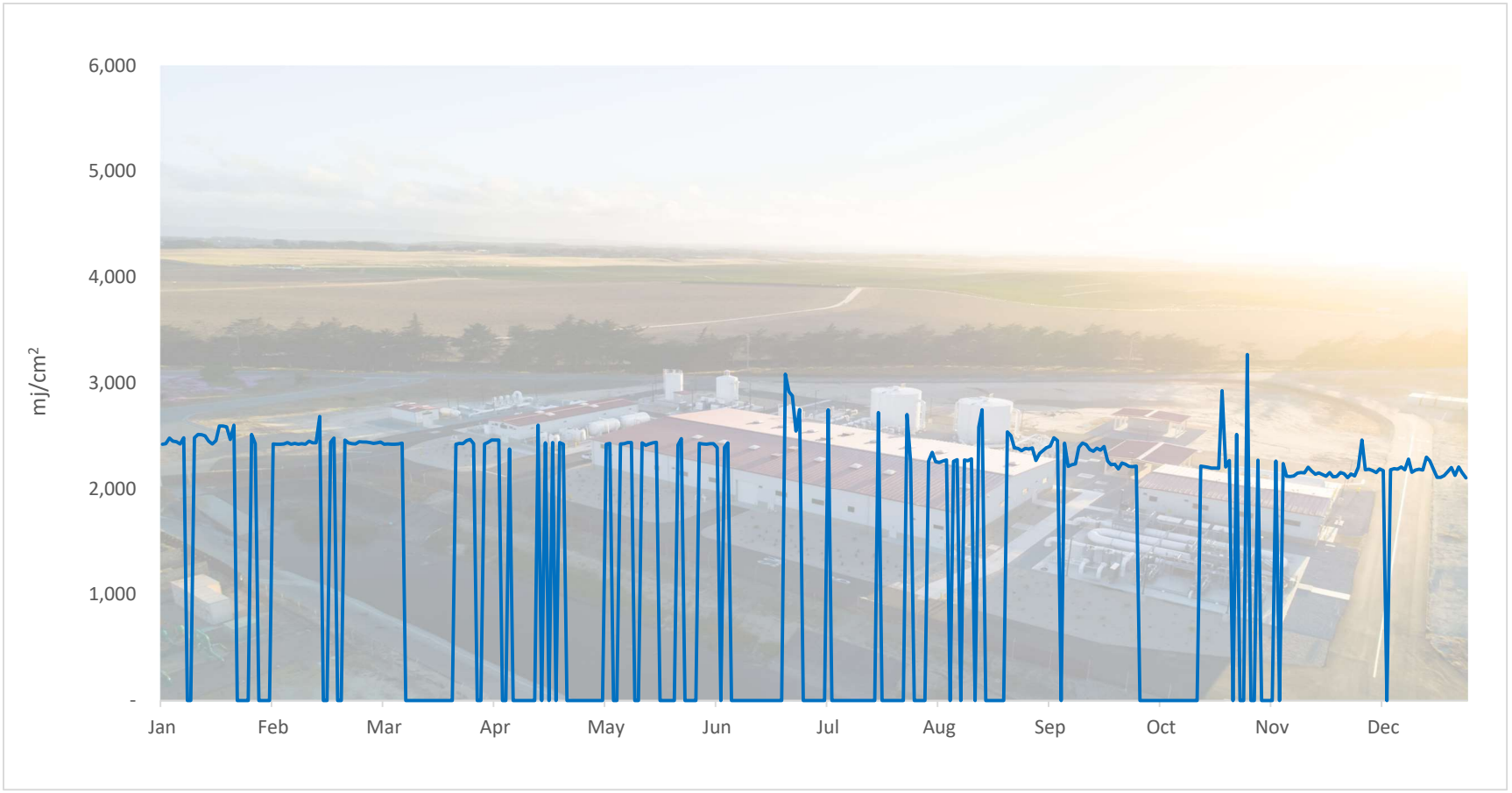


Figure 35. AWPF PW – Daily Average UV Dose for Reactor 1 (mJ/cm^2)

Table 36. AWPF PW – Daily Minimum UV Dose for Reactor 1 (mJ/cm²)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2,272	2,306	2,212	2,335	-	2,303	-	-	2,159	-	-	2,015
2	2,315	2,244	2,220	2,210	-	2,332	-	-	2,037	-	-	1,892
3	1,602	2,361	2,279	2,310	-	2,318	-	2,159	2,048	-	1,914	2,017
4	2,329	2,371	2,341	2,197	-	2,317	-	2,160	2,060	-	-	2,025
5	2,289	2,322	2,333	2,452	2,339	2,309	-	2,155	2,083	-	-	2,012
6	2,215	2,353	2,347	-	1,610	-	2,460	2,163	1,764	-	-	2,019
7	2,315	2,338	2,303	-	-	2,385	-	2,164	2,165	-	-	1,979
8	-	2,323	2,327	2,315	-	1,775	-	2,146	2,049	-	2,048	2,024
9	-	2,331	2,318	-	2,315	-	-	-	-	-	-	-
10	2,339	2,306	-	-	2,303	-	-	2,177	2,169	-	1,893	2,016
11	2,304	2,341	-	-	2,225	-	-	2,179	1,945	-	1,954	2,012
12	2,296	2,277	-	-	2,328	-	-	-	1,805	-	1,972	2,006
13	2,308	2,294	-	-	-	-	-	2,191	2,048	-	1,990	2,011
14	1,697	2,351	-	-	-	-	-	2,151	1,603	-	1,986	1,997
15	2,299	-	-	-	2,327	-	-	2,165	2,017	-	1,961	2,001
16	2,296	-	-	2,577	2,330	-	-	-	1,932	-	1,950	2,005
17	2,457	2,290	-	-	2,331	-	-	2,480	2,166	-	2,004	2,001
18	2,369	2,256	-	2,347	1,630	-	-	2,059	2,155	1,870	2,018	1,996
19	2,307	-	-	-	2,359	-	-	-	2,131	1,916	2,011	2,011
20	2,233	-	-	2,248	-	-	2,341	-	2,038	1,939	2,018	2,027
21	2,216	2,271	-	-	-	-	-	-	1,926	1,921	2,008	2,010
22	-	2,307	-	2,379	-	-	-	-	2,077	2,129	2,015	1,764
23	-	2,323	-	2,311	-	-	-	-	2,084	2,053	2,004	2,015
24	-	2,323	2,342	-	-	2,315	-	-	2,094	1,997	2,015	1,991
25	-	2,275	2,238	-	2,313	2,240	-	2,159	2,044	3,994	1,986	1,992
26	2,251	2,346	2,312	-	2,328	2,313	-	2,008	2,101	1,962	2,013	1,947
27	2,263	2,349	2,230	-	-	2,304	-	2,015	2,042	-	2,001	1,999
28	-	2,289	2,191	-	-	2,327	2,193	2,035	2,093	1,913	1,984	1,987
29	-		2,207	-	-	-	2,179	2,048	2,056	-	1,997	2,024
30	-		-	-	-	-	-	2,155	2,285	-	1,977	1,955
31	-		-		2,313		-	2,039		2,189		1,910

SCADA: [AWPF471_ReportData_V1.DailyMinDose_rpt_Y]

Note: Dashes indicate unit was offline.

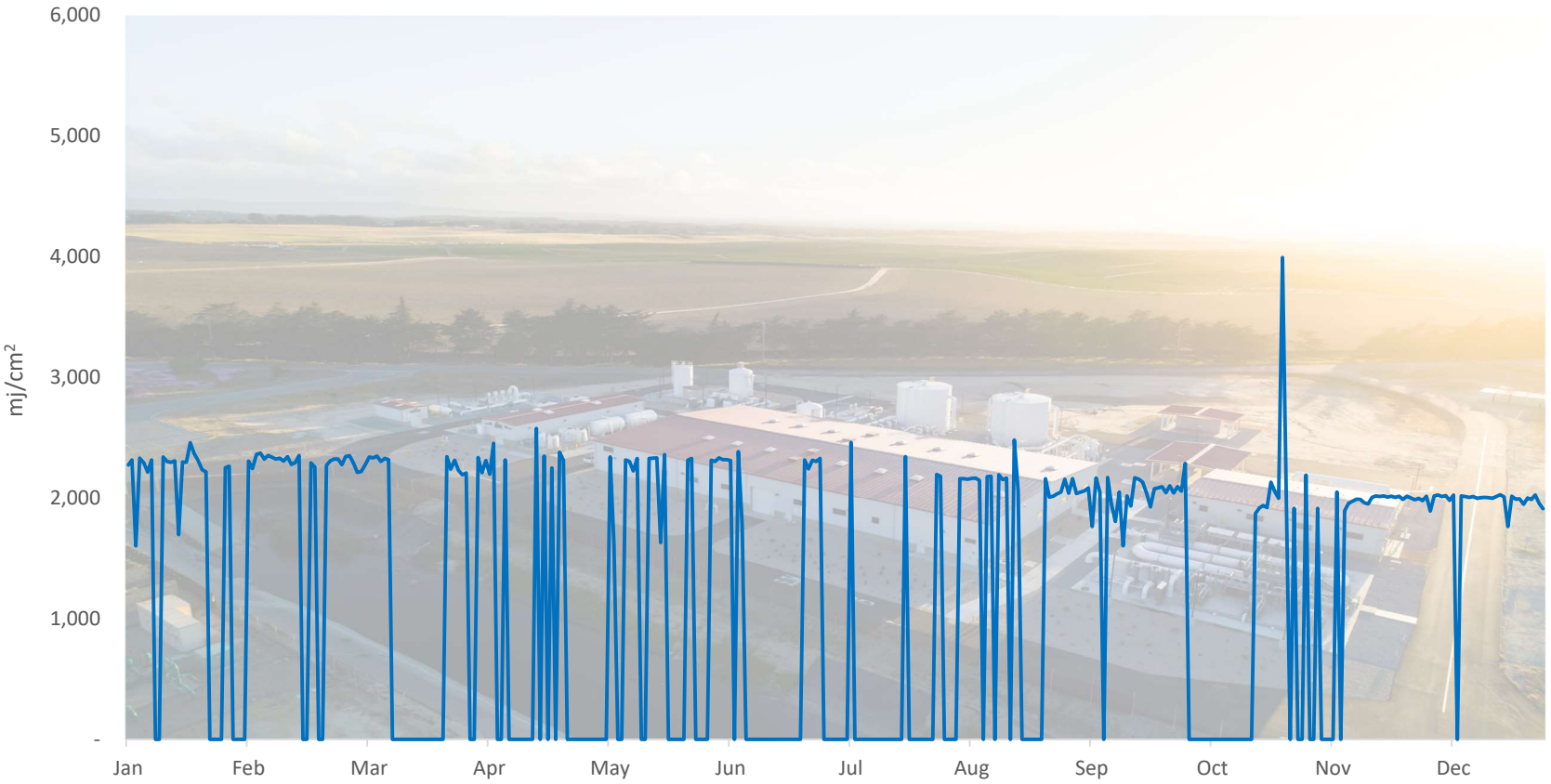


Figure 36. AWPF PW – Daily Minimum UV Dose for Reactor 1 (mJ/cm^2)

Table 37. AWPF PW – Daily Max UV Dose for Reactor 1 (mJ/cm²)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2,832	2,539	3,644	2,496	-	2,511	-	-	6,232	-	-	3,242
2	3,279	3,044	3,602	3,654	-	2,984	-	-	3,932	-	-	5,253
3	6,445	3,016	5,049	3,869	-	6,266	-	6,224	6,224	-	3,438	3,209
4	3,920	5,838	6,180	3,666	-	6,266	-	5,926	6,411	-	-	3,230
5	2,595	2,854	2,853	2,787	2,507	3,799	-	6,024	6,501	-	-	3,148
6	3,095	3,077	2,886	-	3,483	-	2,869	3,115	5,206	-	-	4,524
7	6,426	4,938	3,220	-	-	2,698	-	5,476	5,200	-	-	3,460
8	-	2,839	2,759	2,416	-	6,283	-	6,021	6,226	-	2,379	3,068
9	-	4,708	3,196	-	2,737	-	-	-	-	-	-	-
10	2,347	2,869	-	-	3,086	-	-	2,326	2,331	-	3,728	3,201
11	4,189	5,335	-	-	4,135	-	-	2,856	6,132	-	3,637	3,738
12	6,476	4,102	-	-	2,461	-	-	-	5,692	-	3,596	3,198
13	4,791	2,939	-	-	-	-	-	5,858	3,128	-	3,634	3,221
14	3,153	6,414	-	-	-	-	-	5,935	6,259	-	3,984	3,192
15	3,018	-	-	-	2,497	-	-	5,775	6,313	-	3,738	4,574
16	4,297	-	-	4,688	2,446	-	-	-	6,336	-	3,763	3,552
17	5,846	2,517	-	-	3,158	-	-	3,098	5,535	-	3,083	3,224
18	2,668	5,206	-	3,063	6,215	-	-	6,168	5,795	1,974	3,197	3,239
19	3,312	-	-	-	3,125	-	-	-	6,389	2,322	2,942	3,056
20	2,955	-	-	2,620	-	-	2,742	-	6,412	2,706	3,093	3,298
21	6,308	2,519	-	-	-	-	-	-	6,358	2,334	3,541	3,385
22	-	3,009	-	2,514	-	-	-	-	3,434	2,505	3,078	6,468
23	-	5,807	-	2,426	-	-	-	-	2,884	2,267	2,776	3,047
24	-	4,736	2,506	-	-	5,481	-	-	2,994	6,126	2,766	2,334
25	-	4,201	3,574	-	2,496	6,388	-	3,638	3,692	4,670	2,814	2,338
26	3,992	2,959	3,111	-	4,129	5,386	-	6,234	3,149	5,900	3,074	4,640
27	3,602	2,978	4,243	-	-	2,891	-	6,006	2,502	-	3,687	4,990
28	-	2,968	5,712	-	-	6,403	2,297	5,523	2,486	4,077	2,871	2,395
29	-		3,244	-	-	-	4,726	6,085	2,853	-	4,032	2,865
30	-		-	-	-	-	-	6,116	3,350	-	2,885	2,295
31	-		-		4,476		-	6,504		6,219		2,356

SCADA: [AWPF471AI0101_AIn.Val]

Note: Dashes indicate unit was offline.



Figure 37. AWPF PW – Daily Max UV dose for Reactor 1 (mJ/cm^2)

Table 38. AWPF PW – Daily Average UV Dose for Reactor 2 (mJ/cm²)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2,425	2,626	2,427	2,495	2,438	2,522	2,527	2,419	2,377	2,218	-	2,153
2	2,496	-	2,483	2,479	2,427	2,564	2,530	2,337	2,265	2,231	-	2,172
3	2,623	-	2,485	2,486	2,478	2,502	2,439	2,368	2,361	2,230	-	2,137
4	2,533	-	2,558	2,531	2,439	-	2,430	2,335	2,321	2,125	-	2,142
5	2,600	-	2,424	2,498	2,439	2,620	2,727	2,330	2,389	2,064	-	2,129
6	2,430	-	2,421	2,461	2,427	2,499	2,673	2,300	-	2,091	-	2,640
7	2,615	-	2,538	2,528	2,424	2,610	2,701	2,395	-	2,062	-	2,164
8	2,426	-	2,629	2,512	2,427	2,615	2,821	2,376	2,345	2,075	-	2,144
9	2,425	-	2,519	2,465	2,433	2,581	2,891	2,404	2,235	2,050	-	2,141
10	2,568	-	2,465	2,466	2,480	2,558	2,663	2,394	2,185	2,092	2,263	2,130
11	2,494	-	2,526	2,533	2,468	2,579	2,500	2,360	2,187	2,116	-	2,148
12	2,593	-	2,427	2,428	2,488	2,566	2,489	2,564	2,235	2,119	-	2,139
13	2,636	-	2,436	2,452	2,438	2,559	2,728	2,636	2,276	2,570	-	2,154
14	2,565	2,544	2,564	2,464	2,715	2,499	2,606	2,472	2,408	2,106	-	2,141
15	2,429	2,437	2,528	2,427	2,812	2,507	2,490	2,380	2,267	2,116	2,245	2,237
16	2,466	2,467	2,462	2,494	2,593	2,584	2,508	2,319	2,412	2,094	2,150	2,131
17	2,446	2,429	2,494	2,432	2,503	2,495	2,501	2,649	2,371	2,031	2,137	2,144
18	2,477	2,529	2,513	2,435	2,686	2,514	2,444	2,589	2,353	2,093	2,115	2,142
19	2,523	2,432	2,428	2,438	2,668	2,507	2,464	2,331	2,389	2,045	2,102	2,134
20	2,437	2,428	2,425	2,451	2,674	2,526	2,509	2,252	2,374	2,045	2,120	2,209
21	2,581	2,599	2,552	2,442	2,645	2,527	2,527	2,252	2,406	2,045	2,121	2,189
22	2,429	2,427	2,439	2,466	2,589	2,542	2,537	2,254	2,279	2,017	2,112	2,166
23	2,429	-	2,441	2,437	2,640	3,213	2,301	2,344	2,235	2,055	2,109	2,107
24	2,546	-	2,498	2,426	2,563	3,239	2,340	2,372	2,241	2,458	2,103	2,101
25	2,460	-	2,438	2,457	2,621	2,562	2,297	2,376	2,194	2,115	2,104	2,108
26	2,498	-	2,430	2,442	2,515	2,579	2,342	2,542	2,275	2,267	2,109	2,135
27	2,455	-	2,467	2,451	2,497	2,436	2,379	2,433	2,229	-	2,126	2,178
28	2,441	-	2,507	2,420	2,496	2,523	2,665	2,378	2,252	2,106	2,103	2,109
29	2,427		2,440	2,429	2,493	2,509	2,501	2,365	-	-	2,114	2,132
30	2,422		2,485	2,433	2,495	2,549	2,407	2,376	2,305	-	2,106	2,114
31	2,571		2,494		2,478		2,388	2,361		2,287		2,109

SCADA: [AWPF471AI0201_AIn.Val]

Note: Dashes indicate unit was offline.



Figure 38. AWPF PW – Daily Average UV Dose for reactor 2 (mJ/cm^2)

Table 39. AWPF PW – Daily Minimum UV Dose for Reactor 2 (mJ/cm²)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2,412	-	2,181	2,404	2,391	2,409	2,412	2,239	2,237	1,695	-	2,088
2	2,417	-	2,262	2,413	2,367	2,379	2,412	2,224	2,231	1,753	-	1,782
3	2,414	-	2,393	2,402	2,408	2,408	2,412	2,239	2,241	1,763	-	2,090
4	2,410	-	2,404	2,376	2,407	-	2,410	2,236	2,173	1,708	-	2,089
5	2,410	-	2,405	2,378	2,415	2,409	2,416	2,239	2,076	1,972	-	2,087
6	2,409	-	2,408	2,369	2,406	2,410	2,412	2,239	-	1,952	-	2,097
7	2,410	-	2,412	2,413	2,390	2,351	2,412	2,240	-	1,951	-	1,628
8	2,407	-	2,408	2,411	2,402	2,407	2,423	2,235	1,675	1,978	-	1,603
9	2,412	-	2,400	2,412	2,406	2,409	2,420	2,237	1,612	1,967	-	1,989
10	2,411	-	2,410	2,412	2,408	2,408	2,412	2,239	1,692	1,989	1,619	2,089
11	2,412	-	2,409	2,346	2,092	2,412	2,392	2,238	1,998	2,088	-	2,089
12	2,413	-	2,409	2,407	2,405	2,413	2,409	2,224	2,149	2,089	-	2,084
13	2,412	2,219	2,412	2,359	2,411	2,407	2,401	2,244	1,784	1,933	-	2,088
14	2,042	2,382	2,393	2,384	2,413	2,410	2,411	2,241	2,004	2,086	-	2,087
15	2,407	2,410	2,400	2,407	2,412	2,411	2,383	2,239	1,773	2,088	1,654	2,088
16	2,408	2,410	2,401	2,397	2,410	2,409	2,396	2,239	2,240	1,814	1,825	2,085
17	2,408	2,407	2,409	2,409	2,410	2,410	2,412	2,246	2,238	1,683	2,090	2,090
18	2,396	2,407	2,411	1,876	2,410	2,413	2,397	2,196	2,239	1,619	2,087	2,089
19	2,408	2,409	2,409	2,399	2,409	2,393	2,407	2,219	1,890	1,726	2,088	2,089
20	2,401	2,409	2,406	2,386	2,405	2,412	2,383	2,239	2,110	1,961	2,087	2,087
21	2,411	2,232	2,406	2,392	2,411	2,407	2,366	2,219	1,706	1,970	2,088	2,089
22	2,412	-	2,388	2,380	2,405	2,417	2,240	2,216	2,219	1,644	2,082	2,080
23	2,403	-	2,410	2,396	2,410	2,407	2,238	2,211	2,150	1,606	2,088	2,081
24	2,412	-	2,412	2,411	2,411	2,419	2,239	2,241	2,169	1,876	2,088	2,088
25	2,413	-	2,382	2,407	2,410	2,381	2,241	2,241	2,104	1,728	2,085	2,070
26	2,399	-	2,412	2,368	2,401	2,398	2,237	2,241	1,997	1,949	2,089	2,081
27	2,410	-	2,412	2,409	2,372	2,409	2,238	2,131	2,103	-	2,081	2,085
28	1,900	-	2,410	2,407	2,414	2,365	2,243	2,241	2,091	1,691	2,088	2,073
29	2,410		2,397	2,361	2,412	2,409	2,241	2,229	-	-	2,089	1,940
30	2,407		2,367	2,403	2,408	2,411	2,237	2,239	1,704	-	2,085	2,083
31	2,398		2,396		2,407		2,239	2,222		1,945		2,074

SCADA: [AWPF471_ReportData_V2.DailyMinDose_rpt_Y]

Note: Dashes indicate unit was offline.

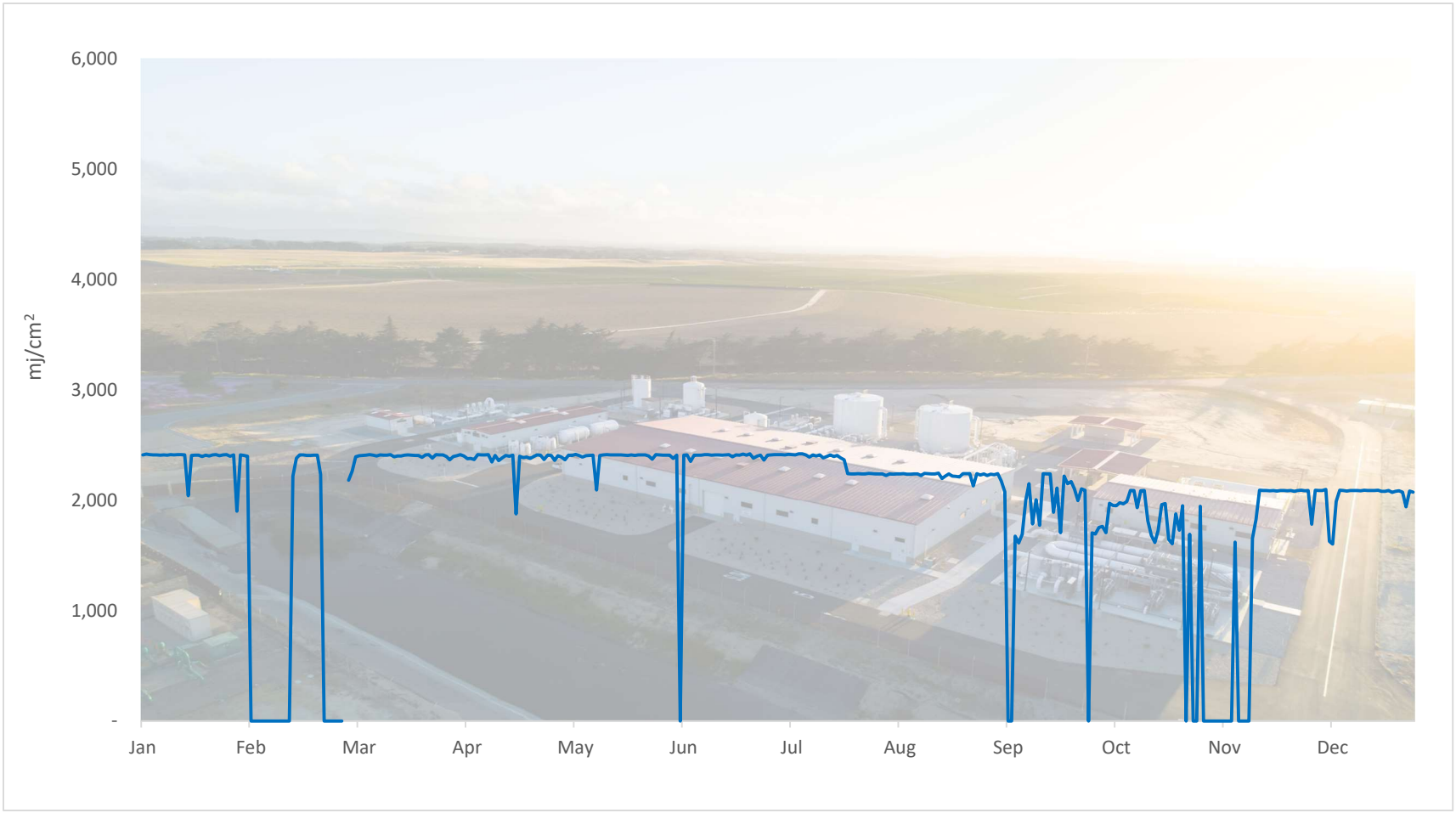


Figure 39. AWPF PW – Daily Minimum UV Dose for Reactor 2 (mJ/cm^2)

Table 40. AWPF PW – Daily Maximum UV Dose for Reactor 2 (mJ/cm^2)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2,695	5,579	2,945	3,339	3,243	4,192	3,906	5,823	5,156	2,337	-	2,687
2	2,989	-	3,759	3,183	2,797	5,191	3,429	5,110	2,883	2,308	-	4,367
3	5,598	-	3,715	3,695	4,356	5,340	2,889	5,075	5,102	2,352	-	2,598
4	3,111	-	5,448	3,188	3,030	-	2,893	4,745	4,850	2,588	-	2,587
5	5,657	-	2,640	3,285	3,530	4,744	5,840	4,087	4,449	2,422	-	2,573
6	3,120	-	2,597	3,633	3,457	4,612	5,835	3,655	-	4,080	-	3,734
7	5,635	-	5,482	4,526	2,728	4,749	5,365	5,124	-	2,962	-	2,782
8	2,711	-	3,544	3,566	2,802	5,830	4,210	5,049	2,196	2,741	-	3,149
9	2,695	-	5,367	3,142	3,003	5,885	5,834	4,022	2,444	2,670	-	3,608
10	5,574	-	4,109	3,160	3,000	4,792	5,839	4,066	2,358	3,011	2,823	2,567
11	4,047	-	5,429	4,868	3,028	5,793	5,287	5,127	2,581	2,762	-	2,792
12	5,516	-	2,913	2,820	3,979	4,809	5,392	5,121	3,153	3,679	-	2,680
13	4,384	-	2,978	3,396	2,932	4,853	5,752	4,952	2,783	6,263	-	2,590
14	3,964	2,648	4,789	3,369	4,870	5,386	5,898	5,567	5,012	2,463	-	2,651
15	3,017	3,515	3,792	2,789	5,829	5,503	5,233	5,440	2,604	2,964	2,180	3,766
16	3,632	3,457	3,711	3,877	5,502	5,849	5,360	5,140	5,038	2,424	2,452	2,687
17	3,747	2,904	4,831	2,900	5,385	5,383	5,323	4,078	4,677	2,139	2,580	2,635
18	4,378	4,601	5,490	4,600	5,791	5,417	2,816	5,624	4,130	4,214	2,579	2,655
19	3,861	3,017	2,798	3,284	5,136	5,492	3,930	5,442	5,044	2,399	2,411	2,581
20	3,055	2,951	2,802	3,308	5,822	5,456	5,382	2,878	4,844	2,331	2,598	2,704
21	5,543	5,544	5,450	3,325	5,828	5,460	4,887	2,862	5,032	2,328	2,627	2,826
22	2,998	2,751	3,072	3,772	3,518	5,378	5,331	2,724	3,021	2,477	2,606	3,890
23	4,338	-	3,072	2,878	4,899	5,150	4,752	5,115	2,520	4,248	2,493	2,481
24	5,620	-	4,165	2,790	4,110	5,186	5,228	5,061	2,436	6,457	2,456	2,171
25	4,020	-	3,003	3,132	4,248	5,311	3,668	4,079	2,827	2,976	2,352	2,182
26	3,295	-	2,962	3,092	4,572	5,199	5,213	5,708	3,963	5,781	2,483	3,967
27	3,876	-	3,709	3,054	5,194	2,858	3,540	5,568	2,544	-	3,414	4,634
28	3,027	-	5,250	2,490	5,399	5,260	4,101	4,730	3,378	2,330	2,441	2,233
29	2,958		3,008	2,744	5,361	5,380	3,297	5,104	-	-	3,192	2,587
30	2,617		3,728	2,875	5,377	4,216	5,530	5,042	4,535	-	2,552	2,611
31	5,560		3,292		4,449		4,140	4,038		3,280		2,221

SCADA: [AWPF471AI0201_AIn.Val]

Note: Dashes indicate unit was offline.

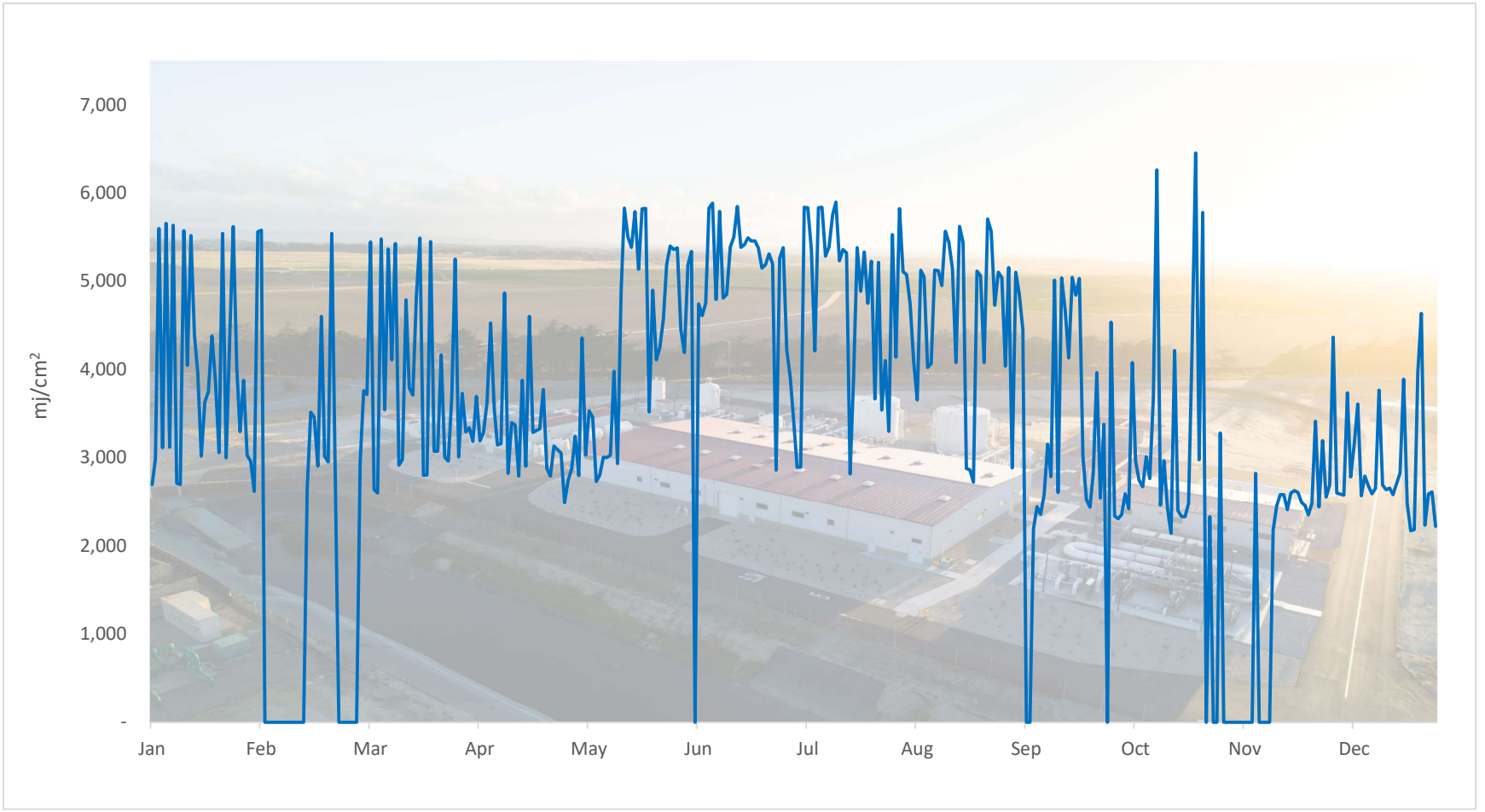


Figure 40. AWPF PW – Daily Maximum UV Dose for Reactor 2 (mJ/cm^2)

Table 41. AWPF PW – Daily Average UV Dose for Reactor 3 (mJ/cm²)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2,420	2,501	2,436	2,437	2,421	2,495	2,420	2,541	2,324	2,244	2,112	2,155
2	2,421	2,425	2,432	2,431	2,407	2,549	2,422	2,556	2,258	2,237	2,120	2,109
3	2,426	2,438	2,442	2,447	2,444	2,472	2,425	3,034	2,326	2,286	2,189	-
4	2,421	2,791	2,495	2,425	2,425	-	2,435	-	2,343	2,200	2,106	2,105
5	2,437	2,446	2,423	2,435	-	2,588	2,448	2,562	2,332	2,102	2,102	2,143
6	2,433	2,420	2,419	2,420	2,424	2,476	2,451	2,472	2,361	2,160	2,099	2,097
7	2,434	2,591	2,469	2,423	2,421	2,462	2,585	2,693	2,438	2,113	2,139	2,126
8	2,422	2,429	2,524	2,428	2,420	2,489	2,694	2,795	2,404	2,108	2,305	2,130
9	2,429	2,593	2,476	2,433	2,420	2,439	2,757	2,623	2,366	2,107	2,367	2,155
10	2,420	2,423	2,455	2,431	2,422	2,448	2,656	2,525	2,338	2,111	2,118	2,144
11	2,483	2,625	2,472	2,480	2,427	2,535	2,483	2,684	2,362	2,108	2,108	2,111
12	2,458	2,567	2,419	2,424	2,426	2,430	2,424	3,039	2,387	2,110	2,109	2,102
13	2,499	2,519	2,428	2,438	2,428	2,551	2,434	2,789	2,331	2,695	2,112	2,110
14	2,448	2,441	2,501	2,420	2,430	2,470	2,429	2,805	2,496	2,102	2,163	2,100
15	2,424	2,421	2,480	2,411	2,439	2,430	2,426	2,729	2,338	2,108	2,135	2,160
16	2,428	2,452	2,451	2,451	2,420	2,426	2,425	2,606	2,312	2,109	2,143	2,097
17	2,490	2,421	2,473	2,402	2,423	2,429	2,426	2,717	2,281	2,112	2,119	2,152
18	2,436	2,469	2,468	2,425	2,444	2,426	2,424	2,993	2,255	2,148	2,101	2,112
19	2,458	2,421	2,424	2,435	2,425	2,423	2,422	2,683	2,315	2,137	2,098	2,145
20	2,448	2,423	2,421	2,421	2,504	2,426	2,426	2,256	2,310	2,138	2,132	2,114
21	2,430	2,503	2,495	2,420	2,435	2,421	2,433	2,272	2,365	2,133	2,099	2,209
22	2,429	2,427	2,423	2,408	2,422	2,475	2,323	2,199	2,252	2,116	2,108	2,158
23	2,426	2,490	2,432	2,422	2,426	3,092	2,254	2,619	2,242	2,169	2,115	2,103
24	2,441	2,533	2,467	2,420	2,427	3,138	2,253	2,251	2,246	2,428	2,106	2,101
25	2,433	2,522	2,429	2,430	2,466	2,427	2,250	2,336	2,226	2,211	2,098	2,110
26	2,439	2,428	2,420	2,431	2,469	2,487	2,253	2,467	2,288	2,168	2,109	2,134
27	2,425	2,416	-	2,420	2,439	2,421	2,248	2,385	2,249	-	2,131	2,149
28	2,426	2,517	2,486	2,417	2,433	2,476	2,274	2,326	2,243	2,111	2,102	2,109
29	2,426		2,416	2,413	2,433	2,462	2,282	2,322	2,234	2,126	2,096	2,144
30	2,419		2,421	2,425	2,433	2,424	2,250	2,350	2,299	2,105	2,102	2,124
31	2,523		2,436		2,437		2,265	2,317		2,169		-

SCADA: [AWPF471AI0301_AIn.Val]

Note: Dashes indicate unit was offline.



Figure 41. AWPF PW – Daily Average UV Dose for Reactor 3 (mJ/cm^2)

Table 42. AWPF PW – Daily Minimum UV Dose for Reactor 3 (mJ/cm^2)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2,399	2,412	2,294	2,361	2,336	2,355	2,403	2,154	2,240	2,203	1,996	2,085
2	2,411	2,379	2,374	2,393	2,323	2,408	2,413	1,988	2,221	2,199	2,069	2,091
3	2,319	2,354	2,359	2,325	2,358	2,405	2,350	2,164	2,242	2,191	2,069	-
4	2,415	2,350	2,337	2,416	2,357	-	2,419	-	2,239	2,091	2,072	2,092
5	2,360	2,355	2,351	2,326	-	2,353	2,419	2,089	2,237	2,087	2,067	2,090
6	2,378	2,406	2,392	2,380	2,342	2,409	2,267	2,052	2,214	2,024	2,046	2,089
7	2,415	2,413	2,349	2,344	2,298	2,316	2,413	2,087	2,241	2,076	1,970	2,056
8	2,318	2,363	2,408	2,270	2,388	2,406	2,390	1,948	2,225	2,091	1,995	2,092
9	2,414	2,363	2,345	2,410	2,397	2,409	2,381	2,060	2,236	2,088	2,084	2,090
10	2,345	2,359	2,405	2,410	2,359	2,378	2,392	2,068	2,236	2,072	1,953	2,091
11	2,413	2,355	2,377	2,205	2,402	2,371	2,341	2,150	2,238	2,090	2,066	2,089
12	2,189	2,410	2,372	2,410	2,355	2,414	2,269	2,104	2,236	2,088	2,084	2,089
13	2,414	2,375	2,409	2,412	2,408	2,368	2,384	2,045	2,176	1,864	2,085	2,089
14	2,378	2,349	2,361	2,372	2,412	2,350	2,274	2,179	2,206	2,062	2,084	2,089
15	2,407	2,337	2,402	2,347	2,260	2,285	2,403	2,010	2,168	2,054	2,088	2,088
16	2,412	2,414	2,381	2,343	2,410	2,252	2,415	2,063	2,237	2,038	2,073	2,089
17	2,341	2,414	2,409	2,322	2,409	2,390	2,153	2,176	2,240	2,039	2,088	2,089
18	2,369	2,367	2,408	2,355	2,413	2,415	2,414	2,058	2,239	1,992	2,092	2,088
19	2,382	2,392	2,412	2,351	2,405	2,245	2,408	2,050	2,220	2,041	2,088	2,090
20	2,347	2,408	2,369	2,309	2,419	2,415	2,406	2,120	2,136	2,087	2,090	2,086
21	2,246	2,365	2,353	2,365	2,313	2,341	2,387	2,012	2,205	2,072	2,091	2,090
22	2,352	2,388	2,365	2,328	2,415	2,414	2,240	2,002	2,202	2,054	2,086	2,084
23	2,368	2,373	2,408	2,347	2,256	2,358	2,236	2,080	2,187	2,047	2,089	2,088
24	2,373	2,407	2,366	2,289	2,399	2,416	2,240	2,239	2,241	2,000	2,090	2,085
25	2,387	2,354	2,333	2,364	2,396	2,363	2,238	2,237	2,108	2,086	2,092	2,075
26	2,374	2,359	2,415	2,293	2,407	2,370	2,241	2,237	2,169	1,997	2,091	2,077
27	2,411	2,363	-	2,356	2,352	2,388	2,241	2,238	2,174	-	2,088	2,090
28	2,377	2,355	2,356	2,352	2,412	2,365	2,246	2,241	2,132	2,078	2,090	2,078
29	2,302		2,348	2,355	2,414	2,411	2,243	2,172	2,161	2,069	2,092	2,088
30	2,399		2,368	2,408	2,400	2,317	2,239	2,238	2,144	2,068	2,085	2,091
31	2,355		2,346		2,404		2,242	2,204		2,073		-

SCADA: [AWPF471_ReportData_V3.DailyMinDose_rpt_Y]

Note: Dashes indicate unit was offline.

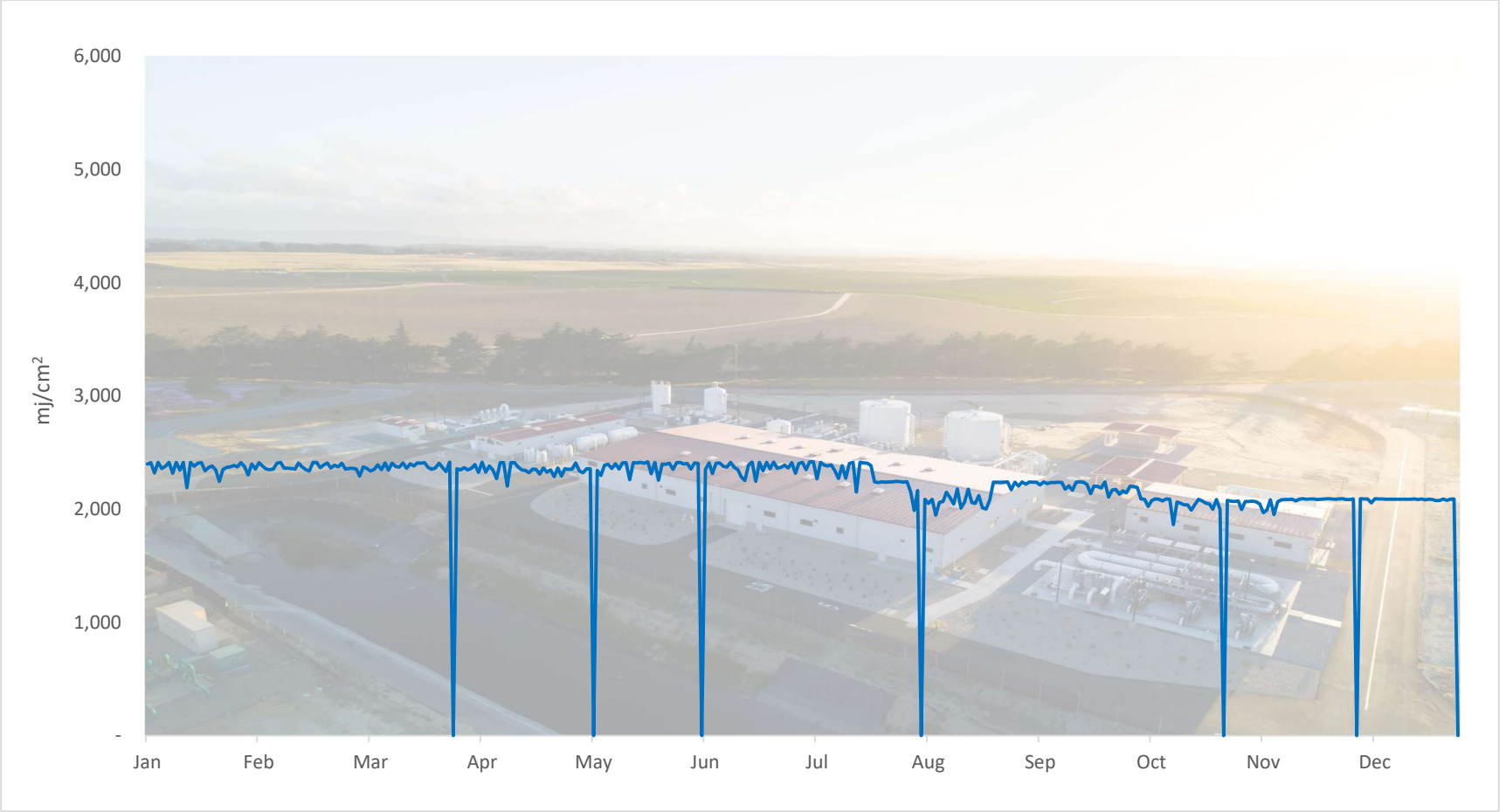


Figure 42. AWPF PW – Daily Minimum UV Dose for Reactor 3 (mJ/cm²)

Table 43. AWPF PW – Daily Maximum UV Dose for Reactor 3 (mJ/cm^2)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2,480	5,132	2,874	3,222	2,970	3,831	2,540	6,367	4,656	2,381	2,809	2,733
2	2,483	2,841	3,358	2,556	2,562	5,087	2,455	5,906	2,791	2,368	2,595	2,266
3	2,705	3,282	3,492	3,434	3,447	4,927	2,552	5,782	4,651	3,785	4,104	-
4	2,441	5,021	4,895	2,722	2,862	-	2,623	-	4,765	2,609	2,455	2,350
5	5,107	2,742	2,501	3,173	-	4,423	2,573	5,293	4,772	2,434	2,398	2,667
6	2,639	2,536	2,475	2,918	2,616	4,278	2,885	5,081	4,253	3,784	2,381	2,288
7	2,678	3,972	5,192	2,594	2,457	4,454	4,930	6,316	4,275	2,889	3,839	2,242
8	2,552	2,831	3,247	2,629	2,538	5,484	3,745	5,824	5,418	2,718	4,204	3,856
9	2,503	3,979	5,124	2,955	2,685	5,597	5,472	5,732	5,340	2,637	3,515	3,675
10	5,114	2,787	3,831	2,952	2,756	4,512	5,510	5,400	4,707	2,957	2,705	2,697
11	3,361	3,993	5,127	4,481	2,931	5,607	4,974	5,785	4,784	2,678	2,699	2,339
12	3,139	2,631	2,647	2,611	2,679	4,494	2,574	6,188	4,724	3,004	2,681	2,559
13	4,022	2,824	2,690	3,148	2,774	4,538	2,575	5,391	3,868	6,246	2,715	2,363
14	3,641	2,759	4,616	2,485	2,794	5,023	2,588	6,403	4,604	2,367	2,730	2,492
15	2,797	2,436	3,485	2,618	3,232	2,613	2,570	6,289	2,547	2,827	2,764	3,758
16	2,756	2,823	3,577	3,688	3,079	2,550	2,609	6,189	4,695	2,883	2,744	2,409
17	5,178	2,543	4,445	2,461	2,663	2,678	2,563	5,993	4,082	2,808	2,396	2,704
18	3,855	3,587	5,157	4,099	5,630	2,589	2,784	6,032	2,757	4,690	2,131	2,400
19	3,681	2,658	2,597	2,956	2,654	2,613	2,866	6,119	4,592	2,839	2,430	2,654
20	2,651	2,640	2,608	2,976	2,714	2,612	2,737	3,734	4,645	2,561	2,614	2,631
21	2,638	5,102	5,079	2,951	2,682	2,574	2,722	3,834	4,629	2,552	2,172	2,859
22	2,640	2,790	2,912	2,788	2,450	4,978	2,752	3,245	2,780	2,609	2,721	3,300
23	3,954	5,030	2,881	2,645	2,676	4,836	2,431	5,750	2,345	5,418	2,422	2,452
24	5,103	3,977	3,779	2,533	2,583	4,810	2,444	2,255	2,282	6,030	2,508	2,170
25	3,568	2,763	2,762	2,929	4,021	2,725	2,655	3,804	2,668	4,173	2,125	2,181
26	2,805	2,701	2,448	2,510	3,630	4,189	2,490	5,304	3,754	4,055	2,344	3,972
27	3,434	2,703	-	2,764	5,103	2,573	2,285	5,239	2,489	-	2,764	4,650
28	3,187	4,797	4,813	2,431	5,016	4,845	2,887	4,462	2,476	2,647	2,352	2,231
29	2,556		2,594	2,552	5,046	4,936	3,782	4,620	2,334	2,720	2,133	2,630
30	2,474		2,504	2,674	5,052	2,668	2,507	4,680	4,471	2,451	2,483	2,369
31	5,157		3,176		3,446		2,713	3,783		3,979		-

SCADA: [AWPF471AI0301_AIn.Val]

Note: Dashes indicate unit was offline.

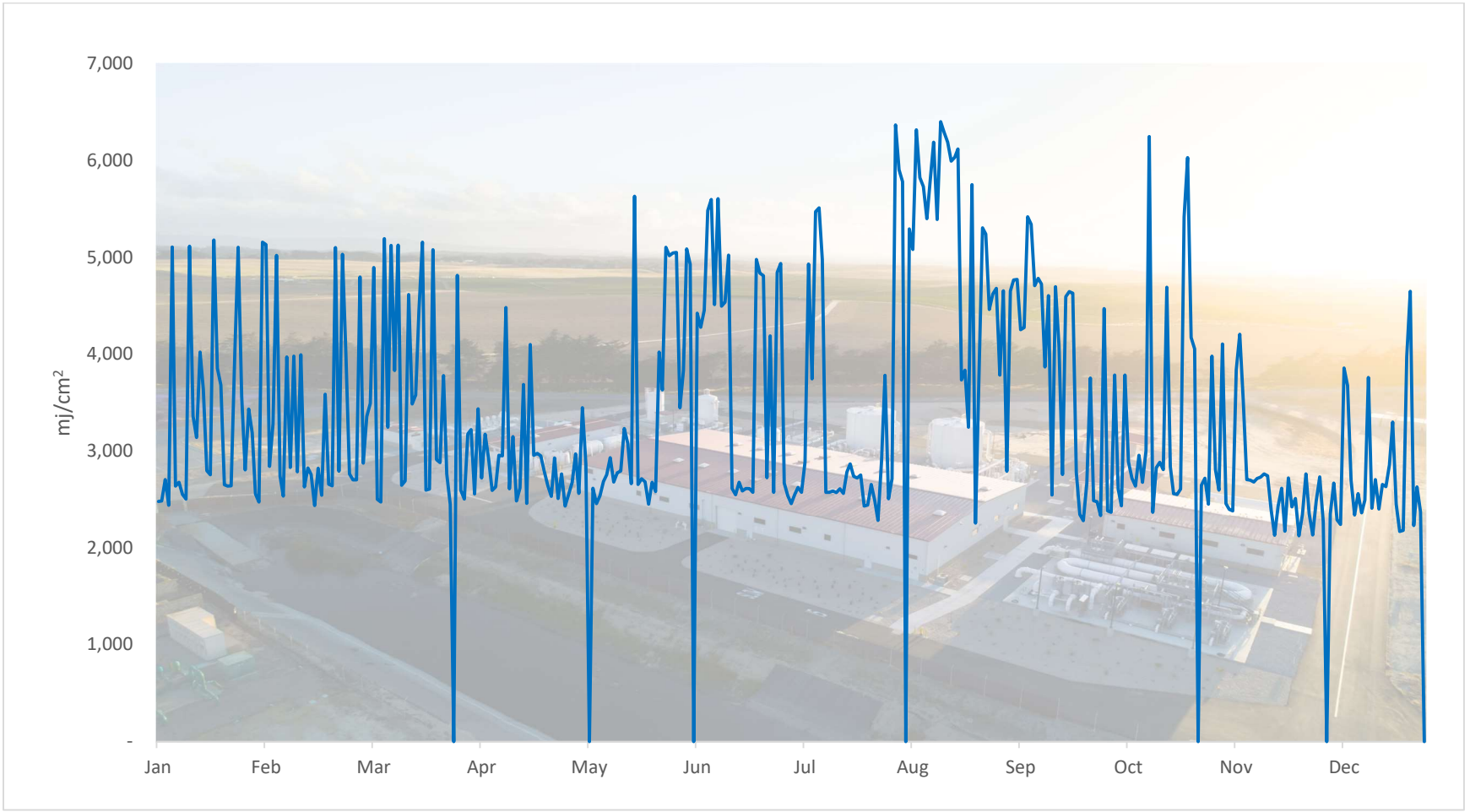


Figure 43. AWPF PW – Daily Maximum UV Dose for Reactor 3 (mJ/cm^2)

Table 44. AWPF PW – Daily Average UV Dose for Reactor 4 (mJ/cm²)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	-	2,497	2,437	2,453	2,431	-	2,431	2,676	-	2,254	2,141	2,229
2	-	2,425	-	2,420	2,414	-	2,425	2,421	-	2,255	2,285	2,154
3	2,492	2,446	-	2,421	2,429	-	2,436	2,502	2,265	2,323	2,440	2,113
4	2,462	2,541	-	2,484	2,432	-	2,428	2,463	2,252	2,249	2,292	2,158
5	2,504	2,409	-	2,455	2,434	2,427	2,460	2,530	2,265	2,127	2,268	2,255
6	2,424	2,421	-	2,423	2,423	2,422	2,541	2,417	2,288	2,172	2,291	2,159
7	2,490	2,485	2,456	2,429	2,421	2,524	2,559	2,628	2,264	2,155	2,354	2,128
8	2,421	2,427	2,551	2,435	2,415	2,428	2,671	2,598	2,264	2,175	2,754	2,221
9	2,421	2,654	2,509	2,435	2,417	2,423	2,749	2,455	2,310	2,139	2,769	2,122
10	2,483	2,427	2,458	2,421	2,470	2,422	2,669	2,357	2,323	2,131	2,195	2,173
11	2,572	2,635	2,507	2,481	2,462	2,422	2,480	2,484	2,317	2,182	2,113	2,146
12	2,790	2,464	2,426	2,420	2,474	2,422	2,471	3,066	2,371	2,187	2,112	2,162
13	-	2,457	2,429	2,440	2,435	2,424	2,808	3,686	2,362	2,550	2,113	2,180
14	-	2,490	2,540	2,440	2,664	2,424	2,486	-	2,319	2,130	2,139	2,148
15	-	2,445	2,491	2,415	2,781	2,434	2,467	2,274	2,367	2,177	2,139	2,137
16	2,559	2,430	2,452	2,444	2,580	2,430	2,724	2,465	2,396	2,162	2,119	2,129
17	2,451	2,425	2,479	2,424	2,488	2,430	2,625	2,853	2,350	2,146	2,102	2,117
18	2,432	2,425	2,496	2,423	2,646	2,440	2,450	2,794	2,329	2,203	2,118	2,151
19	2,428	2,448	2,424	2,434	2,636	2,440	2,766	2,775	2,271	2,242	2,126	2,128
20	2,428	2,422	2,423	2,433	2,634	2,439	2,587	2,264	2,796	2,198	-	2,232
21	2,440	2,496	2,531	2,429	2,610	2,436	2,996	2,275	2,675	2,272	2,109	2,146
22	2,426	2,427	2,428	2,424	2,554	2,823	2,786	2,260	-	2,191	2,114	2,163
23	2,427	2,480	2,434	2,437	2,614	3,304	2,563	2,517	-	2,246	2,151	2,108
24	2,581	2,527	2,473	2,425	2,605	3,228	2,440	2,342	2,448	2,539	2,170	2,099
25	2,436	2,512	2,431	2,419	2,608	2,662	2,449	2,337	2,284	2,591	2,119	2,107
26	2,490	2,417	2,426	2,428	2,440	2,639	2,581	2,254	2,282	2,450	2,131	2,134
27	2,434	2,423	2,429	2,439	2,492	2,435	2,329	2,290	2,313	-	2,119	2,144
28	2,436	2,416	2,448	2,420	2,462	2,449	3,027	2,590	2,343	2,194	2,097	2,110
29	2,426		2,424	2,422	2,463	2,438	2,511	2,316	2,260	2,227	2,122	2,135
30	2,421		2,446	2,420	2,469	2,454	2,704	2,253	2,382	2,196	2,112	2,118
31	2,530		2,423		2,499		2,377	2,266		2,255		2,106

SCADA: [AWPF471AI0401_AIn.Val]

Note: Dashes indicate unit was offline.



Figure 44. AWPF PW – Daily Average UV Dose for Reactor 4 (mJ/cm^2)

Table 45. AWPF PW – Daily Minimum UV Dose for Reactor 4 (mJ/cm²)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	-	2,310	2,206	2,241	2,207	-	2,312	2,102	-	2,153	2,015	2,056
2	-	2,295	-	2,342	2,161	-	2,294	2,137	-	2,146	2,011	1,983
3	2,355	2,283	-	2,324	2,327	-	2,282	2,167	2,179	2,151	2,242	2,017
4	2,231	2,289	-	2,185	2,289	-	2,296	2,136	2,168	2,005	2,001	2,011
5	2,297	2,308	-	2,187	2,303	2,344	2,297	2,035	2,156	1,995	2,008	2,193
6	2,214	2,305	-	1,672	2,299	2,319	2,317	2,108	2,116	2,004	1,948	2,001
7	2,305	2,323	2,310	2,326	2,264	2,367	2,330	2,071	2,156	2,000	1,838	1,989
8	2,322	2,259	2,326	2,314	2,279	2,305	2,349	2,162	2,154	2,016	1,943	2,033
9	2,307	2,318	1,663	2,211	2,302	2,301	2,332	1,796	2,137	2,017	2,044	2,016
10	2,322	2,246	2,291	2,325	2,309	2,274	2,309	2,159	2,151	1,999	1,999	2,100
11	2,319	2,195	2,275	2,297	2,224	2,326	2,301	2,157	2,141	2,012	1,979	1,990
12	2,315	2,288	2,311	2,303	2,271	2,322	1,620	1,696	2,123	2,016	1,962	2,011
13	-	2,306	2,313	2,298	2,296	2,307	1,619	2,084	2,110	2,018	1,977	2,002
14	-	2,007	2,225	2,231	2,338	2,299	2,296	-	2,135	2,003	1,946	2,009
15	-	2,283	2,299	2,255	2,591	2,257	2,324	2,165	2,153	2,009	2,000	1,998
16	2,329	2,282	2,235	2,228	2,304	1,669	2,077	2,061	2,159	2,008	1,996	2,002
17	2,369	2,297	2,289	2,204	2,273	2,296	2,284	2,079	2,163	1,913	2,025	1,980
18	2,308	2,286	1,601	2,237	1,677	2,327	2,201	2,218	2,176	1,937	2,013	1,990
19	2,303	2,330	2,323	2,191	1,624	2,330	2,202	1,894	2,143	2,013	2,040	2,001
20	2,346	2,322	2,327	2,207	2,311	2,308	2,130	2,160	2,165	2,026	-	1,990
21	2,304	2,287	2,288	2,265	2,318	2,285	2,142	2,057	2,185	2,014	2,009	2,010
22	2,303	2,294	2,236	2,249	2,298	2,319	2,129	2,074	-	2,007	1,995	1,969
23	2,204	2,169	2,304	2,232	1,622	2,345	2,165	2,141	-	1,995	2,012	1,670
24	2,368	2,313	2,196	2,242	1,632	2,351	2,163	2,123	2,153	2,030	2,098	1,939
25	2,320	2,216	2,190	2,310	2,319	2,254	2,162	2,147	2,145	2,039	2,006	1,902
26	2,339	2,267	2,318	2,292	2,312	2,250	2,143	2,120	2,065	2,030	2,007	1,898
27	2,254	2,283	2,322	2,322	2,323	2,209	2,156	2,124	2,145	-	2,014	2,014
28	2,296	2,242	2,214	2,291	2,323	2,277	2,136	2,176	2,143	2,017	2,010	1,944
29	2,318		2,326	2,212	2,310	2,284	2,136	2,151	2,140	1,965	1,983	1,996
30	2,314		2,219	2,310	2,312	2,305	2,164	2,128	2,129	2,004	1,983	1,963
31	2,349		2,272		2,309		2,137	2,079		2,018		1,916

SCADA: [AWPF471_ReportData_V4.DailyMinDose_rpt_Y]

Note: Dashes indicate unit was offline.

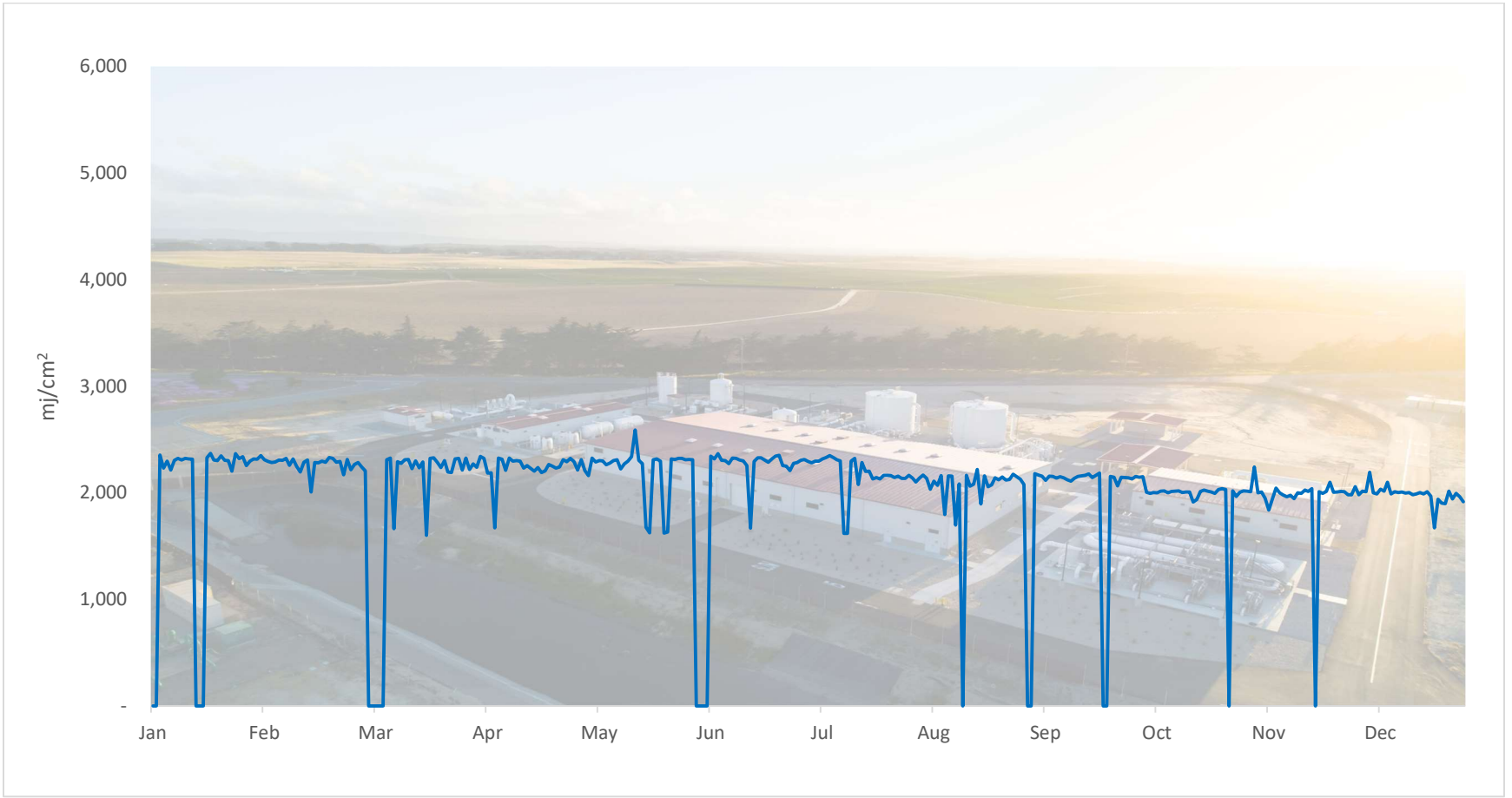


Figure 45. AWPF PW – Daily Minimum UV Dose for Reactor 4 (mJ/cm^2)

Table 46. AWPF PW – Daily Maximum UV Dose for Reactor 4 (mJ/cm^2)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	-	6,060	3,607	4,404	3,564	-	3,709	6,369	-	2,937	5,949	2,865
2	-	3,134	-	3,556	3,007	-	3,792	5,852	-	2,976	3,652	3,603
3	6,098	4,108	-	2,566	4,583	-	3,673	5,723	2,644	4,730	5,492	2,874
4	3,763	5,960	-	3,660	3,729	-	3,710	5,634	5,038	3,643	3,827	3,391
5	5,898	3,147	-	4,239	4,082	3,571	6,247	5,818	3,084	3,079	3,804	2,970
6	3,086	2,968	-	3,385	3,246	3,412	6,106	6,085	5,017	5,873	3,895	3,867
7	5,978	4,654	4,431	4,766	3,143	3,279	5,891	5,575	5,147	3,966	5,684	3,081
8	2,849	3,080	4,239	3,653	2,842	2,935	5,108	6,199	6,374	3,895	5,618	3,121
9	2,908	4,751	5,143	3,557	3,621	5,564	6,406	4,463	6,254	3,875	5,130	4,623
10	6,036	3,191	4,223	3,482	3,412	3,110	6,441	4,958	5,780	4,225	4,778	2,914
11	5,542	4,793	5,136	5,082	4,023	6,363	5,952	5,813	5,560	3,896	3,588	3,792
12	6,018	4,839	3,171	3,057	4,228	3,236	6,066	6,032	5,730	4,259	3,679	3,152
13	-	3,368	3,047	4,258	3,576	3,244	5,595	6,317	4,382	6,586	3,456	3,452
14	-	6,105	5,176	3,768	5,317	5,983	6,216	-	3,424	3,104	3,944	3,171
15	-	3,732	4,265	3,176	6,317	5,887	6,062	4,956	5,602	3,973	3,785	3,366
16	2,872	3,695	3,963	4,638	5,722	5,973	6,228	5,803	5,733	4,147	2,645	3,579
17	5,434	3,368	4,916	3,179	5,018	6,055	6,030	4,656	5,428	3,826	2,973	2,933
18	3,055	3,321	5,199	5,317	6,423	5,966	3,643	6,449	4,469	6,392	2,386	3,291
19	3,049	3,455	3,212	3,461	5,616	5,992	6,448	6,541	4,082	3,737	2,525	2,777
20	2,768	2,989	2,928	3,801	6,157	6,155	6,079	3,776	5,670	3,425	-	3,193
21	6,027	6,048	5,059	3,465	6,008	6,047	6,490	3,686	3,097	3,494	2,328	3,149
22	3,221	2,983	4,099	4,012	4,014	5,700	6,497	3,333	-	3,769	3,212	5,758
23	4,196	6,009	3,708	3,452	5,561	5,864	5,981	5,791	-	6,506	2,949	3,107
24	6,109	4,459	5,057	3,240	4,864	4,951	5,775	2,343	2,331	6,529	2,571	2,295
25	2,862	4,727	3,549	3,435	4,607	6,052	5,934	5,233	3,555	6,295	2,274	2,338
26	3,469	2,813	3,276	3,618	5,463	6,274	6,424	6,422	4,345	4,998	3,238	4,349
27	5,191	3,103	3,684	3,388	5,656	3,445	5,221	3,464	3,141	-	2,875	4,813
28	2,935	2,922	4,345	2,618	5,834	5,959	6,344	5,202	3,693	4,192	2,719	2,349
29	3,187		3,127	3,143	6,061	5,876	5,462	3,118	3,202	3,912	3,340	3,160
30	2,914		3,839	3,015	6,080	4,620	6,444	5,521	6,030	3,581	3,150	3,268
31	5,429		2,874		4,244		5,247	3,010		6,324		2,378

SCADA: [AWPF471AI0401_AIn.Val]

Note: Dashes indicate unit was offline.

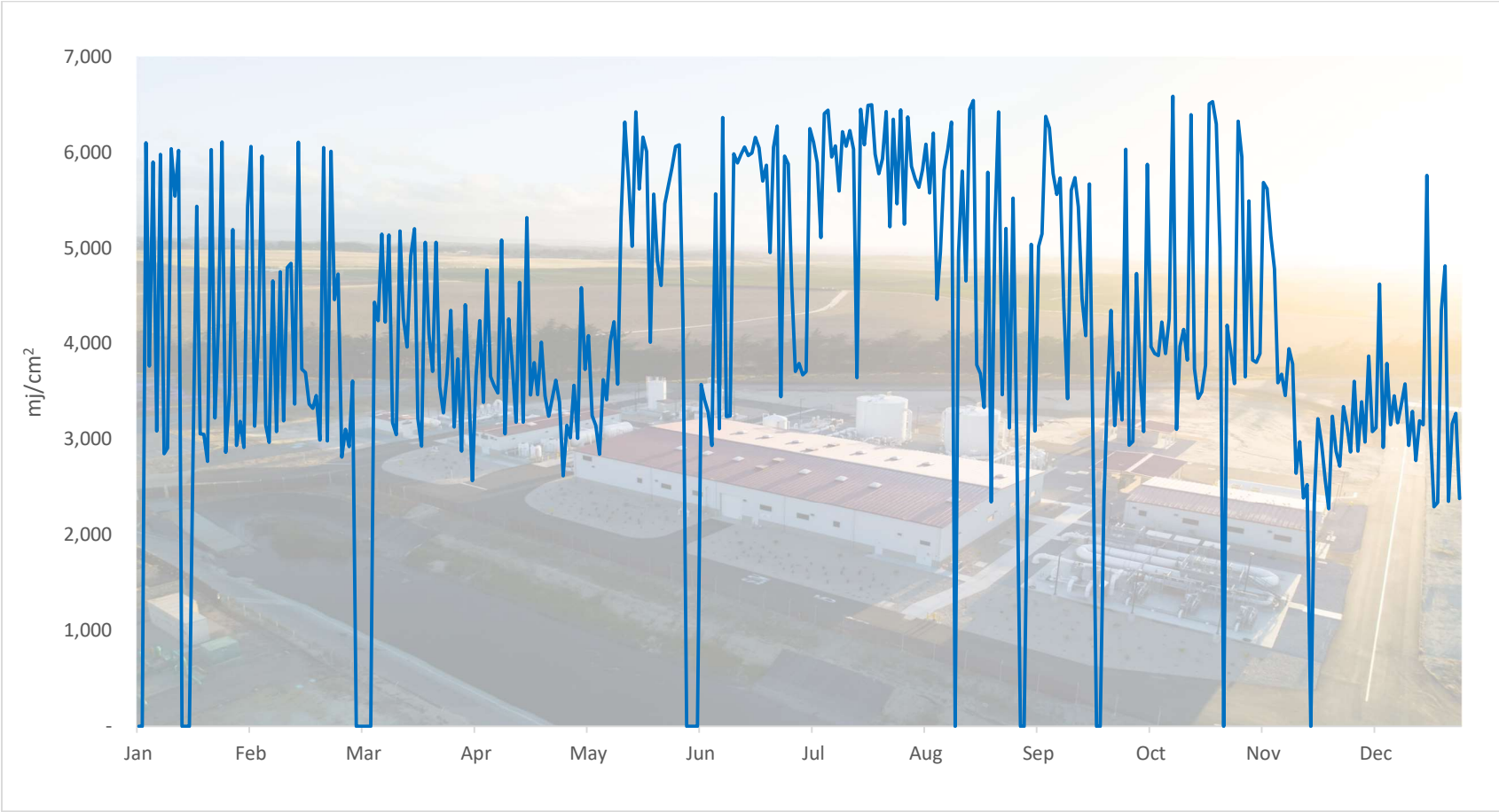


Figure 46. AWPF PW – Daily Maximum UV Dose for Reactor 4 (mJ/cm^2)

Table 47. AWPF PW – Daily Average UV Dose for Reactor 5 (mJ/cm^2)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2,414	2,435	2,434	2,460	2,429	2,427	2,511	2,676	2,312	2,253	2,288	2,098
2	2,424	2,426	2,426	2,457	2,406	2,433	2,525	2,421	2,265	2,253	2,322	2,143
3	2,485	2,427	2,422	2,460	2,471	2,445	2,437	2,502	2,297	2,319	2,313	2,151
4	2,449	2,521	2,514	2,477	2,449	-	2,428	2,462	2,315	2,230	2,301	2,174
5	2,612	2,448	2,426	2,465	2,440	2,589	2,750	2,530	2,309	2,114	2,275	2,109
6	2,422	2,421	2,399	2,460	2,425	2,510	2,705	-	2,311	2,162	2,275	2,151
7	2,433	2,661	2,502	2,511	2,421	2,683	2,466	-	2,304	2,147	2,335	2,167
8	2,419	2,424	-	2,485	2,419	2,612	2,460	2,566	2,359	2,171	2,622	2,128
9	2,420	2,455	2,456	2,445	2,427	2,576	2,463	2,455	2,387	2,136	2,697	2,188
10	2,884	2,424	2,434	2,447	2,426	2,432	2,453	2,357	2,385	2,128	2,316	2,111
11	2,545	2,710	2,439	2,517	2,467	2,474	2,424	2,484	2,404	2,173	-	2,226
12	2,456	2,459	2,445	2,425	2,480	2,553	2,443	3,083	2,419	2,167	-	-
13	2,568	2,444	2,437	2,444	2,435	2,428	2,460	3,686	2,372	2,220	-	-
14	2,445	2,521	2,424	2,452	2,578	2,508	2,449	-	2,338	2,128	2,170	-
15	2,424	2,443	2,424	2,408	2,552	2,528	2,477	2,274	2,464	2,174	2,150	-
16	2,455	2,425	2,421	2,458	2,436	2,533	2,563	2,465	2,253	2,162	2,135	-
17	2,528	2,423	2,422	2,399	2,464	2,513	2,599	2,853	2,248	2,135	2,164	-
18	2,507	2,448	2,421	2,427	2,513	2,471	2,420	2,749	2,248	2,222	2,140	-
19	2,533	2,420	2,421	2,443	2,926	2,497	2,465	2,779	2,332	2,227	2,111	-
20	2,438	2,420	2,420	2,425	2,496	2,477	2,548	-	2,255	2,232	2,097	-
21	2,533	2,460	2,424	2,419	2,498	2,579	2,877	-	2,214	2,232	2,125	-
22	2,423	2,458	2,423	2,462	2,426	-	2,757	2,260	2,259	2,147	2,098	-
23	2,398	2,533	2,421	2,428	2,592	2,838	2,424	2,517	2,224	2,245	-	-
24	2,469	2,531	2,442	2,423	2,448	3,312	2,424	2,285	2,251	2,490	2,097	-
25	2,443	2,540	2,428	2,469	2,436	2,557	2,570	2,264	2,206	2,485	2,109	-
26	2,442	2,454	2,424	2,439	2,504	2,567	2,388	2,377	2,303	2,351	2,178	-
27	2,424	2,399	2,444	2,447	2,420	2,436	2,398	2,532	2,251	-	2,125	-
28	2,499	2,526	2,440	2,417	2,422	2,431	2,934	2,317	2,284	2,172	2,104	-
29	2,406		2,421	2,415	2,422	2,434	2,611	2,299	2,237	2,268	2,099	2,173
30	2,379		2,460	2,427	2,423	2,535	2,540	2,306	2,369	2,245	2,098	2,128
31	2,444		2,456		2,430		2,413	2,287		2,204		2,113

SCADA: [AWPF471AI0501_AIn.Val]

Note: Dashes indicate unit was offline.

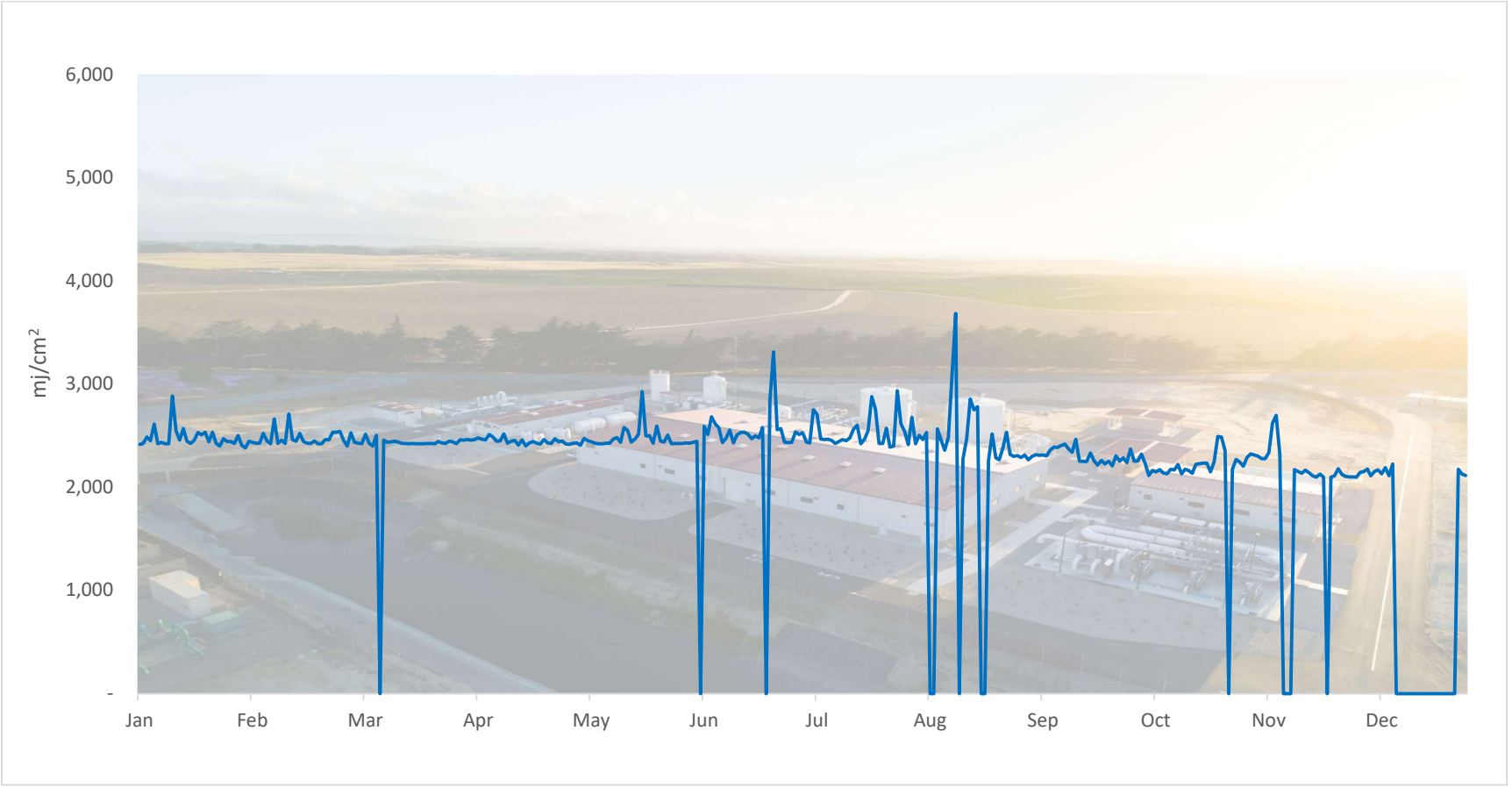


Figure 47. AWPF PW – Daily Average UV Dose for Reactor 5 (mJ/cm^2)

Table 48. AWPF PW – Daily Minimum UV Dose for Reactor 5 (mJ/cm²)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2,388	2,358	2,320	2,379	2,362	1,707	2,366	2,150	1,905	2,236	2,089	1,646
2	2,412	2,404	2,050	2,413	2,349	1,826	2,411	2,079	2,216	2,239	2,091	2,088
3	2,401	2,335	1,623	2,373	2,350	1,814	2,410	2,155	2,238	2,237	2,092	2,086
4	2,356	2,240	2,358	2,349	2,354	-	2,406	2,024	1,674	2,089	2,092	2,159
5	2,350	2,377	2,362	2,363	2,413	1,899	2,409	2,035	1,747	2,086	2,192	1,688
6	2,369	2,407	2,352	2,345	2,347	2,407	2,097	-	2,195	2,087	2,225	2,086
7	1,649	2,408	1,783	2,373	2,377	2,368	2,281	-	2,240	2,090	2,077	2,084
8	2,406	2,362	-	2,408	2,383	2,405	2,087	1,974	2,240	2,089	2,088	2,086
9	2,411	2,335	1,694	2,412	2,389	2,410	1,850	1,796	2,235	2,089	2,171	2,188
10	2,350	2,356	1,817	2,410	1,649	1,675	1,860	2,159	2,239	2,088	2,089	1,628
11	1,697	2,253	2,418	2,345	2,385	2,360	1,772	2,157	1,756	2,087	-	2,123
12	1,673	2,036	1,834	2,407	2,360	2,411	1,714	2,007	2,239	1,814	-	-
13	2,408	2,361	1,835	2,334	2,409	1,687	1,724	2,084	2,174	2,026	-	-
14	1,811	2,367	1,776	2,368	2,423	1,801	2,356	-	1,642	2,087	1,612	-
15	2,408	2,405	1,779	2,350	2,413	2,354	2,413	2,165	1,744	2,090	2,085	-
16	2,405	2,354	1,706	1,749	2,409	2,348	2,203	2,061	1,781	1,622	2,080	-
17	2,344	2,406	1,729	2,259	2,409	2,356	2,198	2,079	1,786	1,881	2,086	-
18	1,697	2,413	1,723	1,847	2,406	2,351	2,188	2,029	1,859	2,088	2,088	-
19	2,359	2,336	1,737	2,269	2,054	2,359	2,101	2,011	1,675	2,088	2,088	-
20	2,369	2,412	1,717	2,349	1,851	2,356	2,016	-	1,775	2,090	1,644	-
21	2,351	2,273	2,417	2,354	1,853	1,721	2,016	-	1,822	2,092	2,087	-
22	2,400	2,236	1,789	2,353	1,964	-	2,008	2,074	2,100	1,966	2,091	-
23	2,356	2,085	1,813	2,356	2,410	1,858	2,024	2,016	1,654	2,093	-	-
24	2,380	2,408	1,755	2,410	2,032	2,418	2,076	2,238	2,238	2,039	2,025	-
25	2,409	2,359	1,761	2,353	1,819	2,366	2,042	1,640	1,765	1,782	2,087	-
26	2,356	2,354	2,411	2,354	1,802	2,372	2,055	1,748	1,792	2,043	2,171	-
27	1,666	2,351	2,350	2,349	1,875	2,401	2,157	1,885	2,164	-	1,625	-
28	2,366	2,383	2,006	2,384	1,981	1,677	2,020	1,730	2,160	2,090	2,088	-
29	2,359		2,368	2,365	1,824	2,100	2,155	1,762	2,162	2,093	1,801	1,797
30	2,355		2,345	2,358	1,880	2,410	2,042	1,883	2,204	2,097	2,087	2,083
31	1,665		2,346		1,661		2,063	1,905		1,802		2,083

SCADA: [AWPF471_ReportData_V5.DailyMinDose_rpt_Y

Note: Dashes indicate unit was offline.***]***

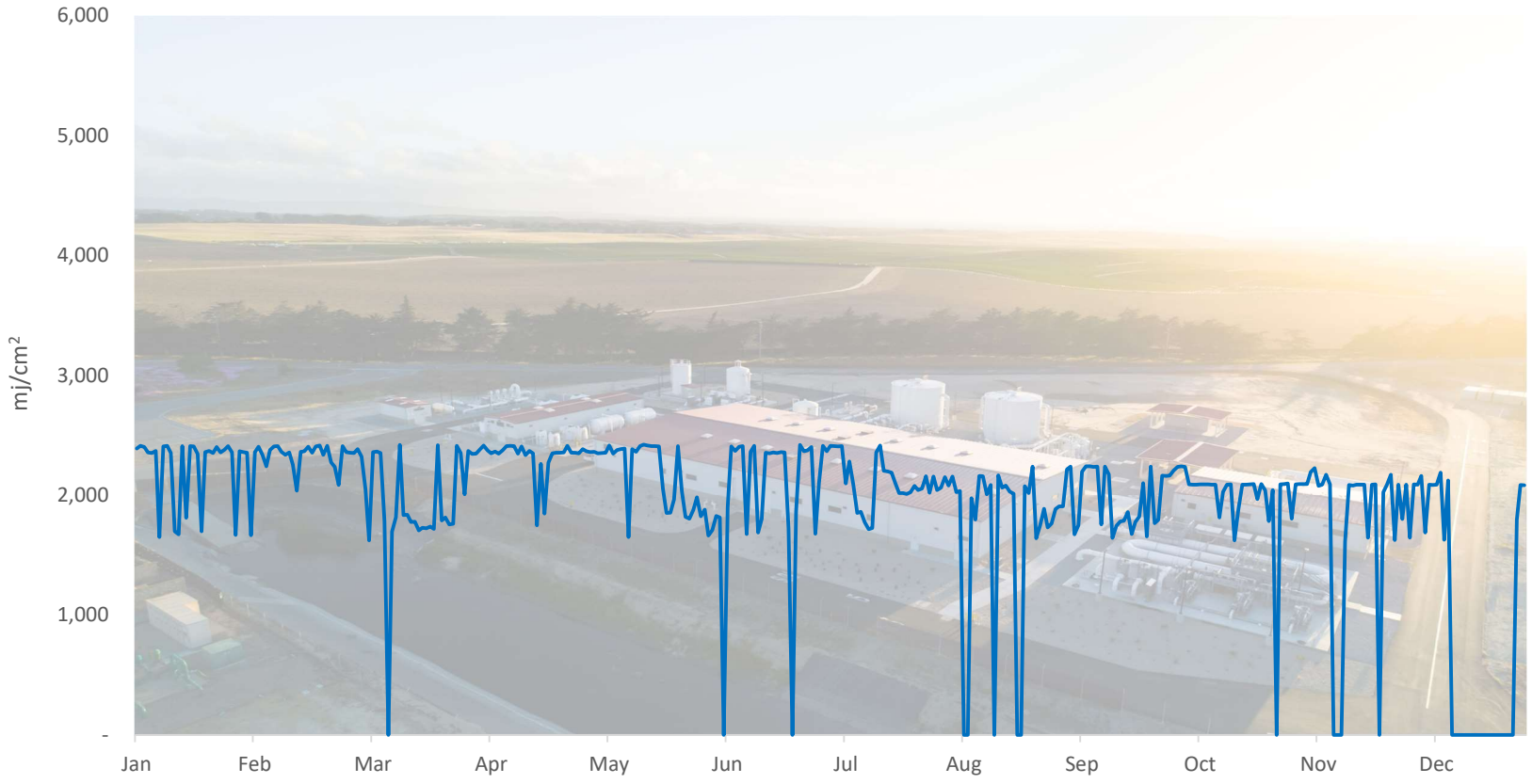


Figure 48. AWPF PW – Daily Minimum UV Dose for Reactor 5 (mJ/cm^2)

Table 49. AWPF PW – Daily Maximum UV Dose for Reactor 5 (mJ/cm^2)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2,489	2,836	2,803	3,251	3,095	4,183	3,973	6,369	4,875	2,540	5,024	2,380
2	2,721	2,875	3,222	2,969	2,577	2,990	3,270	5,852	2,881	2,543	2,957	4,079
3	5,031	2,908	2,823	3,582	4,142	5,392	2,911	5,723	4,892	4,287	3,472	2,674
4	3,038	5,160	5,256	2,927	3,049	-	2,889	5,634	4,757	3,032	3,247	2,215
5	5,021	2,771	2,499	3,227	3,476	4,425	5,801	5,818	4,771	2,688	2,838	2,425
6	2,734	2,547	2,498	3,645	3,558	4,299	5,815	-	4,288	4,407	2,811	4,473
7	5,075	4,102	5,265	4,278	2,578	4,631	2,920	-	4,422	3,241	4,849	2,781
8	2,484	2,774	-	3,355	2,518	5,816	2,938	6,199	5,445	2,978	4,841	3,610
9	2,502	4,075	2,661	2,924	2,855	5,748	2,698	4,463	5,575	2,904	4,293	5,211
10	5,028	2,756	2,663	2,959	2,743	2,821	2,970	4,958	5,006	3,289	3,347	2,361
11	4,216	4,073	2,453	4,506	3,633	5,690	2,614	5,813	5,036	2,953	-	2,717
12	5,058	3,555	2,685	2,756	3,770	4,640	5,092	6,032	4,986	2,800	-	-
13	4,037	2,812	2,635	3,310	2,943	2,881	5,028	6,317	3,956	5,649	-	-
14	3,494	5,083	2,629	3,378	3,427	5,133	5,619	-	4,829	2,551	2,344	-
15	2,785	3,339	2,628	2,695	5,967	5,214	4,976	4,956	4,984	3,193	2,803	-
16	3,849	3,087	2,602	3,910	3,973	5,888	6,176	5,803	2,578	3,205	2,751	-
17	5,039	2,644	2,622	2,589	5,421	5,240	6,398	4,656	2,585	2,687	2,624	-
18	3,981	2,760	2,573	4,216	5,828	5,284	3,675	6,449	2,623	5,611	2,759	-
19	3,632	2,676	2,587	2,972	5,091	5,275	6,380	6,541	4,873	3,186	2,520	-
20	2,717	2,634	2,569	2,971	5,911	5,238	6,197	-	2,675	2,804	2,384	-
21	5,010	4,953	2,435	3,078	5,920	5,278	6,052	-	3,372	2,838	2,600	-
22	2,799	2,735	2,637	3,542	2,835	-	6,473	3,333	2,828	2,917	2,124	-
23	3,905	5,159	2,734	2,723	2,934	3,993	5,849	5,791	2,438	4,780	-	-
24	5,040	4,103	3,305	2,706	3,855	4,808	5,839	2,255	2,446	6,510	2,287	-
25	3,941	5,258	2,607	2,928	2,830	5,045	6,468	2,996	2,360	5,089	2,424	-
26	3,097	2,669	2,705	2,836	3,883	4,844	5,629	5,338	3,840	4,563	2,194	-
27	2,439	2,651	3,390	2,812	2,729	2,650	5,455	5,358	2,547	-	2,919	-
28	3,616	5,075	4,537	2,442	2,834	3,018	6,438	2,683	3,438	4,429	2,544	-
29	2,686		2,702	2,584	2,674	3,895	4,515	4,817	2,421	3,083	2,568	2,644
30	2,448		3,621	2,763	2,745	4,016	6,526	4,768	5,113	3,209	2,130	2,720
31	4,995		3,220		2,892		4,535	2,698		2,981		2,223

SCADA: [AWPF471AI0501_AIn.Val]

Note: Dashes indicate unit was offline.

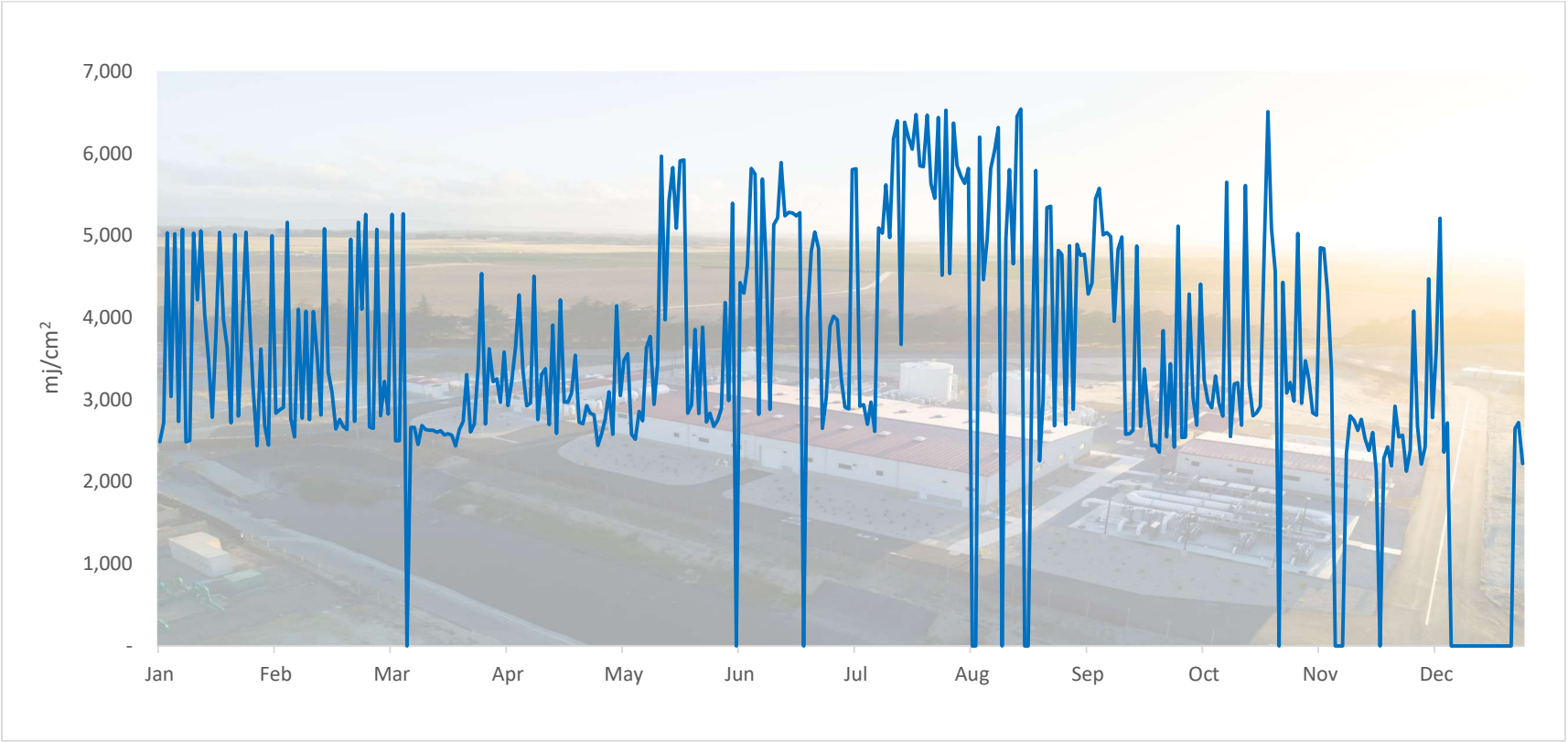


Figure 49. AWPF PW – Daily Maximum UV Dose for Reactor 5 (mJ/cm^2)

Table 50. AWPF PW – Daily Average UV Dose for Reactor 6 (mJ/cm²)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2,547	2,460	2,461	2,425	2,430	2,515	2,483	2,514	2,254	2,253	2,239	2,355
2	2,424	2,426	2,450	2,438	2,413	2,522	2,506	2,518	2,251	2,253	2,219	2,603
3	2,489	2,443	2,442	2,423	2,460	2,482	2,435	2,623	2,254	2,280	2,451	2,300
4	2,472	2,485	2,449	2,453	2,405	-	2,427	2,388	2,250	2,229	2,534	2,297
5	2,566	2,402	2,423	2,431	2,428	2,528	2,630	2,444	2,250	2,098	2,495	2,277
6	-	2,422	2,419	2,444	2,427	2,438	2,555	2,318	2,249	2,154	2,484	2,279
7	2,447	2,638	2,426	2,462	2,421	2,435	2,665	2,541	2,254	2,099	2,553	2,296
8	2,441	2,430	2,432	2,464	2,420	2,442	2,626	2,467	2,313	2,097	3,092	2,315
9	2,421	2,623	2,429	2,421	2,427	2,476	2,686	2,386	2,345	2,097	3,087	2,293
10	2,420	2,422	2,456	2,435	2,426	2,564	2,512	2,405	2,349	2,099	2,535	2,321
11	2,492	2,675	2,421	2,461	2,487	2,430	2,430	2,481	2,340	2,097	2,157	2,341
12	2,469	2,461	2,423	2,425	2,455	2,425	2,467	2,971	2,337	2,099	2,158	2,312
13	2,426	2,467	2,430	2,421	2,560	2,440	2,574	3,625	2,427	2,182	2,160	2,348
14	2,460	2,489	2,435	2,443	2,517	2,478	2,584	2,700	2,319	2,097	2,583	2,303
15	2,428	2,378	2,428	2,418	3,501	2,475	2,474	2,537	2,544	2,099	2,451	2,404
16	2,433	2,420	2,454	2,424	2,875	2,577	2,637	2,387	2,459	2,124	2,263	2,253
17	2,469	2,428	2,451	2,414	-	2,469	2,815	2,656	-	2,138	2,359	2,307
18	2,441	2,424	2,426	2,397	-	2,489	2,437	2,512	-	2,186	2,304	2,333
19	2,423	2,421	2,424	2,405	2,541	2,479	2,514	2,613	2,451	2,193	2,285	2,323
20	2,428	2,423	2,422	2,407	2,521	2,500	2,613	2,260	2,329	2,202	2,254	2,488
21	2,529	2,450	2,415	2,421	2,512	2,486	2,726	2,279	2,425	2,198	2,229	2,386
22	2,428	2,433	2,427	2,455	2,554	2,537	2,965	2,221	2,273	2,156	2,204	2,229
23	2,416	2,447	2,434	2,443	2,518	2,709	2,494	2,407	2,251	2,195	2,276	2,129
24	2,475	2,470	2,470	2,423	2,503	2,798	2,589	2,349	2,252	2,394	2,201	2,144
25	2,443	2,507	2,420	2,433	2,471	2,794	2,390	2,273	2,251	2,404	2,200	2,165
26	2,439	2,424	2,420	2,433	2,439	2,725	2,449	2,271	2,290	2,235	2,247	2,212
27	2,440	2,426	2,420	2,436	2,475	2,420	2,405	2,264	2,269	-	2,255	2,251
28	2,430	2,522	2,456	2,420	2,464	2,486	2,830	2,248	2,284	2,221	2,183	2,160
29	2,422		2,434	2,426	2,464	2,479	2,549	2,265	2,255	2,198	2,231	2,236
30	2,439		2,451	2,428	2,463	2,521	2,464	-	2,377	2,180	2,210	2,190
31	2,487		2,432		2,444		2,412	2,254		2,287		2,171

SCADA: [AWPF471AI0601_AIn.Val]

Note: Dashes indicate unit was offline.

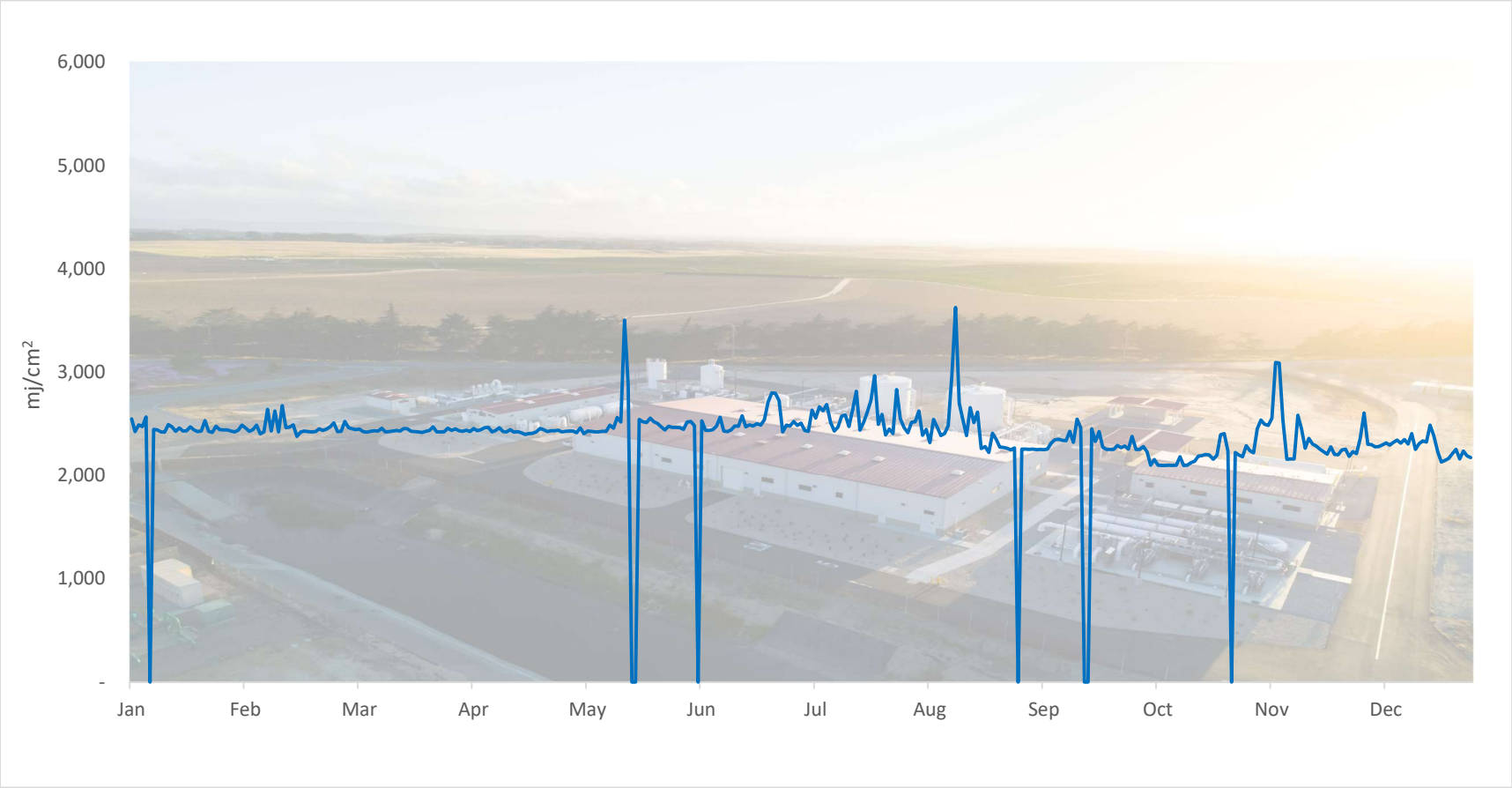


Figure 50. AWPF PW – Daily Average UV Dose for Reactor 6 (mJ/cm^2)

Table 51. AWPF PW – Daily Minimum UV Dose for Reactor 6 (mJ/cm²)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1,721	2,412	1,835	1,827	2,361	2,379	2,411	2,160	2,235	2,237	2,087	2,108
2	1,646	2,402	1,687	2,413	2,358	2,408	2,411	2,013	1,769	2,236	2,089	1,892
3	1,724	2,397	2,336	2,413	1,827	2,407	2,396	2,152	2,242	1,735	1,853	2,117
4	1,753	2,358	1,913	2,214	1,868	-	2,405	2,048	1,874	2,090	2,280	2,122
5	2,414	2,358	2,354	1,758	2,411	1,944	2,412	2,016	1,894	1,739	2,386	2,095
6	-	2,409	2,384	2,336	1,652	1,813	2,388	2,154	1,765	1,804	2,419	2,094
7	2,357	2,410	1,638	2,377	2,378	2,162	2,388	2,056	1,943	1,989	2,090	2,093
8	2,417	2,408	2,019	2,413	2,372	2,043	2,416	1,950	1,889	1,615	2,463	2,152
9	1,663	2,401	1,745	1,763	1,696	2,409	1,908	1,803	2,237	1,611	2,186	2,076
10	2,416	2,371	2,404	2,413	1,760	2,352	1,731	2,133	1,947	2,060	2,091	2,115
11	1,937	2,308	2,021	1,804	2,386	2,029	2,102	1,985	1,986	1,674	2,092	2,130
12	1,784	2,260	2,398	2,407	1,688	2,411	2,357	2,170	1,684	1,620	2,091	2,126
13	2,150	2,375	2,412	1,724	2,419	2,372	2,377	2,207	1,677	2,018	2,092	2,135
14	1,893	2,389	1,820	2,350	1,832	2,355	2,368	2,203	1,784	1,786	2,099	2,120
15	1,906	2,221	2,285	2,352	2,417	2,365	2,359	2,077	1,766	1,941	2,091	1,884
16	1,751	2,153	2,380	1,624	1,885	2,364	2,004	2,135	1,642	2,090	2,092	2,113
17	1,776	2,410	1,689	2,370	-	2,361	2,007	2,192	-	2,073	2,149	2,120
18	2,357	2,281	1,700	1,668	-	2,391	2,206	1,812	-	2,082	2,129	2,127
19	1,743	2,402	2,408	2,168	2,411	2,411	2,073	2,078	1,655	2,086	2,116	2,112
20	2,346	2,409	2,366	1,714	2,407	2,396	2,097	2,142	1,755	2,089	2,096	2,093
21	2,412	2,372	1,893	1,792	2,413	2,359	2,029	2,038	2,238	2,088	2,134	2,092
22	1,819	2,355	2,379	2,359	2,410	4,274	2,005	1,991	2,238	2,090	2,098	2,090
23	2,414	2,280	2,408	1,847	2,409	2,284	2,162	2,034	2,237	2,089	2,111	2,089
24	1,824	2,313	2,350	2,410	1,784	2,418	2,069	2,237	2,234	2,018	2,117	2,090
25	2,389	2,362	2,413	2,393	2,412	2,083	2,017	1,635	1,610	1,806	2,111	2,089
26	2,333	2,409	1,900	2,361	2,410	1,767	2,116	1,701	1,763	2,021	2,111	2,088
27	1,687	2,407	1,863	2,391	2,355	1,771	2,000	1,999	1,707	-	2,137	2,089
28	2,178	2,381	1,812	2,410	2,410	2,309	2,065	1,853	1,777	2,089	2,127	2,089
29	2,354		1,717	2,372	2,410	2,412	2,168	2,241	1,627	2,088	2,125	1,862
30	2,417		2,333	2,373	2,409	2,408	2,056	-	1,995	2,086	2,105	2,092
31	1,853		2,358		2,131		2,136	1,707		2,055		2,091

SCADA: [AWPF471_ReportData_V6.DailyMinDose_rpt_Y]

Note: Dashes indicate unit was offline.

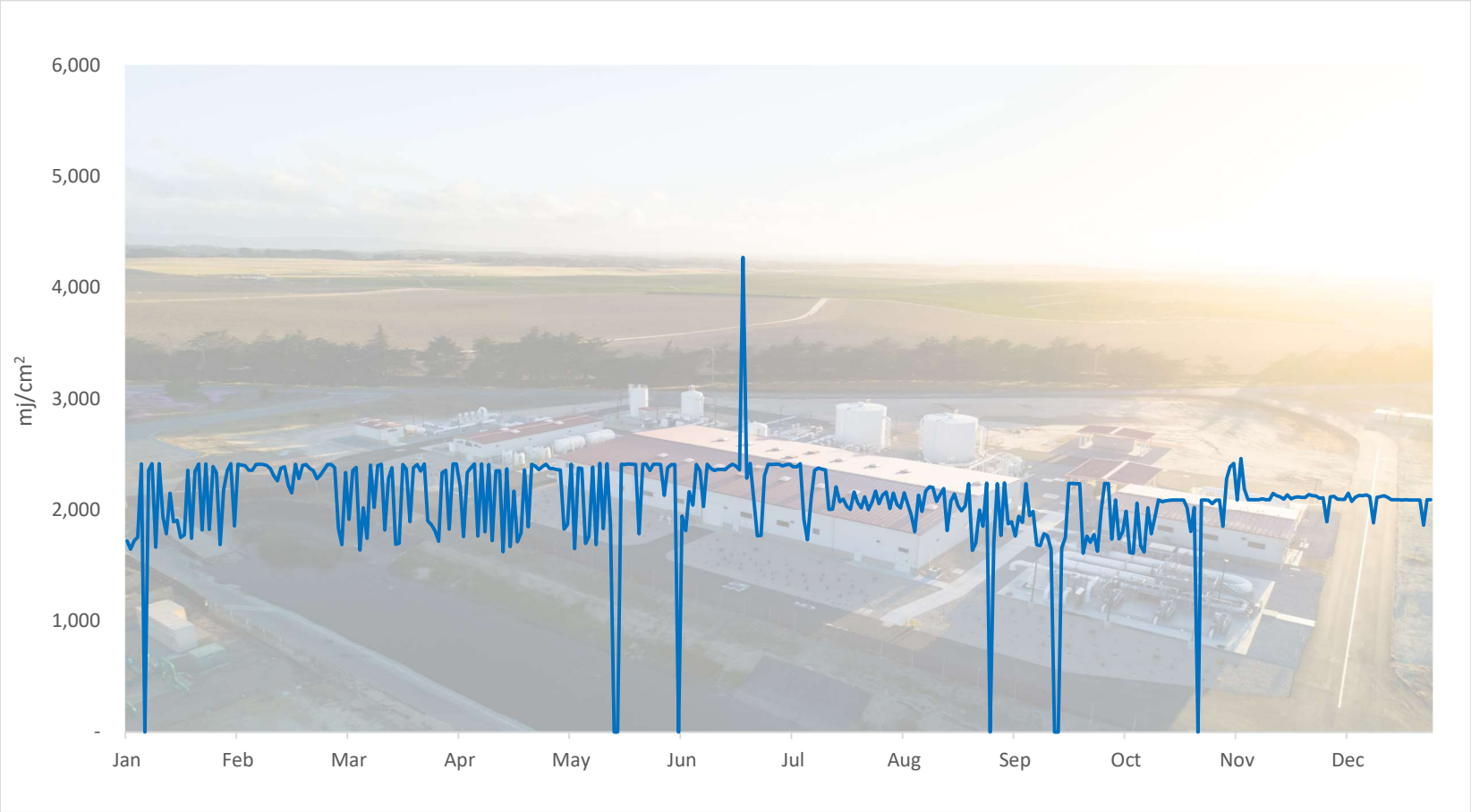


Figure 51. AWPF PW – Daily Minimum UV Dose for Reactor 6 (mJ/cm^2)

Table 52. AWPF PW – Daily Maximum UV Dose for Reactor 6 (mJ/cm^2)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2,525	5,063	2,887	2,733	3,199	4,111	3,710	6,305	2,392	2,556	5,115	3,088
2	2,706	2,905	2,726	2,963	2,597	5,307	3,257	5,767	2,481	2,527	2,804	4,853
3	2,894	3,260	3,478	2,472	4,142	5,277	2,882	6,424	2,379	4,163	4,356	3,011
4	2,737	5,110	5,209	2,954	2,742	-	2,869	6,037	2,609	3,005	3,489	3,027
5	2,847	2,806	2,493	3,070	3,203	4,029	5,676	5,856	2,699	2,483	3,112	3,042
6	-	2,568	2,501	3,668	2,806	2,995	5,717	5,417	2,629	4,376	3,058	5,069
7	2,580	4,073	2,632	4,177	2,600	2,958	4,928	5,788	2,664	2,807	5,148	3,058
8	2,508	2,839	2,836	3,326	2,592	5,702	3,905	5,870	5,395	2,263	5,888	4,195
9	2,512	4,115	2,810	2,589	2,870	5,680	5,569	5,352	5,578	2,201	4,536	4,036
10	2,607	2,880	3,843	2,954	2,706	4,395	5,537	4,770	4,986	2,967	3,598	3,083
11	3,419	4,117	2,865	3,546	3,561	5,634	4,964	5,784	4,953	2,213	3,050	3,328
12	3,289	3,665	2,716	2,723	3,040	2,852	5,108	5,980	4,898	2,393	3,017	3,164
13	3,190	2,934	2,846	2,569	2,919	4,476	5,246	5,830	3,921	4,989	3,060	3,025
14	3,695	5,054	2,834	3,329	4,709	5,070	5,642	6,453	2,640	2,225	3,491	3,091
15	2,718	2,860	3,116	2,693	5,852	5,150	4,990	6,447	4,890	2,784	3,889	4,247
16	3,708	3,204	3,589	2,738	5,427	5,740	6,109	5,809	2,684	3,127	2,981	3,156
17	5,112	2,608	4,346	2,657	-	5,122	6,466	5,372	-	3,000	2,974	3,035
18	4,037	2,507	2,637	4,230	-	5,193	3,564	6,440	-	5,437	3,078	3,108
19	2,921	2,788	2,654	3,007	3,833	5,247	5,590	6,286	2,435	3,114	2,860	2,991
20	2,800	2,703	2,689	2,928	5,802	5,180	6,128	3,776	2,709	2,830	2,907	3,126
21	2,831	2,838	2,734	3,139	5,818	5,114	6,482	3,753	4,647	2,834	2,913	3,208
22	2,875	2,843	3,000	3,505	3,271	4,882	6,501	3,318	2,916	2,974	3,106	3,168
23	2,705	5,130	3,035	2,671	4,621	4,759	5,826	5,992	2,484	4,681	2,878	3,080
24	5,046	4,078	3,974	2,706	4,474	4,825	6,481	2,258	2,474	6,517	2,884	2,417
25	4,051	5,415	2,466	2,937	3,937	2,681	5,879	2,552	2,572	5,065	2,717	2,440
26	3,086	2,769	2,704	2,941	4,368	2,907	5,830	2,461	3,876	4,464	2,856	4,323
27	2,178	2,792	2,711	2,857	5,152	2,580	5,868	2,745	2,531	-	3,947	5,216
28	3,706	5,255	2,924	2,463	5,046	4,945	5,586	2,614	2,544	4,431	2,875	2,476
29	2,814		2,808	2,610	4,967	4,958	4,445	2,398	2,512	2,921	3,756	3,075
30	2,467		3,557	2,833	5,000	4,004	6,532	-	5,209	3,070	2,962	3,003
31	5,005		3,189		3,994		4,674	2,469		4,558		2,441

SCADA: [AWPF471AI0601_AIn.Val]

Note: Dashes indicate unit was offline.

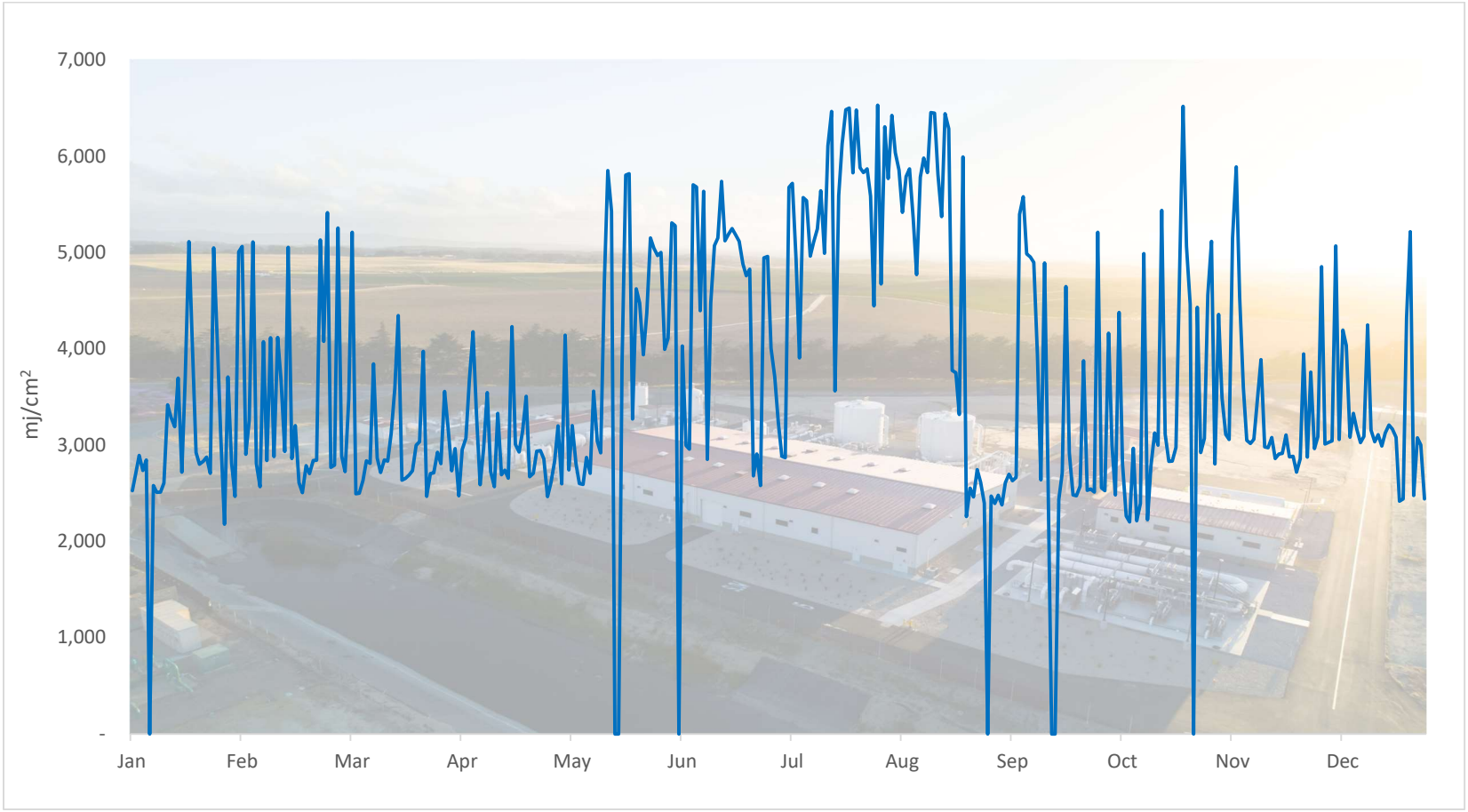


Figure 52. AWPF PW – Daily Maximum UV Dose for Reactor 6 (mJ/cm^2)

Table 53. AWPF PW – Daily Average UV Transmittance (%)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	96.10	96.10	96.10	96.70	96.20	96.40	96.40	96.00	95.80	96.21	96.38	96.07
2	96.20	95.90	96.20	96.50	96.10	96.30	96.30	95.90	95.90	96.36	96.04	96.87
3	96.80	95.90	96.00	96.40	96.20	96.20	96.30	95.90	96.10	96.23	96.25	96.64
4	97.00	96.00	96.10	96.30	96.20	96.60	96.30	95.90	96.10	96.31	96.05	96.52
5	96.40	95.90	96.00	96.30	96.50	96.50	96.80	95.90	96.20	96.42	96.67	96.59
6	96.20	96.00	96.00	96.30	96.20	96.20	96.50	95.90	95.70	98.52	96.19	97.15
7	96.40	96.20	96.30	96.50	96.10	96.30	96.40	96.10	95.80	96.70	96.13	96.51
8	96.20	96.20	96.30	96.40	96.20	96.10	96.90	95.90	95.80	96.77	97.16	96.37
9	96.20	96.30	96.10	96.30	96.30	96.00	97.30	95.80	95.80	96.56	97.30	96.40
10	96.20	96.20	96.20	96.30	96.20	96.20	96.90	95.80	95.80	96.33	97.02	96.36
11	96.20	96.30	96.20	96.20	96.30	96.30	96.50	95.90	96.00	96.53	96.09	96.42
12	96.10	96.20	96.10	96.10	96.40	96.30	96.30	96.00	95.80	96.50	96.11	96.48
13	96.10	96.10	96.20	96.20	96.40	96.20	96.90	96.00	95.80	96.80	96.17	96.45
14	96.20	96.20	96.40	96.20	96.90	96.30	96.60	95.90	95.80	96.80	96.42	96.46
15	96.10	95.60	96.20	96.20	96.60	96.30	96.60	95.70	96.00	96.63	96.13	96.40
16	96.30	96.80	96.20	96.60	96.70	96.40	96.60	95.80	96.30	96.49	96.43	96.38
17	96.50	95.90	96.10	96.40	96.50	96.30	96.50	95.90	96.40	96.25	96.36	96.52
18	96.10	96.10	96.20	96.10	96.70	96.70	96.40	95.90	96.30	96.10	96.21	96.51
19	96.20	95.90	96.20	96.30	96.70	96.60	96.50	95.70	96.30	95.91	96.04	96.47
20	96.20	95.90	96.10	96.30	96.60	96.70	96.20	95.90	96.20	96.41	96.16	96.43
21	96.30	96.00	96.10	96.10	96.50	96.60	95.90	96.00	96.50	96.30	96.27	96.29
22	95.90	95.80	96.20	96.20	96.40	96.70	95.90	95.70	96.30	96.13	96.19	96.25
23	96.00	96.00	96.30	96.10	96.60	96.70	95.80	95.80	96.30	96.21	96.18	96.19
24	96.10	96.00	96.30	96.20	96.40	96.60	96.10	95.80	96.10	96.20	96.22	96.26
25	96.30	95.90	96.30	96.20	96.50	96.70	95.90	95.80	96.20	96.40	96.04	96.30
26	96.00	95.80	96.20	96.20	96.30	96.50	96.00	95.80	96.20	96.23	96.38	96.24
27	95.80	96.00	96.40	96.10	96.30	96.40	95.90	95.80	96.20	-	96.28	96.39
28	96.00	96.20	96.30	96.00	96.10	96.40	96.00	95.90	96.40	98.40	96.22	96.40
29	95.90		96.30	96.00	96.10	96.30	95.80	95.70	96.30	96.23	96.15	96.32
30	95.90		96.30	96.10	96.10	96.20	96.10	95.90	96.20	96.45	96.10	96.30
31	96.20		96.30		96.20		96.00	95.80		96.46		96.30

SCADA: AWPF_UV_UVTAvg_MY_rpt

Note: 10/27/2022 AWPF was out of operation due to utility power outage.

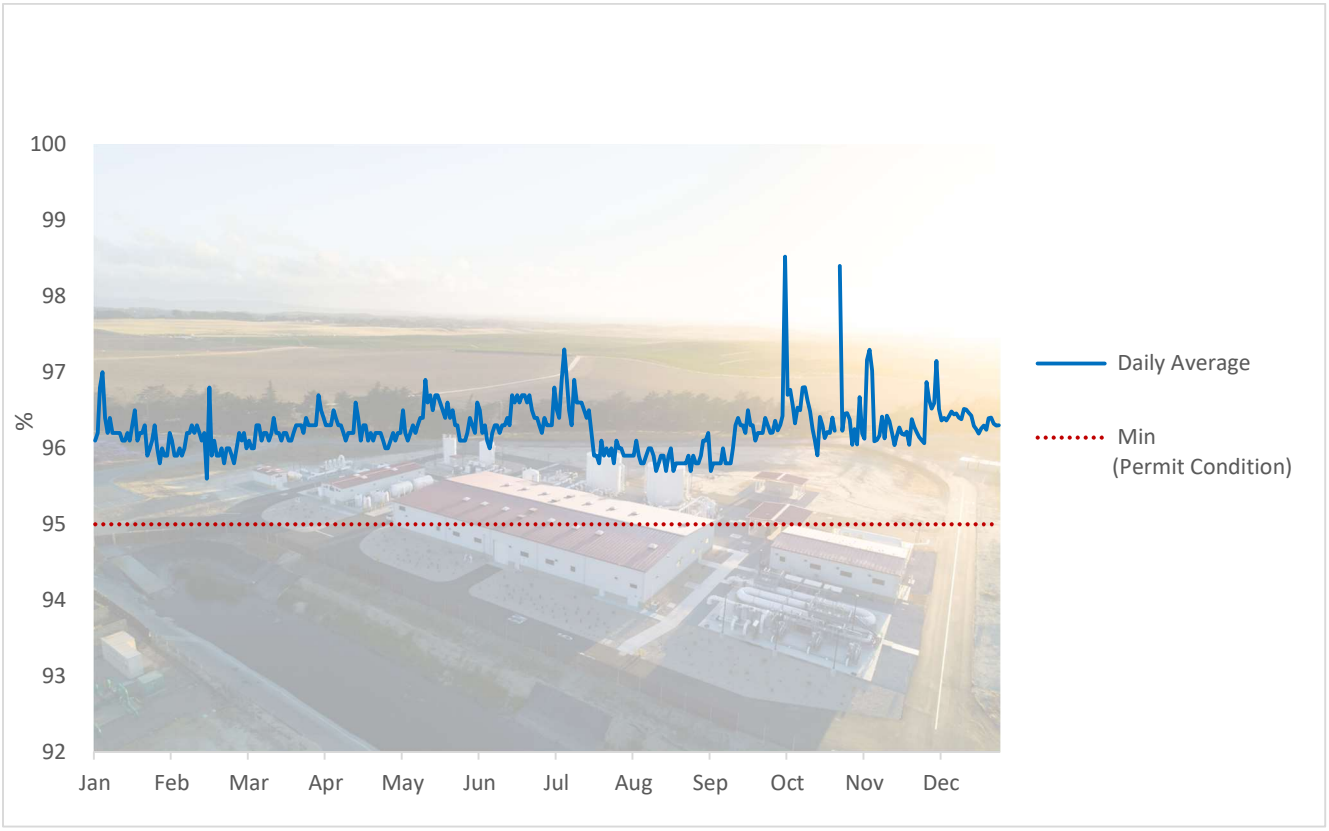


Figure 53. AWPF PW – Daily Average UV Transmittance (%)

Table 54. AWPF PW – Daily Minimum UV Transmittance (%)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	95.70	95.80	96.10	96.10	96.10	95.90	95.80	95.90	95.60	96.15	96.04	96.06
2	95.80	95.60	96.20	96.20	96.10	96.00	96.10	95.80	95.80	96.15	96.01	96.64
3	96.10	95.60	95.90	96.20	96.00	95.90	95.90	95.90	95.70	96.23	96.05	96.31
4	96.80	95.70	96.20	96.30	96.10	96.00	96.10	95.80	95.80	96.28	95.98	96.42
5	96.10	95.50	96.00	96.20	96.40	95.70	96.00	95.80	95.90	96.42	96.06	96.40
6	96.10	95.60	96.30	96.10	96.20	95.50	96.20	95.70	95.70	96.70	96.09	96.41
7	96.20	95.80	95.90	96.10	95.80	95.90	95.90	95.80	95.70	96.58	96.00	96.33
8	96.10	95.80	96.40	96.30	96.00	95.80	96.10	95.70	95.60	96.56	96.99	96.30
9	96.00	95.80	95.70	96.10	96.20	95.80	96.70	95.60	95.80	96.26	97.02	96.30
10	96.00	95.90	96.10	96.30	96.10	95.80	96.70	95.70	95.60	96.29	96.09	96.22
11	96.10	95.90	96.00	96.10	96.20	95.80	96.30	95.80	95.70	96.50	95.90	96.38
12	95.80	96.20	96.10	96.00	96.20	96.00	96.10	95.70	95.60	96.49	95.95	96.36
13	96.00	95.90	95.70	96.10	96.30	95.90	96.10	95.60	95.80	96.40	96.09	96.38
14	95.60	95.80	96.50	96.10	96.00	95.90	95.20	95.90	95.70	96.44	96.04	96.32
15	96.00	95.20	96.00	96.20	95.50	96.00	96.20	95.60	95.80	96.49	95.97	96.34
16	96.00	95.60	96.30	96.20	96.20	96.00	96.20	95.70	96.00	96.25	96.28	96.33
17	96.10	95.70	95.60	96.40	96.10	96.00	96.30	95.80	96.00	96.10	96.21	96.37
18	96.10	95.80	96.30	96.00	96.10	96.20	96.10	95.90	96.20	95.91	96.04	96.31
19	96.00	95.80	95.80	96.00	96.10	96.60	96.30	95.70	96.00	95.86	95.90	96.35
20	95.80	95.70	96.20	96.00	96.30	96.30	96.20	95.60	96.00	96.30	96.06	96.29
21	95.80	95.70	95.80	96.10	96.00	96.30	95.80	95.80	96.00	96.13	96.19	96.25
22	95.70	95.80	96.40	96.10	96.10	96.20	95.90	95.70	96.00	96.05	96.16	96.19
23	95.70	95.80	95.80	96.10	96.10	96.50	95.70	95.70	96.00	96.14	96.12	96.07
24	95.80	95.70	96.20	96.00	96.10	95.60	95.80	95.80	95.80	96.10	96.04	96.22
25	96.10	95.70	96.00	96.10	95.80	96.30	95.90	95.60	96.10	96.23	96.04	96.24
26	95.90	95.70	96.20	96.10	96.10	96.50	95.80	95.60	96.00	96.03	96.16	96.14
27	95.70	95.80	95.80	95.90	96.10	96.30	95.80	95.50	96.10	-	96.22	96.36
28	95.70	95.70	96.80	96.00	95.80	96.30	95.60	95.70	95.90	96.70	96.05	96.32
29	95.70		95.80	95.80	95.70	95.90	95.50	95.60	96.10	96.07	96.10	96.16
30	95.70		96.40	95.80	95.90	96.10	95.80	95.70	95.90	96.19	96.05	96.24
31	95.70		95.80		95.60		95.80	95.70		96.18		96.27

SCADA: AWPF_UV_UVTAvg_MY_rpt

Note: 10/27/2022 AWPF was out of operation due to utility power outage.



Figure 54. AWPF PW – Daily Minimum UV Transmittance (%)

Table 55. AWPF PW – Daily Maximum UV Transmittance (%)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	96.20	96.30	96.20	96.80	96.30	96.50	96.60	96.30	96.20	95.88	95.78	95.92
2	96.20	96.10	96.20	96.70	96.30	96.50	96.40	96.40	96.00	96.15	95.90	95.89
3	96.80	95.90	96.30	96.50	96.40	96.70	96.50	96.40	96.20	95.92	95.90	96.13
4	97.50	96.30	96.40	96.40	96.40	96.60	96.70	96.30	96.10	96.19	95.85	96.31
5	97.00	96.00	96.10	96.50	97.50	98.00	97.00	96.20	96.40	96.02	95.98	96.40
6	96.40	96.00	96.10	96.30	96.50	96.90	97.10	96.00	96.20	96.22	96.03	96.31
7	96.80	96.30	96.50	96.70	96.20	96.80	96.50	96.40	96.00	96.31	95.82	96.31
8	96.40	96.30	96.30	96.70	96.30	97.10	96.90	96.20	95.90	96.14	95.89	96.16
9	96.20	96.40	96.30	96.40	96.40	96.50	97.50	95.90	96.00	95.96	96.33	96.10
10	96.50	96.30	96.20	96.40	96.30	96.70	97.40	95.80	96.10	96.11	96.06	96.20
11	96.30	96.40	96.40	96.40	96.40	97.00	96.90	96.30	96.20	95.93	95.80	96.18
12	96.40	97.10	96.20	96.20	96.50	96.90	96.50	96.30	96.00	96.04	95.69	96.24
13	96.30	96.20	96.20	96.20	96.60	96.60	96.90	96.30	96.10	96.10	95.95	96.30
14	96.20	96.40	96.80	96.20	96.90	96.50	96.90	96.10	96.20	96.27	95.99	96.30
15	96.20	96.20	96.40	96.30	97.30	96.60	96.70	95.90	96.40	96.32	95.71	96.12
16	96.30	97.20	96.20	96.60	96.90	96.90	96.90	96.10	96.70	96.10	95.76	96.27
17	97.00	96.80	96.20	97.30	96.80	96.60	96.90	96.20	96.80	95.76	96.07	96.27
18	96.50	96.20	96.30	96.40	97.10	97.00	96.50	96.30	96.70	95.90	95.98	96.31
19	96.40	96.10	96.30	96.30	97.20	97.10	96.60	96.10	97.00	95.55	95.78	96.29
20	96.30	96.10	96.20	96.40	97.40	97.20	96.70	95.90	96.30	96.23	95.90	96.29
21	96.50	96.50	96.30	96.30	97.30	97.20	96.20	96.00	96.60	95.98	96.06	95.96
22	96.30	96.00	96.20	96.40	96.50	97.30	96.10	96.00	96.50	96.00	95.97	96.05
23	96.10	96.30	96.30	96.20	97.00	97.10	96.00	96.10	96.30	96.05	95.98	95.86
24	96.50	96.10	96.30	96.30	96.90	97.20	96.20	96.10	96.30	96.10	95.96	96.07
25	97.00	96.10	96.30	96.50	96.90	97.30	96.10	96.00	96.30	96.12	95.72	96.17
26	96.30	95.90	96.30	96.40	96.70	97.30	96.40	96.00	96.20	96.02	96.04	96.09
27	96.00	96.10	96.40	96.20	96.90	96.50	96.00	95.80	96.30	-	96.11	96.14
28	96.10	96.30	96.40	96.10	96.50	96.60	96.10	96.20	96.50	95.90	95.96	96.32
29	96.00		96.30	96.00	96.40	96.60	96.20	95.90	96.40	95.93	96.02	96.11
30	95.90		96.40	96.10	96.60	96.40	96.50	96.10	97.00	96.07	95.80	96.16
31	96.50		96.40		96.40		96.10	96.20		96.18		96.08

SCADA: AWPF_UV_UVTAvg_MAXY_rpt

Note: 10/27/2022 AWPF was out of operation due to utility power outage.

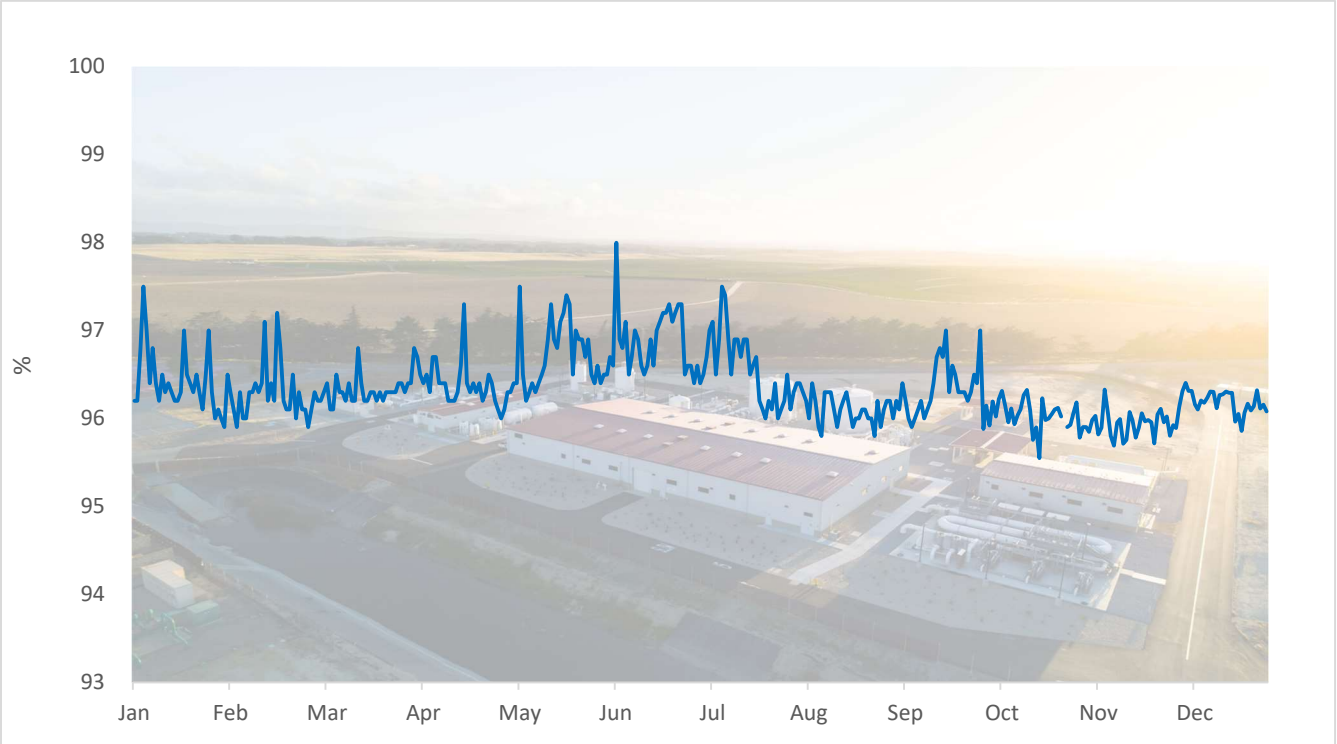


Figure 55. AWPF PW – Daily Maximum UV Transmittance (%)

Table 56. AWPF PW – Daily Average pH

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	8.16	8.72	8.83	8.75	8.58	8.58	8.86	8.78	8.84	8.76	8.82	8.67
2	8.37	8.74	8.85	8.73	8.51	8.71	8.85	8.79	8.77	8.75	8.86	8.62
3	8.40	8.68	8.79	8.73	8.62	8.74	8.76	8.77	8.81	8.75	8.80	8.60
4	8.59	8.75	8.88	8.88	8.67	8.84	8.74	8.75	8.79	8.75	8.69	8.57
5	8.44	8.78	8.51	8.94	8.56	8.75	8.88	8.73	8.77	8.80	8.73	8.54
6	8.28	8.81	8.79	8.83	8.68	8.84	8.80	8.73	8.77	8.64	8.69	8.41
7	8.63	8.86	8.71	8.92	8.58	8.76	8.86	8.69	8.83	8.78	8.68	8.55
8	8.55	8.57	8.89	8.89	8.73	8.72	8.85	8.74	8.70	8.78	8.67	8.68
9	8.56	8.89	8.76	8.69	8.67	8.77	8.90	8.75	8.76	8.75	8.81	8.58
10	8.59	8.75	8.90	8.68	8.46	8.83	8.84	8.70	8.77	8.73	8.65	8.63
11	8.58	8.89	8.66	8.59	8.55	8.71	8.83	8.77	8.78	8.79	8.55	8.55
12	8.56	8.87	8.59	8.57	8.69	8.69	8.88	8.83	8.81	8.88	8.57	8.35
13	8.48	8.63	8.85	8.55	8.72	8.76	8.91	8.77	8.83	8.40	8.57	8.33
14	8.27	8.87	8.87	8.61	8.70	8.77	8.89	8.76	8.79	8.77	8.56	8.33
15	8.54	8.81	8.88	8.65	8.86	8.73	8.77	8.72	8.82	8.78	8.56	8.43
16	8.56	8.76	8.83	8.68	8.78	8.75	8.79	8.71	8.81	8.80	8.58	8.45
17	8.65	8.83	8.77	8.60	8.74	8.74	8.82	8.84	8.78	8.82	8.66	8.67
18	8.58	8.73	8.74	8.73	8.75	8.71	8.74	8.73	8.77	8.76	8.68	8.67
19	8.55	8.82	8.59	8.68	8.77	8.60	8.75	8.70	8.80	8.79	8.70	8.68
20	8.54	8.86	8.76	8.68	8.73	8.71	8.75	8.80	8.79	8.82	8.59	8.82
21	8.51	8.79	8.84	8.54	8.72	8.71	8.78	8.81	8.78	8.77	8.57	8.75
22	8.45	8.80	8.85	8.49	8.73	8.85	8.77	8.73	8.79	8.74	8.66	8.65
23	8.63	8.80	8.66	8.65	8.77	8.87	8.72	8.72	8.82	8.74	8.69	8.69
24	8.69	8.70	8.79	8.51	8.66	8.85	8.74	8.70	8.80	8.76	8.63	8.73
25	8.63	8.58	8.81	8.63	8.80	8.80	8.78	8.73	8.71	8.82	8.58	8.73
26	8.74	8.44	8.70	8.60	8.66	8.66	8.77	8.74	8.78	8.78	8.64	8.68
27	8.78	8.50	8.71	8.54	8.67	8.74	8.83	8.60	8.77	-	8.60	8.78
28	8.52	8.70	8.74	8.19	8.60	8.80	8.83	8.77	8.76	8.77	8.53	8.69
29	8.48		8.82	8.41	8.55	8.78	8.76	8.75	8.79	8.90	8.85	8.72
30	8.47		8.81	8.37	8.53	8.79	8.79	8.75	8.74	8.75	8.65	8.74
31	8.68		8.87		8.57		8.74	8.81		8.83		8.73

SCADA: AWPF_PW_pH_AY_rpt

Note: 10/27/2022 AWPF was out of operation due to utility power outage.



Figure 56. AWPF PW – Daily Average pH

Table 57. AWPF PW – Daily Minimum pH

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	8.07	8.05	8.49	8.46	8.28	8.36	8.38	8.56	8.64	8.64	8.36	8.18
2	8.06	8.66	8.48	8.52	8.29	8.15	8.72	8.62	8.56	8.65	8.67	8.11
3	7.91	8.42	8.46	8.57	8.37	8.20	8.53	8.56	8.40	8.56	8.53	8.08
4	8.53	8.14	8.54	8.56	8.13	8.58	8.56	8.28	8.63	8.67	8.60	8.00
5	7.88	8.72	8.31	8.74	8.41	7.66	8.45	8.65	8.62	8.64	8.63	7.97
6	8.17	8.75	8.46	7.57	8.45	8.06	8.44	8.48	8.59	7.57	8.61	7.88
7	8.23	8.51	8.42	8.62	8.46	8.51	8.33	7.93	8.64	8.58	8.39	7.93
8	8.23	8.44	8.50	8.31	8.40	8.18	8.45	8.54	8.45	8.60	8.40	8.11
9	8.48	8.54	8.12	8.42	8.30	8.50	8.38	8.59	8.60	8.65	8.40	8.19
10	7.94	8.53	8.62	8.56	8.28	8.39	8.40	8.51	8.61	8.59	8.46	7.96
11	7.90	8.46	8.18	7.99	8.37	8.59	8.51	8.55	8.52	8.61	8.47	8.06
12	7.98	8.51	8.44	8.50	8.46	8.55	8.34	8.56	8.63	8.30	8.49	7.99
13	8.19	8.55	8.55	8.30	8.40	8.51	8.49	8.50	8.69	7.60	8.40	7.92
14	6.97	8.31	8.38	8.27	8.46	8.18	8.61	8.46	8.58	8.62	8.43	7.77
15	8.45	8.50	8.15	8.25	8.07	8.36	8.36	8.60	8.59	8.60	8.23	7.96
16	7.93	8.50	8.45	8.13	8.18	8.26	8.59	8.51	8.64	8.57	8.26	8.26
17	8.25	8.52	8.55	8.21	8.33	8.20	8.50	8.68	8.60	8.61	8.22	8.22
18	8.29	8.39	8.42	8.47	8.11	8.42	8.66	8.42	8.54	8.54	8.52	8.17
19	8.03	8.50	8.51	8.37	8.26	8.19	7.76	8.40	8.43	8.61	8.25	8.05
20	8.26	8.61	8.52	8.34	8.34	8.37	8.65	8.60	8.69	8.69	8.19	8.11
21	8.11	8.43	8.54	8.37	8.39	8.25	8.53	8.62	8.61	8.68	8.41	8.22
22	8.31	8.72	8.49	7.19	8.25	8.46	8.54	8.63	8.70	8.69	8.40	8.47
23	8.54	8.34	8.48	8.57	8.03	8.50	8.59	8.44	8.72	8.67	8.38	8.65
24	7.86	8.28	8.61	8.36	8.29	8.50	8.53	8.50	8.56	8.59	8.30	8.63
25	8.53	8.11	8.63	8.34	7.84	8.43	8.60	8.52	8.62	8.60	8.30	7.99
26	8.35	8.28	8.64	8.31	7.87	8.04	8.52	8.40	8.52	8.58	8.19	8.42
27	8.46	8.43	8.61	8.06	8.44	8.56	8.66	7.71	8.64	-	8.44	8.53
28	8.03	8.06	8.52	8.07	8.38	8.19	8.58	8.54	8.67	7.61	8.53	8.42
29	8.41		8.54	8.09	8.33	8.45	8.54	8.63	8.61	8.80	8.03	8.64
30	8.41		8.50	8.28	8.04	8.54	8.62	8.54	7.15	8.64	8.30	8.64
31	8.36		8.48		8.36		8.65	8.52		8.57		8.49

SCADA: AWPF_PW_pH_MY_rpt

Note: 10/27/2022 AWPF was out of operation due to utility power outage.



Figure 57. AWPF PW – Daily Minimum pH

Table 58. AWPF PW – Daily Maximum pH

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	8.51	9.08	9.01	8.98	8.69	8.89	9.18	8.84	9.00	8.95	8.97	8.88
2	8.57	8.82	8.97	9.11	8.77	9.00	9.00	8.93	8.89	8.86	8.96	9.05
3	8.70	8.96	9.08	9.12	8.93	8.92	8.89	8.94	8.95	8.93	9.03	9.13
4	8.76	9.02	9.21	9.06	8.81	8.87	8.97	8.83	8.93	8.88	8.90	9.05
5	8.93	8.83	8.88	9.16	8.68	9.01	9.26	8.88	8.91	8.92	8.87	8.81
6	8.56	8.86	8.94	9.11	8.92	9.02	9.12	8.99	8.89	9.10	8.93	9.12
7	9.22	9.02	9.02	9.06	8.83	9.33	9.01	8.94	8.94	8.96	9.01	9.02
8	8.67	8.79	9.16	9.20	8.80	8.98	8.99	8.97	8.85	8.97	9.14	9.06
9	8.64	9.06	9.11	8.91	8.88	8.98	9.05	8.91	9.01	8.91	8.94	9.02
10	8.80	8.89	9.12	8.88	8.66	9.02	9.09	8.86	8.94	8.92	8.84	8.99
11	8.89	9.08	9.05	8.87	8.84	9.01	9.10	8.87	8.92	8.98	8.83	8.74
12	8.97	9.00	8.70	8.66	9.29	9.03	8.98	8.97	8.92	9.24	8.84	8.60
13	8.84	8.94	9.02	8.72	8.85	9.06	9.03	8.84	8.91	9.58	8.84	8.83
14	8.59	9.04	9.16	8.79	9.15	8.98	9.07	8.84	8.92	8.95	8.83	8.88
15	8.63	8.94	9.11	8.82	9.15	8.98	9.02	8.88	8.88	8.94	8.83	8.73
16	8.85	8.91	9.06	9.12	9.18	9.02	8.85	8.95	9.46	9.04	8.98	8.98
17	8.91	8.95	9.19	8.78	9.08	9.02	8.94	8.93	8.97	9.04	9.08	8.98
18	8.80	9.63	9.09	9.29	9.08	8.97	8.89	8.87	8.92	8.94	8.88	9.00
19	8.79	8.94	8.72	8.86	9.06	8.98	8.85	8.86	8.90	8.94	8.92	9.09
20	8.64	8.90	8.94	8.81	9.04	8.98	8.90	8.84	8.93	8.95	9.00	9.13
21	9.44	8.98	9.05	8.81	9.06	8.95	8.99	8.85	8.98	9.02	8.85	9.03
22	8.68	8.92	9.10	8.97	8.95	8.92	8.90	8.90	8.99	8.91	8.84	8.93
23	8.81	9.11	8.75	8.74	8.98	8.95	8.89	8.89	8.92	8.87	8.88	8.87
24	8.91	9.06	9.06	8.77	9.04	8.98	8.86	8.86	8.90	8.95	8.88	8.87
25	8.87	9.12	9.09	8.91	9.01	9.10	8.88	8.94	8.99	9.33	8.83	8.89
26	8.99	8.56	8.76	8.83	9.07	9.01	8.86	8.87	8.90	8.99	9.04	9.12
27	8.90	8.59	9.10	8.81	9.01	8.87	9.03	8.75	8.90	-	8.82	8.93
28	8.69	9.05	9.00	8.47	8.95	9.02	8.91	8.99	8.87	8.92	9.19	8.98
29	8.53		8.98	8.63	8.92	8.98	8.88	8.92	8.92	8.98	8.94	8.86
30	8.52		9.12	8.71	8.92	8.95	8.92	8.92	8.89	8.92	8.91	8.86
31	9.05		9.04		8.93		8.90	8.98		9.06		8.91

SCADA: AWPF_PW_pH_MaxY_rpt

Note: 10/27/2022 AWPF was out of operation due to utility power outage.



Figure 58. AWPF PW – Daily Maximum pH

Table 59. AWPF PW – Monthly Arsenic (µg/L)

Month	Arsenic	1° MCL*
Jan	ND 0.21	10
Feb	ND 0.21	10
Mar	ND 0.21	10
Apr	ND 0.21	10
May	ND 0.21	10
Jun	ND 0.49	10
Jul	ND 0.5	10
Aug	DNQ 0.6	10
Sep	ND 0.5	10
Oct	-	10
Nov	ND 0.5	10
Dec	ND 0.21	10

Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.
**Compliance interval= running annual avg.*

Figure 59. AWPF PW – Monthly Arsenic (µg/L)

All monitoring results were ND/DNQ.

Table 60. AWPF PW – Monthly Boron (mg/L)

Month	Boron	WQG / RWDL
Jan	0.25	0.75
Feb	0.28	0.75
Mar	0.27	0.75
Apr	0.3	0.75
May	0.32	0.75
Jun	0.30	0.75
Jul	0.27	0.75
Aug	0.37	0.75
Sep	0.31	0.75
Oct	-	0.75
Nov	0.4	0.75
Dec	0.25	0.75

Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.



Figure 60. AWPF PW – Monthly Boron (mg/L)

Table 61. AWPF PW – Monthly Chromium (µg/L)

Month	Chromium	1° MCL*
Jan	ND 0.51	50
Feb	ND 0.51	50
Mar	ND 0.51	50
Apr	ND 0.51	50
May	ND 0.51	50
Jun	ND 0.8	50
Jul	ND 0.3	50
Aug	DNQ 0.4	50
Sep	ND 0.3	50
Oct	-	50
Nov	DNQ 0.3	50
Dec	ND 0.51	50

Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.
**Compliance interval= running annual avg.*

Figure 61. AWPF PW – Monthly Chromium (µg/L)

All monitoring results were ND/DNQ.

Table 62. AWPF PW – Bi-Weekly Total Nitrogen-N (mg/L)

1° MCL/RWDL 10 mg/L

Week	Total Nitrogen mg/L		Week	Total Nitrogen mg/L		Week	Total Nitrogen mg/L	
1	-	-	19	2.6	2.7	37	4.1	3.5
2	1.8	2.2	20	2.9	3.0	38	3.3	-
3	1.9	2.3	21	2.3	2.0	39	3.1	-
4	1.9	2.2	22	3.0	2.5	40	3.0	-
5	2.3	2.8	23	2.2	2.3	41	3.1	-
6	1.9	2.9	24	2.3	2.3	42	3.6	-
7	2.1	2.2	25	2.5	2.9	43	4.4	-
8	2.0	2.5	26	2.7	3.4	44	2.6	-
9	2.2	2.4	27	0.8	2.9	45	2.7	-
10	2.6	2.5	28	3.1	3.1	46	3.4	-
11	2.2	2.8	29	2.7	2.7	47	2.6	-
12	2.0	3.0	30	2.6	2.1	48	3.1	-
13	2.6	3.1	31	1.9	2.1	49	2.8	-
14	3.1	2.8	32	2.8	1.8	50	0.6	-
15	2.4	2.3	33	2.6	2.0	51	2.1	-
16	2.5	2.3	34	3.2	2.4	52	1.9	-
17	2.4	3.0	35	3.2	1.8	53	2.9	-
18	2.4	1.8	36	3.2	3.6			

Total Nitrogen includes nitrate-N, nitrite-N, ammonia-N and organic-N.
Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from 2x/week, 3 days apart to once weekly.

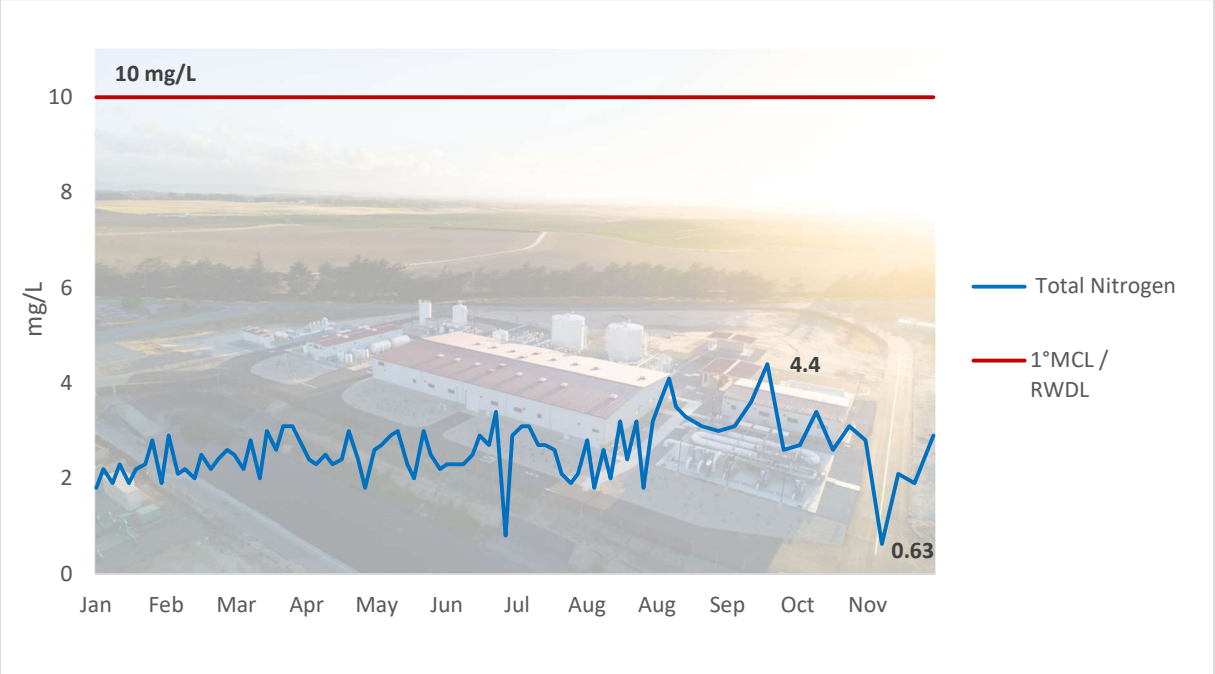


Figure 62. AWPF PW – Bi-Weekly Total Nitrogen-N (mg/L)

Table 63. AWPF PW – Weekly Nitrate-N (mg/L)

1° MCL/RWDL 10 mg/L

Week	Nitrate-N mg/L	Week	Nitrate-N mg/L	Week	Nitrate-N mg/L
1	-	19	0.57	37	0.59
2	0.56	20	0.59	38	0.57
3	0.51	21	0.56	39	0.39
4	0.63	22	0.53	40	0.58
5	0.67	23	0.42	41	0.54
6	0.55	24	0.37	42	0.90
7	0.45	25	0.58	43	0.83
8	0.57	26	0.73	44	0.60
9	0.45	27	0.74	45	0.62
10	0.38	28	0.84	46	0.63
11	0.47	29	0.58	47	0.40
12	0.61	30	0.52	48	0.83
13	0.60	31	0.30	49	0.73
14	0.75	32	0.45	50	0.55
15	0.58	33	0.38	51	0.36
16	0.45	34	0.39	52	0.65
17	0.61	35	0.27	53	0.56
18	0.44	36	0.53		

Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from 2x/week, 3 days apart to once weekly.



Figure 63. AWPF PW – Weekly Nitrate-N (mg/L)

Table 64. AWPF PW – Weekly Total Kjeldahl Nitrogen-N (mg/L)

Week	TKN mg/L
1	-
2	1.4
3	1.6
4	1.4
5	1.9
6	1.8
7	1.7
8	1.7
9	1.7
10	2.1
11	2.0
12	1.9
13	2.2
14	2.2
15	1.7
16	1.9
17	1.9
18	1.6
19	2.0
20	2.3
21	1.6
22	2.1
23	1.8
24	1.9
25	2.0
26	2.3
27	2.1
28	2.2
29	2.1
30	1.8
31	1.7
32	1.8
33	1.8
34	2.4
35	2.2
36	2.8
37	3.2
38	2.6
39	2.6
40	2.3
41	2.4
42	2.5
43	3.4
44	1.9
45	2.0
46	2.6
47	2.2
48	2.2
49	2.0
50	ND 1.1
51	1.6
52	1.2
53	2.2



Figure 64. AWPF PW – Weekly Total Kjeldahl Nitrogen-N (mg/L)

Table 65. AWPF PW – Daily Total Coliform (MPN/100mL)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1
5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
7	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
9	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
11	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
14	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
15	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
17	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
18	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
19	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
21	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
22	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
23	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
24	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
26	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
27	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1
28	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
29	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
30	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
31	<1		<1		<1		<1	<1		<1		<1

Note: 6/4/2022 and 10/27/2022 AWPF was out of operation due to a utility power outage, thus water was not available for collection and analysis.

Figure 65. AWPF PW – Daily Total Coliform (MPN/100mL)

All monitoring results were ND.

Table 66. AWPF PW – Weekly Total Organic Carbon (mg/L)

Week	TOC mg/L	Week	TOC mg/L	Week	TOC mg/L
1	-	18	0.2	36	0.2
2	0.2	19	0.2	37	0.2
3	0.2	20	0.2	38	0.2
4	0.2	21	0.2	39	0.2
5	0.2	22	0.2	40	0.2
6	0.2	23	0.2	41	0.2
7	0.2	24	0.2	42	0.2
8	0.2	25	0.2	43	0.2
9	0.2	26	0.2	44	0.1
10	0.2	27	0.2	45	0.2
11	0.2	28	0.2	46	0.2
12	0.2	29	0.2	47	0.2
13	0.2	30	0.2	48	0.2
14	0.2	31	0.2	49	0.2
15	0.2	32	0.2	50	0.2
16	0.2	33	0.2	51	0.2
17	0.2	34	0.3	52	0.2
		35	0.2	53	0.2

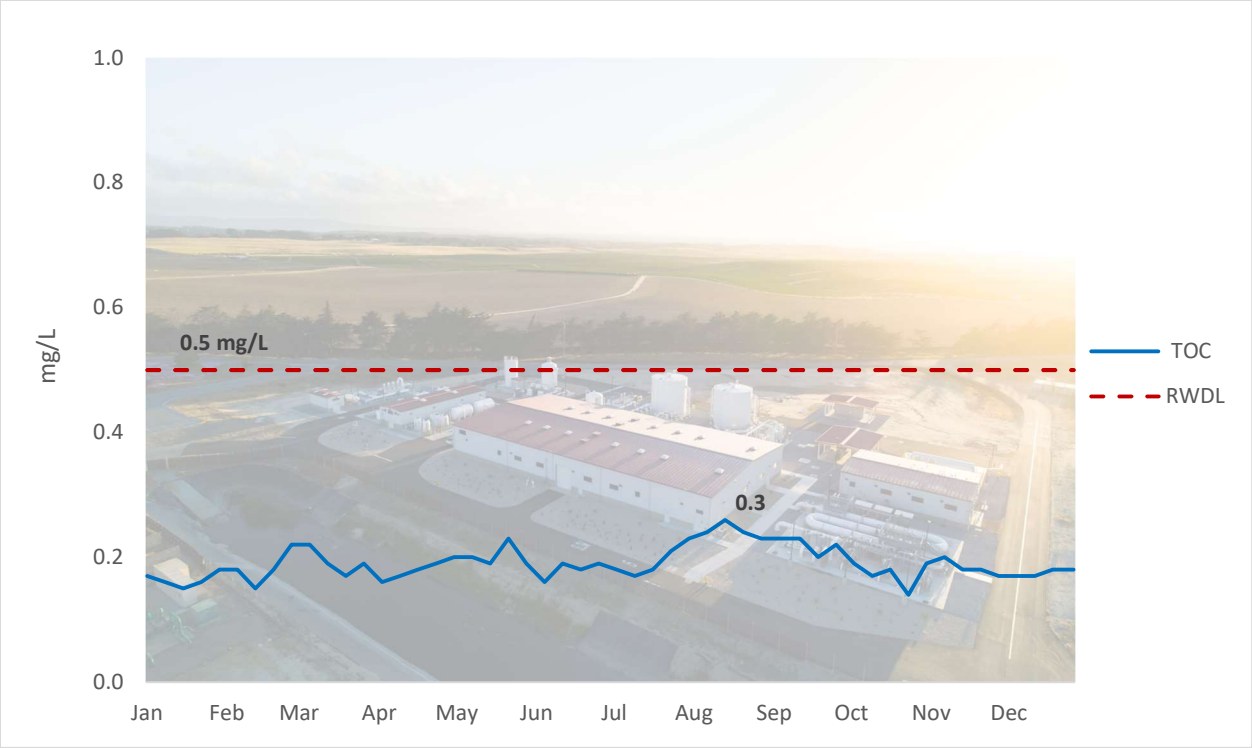


Figure 66. AWPF PW – Weekly Total Organic Carbon (mg/L)

Table 67. AWPF PW – Daily Average Turbidity (NTU)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.15	0.15	0.13	0.14	0.13	0.13	0.14	0.13	0.13	0.15	0.13	0.13
2	0.15	0.15	0.13	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
3	0.17	0.15	0.13	0.14	0.13	0.13	0.13	0.13	0.13	0.15	0.13	0.13
4	0.16	0.14	0.13	0.14	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.16
5	0.16	0.14	0.13	0.14	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.14
6	0.15	0.14	0.13	0.13	0.13	0.13	0.14	0.13	0.13	0.14	0.13	0.22
7	0.15	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.16
8	0.15	0.15	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.15	0.16
9	0.14	0.17	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.18
10	0.15	0.14	0.13	0.13	0.13	0.13	0.14	0.13	0.13	0.16	0.13	0.17
11	0.14	0.14	0.13	0.14	0.13	0.13	0.14	0.13	0.13	0.15	0.13	0.14
12	0.14	0.13	0.13	0.13	0.13	0.13	0.14	0.14	0.13	0.13	0.13	0.14
13	0.15	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.16	0.13	0.13
14	0.15	0.14	0.13	0.13	0.13	0.13	0.14	0.13	0.13	0.15	0.13	0.14
15	0.14	0.17	0.13	0.13	0.13	0.13	0.14	0.13	0.13	0.16	0.13	0.14
16	0.15	0.15	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.15	0.14
17	0.15	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.16
18	0.15	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.13	0.13	0.15	0.16
19	0.15	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.17
20	0.15	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.14
21	0.15	0.13	0.13	0.13	0.13	0.16	0.13	0.13	0.14	0.13	0.14	0.14
22	0.15	0.13	0.13	0.13	0.13	0.14	0.14	0.13	0.13	0.13	0.15	0.19
23	0.15	0.13	0.13	0.13	0.13	0.14	0.14	0.13	0.13	0.13	0.15	0.16
24	0.15	0.13	0.13	0.13	0.13	0.14	0.16	0.13	0.13	0.17	0.13	0.16
25	0.15	0.13	0.13	0.13	0.13	0.14	0.14	0.13	0.14	0.13	0.13	0.13
26	0.14	0.13	0.13	0.13	0.13	0.14	0.13	0.13	0.13	0.14	0.13	0.13
27	0.15	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	-	0.15	0.13
28	0.15	0.13	0.13	0.13	0.13	0.14	0.13	0.14	0.14	0.14	0.15	0.13
29	0.15		0.13	0.13	0.13	0.14	0.13	0.13	0.13	0.13	0.12	0.13
30	0.14		0.14	0.13	0.13	0.14	0.13	0.13	0.14	0.13	0.15	0.14
31	0.15		0.14		0.13		0.13	0.13		0.13		0.13

SCADA: AWPF_PW_Turb_AY_rpt

Note: 10/27/2022 AWPF was out of operation due to utility power outage.



Figure 67. AWPF PW – Daily Average Turbidity (NTU)

Table 68. AWPF PW – Daily Minimum Turbidity (NTU)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.15	0.14	0.12	0.14	0.12	0.12	0.13	0.13	0.12	0.13	0.13	0.13
2	0.15	0.14	0.12	0.14	0.13	0.12	0.13	0.13	0.13	0.13	0.13	0.13
3	0.15	0.14	0.12	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
4	0.16	0.14	0.12	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
5	0.15	0.14	0.12	0.13	0.06	0.13	0.13	0.13	0.13	0.13	0.13	0.13
6	0.15	0.13	0.12	0.13	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.13
7	0.15	0.13	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.14
8	0.14	0.13	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
9	0.14	0.13	0.13	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.14
10	0.14	0.13	0.13	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13
11	0.14	0.13	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
12	0.14	0.00	0.12	0.13	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13
13	0.14	0.13	0.12	0.13	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13
14	0.14	0.00	0.12	0.13	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13
15	0.14	0.13	0.12	0.13	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13
16	0.15	0.13	0.12	0.13	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13
17	0.14	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13
18	0.14	0.12	0.12	0.13	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13
19	0.14	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13
20	0.14	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13
21	0.14	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13
22	0.14	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13
23	0.14	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.12	0.12
24	0.14	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
25	0.14	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
26	0.14	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.01	0.13
27	0.14	0.12	0.12	0.12	0.13	0.13	0.13	0.00	0.13	-	0.12	0.13
28	0.14	0.12	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13
29	0.14		0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.13
30	0.14		0.13	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
31	0.14		0.14		0.12		0.13	0.13		0.13		0.13

SCADA: AWPF_PW_Turb_MY_rpt

Note: 10/27/2022 AWPF was out of operation due to utility power outage.

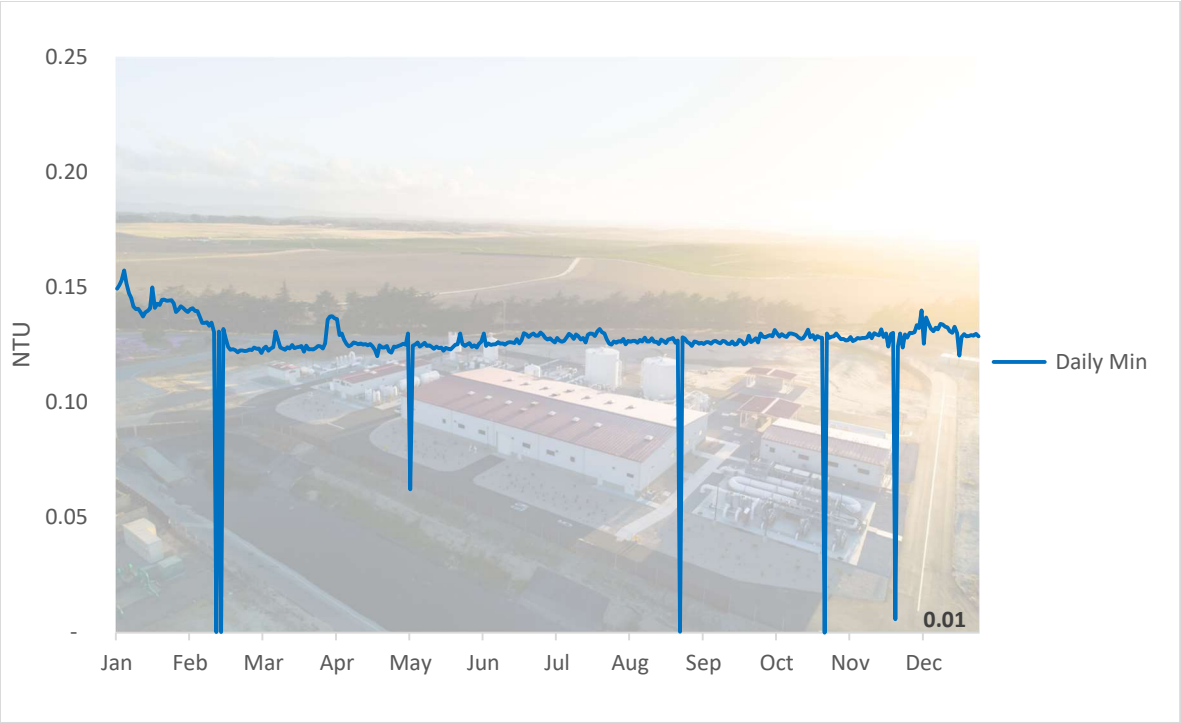


Figure 68. AWPF PW – Daily Minimum Turbidity (NTU)

Table 69. AWPF PW – Daily Maximum Turbidity (NTU)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	4.13	4.68	7.07	1.26	0.17	1.78	2.72	2.30	0.88	0.90	1.59	0.53
2	0.28	3.55	1.45	0.36	0.52	3.28	1.33	1.66	1.89	0.58	1.30	0.40
3	0.40	5.16	1.09	2.84	6.41	1.23	1.35	0.91	2.23	0.47	1.12	0.60
4	4.05	2.36	1.18	1.17	0.41	0.17	1.83	2.36	2.28	0.94	0.54	0.34
5	1.43	1.23	1.18	1.42	2.83	7.87	1.63	1.38	3.25	0.38	0.65	0.28
6	1.43	0.40	0.39	1.28	2.44	0.30	3.43	2.66	1.89	0.74	0.83	1.25
7	0.35	0.27	1.65	1.35	0.46	2.24	1.61	1.95	2.89	1.31	1.12	1.76
8	5.75	4.50	4.17	1.71	0.61	2.62	0.70	1.14	1.04	1.15	0.38	0.86
9	0.34	1.36	2.16	0.34	0.27	2.48	1.90	1.07	2.06	0.40	0.45	0.79
10	0.27	2.15	2.68	0.28	0.49	3.17	3.51	0.51	1.31	1.90	0.38	1.46
11	3.76	0.40	0.95	4.39	4.81	1.97	2.32	3.30	2.54	0.76	0.32	0.60
12	2.88	4.56	2.19	5.67	1.77	2.34	1.75	2.22	1.61	0.49	0.34	0.48
13	1.20	3.88	0.61	3.46	0.28	1.99	1.91	1.84	1.45	1.02	0.38	0.52
14	1.99	0.65	0.22	1.02	4.49	2.78	1.04	3.30	2.89	0.51	0.41	1.27
15	2.03	3.61	11.01	0.81	1.72	2.13	3.02	2.17	2.43	1.83	1.09	0.55
16	0.31	1.39	1.32	4.88	2.45	2.75	1.54	3.52	2.66	0.63	0.55	0.49
17	2.09	8.64	0.70	0.76	1.95	1.74	2.23	0.23	2.39	1.40	0.50	0.68
18	1.17	0.71	1.82	0.79	3.45	2.22	0.30	4.05	3.24	0.60	1.34	0.28
19	2.22	4.85	1.81	0.35	2.21	2.42	5.37	0.85	1.42	1.47	0.46	0.28
20	1.91	0.49	0.40	0.23	2.60	1.71	0.66	1.54	2.24	0.34	0.70	1.96
21	0.39	0.32	0.26	0.46	2.25	1.99	1.29	1.60	2.91	0.39	0.69	1.96
22	2.61	4.99	4.19	4.32	2.51	0.31	1.43	0.19	1.15	0.54	0.66	2.55
23	0.23	0.35	2.10	0.35	1.90	3.20	0.81	3.42	0.59	0.53	0.21	1.11
24	2.16	4.95	0.29	0.45	0.59	4.27	3.48	2.69	0.29	1.17	0.41	0.53
25	2.76	0.92	2.21	0.47	2.00	3.07	1.63	2.23	3.96	1.21	0.43	0.95
26	4.81	0.94	0.38	6.94	1.54	2.62	2.54	1.63	1.17	1.90	1.07	0.77
27	2.55	0.19	0.38	1.14	1.77	0.38	5.06	4.23	0.48	-	1.37	0.57
28	1.10	0.22	2.27	0.34	2.49	3.21	1.28	1.72	2.90	0.90	0.83	1.04
29	2.22		1.93	0.36	1.76	2.09	1.10	2.28	0.42	0.61	1.56	0.46
30	0.17		0.31	0.25	2.16	2.07	1.88	3.20	3.05	1.52	0.56	0.55
31	0.23		2.24		2.02		1.87	2.30		1.25		0.52

SCADA: AWPF_PW_Turb_MaxY_rpt

Note: 10/27/2022 AWPF was out of operation due to utility power outage.

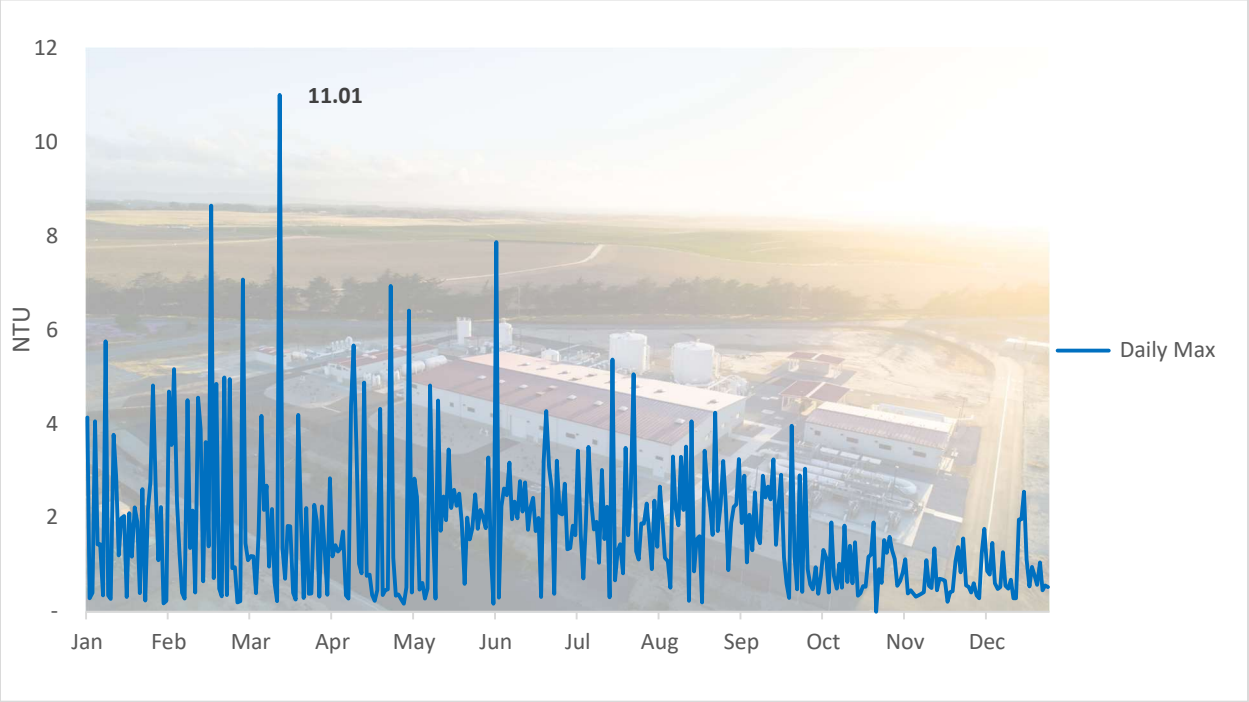


Figure 69. AWPF PW – Daily Maximum Turbidity (NTU)

Table 70. AWPF PW – Remaining Inorganics with Primary MCLs

Month*	Aluminum µg/L	Antimony µg/L	Arsenic µg/L	Asbestos MFL**	Barium µg/L	Beryllium µg/L	Cadmium µg/L	Chromium (Total) µg/L	Cyanide µg/L	Fluoride mg/L	Mercury µg/L	Nickel µg/L	Nitrate (as N) mg/L	Nitrite (as N) mg/L	Nitrate+ Nitrite mg/L	Perchlorate µg/L	Selenium µg/L	Thallium µg/L
Jan	DNQ 1.3	ND 0.11	ND 0.2	ND 0.01	DNQ 1.6	ND 0.1	ND 0.03	ND 0.5	15	DNQ 0.02	ND 0.02	ND 0.32	0.57	0.11	0.63	ND 0.3	ND 0.3	ND 0.04
Feb	DNQ 1.2	ND 0.11	ND 0.2	ND 0.01	DNQ 1.8	ND 0.1	ND 0.03	ND 0.5	DNQ 17	0.06	ND 0.02	ND 0.32	0.50	0.10	0.56	ND 0.3	ND 0.3	ND 0.04
Mar	DNQ 2.2	ND 0.11	ND 0.2	ND 0.01	DNQ 1.5	ND 0.1	DNQ 0.04	ND 0.5	DNQ 12	0.06	ND 0.02	ND 0.32	0.58	0.12	0.65	ND 0.3	ND 0.3	DNQ 0.05
Apr	DNQ 3.8	ND 0.11	ND 0.2	ND 0.01	2.0	ND 0.1	ND 0.03	ND 0.5	DNQ 3.8	0.07	ND 0.02	ND 0.32	0.52	0.13	0.61	ND 0.3	ND 0.3	ND 0.04
May	ND 0.8	ND 0.11	ND 0.2	ND 0.01	DNQ 1.2	ND 0.1	ND 0.03	ND 0.5	DNQ 22	0.09	ND 0.02	ND 0.32	0.55	0.12	0.63	ND 0.3	ND 0.3	ND 0.04
Jun	ND 11	ND 0.48	ND 0.5	ND 0.21	DNQ 1.6	ND 0.2	ND 0.1	ND 0.8	ND 15	0.07	ND 0.08	ND 0.38	0.58	0.11	0.64	ND 0.1	ND 1.0	ND 0.32
Jul	ND 5	ND 0.1	ND 0.5	ND 0.20	DNQ 1.6	ND 0.1	ND 0.1	ND 0.3	ND 2	DNQ 0.05	ND 0.1	ND 0.5	0.56	0.10	0.63	ND 0.4	ND 0.5	ND 0.1
Aug	ND 5	ND 0.1	DNQ 0.6	ND 0.20	DNQ 1.5	ND 0.1	ND 0.1	DNQ 0.4	ND 2	DNQ 0.02	ND 0.1	DNQ 0.9	0.38	0.11	0.46	ND 0.5	ND 0.5	ND 0.1
Sep	ND 5	0.7	ND 0.5	ND 0.20	DNQ 1.5	ND 0.1	ND 0.1	ND 0.3	DNQ 2	DNQ 0.05	ND 0.1	DNQ 0.7	0.55	0.11	0.64	ND 0.4	ND 0.5	ND 0.1
Oct	-	-	-	-	-	-	-	-	-	-	-	-	0.70	0.13	0.82	-	-	-
Nov	ND 5	DNQ 0.1	ND 0.5		DNQ 1.9	ND 0.1	ND 0.1	DNQ 0.3	ND 2	DNQ 0.02	ND 0.1	DNQ 0.8	0.65	0.11	0.74	ND 1	ND 0.5	DNQ 0.1
Dec	-	-	-	-	-	-	-	-	-	-	-	-	0.53	0.10	0.63	-	-	-
1° MCL	1000	6	10	7	1000	4	5	50	150	2	2	100	10	1	10	6	50	2
Compliance Interval* **	*RA*	*RA*	*RA*	*RA*	*RA*	*RA*	*RA*	*RA*	*RA*	*RA*	*RA*	*RA*	*AIC*	*AIC*	*AIC*	*AIC*	*RA*	*RA*

**Per revised MRP 2020-0122 issued September 13, 2022, all constituents with the exception of Asbestos, Nitrate (as N), Nitrite (as N), and Nitrate + Nitrite were reduced from monthly monitoring to quarterly.*

***Per revised MRP 2020-0122 Issued September 13, 2022, monitoring frequency for Asbestos was revised from monthly to once every 3 years.*

****RA = Running Annual Average | SS = Single Sample | AIC = Average of Initial + Confirmation Sample.*



Figure 70-a. AWPF PW – Remaining Inorganics with Primary MCLs – Monthly Antimony (µg/L)

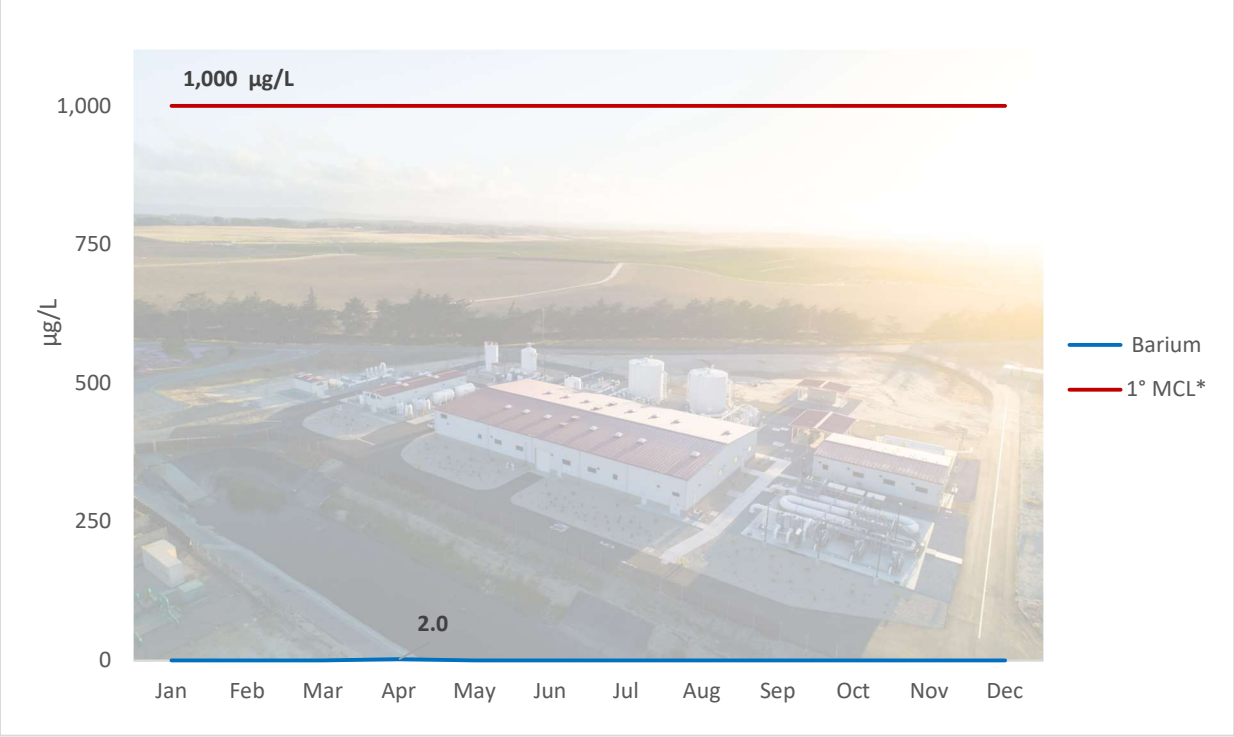


Figure 70-b. AWPF PW – Remaining Inorganics with Primary MCLs – Monthly Barium (µg/L)

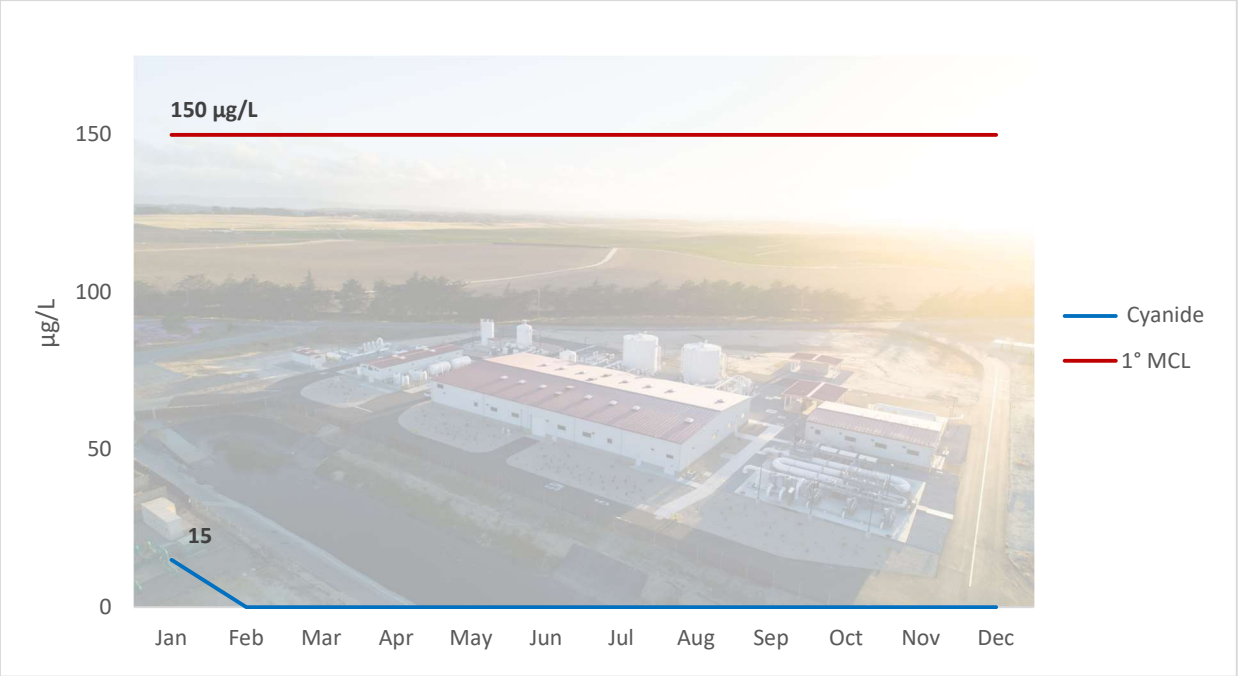


Figure 70-c. AWPF PW – Remaining Inorganics with Primary MCLs – Monthly Cyanide (µg/L)

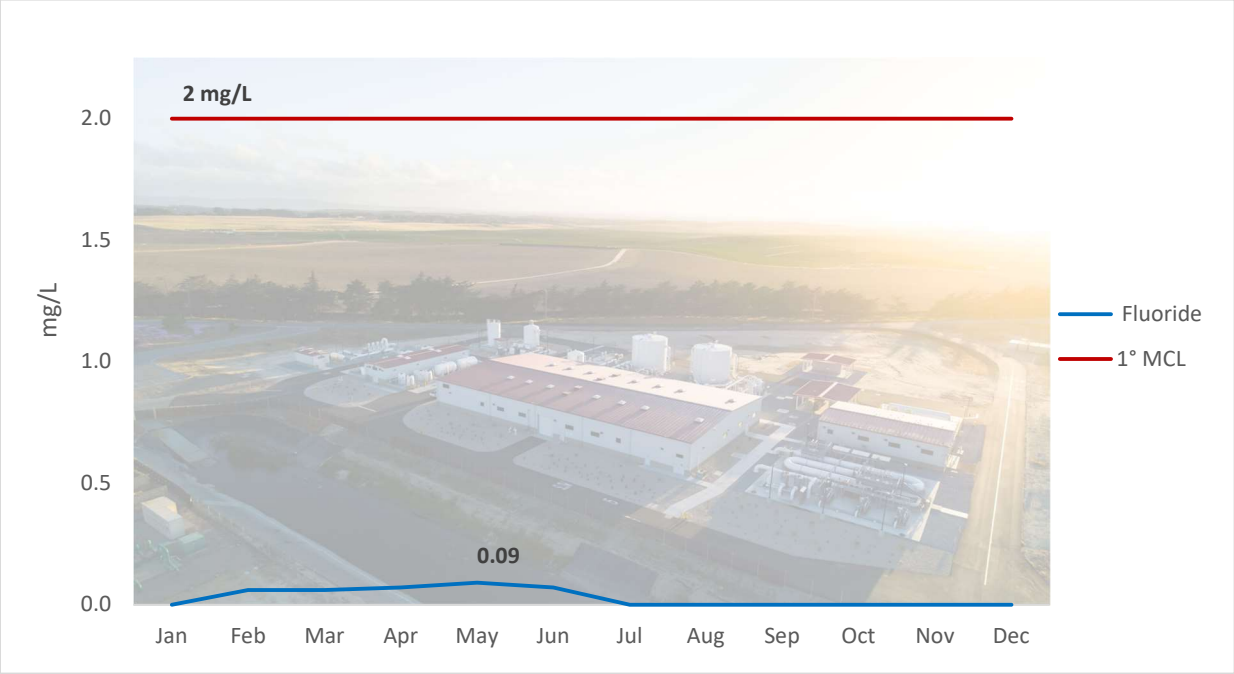


Figure 70-d. AWPF PW – Remaining Inorganics with Primary MCLs – Monthly Fluoride (mg/L)

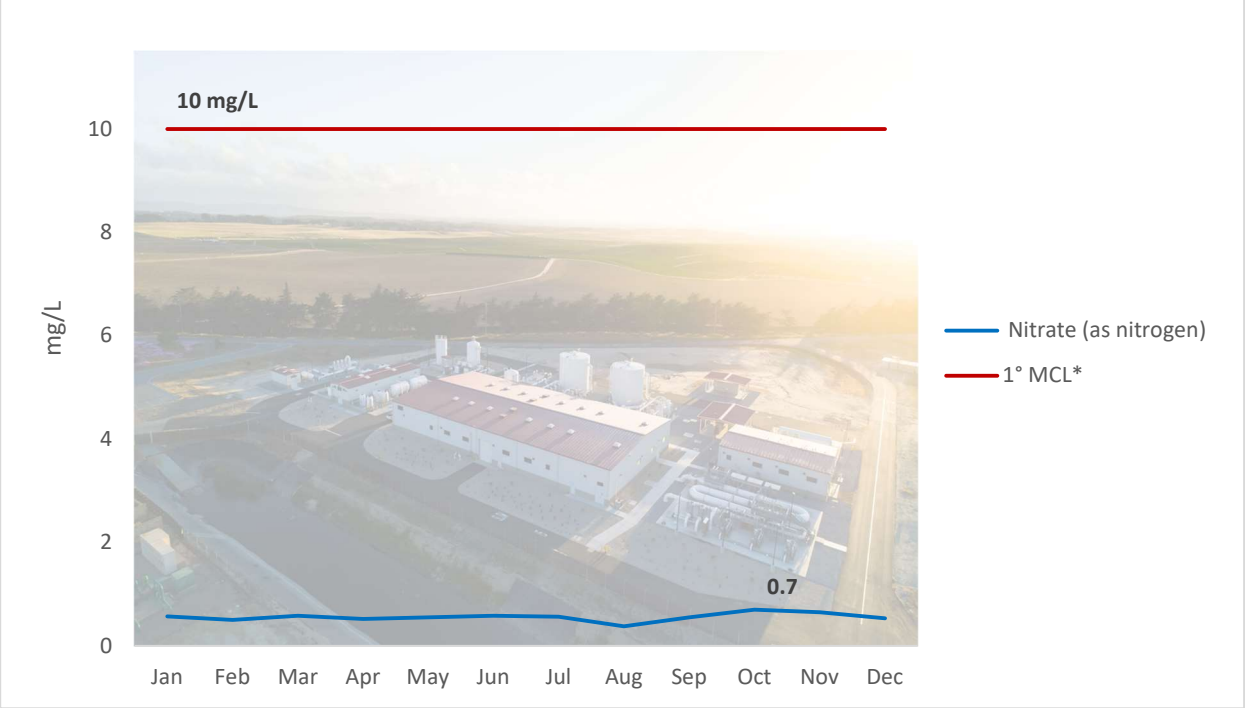


Figure 70-e. AWPF PW – Remaining Inorganics with Primary MCLs – Monthly Nitrate (as N) (mg/L)

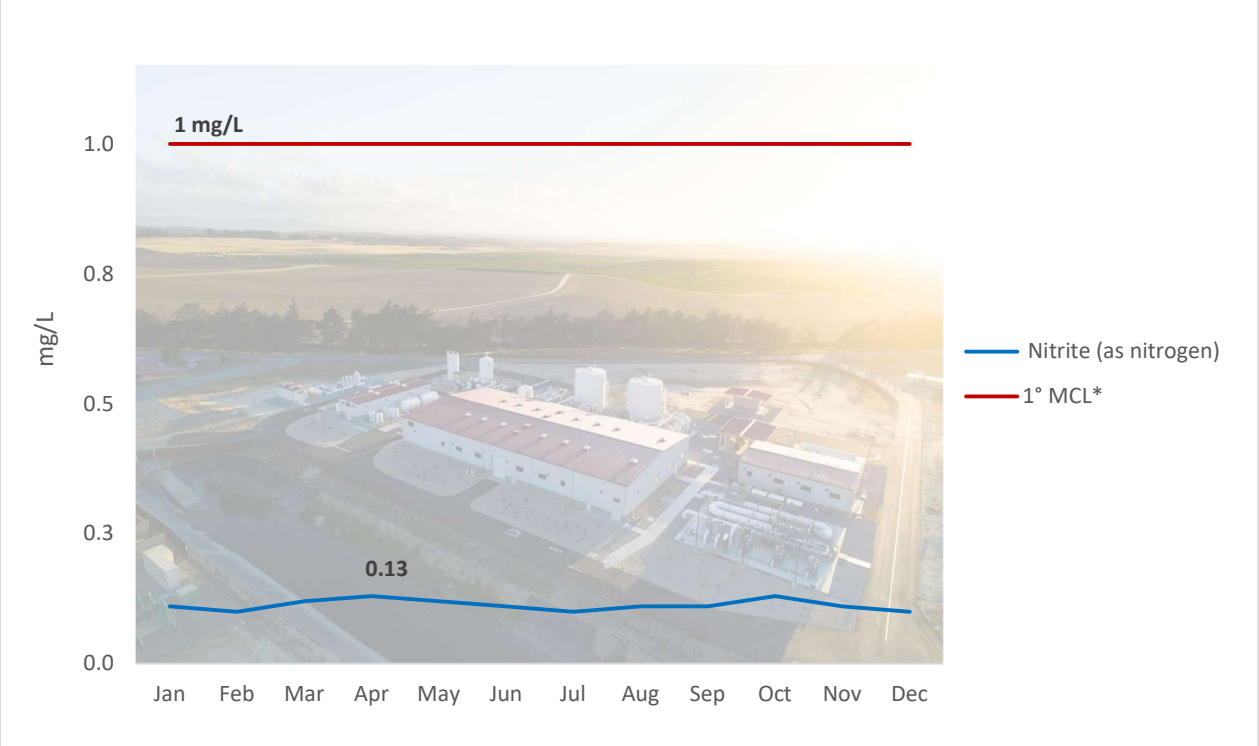


Figure 70-f. AWPF PW – Remaining Inorganics with Primary MCLs – Monthly Nitrite (as N) (mg/L)



Figure 70-g. AWPF PW – Remaining Inorganics with Primary MCLs – Monthly Nitrate + Nitrite (as N) (mg/L)

Table 71. AWPF PW – Monthly Asbestos (MFL)

Month	Asbestos	1° MCL*
Jan	ND 0.01	7
Feb	ND 0.01	7
Mar	ND 0.01	7
Apr	ND 0.01	7
May	ND 0.01	7
Jun	ND 0.21	7
Jul	ND 0.20	7
Aug	ND 0.20	7
Sep	ND 0.20	7
Oct	-	7
Nov	-	7
Dec	-	7

Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to once every three years.
**Compliance interval= running annual avg.*

Figure 71. AWPF PW – Monthly Asbestos (MFL)

All monitoring results were ND/DNQ.

Table 72. AWPF PW – Constituents with Secondary MCLs

Month*	Aluminum ug/L**	Chloride mg/L***	Color	Copper ug/L**	Foam Agents (MBAS) mg/L	Iron ug/L	Manganese ug/L**	MTBE ug/L**	Odor-Threshold TON	Silver ug/L	Specific Conductance us/cm	Sodium mg/L	Sulfate mg/L	Thiobencarb ug/L**	TDS mg/L	Turbidity NTU	Zinc ug/L
Jan	DNQ 1.3	42	ND 3	DNQ 0.40	ND 0.01	ND 2.6	DNQ 1.3	ND 0.07	ND 1	ND 0.01	200	17	DNQ 0.14	ND 0.01	140	0.84	ND 1.2
Feb	DNQ 1.2	42	ND 3	DNQ 0.43	DNQ 0.04	ND 2.6	DNQ 0.5	ND 0.07	ND 1	ND 0.01	210	20	DNQ 0.16	ND 0.01	100	DNQ 0.06	ND 1.2
Mar	DNQ 2.2	35	ND 3	ND 0.36	ND 0.01	ND 2.6	DNQ 0.25	ND 0.07	ND 1	DNQ 0.09	180	16	DNQ 0.14	ND 0.01	100	DNQ 0.07	ND 1.2
Apr	DNQ 3.8	41	ND 3	DNQ 0.40	ND 0.01	ND 2.6	DNQ 1.0	ND 0.07	ND 1	ND 0.01	210	18	0.22	ND 0.01	110	DNQ 0.06	ND 1.2
May	ND 0.78	39	ND 3	DNQ 0.40	DNQ 0.02	ND 2.6	DNQ 1.5	ND 0.07	ND 1	ND 0.01	210	20	0.33	ND 0.01	94	DNQ 0.07	ND 1.2
Jun	ND 11	43	ND 2	DNQ 0.39	ND 0.03	ND 2.2	ND 0.41	ND 0.07	ND 1	ND 0.12	200	16	0.21	ND 0.02	130	0.1	ND 4.3
Jul	ND 5	42	ND 3	ND 7	ND 0.02	ND 10	ND 5	ND 0.94	ND 1	ND 0.5	205	16	0.17	ND 0.03	116	ND 0.1	ND 10
Aug	ND 5	49	ND 3	ND 7	DNQ 0.04	ND 10	ND 5	ND 0.94	ND 1	ND 0.5	229	21	0.37	ND 0.03	132	ND 0.1	ND 10
Sep	ND 5	-	ND 3	ND 7	ND 0.02	ND 10	ND 5	ND 0.94	ND 1	ND 0.5	231	22	-	ND 0.03	110	ND 0.1	ND 10
Oct	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nov	ND 5	45		ND 7			ND 5	ND 0.94					ND 0.1	ND 0.03			
Dec	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2° MCL	200	250	15	1000	0.5	0.3	50	5	3	100	900	69	250	1	500	5	5000
Compliance Interval* **	*RA*	*SS*	*RA*	*RA*	*RA*	*RA*	*RA*	*RA*	*RA*	*RA*	*SS*	*WQG*	*SS*	*RA*	*SS*	*RA*	*RA*

**Per revised MRP 2020-0122 issued September 13, 2022, monitoring for all constituents was reduced from monthly to annually.*

***Quarterly samples were collected for these parameters per the requirements of: Table M-4 (Remaining Inorganics with Primary MCLs - Aluminum); Table M-3b (Recycled Water Discharge Limits - Copper); Table M-7 (Regulated Organics - Manganese, MTBE, Thiobencarb); M-10 (Remaining Constituents with Notification Levels - Manganese).*

****Quarterly samples were collected in error.*

****RA = Running Annual Average | SS = Single Sample | AIC = Average of Initial + Confirmation Sample | WQG = Water Quality Goal.*



Figure 72-a. AWPF PW – Constituents with Secondary MCLs – Monthly Chloride (mg/L)

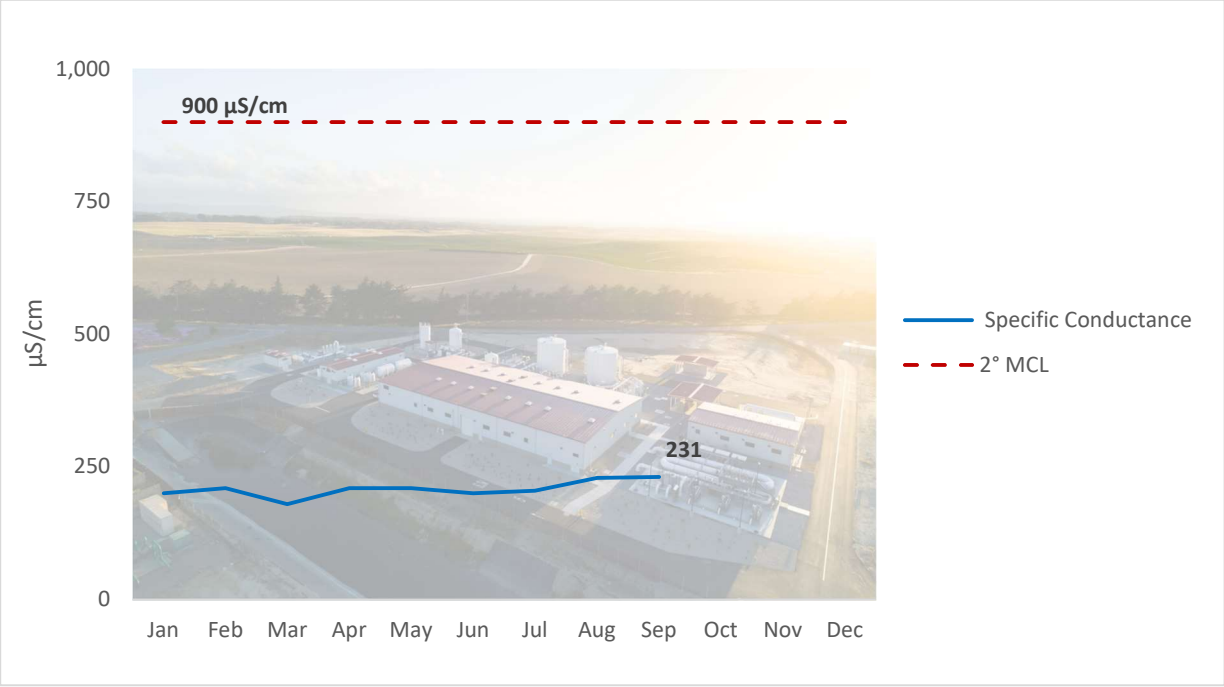


Figure 72-b. AWPF PW – Constituents with Secondary MCLs – Monthly Specific Conductance (µS/cm)



Figure 72-c. AWPF PW – Constituents with Secondary MCLs – Monthly Sodium (mg/L)



Figure 72-d. AWPF PW – Constituents with Secondary MCLs – Monthly Sulfate (mg/L)



Figure 72-e. AWPF PW – Constituents with Secondary MCLs – Monthly TDS (mg/L)



Figure 72-f. AWPF PW – Constituents with Secondary MCLs – Monthly Turbidity (NTU)

Table 73. AWPF PW – Radioactivity (pCi/L)

Month	Gross Alpha Particle Activity pCi/L	Gross Beta Particle Activity pCi/L	Combined Radium-226 and Radium-228 pCi/L	Strontium-90 pCi/L *	Tritum pCi/L	Uranium pCi/L
Jan	3.00	2.00	ND 2.00	-	ND 399	-
Feb	4.37	ND 2.70	ND 2.00	-	ND 1000	-
Mar	ND 2.00	ND 2.00	ND 2.00	-	ND 1000	-
Apr	ND 1.81	ND 2.89	ND 2.00	-	ND 1000	-
May	ND 3.70	3.33	ND 2.00	-	ND 1000	-
Jun	2.24	1.96	0.00	-	-199	-
Jul	0.23	2.16	0.59	-	218	-
Aug	0.60	3.64	0.04	-	228	-
Sep	0.25	2.31	0.00	-	314	-
Oct	-	-	-	-	-	-
Nov	1.45	3.00	0.16	0.38	-130	ND 0.1
Dec	-	-	-	-	-	-
1°MCL	15	50	5	8	20,000	20

Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.
**Previous MRP 2020-0122, issued on February 1, 2021, required no Strontium-90 monitoring for AWPF PW. Revised MRP 2020-0122 issued September 13, 2022 reinstated monitoring.*



Figure 73-a. AWPF PW – Radioactivity – Monthly Gross Alpha (pCi/L)



Figure 73-b. AWPF PW – Radioactivity – Monthly Gross Beta (pCi/L)



Figure 73-c. AWPF PW – Radioactivity – Monthly Radium 226 & Radium 228 (pCi/L)



Figure 73-d. AWPF PW – Radioactivity – Monthly Tritium (pCi/L)



Figure 73-e. AWPF PW – Radioactivity – Monthly Strontium 90 (pCi/L)

Table 74. AWPF PW – Regulated Organic Chemicals (µg/L)

Constituent (Monthly)	UOM	Result:											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Volatile Organic Chemicals													
Benzene	µg/L	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND, N 0.12	ND 0.15	ND 0.15	ND 0.15	-	ND 0.15	-
Carbon Tetrachloride (CTC)	µg/L	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND, N 0.09	ND 0.27	ND 0.27	ND 0.27	-	ND 0.27	-
1,2-Dichlorobenzene	µg/L	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND, N 0.08	ND 0.19	ND 0.19	ND 0.19	-	ND 0.19	-
1,4-Dichlorobenzene	µg/L	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND, N 0.09	ND 0.18	ND 0.18	ND 0.18	-	ND 0.18	-
1,1-Dichloroethane	µg/L	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND, N 0.13	ND 0.27	ND 0.27	ND 0.27	-	ND 0.27	-
1,2-Dichloroethane (1,2-DCA)	µg/L	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND, N 0.12	ND 0.24	ND 0.24	ND 0.24	-	ND 0.24	-
1,1-Dichloroethene (1,1-DCA)	µg/L	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND, N 0.11	ND 0.16	ND 0.16	ND 0.16	-	ND 0.16	-
cis-1,2-Dichloroethylene	µg/L	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	DNQ, N 0.21	ND 0.25	ND 0.25	ND 0.25	-	ND 0.25	-
trans-1,2-Dichloroethylene	µg/L	ND 0.10	ND 0.10	ND 0.10	ND 0.10	ND 0.10	ND, N 0.11	ND 0.26	ND 0.26	ND 0.26	-	ND 0.26	-
Dichloromethane	µg/L	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND, B 0.07	ND 0.30	ND 0.30	ND 0.30	-	ND 0.30	-
1,2-Dichloropropane	µg/L	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND, N 0.07	ND 0.13	ND 0.13	ND 0.13	-	ND 0.13	-
1,3-Dichloropropane	µg/L	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND, N 0.11	ND 0.50	ND 0.50	ND 0.50	-	ND 0.50	-
Ethylbenzene	µg/L	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND, N 0.11	ND 0.21	ND 0.21	ND 0.21	-	ND 0.21	-
Methyl-tert-butyl-ether (MTBE)	µg/L	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND, N 0.07	ND 0.94	ND 0.94	ND 0.94	-	ND 0.94	-
Monochlorobenzene	µg/L	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND, N 0.07	ND 0.15	ND 0.15	ND 0.15	-	ND 0.15	-
Styrene	µg/L	ND 0.11	ND 0.11	ND 0.11	ND 0.11	DNQ 0.27	DNQ, N 0.23	ND 0.19	ND 0.19	ND 0.19	-	ND 0.19	-
1,1,2,2-Tetrachloroethane	µg/L	ND 0.10	ND 0.10	ND 0.10	ND 0.10	ND 0.10	ND, N 0.10	ND 0.20	ND 0.20	ND 0.20	-	ND 0.20	-
Tetrachloroethylene (PCE)	µg/L	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND, N, J3 0.28	ND 0.18	ND 0.18	ND 0.18	-	ND 0.18	-
Toluene	µg/L	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND, N 0.06	ND 0.29	ND 0.29	ND 0.29	-	ND 0.29	-
1,2,4-Trichlorobenzene	µg/L	ND, B 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND, N, B 0.07	ND 0.17	ND 0.17	ND 0.17	-	ND 0.17	-
1,1,1-Trichloroethane	µg/L	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND, N, J3 0.08	ND 0.26	ND 0.26	ND 0.26	-	ND 0.26	-
1,1,2-Trichloroethane	µg/L	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND, N 0.08	ND 0.19	ND 0.19	ND 0.19	-	ND 0.19	-
Trichloroethylene (TCE)	µg/L	ND 0.10	ND 0.10	ND 0.10	ND 0.10	ND 0.10	ND, N, J3 0.10	ND 0.18	ND 0.18	ND 0.18	-	ND 0.18	-
Trichlorofluoromethane	µg/L	ND 0.18	ND 0.18	ND 0.18	ND, J1 0.18	ND 0.18	ND, N, J3 0.18	ND 0.18	ND 0.18	ND 0.18	-	ND 0.18	-
1,1,2-Trichloro- 1,2,2-Trifluoroethane	µg/L	ND 0.14	ND 0.14	ND 0.14	ND, J1 0.14	ND 0.14	ND, N, J3 0.14	ND 1.50	ND 1.50	ND 1.50	-	ND 1.50	-
Vinyl Chloride	µg/L	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND, N, J3 0.08	ND 0.18	ND 0.18	ND 0.18	-	ND 0.18	-
Xylenes (o,m,p)	µg/L	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	N, B, J1 0.56	ND 0.33	ND 0.33	ND 0.33	-	ND 0.33	-
Synthetic Organic Chemicals													
1,2,3-Trichloropropane	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND, N 0.05	ND 0.22	ND 0.22	ND 0.001	-	ND 0.22	-
Alachlor	µg/L	ND 0.05	ND 0.02	ND 0.05	ND 0.02	ND 0.02	ND 0.02	ND 0.03	ND 0.03	ND 0.03	-	ND 0.03	-
Atrazine	µg/L	ND 0.03	ND 0.05	ND 0.03	ND 0.05	ND, J3 0.05	ND 0.05	ND 0.01	ND 0.01	ND 0.01	-	ND 0.01	-
Bentazon	µg/L	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.06	ND 0.23	ND 0.23	ND 0.23	-	ND 0.23	-
Benzo(a)pyrene	µg/L	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.02	ND 0.02	ND 0.02	-	ND 0.02	-
Carbofuran	µg/L	ND 0.1	ND 0.1	ND 0.2	ND 0.1	ND 0.1	ND 0.1	ND 1.0	ND 1.0	ND 1.0	-	ND 1.0	-
Chlordane	µg/L	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.07	ND 0.07	ND 0.07	-	ND 0.07	-
Dalapon	µg/L	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.12	ND 0.11	ND 0.11	ND 0.11	-	ND 0.11	-

Constituent (Monthly)	UOM	Result:											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.001	ND 0.004	ND 0.004	ND 0.004	-	ND 0.004	-
2,4-Dichlorophenoxyacetic acid (2,4-D)	µg/L	ND 0.06	ND 0.06	ND 0.06	DNQ 0.07	ND 0.06	ND 0.03	ND 0.14	ND 0.14	ND 0.14	-	ND 0.14	-
Di(2-ethylhexyl)adipate	µg/L	ND 0.58	ND 0.06	ND 0.58	ND 0.06	ND 0.06	DNQ, B, J1 0.22	ND 0.42	ND 0.42	ND 0.42	-	ND 0.42	-
Di(2-ethylhexyl)phthalate	µg/L	ND 0.58	ND 0.15	ND 0.58	ND 0.15	ND 0.15	ND 0.15	ND 0.41	ND 0.41	ND 0.41	-	ND 0.41	-
Dinoseb	µg/L	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.02	ND 0.03	ND 0.03	ND 0.03	-	ND 0.03	-
Diquat	µg/L	ND 0.37	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.36	ND 0.90	ND 0.90	ND 0.90	-	ND 0.17	-
Endothal	µg/L	ND 2.6	ND 2.6	ND 2.6	ND 2.6	ND 2.6	ND 2.7	ND 11	ND 11	ND 11	-	ND 11	-
Endrin	µg/L	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.001	ND 0.001	ND,J3 0.001	-	ND 0.001	-
Ethylene Dibromide (EDB)	µg/L	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.004	ND 0.003	ND 0.003	ND 0.003	-	ND 0.003	-
Glyphosate	µg/L	ND 1.6	ND 1.6	ND 1.6	ND 1.6	ND 1.6	ND 1.6	ND 1.8	ND 1.8	ND 1.8	-	ND 1.8	-
Heptachlor	µg/L	ND 0.003	ND, Q 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.002	ND 0.002	ND 0.002	-	ND 0.003	-
Heptachlor Epoxide	µg/L	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.002	ND 0.002	ND 0.002	-	ND 0.002	-
Hexachlorobenzene	µg/L	ND 0.01	ND 0.04	ND 0.01	ND 0.04	ND 0.04	ND 0.04	ND 0.004	ND 0.004	ND 0.004	-	ND 0.002	-
Hexachlorocyclopentadiene	µg/L	ND 0.01	ND 0.04	ND 0.01	ND 0.04	ND 0.04	ND 0.04	ND 0.01	ND 0.01	ND 0.01	-	ND 0.01	-
Lindane	µg/L	ND 0.007	ND 0.007	ND 0.007	ND 0.007	ND 0.007	ND 0.007	ND 0.003	ND 0.003	ND 0.003	-	ND 0.003	-
Metoxychlor	µg/L	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.02	ND 0.003	ND 0.003	ND 0.003	-	ND 0.003	-
Molinate	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.03	ND 0.03	ND 0.03	-	ND 0.03	-
Oxamyl	µg/L	ND 0.17	ND 0.17	ND 0.20	ND 0.17	ND 0.17	ND 0.17	ND 1.10	ND 1.10	ND 1.10	-	ND 1.10	-
Pentachlorophenol	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.005	ND 0.05	ND 0.05	ND 0.05	-	ND 0.05	-
Picloram	µg/L	DNQ 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.02	ND 0.05	ND 0.05	ND 0.05	-	ND 0.05	-
Polychlorinated Biphenyls	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.08	ND 0.50	ND 0.50	ND 0.50	-	ND 0.05	-
Simazine	µg/L	ND 0.03	ND, J3 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.02	ND 0.02	ND 0.02	-	ND 0.02	-
Thiobencarb	µg/L	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.02	ND 0.03	ND 0.03	ND 0.03	-	ND 0.03	-
Toxaphene	µg/L	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.37	ND 0.50	ND 0.37	-	ND 0.37	-
2,3,7,8-TCDD (Dioxin)	µg/L	ND 0.05	ND 1.00	ND, N 0.06	ND 0.07	ND 0.36	ND 2.10	ND 2.48	ND 2.48	ND 2.48	-	ND 2.48	-
2,4,5-TP (Silvex)	µg/L	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.02	ND 0.03	ND 0.03	ND 0.03	-	ND 0.03	-

Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.

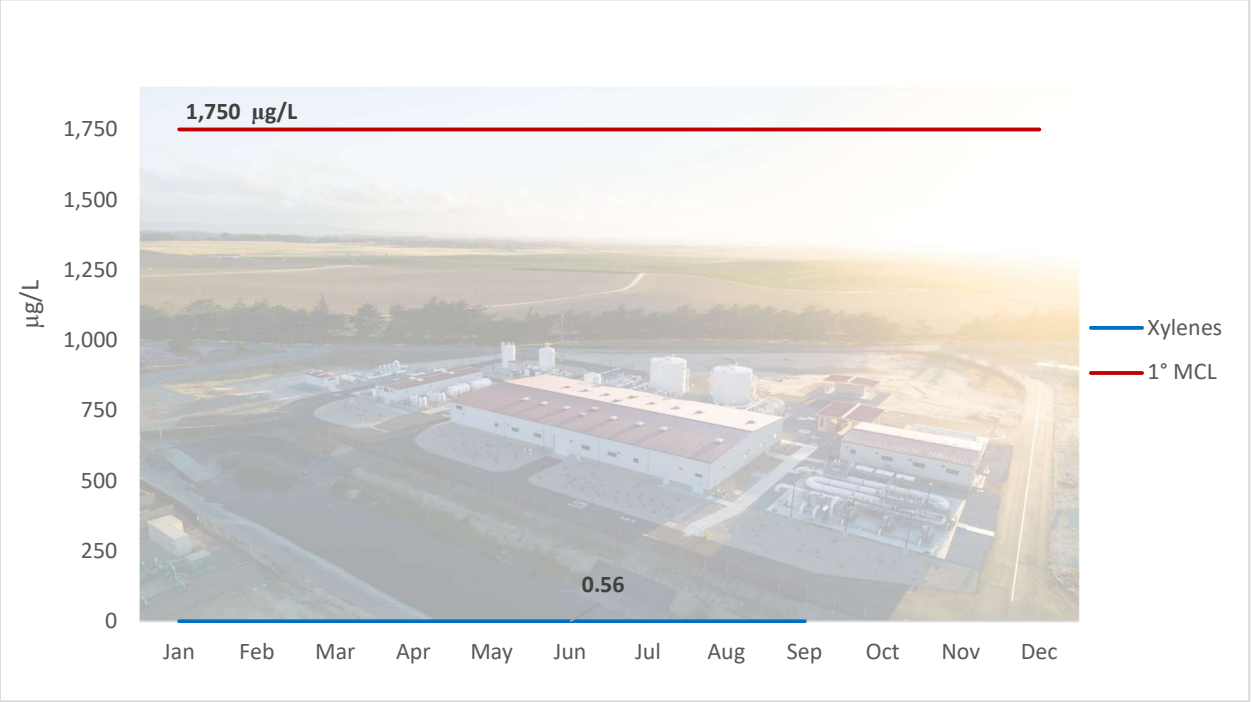


Figure 74. AWPF PW – Regulated Organic Chemicals – Monthly Xylenes (µg/L)

Table 75. AWPF PW – Disinfection Byproducts (µg/L)

Constituent (Monthly)	UOM	Result:											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Disinfection Byproducts													
Total Trihalomethanes (TTHM)*	µg/L	ND 0.14	ND 0.14	DNQ, J3, J4 0.28	ND 0.14	ND 0.14	DNQ,N 0.22	ND 0.38	ND 0.38	ND 0.38	-	ND 0.38	-
Bromate	µg/L	DNQ 1.8	DNQ 5.5	DNQ 6.4	DNQ 6.1	ND 1.4	DNQ 5.2	ND 2.2	22	DNQ 9.7	-	15	-
Bromodichloromethane	µg/L	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND,N 0.11	ND 0.27	ND 0.27	ND 0.27	-	ND 0.27	-
Bromoform	µg/L	ND 0.56	ND 0.56	ND 0.56	ND 0.56	ND 0.56	ND 0.05	ND 0.28	DNQ 0.30	ND 0.28	-	ND 0.28	-
Chlorite	µg/L	ND 0.06	ND 0.06	ND,J4 0.06	ND 0.06	ND 0.06	ND,N 0.06	ND 0.20	ND 0.20	ND 0.20	-	ND 0.20	-
Chloroform	µg/L	ND 0.64	DNQ 0.90	ND 0.64	ND 0.64	ND 0.64	DNQ 0.19	2.2	2.7	3.2	-	1.2	-
Dibromoacetic Acid	µg/L	ND 2.0	ND 2.0	ND 2.0	ND 2.0	ND 2.0	DNQ 0.66	3.5	4.6	4.7	-	1.2	-
Dibromochloromethane	µg/L	ND 0.40	ND 0.40	ND 0.40	ND 0.40	ND 0.40	ND 0.06	ND 0.34	ND 0.34	DNQ 0.46	-	ND 0.34	-
Dichloroacetic Acid	µg/L	ND 0.67	ND 0.67	ND 0.67	ND 0.67	ND 0.67	DNQ 0.47	DNQ 0.95	DNQ 1.2	DNQ 0.69	-	ND 0.31	-
Haloacetic Acid (five) (HAA5)	µg/L	ND 0.52	ND 0.52	ND 0.52	ND 0.52	ND 0.52	ND 0.10	DNQ 0.29	DNQ 0.38	DNQ 0.32	-	ND 0.29	-
Monobromoacetic Acid	µg/L	ND 0.14	ND 0.14	DNQ, J3, J4 0.28	ND 0.14	ND 0.14	DNQ,N 0.22	ND 0.38	ND 0.38	ND 0.38	-	ND 0.38	-
Monoochloroacetic Acid	µg/L	DNQ 1.8	DNQ 5.5	DNQ 6.4	DNQ 6.1	ND 1.4	DNQ 5.2	ND 2.2	22	DNQ 9.7	-	15	-
Trichloroacetic Acid	µg/L	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND,N 0.11	ND 0.27	ND 0.27	ND 0.27	-	ND 0.27	-

**Laboratory must report bromofom, chloroform, dichlorobromomethane, and dichlorodibromomethane to make up the total trihalomethanes for MCL determination.*

***Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*



Figure 75-a. AWPF PW – Disinfection Byproducts – Monthly Haloacetic Acid (µg/L)



Figure 75-b. AWPF PW – Disinfection Byproducts – Monthly Dichloroacetic Acid (µg/L)

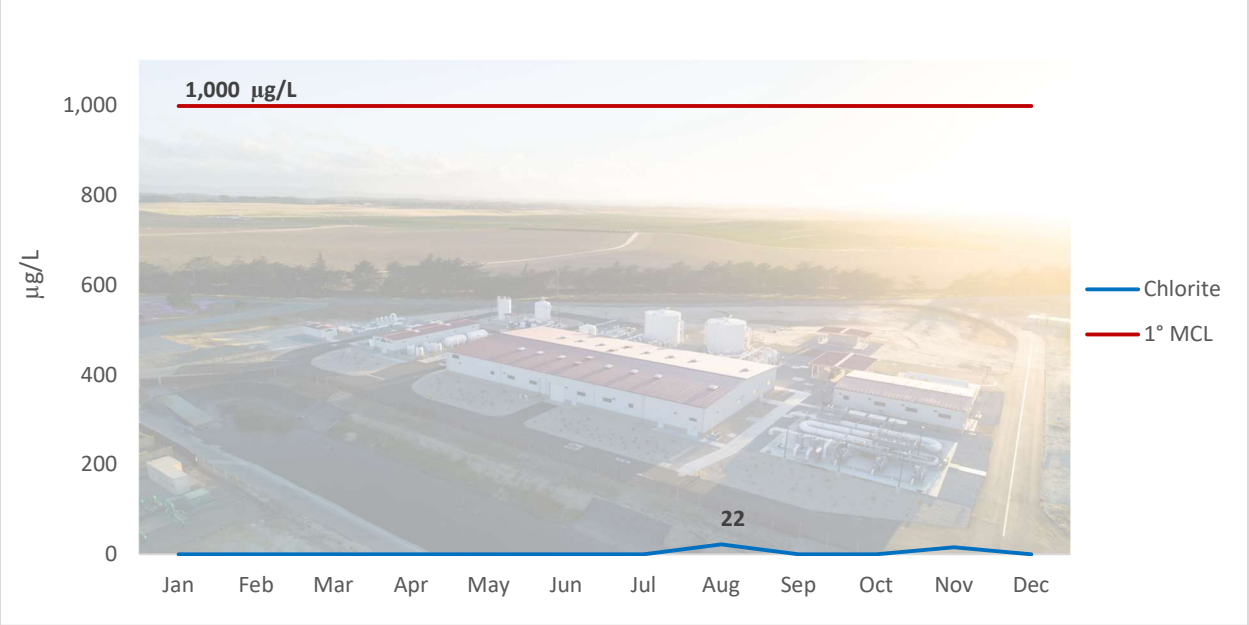


Figure 75-c. AWPF PW – Disinfection Byproducts – Chlorite (µg/L)

Table 76. AWPF PW – General Physical and General Minerals

Constituent (Quarterly)*	UOM	Result: Sample Date			
		Q1	Q2	Q3	Q4
General Physical and General Minerals					
Asbestos**	MFL	ND 0.01	ND 0.21	ND 0.20	-
Calcium*	mg/L	15	15	16	-
Chloride***	mg/L	40	41	43	45
Copper**	µg/L	DNQ 0.42	DNQ 0.40	ND 7	ND 7
Iron***	µg/L	ND 2.6	ND 2.5	ND 10	-
Manganese***	µg/L	DNQ 0.68	DNQ 1.25	ND 5	ND 5
Potassium*	mg/L	1.5	1.8	2.3	-
Sodium***	mg/L	18	18	20	-
Sulfate***	mg/L	DNQ 0.15	0.25	0.25	ND 0.1
Zinc***	µg/L	ND 1.2	ND 2.2	ND 10	-
Color***	Units	ND 3	ND 3	ND 3	-
Corrosivity (LSI)*	--	-0.44	-0.43	-0.79	-
Foaming Agents (MBAS)***	mg/L	DNQ 0.04	DNQ 0.02	DNQ 0.04	-
Odor***	TON	ND,Q 1	ND 1	ND 1	-
Specific Conductance***	µS/cm	197	207	222	-
TDS***	mg/L	113	111	119	-
Hardness (as CaCO3)***	mg/L	39	40	41	-

**Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from quarterly to annual.*
***Per revised MRP 2020-0122 issued September 13, 2022, this parameter is captured in Table M-3b.*
****Per revised MRP 2020-0122 issued September 13, 2022, this parameter is captured in Table M-5.*

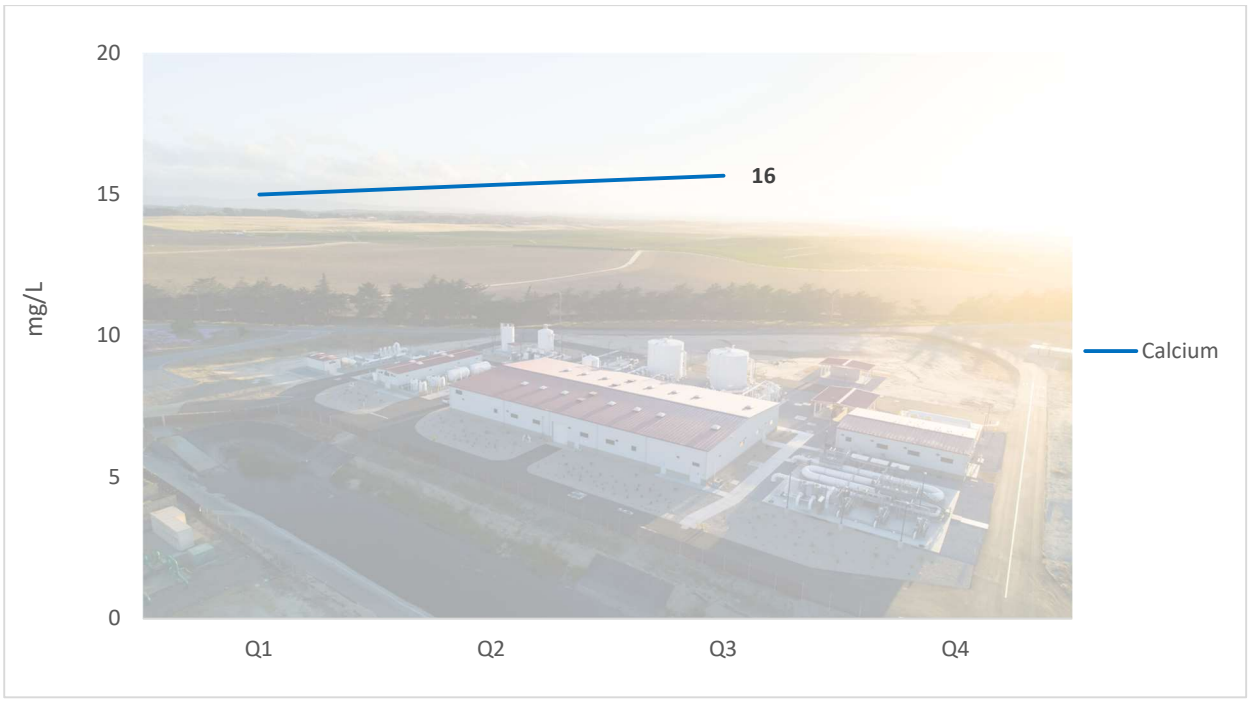


Figure 76-a. AWPF PW – General Physical & General Mineral – Quarterly Calcium (mg/L)

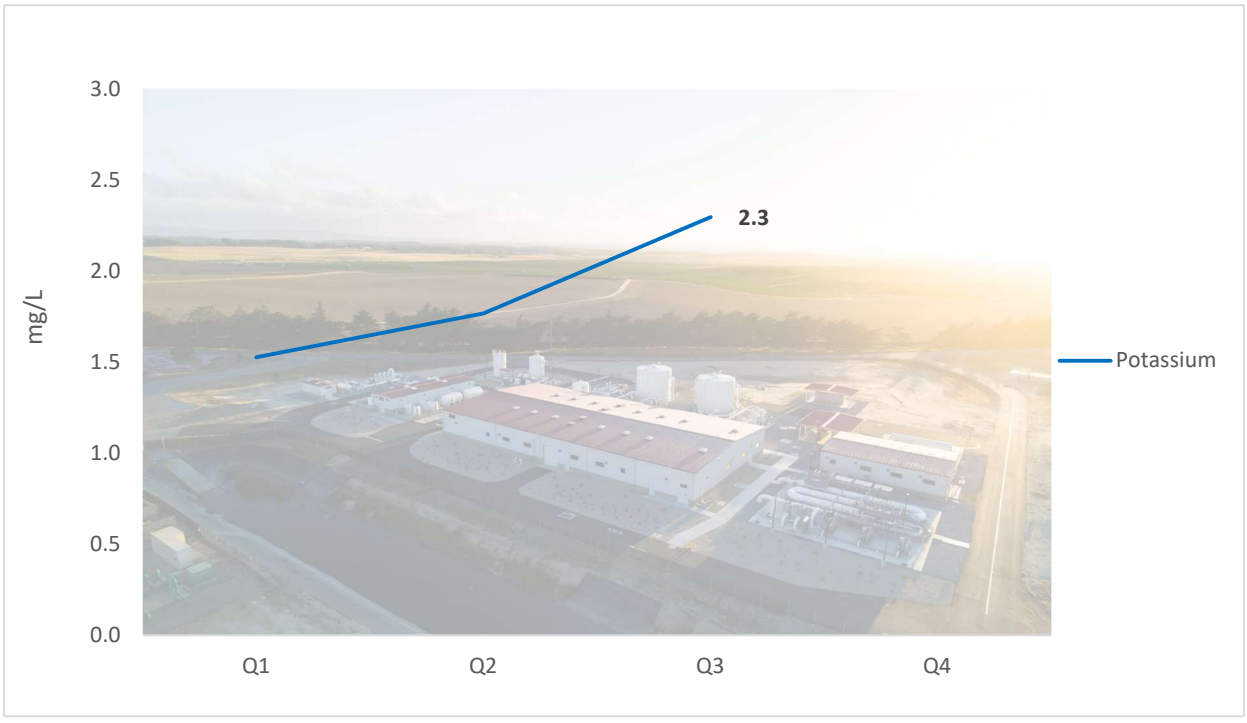


Figure 76-b. AWPF PW – General Physical & General Mineral – Quarterly Potassium (mg/L)

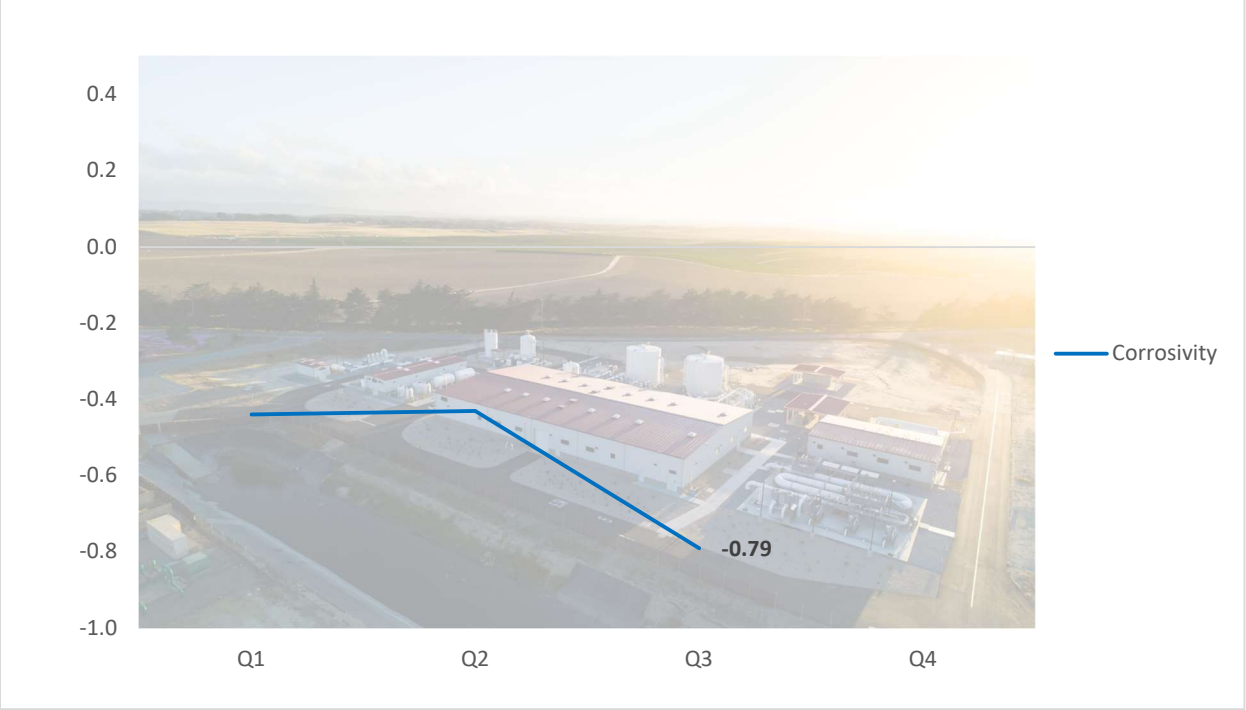


Figure 76-c. AWPF PW – General Physical & General Mineral – Quarterly Corrosivity

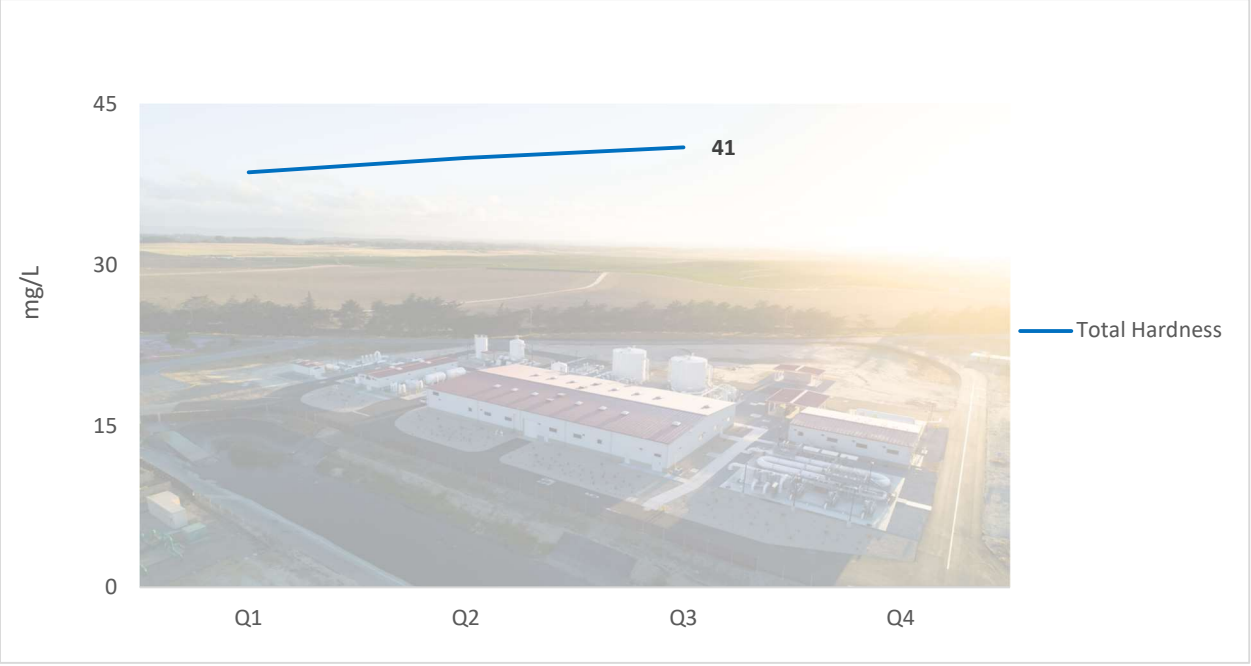


Figure 76-d. AWPF PW – General Physical & General Mineral – Quarterly Total Hardness (mg/L)

Table 77. AWPF PW– Monthly Chlorate (µg/L)

Month	Chlorate	NL*
Jan	110	800
Feb	97	800
Mar	100	800
Apr	120	800
May	120	800
Jun	140	800
Jul	180	800
Aug	260	800
Sep	420	800
Oct	190	800
Nov	200	800
Dec	140	800

**Compliance interval = average of initial and confirmation*

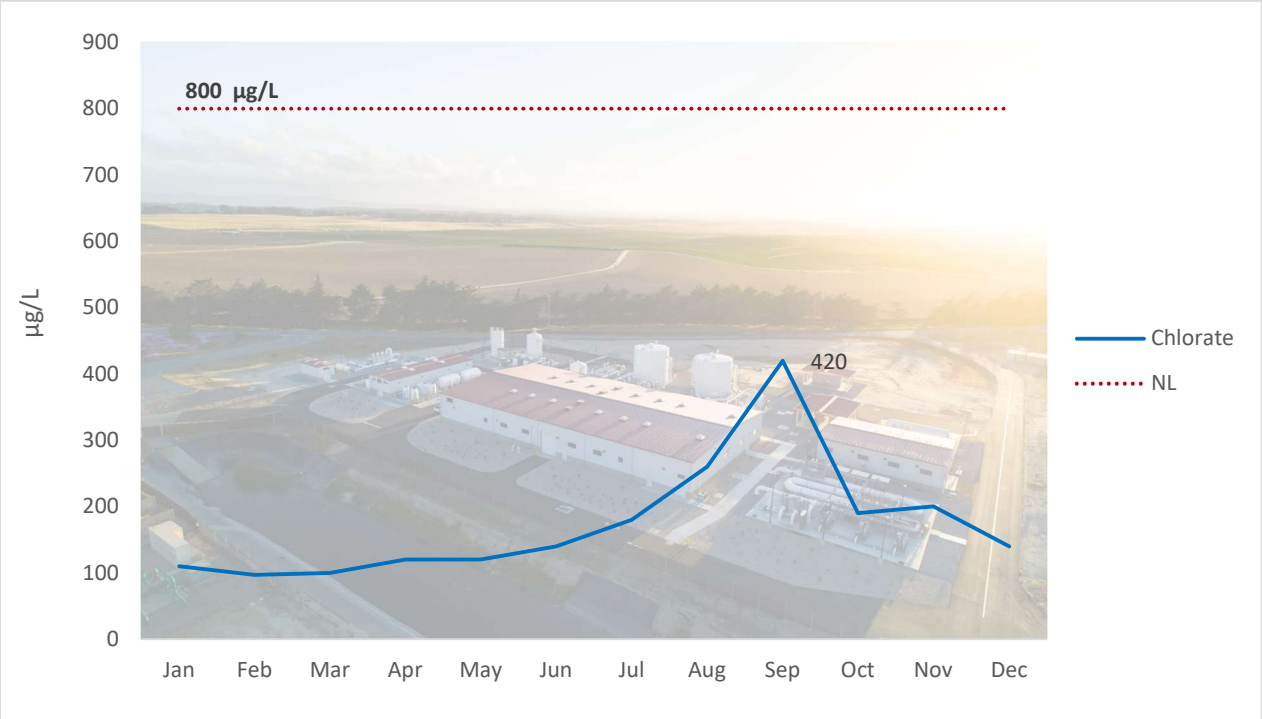


Figure 77. AWPF PW – Chlorate (µg/L)

Table 78. AWPF PW – Constituents with NLs (µg/L)

Constituent (Monthly)	UOM	Compliance Interval	Result: Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Constituents with Notification Levels														
Boron	µg/L	AIC	250	280	270	300	320	300	270	370	310	--	400	--
n-Butylbenzene	µg/L	AIC	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND,N,B 0.06	ND 0.29	ND 0.29	ND 0.29	--	ND 0.29	--
sec-Butylbenzene	µg/L	AIC	ND 0.10	ND 0.10	ND 0.10	ND,J1 0.10	ND 0.10	DNQ,N,B 0.21	ND 0.24	ND 0.24	ND 0.24	--	ND 0.24	--
tert-Butylbenzene	µg/L	AIC	ND 0.09	ND 0.09	ND 0.09	ND 0.09	DNQ 0.25	DNQ,N 0.13	ND 0.18	ND 0.18	ND 0.18	--	ND 0.18	--
Carbon disulfide	µg/L	AIC	ND 0.09	ND 0.09	ND 0.09	ND,J1 0.09	ND 0.09	DNQ,N 0.11	ND 0.25	ND 0.25	ND 0.25	--	ND 0.25	--
2-Chlorotoluene	µg/L	AIC	110	97	100	120	120	140	180	260	420	190	200	140
4-Chlorotoluene	µg/L	AIC	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND,N 0.06	ND 0.15	ND 0.15	ND 0.15	--	ND 0.15	--
Diazinon	µg/L	AIC	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	DNQ,N 0.25	ND 0.15	ND 0.15	ND 0.15	--	ND 0.15	--
Dichlorodifluoromethane (Freon 12)	µg/L	AIC	ND 0.02	ND 0.04	ND 0.02	ND 0.04	ND 0.04	ND 0.03	ND 0.02	ND 0.02	ND 0.02	--	ND 0.02	--
1,4-Dioxane	µg/L	AIC	ND 0.10	ND 0.10	ND 0.10	ND 0.10	ND 0.10	ND,N 0.10	ND 0.45	ND 0.45	ND 0.45	--	ND 0.45	--
Ethylene glycol	µg/L	AIC	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.03	ND 0.03	ND 0.03	--	ND 0.03	--
Formaldehyde	µg/L	AIC	ND 1,200	ND,Q 1,200	ND 1,200	ND,Q 1,200	DNQ 1,200	ND 1,200	ND 4,700	ND 4,700	ND 4,700	--	ND 4,700	--
HMX	µg/L	AIC	28	24	24	25	39	48	30	36	49	--	25	--
Isopropylbenzene	µg/L	AIC	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.30	ND 0.30	ND 0.30	--	ND 0.30	--
Manganese	µg/L	AIC	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	DNQ,N 0.17	ND 0.18	ND 0.18	ND 0.18	--	ND 0.18	--
Methyl isobutyl ketone (MIBK)	µg/L	AIC	DNQ 1.30	DNQ 0.50	DNQ 0.25	DNQ 1.00	DNQ 1.50	ND 0.41	ND 5	ND 5	ND 5	--	ND 5	--
Naphthalene	µg/L	AIC	ND 0.68	ND 0.68	DNQ 3.60	ND 0.68	ND 0.68	ND,N 0.68	ND 1.8	ND 1.8	ND 1.8	--	ND 1.8	--
N-Nitrosodiethylamine (NDEA)	µg/L	AIC	ND 0.15	ND 0.15	DNQ,J3 0.41	ND 0.15	DNQ,J3 0.41	ND,N,B 0.15	ND 0.35	ND 0.35	ND 0.35	--	ND 0.35	--
n-Nitrosodimethylamine (NDMA)	µg/L	AIC	ND 1.5E-03	ND 1.6E-03	ND 1.5E-03	ND 1.5E-03	No Data*	DNQ 6.5E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	--	ND 6.6E-04	--
N-Nitrosodi-n-propylamine (NDPA)	µg/L	AIC	DNQ 1.4E-03	ND 1.0E-03	ND 9.6E-04	ND 9.6E-04	No Data*	DNQ 8.4E-04	DNQ 9.8E-04	DNQ 1.1E-03	DNQ 1.8E-03	--	DNQ 1.2E-03	--
Perfluorooctane sulfonate (PFOS)	µg/L	AIC	ND 8.4E-04	ND 9.0E-04	ND 8.4E-04	ND 8.4E-04	No Data*	ND 2.5E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	--	ND 8.0E-04	--
Perfluorooctanoic acid (PFOA)	µg/L	AIC	ND 4.3E-04	ND 4.3E-04	ND 4.3E-04	ND 4.3E-04	ND 4.3E-04**	ND 4.3E-04	ND 4.6E-04	ND 4.8E-04	ND 4.5E-04	--	ND 4.5E-04	--
Propachlor	µg/L	AIC	ND 3.8E-04	ND 3.8E-04	ND 3.8E-04	ND 3.8E-04	ND,R 3.8E-04**	ND 3.8E-04	ND 5.8E-04	ND 6.0E-04	ND 5.7E-04	--	ND 5.6E-04	--
n-Propylbenzene	µg/L	AIC	ND 0.04	ND 0.01	ND 0.04	ND 0.01	ND 0.01	ND 0.02	ND 0.08	ND 0.02	ND 0.02	--	ND 0.08	--
RDX	µg/L	AIC	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	DNQ,N 0.22	ND 0.18	ND 0.18	ND 0.18	--	ND 0.18	--
Tertiary butyl alcohol (TBA)	µg/L	AIC	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.41	ND 0.41	ND 0.41	--	ND 0.41	--
1,2,4-Trimethylbenzene	µg/L	AIC	ND 0.88	ND 0.88	ND 0.88	ND 0.88	ND 0.88	DNQ 0.87	ND 0.45	ND 0.45	ND 0.45	--	ND 0.45	--
1,3,5-Trimethylbenzene	µg/L	AIC	ND 0.11	ND 0.11	ND 0.11	ND 0.11	DNQ 0.25	ND,N 0.11	ND 0.20	ND 0.20	ND 0.20	--	ND 0.20	--
2,4,6-Trinitrotoluene (TNT)	µg/L	AIC	ND 0.07	ND 0.07	ND 0.07	ND 0.07	DNQ 0.27	DNQ,N,B,J3 0.13	ND 0.17	ND 0.17	ND 0.17	--	ND 0.17	--
Vanadium	µg/L	AIC	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.34	ND 0.34	ND 0.34	--	ND 0.34	--

Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.
RA = Running Annual Average | SS = Single Sample | AIC = Average of Initial + Confirmation Sample | WQG = Water Quality Goal.
**Due to low surrogate recovery, Eurofins was unable to provide data for this test.*
***Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.*

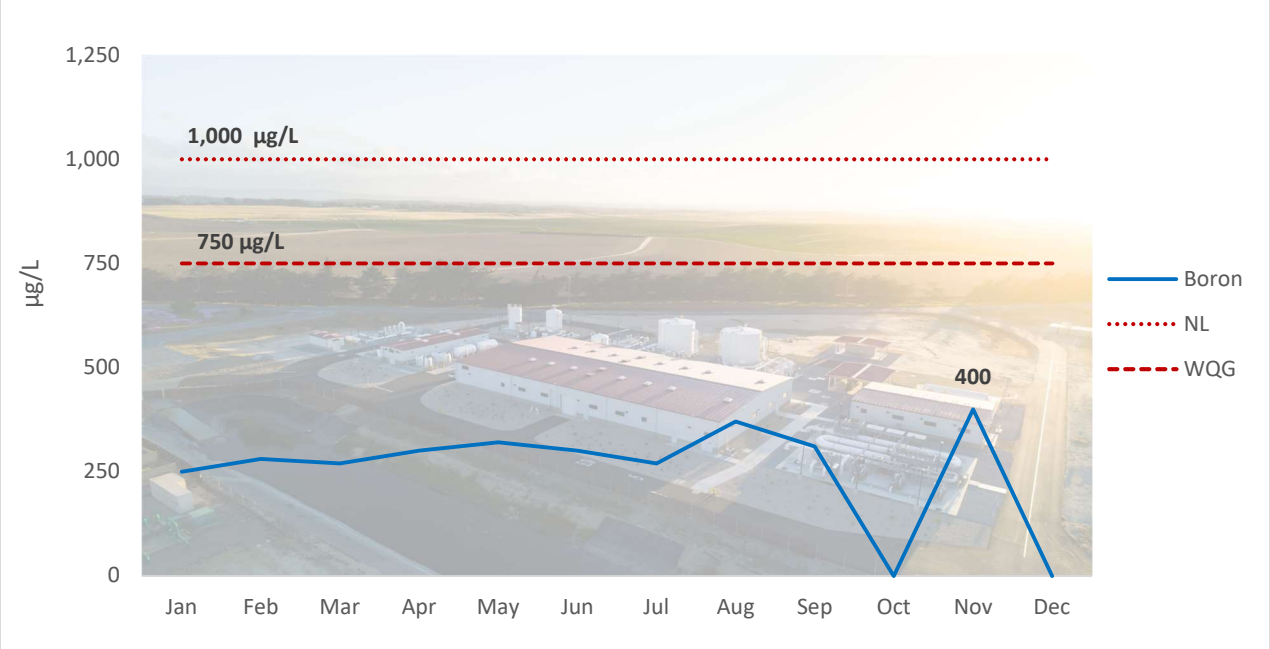


Figure 78-a. AWPF PW – Constituents with NLs – Monthly Boron (µg/L)

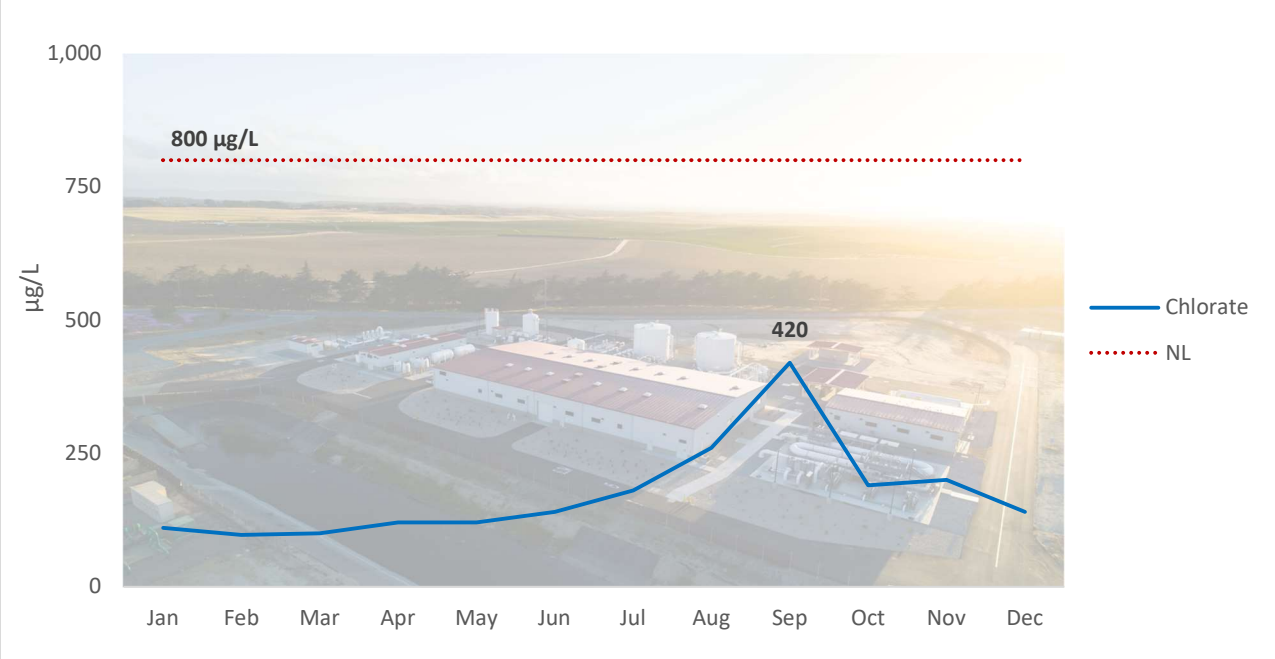


Figure 78-b. AWPF PW – Constituents with NLs – Monthly Chlorate (µg/L)



Figure 78-c. AWPF PW – Constituents with NLs – Monthly Formaldehyde (µg/L)

Table 79. AWPF PW – Remaining Priority Pollutants (µg/L)

Constituent (Quarterly)	UOM	Result: Q1	Q2	Q3	Q4
Pesticides					
Aldrin	µg/L	ND 0.03	ND 0.03	ND 4.00E-03	-
Dieldrin	µg/L	ND 0.04	ND 0.04	ND 3.00E-03	-
4,4'DDT	µg/L	ND 0.02	ND 0.02	ND 3.00E-03	-
4,4'DDE	µg/L	ND 0.03	ND 0.03	ND 1.80E-03	-
4,4'DDD	µg/L	ND 0.03	ND 0.03	ND 3.00E-03	-
Endosulfan I (-alpha)	µg/L	ND 0.07	ND 0.07	ND 3.00E-03	-
Endosulfan II (-beta)	µg/L	ND 0.09	ND 0.09	ND 1.60E-03	-
Endosulfan Sulfate	µg/L	ND 0.03	ND 0.03	ND 3.00E-03	-
Endrin aldehyde	µg/L	ND 0.07	ND 0.07	ND 4.00E-03	-
Alpha-BHC	µg/L	ND 0.02	ND 0.02	ND 1.90E-03	-
Beta-BHC	µg/L	ND 0.03	ND 0.03	ND 2.40E-03	-
Delta-BHC	µg/L	ND 0.03	ND 0.03	ND 3.00E-03	-
Acid Extractables					
2,4,6-Trichlorophenol	µg/L	ND 0.15	ND 0.13	ND 0.22	-
P-Chloro-M-Cresol/4-Chloro-3-methylphenol	µg/L	ND 0.11	ND 0.13	ND 0.23	-
2-Chlorophenol	µg/L	ND 0.08	ND 0.09	ND 0.28	-
2,4-Dichlorophenol	µg/L	ND 0.09	ND 0.13	ND 0.26	-
2,4-Dimethylphenol	µg/L	ND,J3 0.13	ND 0.12	ND 0.76	-
2-Nitrophenol	µg/L	ND 3.90	ND 3.30	ND 0.26	-
4-Nitrophenol	µg/L	ND 3.40	ND 3.20	ND 1.20	-
2,4-Dinitrophenol	µg/L	ND 4.40	ND 4.10	ND 1.90	-
4,6-Dinitro-O-Cresol	µg/L	ND 3.80	ND 4.30	ND 0.50	-
Phenol	µg/L	ND 0.77	ND 0.50	ND 0.81	-
Metals					
Chromium (III)	µg/L	ND 0.51	ND 0.51	ND 0.30	-
Base/Neutral, Extractables					
Acenaphthene	µg/L	ND 0.01	ND 0.01	ND 0.02	-
Benzidine	µg/L	ND,J3 2.20	ND 2.60	ND 3.20	-
Hexachloroethane	µg/L	ND 0.14	ND 0.12	ND 0.50	-
Bis(2-chloroethyl)ether	µg/L	ND 0.09	ND 0.10	ND 0.27	-
2-Chloronaphthalene	µg/L	ND 0.13	ND 0.14	ND,J3 0.45	-
1,3-Dichlorobenzene	µg/L	ND 0.12	ND 0.16	ND 0.42	-
3,3-Dichlorobenzidine	µg/L	ND 1.50	ND 2.90	ND 2.50	-
2,4-Dinitrotoluene	µg/L	ND 0.03	ND 0.03	ND 0.07	-
2,6-Dinitrotoluene	µg/L	ND 0.07	ND 0.07	ND 0.25	-
1,2-Diphenylhydrazine (azobenzene)	µg/L	ND 0.07	ND 0.09	ND 0.30	-
Fluoranthene	µg/L	ND 0.01	ND 0.01	ND 0.03	-
4-Chlorophenyl Phenyl Ether	µg/L	ND 0.09	ND 0.16	ND 0.41	-
4-Bromophenyl Phenyl Ether	µg/L	ND 0.07	ND 0.10	ND 0.36	-
Bis (2-chloroisopropyl) ether	µg/L	ND 0.09	ND 0.13	ND 0.38	-
Bis (2-chloroethoxy) methane	µg/L	ND 0.14	ND 0.10	ND 0.25	-
Hexachlorobutadiene	µg/L	ND 0.16	ND 0.21	ND 0.47	-
Isophorone	µg/L	ND 0.02	ND 0.02	ND 0.21	-
Nitrobenzene	µg/L	ND 0.09	ND 0.14	ND 0.36	-
N-Nitrosodiphenylamine	µg/L	ND 0.09	ND 0.10	ND 0.19	-
Bis(2-ethyl-hexyl)phthalate	µg/L	ND 1.70	ND 3.40	ND 2.30	-
Butyl Benzyl Phthalate	µg/L	ND 0.05	ND 0.05	ND 0.16	-
Di-n-butyl phthalate	µg/L	ND 0.08	ND,B 0.08	ND 0.08	-
Di-N-Octyl Phthalate	µg/L	ND 0.04	ND 0.04	ND 0.23	-
Diethyl phthalate	µg/L	ND 0.13	ND 0.04	ND 0.08	-
Dimethyl phthalate	µg/L	ND 0.04	ND 0.04	ND 0.03	-
Benzo(A)Anthracene	µg/L	ND 0.07	ND 0.12	ND 0.19	-
Benzo(B)Fluoranthene	µg/L	ND,J3 0.01	ND 0.01	ND 0.06	-

Constituent (Quarterly)	UOM	Result: Q1	Q2	Q3	Q4
Base/Neutral, Extractables (cont.)					
Benzo(K)Fluoranthene	µg/L	ND 8.00E-03	ND 8.00E-03	ND 0.07	-
Chrysene	µg/L	ND 5.00E-03	ND 5.00E-03	ND 0.06	-
Acenaphthylene	µg/L	ND 0.04	ND 0.04	ND 0.06	-
Anthracene	µg/L	ND 4.00E-03	ND 4.00E-03	ND 0.12	-
Benzo(ghi)Perylene	µg/L	ND 0.12	ND 0.10	ND 0.42	-
Fluorene	µg/L	ND 0.01	ND 0.01	ND 0.09	-
Phenanthrene	µg/L	ND 6.00E-03	ND 6.00E-03	ND 0.05	-
Dibenzo(A,H)Anthracene	µg/L	ND 0.13	ND 0.15	ND 0.15	-
Indeno(1,2,3-CD)Pyrene	µg/L	ND 0.12	ND 0.12	ND 0.25	-
Pyrene	µg/L	ND 0.08	ND 0.08	ND 0.25	-
Volatile Organics					
Acrolein	µg/L	ND,Q 1.70	ND 4.60	ND 1.20	-
Acrylonitrile	µg/L	ND,Q 1.40	ND 1.40	ND 0.63	-
Chlorobenzene	µg/L	ND 0.07	ND,N 0.07	ND 0.15	ND 0.15
Chloroethane	µg/L	ND 0.08	ND 0.08	ND 0.17	-
1,1-Dichloroethylene	µg/L	ND 0.11	ND,N,J3 0.11	ND 0.16	ND 0.16
Methyl chloride	µg/L	ND 0.11	ND 0.11	ND 0.23	-
Methyl bromide	µg/L	ND 0.12	ND 0.12	ND 0.27	-
2-Chloroethyl Vinyl Ether	µg/L	ND 0.94	ND 1.10	ND 0.19	-

Per MRP 2020-0122 issued in February 2021, monitoring frequency was reduced from quarterly to annual in Table M-3b. M1W continued quarterly monitoring until Q4 2022, after the September 2022 MRP update, due to an inconsistent table footnote to M-11 which contradicted the annual frequency stated in Table M-3b.
*This constituent is also monitored quarterly per requirements of Table M-7, regulated organics.

Figure 79. AWPF PW – Remaining Priority Pollutants (µg/L)

All monitoring results were ND/DNQ.

3.3.3 RO Feed Water (Prior to RO)

Table 80-a. AWPF PW – CECs

Constituent (Quarterly)	UOM	Relevance/ Indicator Type	Type of Sample	Frequency	Result:							
					Q1		Q2		Q3		Q4	
					Prior to RO	AWPF PW	Prior to RO	AWPF PW	Prior to RO	AWPF PW	Prior to RO	AWPF PW
1,4-Dioxane	µg/L	Health	Grab	Quarterly	NA	ND 0.09	NA	ND 0.09	NA	ND 0.03	NA	ND 0.03
NDMA	µg/L	Health & Performance	Grab	Quarterly	0.068	DNQ 1.40E-03	0.061	DNQ 0.00084	0.15	DNQ 1.29E-03	0.089	DNQ 1.20E-03
PFOS	µg/L	Health	Grab	Quarterly	NA	ND 4.30E-04	NA	ND,R 4.30E-04	NA	ND 4.63E-04	NA	ND 4.50E-04
PFOA	µg/L	Health	Grab	Quarterly	NA	ND 3.80E-04	NA	ND,R 3.80E-04	NA	ND 5.83E-04	NA	ND 5.60E-04
NMOR	µg/L	Health	Grab	Quarterly	NA	ND 6.50E-04	NA	No data*	NA	ND 8.10E-04	NA	ND 8.10E-04
Sucralose	µg/L	Performance	Grab	Quarterly	56	ND 0.049	68	ND 0.049	61	ND 0.020	13	ND 0.020
Sulfamethoxazole	µg/L	Performance	Grab	Quarterly	DNQ 4.70E-03	ND 3.20E-03	DNQ 4.40E-03	ND 3.20E-03	0.011	ND 4.00E-03	0.021	ND 4.00E-03

**Due to low surrogate recovery, Eurofins were unable to provide data for this test.*

Table 80-b. AWPF PW – CEC Removal Efficiency

Constituent (Quarterly)	UOM	Relevance/ Indicator Type	Type of Sample	Frequency	Removal Percentage
					Annual
					Removal %*
n-Nitrosodimethylamine (NDMA)	**µg/L**	**Health & Performance**	**Grab**	**Quarterly**	98.7
Sucralose	**µg/L**	**Performance**	**Grab**	**Quarterly**	99.9
Sulfamethoxazole	**µg/L**	**Performance**	**Grab**	**Quarterly**	96.5

Removal Percentage = $([X_{in}-X_{out}]/X_{in})(100)$
X_{in} - Concentration in recycled water prior to a treatment process
X_{out} - Concentration in recycled water after a treatment process
*For ND results, the MDL was used in calculations.

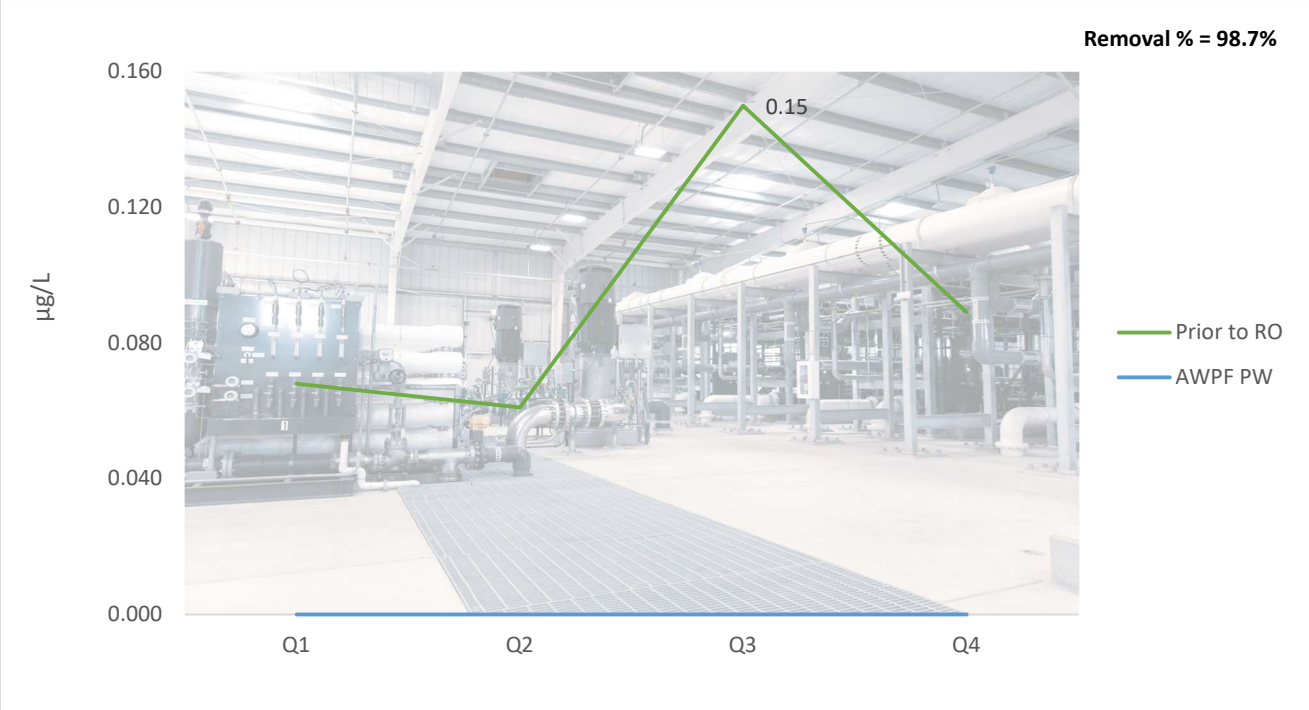


Figure 80-a. AWPF PW – CECs – Quarterly NDMA (µg/L)

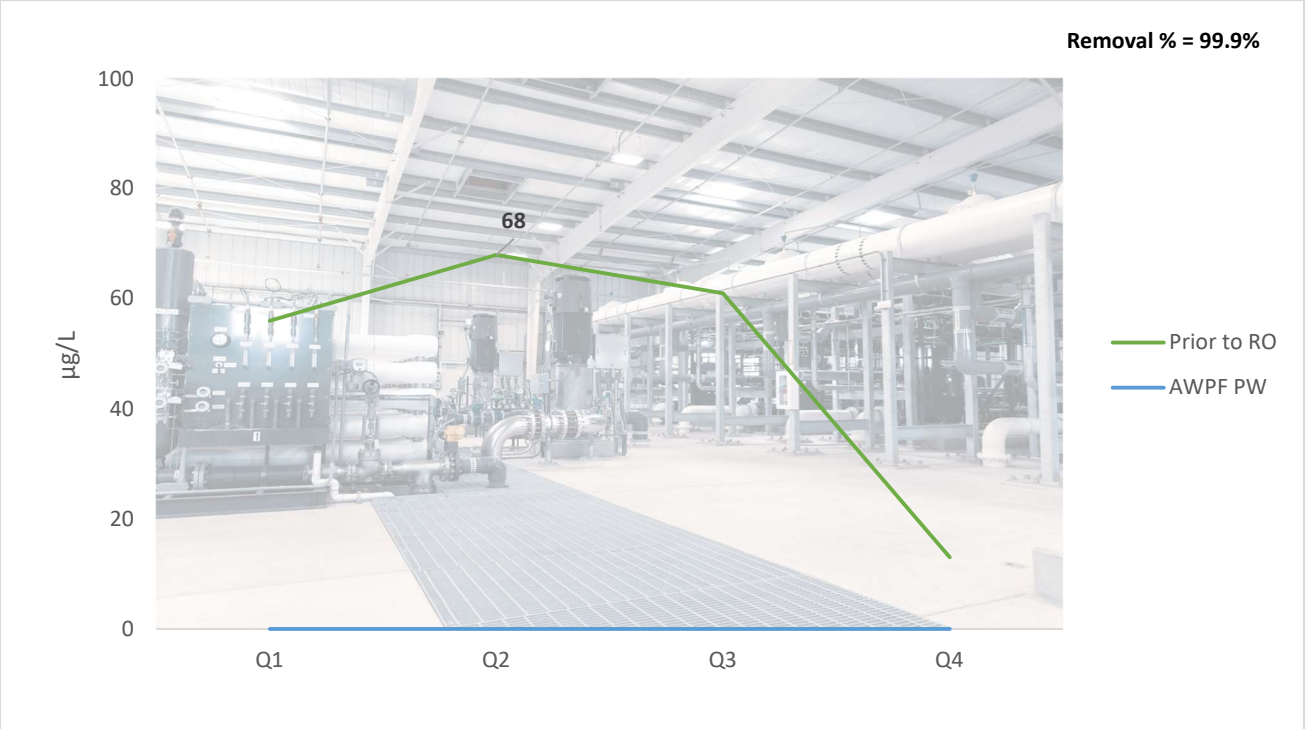


Figure 80-b. AWPF PW – CECs – Quarterly Sucralose (µg/L)

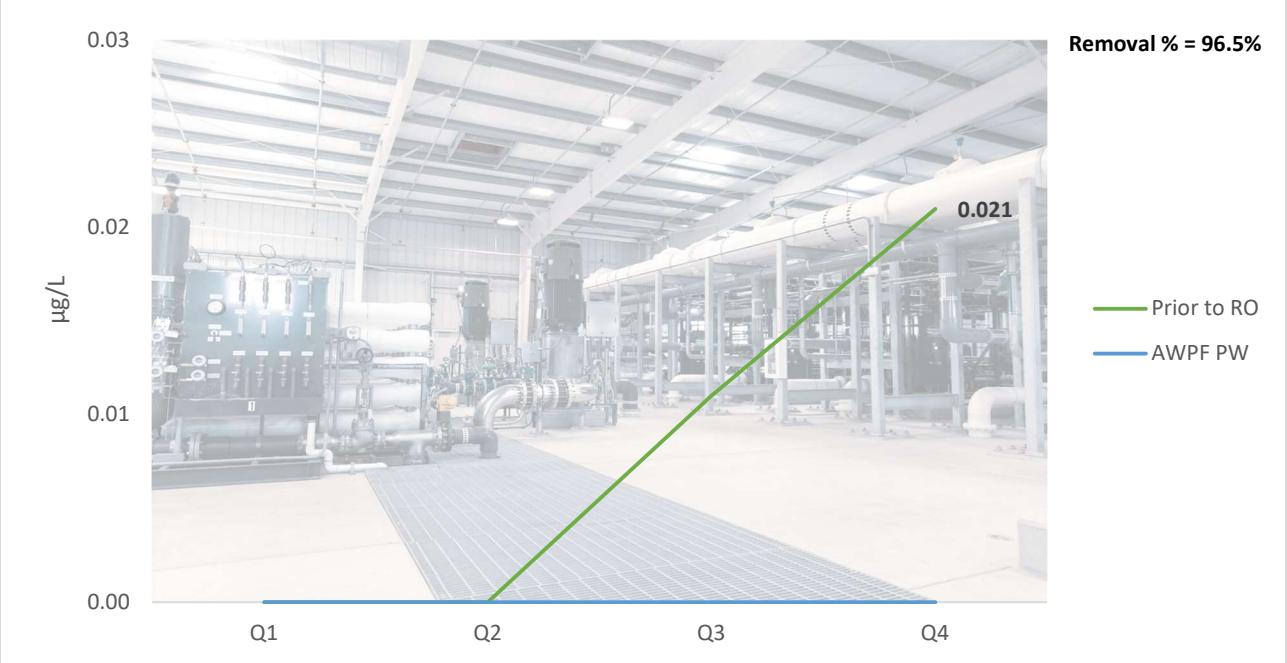


Figure 80-c. AWPF PW – CECs – Quarterly Sulfamethoxazole (µg/L)

Table 81. AWPF PW – DDW Specified Chemicals (µg/L)

Constituent (Quarterly)	UOM	Sample Type	Minimum Frequency	Result:											
				Q1			Q2			Q3			Q4		
				Prior to RO	Prior to AOP	AWPF PW	Prior to RO	Prior to AOP	AWPF PW	Prior to RO	Prior to AOP	AWPF PW	Prior to RO	Prior to AOP	AWPF PW
DCPA	µg/L	Grab	Quarterly	0.4	ND 0.02	ND 0.02	0.79	ND 0.02	ND 0.02	0.23	ND 0.03	ND 0.03	0.22	ND 0.03	ND 0.03
Albuterol	µg/L	Grab	Quarterly	NA	NA	ND 2.50E-03	NA	NA	ND 2.50E-03	NA	NA	ND 5.00E-03	NA	NA	ND 5.00E-03
Caffeine	µg/L	Grab	Quarterly	NA	NA	ND 3.80E-03	NA	NA	DNQ 4.60E-03	NA	NA	ND 4.00E-03	NA	NA	ND 4.00E-03
Carbadox	µg/L	Grab	Quarterly	NA	NA	ND 2.10E-03	NA	NA	ND 2.10E-03	NA	NA	ND 0.01	NA	NA	ND 0.01
Chloropicrin	µg/L	Grab	Quarterly	DNQ 0.33	3.0	1.1	DNQ 0.37	1.0	1.2	DNQ 0.48	2.1	6.1	DNQ 0.27	2.6	2.9
Chloropyrifos	µg/L	Grab	Quarterly	NA	NA	ND 0.02	NA	NA	ND 0.02	NA	NA	ND 1.30E-03	NA	NA	ND 1.30E-03
Chlorothalonil	µg/L	Grab	Quarterly	NA	NA	ND 0.02	NA	NA	ND 0.02	NA	NA	ND 1.50E-03	NA	NA	ND 4.00E-03
Erythromycin	µg/L	Grab	Quarterly	NA	NA	ND 3.60E-03	NA	NA	ND 3.60E-03	NA	NA	ND 5.00E-03	NA	NA	ND 5.00E-03
Fluoxetine	µg/L	Grab	Quarterly	NA	NA	ND 3.30E-03	NA	NA	ND 3.30E-03	NA	NA	ND 4.00E-03	NA	NA	ND 4.00E-03
Iohexol	µg/L	Grab	Quarterly	NA	NA	0.028	NA	NA	ND 8.90E-03	NA	NA	ND 5.00E-03	NA	NA	ND 5.00E-03
Quinoline	µg/L	Grab	Quarterly	DNQ 0.01	DNQ 5.60E-03	ND 2.50E-03	DNQ 0.02	DNQ 4.10E-03	ND 2.50E-03	0.02	ND 4.00E-03	ND 4.00E-03	0.02	ND 4.00E-03	ND 4.00E-03
Triclosan	µg/L	Grab	Quarterly	NA	NA	ND 0.01	NA	NA	ND 0.01	NA	NA	ND 8.00E-03	NA	NA	ND 8.00E-03

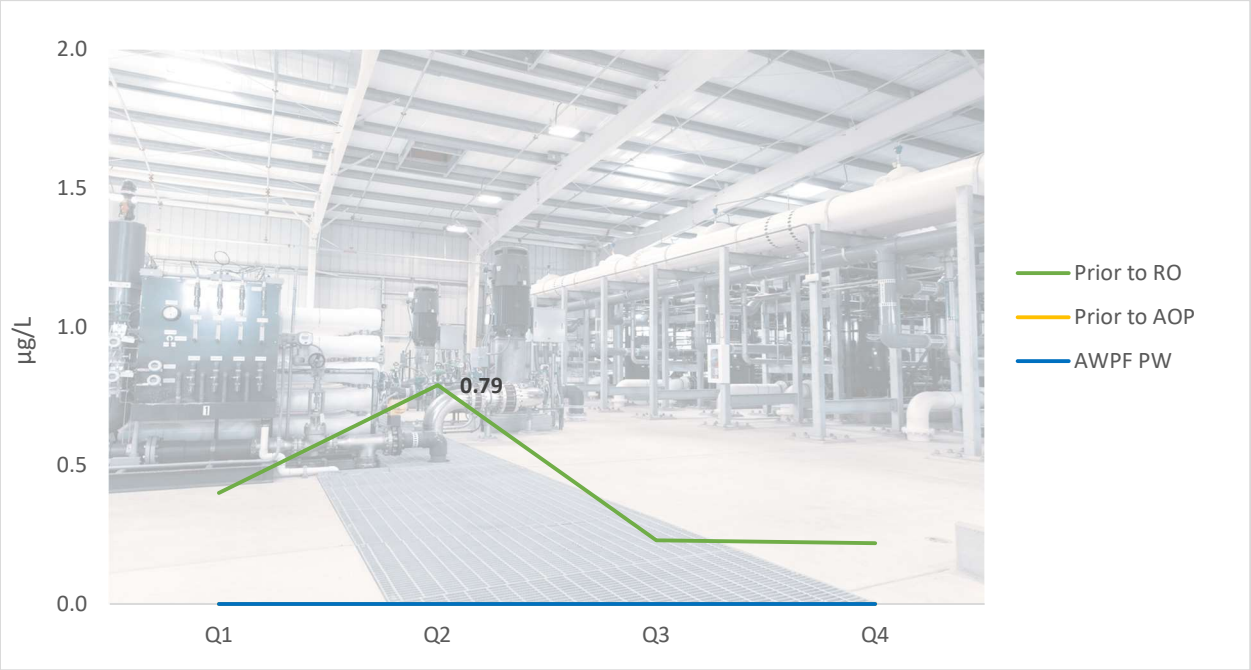


Figure 81-a. AWPF PW – DDW Specified Chemicals – Quarterly DCPA (µg/L)

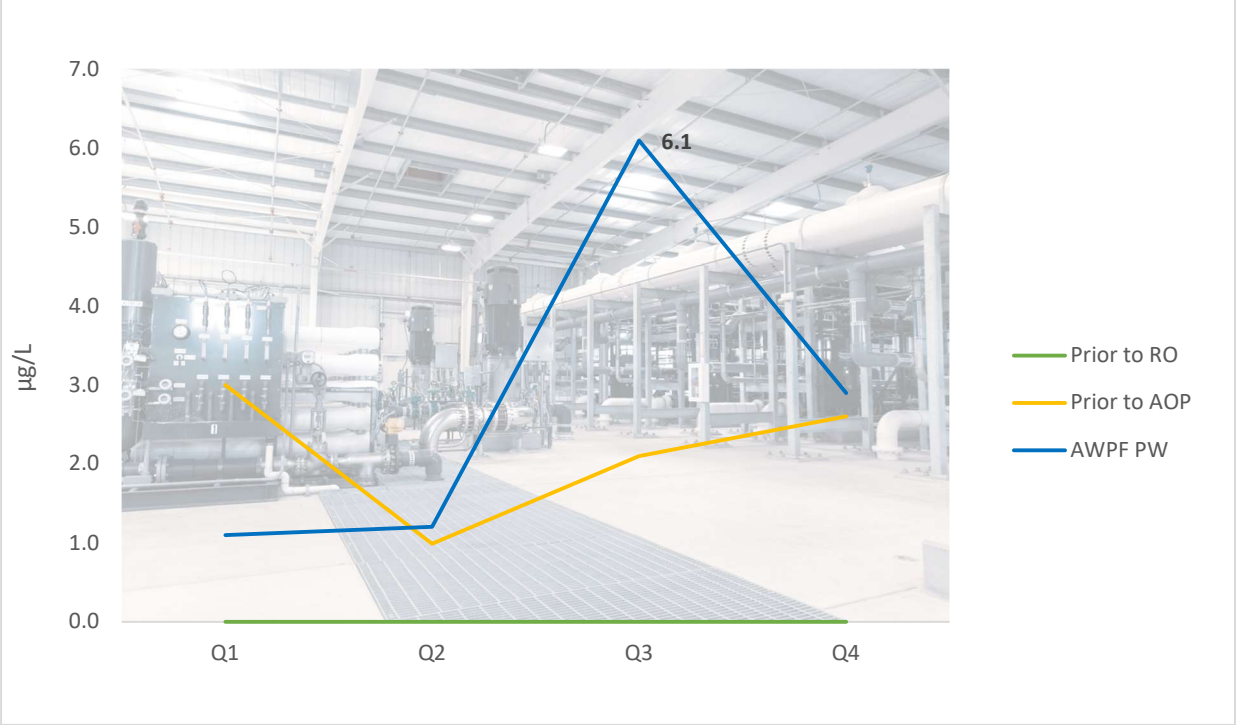


Figure 81-b. AWPF PW – DDW Specified Chemicals – Quarterly Chloropicrin (µg/L)

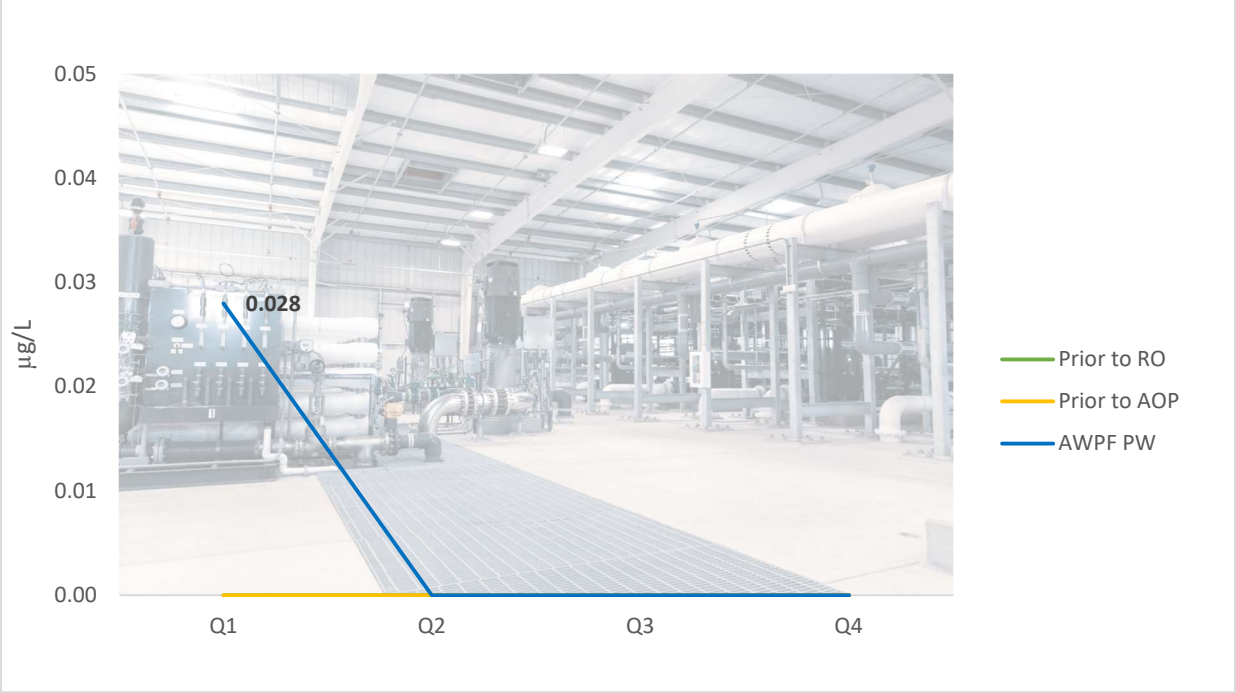


Figure 81-c. AWPF PW – DDW Specified Chemicals – Quarterly Iohexol (µg/L)

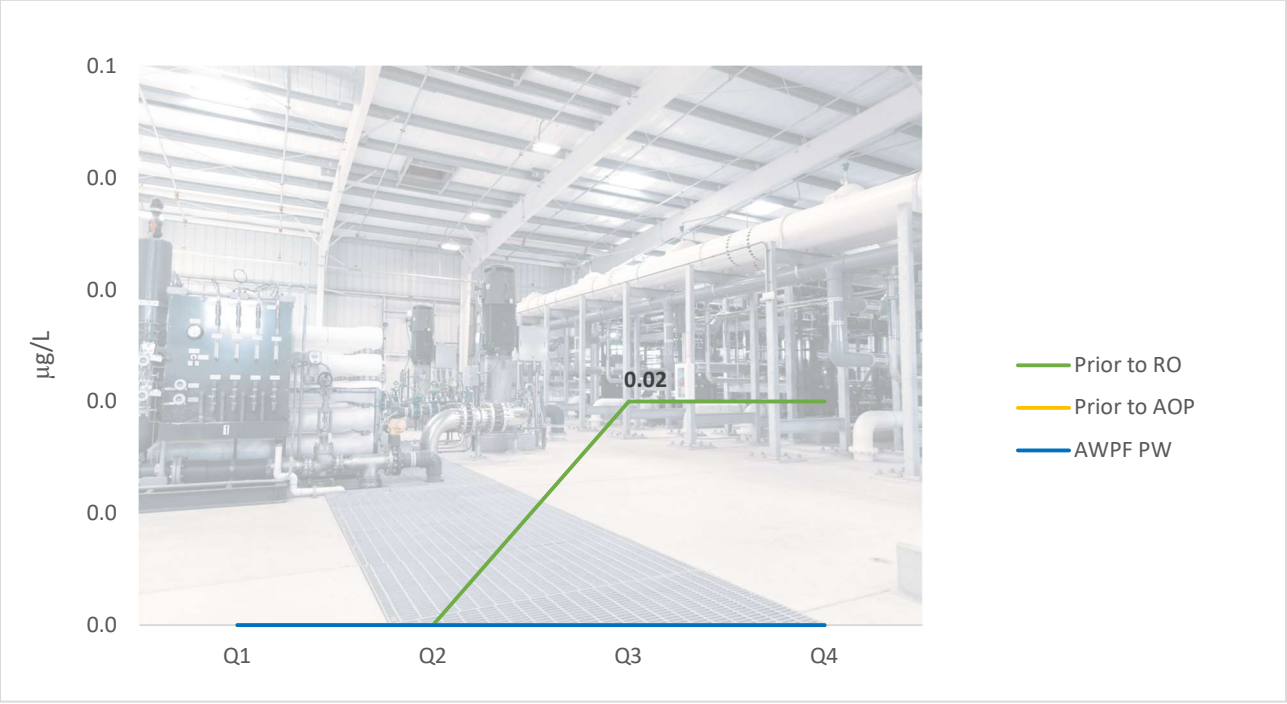


Figure 81-d. AWPF PW – DDW Specified Chemicals –Quarterly Quinoline (µg/L)

Table 82-a. AWPF PW – Surrogates for CECs (Initial Assessment Phase)

Constituent (Quarterly)	UOM	Type of Sample	Minimum Frequency	Result:							
				Q1		Q2		Q3		Q4	
				Prior to RO	AWPF PW	Prior to RO	AWPF PW	Prior to RO	AWPF PW	Prior to RO	AWPF PW
Electrical Conductivity	µS/cm	Online	Continuous	1876.8	212.13	1896.5	211.25	1863.8	211.65	1846.9	218.92
UV Absorbance	cm-1	Grab	Quarterly	NA	0.016	NA	0.016	NA	0.027	NA	0.019
Total Organic Carbon (TOC)	mg/L	Grab	Quarterly	NA	0.14	NA	0.27	NA	0.27	NA	0.18

Table 82-b. AWPF PW – Removal Efficiency for Surrogates for CECs (Initial Assessment Phase)

Constituent (Quarterly)	UOM	Type of Sample	Minimum Frequency	Removal Percentage
				Annual Average
				Removal %
Electrical Conductivity	µS/cm	Online	Continuous*	88.6
UV Absorbance	cm-1	Grab	Quarterly	NA
Total Organic Carbon (TOC)	mg/L	Grab	Quarterly	NA

**Based on Daily Average values*

Removal Percentage = $([X_{in}-X_{out}]/X_{in})(100)$

X_{in} - Concentration in recycled water prior to a treatment process

X_{out} - Concentration in recycled water after a treatment process

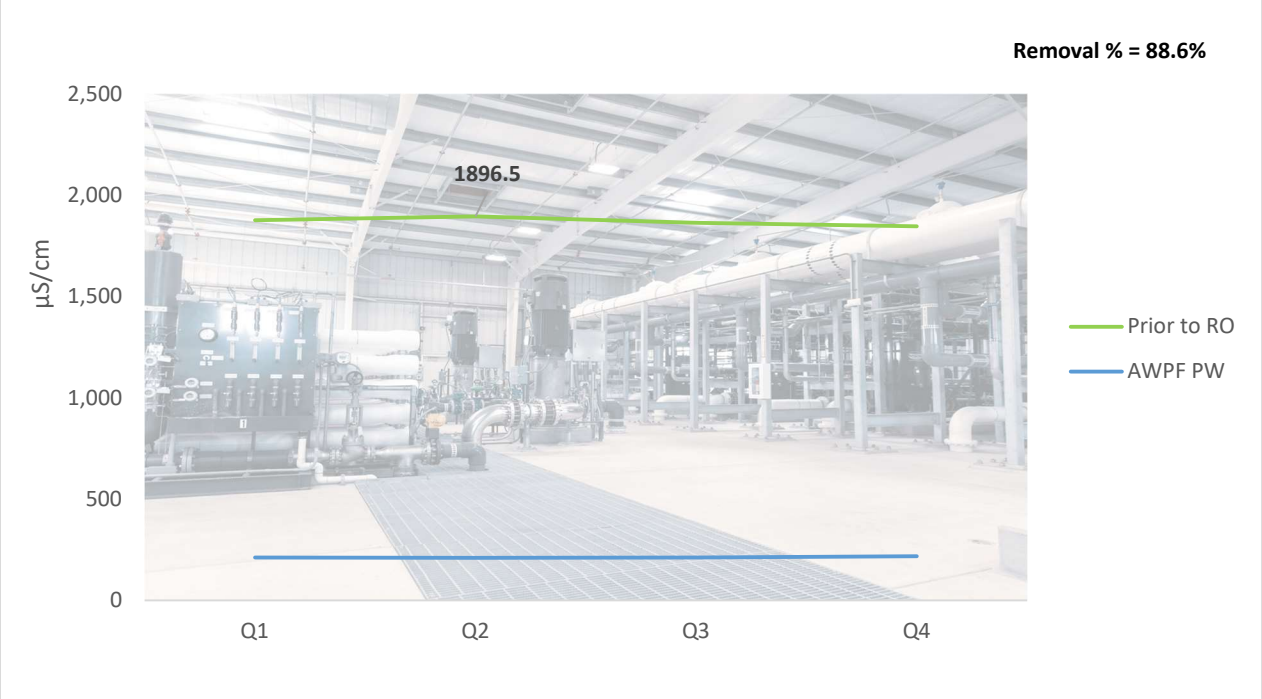


Figure 82-a. AWPF PW – Quarterly Electrical Conductivity (µS/cm)

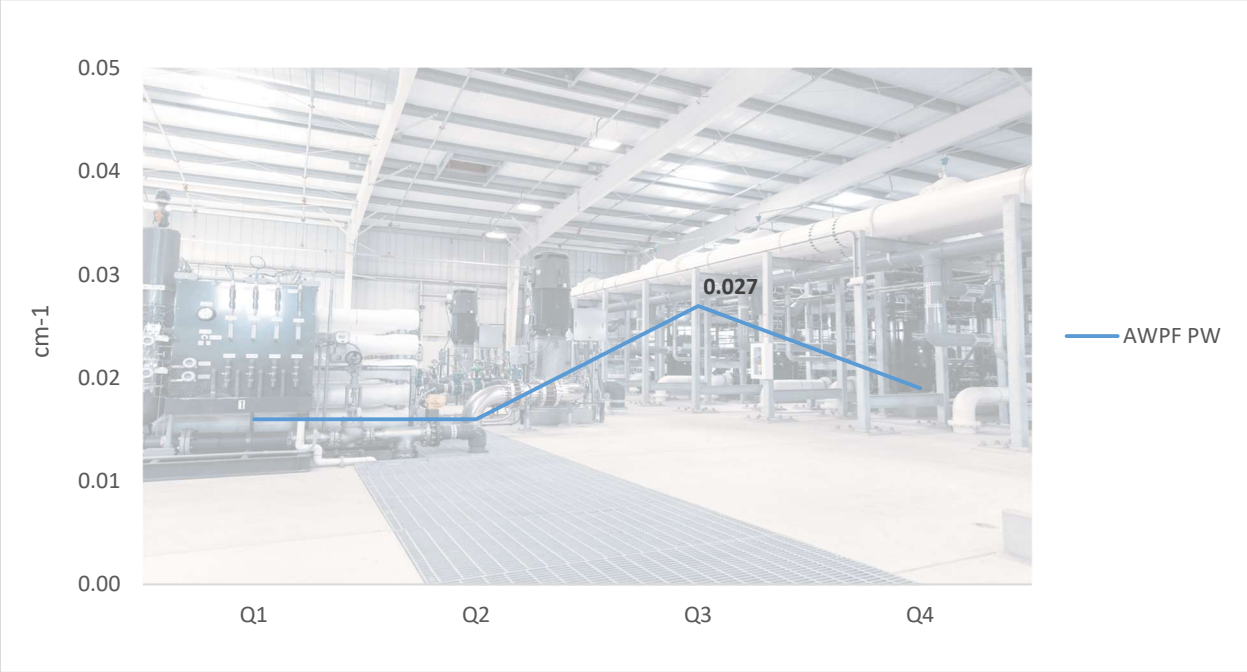


Figure 82-b. AWPF PW – Quarterly UV Absorbance (cm-1)

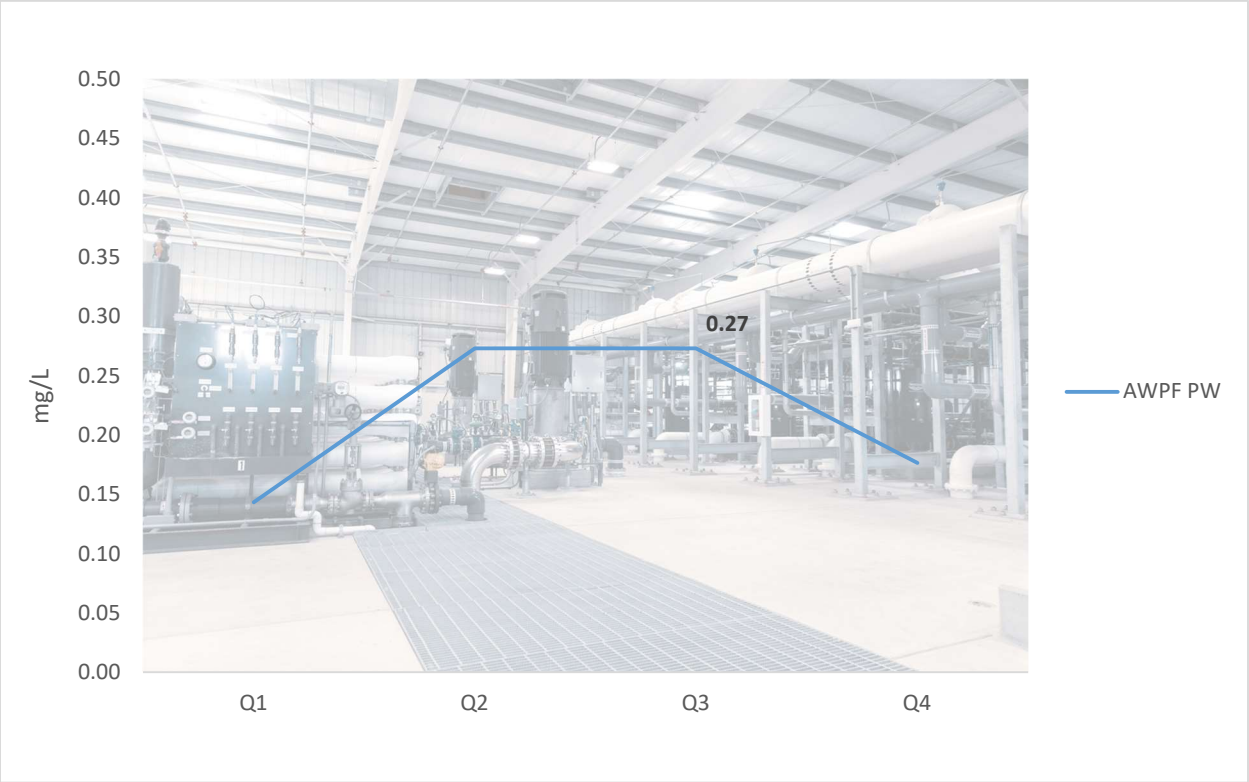


Figure 82-c. AWPF PW – Quarterly TOC (mg/L)

Table 83. AWPF PW – Bioanalytical Screening Tools

Constituent (Quarterly)	UOM	Type of Sample	Frequency	Reporting Limit ng/L	Monitoring Trigger Level ng/L	Result:			
						Q1	Q2	Q3	Q4
						AWPF PW	AWPF PW	AWPF PW	AWPF PW
Estrogen receptor-α (ER-α)	**NA**	**Grab**	**Quarterly**	0.5	3.5	ND 0.15	ND,J4 0.2	ND 0.2	ND 0.2
Aryl-hydrocarbon receptor (AhR)*	**NA**	**Grab**	**Quarterly**	0.5	0.5	-	-	-	-

No data. QAPP approval received May 5, 2021. See **Section 3.3.2 for more information.*

***On October 10, 2022, the Recycled Water Policy QAO notified M1W of the approval of a US-based laboratory for the use of the AhR bioassay. As of the date of this report, M1W is in the process of updating the QAPP for submittal to DDW and the Regional Water Board. Upon approval of the revised QAPP, M1W will initiate the Initial Monitoring Phase for AhR.*

Figure 83. AWPF PW – Bioanalytical Screening Tools

All monitoring results were ND/DNQ.

3.3.4 Groundwater

Analytical results of compliance samples collected during the monitoring period as outlined in Tables M-14 through M-16 are presented herein. See **Section 6.0** for a discussion of detections of monitored chemicals or contaminants, observed trends in the monitoring wells, and historic water quality in the Seaside Basin. Note: groundwater sample analyses are conducted by outside laboratories contracted by M1W. Additionally, per the MRP:

> *If any of the monitoring results indicate that an MCL has been exceeded or coliforms are present in the monitoring wells at the M1W groundwater injection project as a result of the use of the recycled water, M1W shall notify the DDW and Central Coast Water Board within 72 hours of receiving the results and make note of any positive finding in the next monitoring report submitted to the Central Coast Water Board.*

Note: Per the MRP regarding reporting analytical data (only providing quantifiable results in graphical format; for parameters with mixed results, ND and DNQ results treated as zero):

> *j. For the purpose of reporting compliance with numerical limitations, analytical data shall be reported using the following reporting protocols:*
>
> *i. Sample results greater than or equal to the MRL must be reported "as measured" by the laboratory (i.e., the measured chemical concentration in the sample); or*
>
> *ii. Sample results less than the MRL, but greater than or equal to the laboratory's Minimum Detection Limit (MDL), shall be reported as "Detected, but Not Quantified", "DNQ". The laboratory shall write the estimated chemical concentration of the sample next to "DNQ"; or*
>
> *iii. Sample results less than the laboratory's MDL shall be reported as "Not- Detected", or ND.*

Table M-14: Groundwater Monitoring				
Constituents/Parameters	Units	Type of Sample	Minimum Frequency of Analysis	Reference Table Number
Water level elevation[17]	Feet	---	Quarterly	M-14
Chlorine residual	mg/L	Grab	Quarterly	M-14
Chloride	mg/L	Grab	Quarterly	M-14
Nitrate-N	mg/L	Grab	Quarterly	M-14
Nitrite-N	mg/L	Grab	Quarterly	M-14
Nitrate plus Nitrite	mg/L	Grab	Quarterly	M-14
pH	pH units	Grab	Quarterly	M-14
Sodium	mg/L	Grab	Quarterly	M-14
Sulfate	mg/L	Grab	Quarterly	M-14
TOC	mg/L	Grab	Quarterly	M-14
Total coliform	MPN/100ml	Grab	Quarterly	M-14
BOD_5 20°C	mg/L	Grab	Semi-annually	M-14
Oil and grease	mg/L	Grab	Quarterly	M-14
Total nitrogen	mg/L	Grab	Quarterly	M-14
Total Suspended Solids	mg/L	Grab	Semi-annually	M-14
Turbidity	NTU	Grab	Quarterly	M-14
Remaining Inorganics with primary MCLs	µg/L	Grab	Quarterly	M-4
Radioactivity	pci/L	Grab	Quarterly	M-15
Regulated organics	µg/L	Grab	Quarterly	M-15
Disinfection byproducts (DBPs)	µg/L	Grab	Quarterly	M-15
Remaining General physical		Grab	Quarterly	M-16
Remaining General minerals	µg/L	Grab	Quarterly	M-16
Chemicals with NLs	µg/L	Grab	Quarterly	M-15
N-Nitrosopyrrolidine	µg/L	Grab	Annually	M-14
Remaining priority pollutants	µg/L	Grab	Quarterly	M-15
Silver	mg/L	Grab	Quarterly	M-14

[17]Water level elevations shall be measured to the nearest 0.01 feet, and referenced to mean sea level.

Table M-15: Groundwater Monitoring Frequency	
Constituent	**Frequency**
Radioactivity	
Gross Alpha Particle Activity (including Radium-226 but excluding radon and uranium)	Quarterly
Gross Beta Particle Activity	Quarterly
Radium-226	Quarterly
Radium-226 & Radium-228 (Combined)	Quarterly
Radium-228	Quarterly
Strontium-90	Quarterly
Tritium	Quarterly
Uranium	Quarterly
Organic Chemicals	
(a) Volatile Organic Chemicals	
1,1,1-Trichloroethane	Quarterly
1,1,2,2-Tetrachloroethane	Quarterly
1,1,2-Trichloro-1,2,2- Trifluoroethane	Quarterly
1,1,2-Trichloroethane	Quarterly
1,1-Dichloroethane	Quarterly
1,1-Dichloroethene (1,1 DCE)	Quarterly
1,2,4-Trichlorobenzene	Quarterly
1,2-Dichlorobenzene	Quarterly
1,2-Dichloroethane (1,2 DCA)	Quarterly
1,2-Dichloropropane	Quarterly
1,3-Dichloropropene	Quarterly
1,4-Dichlorobenzene	Quarterly
Benzene	Quarterly
Carbon Tetrachloride (CTC)	Quarterly
cis-1,2-Dichloroethylene	Quarterly
Dichloromethane	Quarterly
Ethylbenzene	Quarterly
Methyl-tert-butyl-ether (MTBE)	Quarterly
Monochlorobenzene	Quarterly
Styrene	Quarterly

Table M-15: Groundwater Monitoring Frequency	
Tetrachloroethylene (PCE)	Quarterly
Toluene	Quarterly
trans-1,2-Dichloroethylene	Quarterly
Trichloroethylene (TCE)	Quarterly
Trichlorofluoro-methane	Quarterly
Vinyl Chloride	Quarterly
Xylenes (m, p)	Quarterly
(b) Synthetic organic chemical	
1,2-Dibromo-3-Chloropropane (DBCP)	Quarterly
1,2,3-Trichloropropane	Quarterly
2,3,7,8-TCDD (Dioxin)	Quarterly
2,4,5-TP (Silvex)	Quarterly
2,4-Dichlorophenoxyacetic acid (2,4-D)	Quarterly
2,3,5,6-tetrachloroterephthalate (DCPA)	Quarterly
Alachlor	Quarterly
Albuterol	Quarterly
Atrazine	Quarterly
Bentazon	Quarterly
Benzo (a) pyrene	Quarterly
Caffeine	Quarterly
Carbadox	Quarterly
Carbofuran	Quarterly
Chlordane	Quarterly
Chloropicrin	Quarterly
Dalapon	Quarterly
Di (2-ethylhexyl) adipate	Quarterly
Di (2-ethylhexyl) phthalate	Quarterly
Dinoseb	Quarterly
Diquat	Quarterly
Endothal	Quarterly
Endrin	Quarterly
Erythromycin	Quarterly
Ethylene Dibromide (EDB)	Quarterly
Fluoxetine	Quarterly
Glyphosate	Quarterly
Heptachlor	Quarterly
Heptachlor Epoxide	Quarterly
Hexachlorobenzene	Quarterly

Table M-15: Groundwater Monitoring Frequency	
Hexachlorocyclo-pentadiene	Quarterly
Iohexol	Quarterly
Lindane (Gamma BHC)	Quarterly
Methoxychlor	Quarterly
Molinate	Quarterly
Oxamyl	Quarterly
PCB 1016	Quarterly
PCB 1221	Quarterly
PCB 1232	Quarterly
PCB 1242	Quarterly
PCB 1248	Quarterly
PCB 1254	Quarterly
PCB 1260	Quarterly
Pentachlorophenol	Quarterly
Picloram	Quarterly
Quinoline	Quarterly
Simazine	Quarterly
Thiobencarb	Quarterly
Toxaphene	Quarterly
Triclosan	Quarterly
Disinfection Byproducts	
Bromate	Quarterly
Bromodichloro-methane	Quarterly
Bromoform	Quarterly
Chlorite	Quarterly
Chloroform	Quarterly
Dibromoacetic Acid	Quarterly
Dibromochloro-methane	Quarterly
Dichloroacetic Acid	Quarterly
Haloacetic Acid (Five) (HAA5)	Quarterly
Monobromoacetic Acid	Quarterly
Monochloroacetic Acid	Quarterly
Total Trihalomethanes	Quarterly
Trichloroacetic Acid	Quarterly

Table M-15: Groundwater Monitoring Frequency	
Chemicals with Notification Levels	
1,2,4-Trimethylbenzene	Quarterly
1,3,5-Trimethylbenzene	Quarterly
1,4-Dioxane	Quarterly
2-Chlorotoluene	Quarterly
2,4,6-Trinitrotoluene (TNT)	Quarterly
4-Chlorotoluene	Quarterly
Boron	Quarterly
Carbon Disulfide	Quarterly
Chlorate	Quarterly
Diazinon	Quarterly
Dichlorodifluoro-methane (Freon 12)	Quarterly
Ethylene Glycol	Quarterly
Formaldehyde	Quarterly
HMX	Quarterly
Isopropylbenzene	Quarterly
Manganese	Quarterly
Methyl-isobutyl-keytone (MIBK)	Quarterly
Naphthalene	Quarterly
n-Butylbenzene	Quarterly
n-Nitrosodiethyl-amine (NDEA)	Quarterly
n-Nitrosodimethylamine (NDMA)	Quarterly
n-Nitrosodi-n-propylamine (NDPA)	Quarterly
Perfluorooctanoic acid (PFOA)	Quarterly
Perfluorooctane sulfonate (PFOS)	Quarterly
n-Propylbenzene	Quarterly
Propachlor	Quarterly
RDX	Quarterly
sec-Butlybenzene	Quarterly
tert-Butylbenzene	Quarterly
Tertiary-butyl-alcohol (TBA)	Quarterly
Vanadium	Quarterly

Table M-15: Groundwater Monitoring Frequency	
Remaining Priority Pollutants	
Pesticides	
4,4'-DDD	Quarterly
4,4'-DDE	Quarterly
4,4' -DDT	Quarterly
Aldrin	Quarterly
Alpha BHC	Quarterly
Alpha Endosulfan	Quarterly
Beta BHC	Quarterly
Beta Endosulfan	Quarterly
Chloropyrifos	Quarterly
Chlorothalonil	Quarterly
Chromium III	Quarterly
Chromium VI	Quarterly
Delta BHC	Quarterly
Dieldrin	Quarterly
Endosulfan Sulfate	Quarterly
Endrin Aldehyde	Quarterly
Acid Extractables	
2,4,6-Trichlorophenol	Quarterly
2,4-Dichlorophenol	Quarterly
2,4-Dimethylphenol	Quarterly
2,4-Dinitrophenol	Quarterly
2-Chlorophenol	Quarterly
2-Nitrophenol	Quarterly
4,6-Dinitro-o-Cresol (2-Methly-4,6-Dinitrophenol)	Quarterly
4-Nitrophenol	Quarterly
p-Chloro-m-Cresol (3-Methyl-4-Chlorophenol)	Quarterly
Phenol	Quarterly
Base/Neutral Extractables	
1,12-Benzoperylene (Benzo(g,h,i)-perylene)	Quarterly
1,2,5,6-Dibenzanthracene (Dibenzo(a,h) anthracene)	Quarterly
1,2-Diphenylhydrazine	Quarterly
1,3-Dichlorobenzene	Quarterly
2,4-Dinitrotoluene	Quarterly
2,6-Dinitrotoluene	Quarterly
2-Chloronaphthalene	Quarterly
3,3'-Dichlorobenzidine	Quarterly

Table M-15: Groundwater Monitoring Frequency	
4-Bromophenyl phenyl ether	Quarterly
4-Chlorophenyl phenyl ether	Quarterly
Acenaphthene	Quarterly
Acenaphthylene	Quarterly
Anthracene	Quarterly
Benzidine	Quarterly
Benzo(a)anthracene	Quarterly
Benzo(b)fluoranthene	Quarterly
Benzo(k)fluoranthene	Quarterly
Bis(2-chloroethoxyl)-methane	Quarterly
Bis(2-chloroethyl)ether	Quarterly
Bis(2-chloroisopropyl)ether	Quarterly
Butyl benzyl phthalate	Quarterly
Chrysene	Quarterly
Di(2-ethylhexyl) phthlate	Quarterly
Dimethyl phthalate	Quarterly
Di-n-butyl phthalate	Quarterly
Di-n-octyl phthalate	Quarterly
Fluoranthene	Quarterly
Fluorene	Quarterly
Hexachlorobutadiene	Quarterly
Hexachloroethane	Quarterly
Indeno(1,2,3-cd) pyrene	Quarterly
Isophorone	Quarterly
Nitrobenzene	Quarterly
n-Nitrosodi-n-propylamine	Quarterly
n-Nitrosodiphenylamine	Quarterly
Phenanthrene	Quarterly
Pyrene	Quarterly
1,1-Dichloroethylene	Quarterly
2-Chloroethyl vinyl ether	Quarterly
Acrolein	Quarterly
Acrylonitrile	Quarterly
Chlorobenzene	Quarterly
Chloroethane	Quarterly
Methyl bromide	Quarterly
Methyl chloride	Quarterly

Table M-16: General Physical and General Minerals		
Constituents		
Asbestos	Potassium	Foaming Agents
Calcium	Sodium	Odor
Chloride	Sulfate	Specific Conductance
Copper	Zinc	Total Dissolved Solids
Iron	Color	Total Hardness
Manganese	Corrosivity	

Table 84. GW – Quarterly Monitoring

Constituents/ Parameters (Quarterly)	UOM	Q1							Q2							Q3							Q4						
		MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
Distance to Water (DTW)	ft-bgs	405.33	398.64	417.64	370.55	375.68	381.56	385.23	408.38	399.08	418.17	375.34	382.35	385.03	387.95	418.91	399.61	425.44	376.75	391.12	391.22	396.04	409.11	431.89	423.91	372.82	380.13	387.82	393.12
Chlorine Residual, DPD	mg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.13	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05
Chloride	mg/L	43	52	43	56	43	95	47	42	44	44	55	42	95	50	44	44	44	54	43	103	49	48	44	44	56	48	112	46
Nitrate-N	mg/L	2.6	0.6	2.5	DNQ 0.01	2.6	0.9	1.8	2.2	1.8	2.5	0.01	2.9	0.9	1.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.6	2.2	2.3	DNQ 0.01	3.0	0.9	1.3
Nitrite-N	mg/L	ND 0.004	ND 0.004	0.09	ND 0.004	ND 0.004	ND 0.008	ND 0.004	ND 0.004	ND 0.004	DNQ 0.03	ND 0.004	0.08	ND 0.007	ND 0.004	0.2	ND 0.02	DNQ 0.02	ND 0.02	0.2	ND 0.02	DNQ 0.02	ND 0.02	ND 0.02	0.3	ND 0.02	DNQ 0.09	ND 0.02	ND 0.02
Nitrate Plus Nitrite	mg/L	2.6	0.6	2.5	DNQ 0.01	2.6	0.9	1.8	2.2	1.8	2.5	0.01	2.9	0.9	1.7	2.9	1.5	2.5	DNQ 0.03	2.8	0.8	1.4	2.6	2.2	2.6	ND 0.03	3.1	0.9	1.3
pH	Units	7.4	7.0	7.8	7.7	7.5	7.8	7.6	6.8	7.3	7.7	7.7	6.8	7.6	7.7	7.4	7.9	7.6	7.7	7.4	8.3	8.1	6.8	7.3	7.6	7.6	7.1	7.9	7.7
Sodium	mg/L	19	36	24	38	20	61	26	20	34	23	38	20	61	27	20	33	23	38	21	64	27	19	33	22	38	22	66	25
Sulfate	mg/L	0.7	8.0	3.6	18	1.0	19	8.3	3.4	6.0	3.8	19	1.0	20	10	DNQ 0.4	7	4	19	DNQ 0.8	24	12	1	4	3	19	DNQ 0.5	28	8
TOC	mg/L	DNQ 0.1	DNQ 0.2	DNQ 0.2	0.3	DNQ 0.1	0.2	0.2	DNQ 0.1	DNQ 0.2	DNQ 0.2	0.3	DNQ 0.1	DNQ 0.2	DNQ 0.2	ND 0.1	DNQ 0.3	DNQ 0.2	DNQ 0.3	DNQ 0.1	0.4	0.3	ND 0.1	DNQ 0.2	DNQ 0.2	DNQ 0.3	DNQ 0.1	DNQ 0.2	DNQ 0.3
Total Coliform	MPN/100ml	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	8.4	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	1	ND 1	ND 1
Oil and Grease	mg/L	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5
Total Nitrogen (as N)	mg/L	2.4	0.4	2.1	ND 0.1	2.3	0.7	1.5	2.9	1.1	2.5	ND 0.1	1.0	0.8	1.7	2.6	1.4	2.4	ND 0.1	3.0	0.9	1.4	2.6	2.2	2.6	ND 0.1	3.1	0.9	1.4
Turbidity	NTU	ND 0.1	0.1	0.2	2.8	0.2	0.2	0.2	ND 0.1	0.2	0.2	0.9	0.1	0.2	0.2	ND 0.1	0.2	ND 0.1	0.7	0.2	0.2	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.6	ND 0.1	0.2	ND 0.1

**Q1-Q3 are quarterly averages of monthly measurements.*

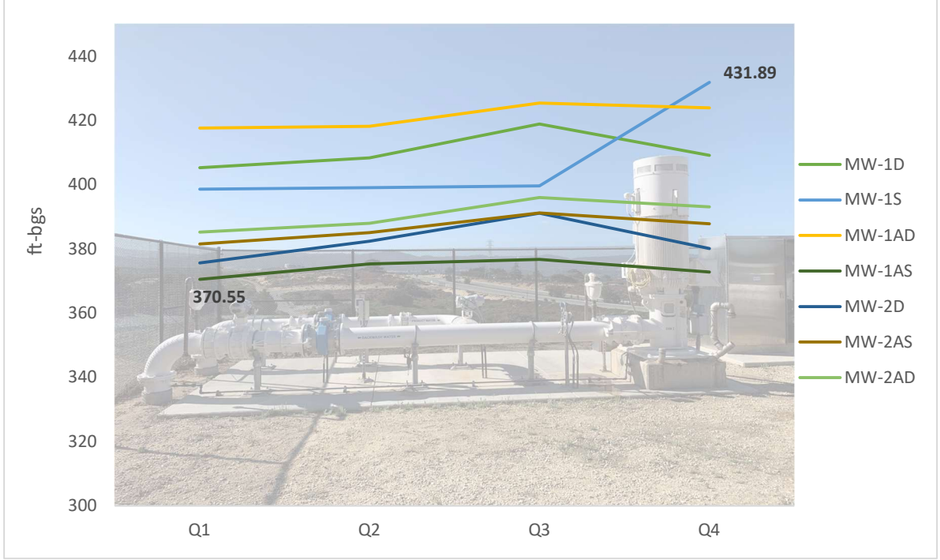


Figure 84-a. GW – Quarterly Water Level Elevation (ft-bgs)

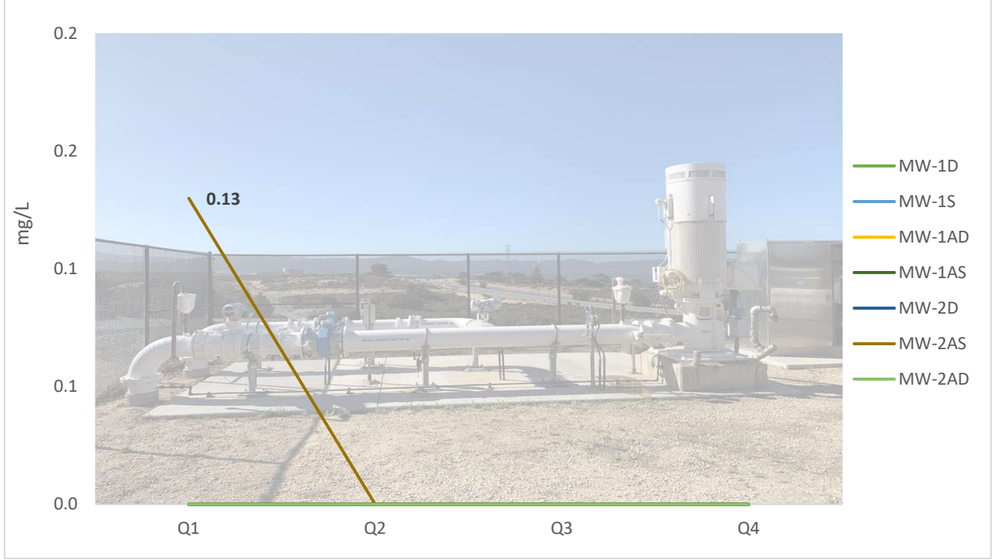


Figure 84-b. GW – Quarterly Chlorine Residual (mg/L)

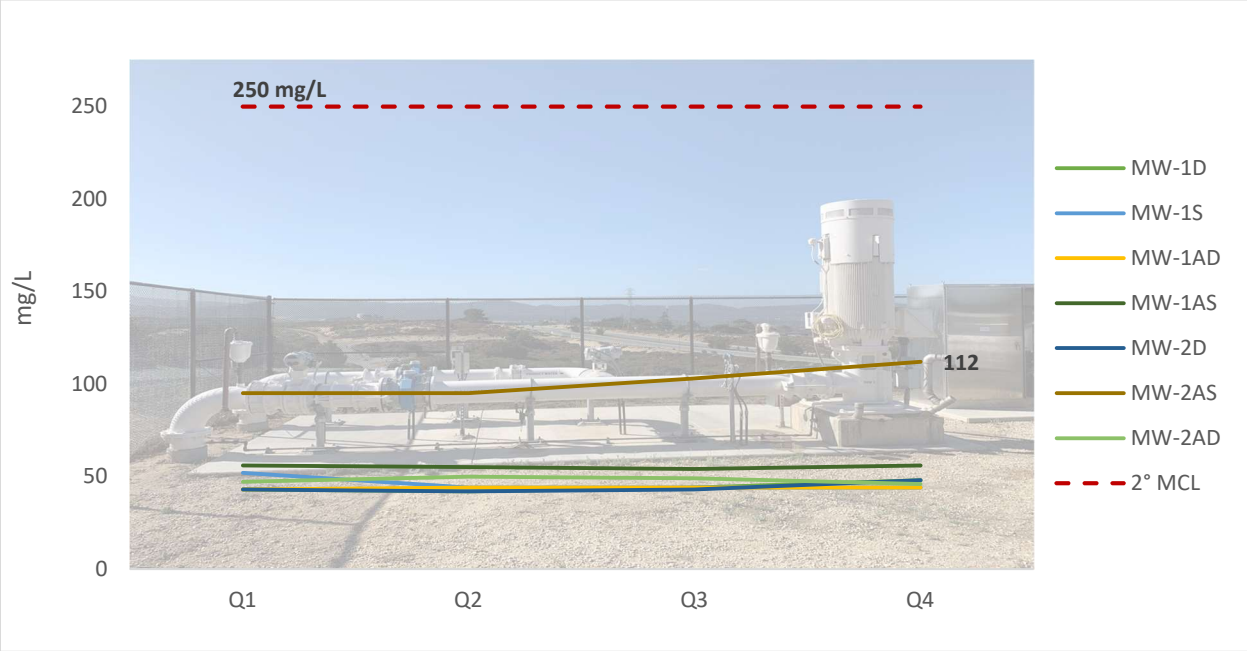


Figure 84-c. GW – Quarterly Chloride (mg/L)

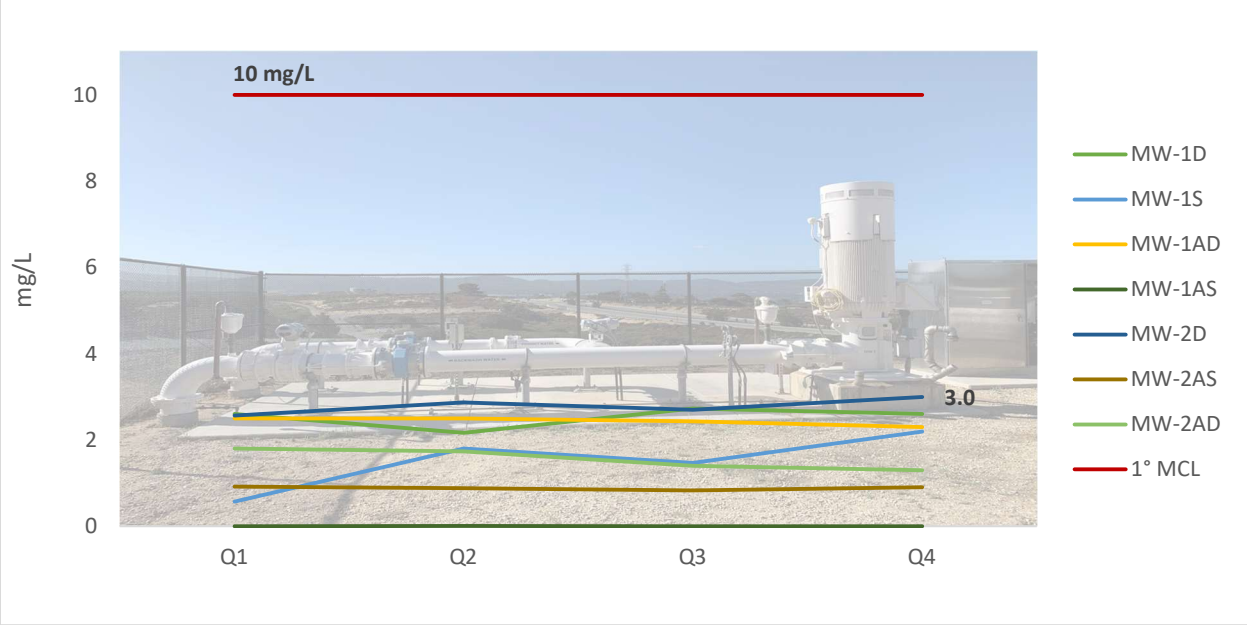


Figure 84-d. GW– Quarterly Nitrate-N (mg/L)

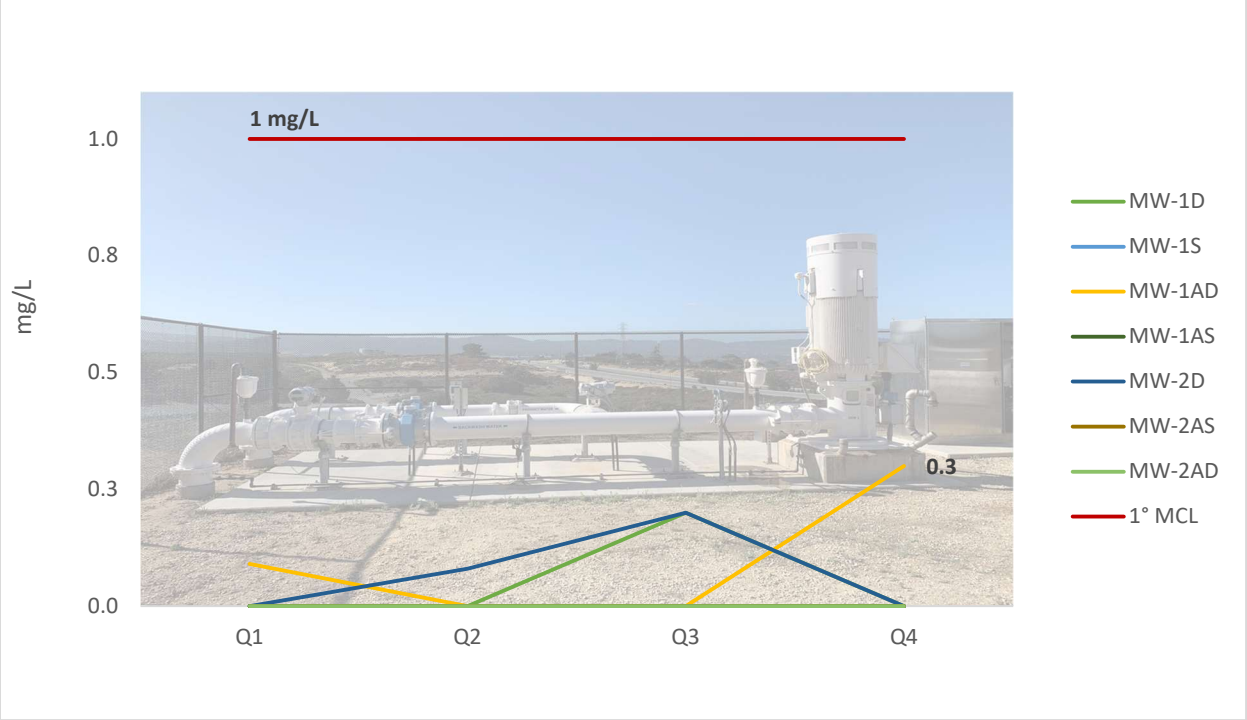


Figure 84-e. GW – Quarterly Nitrite-N (mg/L)

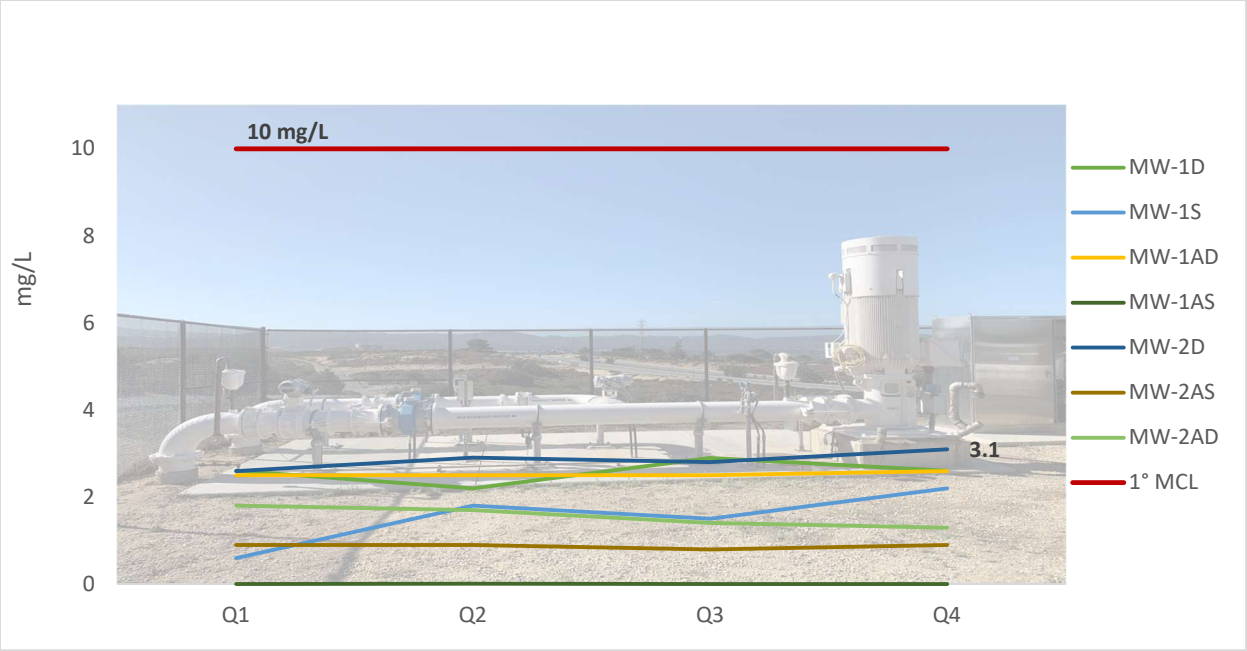


Figure 84-f. GW – Quarterly Nitrate Plus Nitrite (mg/L)

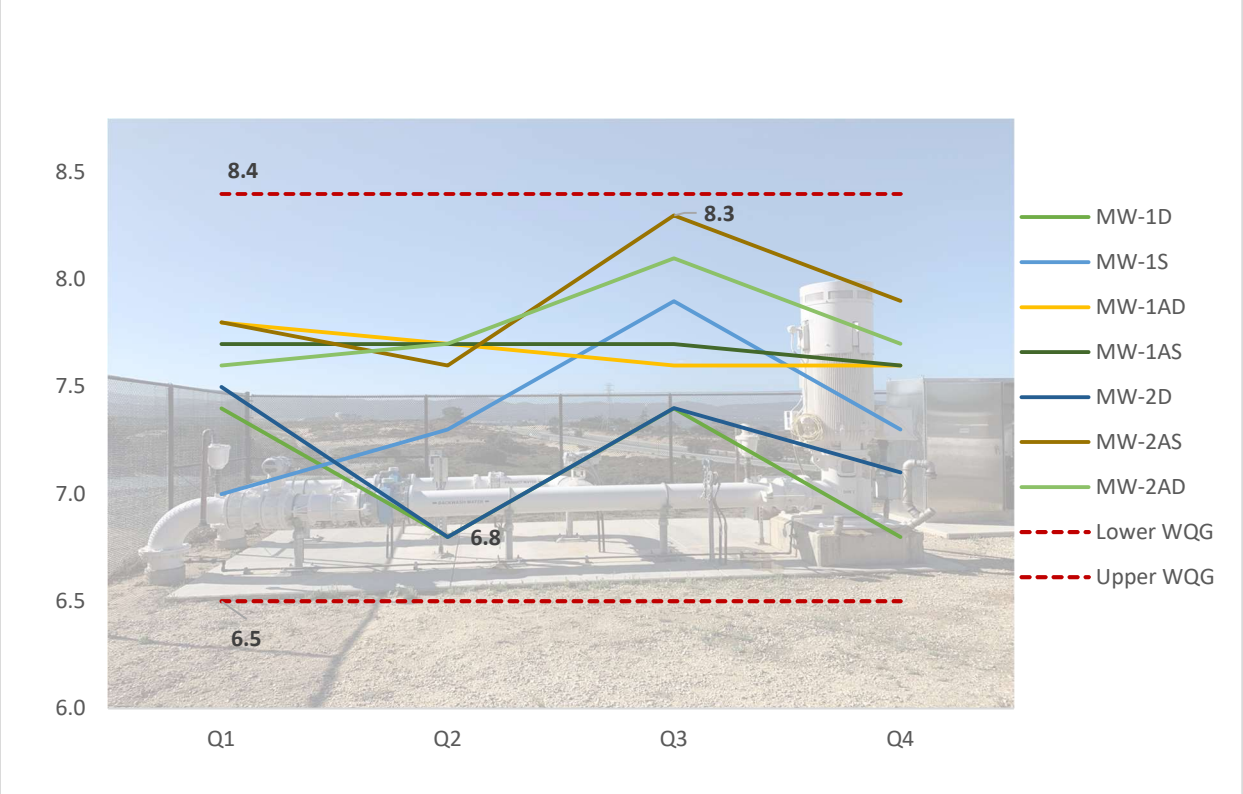


Figure 84-g. GW – Quarterly pH

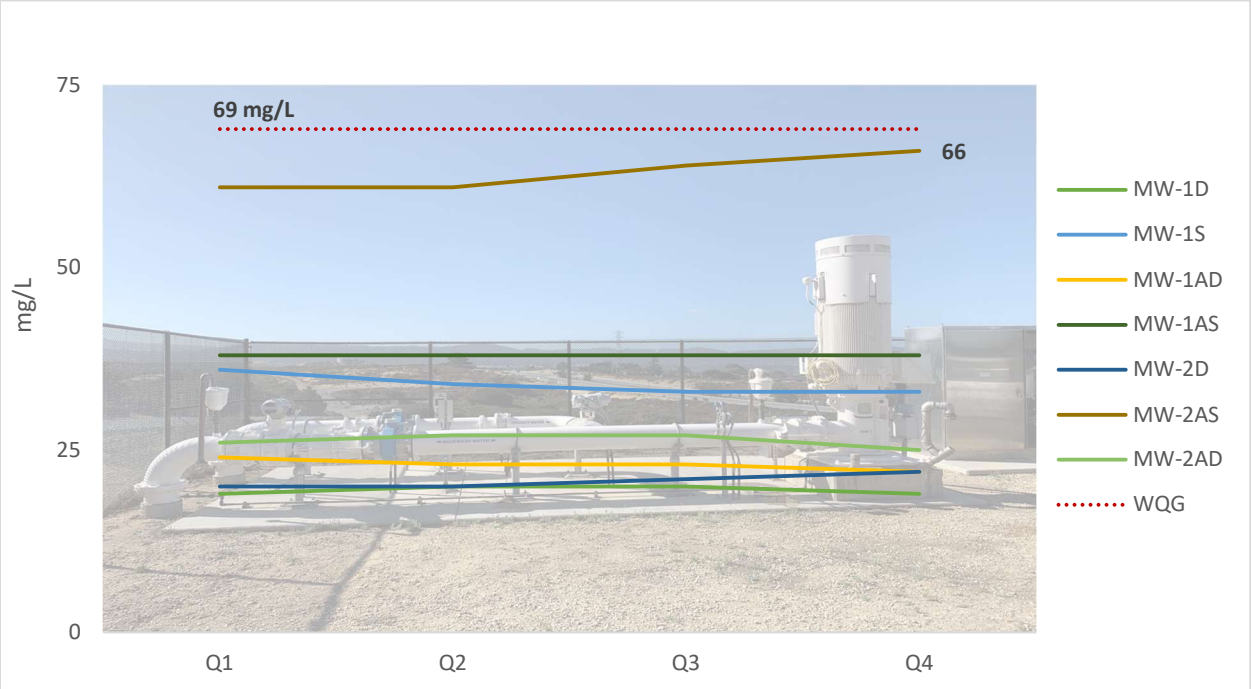


Figure 84-h. GW – Quarterly Sodium (mg/L)

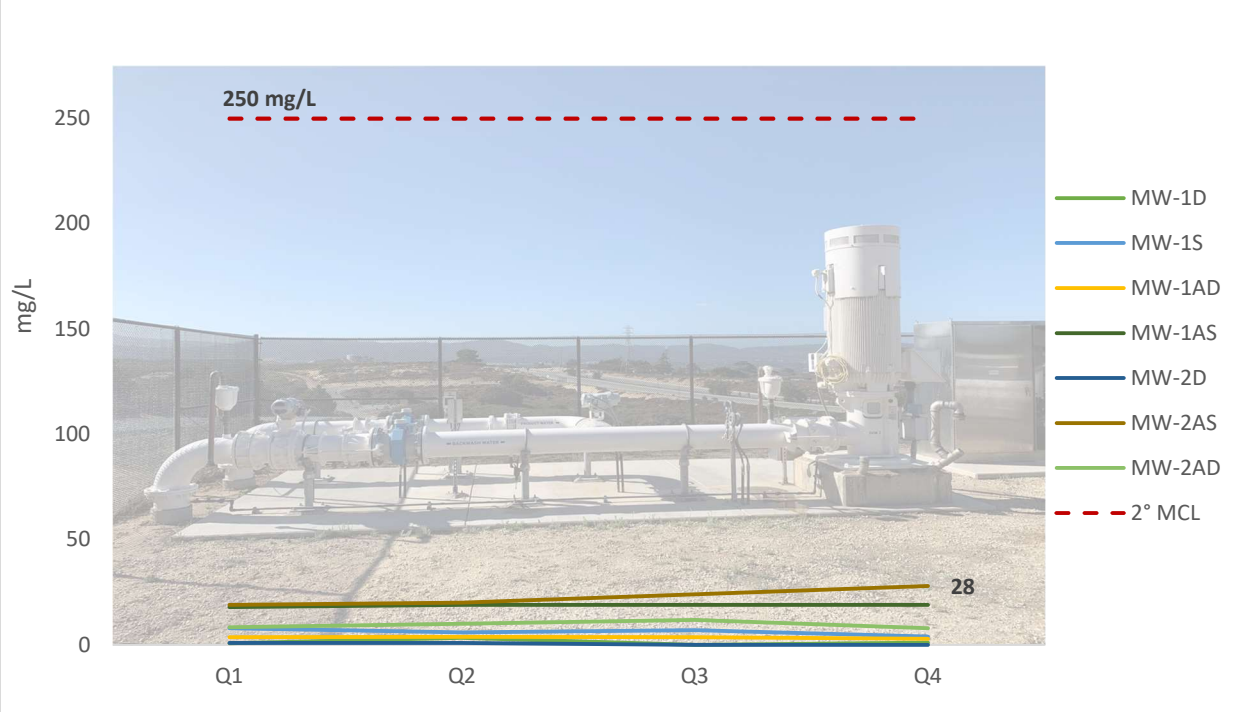


Figure 84-i. GW – Quarterly Sulfate (mg/L)

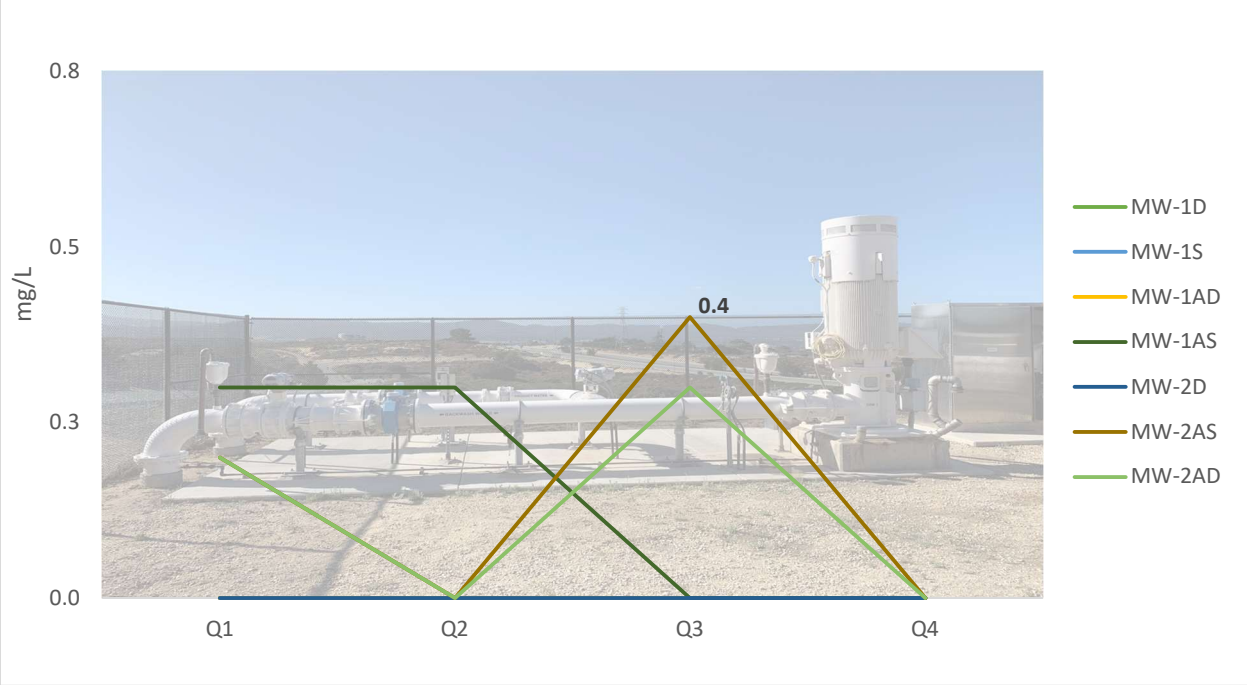


Figure 84-j. GW – Quarterly TOC (mg/L)

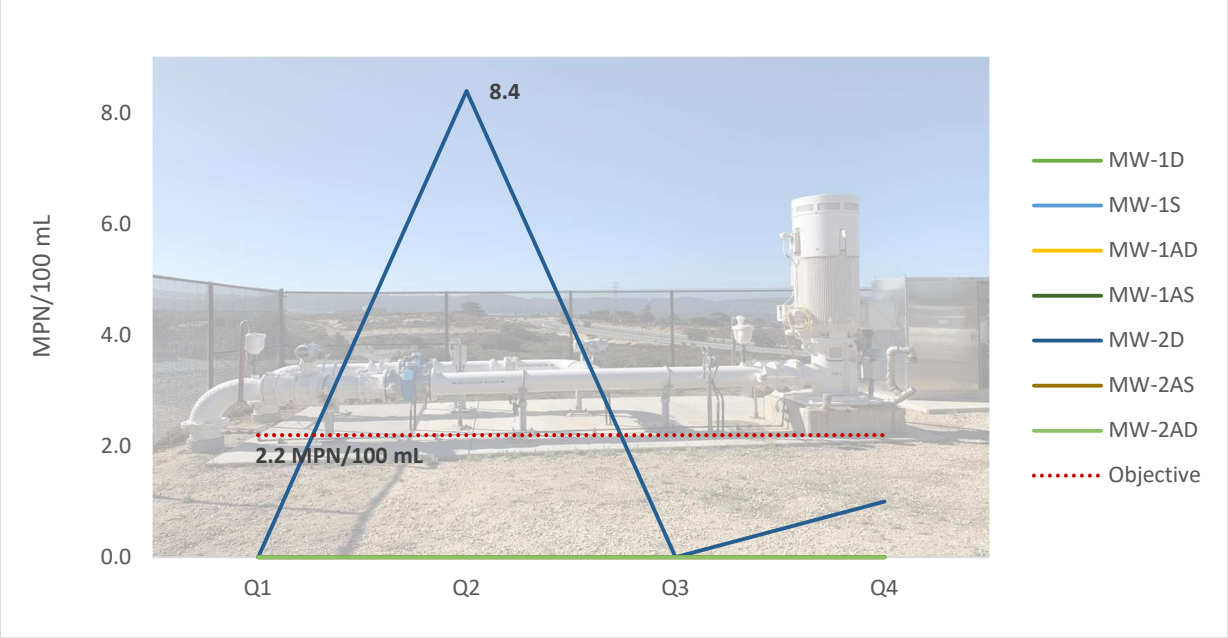


Figure 84-k. GW – Quarterly Total Coliform (MPN/100 mL)[9]

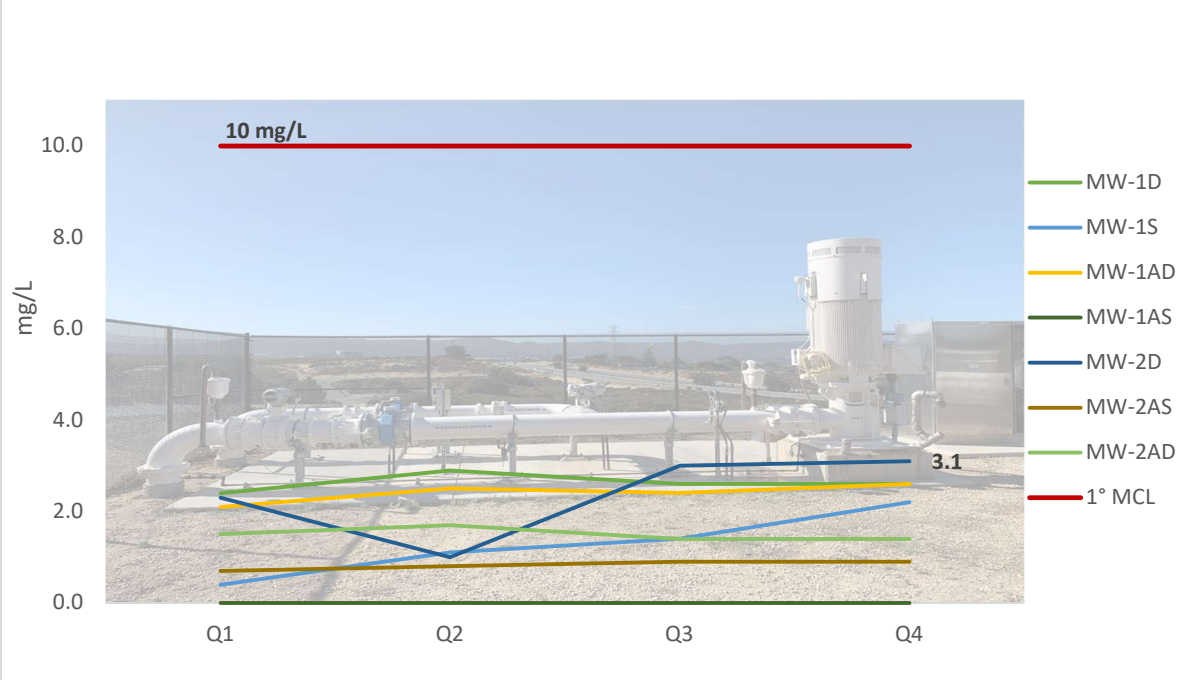


Figure 84-l. GW – Quarterly Total Nitrogen (mg/L)

[9] The Q2 2022 detection of coliform at MW-2D was due to high winds as documented during sample collection and/or rodent activity near the well, and not as a result of the application of Project water. Nonetheless, M1W notified DDW and the Regional Water Board, and took corrective actions. See **Section 6.2.4** for more information on this and other detections and trends at MW-2D.

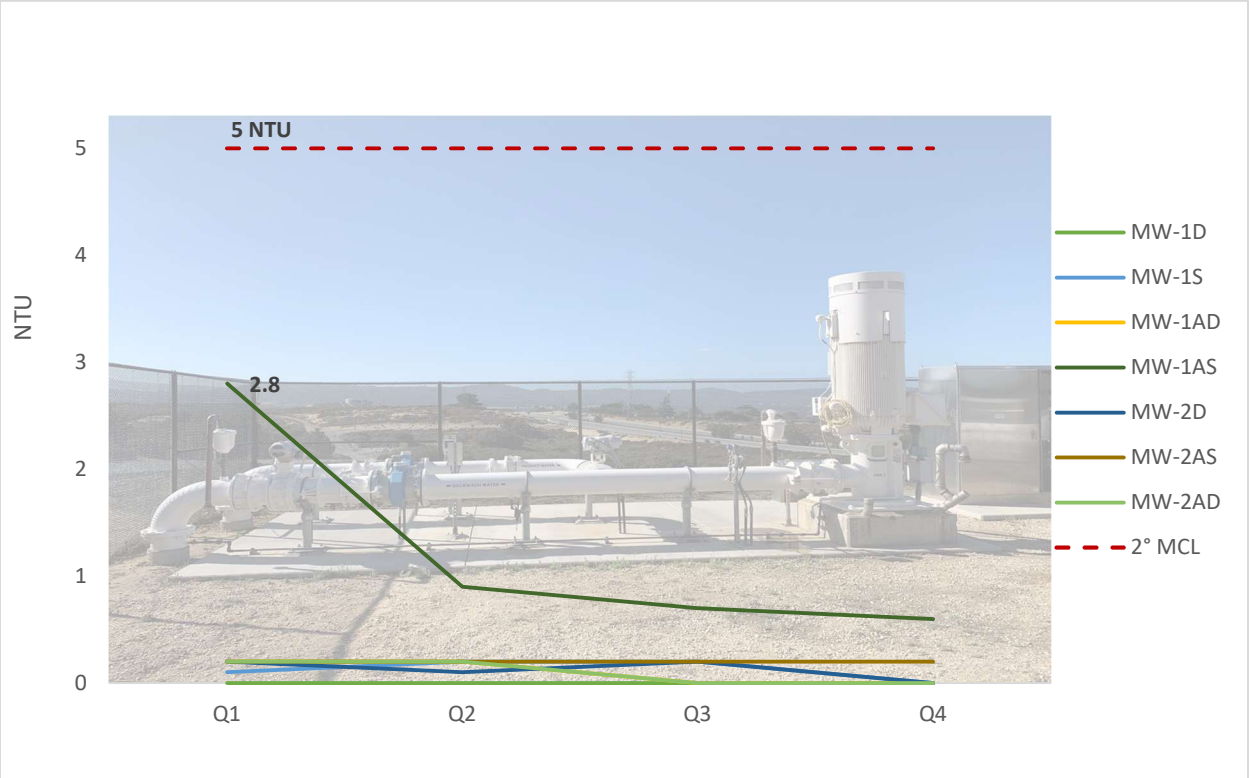


Figure 84-m. GW – Quarterly Turbidity (NTU)

Table 85. GW – Semi-Annual Monitoring

Constituents/Parameters (2x/Year) *	UOM	Semi-1							Semi-2						
		MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
BOD_5 20°C	**mg/L**	ND 2	ND 2	ND,J3 2	ND 2	ND 2	ND,J3 2	ND,J3 2	ND 2	ND 2	ND,J3 2	ND,J3 2	ND 2	ND 2	ND 2
TSS	**mg/L**	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	2	ND 2	ND 2	ND 2	ND 2

BOD & TSS were inadvertently not requested in May 2022 samples. They were instead analyzed in August 2022 as required, but due to confusion regarding required frequency, they were also analyzed in November 2022.

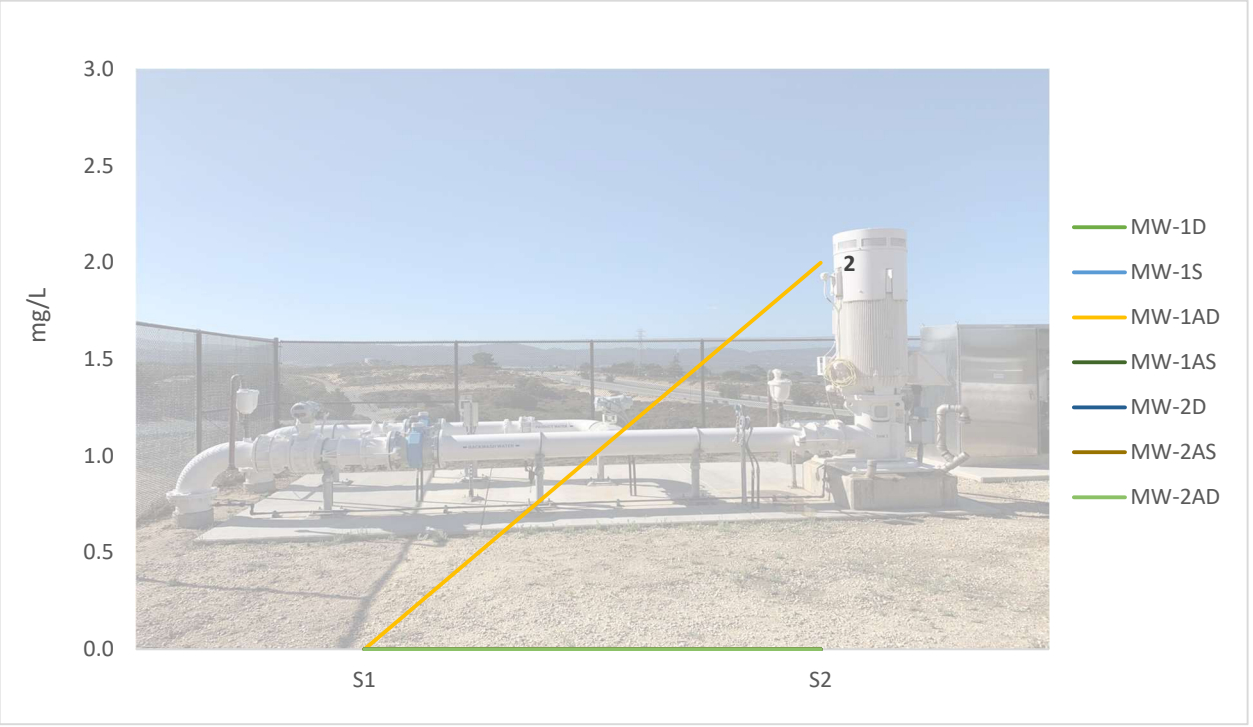


Figure 89. GW – Semi-Annual TSS (mg/L)

Table 90. GW – Monthly Aluminum (µg/L)

1° MCL 1,000 µg/L **Compliance Interval:** Running Annual Average

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	DNQ 4	DNQ 4	DNQ 6	46	DNQ 4	190	DNQ 3
February	DNQ 2	DNQ 4	DNQ 9	130	DNQ 4	52	DNQ 3
March	DNQ 2	DNQ 4	DNQ 6	30	DNQ 3	DNQ 17	DNQ 8
April	DNQ 2	DNQ 4	DNQ 9	24	DNQ 4	22	DNQ 4
May	ND 1	DNQ 3	DNQ 5	20	DNQ 3	DNQ 5	DNQ 3
June	ND 11	ND 11	ND 11	28	21	ND 11	ND 11
July	ND 5	DNQ 6	ND 5	ND 5	ND 5	ND 5	ND 5
August	ND 5	ND 5	DNQ 6	DNQ 5	ND 5	ND 5	ND 5
September	ND 5	ND 5	ND 5	18	ND 5	ND 5	ND 5
October	-	-	-	-	-	-	-
November	ND 5	ND 5	ND 5	DNQ 6	ND 5	DNQ 7	ND 5
December	-	-	-	-	-	-	-

**Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

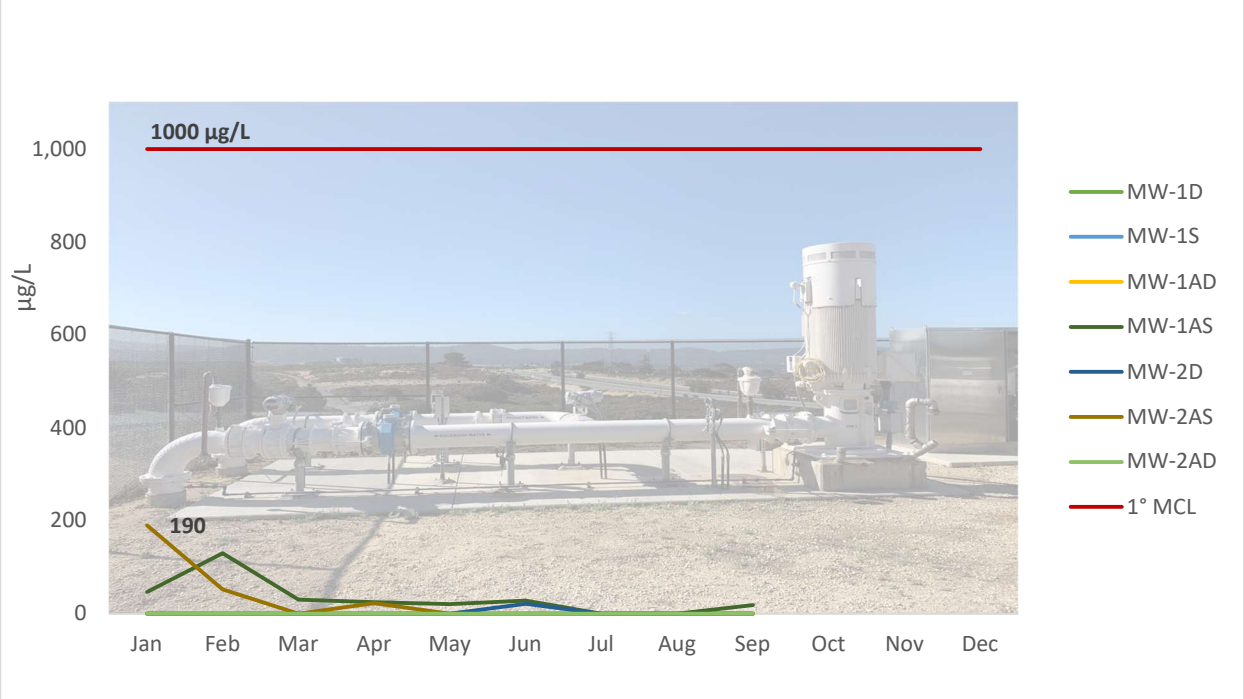


Figure 90. GW – Monthly Aluminum (µg/L)

Table 91. GW – Monthly Antimony (µg/L)

1° MCL: 6 µg/L **Compliance Interval:** Running Annual Average

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	ND 0.1	ND 0.1	DNQ 0.2	ND 0.1	ND 0.1	DNQ 0.2	ND 0.1
February	ND 0.1	DNQ 0.1	DNQ 0.3	DNQ 0.2	ND 0.1	DNQ 0.1	DNQ 0.2
March	ND 0.1	ND 0.1	DNQ 0.2	ND 0.1	ND 0.1	DNQ 0.1	DNQ 0.2
April	ND 0.1	ND 0.1	DNQ 0.2	ND 0.1	ND 0.1	DNQ 0.1	DNQ 0.2
May	ND 0.1	ND 0.1	DNQ 0.2	ND 0.1	ND 0.1	ND 0.1	DNQ 0.2
June	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
July	ND,B 0.1	ND,B 0.1	DNQ 0.2	ND 0.1	ND,B 0.1	ND 0.1	DNQ 0.1
August	ND 0.1	DNQ 0.1	ND 0.1	ND 0.1	0.6	DNQ 0.2	DNQ 0.2
September	ND,B 0.1	ND,B 0.1	DNQ 0.2	ND 0.1	ND,B 0.1	DNQ 0.1	DNQ 0.2
October	-	-	-	-	-	-	-
November	ND 0.1	ND 0.1	0.5	DNQ 0.2	ND 0.1	DNQ 0.2	DNQ 0.2
December	-	-	-	-	-	-	-

**Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

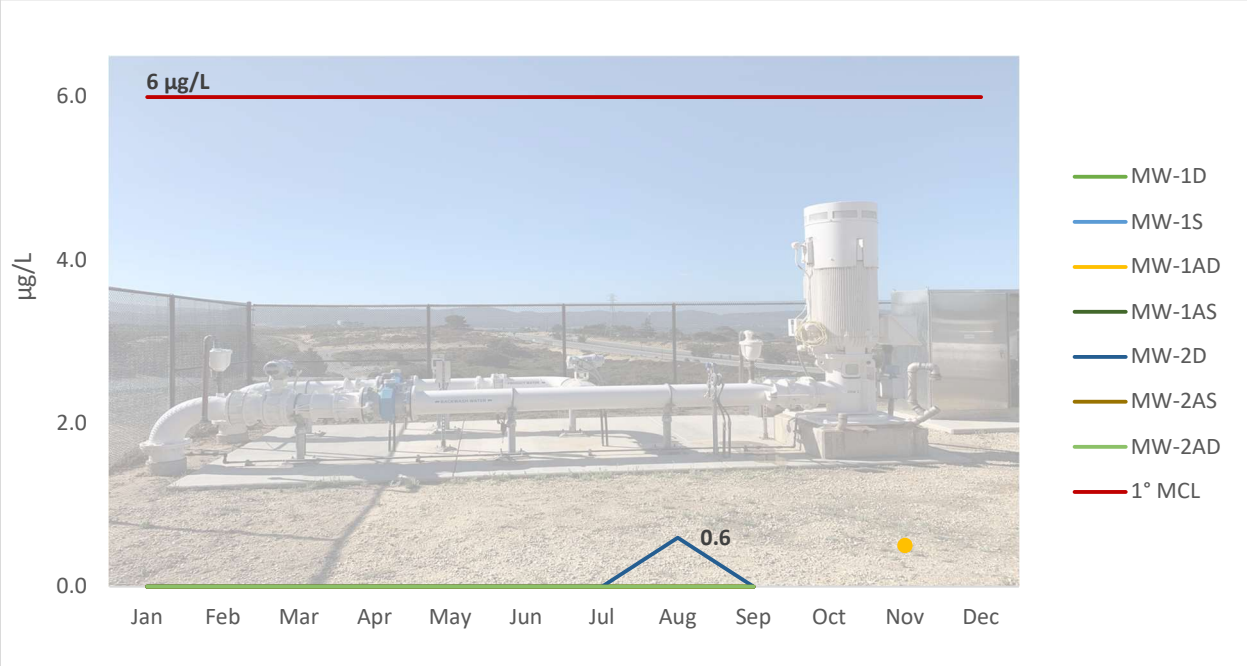


Figure 91. GW – Monthly Antimony (µg/L)

Table 92. GW – Monthly Arsenic (µg/L)

1° MCL: 10 µg/L **Compliance Interval:** Running Annual Average

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	ND 0.2	1.7	1.4	8.9	ND 0.2	4.4	DNQ 0.8
February	DNQ 0.5	2.0	1.5	8.9	ND 0.2	4.8	1.1
March	DNQ 0.7	1.9	1.4	9.2	ND 0.2	4.6	DNQ 0.90
April	DNQ 0.4	1.7	1.4	9.3	DNQ 0.3	4.8	DNQ 0.8
May	DNQ 0.4	1.8	1.3	8.5	DNQ 0.3	4.5	DNQ 0.8
June	DNQ 0.9	1.8	1.3	8.9	ND 0.5	4.7	1.0
July	DNQ 0.9	2.0	DNQ 0.9	5.4	DNQ 0.5	4.7	DNQ 0.6
August	DNQ 0.6	1.4	1.2	6.3	ND 0.5	5.3	DNQ 0.8
September	DNQ 0.7	1.4	1.2	7.1	DNQ 0.6	6.2	DNQ 0.9
October	-	-	-	-	-	-	-
November	DNQ 0.5	1.2	DNQ 1.0	5.8	ND 0.5	5.0	DNQ 0.7
December	-	-	-	-	-	-	-

**Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*[10]

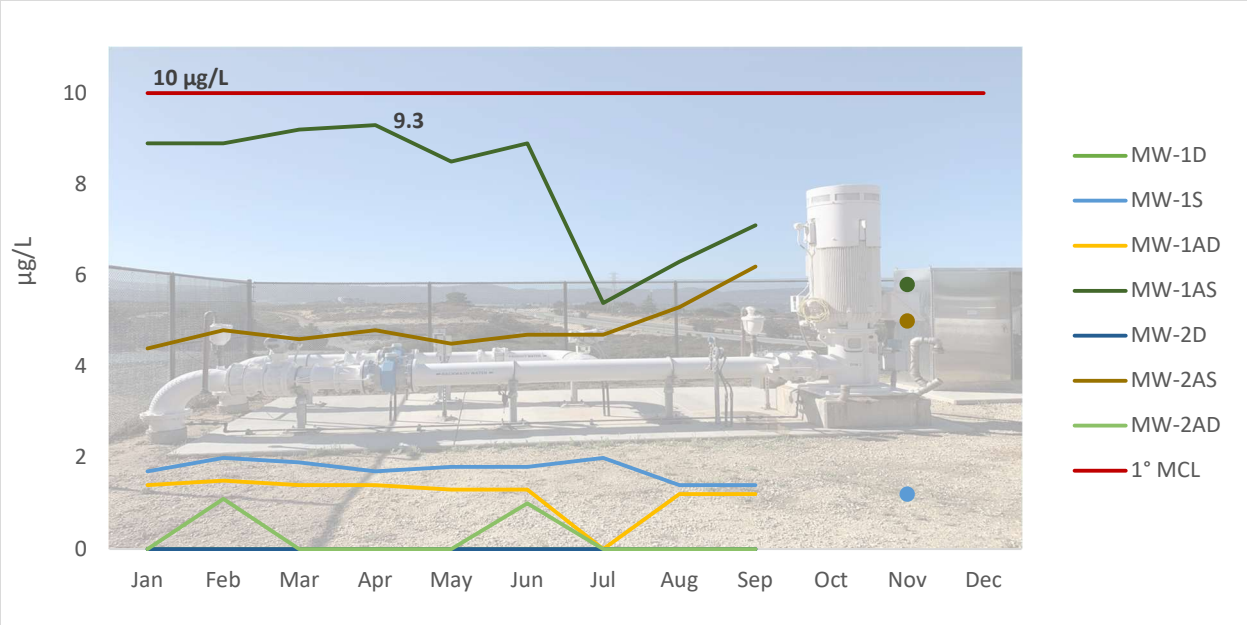


Figure 92. GW – Monthly Arsenic (µg/L)

[10] As discussed in the 2021 AWPF Annual Summary Report and throughout the 2022 AWPF Quarterly Reports, short-term arsenic mobilization was previously observed at MW-1AS. M1W worked in conjunction with DDW and the Regional Water Board to conduct a geochemical interaction analysis by Dr. Scott Fendorf of Sanford University, including an "end of project life" scenario (i.e., cessation of injection into the Seaside Basin). Regional Water Board confirmed that the final report addressed all of their concerns and as reflected in the 2022 data, arsenic levels have remained below the 10 µg/L 1° MCL. See **Section 6.2.5** for a discussion of this and other trends and detections at MW-1AS.

Table 93. GW – Monthly Asbestos (MFL)

1° MCL: 7 MFL **Compliance Interval:** Running Annual Average

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	ND 0.01	ND 0.01	ND 0.01	0.19	ND 0.01	ND 1.1	ND 0.01
February	ND 0.01	ND 0.01	ND 0.01	ND 0.42	ND 0.01	ND 0.19	ND 0.01
March	ND 0.01	ND 0.01	ND 0.01	ND 0.19	ND 0.01	ND 0.01	ND 0.01
April	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01
May	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01
June	ND 0.21	ND 0.19	ND 0.19	ND 0.20	ND 0.19	ND 0.21	ND 0.19
July	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
August	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
September	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
October	-	-	-	-	-	-	-
November	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
December	-	-	-	-	-	-	-

**Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

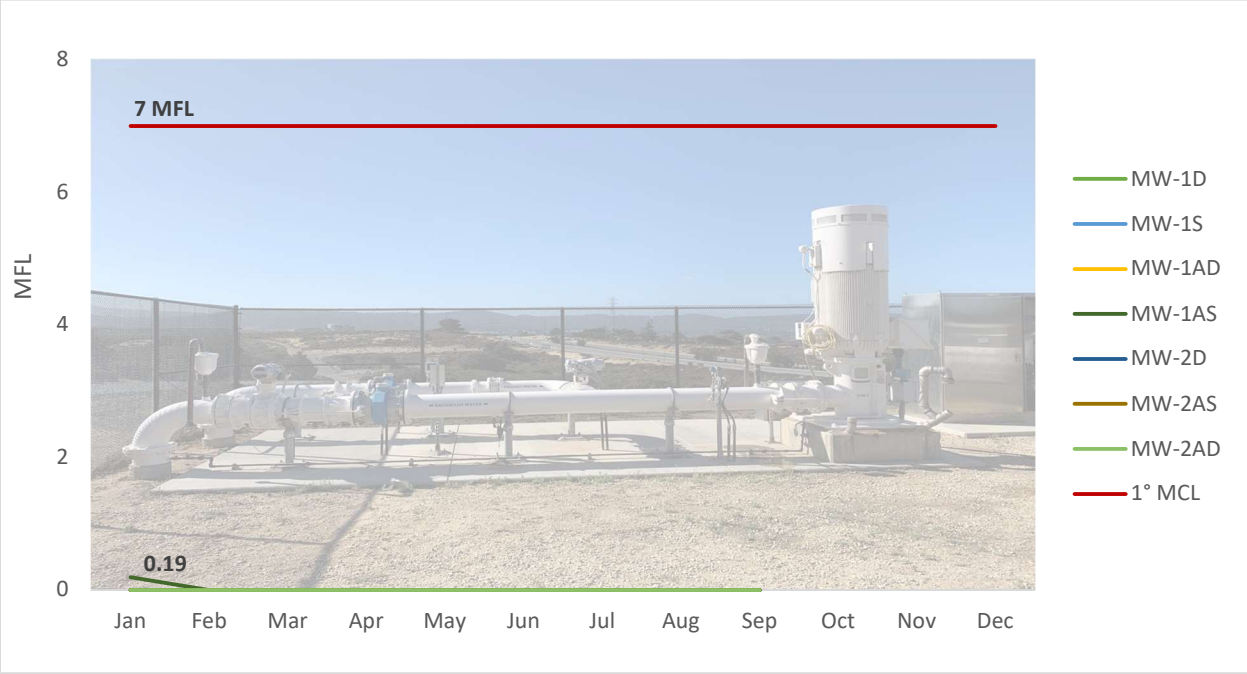


Figure 93. GW – Monthly Asbestos (MFL)

Table 94. GW – Monthly Barium (µg/L)

1° MCL: 1,000 µg/L **Compliance Interval:** Running Annual Average

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	13	15	16	69	23	39	26
February	12	15	22	70	23	38	29
March	12	14	18	75	20	39	28
April	13	14	18	75	24	39	27
May	11	13	17	75	23	33	27
June	11	14	21	71	25	33	37
July	10	15	20	62	24	33	30
August	10	12	20	68	23	38	32
September	13	14	20	79	26	38	32
October	-	-	-	-	-	-	-
November	11	11	17	71	21	34	26
December	-	-	-	-	-	-	-

**Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

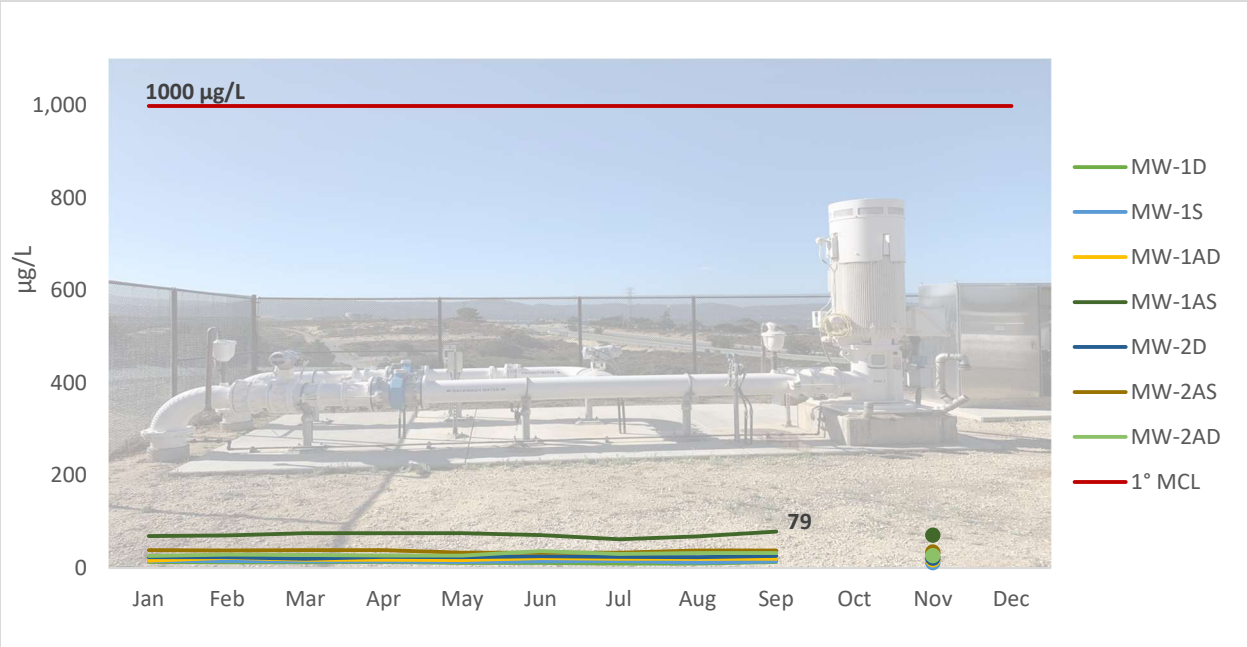


Figure 94. GW – Monthly Barium (µg/L)

Table 95. GW – Monthly Beryllium (µg/L)

1° MCL: 4 µg/L **Compliance Interval:** Running Annual Average

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1
February	ND 0.1	ND 0.1	ND 0.1	ND,J1 0.1	ND 0.1	ND 0.1	ND 0.1
March	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1
April	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1
May	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1
June	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2
July	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1
August	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1
September	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1
October	-	-	-	-	-	-	-
November	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1
December	-	-	-	-	-	-	-

**Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

Figure 95. GW – Monthly Beryllium (µg/L)

All monitoring results were ND.

Table 96. GW – Monthly Cadmium (µg/L)

1° MCL: 5 µg/L **Compliance Interval:** Running Annual Average

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	DNQ 0.2	ND 0.03	ND 0.03	ND 0.03	DNQ 0.2	DNQ 0.03	DNQ 0.1
February	DNQ 0.1	ND 0.03	DNQ 0.03	ND 0.03	DNQ 0.2	ND 0.03	DNQ 0.1
March	DNQ 0.1	ND 0.03	DNQ 0.03	DNQ 0.04	DNQ 0.2	ND 0.03	DNQ 0.1
April	DNQ 0.2	ND 0.03	ND 0.03	ND 0.03	DNQ 0.2	ND 0.03	DNQ 0.06
May	DNQ 0.1	ND 0.03	ND 0.03	ND 0.03	DNQ 0.2	ND 0.03	DNQ 0.05
June	ND 0.1	ND 0.1	ND 0.1	ND 0.1	DNQ 0.3	ND 0.1	DNQ 0.08
July	ND 0.1	ND 0.1	ND 0.1	ND 0.1	DNQ 0.2	ND 0.1	ND 0.1
August	ND 0.1	ND 0.1	ND 0.1	ND 0.1	DNQ 0.2	ND 0.1	ND 0.1
September	DNQ 0.1	ND 0.1	ND 0.1	ND 0.1	DNQ 0.2	ND 0.1	ND 0.1
October	-	-	-	-	-	-	-
November	DNQ 0.1	ND 0.1	ND 0.1	ND 0.1	DNQ 0.2	ND 0.1	ND 0.1
December	-	-	-	-	-	-	-

**Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

Figure 96. GW – Monthly Cadmium (µg/L)

All monitoring results were ND/DNQ.

Table 97. GW – Monthly Chromium (Total) (µg/L)

1° MCL 50 µg/L **Compliance Interval:** Running Annual Average

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	ND 0.5	4.2	ND 0.5	DNQ 0.9	ND 0.5	5.3	DNQ 0.9
February	ND 0.5	4.3	DNQ 0.5	1.2	DNQ 1.0	6.0	2.8
March	ND 0.5	4.7	ND 0.5	1.3	DNQ 0.5	4.5	ND 0.5
April	ND 0.5	4.1	3.0	DNQ 0.8	ND 0.5	4.4	ND 0.5
May	ND 0.5	3.4	ND 0.5	DNQ 0.8	ND 0.5	4.0	ND 0.5
June	ND 0.8	3.1	ND 0.8	ND 0.8	DNQ 1.0	7.4	ND 0.8
July	ND 0.3	2.5	ND 0.3	ND 0.3	ND 0.3	25	ND 0.3
August	ND 0.3	2.2	ND 0.3	DNQ 0.7	ND 0.3	9.5	ND 0.3
September	ND 0.3	2.2	DNQ 0.4	1.7	ND 0.3	8.1	DNQ 0.4
October	-	-	-	-	-	-	-
November	ND 0.3	1.2	ND 0.3	1.1	ND 0.3	5.4	ND 0.3
December	-	-	-	-	-	-	-

**Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

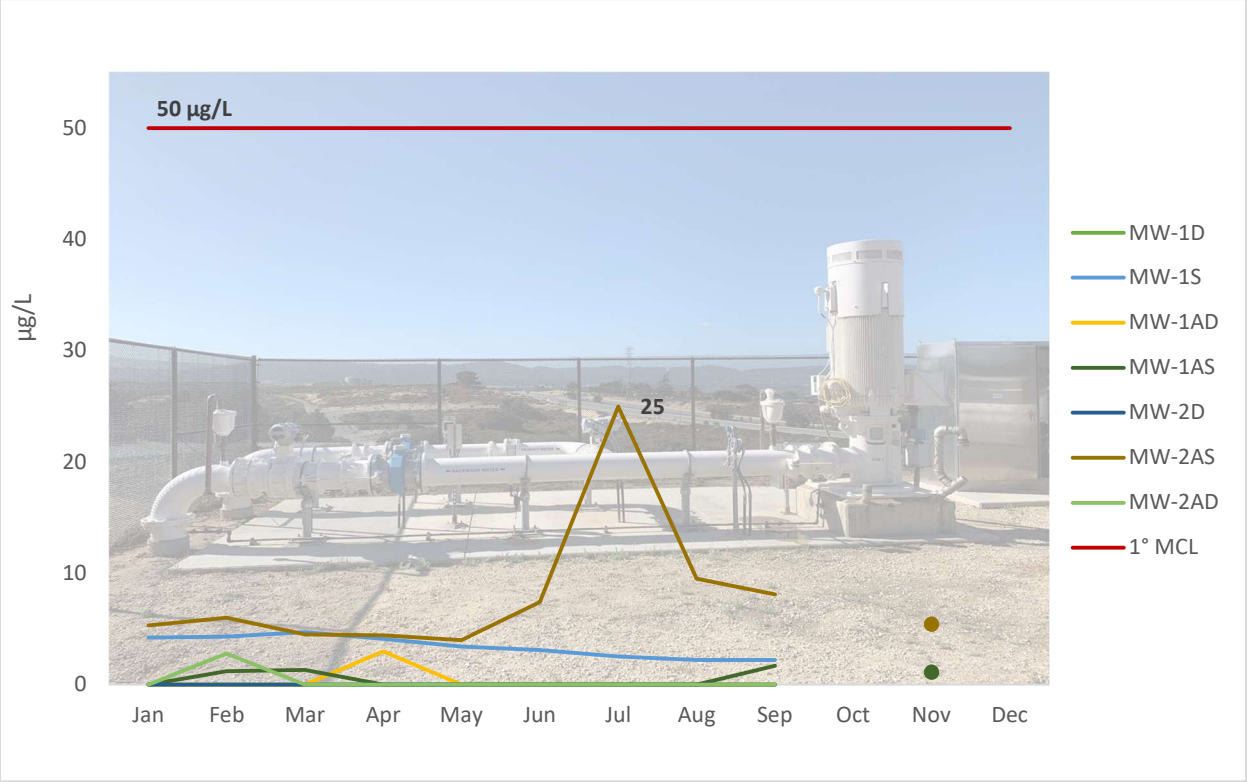


Figure 97. GW – Monthly Chromium (Total) (µg/L)

Table 98. GW – Monthly Cyanide (µg/L)

1° MCL: 150 µg/L **Compliance Interval:** Running Annual Average

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	DNQ 23	DNQ 21	DNQ 15	DNQ 14	ND 3	DNQ 14	ND 2
February	ND 6	ND 6	ND 6	ND 6	ND 6	ND 6	ND 2
March	ND 6	ND 6	ND 6	ND 6	ND 6	ND 6	DNQ 22
April	ND 6	ND 6	DNQ 12	DNQ 15	ND 6	DNQ 10	ND 2
May	ND 6	ND 6	ND 6	DNQ 10	ND 6	ND 6	ND 2
June	ND 15	ND 15	ND 15	ND 15	ND 15	ND 15	ND 15
July	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2
August	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2
September	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2
October	-	-	-	-	-	-	-
November	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2
December	-	-	-	-	-	-	-

**Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

Figure 98. GW – Monthly Cyanide (µg/L)

All monitoring results were ND/DNQ.

Table 99. GW – Monthly Fluoride (mg/L)

1° MCL: 2 mg/L **Compliance Interval:** Running Annual Average

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	0.11	0.08	0.40	0.07	0.15	DNQ 0.02	0.44
February	0.10	0.10	0.44	0.12	0.18	0.08	0.48
March	0.11	0.09	0.39	0.11	0.17	0.06	0.43
April	0.12	0.09	0.36	0.10	0.15	0.06	0.41
May	0.12	0.08	0.34	0.10	0.15	0.07	0.41
June	0.11	0.09	0.33	0.10	0.17	0.10	0.37
July	DNQ 0.09	DNQ 0.07	0.30	DNQ 0.07	0.10	DNQ 0.06	0.30
August	DNQ 0.09	DNQ 0.07	0.30	DNQ 0.07	0.10	DNQ 0.04	0.30
September	DNQ 0.08	DNQ 0.06	0.30	DNQ 0.07	0.10	DNQ 0.06	0.30
October	-	-	-	-	-	-	-
November	DNQ 0.09	DNQ 0.07	0.30	DNQ 0.07	0.10	DNQ 0.03	0.30
December	-	-	-	-	-	-	-

**Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

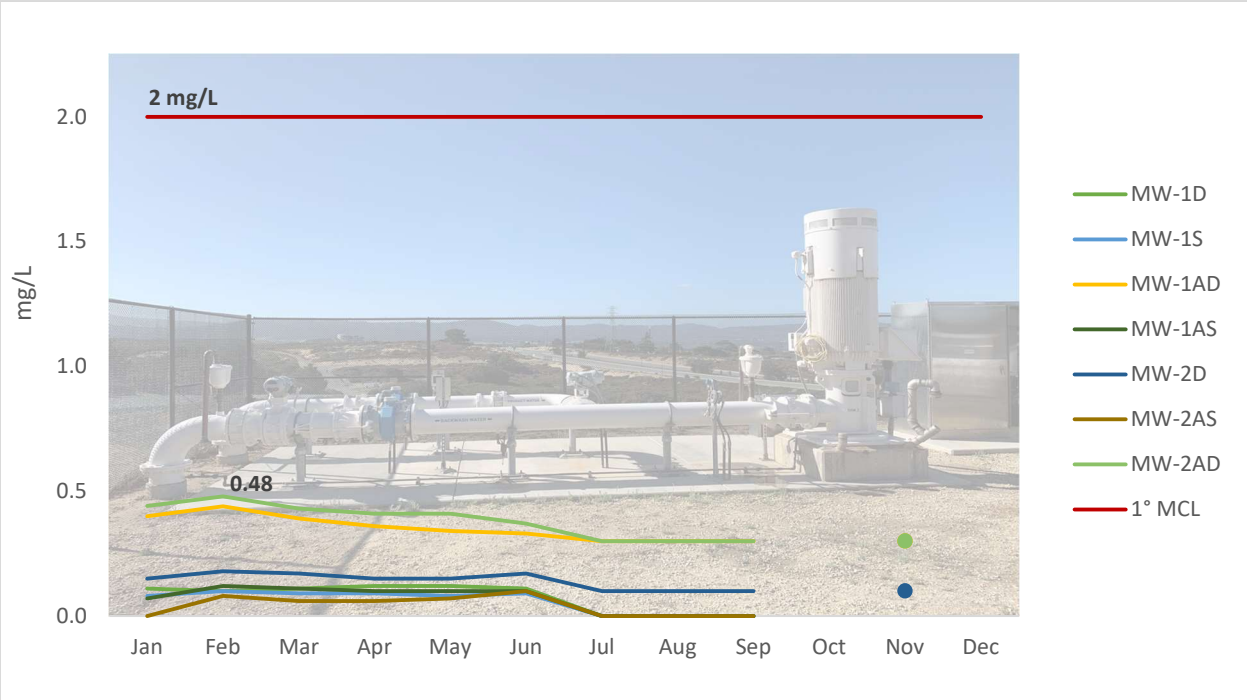


Figure 99. GW – Monthly Fluoride (mg/L)

Table 100. GW – Monthly Mercury (µg/L)

1° MCL: 2 µg/L **Compliance Interval:** Running Annual Average

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02
February	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02
March	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02
April	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02
May	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02
June	ND,Q 0.08	ND,Q 0.08	ND 0.08	ND 0.08	ND,Q 0.08	ND 0.08	ND 0.08
July	ND 0.1	DNQ 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1
August	ND 0.1	ND 0.1	DNQ 0.1	ND 0.1	ND 0.1	DNQ 0.2	ND 0.1
September	DNQ 0.1	ND 0.1	DNQ 0.2	ND 0.1	ND 0.1	ND 0.1	ND 0.1
October	-	-	-	-	-	-	-
November	ND 0.1	ND,J4 0.1	DNQ 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1
December	-	-	-	-	-	-	-

**Per Revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

Figure 100. GW – Monthly Mercury (µg/L)

All monitoring results were ND/DNQ.

Table 101. GW – Monthly Nickel (µg/L)

1° MCL: 100 µg/L **Compliance Interval:** Running Annual Average

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	DNQ 0.4	DNQ 0.3	DNQ 0.4	DNQ 0.9	DNQ 0.4	DNQ 0.9	ND 0.3
February	DNQ 0.4	DNQ 0.4	DNQ 1.8	DNQ 1.3	DNQ 0.4	DNQ 0.7	DNQ 0.7
March	DNQ 0.3	ND 0.3	DNQ 1.0	DNQ 1.2	DNQ 0.4	DNQ 0.6	DNQ 0.8
April	DNQ 0.6	DNQ 0.3	DNQ 1.0	DNQ 0.8	DNQ 0.5	DNQ 0.8	DNQ 0.4
May	DNQ 0.5	DNQ 0.3	DNQ 0.8	DNQ 0.8	DNQ 0.5	DNQ 0.6	DNQ 0.4
June	DNQ 0.5	ND 0.4	DNQ 1.7	DNQ 1.1	8.9	DNQ 1.0	DNQ 0.9
July	DNQ 1.4	DNQ 0.9	DNQ 1.8	DNQ 0.8	DNQ 4.6	DNQ 1.9	DNQ 1.2
August	DNQ 1.1	DNQ 1.1	DNQ 1.7	DNQ 1.2	DNQ 2.1	DNQ 2.5	DNQ 1.2
September	DNQ 1.1	DNQ 0.7	DNQ 1.6	DNQ 1.7	DNQ 2.8	DNQ 2.9	DNQ 1.2
October	-	-	-	-	-	-	-
November	DNQ 0.8	DNQ 0.5	DNQ 1.2	DNQ 2.4	DNQ 2.0	DNQ 2.0	DNQ 0.8
December	-	-	-	-	-	-	-

**Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*



Figure 101. GW – Monthly Nickel (µg/L)

Table 102. GW – Monthly Nitrate-N (mg/L)

1° MCL: 10 mg/L **Compliance Interval:** Average Initial + Confirmation Sample

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	2.1	0.5	2.5	DNQ 0.01	2.2	0.9	1.8
February	2.8	0.5	2.4	DNQ 0.01	2.7	0.9	1.8
March	2.9	0.7	2.6	DNQ 0.01	2.8	0.9	1.8
April	0.8	3.0	2.7	DNQ 0.02	2.8	0.9	1.8
May	2.9	1.1	2.4	ND 0.005	3.0	0.9	1.8
June	2.8	1.3	2.4	0.01	2.8	0.9	1.6
July	2.9	1.2	2.3	DNQ 0.02	2.9	0.8	1.4
August	2.4	1.4	2.4	ND 0.01	2.6	0.8	1.3
September	2.9	1.8	2.6	DNQ 0.03	2.6	0.9	1.5
October	-	-	-	-	-	-	-
November	2.6	2.2	2.3	DNQ 0.01	3.0	0.9	1.3
December	-	-	-	-	-	-	-

**Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

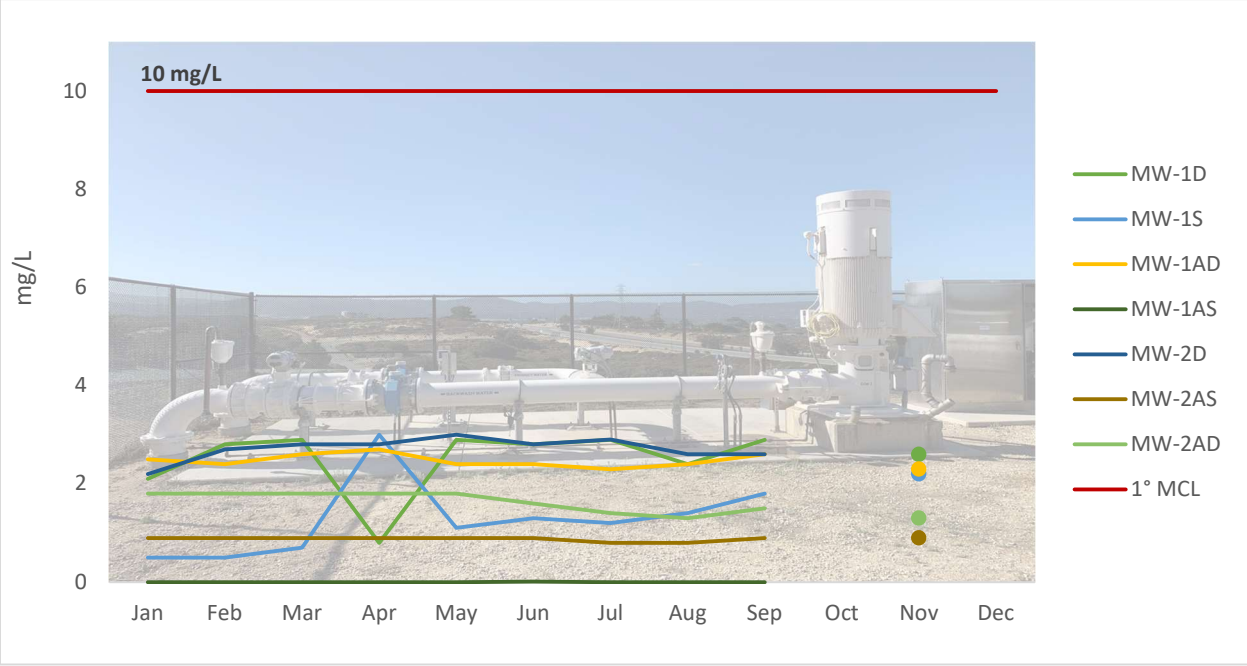


Figure 102. GW – Monthly Nitrate-N (mg/L)

Table 103. GW – Monthly Nitrite-N (mg/L)

1° MCL: 1 mg/L **Compliance Interval:** Average Initial + Confirmation Sample

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	ND 0.004	ND 0.004	0.1	ND 0.004	ND 0.004	ND 0.008	ND 0.004
February	ND 0.004	ND 0.004	DNQ 0.03	ND 0.004	ND 0.004	ND 0.008	ND 0.004
March	ND 0.004	ND 0.004	DNQ 0.01	ND 0.004	ND 0.004	ND 0.008	ND 0.004
April	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.008	ND 0.004
May	ND 0.004	ND 0.004	DNQ 0.03	ND,B 0.004	DNQ 0.01	ND 0.008	ND 0.004
June	ND 0.003	ND 0.003	ND 0.003	ND 0.003	0.1	ND 0.006	ND 0.003
July	0.2	ND 0.02	DNQ 0.03	ND 0.02	0.1	ND 0.02	DNQ 0.02
August	0.1	ND 0.02	ND 0.02	ND 0.02	0.2	ND 0.02	DNQ 0.03
September	0.3	ND 0.02	DNQ 0.02	ND 0.02	DNQ 0.05	ND 0.02	ND 0.02
October	-	-	-	-	-	-	-
November	ND 0.02	ND 0.02	0.3	ND 0.02	DNQ 0.09	ND 0.02	ND 0.02
December	-	-	-	-	-	-	-

**Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

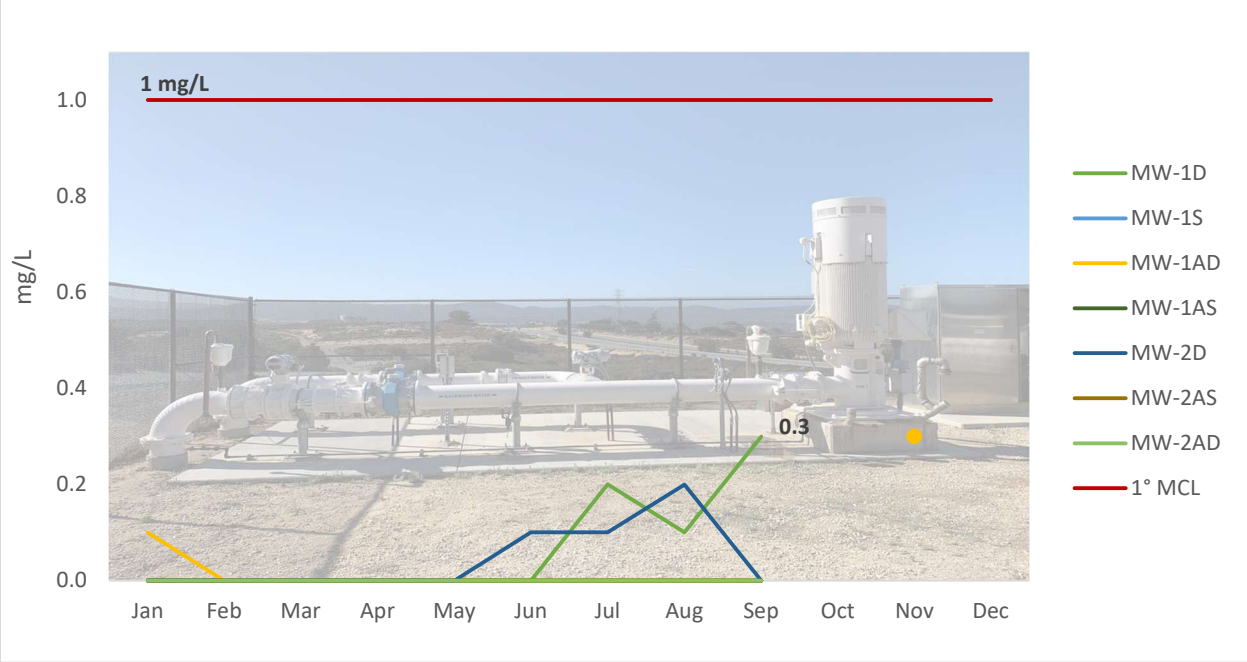


Figure 103. GW – Monthly Nitrite-N (mg/L)

Table 104. GW – Monthly Nitrate Plus Nitrite (mg/L)

1° MCL: 10 mg/L **Compliance Interval:** Average Initial + Confirmation Sample

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	2.1	0.5	2.6	DNQ 0.01	2.2	0.9	1.8
February	2.8	0.5	2.4	DNQ 0.01	2.7	0.9	1.8
March	2.9	0.7	2.6	DNQ 0.01	2.8	0.9	1.8
April	0.8	3.0	2.7	DNQ 0.02	2.8	0.9	1.8
May	2.9	1.1	2.4	ND 0.005	3.0	0.9	1.8
June	2.8	1.3	2.4	0.01	2.9	0.9	1.6
July	3.0	1.2	2.3	ND 0.03	3.0	0.8	1.4
August	2.6	1.4	2.4	ND 0.03	2.8	0.8	1.4
September	3.2	1.8	2.7	DNQ 0.03	2.6	0.9	1.5
October	-	-	-	-	-	-	-
November	2.6	2.2	2.6	ND 0.03	3.1	0.9	1.3
December	-	-	-	-	-	-	-

**Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

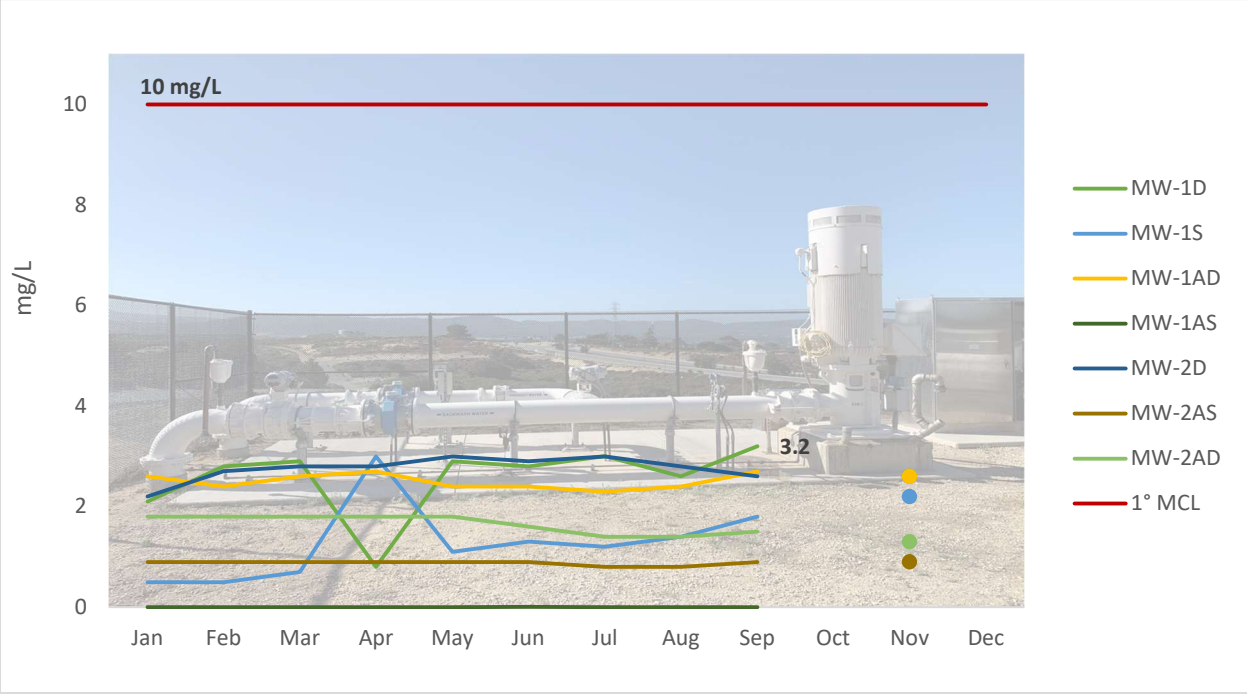


Figure 104. GW – Monthly Nitrate Plus Nitrite (mg/L)

Table 105. GW – Monthly Perchlorate (µg/L)

1° MCL: 6 µg/L **Compliance Interval:** Average Initial + Confirmation Sample

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 0.3
February	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 0.3
March	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 0.3
April	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 0.3
May	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 0.3
June	ND 0.4	ND 0.4	ND 0.09	ND 0.09	ND 0.4	DNQ 0.4	ND 0.09
July	ND 0.4	ND 0.4	ND 0.4	ND 0.78	ND 0.4	ND 0.4	ND 0.4
August	ND 0.4	ND 0.4	ND 0.4	ND 0.4	ND 0.4	ND 0.4	ND 0.4
September	ND 0.4	ND 0.4	ND 0.4	ND 0.4	ND 0.4	ND 0.4	ND 0.4
October	-	-	-	-	-	-	-
November	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
December	-	-	-	-	-	-	-

**Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

Figure 105. GW – Monthly Perchlorate (µg/L)

All monitoring results were ND.

Table 106. GW – Monthly Selenium (µg/L)

1° MCL: 50 µg/L **Compliance Interval:** Running Annual Average

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	DNQ 0.3	DNQ 0.3	ND 0.3	DNQ 0.4	DNQ 0.5	5.4	ND 0.3
February	DNQ 0.3	DNQ 0.4	DNQ 0.6	ND 0.3	DNQ 0.5	5.3	DNQ 0.5
March	ND 0.3	DNQ 0.3	DNQ 0.4	DNQ 0.4	ND 0.3	5.8	DNQ 0.6
April	ND 0.3	DNQ 0.3	DNQ 0.4	DNQ 0.5	DNQ 0.6	6.1	DNQ 0.5
May	ND 0.3	ND 0.3	DNQ 0.3	ND 0.3	DNQ 0.5	DNQ 4.9	ND 0.3
June	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	DNQ 3.7	ND 1.0
July	DNQ 0.6	DNQ 0.7	ND 0.5	DNQ 0.9	DNQ 0.8	5.1	ND 0.5
August	ND 0.5	DNQ 0.6	DNQ 1.0	1.3	DNQ 0.7	7.6	ND 0.5
September	DNQ 0.5	DNQ 0.7	DNQ 0.8	2.4	DNQ 0.9	7.5	DNQ 0.6
October	-	-	-	-	-	-	-
November	ND 0.5	ND 0.5	ND 0.5	1.0	ND 0.5	6.2	ND 0.5
December	-	-	-	-	-	-	-

**Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

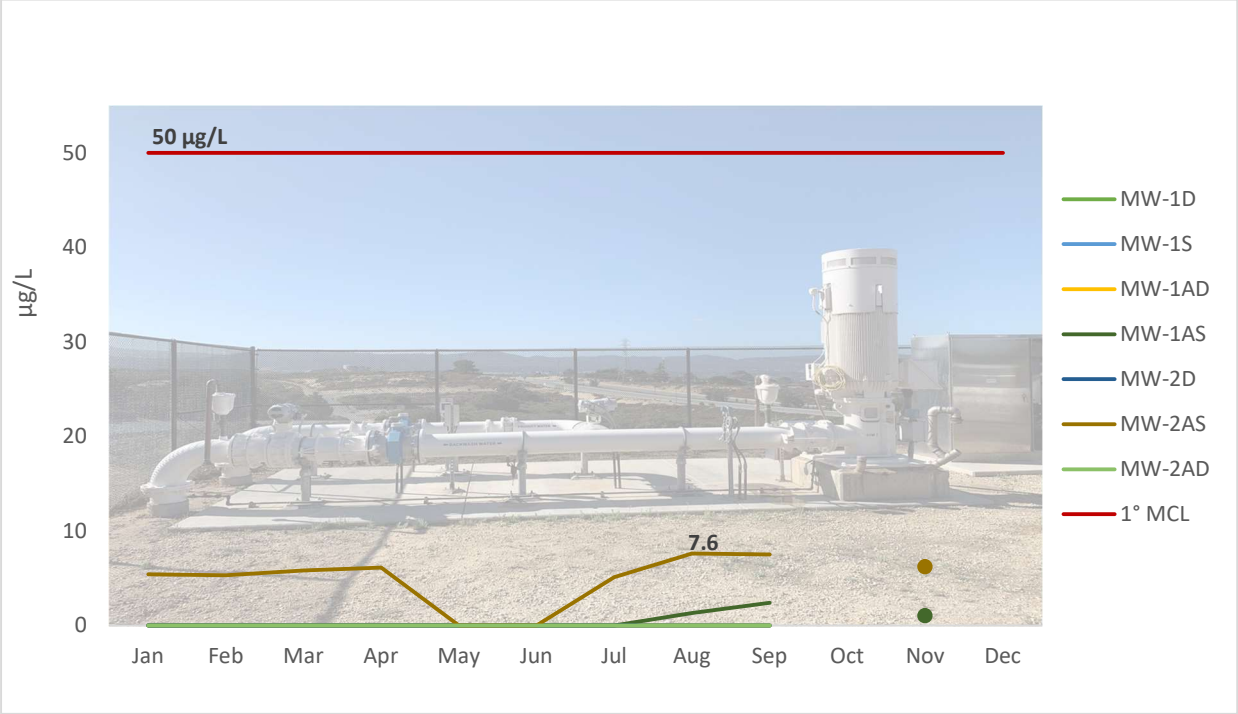


Figure 106. GW – Monthly Selenium (µg/L)

Table 107. GW – Monthly Thallium (µg/L)

1° MCL: 2 µg/L **Compliance Interval:** Running Annual Average

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04
February	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04
March	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04
April	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04
May	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04
June	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 0.3
July	DNQ 0.1	ND 0.1	ND 0.1	ND 0.1	DNQ 0.1	ND 0.1	ND 0.1
August	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1
September	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1
October	-	-	-	-	-	-	-
November	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1
December	-	-	-	-	-	-	-

**Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

Figure 107. GW – Monthly Thallium (µg/L)

All monitoring results were ND/DNQ.

Table 108. GW – Quarterly Radioactivity (pCi/L)

Constituents/Parameters (Quarterly)	UOM	Q1							Q2							Q3							Q4						
		MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
Radioactivity																													
Radioactivity (Gross Alpha)	pCi/L	2.31	3.24	1.24	0.84	4.03	0.91	2.13	-0.75	-0.49	2.12	1.11	-0.56	0.82	0.72	0.94	0.29	0.93	0.73	0.79	1.62	0.92	2.39	0.82	2.13	0.35	1.47	2.12	2.72
Radioactivity (Gross Beta)	pCi/L	2.68	2.42	2.12	2.99	3.62	4.89	3.70	2.80	5.08	1.19	1.89	1.69	4.44	6.20	1.91	1.03	2.88	2.66	4.76	5.51	3.80	2.59	0.57	2.26	3.61	2.51	7.00	2.02
Radium-226	pCi/L	0.26	0.29	0.29	0.31	0.31	0.33	0.24	0.36	0.43	0.25	0.36	0.58	0.32	0.32	0.00	-0.02	0.00	0.00	0.00	-0.04	0.04	-0.1	-0.12	-0.06	-0.12	-0.12	-0.02	-0.02
Radium-226 and Radium-228	pCi/L	0.26	0.32	0.29	0.33	0.68	0.33	0.65	0.36	0.60	0.64	0.59	1.08	0.32	0.32	0.00	0.69	0.00	0.00	0.00	-0.04	0.50	-0.1	0.14	-0.06	-0.12	-0.12	0.06	-0.02
Radium-228	pCi/L	0.00	0.03	0.00	0.02	0.36	0.00	0.41	0.00	0.17	0.39	0.23	0.51	0.00	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.45	0.00	0.26	0.00	0.00	0.00	0.08	0.00
Strontium-90	pCi/L	0.21	1.67	1.08	1.01	1.16	0.85	0.53	1.46	0.77	0.40	0.47	1.09	0.17	1.55	0.39	0.36	0.29	0.40	0.70	0.25	0.29	0.27	0.44	0.50	0.00	0.99	0.55	0.16
Tritium	pCi/L	311	265	253	260	270	281	298	212	218	288	263	307	263	188	211	144	376	184	325	95	40	-66.7	-212	-135	-66.7	-249	39	-154
Uranium (pci/L)	pCi/L	ND 0.1	ND 0.1	0.6	DNQ 0.1	ND 0.1	0.70	DNQ 0.2	DNQ 0.1	DNQ 0.1	0.5	DNQ 0.2	DNQ 0.1	0.70	DNQ 0.2	ND 0.1	ND 0.1	0.40	ND 0.1	ND 0.1	0.90	DNQ 0.2	ND 0.1	ND 0.1	0.40	ND 0.1	ND 0.1	0.90	DNQ 0.1

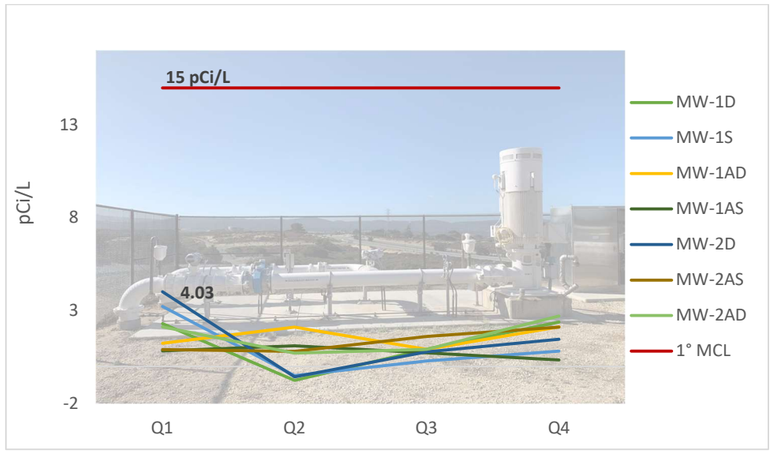


Figure 109-a. GW – Quarterly Gross Alpha (pCi/L)

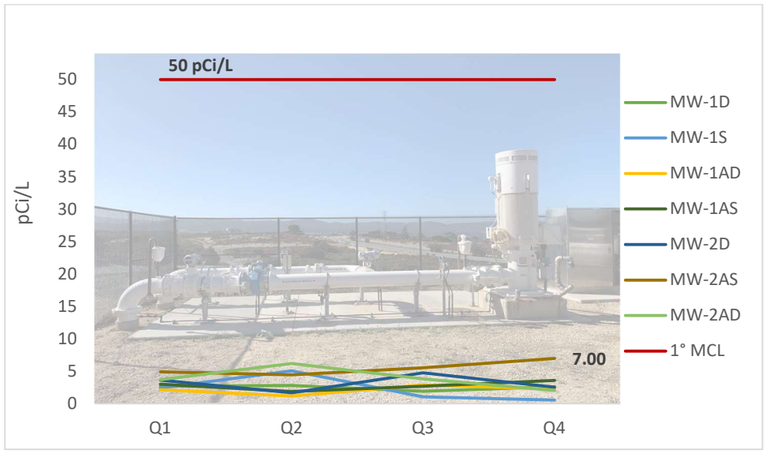


Figure 108-b. GW – Quarterly Gross Beta (pCi/L)

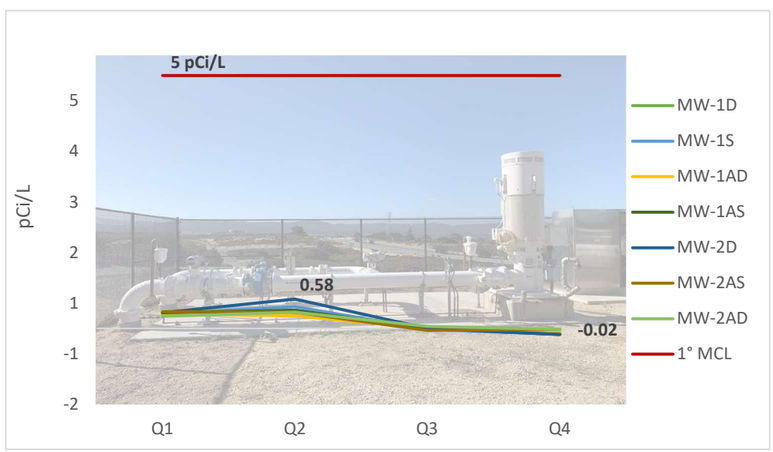


Figure 108-c. GW – Quarterly Gross Radium 226 (pCi/L)

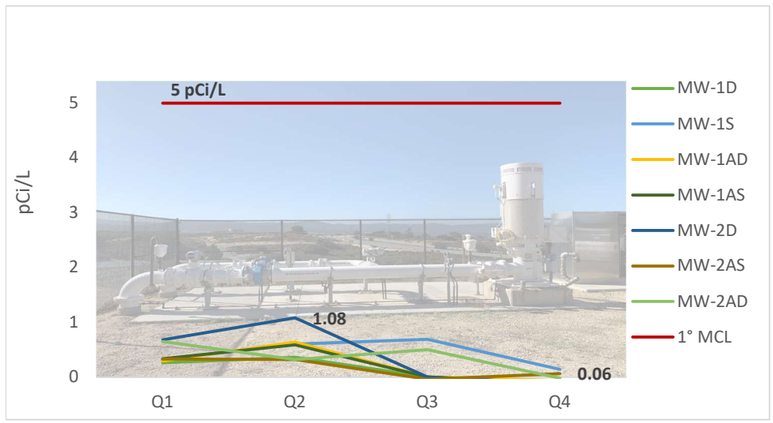


Figure 108-d. GW – Quarterly Radium 226 & 228 (pCi/L)

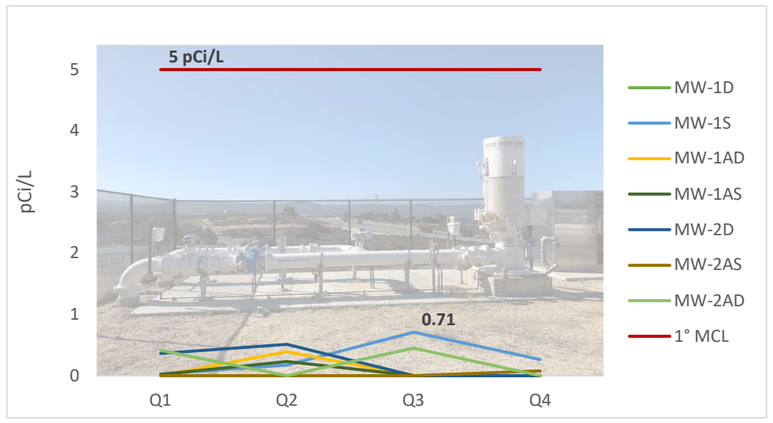


Figure 108-e. GW – Quarterly Radium 228 (pCi/L)

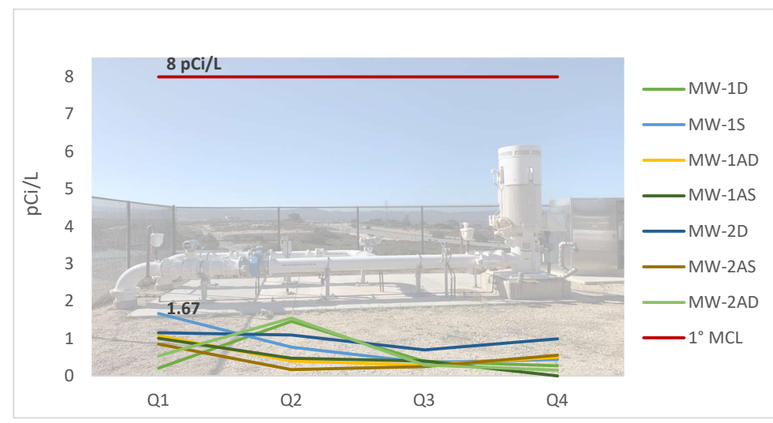


Figure 108-f. GW – Quarterly Strontium 90 (pCi/L)

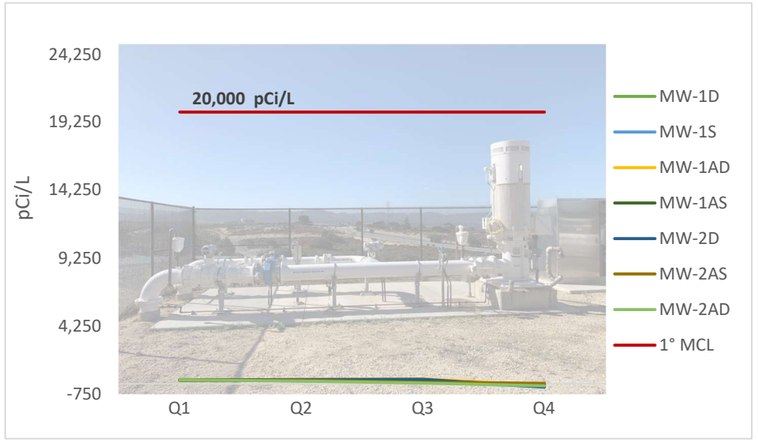


Figure 108-g. GW – Quarterly Tritium (pCi/L)

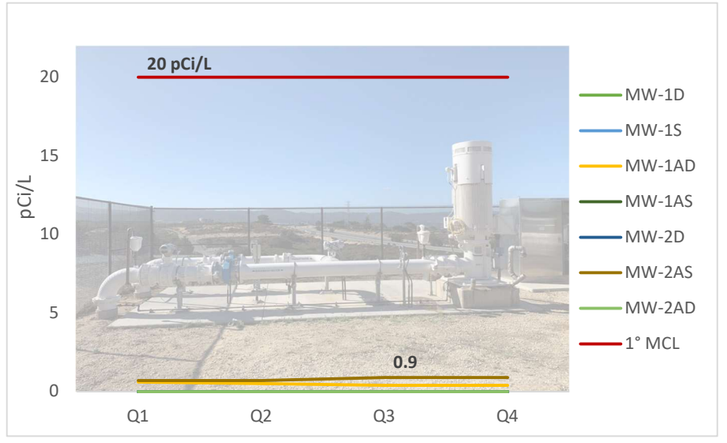


Figure 108-h. GW – Quarterly Uranium (pCi/L)

Table 109. GW – Organic Chemicals – Quarterly VOCs (µg/L)

Constituents/Parameters (Quarterly)	UOM	Q1							Q2							Q3							Q4						
		MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
Organic Chemicals (a) Volatile Organic Chemicals																													
1,1,1-Trichloroethane	µg/L	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26
1,1,2,2-Tetrachloroethane	µg/L	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20
1,1,2-Trichloro-1,2,2-Trifluoroethane	µg/L	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5
1,1,2-Trichloroethane	µg/L	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19
1,1-Dichloroethane	µg/L	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27
1,1-Dichloroethylene	µg/L	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16
1,2,4-Trichlorobenzene	µg/L	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17
1,2-Dichlorobenzene	µg/L	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19
1,2-Dichloroethane	µg/L	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24
1,2-Dichloropropane	µg/L	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13	ND 0.13
1,3-dichloropropene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
1,4-Dichlorobenzene	µg/L	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18
Benzene	µg/L	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15
Carbon Tetrachloride	µg/L	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27
cis-1,2-Dichloroethylene	µg/L	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25
Dichloromethane	µg/L	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30
Ethylbenzene	µg/L	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21
Methyl-tert-butyl ether	µg/L	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94	ND 0.94
Monochlorobenzene	µg/L	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15
Styrene	µg/L	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19
Tetrachloroethylene	µg/L	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18
Toluene	µg/L	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29
trans-1,2-Dichloroethylene	µg/L	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26
Trichloroethylene	µg/L	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18
Trichlorofluoromethane	µg/L	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18
Vinyl Chloride	µg/L	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18
Xylenes (m,p)	µg/L	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33	ND 0.33

Figure 109. GW – Quarterly VOCs

All monitoring results were all ND/DNQ.

Table 110. GW – Quarterly SOCs

Constituents/Parameters (Quarterly)	UOM	Q1							Q2							Q3							Q4						
		MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
Organic Chemicals, (b) Synthetic Organic Chemicals																													
DBCP	µg/L	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004
1,2,3-Trichloropropane	µg/L	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001
2,3,7,8-TCDD (Dioxin)	µg/L	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06	ND 2.5E-06
2,4,5-TP (Silvex)	µg/L	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03
2,4-D	µg/L	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14	ND 0.14
DCPA	µg/L	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03
Alachlor	µg/L	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03
Albuterol	µg/L	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005
Atrazine	µg/L	ND 0.01	ND 0.01	ND 0.01	ND 0.01	DNQ 0.02	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01
Bentazon	µg/L	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23
Benzo(A)Pyrene	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.14	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02
Caffeine	µg/L	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	0.013	0.006	0.014	ND 0.004	0.014	0.008	0.020	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	0.010	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004
Carbadox	µg/L	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01
Carbofuran	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
Chlordane	µg/L	ND 0.07	ND 0.10	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07
Chloropicrin	µg/L	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	2.7	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20
Dalapon	µg/L	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11	ND 0.11
Di(2-ethylhexyl)adipate	µg/L	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42
Di(2-ethylhexyl)phthalate	µg/L	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41
Dinoseb	µg/L	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03
Diquat	µg/L	ND 0.90	ND 0.90	ND 0.90	ND 0.90	ND 0.90	ND 0.90	ND 0.90	ND 0.90	ND 0.90	ND 0.90	ND 0.90	ND 0.90	ND 0.90	ND 0.90	ND 0.90	ND 0.90	ND 0.90	ND 0.90	ND 0.90	ND 0.90	ND 0.90	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17
Endothall	µg/L	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11	ND 11
Endrin	µg/L	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003
Erythromycin	µg/L	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005
Ethylene Dibromide	µg/L	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003
Fluoxetine	µg/L	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004
Glyphosate	µg/L	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 9	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8
Heptachlor	µg/L	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003
Heptachlor Epoxide	µg/L	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002
Hexachlorobenzene	µg/L	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002
exachlorocyclopentadiene	µg/L	ND 0.006	ND 0.006	ND 0.006	ND 0.006	ND 0.006	ND 0.006	ND 0.006	ND 0.006	ND 0.006	ND 0.006	ND 0.006	ND 0.006	ND 0.006	ND 0.006	ND 0.006	ND 0.006	ND 0.006	ND 0.006	ND 0.006	ND 0.006	ND 0.006	ND 0.007	ND 0.007	ND 0.007	ND 0.007	ND 0.007	ND 0.007	ND 0.007	ND 0.007
Iohexol	µg/L	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005	ND 0.005
Lindane	µg/L	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003
Methoxychlor	µg/L	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003
Molinate	µg/L	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03
Oxamyl	µg/L	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1	ND 1.1
PCB-1016	µg/L	ND 0.02	ND 0.50	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.10	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05
PCB-1221	µg/L	ND 0.04	ND 0.50	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.10	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04
PCB-1232	µg/L	ND 0.01	ND 0.50	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.10	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06
PCB-1242	µg/L	ND 0.07	ND 0.50	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.10	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07
PCB-1248	µg/L	ND 0.09	ND 0.50	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.10	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05
PCB-1254	µg/L	ND 0.09	ND 0.50	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.10	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07
PCB-1260	µg/L	ND 0.04	ND 0.50	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.10	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08
Pentachlorophenol	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05
Picloram	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05

Constituents/Parameters (Quarterly)	UOM	Q1							Q2							Q3							Q4						
		MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
Quinoline	µg/L	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004
Simazine	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02
Thiobencarb	µg/L	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03
Toxaphene	µg/L	ND 0.37	ND 1.00	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37
Triclosan	µg/L	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008	ND 0.008

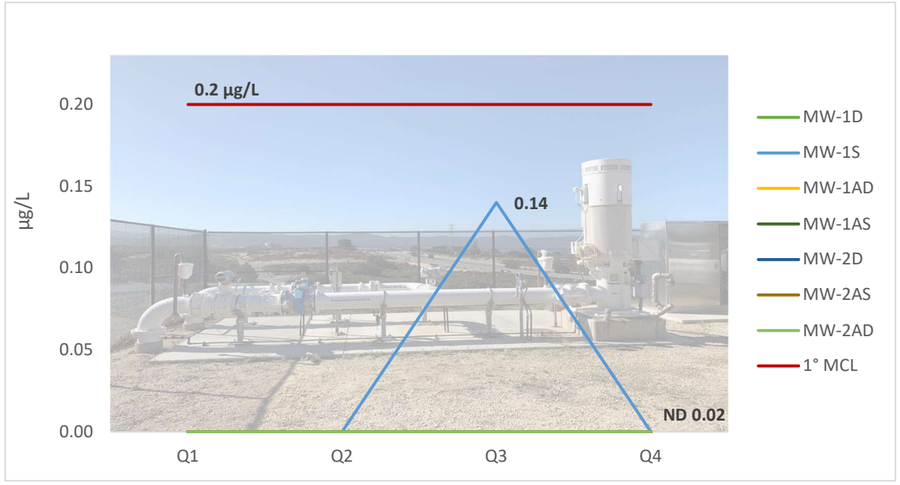


Figure 110-a. GW – Quarterly SOCs – Benzo(a)Pyrene (µg/L)

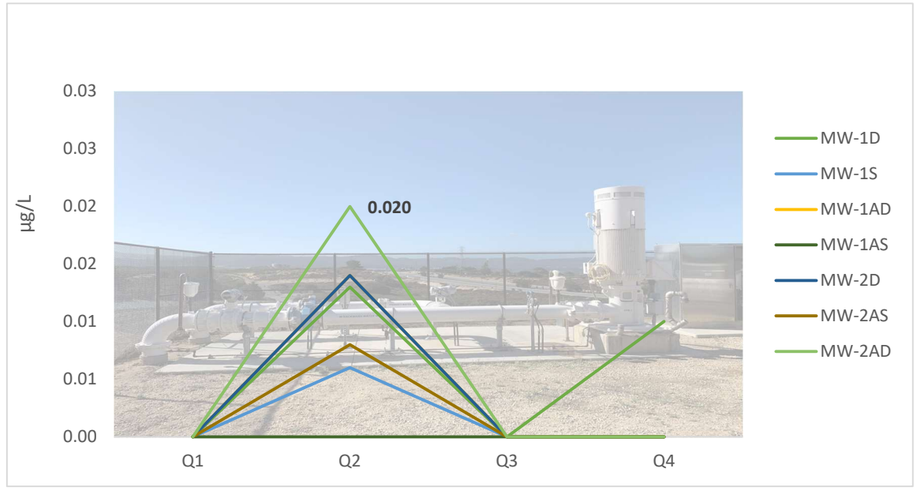


Figure 110-b. GW – Quarterly SOCs – Caffeine (µg/L)

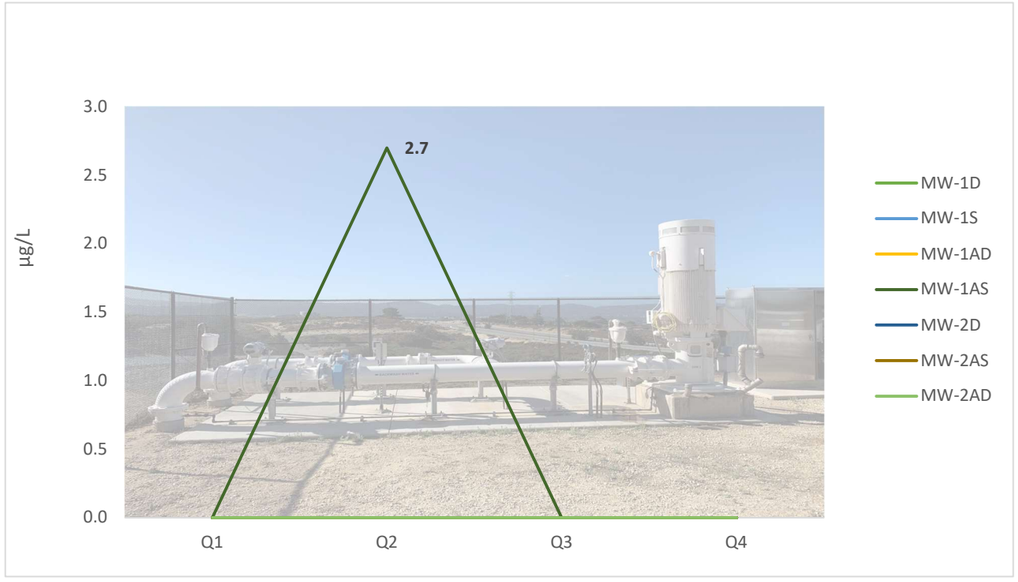


Figure 110-c. GW – Quarterly SOCs – Chloropicrin (µg/L)

Table 111. GW – Disinfection Byproducts (µg/L)

Constituents/Parameters (Quarterly)	UOM	Q1							Q2							Q3							Q4						
		MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
Organic chemicals, Disinfection Products																													
Bromate	µg/L	ND 1.4	ND 1.4	ND 1.4	DNQ 2.20	ND 1.4	ND 1.4	ND 1.4	ND 1.4	ND 1.4	ND 1.4	ND 1.4	ND 1.4	ND 1.4	ND 1.4	ND 1.4	ND 1.4	ND 1.4	ND 1.4	ND 1.4	ND 1.4	ND 1.4	ND 1.4	ND 1.4	ND 1.4	ND 1.4	ND 1.4	ND 1.4	ND 1.4	ND 1.4
Bromodichloromethane	µg/L	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24
Bromoform	µg/L	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38
Chlorite	µg/L	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2	ND 2.2
Chloroform	µg/L	ND 0.27	DNQ 0.37	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	0.51	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	0.64	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	0.92	ND 0.27	ND 0.27	DNQ 0.45	ND 0.27	ND 0.27
Dibromoacetic Acid	µg/L	ND 0.32	ND 0.32	ND 0.32	ND 0.32	ND 0.32	ND 0.32	ND 0.32	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28
Dibromochloromethane	µg/L	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20
Dichloroacetic Acid	µg/L	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.37	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29
Haloacetic acids (HAA5)	µg/L	ND 1.00	ND 1.00	ND 1.00	ND 1.00	ND 1.00	ND 1.00	ND 1.00	ND 0.28	ND 0.28	ND 0.28	DNQ 0.31	ND 0.28	ND 0.28	ND 0.28	2.8	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28
Monobromoacetic Acid	µg/L	ND 0.39	ND 0.39	ND 0.39	ND 0.39	ND 0.39	ND 0.39	ND 0.39	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34
Monochloroacetic Acid	µg/L	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.31	ND 0.31	ND 0.31	ND 0.31	ND 0.31	ND 0.31	ND 0.31	2.8	DNQ 0.53	DNQ 0.87	DNQ 0.34	ND 0.31	DNQ 0.37	DNQ 0.63	ND 0.31	ND 0.31	DNQ 0.39	ND 0.31	ND 0.31	ND 0.31	ND 0.31	ND 0.31
Total Trihalomethanes	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.51	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.64	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.92	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
Trichloroacetic Acid	µg/L	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.29	ND 0.29	ND 0.29	DNQ 0.31	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29

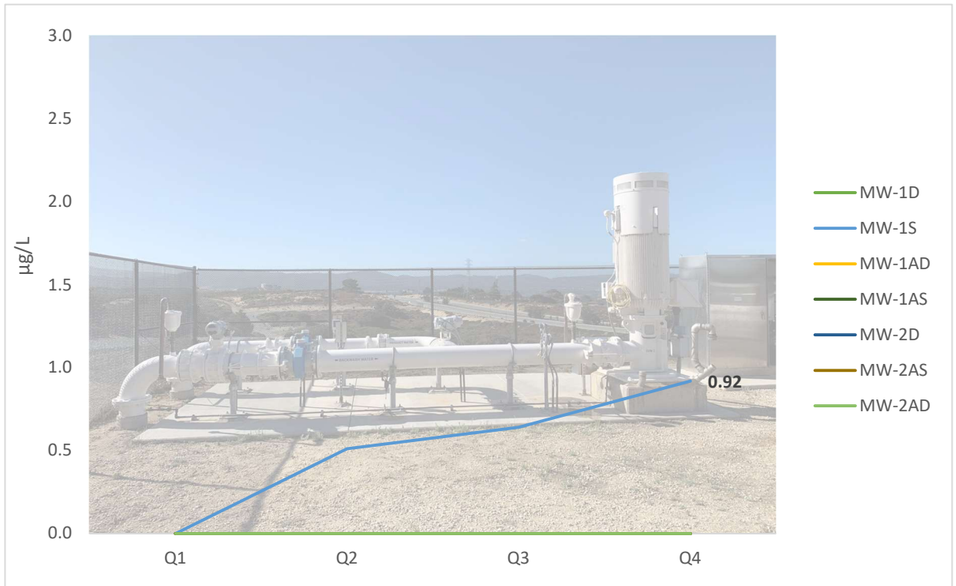


Figure 111-a. GW – Disinfection Byproducts – Quarterly Chloroform (µg/L)

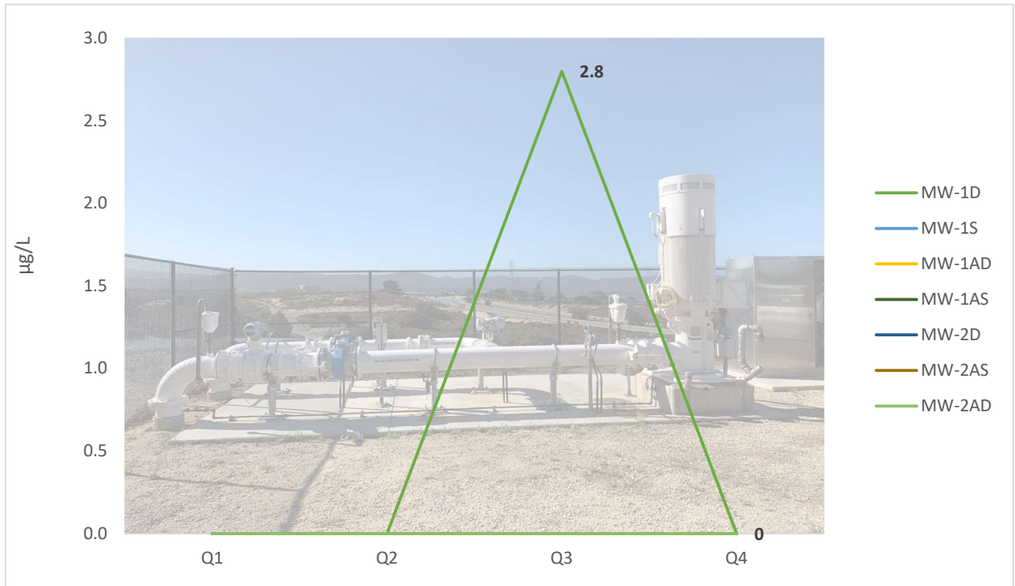


Figure 111-b. GW – Disinfection Byproducts – Quarterly Haloacetic Acid (HAA5) (µg/L)

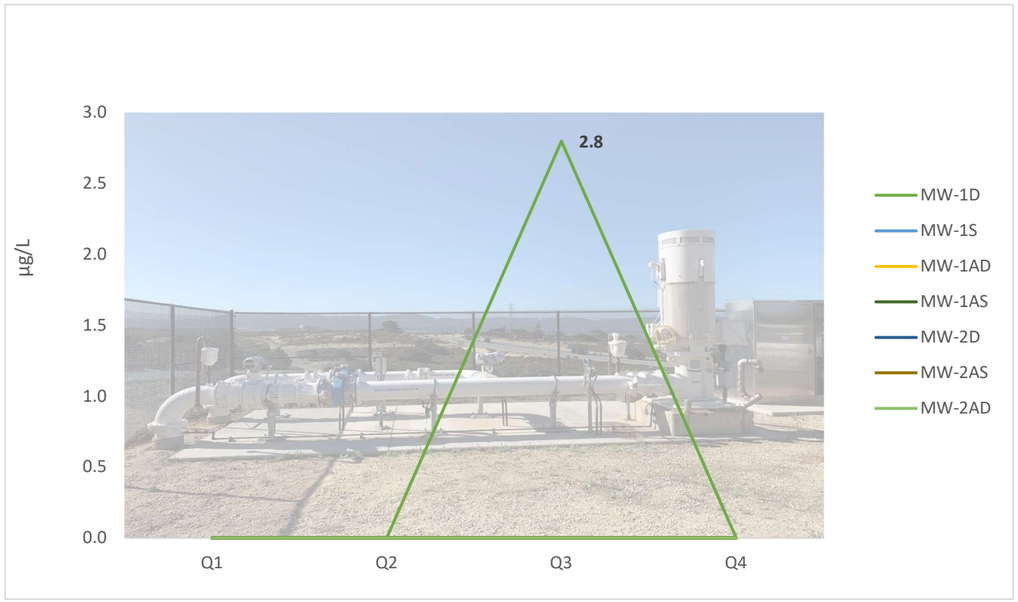


Figure 111-c. GW – Disinfection Byproducts – Quarterly Monochloroacetic Acid (µg/L)

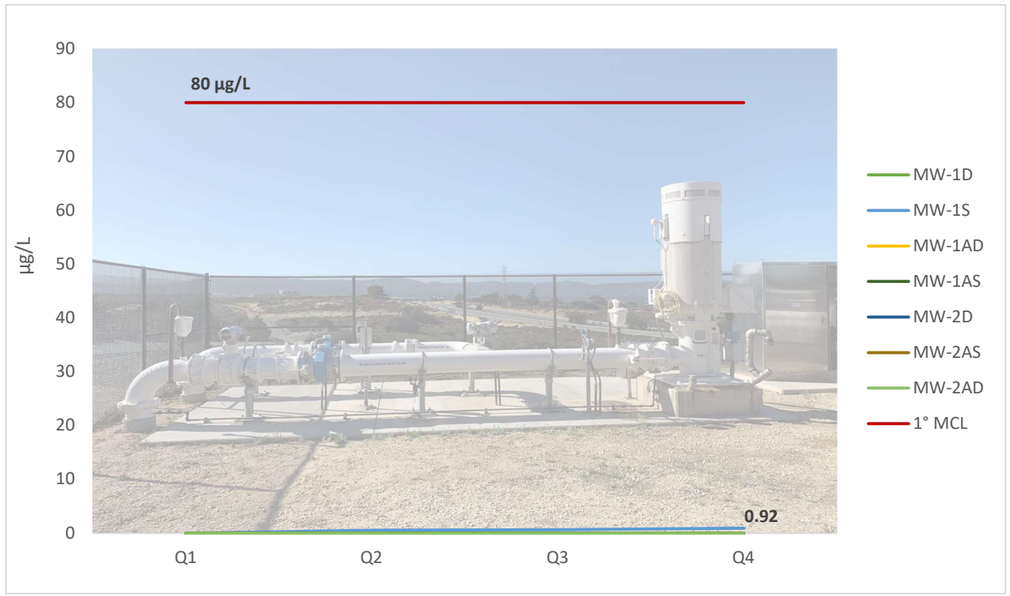


Figure 111-d. GW – Disinfection Byproducts – Quarterly Total Trihalomethanes (µg/L)

Table 112. GW – Organic Chemicals – Chemicals with NLs

Constituents/Parameters (Quarterly)	UOM	Q1							Q2							Q3							Q4						
		MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
Chemicals with NLs																													
1,2,4-Trimethylbenzene	µg/L	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20
1,3,5-Trimethylbenzene	µg/L	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17
1,4-Dioxane	µg/L	ND 0.03	ND 0.03	DNQ 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03
2-Chlorotoluene	µg/L	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15
2,4,6-Trinitrotoluene (TNT)	µg/L	ND 6.7	ND 0.34	ND 0.34	ND 0.34	ND 6.7	ND 1.7	ND 6.7	ND 1.7	ND 1.7	ND 0.34	ND 0.34	ND 6.7	ND 0.34	ND 6.7	ND 6.7	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 1.7	ND 6.7	ND 6.7	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 0.34	ND 1.7	ND 6.7
4-Chlorotoluene	µg/L	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15
Boron	mg/L	300	ND 50	250	ND 50	270	DNQ 70	290	260	ND 50	240	ND 50	260	DNQ 50	270	290	ND 50	270	ND 50	270	DNQ 50	230	300	ND 50	300	ND 50	300	DNQ 80	300
Carbon disulfide	µg/L	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25
Chlorate	µg/L	85	61	110	ND 1.7	90	ND 1.7	110	100	100	150	ND 1.7	110	DNQ 8.2	120	240	92	99	ND 1.7	160	ND 1.7	76	330	85	110	ND 1.7	230	ND 1.7	60
Diazinon	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02
Dichlorodifluoromethane (Freon 12)	µg/L	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45
Ethylene glycol	mg/L	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700	ND 4700
Formaldehyde	µg/L	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86	ND 0.86
HMX	µg/L	ND 6.0	ND 0.30	ND 0.30	ND 0.30	ND 6.0	ND 1.5	ND 6.0	ND 1.5	ND 1.5	ND 0.30	ND 0.30	ND 6.0	ND 0.30	ND 6.0	ND 6.0	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 1.5	ND 6.0	ND 6.0	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 1.5	ND 6.0
Isopropylbenzene	µg/L	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18
Manganese	µg/L	DNQ 1	DNQ 0.2	3	78	DNQ 0.8	2	5	DNQ 1	DNQ 0.1	DNQ 1	65	4	DNQ 0.2	7	ND 5	ND 5	ND 5	40	ND 5	ND 5	DNQ 8	ND 5	ND 5	ND 5	76	ND 5	ND 5	DNQ 6
Methyl isobutyl ketone (MIBK)	µg/L	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8
Naphthalene	µg/L	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35	ND 0.35
n-Butylbenzene	µg/L	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29	ND 0.29
N-Nitrosodiethylamine (NDEA)	µg/L	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04	ND 6.6E-04
n-Nitrosodimethylamine (NDMA)	µg/L	DNQ 7.4E-04	ND 6.3E-04	ND 6.3E-04	ND 6.3E-04	ND 6.3E-04	ND 6.3E-04	ND 6.3E-04	DNQ 6.9E-04	ND 6.3E-04	DNQ 9.1E-04	DNQ 6.6E-04	ND 6.3E-04	ND 6.3E-04	DNQ 6.4E-04	DNQ 6.9E-04	DNQ 7.9E-04	DNQ 1.7E-03	ND 6.3E-04	DNQ 1.3E-03	DNQ 6.3E-04	DNQ 1.2E-03	DNQ 7.8E-04	ND 6.3E-04	ND 6.3E-04	ND 6.3E-04	DNQ 1.5E-03	ND 6.3E-04	ND 6.3E-04
N-Nitrosodi-n-propylamine (NDPA)	µg/L	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04
Perfluorooctanoic acid (PFOA)	µg/L	ND 5.8E-04	ND 5.8E-04	ND 5.7E-04	ND 5.8E-04	ND 5.8E-04	ND 5.6E-04	ND 5.7E-04	ND 6.7E-04	ND 6.0E-04	ND 6.7E-04	ND 5.8E-04	ND 6.0E-04	ND 6.0E-04	ND 6.7E-04	ND 6.7E-04	ND 6.0E-04	ND 6.0E-04	ND 5.9E-04	ND 5.9E-04	ND 6.1E-04	ND 6.7E-04	ND 5.6E-04	ND 5.8E-04	ND 5.6E-04	ND 5.7E-04	ND 5.9E-04	ND 5.9E-04	ND 6.7E-04
Perfluorooctane sulfonate (PFOS)	µg/L	ND 4.6E-04	ND 4.6E-04	ND 4.5E-04	ND 4.7E-04	ND 4.6E-04	ND 4.4E-04	ND 4.5E-04	ND 5.3E-04	ND 4.8E-04	ND 5.3E-04	ND 4.6E-04	ND 4.8E-04	ND 4.8E-04	ND 5.3E-04	ND 5.3E-04	ND 4.8E-04	ND 4.8E-04	ND 4.7E-04	ND 4.7E-04	ND 4.8E-04	ND 5.3E-04	ND 4.5E-04	ND 4.6E-04	ND 4.5E-04	ND 4.5E-04	ND 4.7E-04	ND 4.7E-04	ND 5.3E-04
n-Propylbenzene	µg/L	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18
Propachlor	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02
RDX	µg/L	ND 8.3	ND 0.41	ND 0.41	ND 0.41	ND 8.3	ND 2.1	ND 8.3	ND 2.1	ND 2.1	ND 0.41	ND 4.0	ND 8.3	ND 0.41	ND 8.3	ND 8.3	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 2.1	ND 8.3	ND 8.3	ND 0.41	ND 0.41	ND 0.41	DNQ 0.47	ND 2.1	ND 8.3
sec-Butylbenzene	µg/L	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24	ND 0.24
tert-Butylbenzene	µg/L	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18
Tertiary butyl alcohol (TBA)	µg/L	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45
Vanadium	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.5	ND 0.5	DNQ 1.4	7.0	DNQ 2.3	ND 0.5	DNQ 1.8	8.2	DNQ 1.8	ND 0.5	DNQ 1.6	ND 0.5	ND 0.5	ND 0.5	2.7	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
4,4'DDD	µg/L	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8	ND 1.8

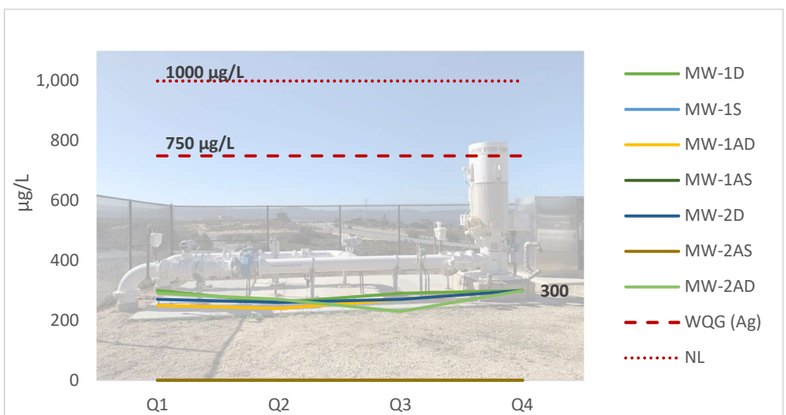


Figure 112-a. GW – Chemicals with NLs – Quarterly Boron (µg/L)

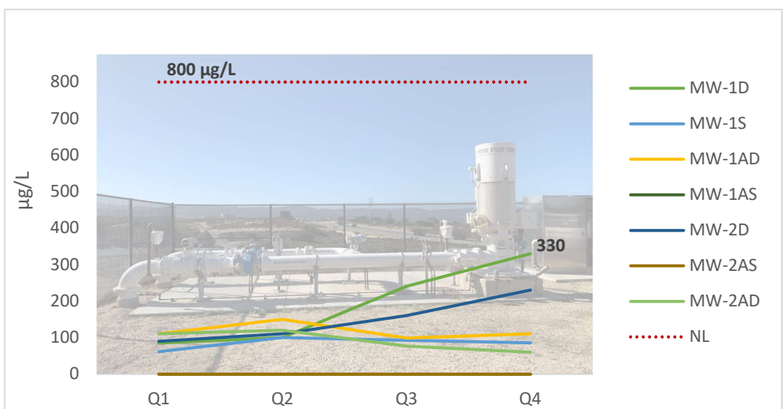


Figure 112-b. GW – Chemicals with NLs – Quarterly Chlorate (µg/L)

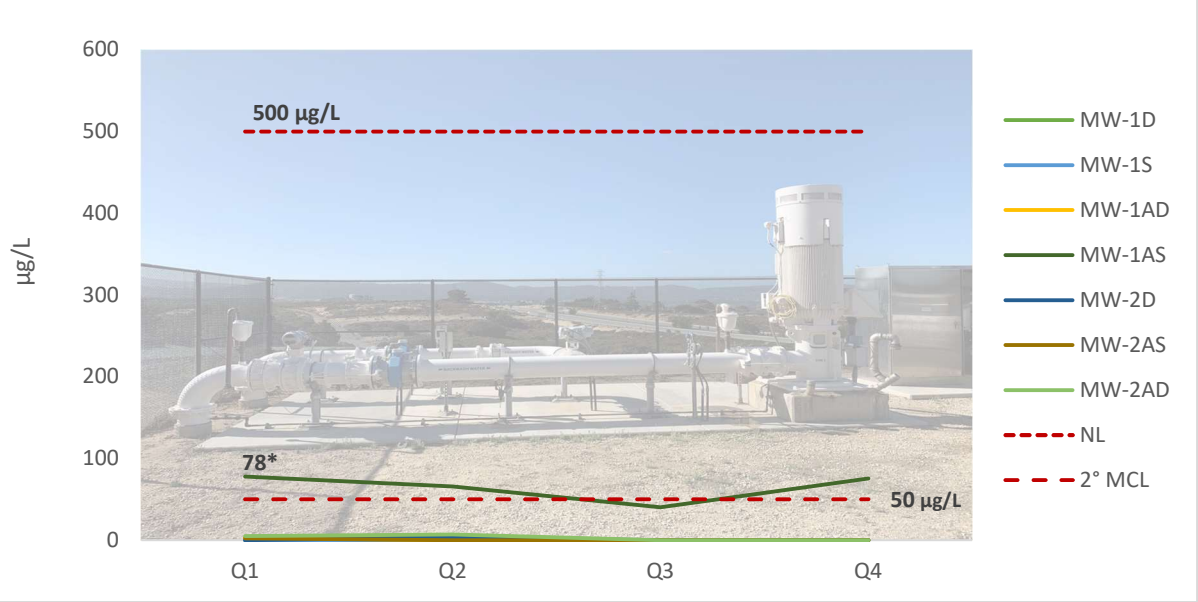


Figure 112-c. GW – Chemicals with NLs – Quarterly Manganese (µg/L)[11]

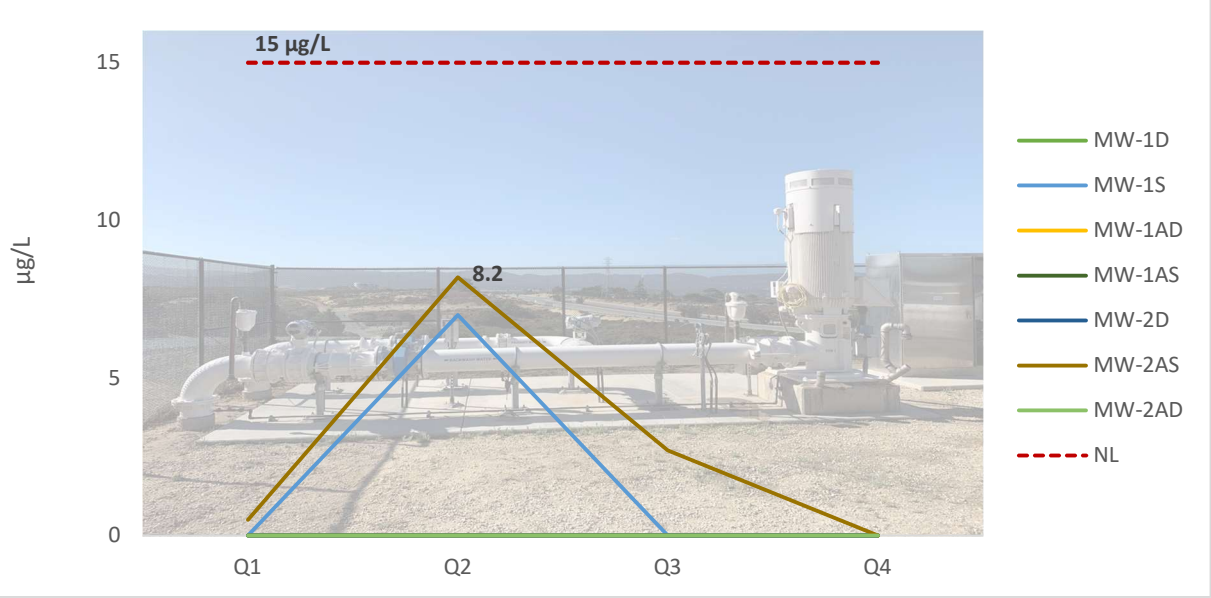


Figure 112-d. GW – Chemicals with NLs – Quarterly Vanadium (µg/L)

[11] Compliance with the Manganese 2° MCL is based on a running annual average. Per Revised MRP 2020-0122 issued September 13, 2022, monitoring frequency for this parameter was reduced from monthly to quarterly. The running annual average of all data collected for manganese at MW-1AS was 59.7 µg/L which is above the 2° MCL. However, the exceedance is not suspected to be the result of Project operations due to historical water quality exceedances in the Seaside Basin, among other factors. The highest detections of manganese and iron observed at AWPF since Project startup were 2 µg/L and 40 µg/L, respectively. See **Section 6.2.5** for a discussion of this, and other water quality trends at MW-1AS.

Table 113. GW – Remaining Priority Pollutants – Pesticides (µg/L)

Constituents/Parameters (Quarterly)	UOM	Q1							Q2							Q3							Q4						
		MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
Remaining Priority Pollutants, Pesticides																													
4,4'DDE	µg/L	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003
4,4'DDT	µg/L	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004
Aldrin	µg/L	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003
Alpha-BHC	µg/L	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004
Endosulfan I (-alpha)	µg/L	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002
Beta-BHC	µg/L	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003
Endosulfan II (-beta)	µg/L	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004
Chloropyrifos	µg/L	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002
Chlorothalonil	µg/L	ND 0.007	ND 0.007	ND 0.007	ND 0.007	ND 0.007	ND 0.007	ND 0.007	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001	ND 0.001
Chromium (III)	µg/L	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.002	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004	ND 0.004
Hexavalent Chromium	µg/L	ND 0.3	DNQ 0.3	ND 0.3	DNQ 0.3	ND 0.3	DNQ 0.4	ND 0.3	1.0	DNQ 0.9	DNQ 0.5	ND 0.3	DNQ 0.4	1.3	DNQ 0.4	ND 0.3	ND 0.3	ND 0.3	DNQ 0.4	ND 0.3	6.9	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 0.3	ND 0.3	4.0	ND 0.3
Delta-BHC	µg/L	0.1	4.1	0.0	0.1	0.1	4.4	DNQ 0.02	0.1	3.2	0.0	0.2	0.1	4.1	0.1	0.1	2.7	0.1	0.1	0.1	4.0	0.1	0.1	1.8	0.1	0.2	0.1	3.6	0.1
Dieldrin	µg/L	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003
Endosulfan Sulfate	µg/L	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003
Endrin aldehyde	µg/L	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003	ND 0.003

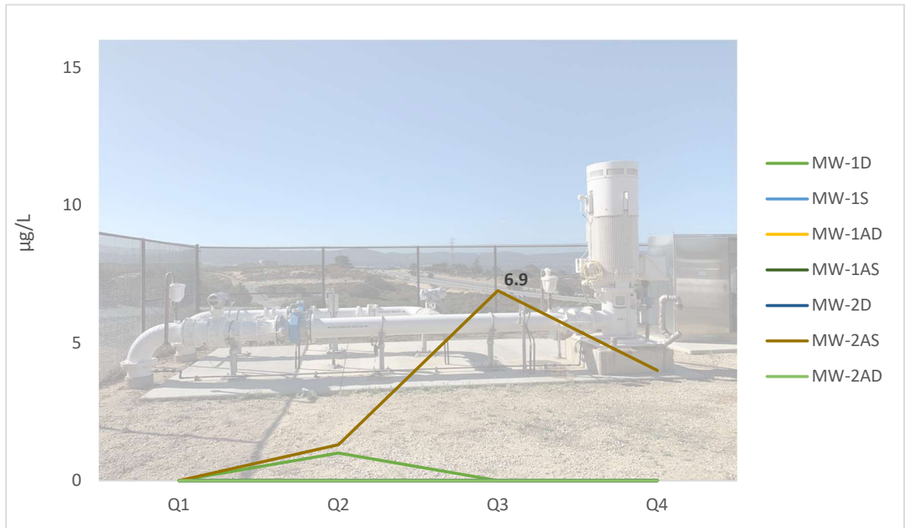


Figure 113-a. GW – Pesticides – Quarterly Chromium (III) (µg/L)

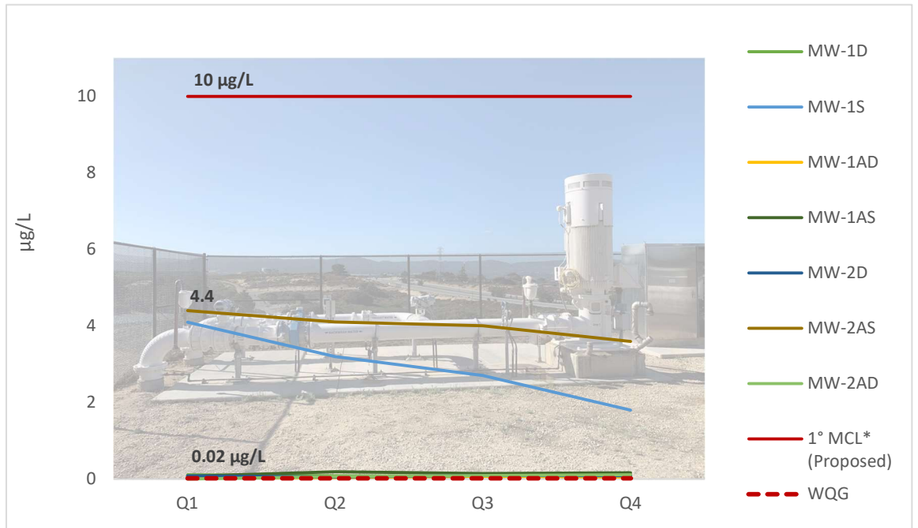


Figure 113-b. GW – Pesticides – Quarterly Hexavalent Chromium (µg/L)

Table 114. GW – Remaining Priority Pollutants – Quarterly Acid Extractables (µg/L)

Constituents/Parameters (Quarterly)	UOM	Q1							Q2							Q3							Q4						
		MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
Remaining Priority Pollutants, Acid Extractables																													
2,4,6-Trichlorophenol	µg/L	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22
2,4-Dichlorophenol	µg/L	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26
2,4-Dimethylphenol	µg/L	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76	ND 0.76
2,4-Dinitrophenol	µg/L	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9	ND 1.9
2-Chlorophenol	µg/L	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28	ND 0.28
2-Nitrophenol	µg/L	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26	ND 0.26
4,6-Dinitro-O-Cresol	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
4-Nitrophenol	µg/L	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2
P-Chloro-M-Cresol/4-Chloro-3-methylphenol	µg/L	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23
Phenol	µg/L	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81	ND 0.81

Figure 113. GW – Remaining Priority Pollutants – Quarterly Acids/Extractables (µg/L)

All monitoring results were ND/DNQ.

Table 115. GW – Remaining Priority Pollutants – Quarterly Base/Neutral Extractables (µg/L)

Constituents/Parameters (Quarterly)	UOM	Q1							Q2							Q3							Q4						
		MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
Remaining Priority Pollutants, (c) Base/Neutral Extractables																													
Benzo(ghi)Perylene	µg/L	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	DNQ 0.24	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23
Dibenzo(A,H)Anthracene	µg/L	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	DNQ 0.26	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22	ND 0.22
1,2-Diphenylhydrazine (azobenzene)	µg/L	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30	ND 0.30
1,3-Dichlorobenzene	µg/L	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42	ND 0.42
2,4-Dinitrotoluene	µg/L	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07
2,6-Dinitrotoluene	µg/L	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25
2-Chloronaphthalene	µg/L	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45	ND 0.45
3,3-Dichlorobenzidine	µg/L	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5
4-Bromophenyl Phenyl Ether	µg/L	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36
4-Chlorophenyl Phenyl Ether	µg/L	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41
Acenaphthene	µg/L	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38
Acenaphthylene	µg/L	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06
Anthracene	µg/L	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12	ND 0.12
Benzidine	µg/L	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2	ND 3.2
Benzo(A)Anthracene	µg/L	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	DNQ 0.05	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	DNQ 0.04	DNQ 0.04	DNQ 0.04	DNQ 0.04	DNQ 0.04	DNQ 0.04	DNQ 0.04
Benzo(B)Fluoranthene	µg/L	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	DNQ 0.13	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06
Benzo(K)Fluoranthene	µg/L	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	DNQ 0.14	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07	ND 0.07
Bis (2-chloroethoxy) methane	µg/L	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25	ND 0.25
Bis(2-chloroethyl)ether	µg/L	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27
Bis (2-chloroisopropyl) ether	µg/L	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38	ND 0.38
Butyl Benzyl Phthalate	µg/L	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16
Chrysene	µg/L	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06	ND 0.06
Di(2-ethylhexyl)phthalate	µg/L	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41	ND 0.41
Dimethyl phthalate	µg/L	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03
Di-n-butyl phthalate	µg/L	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	ND 0.08	DNQ 0.08	DNQ 0.08	ND 0.08	ND 0.08	DNQ 0.08
Di-N-Octyl Phthalate	µg/L	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	DNQ 0.26	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23

Constituents/Parameters (Quarterly)	UOM	Q1							Q2							Q3							Q4						
		MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
Fluoranthene	µg/L	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03	ND 0.03
Fluorene	µg/L	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09	ND 0.09
Hexachlorobutadiene	µg/L	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47	ND 0.47
Hexachloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
Indeno(1,2,3-CD)Pyrene	µg/L	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	DNQ 0.23	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18	ND 0.18
Isophorone	µg/L	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21	ND 0.21
Nitrobenzene	µg/L	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36	ND 0.36
N-Nitrosodi-n-propylamine (NDPA)	µg/L	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04	ND 8.0E-04
N-Nitrosodiphenylamine	µg/L	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19
Phenanthrene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05
Pyrene	µg/L	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04	ND 0.04
1,1-Dichloroethylene	µg/L	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16	ND 0.16
2-Chloroethyl Vinyl Ether	µg/L	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19	ND 0.19
Acrolein	µg/L	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2	ND 1.2
Acrylonitrile	µg/L	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5	ND 1.5
Monochlorobenzene	µg/L	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15
Chloroethane	µg/L	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17	ND 0.17
Methyl Bromide/BromoMethane	µg/L	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27	ND 0.27
Methyl Chloride	µg/L	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23	ND 0.23
Silver																													
Silver	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	DNQ 0.7	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5

Figure 115. GW – Remaining Priority Pollutants – Quarterly Base/Neutral Extractables (µg/L)

All monitoring results were ND/DNQ.

Table 116. GW – Annual N-Nitrosopyrrolidine (µg/L)

Monitoring well	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
Date							
Result	ND 0.75	ND 0.75	ND 0.75	ND 0.75	ND 0.75	ND 0.75	ND 0.75

Figure 116. GW – Annual N-Nitrosopyrrolidine (µg/L)

All monitoring results were ND.

Table 117. GW – General Physical & General Minerals – Monthly Asbestos (MFL)

1° MCL 7 MFL **Compliance Interval:** Running Annual Average

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	ND 0.01	ND 0.01	ND 0.01	0.19	ND 0.01	ND 1.10	ND 0.01
February	ND 0.01	ND 0.01	ND 0.01	ND 0.42	ND 0.01	ND 0.19	ND 0.01
March	ND 0.01	ND 0.01	ND 0.01	ND 0.19	ND 0.01	ND 0.01	ND 0.01
April	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01
May	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01
June	ND 0.21	ND 0.19	ND 0.19	ND 0.20	ND 0.19	ND 0.21	ND 0.19
July	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20
August	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20
September	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20
October	-	-	-	-	-	-	-
November	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20	ND 0.20
December	-	-	-	-	-	-	-

**Per Revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

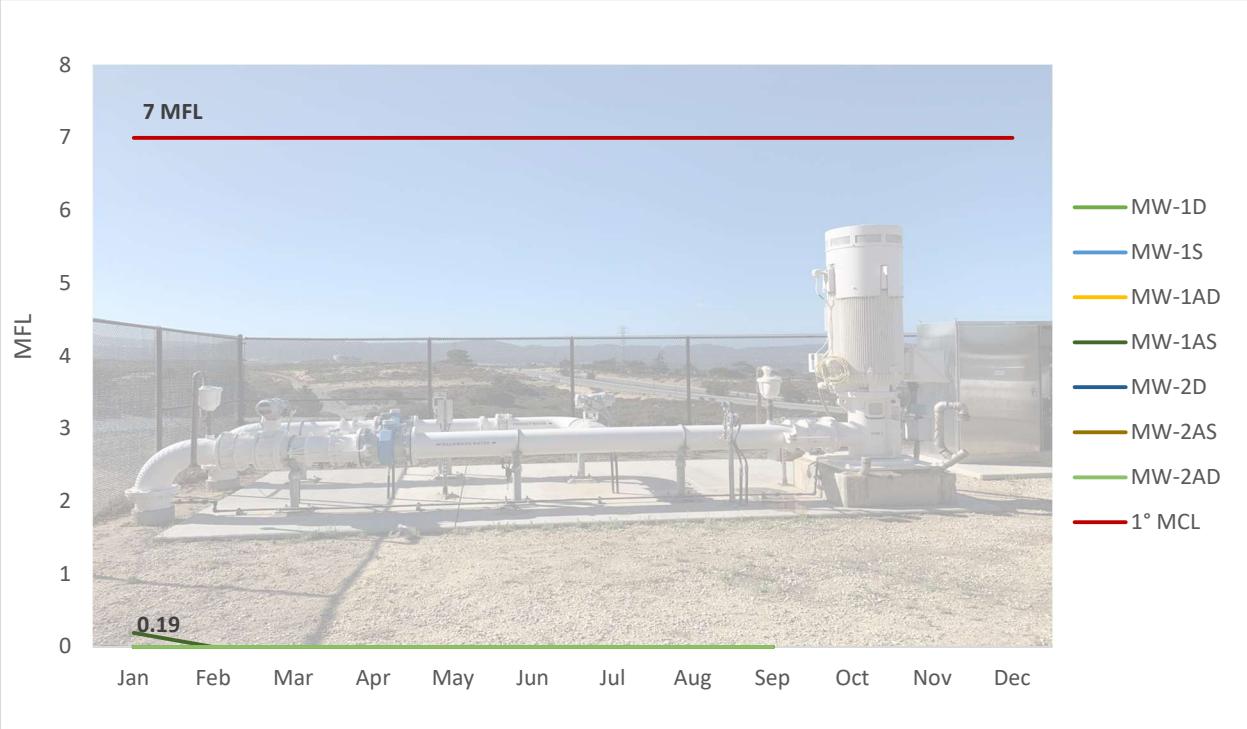


Figure 117. GW – General Physical & General Minerals – Monthly Asbestos (MFL)

Table 118. GW – General Physical & General Minerals – Monthly Calcium (mg/L)

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	17	15	18	12	14	48	19
February	15	14	21	12	14	50	22
March	16	14	18	13	14	53	20
April	16	13	18	13	15	54	20
May	16	13	18	12	15	52	20
June	15	13	21	13	15	46	27
July	13	13	18	12	13	46	19
August	14	11	18	12	13	47	19
September	16	11	18	12	17	53	20
October	-	-	-	-	-	-	-
November	17	11	20	13	17	66	21
December	-	-	-	-	-	-	-

**Per Revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

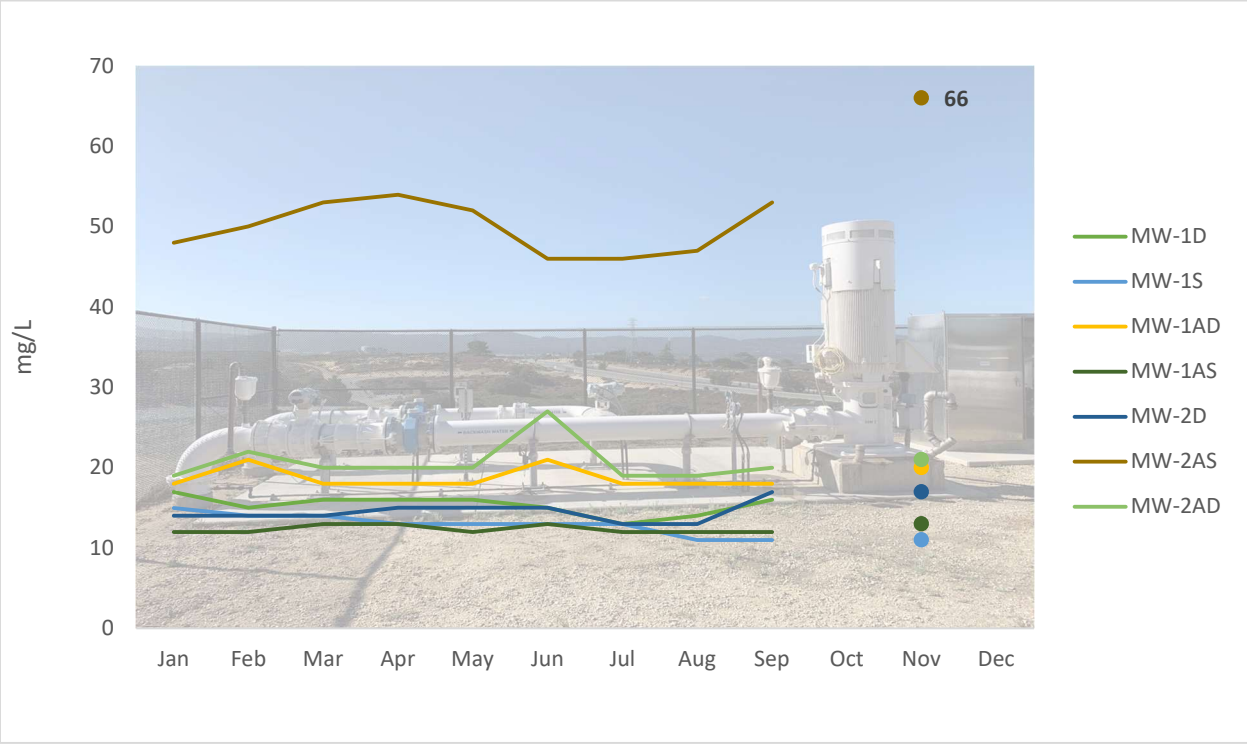


Figure 118. GW – General Physical & General Minerals – Monthly Calcium (mg/L)

Table 119. GW – General Physical & General Minerals – Monthly Chloride (mg/L)

2° MCL: 250 mg/L
2° MCL (Upper): 500 mg/L
Compliance Interval: -

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	44	54	40	56	43	93	45
February	43	53	45	56	43	95	48
March	42	50	44	56	42	98	48
April	46	42	45	56	43	100	49
May	41	45	42	55	42	95	46
June	40	45	45	54	42	90	56
July	38	44	44	54	39	96	47
August	46	44	43	55	43	105	50
September	49	44	44	55	48	108	49
October	-	-	-	-	-	-	-
November	48	44	44	56	48	112	46
December	-	-	-	-	-	-	-

**Per Revised MRP 2020-0122 issued September 12, 2022, monitoring frequency was reduced from monthly to quarterly.*

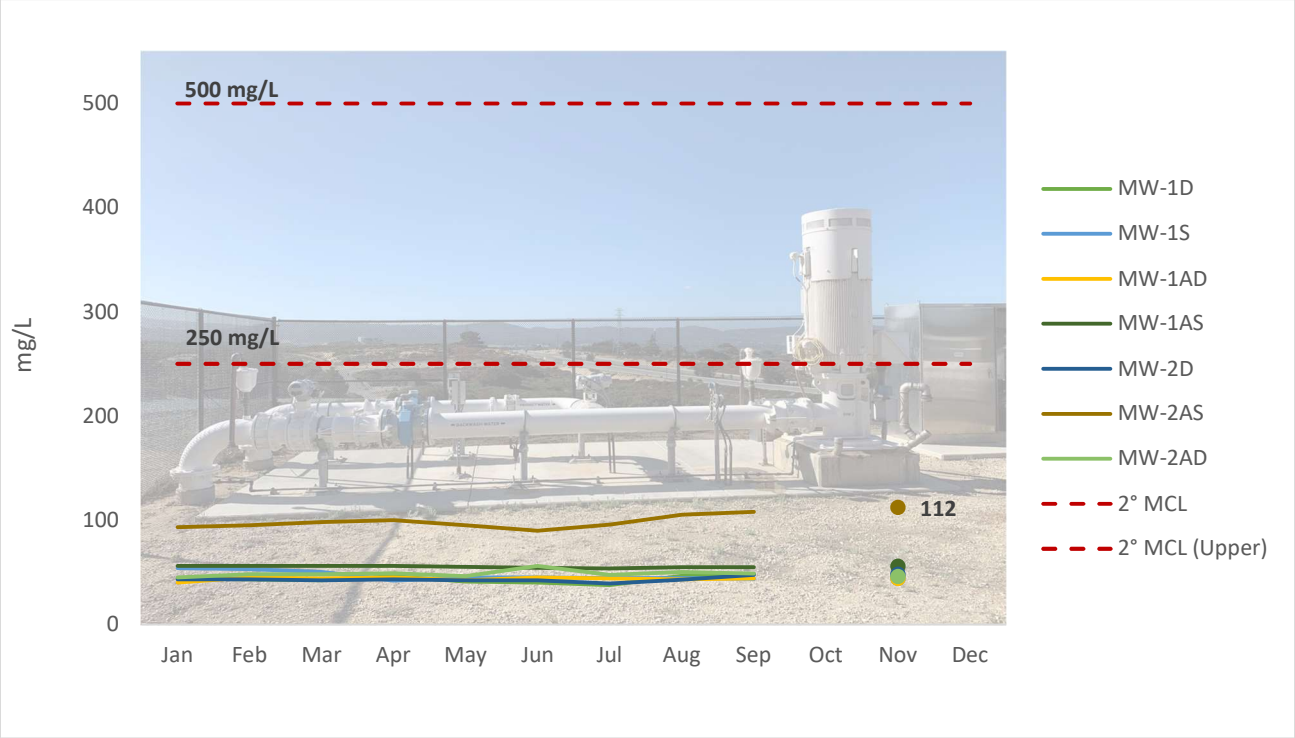


Figure 119. GW – General Physical & General Minerals – Monthly Chloride (mg/L)

Table 120. GW – General Physical & General Minerals – Monthly Copper (µg/L)

2 ° MCL: 1,000 µg/L
AL: 1,300 µg/L

Action Level Running Annual Average

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	ND 0.36	ND 0.36	DNQ 1.4	ND 0.36	2.8	DNQ 0.80	DNQ 0.41
February	ND 0.36	ND 0.36	DNQ 1.8	DNQ 0.83	2.9	DNQ 1.3	DNQ 0.85
March	ND 0.36	ND 0.36	DNQ 1.2	ND 0.36	2.6	DNQ 0.77	DNQ 0.92
April	ND 0.36	ND 0.36	DNQ 1.7	DNQ 0.45	3.1	DNQ 1.4	DNQ 0.53
May	ND 0.36	ND 0.36	2.0	4.3	2.5	DNQ 0.68	DNQ 0.83
June	ND 0.27	ND 0.27	DNQ 1.6	DNQ 0.68	3.0	DNQ 0.82	DNQ 1.8
July	ND 7	ND 7	ND 7	ND 7	ND 7	ND 7	ND 7
August	ND 7	ND 7	ND 7	ND 7	ND 7	ND 7	ND 7
September	ND 7	ND 7	ND 7	ND 7	ND 7	ND 7	ND 7
October	-	-	-	-	-	-	-
November	ND 7	ND 7	ND 7	ND 7	ND 7	ND 7	ND 7
December	-	-	-	-	-	-	-

Per Revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.

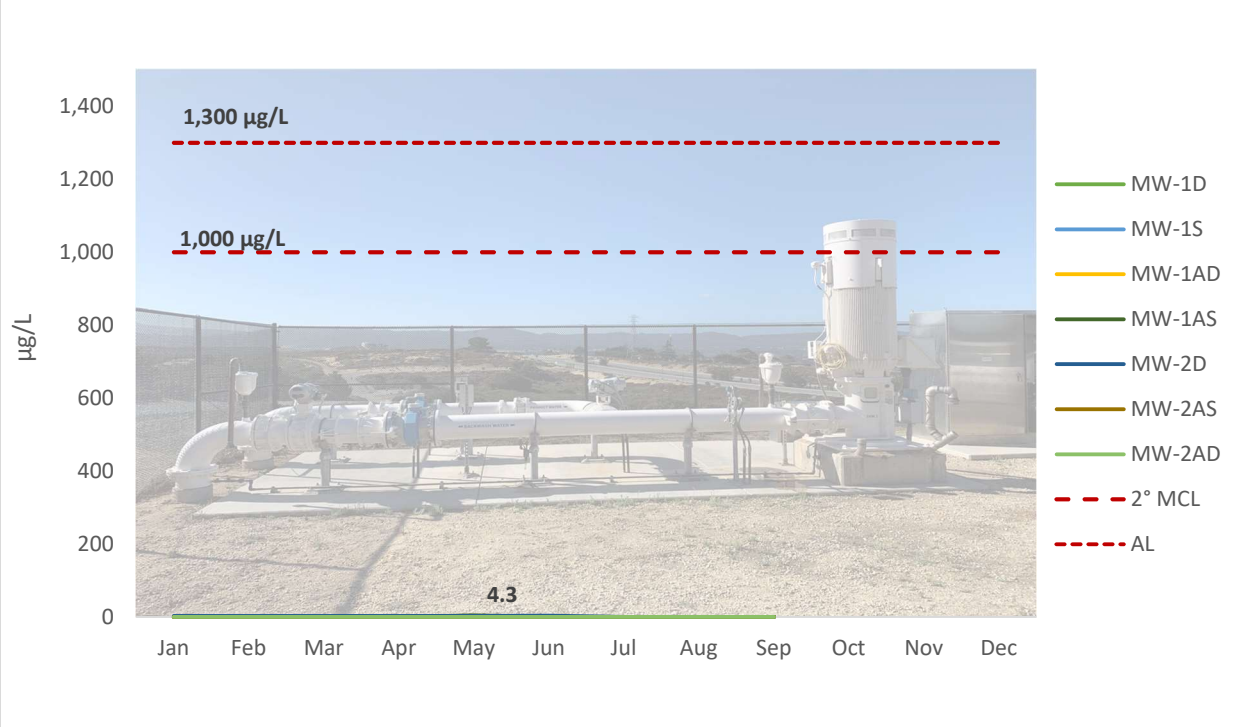


Figure 120. GW – General Physical & General Minerals – Monthly Copper (µg/L)

Table 121. GW – General Physical & General Minerals – Monthly Iron (µg/L)

2° MCL:	300 µg/L			Compliance Interval		Running Annual Average	
Month	**MW-1D**	**MW-1S**	**MW-1AD**	**MW-1AS**	**MW-2D**	**MW-2AS**	**MW-2AD**
January	DNQ 3.9	ND 2.6	DNQ 2.6	290	ND 2.6	180	DNQ 2.9
February	ND 2.6	ND 2.6	10	440	ND 2.6	44	ND 2.6
March	ND 2.6	ND 2.6	ND 2.6	380	ND 2.6	15	ND 2.6
April	ND 2.6	ND 2.6	23	190	ND 2.6	19	ND 2.6
May	ND 2.6	ND 2.6	ND 2.6	260	ND 2.6	DNQ 2.90	ND 2.6
June	ND 2.2	ND 2.2	DNQ 3.4	230	24	12	ND 2.2
July	ND 10	DNQ 10	ND 10	84	DNQ 16.00	ND 10	ND 10
August	ND 10	ND 10	ND 10	172	ND 10	ND 10	ND 10
September	ND 10	ND 10	ND 10	256	ND 10	ND 10	ND 10
October	-	-	-	-	-	-	-
November	ND 10	ND 10	ND 10	327	ND 10	ND 10	ND 10
December	-	-	-	-	-	-	-

Per revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.

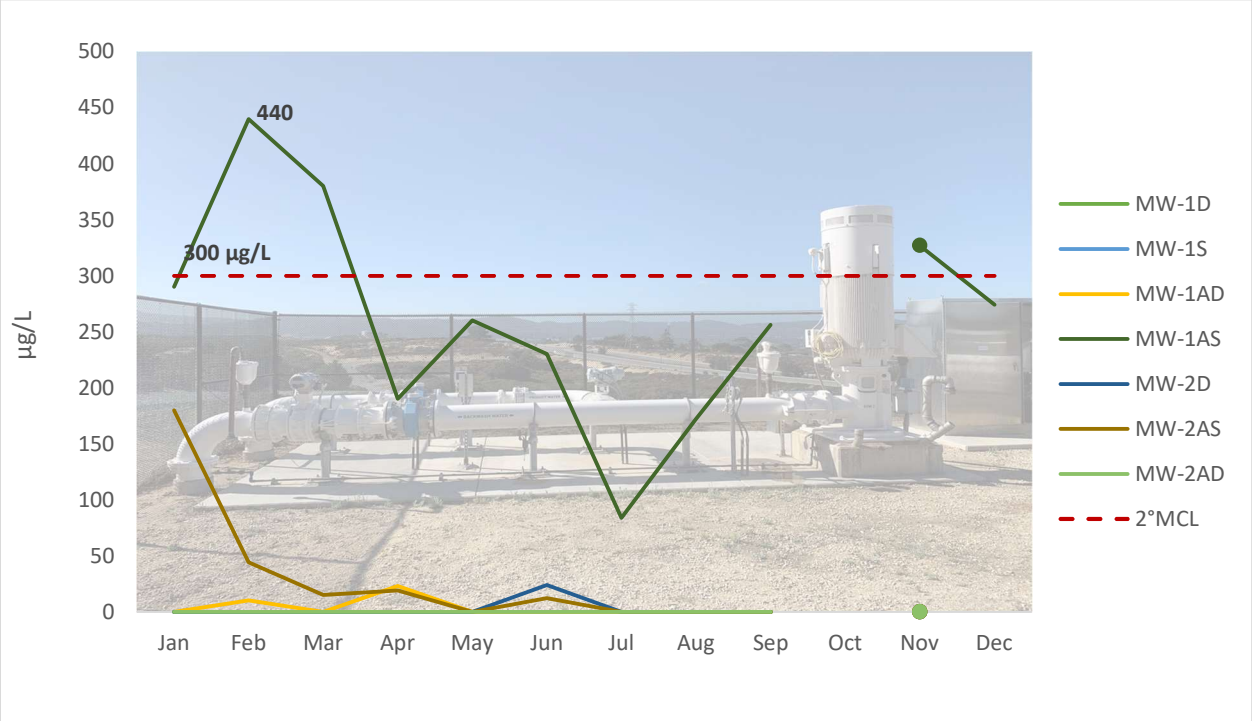


Figure 121. GW – General Physical & General Minerals – Monthly Iron (µg/L)[12]

[12] Compliance with the 2° MCL for iron is based on a running annual average. The running annual average of all data collected for iron at MW-1AS was 267 mg/L, below the 300 mg/L 2° MCL. M1W believes these as well as the manganese exceedances observed at this well are related to the well itself, not groundwater quality. The highest iron levels ever detected at AWPF was 40 µg/L since Project startup. See **Section 6.2.5** for a discussion of this, and other water quality trends at MW-1AS.

Table 122. GW – General Physical & General Minerals – Monthly Manganese (µg/L)

2° MCL: 50 µg/L **Compliance Interval:** Running Annual Average

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	DNQ 1.6	DNQ 0.14	3	46	DNQ 0.84	2.4	4.2
February	DNQ,B 1.3	DNQ,B 0.17	DNQ 1.6	58	DNQ,B 0.89	DNQ 1.0	5.4
March	DNQ 1.4	DNQ 0.17	DNQ 0.90	130	DNQ 0.84	DNQ 0.30	4.9
April	DNQ 1.4	DNQ 0.11	DNQ 1.6	38	DNQ 1.0	DNQ 0.36	6.1
May	DNQ 1.2	DNQ 0.12	DNQ 0.85	63	DNQ 1.0	DNQ 0.11	5.1
June	DNQ 0.9	ND 0.41	DNQ 1.2	54.5	3.8	ND 0.41	10
July	ND 5	ND 5	ND 5	16	ND 5	ND 5	DNQ 8
August	ND 5	ND 5	ND 5	39	ND 5	ND 5	DNQ 8
September	ND 5	ND 5	ND 5	66	ND 5	ND 5	DNQ 8
October	-	-	-	-	-	-	-
November	ND 5	ND 5	ND 5	91	ND 5	ND 5	DNQ 6
December	-	-	-	60	-	-	-

Per Revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.

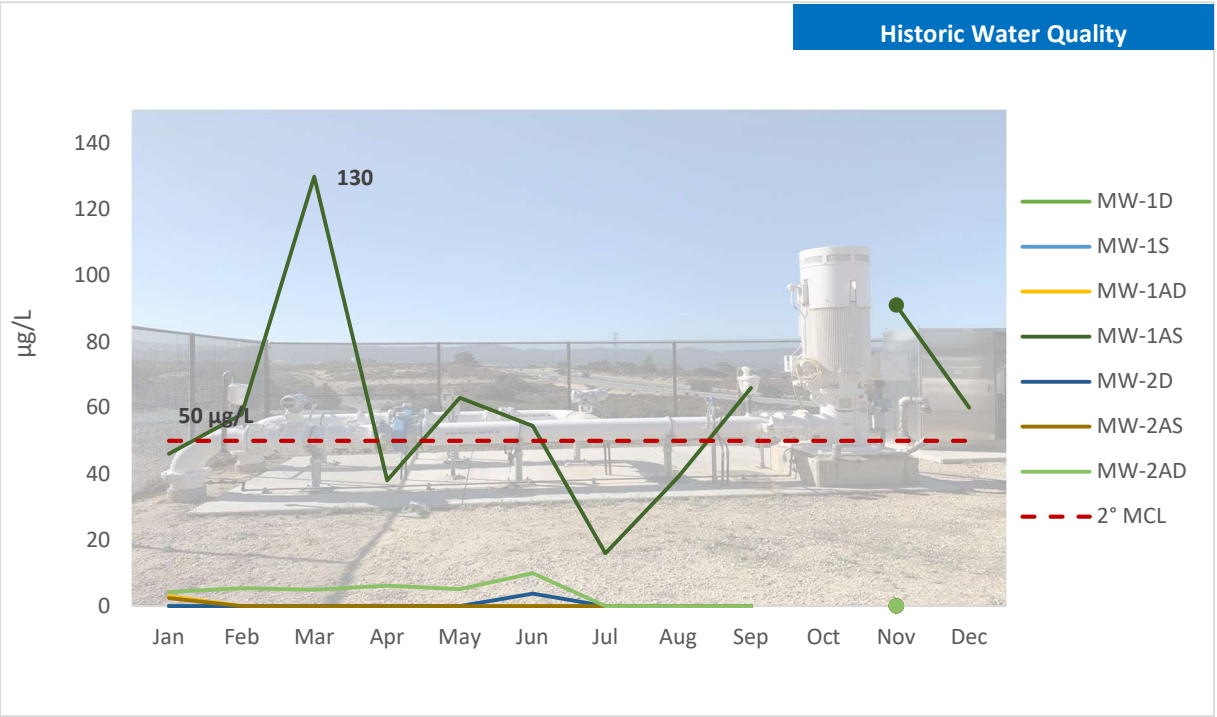


Figure 122. GW – General Physical & General Minerals – Monthly Manganese (µg/L)[13]

[13] Compliance with the Manganese 2° MCL is based on a running annual average. Per Revised MRP 2020-0122 issued September 13, 2022, monitoring frequency for this parameter was reduced from monthly to quarterly. The running annual average of all data collected for manganese at MW-1AS was 59.7 µg/L which is above the 2° MCL. However, the exceedance is not suspected to be the result of Project operations due to historical water quality exceedances in the Seaside Basin, among other factors. The highest detections of manganese and iron observed at AWPF since Project startup were 2µg/L and 40 µg/L, respectively See **Section 6.2.5** for a discussion of this, and other water quality trends at MW-1AS.

Table 123. GW – General Physical & General Minerals – Monthly Potassium (mg/L)

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	1.6	1.6	1.8	2.3	1.4	3.2	2.1
February	1.5	1.5	1.9	2.2	1.5	3.1	2.2
March	1.7	1.6	1.9	2.3	1.5	3.3	2.1
April	1.9	1.5	1.8	2.3	1.7	3.3	2.2
May	1.8	1.5	1.7	2.1	1.7	3.2	2.1
June	1.5	1.3	1.9	2.3	1.6	2.9	2.4
July	2.1	2.1	2.1	2.6	2.2	3.2	2.4
August	2.0	1.6	2.2	2.5	1.8	3.1	2.1
September	2.4	1.6	2.2	2.6	2.5	3.7	2.6
October	-	-	-	-	-	-	-
November	2.3	1.8	2.1	2.5	2.3	3.6	2.4
December	-	-	-	-	-	-	-

Per Revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.



Figure 123. GW – General Physical & General Minerals – Monthly Potassium (mg/L)

Table 124. GW – General Physical & General Minerals – Monthly Sodium (mg/L)

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	18	36	23	38	19	60	26
February	20	36	25	38	20	60	26
March	20	36	23	39	20	63	25
April	20	34	22	38	20	62	26
May	20	35	23	37	20	62	25
June	19	34	25	39	21	58	31
July	19	35	23	39	20	60	25
August	18	31	24	37	18	65	30
September	23	33	23	39	24	66	27
October	-	-	-	-	-	-	-
November	19	33	22	38	22	66	25
December	-	-	-	-	-	-	-

Per Revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.

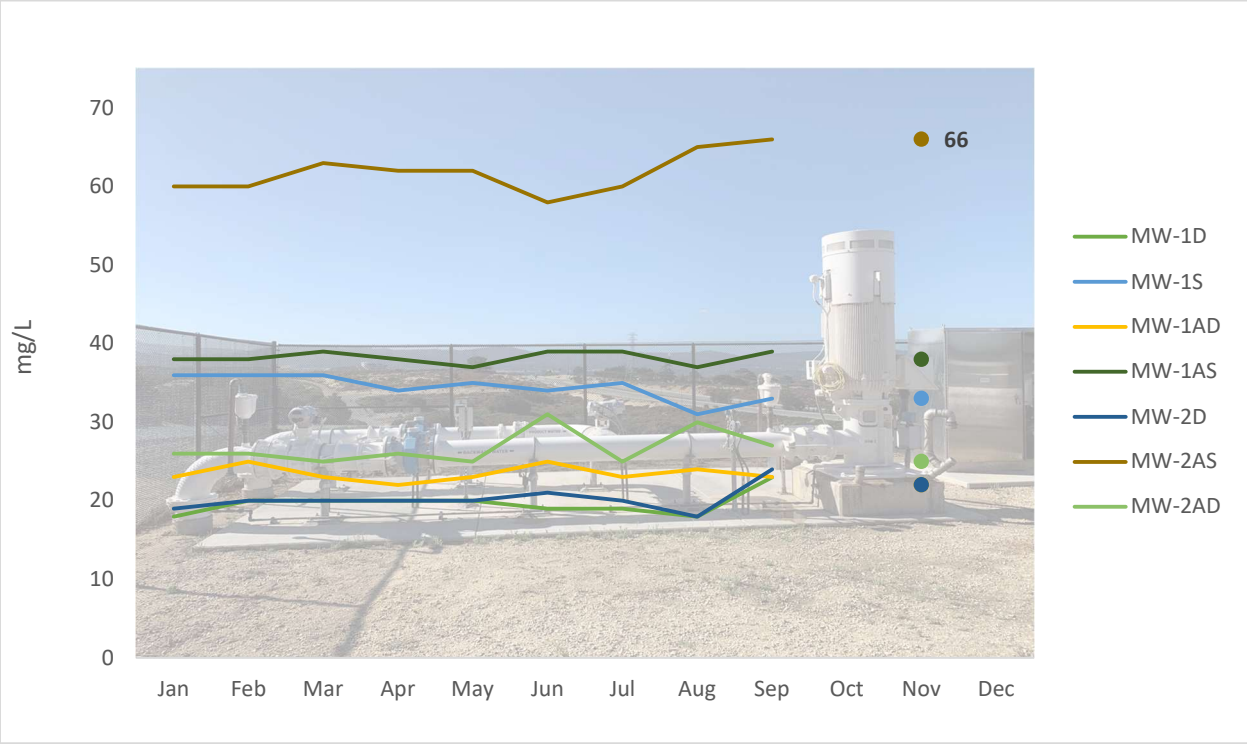


Figure 124. GW – General Physical & General Minerals – Monthly Sodium (mg/L)

Table 125. GW – General Physical & General Minerals – Monthly Sulfate (mg/L)

2° MCL: 250 mg/L
2° MCL (Upper): 500 mg/L
Compliance Interval: -

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	0.78	7.6	2.9	18	1	17	6.8
February	0.52	7.9	4.4	18	0.88	19	9.6
March	0.77	8.6	3.5	18	1	21	8.4
April	8.7	1.1	3.3	18	0.51	22	6.9
May	0.63	9	3.7	20	1	21	8.1
June	0.84	8	4.4	18	1.5	18	15
July	DNQ 0.5	8	4	19	DNQ 0.97	21	13
August	DNQ 0.5	6	3	18	DNQ 0.7	24	13
September	DNQ 0.3	6	4	19	DNQ 0.7	26	11
October	-	-	-	-	-	-	-
November	1	4	3	19	DNQ 0.5	28	8
December	-	-	-	-	-	-	-

Per Revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.

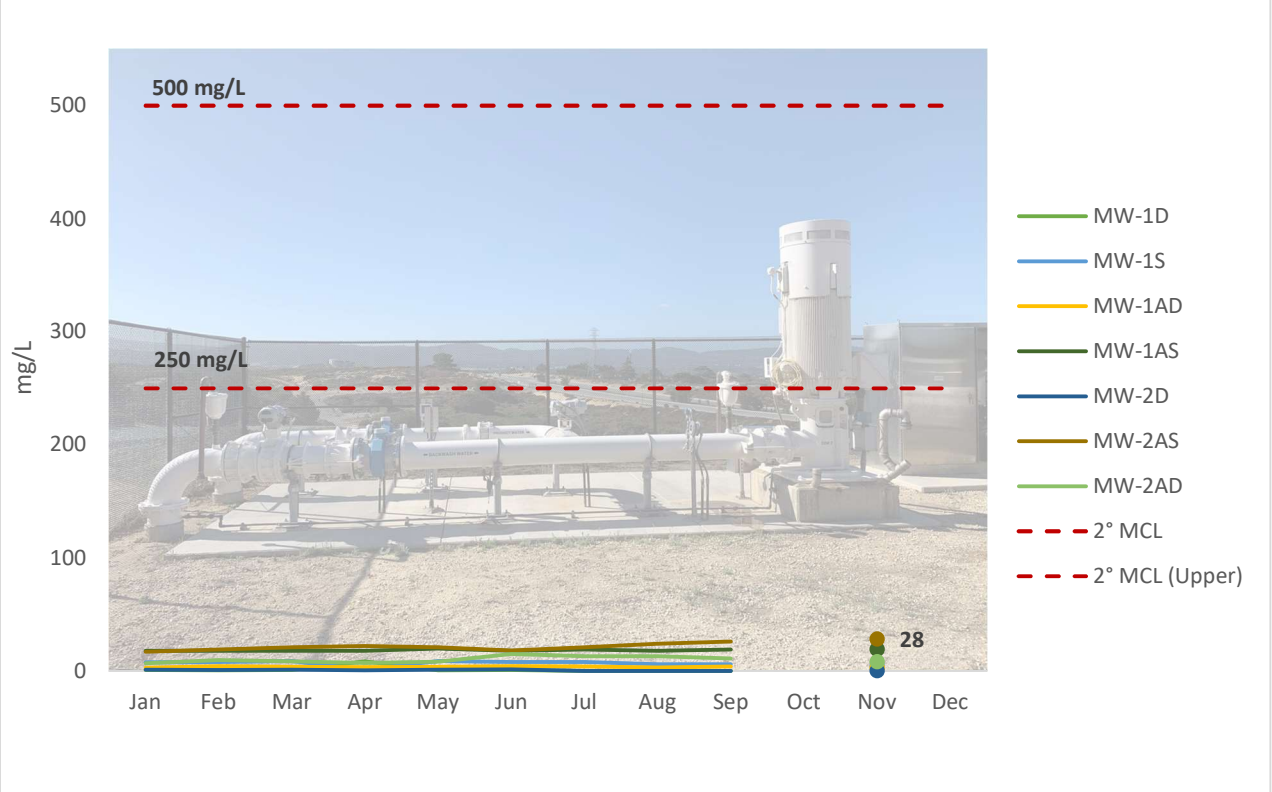


Figure 125. GW – General Physical & General Minerals – Monthly Sulfate (mg/L)

Table 126. GW – General Physical & General Minerals – Monthly Zinc (µg/L)

2° MCL: 5,000 µg/L **Compliance Interval:** Running Annual Average

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	ND 1.2	ND 1.2	ND 1.2	ND 1.2	DNQ 3.1	DNQ 2.8	ND 1.2
February	ND 1.2	ND 1.2	ND 1.2	ND 1.2	DNQ 1.5	DNQ 1.5	ND 1.2
March	ND 1.2	ND 1.2	ND 1.2	DNQ 2.9	DNQ 1.8	ND 1.2	ND 1.2
April	ND 1.2	ND 1.2	DNQ 1.2	ND 1.2	DNQ 1.9	DNQ 1.2	ND 1.2
May	ND 1.2	ND 1.2	ND 1.2	DNQ 8.9	DNQ 1.2	ND 1.2	ND 1.2
June	ND 4.3	ND 4.3	ND 4.3	ND 4.3	ND 4.3	ND 4.3	ND 4.3
July	ND 10	ND 10	ND 10	ND 10	ND 10	ND 10	ND 10
August	ND 10	ND 10	DNQ 28	ND 10	ND 10	ND 10	ND 10
September	ND 10	ND 10	ND 10	ND 10	ND 10	ND 10	ND 10
October	-	-	-	-	-	-	-
November	ND 10	ND 10	ND 10	ND 10	ND 10	ND 10	ND 10
December	-	-	-	-	-	-	-

Per Revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.

Figure 126. GW – General Physical & General Minerals – Monthly Zinc (µg/L)

All monitoring results were ND/DNQ.

Table 127. GW – General Physical & General Minerals – Monthly Color

2° MCL: 15 **Compliance Interval:** Running Annual Average

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	ND 3	ND 3	ND 3	25	ND 3	ND 3	15
February	ND 3	ND 3	ND 3	ND 3	ND 3	ND 3	ND 3
March	ND 3	ND 3	ND 3	10	ND 3	ND 3	ND 3
April	ND 3	ND 3	ND 3	ND 3	ND 3	ND 3	ND 3
May	ND 3	ND 3	ND 3	10	ND 3	ND 3	ND 3
June	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2
July	ND 3	ND 3	ND 3	ND 3	ND 3	ND 3	ND 3
August	ND 3	ND 3	ND 3	5	ND 3	ND 3	ND 3
September	ND 3	ND 3	ND 3	ND 3	ND 3	ND 3	ND 3
October	-	-	-	-	-	-	-
November	ND 3	ND 3	ND 3	ND 3	ND 3	ND 3	ND 3
December	-	-	-	-	-	-	-

Per Revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.

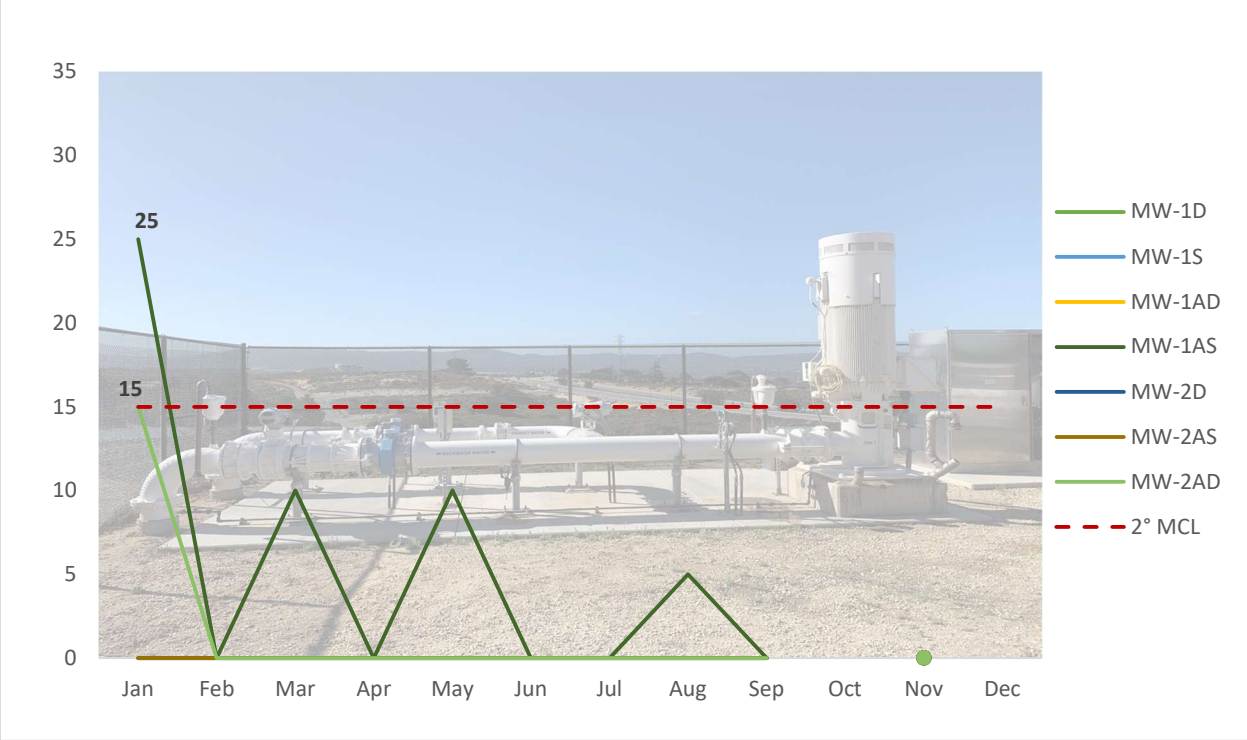


Figure 127. GW – General Physical & General Minerals – Monthly Color[14]

[14] Compliance with the 2° MCL for color is based on running annual average. ND results are functionally 0 values, and therefore the calculated running annual averages at MW-1AS and MW-2AD for color are 5 and 1.5, respectively. This does not constitute a violation of the MCL. See **Sections 6.2.5** and **6.2.3** for more information on water quality trends at these monitoring wells.

Table 128. GW – General Physical & General Minerals – Monthly Corrosivity

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	-1	-0.42	-0.09	-0.36	-1.2	0.93	0.0091
February	-1.1	-0.36	0.09	-0.43	-1.2	0.99	0.01
March	-1.1	-0.34	-0.15	-0.36	-1.1	1.1	-0.08
April	-1.2	-0.33	-0.18	-0.31	-1.1	1.1	-0.04
May	-1	-0.34	-0.22	-0.37	-0.99	0.99	-0.09
June	-1.69	-0.77	-0.5	-0.95	-1.54	0.3	-0.36
July	-1.08	-0.08	-0.42	-0.54	-0.79	0.74	-0.42
August	-1.19	-0.29	-0.48	-0.57	-1.19	1.23	0.15
September	-1.88	-0.67	-0.1	-0.52	-1.69	0.78	-0.61
October	-	-	-	-	-	-	-
November	-2.41	-0.87	-0.62	-1.4	-1.93	0.6	-0.36
December	-	-	-	-	-	-	-

**Per Revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

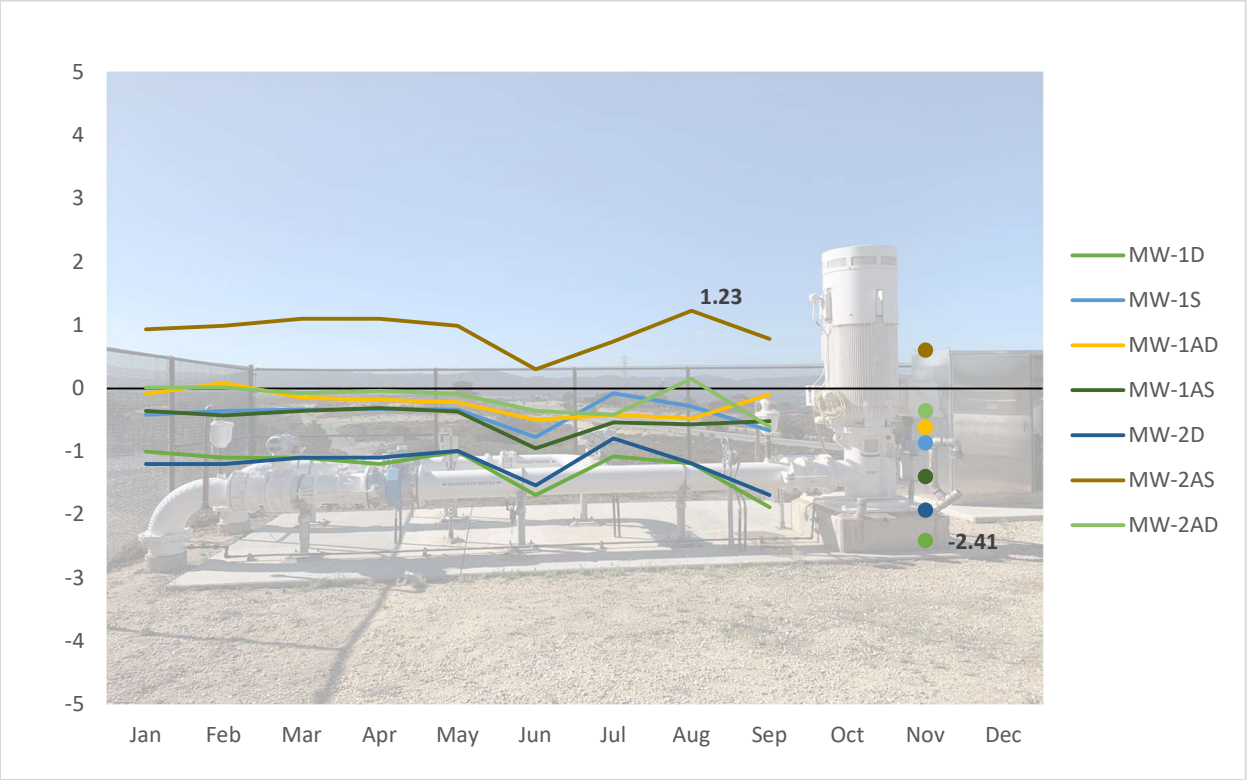


Figure 128. GW – General Physical & General Minerals – Monthly Corrosivity

Table 129. GW – General Physical & General Minerals– Monthly Foaming Agents (mg/L)

2° MCL: 0.5 mg/L **Compliance Interval:** Running Annual Average

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	ND 0.01	ND 0.01	ND 0.01	ND 0.01	DNQ 0.01	DNQ 0.02	DNQ 0.02
February	ND 0.01	ND 0.01	ND 0.01	ND 0.01	DNQ 0.02	ND 0.01	ND 0.01
March	DNQ 0.02	ND 0.01	DNQ 0.02	ND 0.01	ND 0.01	ND 0.01	ND 0.01
April	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	ND 0.01	DNQ 0.03
May	DNQ 0.02	DNQ 0.01	DNQ 0.02	ND 0.01	DNQ 0.02	DNQ 0.02	DNQ 0.02
June	ND 0.03	ND 0.03	ND 0.03	ND 0.03	DNQ 0.03	ND 0.03	ND 0.03
July	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02
August	ND 0.02	ND 0.02	DNQ 0.02	DNQ 0.03	ND 0.02	DNQ 0.02	DNQ 0.03
September	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02	ND 0.02
October	-	-	-	-	-	-	-
November	DNQ 0.03	DNQ 0.02	ND 0.02	ND 0.02	DNQ 0.03	ND 0.02	ND 0.02
December	-	-	-	-	-	-	-

**Per Revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

Figure 129. GW – General Physical & General Minerals – Monthly Foaming Agents (mg/L)

All monitoring results were ND/DNQ.

Table 130. GW – General Physical & General Minerals – Monthly Odor (TON)

2° MCL: 3 Units **Compliance Interval:** Running Annual Average

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	ND,Q 1	ND,Q 1	ND 1	ND 1	ND,Q 1	ND 1	1
February	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
March	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
April	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	1
May	ND 1	ND 1	ND 1	No Data **	ND 1	ND 1	ND 1
June	1	1	ND 1	ND 1	1	ND 1	ND 1
July	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	1
August	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
September	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
October	-	-	-	-	-	-	-
November	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
December	-	-	-	-	-	-	-

**Per Revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

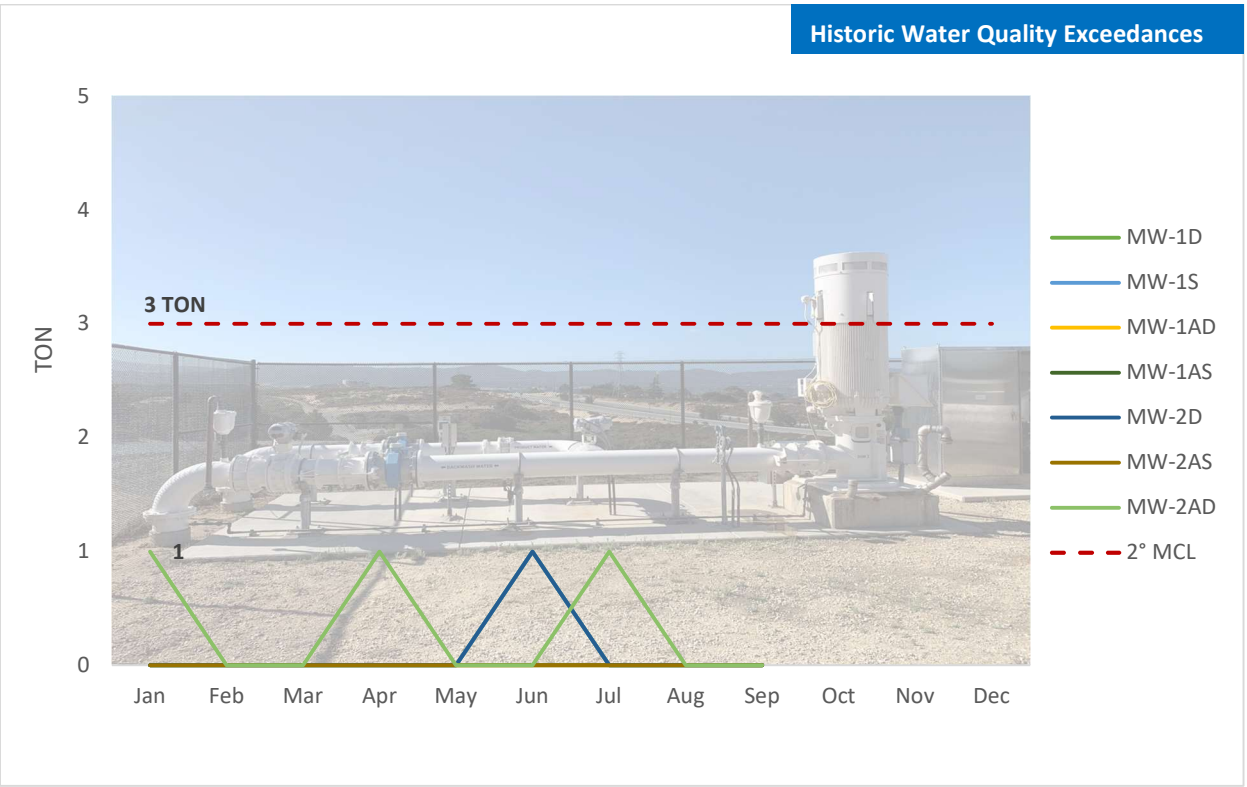


Figure 130. GW – General Physical & General Minerals – Monthly Odor (TON)

Table 131. GW – General Physical & General Minerals – Monthly Specific Conductance (µS/cm)

2° MCL: 900 µS/cm
2° MCL (upper: 1,600 µS/cm

Compliance Interval

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	210	300	250	310	210	610	280
February	210	290	280	310	210	610	300
March	210	280	260	310	210	640	280
April	210	280	250	310	220	650	280
May	210	270	250	310	210	630	280
June	220	290	270	321	230	570	340
July	207	287	272	308	226	580	284
August	233	282	259	311	227	711	333
September	213	260	259	307	207	696	300
October	-	-	-	-	-	-	-
November	214	249	260	306	227	702	266
December	-	-	-	284	-	-	-

**Per Revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

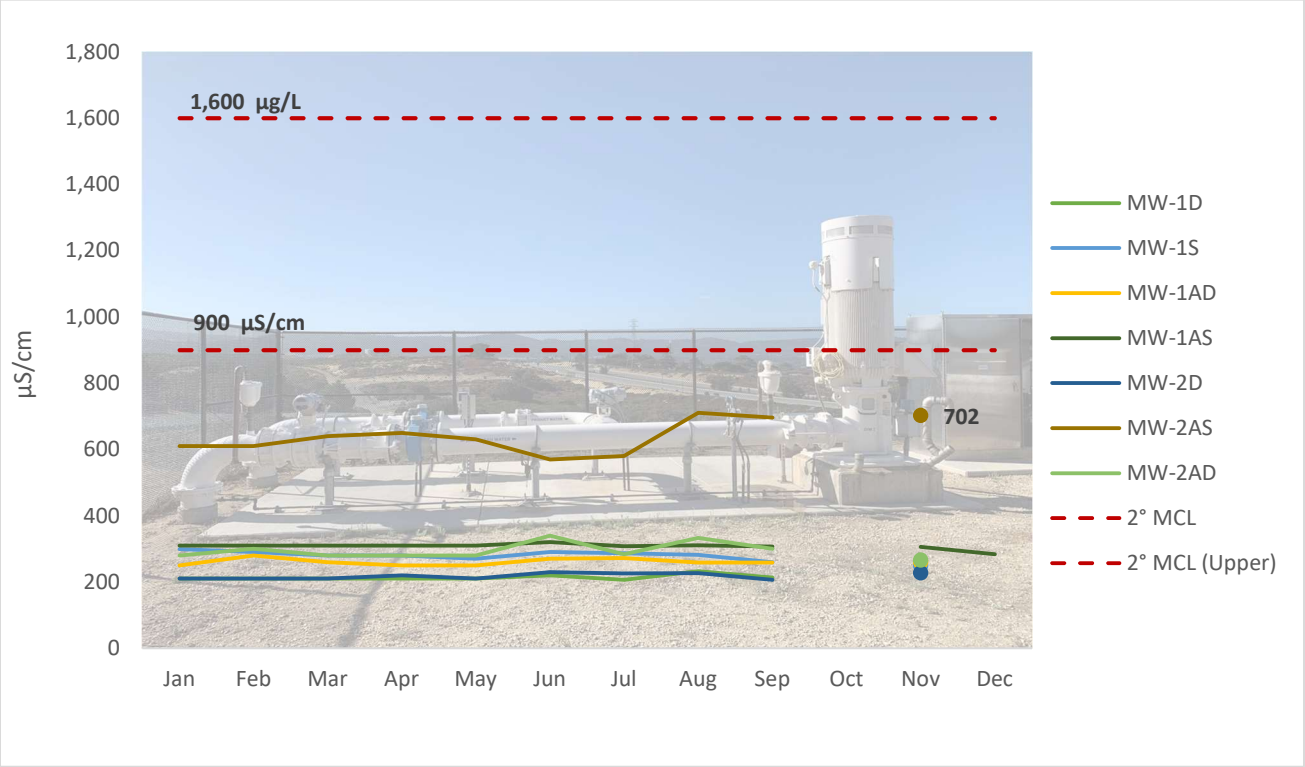


Figure 131. GW – General Physical & General Minerals – Monthly Specific Conductance (µS/cm)

Table 132. GW – General Physical & General Minerals – Monthly TDS (mg/L)

2° MCL: 500 mg/L
2° MCL (upper): 1,000 mg/L **Compliance Interval** -

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	160	200	150	220	150	380	160
February	120	190	170	200	120	360	180
March	130	180	160	220	120	390	170
April	110	170	160	210	120	390	160
May	130	180	150	210	130	390	160
June	130	180	170	200	130	360	200
July	120	182	152	210	124	376	168
August	146	174	170	212	136	416	190
September	146	166	158	202	116	408	174
October	-	-	-	-	-	-	-
November	138	148	150	184	128	404	140
December	-	-	-	-	-	-	-

**Per Revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

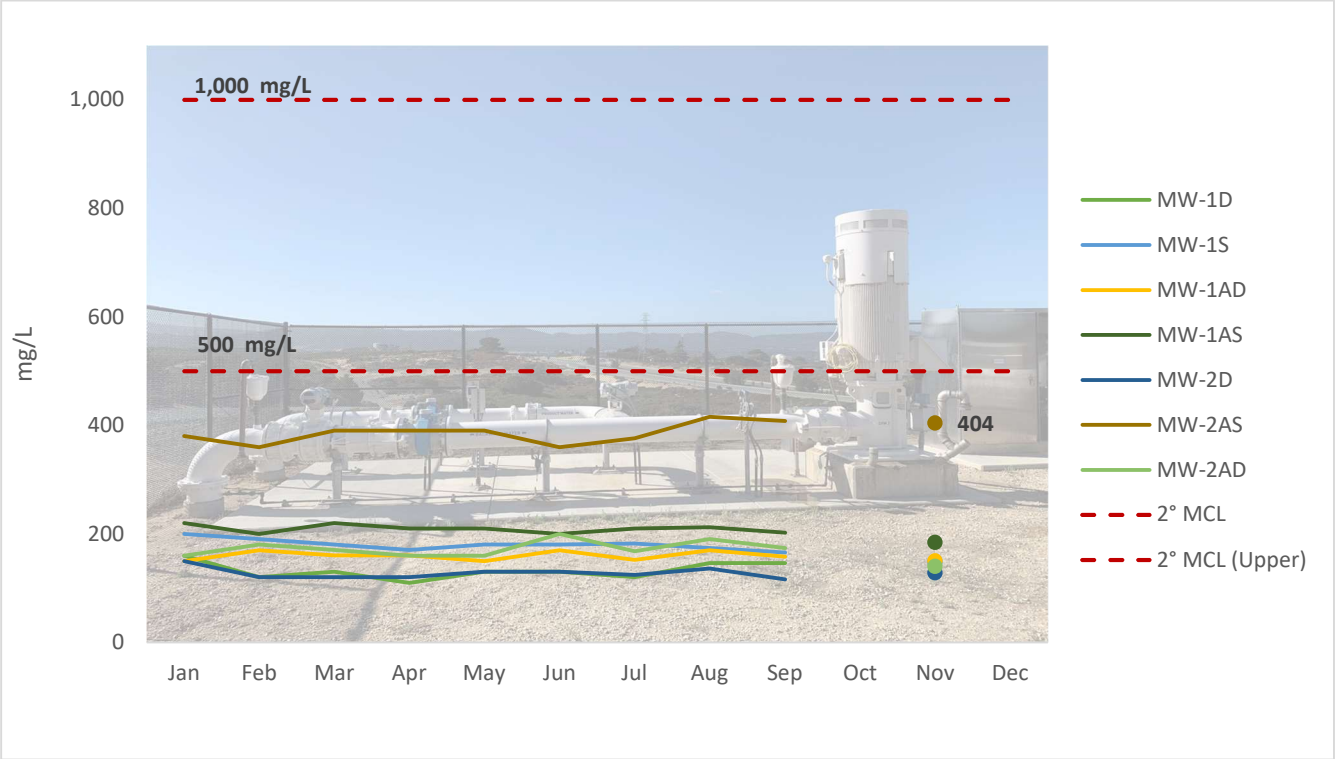


Figure 132. GW – General Physical & General Minerals – Monthly TDS (mg/L)

Table 133. GW – General Physical & General Minerals – Monthly Hardness (mg/L)

Month	MW-1D	MW-1S	MW-1AD	MW-1AS	MW-2D	MW-2AS	MW-2AD
January	46	54	61	50	44	150	66
February	42	51	70	50	44	160	76
March	45	51	61	53	44	170	69
April	43	47	60	53	46	170	68
May	44	47	61	50	46	160	69
June	44	47	70	53	47	146	93
July	39	47	63	51	42	150	70
August	40	41	62	49	39	156	69
September	46	42	62	51	52	171	70
October	-	-	-	-	-	-	-
November	47	42	66	52	50	205	71
December	-	-	-	-	-	-	-

**Per Revised MRP 2020-0122 issued September 13, 2022, monitoring frequency was reduced from monthly to quarterly.*

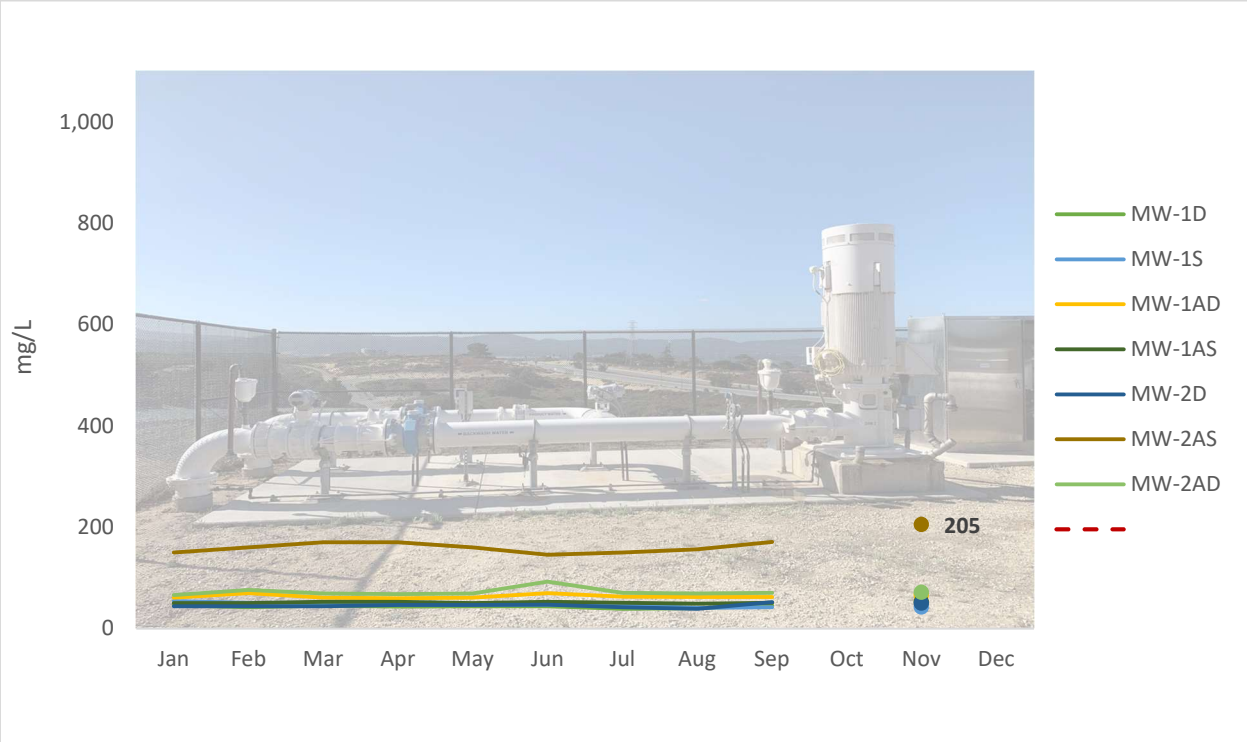


Figure 133. GW – General Physical & General Minerals – Monthly Hardness (mg/L)

4.0 SUMMARY OF COMPLIANCE

A summary of compliance status with all monitoring requirements during the previous calendar year…

4.1 General Performance

AWPF was online 364 days in calendar year 2022, using an average of 5.3 MGD influent with a low of 0.9 MGD and a high of 7.2 MGD. AWPF experienced several short-lived, unexpected power outages due to commercial power bumps or PG&E planned maintenance activities, both causing plant shutdowns. There was one instance of recycled water injection suspension in CY 2022 due to the AWPF's 21 KV switchgear failing on October 26, 2022, causing the AWPF to cease production until October 28, 2022 (approximately 30 hours total).

Additionally, throughout the year, the AWPF was off-line for short periods of time pertaining to planned maintenance, and/or vendors requests for on-site inspection(s). Overall, the APWF operated well during its third year and produced 1,300 MG of purified recycled water averaging 3.6 MGD. On average, 0.84 MGD of RO concentrate was sent to the ocean outfall.

4.2 Monitoring Program

The following sections provide a summary of compliance with applicable standards and water quality conditions. Note that drinking water standards (MCLs, NLs, etc.), which are applicable to AWPF product water and groundwater, are determined based on "compliance intervals" (e.g., running annual average) as stipulated by CCR Titles 17 and 22 and 40 CFR 141-143. Thus, in some instances while a single sample may exceed a water quality standard, it does not necessarily constitute a violation.

4.2.1 AWPF Influent

The AWPF Influent Monitoring requirements are not associated with any regulatory limits. M1W performed all required sampling and analysis in compliance with provisions of the WDR/WRR and MRP.

4.2.2 AWPF Recycled Water

All constituent parameters were in compliance during 2022.

Table 134-a. 2022 AWPF Recycled Water Compliance Summary

Constituent Parameters	Units	Type	Compliance Interval	Requirement	Max Result	Min Result	Compliant?
Table M-3a: Recycled Water Discharge Limits Monitoring							
Conductivity	umhos/cmmho/cm	2° MCL	-	1,600	247	158	Yes
Total Chlorine Residual	mg/L	Process Control	N/A	N/A	4.73	3.03	N/A
Total Recycled Water Flow	MGD	N/A	N/A	N/A	4.79	1.41	N/A
UV System	mJ/cm^3	Permit Requirement	Daily Min	1,600	6,541	1,602	Yes
UV Transmittance	%	Permit Requirement	Daily Min	95	98.5	95.6	Yes
pH	pH Units	WQG / 2° MCL	-	6.5 - 8.5	8.8	6.97	N/A
Arsenic	µg/L	1° MCL	Running Annual Avg	10	ND	ND	Yes
Boron	mg/L	Basin Plan WQO	Avg of Initial + Confirmation	0.75	0.4	0.25	Yes
Chromium-Total	µg/L	1° MCL	Running Annual Avg	50	DNQ	ND	Yes
Total Nitrogen	mg/L	1° MCL	Avg of Initial + Confirmation	10	4.4	0.6	Yes
Nitrate-N	mg/L	1° MCL	Avg of Initial + Confirmation	10	0.90	0.27	Yes
Total Kjeldahl Nitrogen-N	mg/L	N/A	N/A	N/A	3.4	1.2	N/A
Total Coliform	MPN/100 mL	WQO	Detection	2.2	ND	ND	Yes
TOC	mg/L	RWDL	Daily Avg	0.5	0.3	0.1	Yes
Table M-3b: Recycled Water Discharge Limits Monitoring							
Turbidity	NTU	2° MCL	Running Annual Avg	< 5 NTU (15 min rolling avg)	0.22	0.12	Yes
Asbestos	MFL	1° MCL	Running Annual Avg	7	ND	ND	Yes
Chlorate	µg/L	NL	Avg of Initial + Confirmation	800	420	97	Yes
Lead	µg/L	1° MCL	Avg. of Samples Collected in Monitoring Period	15	DNQ	ND	Yes
Copper	µg/L	1° MCL		1,300	DNQ	ND	Yes
Table M-4: Inorganics with Primary MCLs							
Aluminum	µg/L	1°MCL	Running Annual Avg	1,000	DNQ	ND	Yes
Antimony	µg/L	1° MCL	Running Annual Avg	6	0.7	ND	Yes
Arsenic	µg/L	1° MCL	Running Annual Avg	10	DNQ	ND	Yes
Barium	µg/L	1° MCL	Running Annual Avg	1,000	2.0	DNQ	Yes
Beryllium	µg/L	1° MCL	Running Annual Avg	4	ND	ND	Yes
Cadmium	µg/L	1° MCL	Running Annual Avg	5	DNQ	ND	Yes
Chromium	µg/L	1° MCL	Running Annual Avg	50	DNQ	ND	Yes
Cyanide	µg/L	1° MCL	Running Annual Avg	150	15	ND	Yes
Fluoride	µg/L	1° MCL	Running Annual Avg	2	0.09	DNQ	Yes
Mercury	µg/L	1° MCL	Running Annual Avg	2	ND	ND	Yes
Nickel	µg/L	1° MCL	Running Annual Avg	100	DNQ	ND	Yes
Nitrate as Nitrogen	mg/L	1° MCL	Avg of Initial + Confirmation	10	0.7	0.4	Yes
Nitrite as Nitrogen	mg/L	1° MCL	Avg of Initial + Confirmation	1	0.13	0.09	Yes

Nitrate + Nitrite	mg/L	1° MCL	Avg of Initial + Confirmation	10	0.82	0.46	Yes
Perchlorate	µg/L	1° MCL	Avg Initial + Confirmation	6	ND	ND	Yes
Selenium	µg/L	1° MCL	Running Annual Avg	50	ND	ND	Yes
Thallium	µg/L	1° MCL	Running Annual Avg	2	DNQ	ND	Yes
Table M-5: Constituents/Parameters with Secondary MCLs							
Aluminum	µg/L	2° MCL	Running Annual Avg	200	DNQ	ND	Yes
Chloride	mg/L	2° MCL	-	250 (Recommended) 500 (Upper)	49	35	Yes
Color	Units	2° MCL	Running Annual Avg	15	ND	ND	Yes
Copper	µg/L	2° MCL	Running Annual Avg	1,000	DNQ	ND	Yes
Foaming Agents	mg/L	2° MCL	Running Annual Avg	0.5	DNQ	ND	Yes
Iron	mg/L	2° MCL	Running Annual Avg	300	ND	ND	Yes
Manganese	µg/L	2° MCL	Running Annual Avg	50	DNQ	ND	Yes
MTBE	µg/L	2° MCL	Running Annual Avg	5	ND	ND	Yes
Odor	TON	2° MCL	Running Annual Avg	3	ND	ND	Yes
Silver	µg/L	2° MCL	Running Annual Avg	100	DNQ	ND	Yes
Specific Conductance	µS/cm	2° MCL	-	900 (Recommended) 1,600 (Upper)	231	180	Yes
Sodium	mg/L	WQG	-	69	22	16	Yes
Sulfate	mg/L	2° MCL	-	250 (Recommended) 500 (Upper)	0.37	ND	Yes
Thiobencarb	µg/L	2° MCL	Running Annual Avg	< 1	ND	ND	Yes
TDS	mg/L	2° MCL	-	500 (Recommended) 1,000 (Upper)	140	94	Yes
Turbidity	NTU	2° MCL	Running Annual Avg	< 5	0.84	ND	Yes
Zinc	µg/L	2° MCL	Running Annual Avg	5,000	ND	ND	Yes
Table M-6: Radioactivity							
Gross Alpha	pCi/L	1° MCL	Running Annual Avg	15	4.37	ND	Yes
Gross Beta	pCi/L	1° MCL	Running Annual Avg	50	3.64	ND	Yes
Radium 226 & 228	pCi/L	1° MCL	Running Annual Avg	5	0.59	0.00	Yes
Uranium	pCi/L	1° MCL	Running Annual Avg	20	ND	ND	Yes
Tritium	pCi/L	1° MCL	Running Annual Avg	20,000	314	ND	Yes
Strontium 90	pCi/L	1° MCL	Running Annual Avg	8	0.38	0.38	Yes
Table M-7: Regulated Organics							
Volatile Organic Compounds							
Benzene	µg/L	1° MCL	Running Annual Avg	1	ND	ND	Yes
Carbon Tetrachloride (CTC)	µg/L	1° MCL	Running Annual Avg	0.5	ND	ND	Yes
1,2-Dichlorobenzene	µg/L	1° MCL	Running Annual Avg	600	ND	ND	Yes
1,4-Dichlorobenzene	µg/L	1° MCL	Running Annual Avg	5	ND	ND	Yes
1,1-Dichloroethane	µg/L	1° MCL	Running Annual Avg	5	ND	ND	Yes
1,2-Dichloroethane (1,2- DCA)	µg/L	1° MCL	Running Annual Avg	0.5	ND	ND	Yes
1,1-Dichloroethene (1,1- DCE)	µg/L	1° MCL	Running Annual Avg	6	ND	ND	Yes
cis-1,2-Dichloroethylene	µg/L	1° MCL	Running Annual Avg	6	ND	ND	Yes
trans-1,2- Dichloroethylene	µg/L	1° MCL	Running Annual Avg	10	ND	ND	Yes
Dichloromethane	µg/L	1° MCL	Running Annual Avg	5	ND	ND	Yes

1,2-Dichloropropane	µg/L	1° MCL	Running Annual Avg	5	ND	ND	Yes
1,3-Dichloropropene	µg/L	1° MCL	Running Annual Avg	0.5	ND	ND	Yes
Ethylbenzene	µg/L	1° MCL	Running Annual Avg	300	ND	ND	Yes
Methyl-tert-butyl-ether (MTBE)	µg/L	1° MCL	Running Annual Avg	13	ND	ND	Yes
Monochlorobenzene	µg/L	1° MCL	Running Annual Avg	70	ND	ND	Yes
Styrene	µg/L	1° MCL	Running Annual Avg	100	ND	ND	Yes
1,1,2,2-Tetrachloroethane	µg/L	1° MCL	Running Annual Avg	1	ND	ND	Yes
Tetrachloroethylene (PCE)	µg/L	1° MCL	Running Annual Avg	5	ND	ND	Yes
Toluene	µg/L	1° MCL	Running Annual Avg	150	ND	ND	Yes
1,2,4-Trichlorobenzene	µg/L	1° MCL	Running Annual Avg	5	ND	ND	Yes
1,1,1-Trichloroethane	µg/L	1° MCL	Running Annual Avg	200	ND	ND	Yes
1,1,2-Trichloroethane	µg/L	1° MCL	Running Annual Avg	5	ND	ND	Yes
Trichloroethylene (TCE)	µg/L	1° MCL	Running Annual Avg	5	ND	ND	Yes
Trichlorofluoromethane	µg/L	1° MCL	Running Annual Avg	150	ND	ND	Yes
1,1,2-Trichloro-1,2,2- Trifluoroethane	µg/L	1° MCL	Running Annual Avg	1,200	ND	ND	Yes
Vinyl Chloride	µg/L	1° MCL	Running Annual Avg	0.5	ND	ND	Yes
Xylenes (o,m,p)	µg/L	1° MCL	Running Annual Avg	1,750	0.56	ND	Yes
Synthetic Organic Chemicals							
1,2,3 Trichloropropane	µg/L	1° MCL	Running Annual Avg	0.005	ND	ND	Yes
Alachlor	µg/L	1° MCL	Running Annual Avg	2	ND	ND	Yes
Atrazine	µg/L	1° MCL	Running Annual Avg	1	ND	ND	Yes
Bentazon	µg/L	1° MCL	Running Annual Avg	18	ND	ND	Yes
Benzo(a)pyrene	µg/L	1° MCL	Running Annual Avg	0.2	ND	ND	Yes
Carbofuran	µg/L	1° MCL	Running Annual Avg	18	ND	ND	Yes
Chlordane	µg/L	1° MCL	Running Annual Avg	0.1	ND	ND	Yes
Dalapon	µg/L	1° MCL	Running Annual Avg	200	ND	ND	Yes
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	1° MCL	Running Annual Avg	0.2	ND	ND	Yes
2,4-Dichlorophenoxyacetic acid (2,4-D)	µg/L	1° MCL	Running Annual Avg	70	ND	ND	Yes
Di(2-ethylhexyl)adipate	µg/L	1° MCL	Running Annual Avg	400	ND	ND	Yes
Di(2-ethylhexyl)phthalate	µg/L	1° MCL	Running Annual Avg	4	ND	ND	Yes
Dinoseb	µg/L	1° MCL	Running Annual Avg	7	ND	ND	Yes
Diquat	µg/L	1° MCL	Running Annual Avg	20	ND	ND	Yes
Endothall	µg/L	1° MCL	Running Annual Avg	100	ND	ND	Yes
Endrin	µg/L	1° MCL	Running Annual Avg	2	ND	ND	Yes
Ethylene Dibromide (EDB)	µg/L	1° MCL	Running Annual Avg	0.05	ND	ND	Yes
Glyphosate	µg/L	1° MCL	Running Annual Avg	700	ND	ND	Yes
Heptachlor	µg/L	1° MCL	Running Annual Avg	0.01	ND	ND	Yes
Heptachlor Epoxide	µg/L	1° MCL	Running Annual Avg	0.01	ND	ND	Yes
Hexachlorobenzene	µg/L	1° MCL	Running Annual Avg	1	ND	ND	Yes
Hexachlorocyclopentadiene	µg/L	1° MCL	Running Annual Avg	50	ND	ND	Yes
Lindane	µg/L	1° MCL	Running Annual Avg	0.2	ND	ND	Yes
Methoxychlor	µg/L	1° MCL	Running Annual Avg	30	ND	ND	Yes
Molinate	µg/L	1° MCL	Running Annual Avg	20	ND	ND	Yes
Oxamyl	µg/L	1° MCL	Running Annual Avg	50	ND	ND	Yes
Pentachlorophenol	µg/L	1° MCL	Running Annual Avg	1	ND	ND	Yes

Picloram	µg/L	1° MCL	Running Annual Avg	500	ND	ND	Yes
Polychlorinated Biphenyls	µg/L	1° MCL	Running Annual Avg	0.5	ND	ND	Yes
Simazine	µg/L	1° MCL	Running Annual Avg	4	ND	ND	Yes
Thiobencarb	µg/L	1° MCL	Running Annual Avg	70	ND	ND	Yes
Toxaphene	µg/L	1° MCL	Running Annual Avg	3	ND	ND	Yes
2,3,7,8-TCDD (Dioxin)	µg/L	1° MCL	Running Annual Avg	30	ND	ND	Yes
2,4,5-TP (Silvex)	µg/L	1° MCL	Running Annual Avg	50	ND	ND	Yes
Table M-8: Disinfection Byproducts							
Total Trihalomethanes	µg/L	1° MCL	Running Annual Avg	80	DNQ	ND	Yes
Bromodichloromethane	µg/L	-	-	-	ND	ND	N/A
Bromoform	µg/L	-	-	-	DNQ	ND	N/A
Chloroform	µg/L	-	-	-	ND	ND	N/A
Dibromochloroform	µg/L	-	-	-	ND	ND	N/A
Haloacetic Acid	µg/L	1° MCL	Running Annual Avg	60	4.7	ND	Yes
Monochloroacetic Acid	µg/L	-	-	-	DNQ	ND	N/A
Dichloroacetic Acid	µg/L	-	-	-	3.2	ND	N/A
Trichloroacetic Acid	µg/L	-	-	-	DNQ	ND	N/A
Monobromoacetic Acid	µg/L	-	-	-	DNQ	ND	N/A
Dibromoacetic Acid	µg/L	-	-	-	DNQ	ND	N/A
Bromate	µg/L	1° MCL	Running Annual Avg	10	ND	ND	Yes
Chlorite	µg/L	1° MCL	Avg of Sample Set	1,000	15	ND	Yes
Table M-9: General Physical and General Minerals							
Calcium	mg/L	-	-	-	16	15	N/A
Potassium	mg/L	-	-	-	2.3	1.5	N/A
Corrosivity	LSI	-	-	-	-0.43	-0.79	N/A
Total Hardness	mg/L	-	-	-	41	39	N/A
Table M-10: Constituents with Notification Levels							
Boron	µg/L	NL	Avg of Initial + Confirmation	1,000	400	250	Yes
n-Butylbenzene	µg/L	NL	Avg of Initial + Confirmation	260	ND	ND	Yes
sec-Butylbenzene	µg/L	NL	Avg of Initial + Confirmation	260	DNQ	ND	Yes
tert-Butylbenzene	µg/L	NL	Avg of Initial + Confirmation	260	DNQ	ND	Yes
Carbon disulfide	µg/L	NL	Avg of Initial + Confirmation	160	DNQ	ND	Yes
2-Chlorotoluene	µg/L	NL	Avg of Initial + Confirmation	140	ND	ND	Yes
4-Chlorotoluene	µg/L	NL	Avg of Initial + Confirmation	140	DNQ	ND	Yes
Diazinon	µg/L	NL	Avg of Initial + Confirmation	1.2	ND	ND	Yes
Dichlorodifluoromethane (Freon 12)	µg/L	NL	Avg of Initial + Confirmation	1,000	ND	ND	Yes
1,4-Dioxane	µg/L	NL	Avg of Initial + Confirmation	1	ND	ND	Yes
Ethylene glycol	µg/L	NL	Avg of Initial + Confirmation	14,000	DNQ	ND	Yes
Formaldehyde	µg/L	NL	Avg of Initial + Confirmation	1,000	49	24	Yes
HMX	µg/L	NL	Avg of Initial + Confirmation	350	ND	ND	Yes
Isopropylbenzene	µg/L	NL	Avg of Initial + Confirmation	770	DNQ	ND	Yes
Manganese	µg/L	NL	Avg of Initial + Confirmation	500	DNQ	ND	Yes
Methyl isobutyl ketone (MIBK)	µg/L	NL	Avg of Initial + Confirmation	120	DNQ	ND	Yes
Naphthalene	µg/L	NL	Avg of Initial + Confirmation	17	DNQ	ND	Yes
n-Nitrosodiethyamine (NDEA)	µg/L	NL	Avg of Initial + Confirmation	0.01	DNQ	ND	Yes

n-Nitrosodimethylamine (NDMA)	µg/L	NL	Avg of Initial + Confirmation	0.01	DNQ	ND	Yes
n-Nitrosodi-n-propylamine (NDPA)	µg/L	NL	Avg of Initial + Confirmation	0.01	ND	ND	Yes
Perfluorooctane sulfonate (PFOS)	µg/L	NL	Avg of Initial + Confirmation	0.0065	ND	ND	Yes
Perfluorooctanoic acid (PFOA)	µg/L	NL	Avg of Initial + Confirmation	0.0051	ND	ND	Yes
Propachlor	µg/L	NL	Avg of Initial + Confirmation	90	ND	ND	Yes
n-Propylbenzene	µg/L	NL	Avg of Initial + Confirmation	260	DNQ	ND	Yes
RDX	µg/L	NL	Avg of Initial + Confirmation	0.3	ND	ND	Yes
Tertiary butyl alcohol (TBA)	µg/L	NL	Avg of Initial + Confirmation	12	DNQ	ND	Yes
1,2,4-Trimethylbenzene	µg/L	NL	Avg of Initial + Confirmation	330	DNQ	ND	Yes
1,3,5-Trimethylbenzene	µg/L	NL	Avg of Initial + Confirmation	330	DNQ	ND	Yes
2,4,6-Trinitrotoluene (TNT)	µg/L	NL	Avg of Initial + Confirmation	10	ND	ND	Yes
Vanadium	µg/L	NL	Avg of Initial + Confirmation	50	DNQ	ND	Yes
Table M-11: Remaining Priority Pollutants							
Pesticides							
Aldrin	µg/L	-	-	-	ND	ND	N/A
Dieldrin	µg/L	-	-	-	ND	ND	N/A
4,4'-DDT	µg/L	-	-	-	ND	ND	N/A
4,4'-DDE	µg/L	-	-	-	ND	ND	N/A
4,4'-DDD	µg/L	-	-	-	ND	ND	N/A
Alpha-endosulfan	µg/L	-	-	-	ND	ND	N/A
Beta-endosulfan	µg/L	-	-	-	ND	ND	N/A
Endosulfan sulfate	µg/L	-	-	-	ND	ND	N/A
Endrin aldehyde	µg/L	-	-	-	ND	ND	N/A
Alpha-BHC	µg/L	-	-	-	ND	ND	N/A
Beta-BHC	µg/L	-	-	-	ND	ND	N/A
Delta-BHC	µg/L	-	-	-	ND	ND	N/A
Acid Extractables							
2,4,6-trichlorophenol	µg/L	-	-	-	ND	ND	N/A
P-chloro-m-cresol	µg/L	-	-	-	ND	ND	N/A
2-chlorophenol	µg/L	-	-	-	ND	ND	N/A
2,4-dichlorophenol	µg/L	-	-	-	ND	ND	N/A
2,4-dimethylphenol	µg/L	-	-	-	ND	ND	N/A
2-nitrophenol	µg/L	-	-	-	ND	ND	N/A
4-nitrophenol	µg/L	-	-	-	ND	ND	N/A
2,4-dinitrophenol	µg/L	-	-	-	ND	ND	N/A
4,6-dinitro-o-cresol	µg/L	-	-	-	ND	ND	N/A
Phenol	µg/L	-	-	-	ND	ND	N/A
2-chloroethyl vinyl ether	µg/L	-	-	-	ND	ND	N/A
Metals							
Chromium III	µg/L	-	-	-	ND	ND	N/A
Base/Neutral Extractables							
Acenaphthene	µg/L	-	-	-	ND	ND	N/A
Benzidine	µg/L	-	-	-	ND	ND	N/A
Hexachloroethane	µg/L	-	-	-	ND	ND	N/A
Bis(2-chloroethyl)ether	µg/L	-	-	-	ND	ND	N/A

2-chloronaphthalene	µg/L	-	-	-	ND	ND	N/A
1,3-dichlorobenzene	µg/L	-	-	-	ND	ND	N/A
3,3'-dichlorobenzidine	µg/L	-	-	-	ND	ND	N/A
2,4-dinitrotoluene	µg/L	-	-	-	ND	ND	N/A
2,6-dinitrotoluene	µg/L	-	-	-	ND	ND	N/A
1,2-diphenylhydrazine	µg/L	-	-	-	ND	ND	N/A
Fluoranthene	µg/L	-	-	-	ND	ND	N/A
4-chlorophenyl phenyl ether	µg/L	-	-	-	ND	ND	N/A
4-bromophenyl phenyl ether	µg/L	-	-	-	ND	ND	N/A
Bis(2- chloroisopropyl) ether	µg/L	-	-	-	ND	ND	N/A
Bis(2- chloroethoxyl)methane	µg/L	-	-	-	ND	ND	N/A
Hexachlorobutadiene	µg/L	-	-	-	ND	ND	N/A
Isophorone	µg/L	-	-	-	ND	ND	N/A
Nitrobenzene	µg/L	-	-	-	ND	ND	N/A
N-nitrosodiphenylamine	µg/L	-	-	-	ND	ND	N/A
Bis(2- ethylhexyl)phthalate	µg/L	-	-	-	ND	ND	N/A
Butyl benzyl phthalate	µg/L	-	-	-	ND	ND	N/A
Di-n-butyl phthalate	µg/L	-	-	-	ND	ND	N/A
Di-n-octyl phthalate	µg/L	-	-	-	ND	ND	N/A
Diethyl phthalate	µg/L	-	-	-	ND	ND	N/A
Dimethyl phthalate	µg/L	-	-	-	ND	ND	N/A
Benzo(a)anthracene	µg/L	-	-	-	ND	ND	N/A
Benzo(b)fluoranthene	µg/L	-	-	-	ND	ND	N/A
Benzo(k)fluoranthene	µg/L	-	-	-	ND	ND	N/A
Chrysene	µg/L	-	-	-	ND	ND	N/A
Acenaphthylene	µg/L	-	-	-	ND	ND	N/A
Anthracene	µg/L	-	-	-	ND	ND	N/A
1,12-benzoperylene	µg/L	-	-	-	ND	ND	N/A
Fluorene	µg/L	-	-	-	ND	ND	N/A
Phenanthrene	µg/L	-	-	-	ND	ND	N/A
1,2,5,6-dibenzanthracene	µg/L	-	-	-	ND	ND	N/A
Indeno(1,2,3-cd)pyrene	µg/L	-	-	-	ND	ND	N/A
Pyrene	µg/L	-	-	-	ND	ND	N/A
Volatile Organics							
Acrolein	µg/L	-	-	-	ND	ND	N/A
Acrylonitrile	µg/L	-	-	-	ND	ND	N/A
Chlorobenzene	µg/L	-	-	-	ND	ND	N/A
Chloroethane	µg/L	-	-	-	ND	ND	N/A
1,1-dichloroethylene	µg/L	-	-	-	ND	ND	N/A
Methyl chloride	µg/L	-	-	-	ND	ND	N/A
Methyl bromide	µg/L	-	-	-	ND	ND	N/A

4.2.3 RO Feed Water (Prior to RO)

A summary of RO Feed Water Compliance is as follows:

Table 134-b. 2022 RO Feed Water Compliance Summary

Constituent Parameters	Units	Type	Requirement	Highest Prior to RO	Associated AWPF	% Removal	Compliant?
Constituents of Emerging Concern							
1,4-Dioxane	ug/L	MTL/NL	1.000	-	ND	-	N/A
n-Nitrosodimethylamine (NDMA)	ug/L	MTL/NL	0.010	0.2	DNQ	98.7%	Yes*
Perfluorooctane sulfonate (PFOS)	ug/L	MTL/NL	0.013	-	ND	-	N/A
Perfluorooctanoic acid (PFOA)	ug/L	MTL/NL	0.014	-	ND	-	N/A
n-Nitrosomorpholine (NMOR)	ug/L	MTL/NL	0.012	-	ND	-	N/A
Sucralose	ug/L	N/A	-	68	ND	99.9%	Yes*
Sulfamethoxazole	ug/L	N/A	-	0.021	ND	96.5%	Yes*
DDW Specified Chemicals							
2,3,5,6-tetrachloroterephthal ate (DCPA)	ug/L	DDW	-	0.79	ND	N/A	N/A
Albuterol	ug/L	DDW	-	N/A	ND	N/A	N/A
Caffeine	ug/L	DDW	-	N/A	ND	N/A	N/A
Carbadox	ug/L	DDW	-	N/A	ND	N/A	N/A
Chloropicrin	ug/L	DDW	-	DNQ	ND	N/A	N/A
Chloropyrifos	ug/L	DDW	-	N/A	ND	N/A	N/A
Chlorothalonil	ug/L	DDW	-	N/A	ND	N/A	N/A
Erythromycin	ug/L	DDW	-	N/A	ND	N/A	N/A
Fluoxetine	ug/L	DDW	-	N/A	ND	N/A	N/A
Iohexol	ug/L	DDW	-	N/A	0.028	N/A	N/A
Quinoline	ug/L	DDW	-	0.02	ND	N/A	N/A
Triclosan	ug/L	DDW	-	N/A	ND	N/A	N/A
Constituent Parameters	**Units**	**Type**	**Requirement**	**Highest Prior to RO**	**Associated AWPF**	**% Removal**	**Compliant?**
Surrogates for CECs							
Electrical Conductivity	uS/cm	2° MCL	900 (Recommended) 1,600 (Upper) 2,200 (Short-Term)	1,978.10	211.3	88.6%	Yes*
UVA	cm-1	Permit Requirement	N/A	N/A	0.027	-	N/A
TOC	mg/L	Permit Requirement	0.5	-	0.27	-	Yes*
ERA	ng/L	Monitoring Trigger Level / NL	0.5 / 3.5	ND	ND	-	Yes*
AHR	ng/L	Monitoring Trigger Level / NL	0.5 / 3.5	-	-	-	-

**Compliance point is PW "Associated AWPF"*
***As of the date of this Annual Report, the AWPF CEC QAPP was in the process of being updated to include AhR testing for submittal to and approval by DDW. Following approval, M1W will initiate the initial monitoring phase for AhR.*

4.2.4 Groundwater

A summary of Groundwater Monitoring compliance is as follows. All constituent parameters were in compliance, however short-term exceedances and detections not constituting violations occurred as further discussed in **Section 6.0**:

Table 134-c. 2022 Groundwater Monitoring Compliance Summary

Constituent Parameters	Units	Type	Compliance Interval	Limit	Max Result	Min Result	MW (Max Result)	Compliant?
Table M-14: Groundwater Monitoring								
Water Level Elevation	Feet bgs	N/A	N/A	N/A	431.89	370.55	MW-1S	N/A
Chlorine Residual	mg/L	Process Control	N/A	N/A	0.13	ND	MW-2AS	N/A
Chloride	mg/L	2° MCL	-	250 (Recommended) 500 (Upper)	112	42	MW-2AS	Yes
Nitrate as N	mg/L	1° MCL	Avg of Initial + Confirmation	10	3.0	DNQ	MW-2D	Yes
Nitrite as N	mg/L	1° MCL	Avg of Initial + Confirmation	1	0.3	0.08	MW-1D	Yes
Nitrate plus Nitrite as N	mg/L	1° MCL	Avg of Initial + Confirmation	10	3.1	0.01	MW-2D	Yes
pH	pH Units	WQG / 2° MCL	-	6.5-8.5	8.3	6.8	MW-2AS	Yes
Sodium	mg/L	WQG	-	69	66	19	MW-2AS	N/A
Sulfate	mg/L	2° MCL	Avg of Initial + Confirmation	250	28	DNQ	MW-2AS	Yes
TOC	mg/L	N/A	N/A	N/A	0.4	0.2	MW-2AS	Yes
Total Coliform	MPN/100 mL	WQO	-	2.2	8.4	ND	MW-2D	Yes. See **Section 6.2.4**
BOD5 20C	mg/L	N/A	N/A	N/A	ND	ND	-	N/A
Oil and Grease	mg/L	N/A	N/A	N/A	ND	ND	-	N/A
Total Nitrogen	mg/L	1° MCL	Avg of Initial + Confirmation	10	3.1	0.4	MW-2D	Yes
TSS	mg/L	N/A	N/A	N/A	2	ND	MW-1AD	N/A
Turbidity	NTU	2° MCL	Running Annual Avg	5	2.8	ND	MW-1AS	Yes
Silver	µg/L	2° MCL	Running Annual Avg	100	DNQ	ND	MW-1D	Yes
N-Nitrosopyrrolidine	µg/L	-	-	-	ND	ND	-	N/A
M-4 Inorganics with Primary MCLs								
Aluminum	µg/L	1°MCL	Running Annual Avg	1,000	190	18	MW-2AS	Yes
Antimony	µg/L	1° MCL	Running Annual Avg	6	0.6	ND	MW-2D	Yes
Arsenic	µg/L	1° MCL	Running Annual Avg	10	9.3	ND	MW-1AS	Yes
Barium	µg/L	1° MCL	Running Annual Avg	1,000	79	10	MW-1AS	Yes
Beryllium	µg/L	1° MCL	Running Annual Avg	4	ND	ND	-	Yes
Cadmium	µg/L	1° MCL	Running Annual Avg	5	DNQ	ND	-	Yes
Chromium	µg/L	1° MCL	Running Annual Avg	50	25	ND	MW-2AS	Yes
Cyanide	µg/L	1° MCL	Running Annual Avg	150	DNQ	ND	-	Yes
Fluoride	µg/L	1° MCL	Running Annual Avg	2	0.48	DNQ	MW-2AD	Yes
Mercury	µg/L	1° MCL	Running Annual Avg	2	DNQ	ND	-	Yes
Nickel	µg/L	1° MCL	Running Annual Avg	100	8.9	ND	MW-2D	Yes
Nitrate as Nitrogen	mg/L	1° MCL	Avg of Initial + Confirmation	10	3.0	ND	MW-2D	Yes

Nitrite as Nitrogen	mg/L	1° MCL	Avg of Initial + Confirmation	1	0.3	ND	MW-1D / MW-1AD	Yes
Nitrate + Nitrite	mg/L	1° MCL	Avg of Initial + Confirmation	10	3.2	ND	MW-1D	Yes
Perchlorate	µg/L	1° MCL	Avg of Initial + Confirmation	6	DNQ	ND	-	Yes
Selenium	µg/L	1° MCL	Running Annual Avg	50	7.6	ND	MW-2AS	Yes
Thallium	µg/L	1° MCL	Running Annual Avg	2	DNQ	ND	-	Yes
M-15 Groundwater Monitoring Frquency								
Radioactivity								
Gross Alpha	pCi/L	1° MCL	Running Annual Avg	15	4.03	-0.75	MW-2D	Yes
Gross Beta	pCi/L	1° MCL	Running Annual Avg	50	7.00	0.57	MW-2AS	Yes
Radium 226	pCi/L	1° MCL	Running Annual Avg	5	0.58	-0.12	MW-2D	Yes
Radium 226 & 228	pCi/L	1° MCL	Running Annual Avg	5	1.08	-0.12	MW-2D	Yes
Radium 228	pCi/L	1° MCL	Running Annual Avg	5	0.71	0	MW-1S	Yes
Strontium 90	pCi/L	1° MCL	Running Annual Avg	8	1.67	0	MW-1S	Yes
Tritium	pCi/L	1° MCL	Running Annual Avg	20,000	376	-249	MW-1AD	Yes
Uranium	pCi/L	1° MCL	Running Annual Avg	20	0.9	ND	MW-2AS	Yes
Volatile Organic Chemicals								
1,1,1-Trichloroethane	µg/L	1° MCL	Running Annual Avg	< 200	ND	ND	-	Yes
1,1,2,2-Tetrachloroethane	µg/L	1° MCL	Running Annual Avg	1	ND	ND	-	Yes
1,1,2-Trichloro-1,2,2-Trifluoroethane	µg/L	1° MCL	Running Annual Avg	1,200	ND	ND	-	Yes
1,1,2-Trichloroethane	µg/L	1° MCL	Running Annual Avg	5	ND	ND	-	Yes
1,1-Dichloroethane	µg/L	1° MCL	Running Annual Avg	6	ND	ND	-	Yes
1,1-Dichloroethene (1,1 DCE)	µg/L	1° MCL	Running Annual Avg	6	ND	ND	-	Yes
1,2,4-Trichlorobenzene	µg/L	1° MCL	Running Annual Avg	5	ND	ND	-	Yes
1,2-Dichlorobenzene	µg/L	1° MCL	Running Annual Avg	600	ND	ND	-	Yes
1,2-Dichloroethane (1,2 DCA)	µg/L	1° MCL	Running Annual Avg	0.5	ND	ND	-	Yes
1,2-Dichloropropane	µg/L	1° MCL	Running Annual Avg	5	ND	ND	-	Yes
1,3-Dichloropropene	µg/L	1° MCL	Running Annual Avg	0.5	ND	ND	-	Yes
1,4-Dichlorobenzene	µg/L	1° MCL	Running Annual Avg	5	ND	ND	-	Yes
Benzene	µg/L	1° MCL	Running Annual Avg	1	ND	ND	-	Yes
Carbon Tetrachloride (CTC)	µg/L	1° MCL	Running Annual Avg	0.5	ND	ND	-	Yes
cis-1,2-Dichloroethylene	µg/L	1° MCL	Running Annual Avg	6	ND	ND	-	Yes
Dichloromethane	µg/L	1° MCL	Running Annual Avg	5	ND	ND	-	Yes
Ethylbenzene	µg/L	1° MCL	Running Annual Avg	300	ND	ND	-	Yes
Methyl-tert-butyl-ether (MTBE)	µg/L	1° MCL	Running Annual Avg	130	ND	ND	-	Yes
Monochlorobenzene	µg/L	1° MCL	Running Annual Avg	70	ND	ND	-	Yes
Styrene	µg/L	1° MCL	Running Annual Avg	100	ND	ND	-	Yes
Tetrachloroethylene (PCE)	µg/L	1° MCL	Running Annual Avg	5	ND	ND	-	Yes
Toluene	µg/L	1° MCL	Running Annual Avg	150	ND	ND	-	Yes
trans-1,2-Dichloroethylene	µg/L	1° MCL	Running Annual Avg	10	ND	ND	-	Yes
Trichloroethylene (TCE)	µg/L	1° MCL	Running Annual Avg	5	ND	ND	-	Yes
Trichlorofluoro-methane	µg/L	1° MCL	Running Annual Avg	150	ND	ND	-	Yes
Vinyl Chloride	µg/L	1° MCL	Running Annual Avg	0.5	ND	ND	-	Yes
Xylenes (m,p)	µg/L	1° MCL	Running Annual Avg	1,750	ND	ND	-	Yes

Synthetic Organic Chemicals								
1,2-Dibromo-3-Chloropropane (DBCP)	µg/L	1° MCL	Running Annual Avg	0.2	ND	ND	-	Yes
1,2,3-Trichloropropane	µg/L	1° MCL	Running Annual Avg	0.005	ND	ND	-	Yes
2,3,7,8-TCDD (Dioxin)	µg/L	1° MCL	Running Annual Avg	0.00003	ND	ND	-	Yes
2,4,5-TP (Silvex)	µg/L	1° MCL	Running Annual Avg	50	ND	ND	-	Yes
2,4-Dichlorophenoxyacetic acid (2,4-D)	µg/L	1° MCL	Running Annual Avg	70	ND	ND	-	Yes
2,3,5,6-tetrachloroterephthalate (DCPA)	µg/L	DDW	-	-	ND	ND	-	N/A
Alachlor	µg/L	1° MCL	Running Annual Avg	2	ND	ND	-	Yes
Albuterol	µg/L	DDW	-	-	ND	ND	-	N/A
Atrazine	µg/L	1° MCL	Running Annual Avg	1	DNQ	ND	-	Yes
Bentazon	µg/L	1° MCL	Running Annual Avg	18	ND	ND	-	Yes
Benzo (a) pyrene	µg/L	1° MCL	Running Annual Avg	0.2	0.14	ND	MW-1S	Yes
Caffeine	µg/L	DDW	-	-	0.02	ND	MW-2AD	N/A
Carbadox	µg/L	DDW	-	-	ND	ND	-	N/A
Carbofuran	µg/L	1° MCL	Running Annual Avg	18	ND	ND	-	Yes
Chlordane	µg/L	1° MCL	Running Annual Avg	0.1	ND	ND	-	Yes
Chloropicrin	µg/L	DDW	-	-	2.7	ND	MW-1AS	N/A
Dalapon	µg/L	1° MCL	Running Annual Avg	200	ND	ND	-	Yes
Di (2-ethylhexyl) adipate	µg/L	1° MCL	Running Annual Avg	400	ND	ND	-	Yes
Di (2-ethylhexyl) phthalate	µg/L	1° MCL	Running Annual Avg	4	ND	ND	-	Yes
Dinoseb	µg/L	1° MCL	Running Annual Avg	7	ND	ND	-	Yes
Diquat	µg/L	1° MCL	Running Annual Avg	20	ND	ND	-	Yes
Endothal	µg/L	1° MCL	Running Annual Avg	100	ND	ND	-	Yes
Endrin	µg/L	1° MCL	Running Annual Avg	2	ND	ND	-	Yes
Erythromycin	µg/L	DDW	-	-	ND	ND	-	N/A
Ethylene Dibromide (EDB)	µg/L	1° MCL	Running Annual Avg	0.05	ND	ND	-	Yes
Fluoxetine	µg/L	DDW	-	-	ND	ND	-	N/A
Glyphosate	µg/L	1° MCL	Running Annual Avg	700	ND	ND	-	Yes
Heptachlor	µg/L	1° MCL	Running Annual Avg	0.01	ND	ND	-	Yes
Heptachlor Epoxide	µg/L	1° MCL	Running Annual Avg	0.01	ND	ND	-	Yes
Hexachlorobenzene	µg/L	1° MCL	Running Annual Avg	1	ND	ND	-	Yes
Hexachlorocyclo-pentadiene	µg/L	1° MCL	Running Annual Avg	50	ND	ND	-	Yes
Iohexol	µg/L	DDW	-	-	ND	ND	-	N/A
Lindane (Gamma BHC)	µg/L	1° MCL	Running Annual Avg	0.2	ND	ND	-	Yes
Methoxychlor	µg/L	1° MCL	Running Annual Avg	30	ND	ND	-	Yes
Molinate	µg/L	1° MCL	Running Annual Avg	20	ND	ND	-	Yes
Oxamyl	µg/L	1° MCL	Running Annual Avg	50	ND	ND	-	Yes
PCB 1016	µg/L	1° MCL	-	0.5	ND	ND	-	Yes
PCB 1221	µg/L	1° MCL	-	0.5	ND	ND	-	Yes
PCB 1232	µg/L	1° MCL	-	0.5	ND	ND	-	Yes
PCB 1242	µg/L	1° MCL	-	0.5	ND	ND	-	Yes
PCB 1248	µg/L	1° MCL	-	0.5	ND	ND	-	Yes

PCB 1254	µg/L	1° MCL	-	0.5	ND	ND	-	Yes
PCB 1260	µg/L	1° MCL	-	0.5	ND	ND	-	Yes
Pentachlorophenol	µg/L	1° MCL	Running Annual Avg	1	ND	ND	-	Yes
Picloram	µg/L	1° MCL	Running Annual Avg	500	ND	ND	-	Yes
Quinoline	µg/L	DDW	-	-	ND	ND	-	N/A
Simazine	µg/L	1° MCL	Running Annual Avg	4	ND	ND	-	Yes
Thiobencarb	µg/L	1° MCL	Running Annual Avg	70	ND	ND	-	Yes
Toxaphene	µg/L	1° MCL	Running Annual Avg	3	ND	ND	-	Yes
Triclosan	µg/L	DDW	-	-	ND	ND	-	N/A
Disinfection Byproducts								
Bromate	µg/L	1° MCL	Running Annual Avg	-	DNQ	ND	-	Yes
Bromodichloro-methane	µg/L	-	-	-	ND	ND	-	N/A
Bromoform	µg/L	-	-	-	ND	ND	-	N/A
Chlorite	µg/L	1° MCL	Avg of Samples Collected in Monitoring Period	-	ND	ND	-	Yes
Chloroform	µg/L	-	-	-	0.92	ND	MW-1S	Yes
Dibromoacetic Acid	µg/L	-	-	-	ND	ND	-	N/A
Dibromochloro-methane	µg/L	-	-	-	ND	ND	-	N/A
Dichloroacetic Acid	µg/L	-	-	-	ND	ND	-	N/A
Haloacetic Acid (Five) (HAA5)	µg/L	1° MCL	Running Annual Avg	60	2.8	ND	-	Yes
Monobromoacetic Acid	µg/L	-	-	-	ND	ND	-	N/A
Monochloroacetic Acid	µg/L	-	-	-	2.8	ND	-	N/A
Total Trihalomethanes	µg/L	1° MCL	Running Annual Avg	80	0.92	ND	MW-1S	Yes
Trichloroacetic Acid	µg/L	-	-	-	DNQ	ND	-	N/A
Chemicals with Notification Levels								
1,2,4-Trimethylbenzene	µg/L	NL	Avg of Initial + Confirmation	330	ND	ND	-	Yes
1,3,5-Trimethylbenzene	µg/L	NL	Avg of Initial + Confirmation	330	ND	ND	-	Yes
1,4-Dioxane	µg/L	NL	Avg of Initial + Confirmation	1	DNQ	ND	-	Yes
2-Chlorotoluene	µg/L	NL	Avg of Initial + Confirmation	140	ND	ND	-	Yes
2,4,6-Trinitrotoluene (TNT)	µg/L	NL	Avg of Initial + Confirmation	10	ND	ND	-	Yes
4-Chlorotoluene	µg/L	NL	Avg of Initial + Confirmation	140	ND	ND	-	Yes
Boron	µg/L	NL	Avg of Initial + Confirmation	1,000	300	ND	MW 1D MW-1AD MW-2D MW-2AD	Yes
Carbon Disulfide	µg/L	NL	Avg of Initial + Confirmation	1,000	ND	ND	-	Yes
Chlorate	µg/L	NL	Avg of Initial + Confirmation	800	330	ND	MW-1D	Yes
Diazinon	µg/L	NL	Avg of Initial + Confirmation	1.2	ND	ND	-	Yes
Dichlorodifluoro-methane (Freon 12)	µg/L	NL	Avg of Initial + Confirmation	1,000	ND	ND	-	Yes
Ethylene Glycol	µg/L	NL	Avg of Initial + Confirmation	14,000	ND	ND	-	Yes
Formaldehyde	µg/L	NL	Avg of Initial + Confirmation	100	ND	ND	-	Yes
HMX	µg/L	NL	Avg of Initial + Confirmation	350	ND	ND	-	Yes
Isopropylbenzene	µg/L	NL	Avg of Initial + Confirmation	770	ND	ND	-	Yes

Manganese	µg/L	NL	Avg of Initial + Confirmation	500	78	ND	MW-1AS	Yes. See **Section 6.2.5**
Methyl-isobutyl-keytone (MIBK)	µg/L	NL	Avg of Initial + Confirmation	120	ND	ND	-	Yes
Naphthalene	µg/L	NL	Avg of Initial + Confirmation	17	ND	ND	-	Yes
n-Butylbenzene	µg/L	NL	Avg of Initial + Confirmation	260	ND	ND	-	Yes
n-Nitrosodiethyl-amine (NDEA)	µg/L	NL	Avg of Initial + Confirmation	0.01	ND	ND	-	Yes
n-Nitrosodimethylamine (NDMA)	µg/L	NL	Avg of Initial + Confirmation	0.01	DNQ	ND	-	Yes
n-Nitrosodi-n-propylamine (NDPA)	µg/L	NL	Avg of Initial + Confirmation	0.01	ND	ND	-	Yes
Perfluorooctanoic acid (PFOA)	µg/L	NL	Avg of Initial + Confirmation	0.0051	ND	ND	-	Yes
Perfluorooctane sulfonate (PFOS)	µg/L	NL	Avg of Initial + Confirmation	0.0065	ND	ND	-	Yes
n-Propylbenzene	µg/L	NL	Avg of Initial + Confirmation	260	ND	ND	-	Yes
Propachlor	µg/L	NL	Avg of Initial + Confirmation	90	ND	ND	-	Yes
RDX	µg/L	NL	Avg of Initial + Confirmation	0.3	DNQ	ND	-	Yes
sec-Butlybenzene	µg/L	NL	Avg of Initial + Confirmation	260	ND	ND	-	Yes
tert-Butylbenzene	µg/L	NL	Avg of Initial + Confirmation	260	ND	ND	-	Yes
Tertiary-butyl-alcohol (TBA)	µg/L	NL	Avg of Initial + Confirmation	12	ND	ND	-	Yes
Vanadium	µg/L	NL	Avg of Initial + Confirmation	5	8.2	ND	MW-2AS	Yes
Pesticides								
4,4'-DDD	µg/L	-	-	-	ND	ND	-	N/A
4,4'-DDE	µg/L	-	-	-	ND	ND	-	N/A
4,4' -DDT	µg/L	-	-	-	ND	ND	-	N/A
Aldrin	µg/L	-	-	-	ND	ND	-	N/A
Alpha BHC	µg/L	-	-	-	ND	ND	-	N/A
Alpha Endosulfan	µg/L	-	-	-	ND	ND	-	N/A
Beta BHC	µg/L	-	-	-	ND	ND	-	N/A
Beta Endosulfan	µg/L	-	-	-	ND	ND	-	N/A
Chloropyrifos	µg/L	-	-	-	ND	ND	-	N/A
Chlorothalonil	µg/L	-	-	-	ND	ND	-	N/A
Chromium III	µg/L	-	-	-	6.9	ND	MW-2AS	N/A
Chromium VI	µg/L	-	-	-	4.4	DNQ	MW-2AS	N/A
Delta BHC	µg/L	-	-	-	ND	ND	-	N/A
Dieldrin	µg/L	-	-	-	ND	ND	-	N/A
Endosulfan Sulfate	µg/L	-	-	-	ND	ND	-	N/A
Endrin Aldehyde	µg/L	-	-	-	ND	ND	-	N/A
Acid Extractables								
2,4,6-Trichlorophenol	µg/L	-	-	-	ND	ND	-	N/A
2,4-Dichlorophenol	µg/L	-	-	-	ND	ND	-	N/A
2,4-Dimethylphenol	µg/L	-	-	-	ND	ND	-	N/A
2,4-Dinitrophenol	µg/L	-	-	-	ND	ND	-	N/A
2-Chlorophenol	µg/L	-	-	-	ND	ND	-	N/A
2-Nitrophenol	µg/L	-	-	-	ND	ND	-	N/A
4,6-Dinitro-o-Cresol (2-Methly-4,6-Dinitrophenol)	µg/L	-	-	-	ND	ND	-	N/A
4-Nitrophenol	µg/L	-	-	-	ND	ND	-	N/A

p-Chloro-m-Cresol (3-Methyl-4-Chlorophenol)	µg/L	-	-	-	ND	ND	-	N/A
Phenol	µg/L	-	-	-	ND	ND	-	N/A
Base/Neutral Extractables								
1,12-Benzoperylene (Benzo(g,h,i)-perylene)	µg/L	-	-	-	DNQ	ND	-	N/A
1,2,5,6-Dibenzanthracene (Dibenzo(a,h) anthracene)	µg/L	-	-	-	DNQ	ND	-	N/A
1,2-Diphenylhydrazine	µg/L	-	-	-	ND	ND	-	N/A
1,3-Dichlorobenzene	µg/L	-	-	-	ND	ND	-	N/A
2,4-Dinitrotoluene	µg/L	-	-	-	ND	ND	-	N/A
2,6-Dinitrotoluene	µg/L	-	-	-	ND	ND	-	N/A
2-Chloronaphthalene	µg/L	-	-	-	ND	ND	-	N/A
3,3'-Dichlorobenzidine	µg/L	-	-	-	ND	ND	-	N/A
4-Bromophenyl phenyl ether	µg/L	-	-	-	ND	ND	-	N/A
4-Chlorophenyl phenyl ether	µg/L	-	-	-	ND	ND	-	N/A
Acenaphthene	µg/L	-	-	-	ND	ND	-	N/A
Acenaphthylene	µg/L	-	-	-	ND	ND	-	N/A
Anthracene	µg/L	-	-	-	ND	ND	-	N/A
Benzidine	µg/L	-	-	-	ND	ND	-	N/A
Benzo(a)anthracene	µg/L	-	-	-	DNQ	ND	-	N/A
Benzo(b)fluoranthene	µg/L	-	-	-	DNQ	ND	-	N/A
Benzo(k)fluoranthene	µg/L	-	-	-	DNQ	ND	-	N/A
Bis(2-chloroethoxyl)-methane	µg/L	-	-	-	ND	ND	-	N/A
Bis(2-chloroethyl)ether	µg/L	-	-	-	ND	ND	-	N/A
Bis(2-chloroisopropyl)ether	µg/L	-	-	-	ND	ND	-	N/A
Butyl benzyl phthalate	µg/L	-	-	-	ND	ND	-	N/A
Chrysene	µg/L	-	-	-	ND	ND	-	N/A
Di(2-ethylhexyl) phthlate	µg/L	-	-	-	ND	ND	-	N/A
Dimethyl phthalate	µg/L	-	-	-	ND	ND	-	N/A
Di-n-butyl phthalate	µg/L	-	-	-	DNQ	ND	-	N/A
Di-n-octyl phthalate	µg/L	-	-	-	DNQ	ND	-	N/A
Fluoranthene	µg/L	-	-	-	ND	ND	-	N/A
Fluorene	µg/L	-	-	-	ND	ND	-	N/A
Hexachlorobutadiene	µg/L	-	-	-	ND	ND	-	N/A
Hexachloroethane	µg/L	-	-	-	ND	ND	-	N/A
Indeno(1,2,3-cd) pyrene	µg/L	-	-	-	DNQ	ND	-	N/A
Isophorone	µg/L	-	-	-	ND	ND	-	N/A
Nitrobenzene	µg/L	-	-	-	ND	ND	-	N/A
n-Nitrosodi-n-propylamine	µg/L	-	-	-	ND	ND	-	N/A
n-Nitrosodiphenylamine	µg/L	-	-	-	ND	ND	-	N/A
Phenanthrene	µg/L	-	-	-	ND	ND	-	N/A
Pyrene	µg/L	-	-	-	ND	ND	-	N/A
1,1-Dichloroethylene	µg/L	-	-	-	ND	ND	-	N/A
2-Chloroethyl vinyl ether	µg/L	-	-	-	ND	ND	-	N/A

Acrolein	µg/L	-	-	-	ND	ND	-	N/A
Acrylonitrile	µg/L	-	-	-	ND	ND	-	N/A
Chlorobenzene	µg/L	-	-	-	ND	ND	-	N/A
Chloroethane	µg/L	-	-	-	ND	ND	-	N/A
Methyl bromide	µg/L	-	-	-	ND	ND	-	N/A
Methyl chloride	µg/L	-	-	-	ND	ND	-	N/A
General Physical and General Minerals								
Asbestos	MFL	1° MCL	Running Annual Avg	7	0.19	ND	MW-1AS	Yes
Calcium	mg/L	N/A	N/A	N/A	66	11	MW-2AS	N/A
Chloride	mg/L	2° MCL	-	250 (Recommended) 500 (Upper)	112	37.5	MW-2AS	Yes
Copper	µg/L	1° MCL 2° MCL	Avg of Samples Collected in Monitoring Period	1,300 1,000	4.3	2	MW-1AS	Yes
Iron	µg/L	2° MCL	Running Annual Avg	300	440	10	-	Yes
Manganese	µg/L	2° MCL	Running Annual Avg	50	130	2.4	MW-1AS	No. See **Section 6.2.5**
Potassium	mg/L	N/A	N/A	N/A	3.7	1.3	MW-2AS	N/A
Sodium	mg/L	WQG	-	69	66	18	MW-2AS	Yes
Sulfate	mg/L	2° MCL	-	250	28	DNQ	MW-2AS	Yes
Zinc	µg/L	2° MCL	Running Annual Avg	5,000	DNQ	ND	-	Yes
Color	mg/L	2° MCL	Running Annual Avg	15	25	ND	MW-1AS	Yes*
Corrosivity	mg/L	N/A	N/A	N/A	1.23	-2.41	-	N/A
Foaming Agents	mg/L	2° MCL	Running Annual Avg	0.5	DNQ	ND	-	Yes
Odor	TON	2° MCL	Running Annual Avg	3	1	ND	-	Yes
Specific Conductance	µS/cm	2° MCL	-	900 (Recommended) 1,600 (Upper)	711	207	MW-2AS	Yes
TDS	mg/L	2° MCL	-	500 (Recommended) 1,000 (Upper)	66	18	MW-2AS	Yes
Hardness	mg/L	N/A	N/A	N/A	205	39	MW-2AS	N/A

** Elevated results are within historical levels, therefore, not attributed to the Project*



Figure 134. DIW-2

5.0 SUMMARY OF NON-COMPLIANCE

For any non-compliance during the previous calendar year, a description of:

i. The date, duration, and nature of the violation;
ii. A summary of any corrective actions and/or suspensions of subsurface application of recycled water resulting from a violation; and
iii. If uncorrected, a schedule for and summary of all pending and completed remedial actions.

5.1 Date, Duration, and Nature of Non-Compliance

There was one instance of non-compliance which resulted in the violation of a secondary drinking water MCL pertaining to manganese. MW-1AS has experienced episodic elevated manganese results since its startup in 2020. Manganese has a secondary drinking water MCL of 50 µg/L which is based on a running annual average as described in 22 CCR §64449. In 2022, MW-1AS manganese levels resulted in a running annual average of 59.7 µg/L, as reflected in **Table 122** and **Figure 122**.

The elevated results are believed not to be the result of Project operations for the following reasons:

1. **AWPF Product Water Quality:** The highest detection of manganese at AWPF since Project startup was 2 µg/L.
2. **Historic Water Quality:** The Seaside Basin has a well-documented history of elevated manganese levels that predate Project operations.
3. **Arrival of Project Water:** MW-1AS is an offsite, shallow monitoring well screened in the upper Paso Robles Aquifer. The MWs within the Paso Robles Aquifer would only be affected by Project injections via the VZW, which only account for approximately 2% of all Project injections. Due to these factors, travel times from the VZW to these offsite shallow monitoring wells are exceedingly long, as supported by the tracer studies conducted to validate underground travel time for compliance with pathogen reduction requirements. See **Section 7.0** for more information.
4. **Consultation with Local Experts:** In a discussion with Jon Lear, PG, CHG (MWPMD), it is not uncommon that as monitoring wells age minerals can precipitate onto the pump and metal column pipes that remain submerged. Pumps within the Project IWF monitoring wells are hung on a combination of metal and PVC column pipes to allow movement when they are started. This action could allow for some of that precipitate to come free from the pumps and column pipes, thus resulting in elevated detections observed.

Notwithstanding the above reasoning, M1W collected and analyzed confirmation samples, made necessary disclosures in monitoring reports per requirements outlined in 22 CCR §64449, and provided notification to DDW and the Regional Water Board. Other short-term exceedances not constituting violations and detections warranting further investigation and/or corrective action are discussed in **Section 6.0.** In addition, **Section 7.0** provides discussion of the Tracer Study findings and recharge water migration patterns which provides important context for understanding cases where detections and exceedances of water quality standards are not the result of Project operations.

6.0 DETECTIONS OF MONITORING CHEMICALS AND CONSTITUENTS IN GROUNDWATER MONITORING WELLS

Any detections of monitored chemicals or contaminants, and any observed trends in the monitoring wells...

The following section provides an overview of detections of monitored chemicals or contaminants at the 7 Project MWs. **Table 135** below provides an overview of the MW characteristics:

Table 135. Project Monitoring Wells

MW	Well Pair	Deep/Shallow	Onsite/Offsite	Aquifer
MW-1AD	DIW-1	Deep	Offsite	Santa Margarita
MW-1D	DIW-1	Deep	Onsite	Santa Margarita
MW-2AD	DIW-2	Deep	Offsite	Santa Margarita
MW-2D	DIW-2	Deep	Onsite	Santa Margarita
MW-1AS	VZ-1b	Shallow	Offsite	Paso Robles
MW-1S	VZ-1b	Shallow	Onsite	Paso Robles
MW-2AS	VZ-2	Shallow	Offsite	Paso Robles



Figure 135. Project Monitoring Well Sampling Event, Q4 2022

6.1 Existing Groundwater Quality in the Seaside Basin

Table 136 and **Figure 136** demonstrate that background water quality in the Seaside Basin has experienced documented historical exceedances that predate Project operations. Where applicable, these historical exceedances are noted in relation to detections experienced at Project MWs.

Table 2 - Existing Groundwater Quality in the Seaside Basin

Constituent	City of Seaside No.4	ASR-1	Ord Grove No. 2	Paralta	Basin-Wide Averages
Aluminum	50	50	26	50	42
Arsenic	1.2	1.8	2.0	2.5	2.1
Barium	28	100	100	100	94
Boron	46	95	132	96	108
Chloride	72	63	129	94	103
Chromium-total	3.6	9.3	10	10	9.1
Chromium VI	-	1.0	0.8	2.3	1.4
Lead	5	3.7	5.0	5.0	4.5
Nitrate as N	1.9	0.1	1.7	0.5	1.1
Sodium	50	60	94	79	79.7
Sulfate	13	77	63	58	54.9
TDS	237	406	524	435	449
TOC	0.5	1.0	0.6	0.6	0.7

**Source: averages of well water quality data submitted by MRPCA on November 9, 2016*

**Concentrations are in µg/L except chloride, nitrate, sodium, sulfate, TDS, and TOC, which are mg/L*

Figure 136. Existing Groundwater Quality in the Seaside Basin

6.2 Detections and Trends

Table 136. Historic Seaside Basin Water Quality Exceedances

Site	Group/Constituent Identification	Sampling Date	Result	MCL	Unit
MW-1AD	Odor Threshold @ 60 C	2018-12-13	40	3	TON
MW-1AD	Manganese	2020-02-26	55	50	µg/L
MW-1AD	Heptachlor	2019-02-26	0.015	0.01	µg/L
MW-1D	Odor Threshold @ 60 C	2018-12-06	32	3	TON
MW-1D	Odor Threshold @ 60 C	2019-02-25	67	3	TON
MW-1D	Odor Threshold @ 60 C	2020-02-27	4	3	TON
MW-1D	Nitrate (As N)	2018-12-06	17	10	mg/L
MW-1D	Nitrate + Nitrite (As N)	2018-12-06	17	10	mg/L
MW-2AD	Odor Threshold @ 60 C	2018-12-12	40	3	TON
MW-2AD	Odor Threshold @ 60 C	2019-02-26	100	3	TON
MW-2D	Odor Threshold @ 60 C	2018-07-09	8	3	TON
MW-2D	Odor Threshold @ 60 C	2019-02-28	40	3	TON
MW-2D	Odor Threshold @ 60 C	2020-02-26	4	3	TON
MW-2D	Manganese	2020-02-26	66	50	µg/L
MW-2D	Toluene	2018-07-09	290	150	µg/L
MW-2D	Turbidity, Laboratory	2018-07-09	46	5	NTU
MW-2D	Turbidity, Laboratory	2020-02-26	11	5	NTU

6.2.1 MW-1AD

Table 137. MW-1AD Detections and Trends

Well: MW-1AD **Deep/ Shallow:** Deep **On/Offsite:** Offsite **Aquifer:** Santa Margarita

Constituent	Highest Detection			Limit		Compliance Interval	Discussion
Constituents with Primary MCLs							
Barium	Feb	22	µg/L	1,000	µg/L	Running Annual Avg.	Barium detections in MW-1AD stabilized between 16 - 22 µg/L, well below the 1,000 µg/L primary MCL, a continued downward trend from 2021 (34 ug/L max in January / 16 µg/L low in December).
Fluoride	Feb	0.44	mg/L	2	mg/L	Running Annual Avg.	MW-1AD exhibited consistently elevated fluoride levels through 2022; however, the max detection was lower in 2022 (0.44 mg/L) than in 2021 (0.57 mg/L). The well continues to remain in compliance with a running annual average of 0.35 mg/L. A similar trend was observed at MW-2AD, which had the highest 2022 detection (see **Section 6.2.3**).
Gross Alpha	Q1	4.82	pCi/L	15	pCi/L	Running Annual Avg.	MW-1AD had a pronounced downward trend in gross alpha in 2022, having shown the max detection of all wells in 2021 at 7.15 pCi/L.
Nitrate N	Nov	0.3	mg/L	10	mg/L	Avg. Initial + Confirmation	MW-1AD shares the highest detection of 2022 for nitrate with MW-1D (see **Section 6.2.2**), however this is a reduction from the previous year maximum concentration of 2.47 mg/L.
Nitrite N	Q4	0.3	mg/L	1	mg/L	Avg. Initial + Confirmation	As with nitrate, MW-1AD exhibited the highest detection nitrite in 2022 alongside MW-1D. This is a reduction from the previous year max concentration of 0.84 mg/L.
Radium-226 & 228	Q2	0.64	pCi/L	5	pCi/L	Running Annual Avg.	MW-1AD along with all other MWs trended downward for Radium-226 and Radium 226 & 228 commencing at Q2 of 2022.
Strontium-90	Q1	1.08	pCi/L	8	pCi/L	Running Annual Avg.	Strontium-90 showed a notable downward trend from a max of 1.08 pCi/L in Q1 to a Q3 low of 0.29 pCi/L.
Tritium	Q3	376	pCi/L	20,000	pCi/L	Running Annual Avg.	Q3 tritium results at MW-1AD were the highest of 2022, although still well below the 20,000 pCi/L primary MCL.
Constituents with Secondary MCLs							
Manganese	Mar	74	mg/L	50	mg/L	Running Annual Avg.	In 2022, MW-1AD experienced a single sample exceedance of the manganese secondary MCL with a max detection of 74 mg/L. However, because compliance is determined based on a running annual average, this exceedance did not cause a violation.
Specific Conductance	Mar	260	µS/cm	1,600	µS/cm	-	MW-1AD showed a downward trend in specific conductance, sulfate, and TDS in 2022 with new highs well below 2021 max detections.
Sulfate	Jun	4.4	mg/L	250	mg/L	-	
TDS	Feb	170	mg/L	1,000	mg/L	-	

Constituents with NLs, Als, WQGs, and WQOs							
Boron	Q4	300	µg/L	750	µg/L	Avg. Initial + Confirmation	From Project startup, MW-1AD has experienced an upward trend in boron with a new max of 300 ug/L in 2022, shared with MW-1D, MW-2D, and MW-2AD. This is an increase from a previous max of 250 ug/L in 2021 and is the highest detection of boron in CY 2022, however still well below the WQG of 750 µg/L.
Calcium	Jan	15	mg/L	-	-	-	Calcium concentrations continued to trend downward from a 2021 max of 40 mg/L to a new 2022 max detection of 15 mg/L.
Hardness	Feb	70	mg/L	-	-	-	MW-1AD has continued to trend downward for hardness in 2022 from 137 mg/L max in 2021 high of 137 mg/L to a 2022 max of 70 mg/L.



Figure 137. IWF Sampling Event, Q4 2022

6.2.2 MW-1D

Table 138. MW-1D Detections and Trends

Well: MW-1D **Deep/ Shallow:** Deep **On/Offsite:** Onsite **Aquifer:** Santa Margarita

Constituent	Highest Detection			Limit		Compliance Interval	Discussion
Constituents with Primary MCLs							
Haloacetic Acid	Q3	2.8	µg/L	60	µg/L	Running Annual Avg.	Q3 MW-1D was the only haloacetic acid detection in 2022.
Nitrate N	Mar	2.9	mg/L	10	mg/L	Avg. Initial + Confirmation	Nitrate levels at MW-1D were consistently on the higher end of detections of all MWs, but still well below the 10 mg/L MCL.
Nitrite N	Sep	0.3	mg/L	1	mg/L	Avg. Initial + Confirmation	MW-1D exhibited the highest detection nitrite in 2022 alongside MW-1AD (See **Section 6.2.1**). This represents a downward trend from the previous year max of 0.86 mg/L, however is still well below the 1 mg/L MCL.
Total Nitrogen	Q2	2.9	mg/L	10	mg/L	Avg. Initial + Confirmation	Total nitrogen at MW-1D was consistently on the higher end of detections of all MWs but still well below the 10 mg/L MCL.
Constituents with Secondary MCLs							
Chloride	Sep	49	mg/L	250	mg/L	-	MW-1D and MW-2D (**Section 6.2.4**) continued to exhibit the lowest chloride, sulfate, specific conductance, and TDS concentrations at all MWs in both 2021 and 2022, consistent with the 11-day travel time. See **Section 7.0** for Tracer Study findings and conclusions and **Appendix F** for the accompanying report providing the travel time basis.
Specific Conductance	Aug	233	µS/cm	900	µS/cm	-	
Sulfate	Apr	8.7	mg/L	250	mg/L	-	
TDS	Jan	160	mg/L	1,000	mg/L	-	
Constituents with NLs, Als, WQGs, and WQOs							
Boron	Q1	300	µg/L	750	µg/L	Avg. Initial + Confirmation	MW-1D shares this max detection with MW-1AD, MW-2D, and MW-2AD. While it is the 2022 max, it is still well below the 750 µg/L WQG.
Chlorate	Q4	330	µg/L	800	µg/L	Avg. Initial + Confirmation	MW-1D exhibited the highest detection of chlorate in 2022 at 330 µg/L, a decrease from the 2021 high of 630 ug/L.
Hardness	Jan	46	mg/L	-	-	-	January 2022 hardness at MW-1D was among the lowest with a very similar trend observed at MW-2D. In 2020, MW-1D was noted as having the highest detection of hardness in February with a pronounced downward trend to 41 mg/L by December. In 2021 MW-1D had the lowest detections with a max of 21 mg/L.



Figure 138. DIW-1 & MW-1D

6.2.3 MW-2AD

Table 139. MW-2AD Detections and Trends

Well: MW-2AD **Deep/ Shallow:** Deep **On/Offsite:** Offsite **Aquifer:** Santa Margarita

Constituent	Highest Detection			Limit		Compliance Interval	Discussion
Constituents with Primary MCLs							
Fluoride	Feb	0.48	mg/L	2	mg/L	Running Annual Avg.	February fluoride was the max detection for 2022 however, the running annual average 0.37 mg/L was below the MCL.
Tritium	Q1	298	pCi/L	20,000	pCi/L	Running Annual Avg.	MW-2AD observed the highest detection in 2021 with a noticeable downward trend thereafter. Tritium detections continued to trend downward in 2022 with a max of 298 pCi/L and Q4 low of -154 pCi/L.
Constituents with Secondary MCLs							
Color	Jan	15	-	15	-	Running Annual Avg.	MW-2AD experienced one detection of color in 2022 at but not exceeding the secondary MCL of 15. Compliance is determined based on running annual average, which was calculated to be 1.7.
Specific Conductance	Jun	340	µS/cm	900	µS/cm	-	MW-2AD continued to exhibit a downward trend in specific conductance, sulfate, and TDS in 2022.
Sulfate	Jun	15	mg/L	250	mg/L	-	
TDS	Jun	200	mg/L	1,000	mg/L	-	
Constituents with NLs, Als, WQGs, and WQOs							
Boron	Q4	300	µg/L	750	µg/L	Avg. Initial + Confirmation	MW-2AD shares this max 2022 detection with MW-1D and MW-2D. While it is the 2022 max, it is still well below the 750 µg/L WQG.
Ethylene Glycol	Q1	320	µg/L	1,400	µg/L	Avg. Initial + Confirmation	Q1 2022 MW-2AD was the only ethylene glycol detection, however it was still well below the 1,400 µg/L NL.



Figure 139. DIW-2

6.2.4 MW-2D

Table 140. MW-2D Detections and Trends

Well: MW-2D **Deep/ Shallow:** Deep **On/Offsite:** Onsite **Aquifer:** Santa Margarita

Constituent	Highest Detection			Limit		Compliance Interval	Discussion
Constituents with Primary MCLs							
Arsenic	Jan-Dec	DNQ	µg/L	10	µg/L	Running Annual Avg.	An abrupt upward trend and equally abrupt subsequent downward trend of arsenic was observed at MW-2D in 2021 which M1W strongly suspected was a discrete short-term event related to the dissolution and subsequent reabsorption of arsenic in the geological formation due to the introduction of oxygenated recycled water. It is important to note that MW-2D is located directly adjacent to DIW-2, with an underground travel time of 4 days (see **Section 7.0**). Due to natural diffusion and mixing with existing groundwater, it is highly unlikely for similar arsenic levels to be observed in any well located outside the zone of direct influence of the recycled water signal as is the case at MW-2D. Nonetheless, M1W worked with DDW, the Regional Board and experts to further study arsenic mobilization to ensure protection of public health and safety. Milestones included: • **August 8, 2021** – M1W submitted an arsenic geochemical interaction analysis technical memorandum (TM) to the Regional Water Board, performed by Dr. Scott Fendorf of Stanford University on behalf of M1W (dated December 11, 2020). • **November 5, 2021** – Regional Board provided comments on the TM, requesting further investigation regarding implications of the "End of Life" scenario (cessation of Project injections). • **January 26, 2022** – M1W received approval of a scope of analysis to complete to address Regional Board comments. • **March 9, 2022** – MPWMD Hydrogeologic Consultant contracted with Dr. Fendorf to complete the approved scope of work. • **August 10, 2022** – M1W submitted the final report to DDW and Regional Board for review and comment (see **Appendix H**). • **August 23, 2022** – The Regional Board responded that the report addressed all concerns regarding arsenic mobilization and that no further action is needed at this time.

							In 2022, all results at MW-2D for Arsenic were ND or DNQ. This downward trend can be seen in all MWs (see **Table 92**). As a primary MCL with a documented history related to the Project MWs, M1W will continue to closely monitor arsenic results. However, as demonstrated by the 2022 trends, the temporary mobilization has been abated and all results are below the MCL.
Gross Alpha	Q1	4.03	pCi/L	15	pCi/L	Running Annual Avg.	MW-2D had the highest detection for gross alpha in 2022, however the detection was still well below the 15 pCi/L MCL.
Nickel	Jun	8.9	µg/L	100	µg/L	Running Annual Avg.	Only MW-2D experienced a nickel detection in 2022, however the detection was well below the 100 µg/L MCL.
Nitrate-N	Nov	3	mg/L	10	mg/L	Avg. Initial + Confirmation	Nitrate-N levels at MW-2D were consistently elevated, but still well below the 10 mg/L MCL in 2022. November results were the highest of the year and an increase from the start of the year, see **Table 102**.
Nitrate + Nitrite	Nov	3.1	mg/L	10	mg/L	Avg. Initial + Confirmation	Similar to nitrate trends, MW-2D exhibited consistently elevated nitrate + nitrite levels throughout 2022 that were well below the 10 mg/L MCL. See **Table 104**.
Radium-226 & 228	Q2	1.08	pCi/L	5	pCi/L	Running Annual Avg.	MW-2D along with all other MWs showed a downward trend of Radium-226, Radium-228, and Radium-226 & 228 concentrations commencing at Q2. All results were still well below the 5 pCi/L MCL.
Total Nitrogen	Q4	3.1	mg/L	10	mg/L	Avg. Initial + Confirmation	As with nitrate and nitrate + nitrite, total nitrogen concentrations observed at MW-2D in 2022 were among the highest of the year but still well below the 10 mg/L MCL, see **Table 84**.
Constituents with Secondary MCLs							
Chloride	Sep	48	mg/L	250	mg/L	-	As previously discussed, travel time from DIW-2 to MW-2D is 4 days and therefore MW-2D is highly influenced by the application of Project water, as evidenced by the continued low chloride, specific conductance, sulfate, and TDS concentrations at both wells from 2020 - 2022. See **Table 119** and **Section 7.0** for more information on recycled water migration patterns.
Specific Conductance	Apr	230	µS/cm	1,600	µS/cm	-	
Sulfate	Jun	1.5	mg/L	250	mg/L	-	
TDS	Jan	150	mg/L	1,000	mg/L	-	
Constituents with NLs, Als, WQGs, and WQOs							
Boron	Q4	300	µg/L	750	µg/L	Avg. Initial + Confirmation	MW-2D shares this max 2022 detection with MW-1D and MW-2AD. While it is the max detection, it is still well below the 750 µg/L WQG.
Chlorate	Q4	230	mg/L	800	mg/L	Avg. Initial + Confirmation	Similar to the trend observed at MW-1D, MW-2D experienced an increase in chlorate in 2022 with a 230 mg/L max. This detection is still well below the 800 mg/L NL.

Total Coliform	Q2	8.4	MPN/ 100 mL	2.2	MPN/ 100 mL	7-Day Median	In 2022, MW-2D was the only MW to experience coliform detections, one on 5/11/2022 and second on 11/16/2022. Neither was the result of Project water, however M1W took the following actions: • **5/11/2022** – routine quarterly sampling conducted. High winds documented during sampling and coliform results at AWPF PW preceding and following the detection were ND. • **5/12/2022** – M1W's contract lab notifies M1W that samples collected at MW-2D were detect for coliform at 1 MPN/100 mL, below the 2.2 MPN/100 mL WQO. M1W immediately implements corrective actions including disinfecting the well. • **5/13/2022** – Re-sampling conducted at the MW-2D 24 hours after disinfection. Two samples were collected, one for analysis by the onsite laboratory and one for analysis by the contract laboratory. Again, winds were noted during sampling. • **5/14/2022** – Both samples indicated a result of 23 MPN/100 mL. • **5/18/2022** – Well was disinfected allowing 24-hour contact time. • **5/19/2022** – Resampled the well following disinfection. • **5/20/2022** – Results of samples collected on 5/19/2022, analyzed by the contract laboratory and M1W laboratory, were 4.1 and 6 MPN/100 mL, respectively. • **5/24/2022** – MW-2D was disinfected again, including all physical well components, allowing 24-hour contact time. Due to high chlorine residual, M1W delayed resampling until the well could be purged and chlorine residual reduced. • **5/26/2022 –** Resampled the well following disinfection. • **5/27/2022** – Resample results were <1 MPN/100 mL. Samples collected on November 16, 2022, had a result of 1 MPN/100 mL, below the 2.2 MPN/100 mL Bain Plan WQO. While this detection was not the result of Pure Water Monterey, corrective actions were taken to disinfect the well. The well was resampled on November 28, 2022 and the result was non-detect. Note that AWPF PW daily total coliform monitoring results have been consistently ND since Project startup. The detections may be a result of conditions local to the site (e.g., rodent/animal activity). M1W and MPWMD are collaborating to develop a regular schedule for disinfecting MW-2D as a preventative action.



Figure 140. Backflush Basin

6.2.5 MW-1AS

Table 141. MW-1AS Detections and Trends

Well: MW-1AS **Deep/ Shallow:** Shallow **On/Offsite:** Offsite **Aquifer:** Paso Robles

Constituent	Highest Detection			Limit		Compliance Interval	Discussion
Constituents with Primary MCLs							
Arsenic	Apr	9.3	µg/L	10	µg/L	Running Annual Avg.	MW-1AS has experienced elevated arsenic levels which have not exceeded nor violated the 10 µg/L MCL since Project startup. In 2022, arsenic detections appear to be trending downwards with a running annual average of 7.8 µg/L. See **Table 92** and **Section 6.2.4** discussion regarding investigation of arsenic trends at Project wells.
Asbestos	Jan	0.19	MFL	7	MFL	Running Annual Avg.	MW-1AS continues to be the only Project well to experience asbestos detections. All detections were well below the 7 MFL MCL.
Barium	Sep	79	µg/L	1,000	µg/L	Running Annual Avg.	Barium detections at MW-1AS were among the highest in 2022, however still well below 1,000 µg/L MCL.
Constituents with Secondary MCLs							
Color	Jan	25	-	15	-	Running Annual Avg.	MW-1AS had 4 detections for color in 2022, one of which exceeded the secondary MCL. Compliance is based on a running annual average of 5 color units is below the MCL. Therefore, although there was a single sample exceedance, MW-1AS did not violate the MCL.
Copper	May	4.3	µg/L	1,000	µg/L	Running Annual Avg.	MW-1AS experienced the highest detection of copper in 2022 in May, with the remainder of the results being ND. This detection is well below the 1,000 µg/L 1,000 µg/L MCL.
Iron	Feb	440	µg/L	300	µg/L	Running Annual Avg.	In 2022, MW-1AS exhibited the highest detection of iron in at 440 µg/L, exceeding the secondary MCL; however, the running annual average was 264 µg/L, below the 300 µg/L MCL. See **Table 121.** These exceedances and elevated detections are not the result of the application of Project water, but rather the result of normal aging causing well components to precipitate metals like iron and manganese into the well column. Pumps in these MWs are hung on a combination of metal and PVC column pipes that allow for movement of the pumps when they are started that could allow for some of the precipitate to come free from the pumps and column pipes.
Manganese	Mar	130	µg/L	50	µg/L	Running Annual Avg.	In 2022, MW-1AS had the highest detection at 130 µg/L, above the 50 µg/L MCL. The running annual average for MW-1AS was calculated to be 60 µg/L, violating the 50 µg/L MCL. Similar to iron, these elevated

							detections and resulting violation are not the result of the application of Project water but instead well aging. See **Table 122** and **Section 5.0.**
Constituents with NLs, Als, WQGs, and WQOs							
Chloropicrin	Q2	2.7	µg/L	-	-	-	The Q2 2022 detection at MW-1AS was the only detection for chloropicrin in 2022.



Figure 141. DIW-3

6.2.6 MW-1S

Table 142. MW-1S Detections and Trends

Well: MW-1S **Deep/ Shallow:** Shallow **On/Offsite:** Onsite **Aquifer:** Paso Robles

Constituent	Highest Detection			Limit		Compliance Interval	Discussion
Constituents with Primary MCLs							
Benzo(A)pyrene	Q3	0.14	µg/L	0.2	µg/L	Running Annual Avg.	This is the first and only detection of benzo(a)pyrene in Project MWs since startup in 2020. This detection is below the 0.2 µg/L MCL.
Nitrate + Nitrite	Apr	3	mg/L	10	mg/L	Avg. Initial + Confirmation	MW-1S shares the highest Nitrate + Nitrite and Nitrate-N detections with MW-2D. See **Table 104**.
Nitrate-N	Apr	3	mg/L	10	mg/L	Avg. Initial + Confirmation	
TTHMS	Q4	0.92	µg/L	80	µg/L	Running Annual Avg.	MW-1S was the only well to observe detections for TTHMs in 2022 with 3 of the 4 quarters being detect with a slight upward trend from Q1 (0.51 µg/L) to Q3 (0.92 µg/L). All detections were well below the 80 µg/L MCL.
Constituents with Secondary MCLs							
Specific Conductance	Jan	300	µS/cm	900	µS/cm	-	MW-1S exhibited mid-range detections for specific conductance throughout 2022 from the start of the year high (300 µS/cm) to an end of year detection of 249 µS/cm.



Figure 142. DIW-3&4 Commissioning

6.2.7 MW-2AS

Table 143. MW-1AS Detections and Trends

Well: MW-2AS **Deep/ Shallow:** Shallow **On/Offsite:** Offsite **Aquifer:** Paso Robles Aquifer

Constituent	Highest Detection			Limit		Compliance Interval	Discussion
Constituents with Primary MCLs							
Aluminum	Jan	190	µg/L	1,000	µg/L	Running Annual Avg.	MW-2AS continued to exhibit the highest aluminum in any of the wells with a max of 190 µg/L. This detection is well below the 1,000 µg/L MCL.
Chromium	Jul	25	µg/L	25	µg/L	Running Annual Avg.	MW-2AS has consistently experienced the highest chromium detections, none of which has exceeded the 25 µg/L MCL.
Constituents with Secondary MCLs							
Chloride	Nov	112	mg/L	250	mg/L	-	MW-2AS continued to exhibit the highest chloride in 2022 as it had in 2021, with a new max of 112 mg/L.
Specific Conductance	Aug	711	µS/cm	900	µS/cm	-	MW-2AS continued to exhibit the highest specific conductance, sulfate, and TDS in 2022. None of the maximum detections for any of these constituents exceeded the secondary MCLs.
Sulfate	Nov	28	mg/L	250	mg/L	-	
TDS	Aug	416	mg/L	500	mg/L	-	
Constituents with NLs, Als, WQGs, and WQOs							
Calcium	Nov	66	mg/L	-	-	-	MW-2AS had the highest detections of calcium, chromium(iii), corrosivity, hardness, potassium, and sodium in 2022.
Chromium(iii)	Q3	6.9	µg/L	-	-	-	
Corrosivity	Aug	1.23	-	-	-	-	
Hardness	Nov	205	mg/L	-	-	-	
Potassium	Sep	3.7	mg/L			-	
Sodium	Q1-4	66	mg/L	69	mg/L	-	



Figure 143. DIW-4

6.3 Explanation of Sampling Schedule Variance

Per MRP R3-2020-0122, p. MRP-7:

> *"Quarterly monitoring for recycled water and groundwater must be performed during the months of February, May, August, and November… Should there be instances when monitoring cannot be done during these specified months, M1W must conduct the monitoring as soon as it can and state in the monitoring report the reason monitoring could not be conducted during the specified month."*

All quarterly monitoring for recycled water and groundwater was performed within the quarter, but not necessarily within the designated month. Accordingly, please note the following quarterly sampling schedule variances:

- Semi-Annual GW BOD and TSS were analyzed in May and November 2022 as required. However, were also inadvertently analyzed in August 2022.

7.0 DISCUSSION OF RECHARGE WATER MIGRATION PATTERNS

Information pertaining to the vertical and horizontal migration of the recharge in the monitoring wells…

In accordance with 22 CCR §60320.208(b), the Project can be credited with up to 1-log virus reduction for each month the injected recycled water is retained underground, depending on how the underground retention time is determined. Section 60320.208(d) allows GRRPs with subsurface application of recycled water to demonstrate the retention time underground through a tracer study utilizing either an intrinsic tracer or an added tracer. Table 60320.208 therein specifies that a tracer study conducted using an intrinsic tracer will receive 0.67-log virus reduction per month and a tracer study conducted using an added tracer will receive 1-log.

DIW-1 & 2 Added Tracer Study: On October 20, 2021, DDW conditionally accepted M1W's DIW-1&2 Added Tracer Study Workplan and the Regional Water Board issued an enrollment letter for coverage under the General Waiver for Specific Types of Discharges (R3-2019-0089) for Injected Tracer Study Compounds. Subsequently, on October 26, 2021, fluorescein dye was injected into DIW-1 and eosine dye was injected into DIW-2, marking the start of the DIW-1&2 Added Tracer Study. Dye concentrations were measured twice weekly at downgradient Project wells MW-1AD, MW-2AD, MW-1S, as well as at downgradient drinking water wells, Paralta and Ord Grove 2. See **Figure 144**.

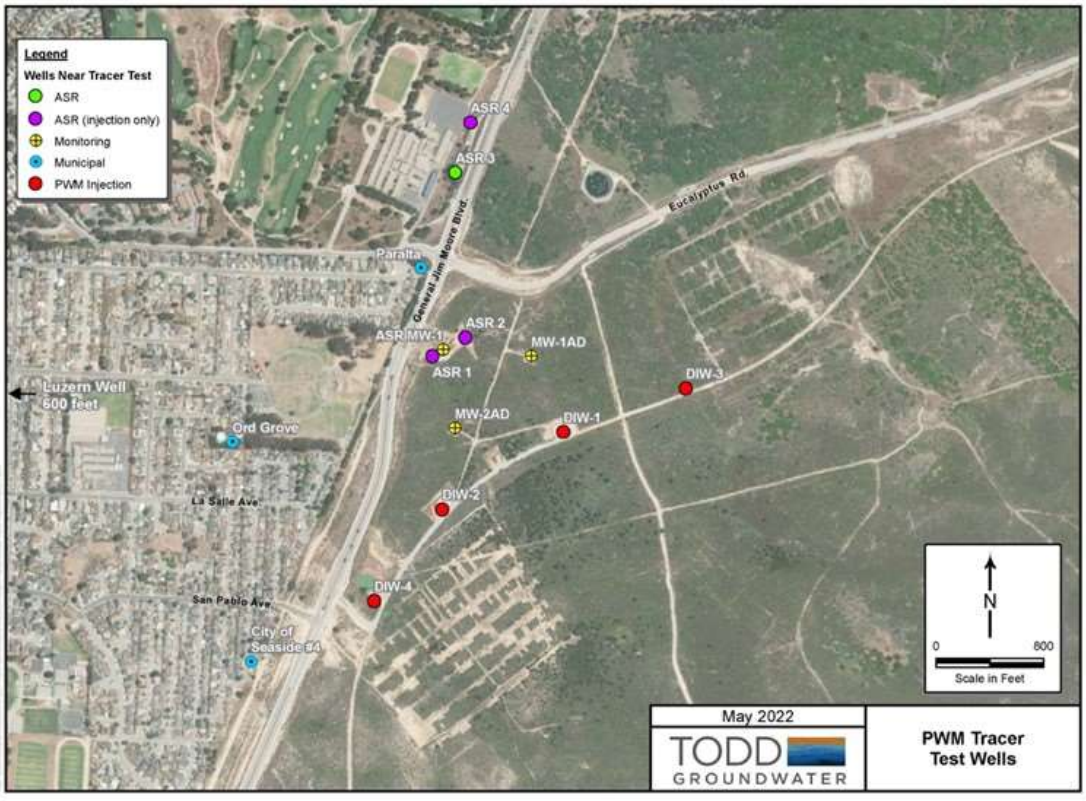


Figure 144. Tracer Study Test Wells

Results of the study were documented in a May 2022 Technical Memorandum[15] submitted to DDW and the Regional Water Board (**Appendix E**). Relevant findings included:

- Paralta is the nearest downgradient drinking water well from injection wells DIW-1 and DIW-2.
- The t_{10} travel time to Paralta was 4.6 months, more than double the regulatory minimum of 2 months. This reflects worst-case conditions in terms of travel time under a scenario injecting 4,300 AFY of Project water into the Basin.
- These results qualify injection at DIW-1 and DIW-2 for 4.6 virus log removal credits.
- Travel times from DIW-3 and DIW-4 to their respective nearest downgradient drinking water wells (Paralta and Ord Grove 2) are expected to be longer than the travel time from DIW-1 to Paralta based on a comparison of distances between the wells and their injection and extraction rates.[16]

DDW accepted the results of the DIW-1&2 Added Tracer Study On August 30, 2022, and results were used to calibrate the Watermaster Model with extrapolation for DIW-3 and DIW-4 to estimate travel times to other downgradient wells as shown in **Table 144**. With this acceptance, DDW granted a virus log reduction credit of 1.0 per month for operation of all four DIWs on the condition that intrinsic and added tracer studies be conducted on DIW-3 and DIW-4 to confirm the modeled results. Modeling conducted for the new injection well locations and quantities demonstrated that t_{10} travel times of at least 4 months could be achieved for all four deep injection wells while achieving 4,300 AFY of annual injection (see **Section 10.0** for more information).

Table 144. Simulated t_{10} Travel Times between DIWs and Downgradient Production Wells

Injection Well	Long Term Average Q (gpm)	Minimum t_{10} Travel Times (months)				
		Paralta	ASR-3	Ord Grove 2	Seaside Muni 4	Min t_{10} (months)
DIW-1	795	4.0	>24	--	--	4.0
DIW-2	330	7.3	>24	--	--	7.3

DIW-3&4 Intrinsic and Added Tracer Studies: The primary purposes of the DIW-3&4 Tracer Studies were to determine whether the calibrated model parameters for the area near DIW-1 and DIW-2 also represent aquifer conditions for DIW-3 and DIW-4, and to confirm the subsurface travel times to the nearest downgradient drinking water wells.

DIW-3&4 Intrinsic Tracer Study: M1W submitted and received approval of its DIW-3&4 Intrinsic Tracer Study Workplan in October 2022. For the DIW-3&4 Intrinsic Tracer Study, electrical conductivity (EC) was selected as a marker signal for Project water arrival because EC of Project water is much lower than native groundwater in the Santa Margarita Aquifer. The results of the DIW-3&4 Intrinsic Tracer Study would

[15] Todd Groundwater, *Technical Memorandum, SUBJECT: Pure Water Monterey Project Groundwater Replenishment Reuse Project Added Tracer Study Field Results.* May 6, 2022.

[16] Subsequently, the second Intrinsic and Added Tracer Studies for DIW-3 and DIW-4 demonstrated significantly longer travel times from DIW-3 and DIW-4 to the nearest extraction wells.

allow the use of 0.67 virus log removal credits per month of underground retention time. EC measurements were taken at DIW-3 the downgradient production well (ASR-3), DIW-4 downgradient production wells (Ord Grove and Seaside Muni 4), as well as at the AWPF product water pipeline supplying the IWF. The DIW-3&4 Intrinsic Tracer Study results as reported through early November 2022 indicate that Project water had not reached downgradient drinking water wells within 7.5 months (March – November 2022) from DIW-3 nor within 6.7 months (April – November 2022) from DIW-4. Other relevant conclusions submitted in a November 2022 Technical Memorandum[17] (**Appendix G**) to DDW and the Regional Board include:

- Project water injected at DIW-3 and DIW-4 did not reach any of the four potential downgradient drinking water wells within 6.7 months (DIW-4) to 7.5 months (DIW-3) following the start of injection.
- Injection and extraction conditions during the intrinsic tracer study were within the normal range of operating conditions of a year with low rainfall (such as the 2022 Water Year which was considered to be a drought year). The PWM injection rates for DIW-3 and DIW-4 were 53-76% of their long-term sustainable capacities. Conditions were also relatively conservative in terms of travel time because of the relatively high CalAm extraction rates (equal to the maximum monthly rate during 2021) and because of the absence of substantial recent or concurrent ASR injection (which would increase travel time).
- DIW-3 and DIW-4 qualify for 0.67 virus LRV credits per month of subsurface travel time measured by means of an intrinsic tracer. Applying that factor, DIW-3 qualifies for a virus LRV credit of 5.0 and DIW-4 qualifies for a virus LRV credit of 4.5.

These findings were also presented to the Monterey Peninsula Water Operations Committee (see **Section 15.1).**

DIW 3&4 Added Tracer Study: M1W initiated the DIW-3&4 Added Tracer Study concurrent with the DIW-3&4 Intrinsic Tracer Study as required by DDW's conditional acceptance of the modeled results for DIW-3 and DIW-4 underground travel times determined during the DIW-1&2 Added Tracer Study. DDW approved the DIW-3&4 Added Tracer Study Workplan on October 17, 2022. Subsequently, fluorescein dye was added to both DIW-3 and DIW-4 on October 25, 2022. As of the date of this report, samples were being collected from Ord Grove 2, Seaside Muni 4, ASR-3, and Paralta according to the schedule provided in the workplan. Dye had not been detected at any of those wells as of April 2023; however, MPWMD has stated it plans to continue sampling and analysis to improve their understanding of groundwater flow conditions.

Next Steps: M1W continues to work with DDW, the Regional Water Board, and MPWMD to understand the Project water migration patterns and how the operation of various water facilities within the Seaside Basin affect underground travel times.

[17] Todd Groundwater, *Technical Memorandum, SUBJECT: Pure Water Monterey Project Groundwater Replenishment Reuse Project, Intrinsic Tracer Study Results for Deep Injection Wells 3 and 4.* November 3, 2022.

8.0 NEAREST DRINKING WATER SUPPLY WELL TITLE 22 DRINKING WATER QUALITY DATA

Title 22 drinking water quality data for the nearest drinking water supply well…

On June 15, 2019, the Monterey Peninsula Water Management District (MPWMD) enacted Ordinance No. 183 which added Rule 20-E, establishing a zone of controlled drinking water well construction and a zone of potential controlled drinking water well construction related to the Project's injection of highly-purified water. The ordinance is available via MPWMD's website at the following link:

www.mpwmd.net/ordinances/final/ord183/Ordinance183.pdf.

The nearest drinking water supply well to the Project IWF is operated by California American (CalAm) Water to supply Public Water System (PWS) CA2710004. See **Appendix C** for a copy of the 2021 CalAm Water System Annual Consumer Confidence Report (CCR), an annual water quality report containing data that CalAm Water and all associated water suppliers collected during 2021. CCRs disclose what contaminants, if any, are detected in their drinking water as well as related health effects. CCRs also provide information on water sources and treatments applied. CCRs are due annually by July 1st of the year following the reporting year, thus the 2022 CalAm Water System CCR had yet to be published as of the date of this report. See also **Section 7.0** for a discussion of the vertical and horizontal migration of the recharge water plume.

9.0 OPERATIONAL CHANGES OF UNIT PROCESSES AND FACILITIES

A description of any changes in the operation of any unit processes or facilities…

There were no changes in the operation of any unit process or facility in 2022.

10.0 QUANTITY AND QUALITY OF RECYCLED WATER TO BE UTILIZED IN 2023

The estimated quantity and quality of the recycled water to be utilized for the next calendar year…

By submitting a Report of Waste Discharge in October 2021, M1W requested a permit amendment to its project-specific WDR/WRR Order No. R3-2017-0003 and revised MRP No. R3-2020-0122. The amendment request included, among other changes, an increase to the annual volumes of Seaside Basin groundwater injection from 3,700 AFY to 4,300 AFY. Upon approval from DDW and the Regional Board, M1W will inject up to 4,300 AFY in the Seaside Basin. The recent MRP update (September 2022) clarified that injection volumes can be accounted and reported on a water year basis. On December 19, 2022, DDW accepted M1W's proposed 4-month underground retention and travel time analysis corresponding to a 4-logs removal value (LRV of 4) for virus crediting (analysis assumed 4,300 AFY of injection), see **Section 7.0**.

11.0 LABORATORY INFORMATION

A list of analytical methods used for each test and associated laboratory quality assurance/quality control procedures. Identification of the laboratories used by M1W to monitor compliance with Order No. R3-2017-0003, their status of certification, and a summary of proficiency test…

11.1 Analytical Methods and Laboratory QA/QC Procedures

Table 145. Analytical Methods and Laboratory QA/QC Procedures

Laboratory	Method	QA/QC Parameter				
		Blank	Dup	LCS	MS/MSD	Sur/IS
DaviLabs	EPA 905.0			X		
Eberline	EPA 905.0	X	X	X		
Eurofins	EPA 1613B	X	X	X	X	X
Eurofins	EPA 180.1	X	X	X		
Eurofins	EPA 200.7	X	X	X	X	
Eurofins	EPA 200.8	X	X	X	X	X
Eurofins	EPA 218.6	X	X	X	X	X
Eurofins	EPA 300.1	X	X	X	X	X
Eurofins	EPA 317.0	X	X	X	X	
Eurofins	EPA 331	X	X	X	X	
Eurofins	EPA 504.1	X	X	X	X	X
Eurofins	EPA 505	X	X	X	X	X
Eurofins	EPA 515.4	X	X	X	X	X
Eurofins	EPA 521	X	X	X	X	X
Eurofins	EPA 522	X	X	X	X	X
Eurofins	EPA 524.2	X	X	X	X	X
Eurofins	EPA 525	X	X	X	X	X
Eurofins	EPA 531.1	X		X		X
Eurofins	EPA 537.1	X	X	X	X	X
Eurofins	EPA 547	X		X	X	
Eurofins	EPA 548.1	X	X	X	X	
Eurofins	EPA 549.2	X		X	X	
Eurofins	EPA 551.1	X	X	X	X	X
Eurofins	EPA 556	X	X	X	X	X
Eurofins	EPA 624	X	X	X	X	X
Eurofins	EPA 625	X	X	X	X	X
Eurofins	EPA 8015 B	X	X	X	X	
Eurofins	EPA 900.0	X	X	X	X	
Eurofins	EPA 903.1/EPA 904.0	X	X	X		
Eurofins	EPA 906.0	X	X	X	X	
Eurofins	LC-MS-MS	X	X	X	X	X
Eurofins	SM 2120 B	X	X			
Eurofins	SM 2150 B	X	X			
Eurofins	SM 2320 B	X	X	X	X	
Eurofins	SM 2510 B	X	X	X		
Eurofins	SM 2540 C	X	X	X		
Eurofins	SM 4500-CN E					
Eurofins	SM 4500-CN F	X	X	X		
Eurofins	SM 5540 C	X	X	X	X	
Eurofins	SM 6251B	X	X	X	X	X
FGL	EPA 903.1/EPA 904.0	X	X	X		
FGL	EPA 906.0	X		X	X	
LATesting	EPA 100.2	X				

MBAS	EPA 1664 B	X		X	X	
MBAS	EPA 200.7	X	X	X	X	X
MBAS	EPA 200.8	X	X	X	X	X
MBAS	EPA 300.0	X	X	X	X	X
MBAS	EPA 314.0	X	X	X	X	
MBAS	EPA 351.2	X	X	X	X	X
MBAS	OIA-1677-09	X	X	X	X	
MBAS	SM 2120 B	X	X	X		
MBAS	SM 2130 B	X	X	X		
MBAS	SM 2320 B	X	X	X		
MBAS	SM 2510 B		X	X		
MBAS	SM 2540 C	X	X	X		
MBAS	SM 2540 D	X	X	X	X	X
MBAS	SM 4500-Cl G	X	X	X	X	X
MBAS	SM 4500-H+ B	X	X	X	X	X
MBAS	SM 4500-N org C	X	X	X	X	
MBAS	SM 5210 B	X		X		
MBAS	SM 5310 C	X	X	X	X	X
MBAS	SM 5540 C	X	X	X	X	
MBAS	SM 5910 B	X	X	X	X	X
MBAS	SM 9223 B	X	X	X	X	X
McCampbell	EPA 314.0	X	X	X	X	X
Trusselltech	PrestoBlue	X	X		X	
Weck	EPA 1613B	X	X	X	X	X
Weck	EPA 218.6	X	X	X	X	X
Weck	EPA 300.1	X	X	X	X	X
Weck	EPA 314.0	X		X	X	
Weck	EPA 317.0	X		X	X	
Weck	EPA 504.1	X	X	X		X
Weck	EPA 505	X	X	X		X
Weck	EPA 508	X	X	X	X	X
Weck	EPA 515.4	X	X	X	X	X
Weck	EPA 521	X	X	X	X	X
Weck	EPA 522	X	X	X	X	X
Weck	EPA 524.2	X	X	X	X	X
Weck	EPA 525	X	X	X	X	X
Weck	EPA 531.1	X		X	X	X
Weck	EPA 537.1	X	X	X	X	X
Weck	EPA 547	X	X	X	X	X
Weck	EPA 548.1	X	X	X	X	X
Weck	EPA 549.2	X	X	X	X	X
Weck	EPA 551.1	X	X	X	X	X
Weck	EPA 552	X	X	X	X	X
Weck	EPA 556	X	X	X	X	X
Weck	EPA 624	X	X	X	X	X
Weck	EPA 625	X	X	X	X	X
Weck	EPA 8015 B	X	X	X	X	X
Weck	EPA 8315A	X	X	X		
Weck	EPA 900.0	X		X	X	
Weck	LC-MS-MS	X	X	X	X	X

Dup = Sample Dup, LCS Dup or Rep
LCS = LFB, SB, ICV or CCV
MS/MSD = MS or MS/MSD
Sur/IS= Surrogate and/or Internal Standard



Figure 145. 2022 M1W ELAP Onsite Assessment

11.2 Laboratories Utilized

Table 146, below provides a list of the laboratories used by M1W to monitor compliance with Order No. RE-2017-0003. See **Appendix B** for laboratory ELAP certifications.

Table 146. Laboratories Utilized

Davi Laboratories, Environmental Associates ELAP #1438 730 Alfred Nobel Dr Hercules, CA 94547	Eurofins Sacramento, ELAP #2897 880 Riverside Parkway West Sacramento, CA 95605
Eberline Analytical Corp., ELAP #2912 601 Scarboro Rd Oak Ridge TN 37830	Eurofins TestAmerica Savannah, ELAP #2939 5102 LaRoche Avenue Savannah, GA 31404
EMSL Analytical, Inc., ELAP #2283 520 Mission Street South Pasadena, CA 91030	Eurofins TestAmerica St. Louis, ELAP #2886 13715 Rider Trail North Earth City, MO 63045
Eurofins Calscience, LLC, ELAP #2944 7440 Lincoln Way Garden Grove, CA 92841-1427	FGL, ELAP # 1573 853 Corporation Street Santa Paula, CA 93060
Eurofins Calscience, ELAP #2706 17461 Derian Avenue Irvine, CA 92614-5817	Monterey Bay Analytical Services, ELAP #2385 4 Justin Court, Suite D Monterey, CA 93940
Eurofins CEI, Inc., ELAP #2483 730 SE Maynard Road Cary, NC 27511	McCampbell Analytical, Inc., ELAP # 1644 1534 Willow Pass Road Pittsburg, CA 94565
Eurofins Eaton Analytical, LLC – Monrovia, ELAP #2813 750 Royal Oaks Drive, Suite 100 Monrovia, CA 91016	Pace Analytical Services, ELAP #2950 1638 Roseytown Road Greensburg, PA 15601
Eurofins Eaton Analytical, LLC, ELAP #2920 110 South Hill Street South Bend, IN 46617	Trussell Technologies, Inc. 232 North Lake Avenue Suite 300 Pasadena, CA 91101
Eurofins Lancaster Laboratories Environment Testing, LLC ELAP #2792 2425 New Holland Pike Lancaster, PA 17601	Weck Laboratories, ELAP #1132 14859 East Clark Avenue City of Industry, CA 91745

11.3 Proficiency Tests

Once per year laboratories are required to obtain an "Acceptable" PT score for each Field of Testing (FOT) the laboratory is applying for or currently accredited for. See **Appendix A** which provides a OneDrive link to access proficiency test documentation for laboratories utilized for compliance with WDR/WRR Order No. R3-2017-0003 and MRP R3-2020-0122. See **Figure 146** which provides 2022 proficiency renewal certificates.



Figure 146. 2022 M1W Proficiency Testing & Certificate Renewal

12.0 STAFFING

A list of current operating personnel, their responsibilities, and their corresponding grade certification.

The AWPF is located on the RTP property, where M1W's existing operations staff are based. The RTP serves as the operations and maintenance hub for the AWPF. The existing control room at the RTP has human-machine interface (HMI) screens used to monitor and operate the AWPF. There is also a local HMI in the AWPF Membrane Process Building and Operators at the AWPF have mobile tablets and laptop computers to remotely access the supervisory control and data acquisition (SCADA) system screens to monitor and control the facility.

The AWPF is operated and monitored 24 hours per day, 7 days per week by the M1W Operations Department. MCWD staff operate and maintain the conveyance pipeline and reservoir. **Table 147** lists the staff responsible for operating the RTP and the AWPF including their names, titles, and certifications.

Table 147. Operational Personnel, Responsibilities, and Certifications

Title	Name	Certificate #	Certification Type
Chief Plant Operator	Jose Guzman	V-28470	WWTP Operator
Operations Supervisor	Nathan Clark	V-28858	WWTP Operator
		AWT3-185	Advanced Water Treatment Operator
Operations Supervisor	David Bradley	V-29017	WWTP Operator
		AWT5-123	Advanced Water Treatment Operator
Sr. WWTP Operator	Neil Steiner	V-42403	WWTP Operator
		II-T2-40374	Water Treatment Operator
Sr. WWTP Operator	Garon Goularte	V-28342	WWTP Operator
		AWT3-159	Advanced Water Treatment Operator
WWTP Operator III	Mike Swearingen	III-10926	WWTP Operator
WWTP Operator III	Jaime Hernandez	V-10382	WWTP Operator
WWTP Operator III	Ilya Levitin	V-40970	WWTP Operator
WWTP Operator III	Lucas Martin	III-43531	WWTP Operator
WWTP Operator III	Nicholas Norman	III-43479	WWTP Operator
WWTP Operator III	Javier Robledo	III-43631	WWTP Operator
		AWT3-217	Advanced Water Treatment Operator
WWTP Operator III	Juan Carlos Rocha	III-42675	WWTP Operator
		II-D2-45020	Water Treatment Operator
		II-T2-36682	Water Distribution Operator
WWTP Operator III	Freddy Mendez	III-39834	WWTP Operator
WWTP Operator III	Stefan Wilson	III-42213	WWTP Operator
WWTP Operator II	Sean Huang	III-44009	WWTP Operator
		II-D2-50606	Water Distribution Operator
		II-T2-41828	Water Treatment Operator
WWTP Operator II	Derrik Treur	II-44249	WWTP Operator
WWTP Operator III	Josh Meininger	III-44926	WWTP Operator
WWTP Operator II	Jose Miguel Rosas	V-41267	WWTP Operator
WWTP Operator II	Jacob Regester	II-45181	WWTP Operator
Operator In Training (OIT)	Francisco Valenzuela	-	WWTP OIT
Operator In Training (OIT)	Juan Delgado	-	WWTP OIT



Figure 147. M1W Operator Assists UV System Optimization, Q4 2022

13.0 REPORT PREPARERS

The Annual Report must be prepared by a properly qualified engineer registered and licensed in California and experienced in the field of wastewater treatment.

Table 148 below lists the staff who contributed to the preparation of this Annual Summary Report, including properly qualified engineers registered and licensed in California and field experts consulted.

Table 148. Report Preparers

Name	Title
Tamsen McNarie	Assistant General Manager
Jose Guzman	Chief Plant Operator
Joanne Y. Le	Lab & Environmental Services Manager
Jennifer Gonzalez, P.E.	Engineering Manager
Alison Imamura, P.E.	Principal Engineer
Sarah McGinnis	QA/QC Analyst
Sarah Stevens	Compliance Analyst
Experts Consulted	
Name	**Title, Entity**
Jonathan Lear, P.G., CHG	Water Resources Division Manager, MPWMD
Maureen Hamilton, P.E.	District Engineer, MPWMD



Figure 148. 2022 ASCE OPAL Award

14.0 SUMMARY OF MONITORING REPORTS, REPORTING, AND TREND ANALYSES

A summary of monitoring reports, reporting, and trend analysis, to describe the changes in water quality and contrast them to background measurements for all constituents exceeding MCLs or where concentration trends increase after the addition of recycled water. Specifically describe studies or investigations made to identify the source, fate and transport path of constituents which exceed the MCL at monitoring wells.

See **Section 6.0** for a summary of trend analysis describing the changes in water quality. Monitoring reports have been successfully submitted by M1W and associated contractors on a monthly and quarterly basis throughout 2022. Reports of the Tracer Studies have been submitted to the Regional Water Board and DDW by Todd Groundwater as discussed in **Section 7.0**. Any MCL exceedances were reported to DDW and the Regional Water Board via email when M1W became aware and were discussed in the quarterly reports as well as in **Section 6.0** of this Annual Report.

15.0 INTER-AGENCY COORDINATION

M1W must submit to DDW and the Central Coast Water board a summary of coordination activities with Marina Coast Water District on the operation and maintenance of the Product Water Pipeline and the Purified Water Reservoir necessary for the protection of the product water for injection. At a minimum, M1W must be kept informed of the status of testing and maintenance of backflow preventers on the Product Water Pipeline, occurrence of backflow incidents (if any), and maintenance activities of the Purified Water Reservoir.

15.1 Monterey Peninsula Water Operations Meetings

From July 2020 to December 2022, Project stakeholders regularly met at the Seaside Water Quality and Operations Committee meetings to share Project updates, discuss water quality, and other topics as necessary. The Seaside Water Quality and Operations Committee meetings included representatives from the following entities:

- M1W
- MPWMD
- CalAm
- MCWD
- City of Seaside
- MCWRA
- Seaside Basin Watermaster
- Regional Board
- SWRCB, DDW
- Local DDW District 05

In a December 2022 meeting between M1W, MPWMD, and DDW (Recycled Water Unit and Local District 5), DDW staff requested that M1W and MPWMD foster better information sharing with CalAm and the City of Seaside to ensure all parties are aware of Seaside Basin status and activities, including Project injection operations and compliance status.

The Seaside Basin Water Quality and Operations meetings had focused on Project operations and compliance, however, in recognition that all water supply infrastructure within the Seaside Basin is interrelated, this meeting was modified to expand the scope of information shared to include current, planned, and future water facility operation in the Seaside Basin so that all water facility operators can effectively plan. Subsequently, the Monterey Peninsula Water Operations Committee (MPWOC) was established replacing the Seaside Basin Water Quality and Operations meetings. The MPWOC held its first meeting on March 29, 2023.

MPWMD will lead these new meetings following their Quarterly Water Supply Strategy and Budget Meetings, which prescribe production within CalAm's Main and Laguna Seca Subarea systems and are cooperatively developed with MPWMD, Cal Am, National Marine Fisheries Services, the State Water Resources Control Board Division of Water Rights, and the California Department of Fish and Wildlife.

MPWMD staff is responsible for ensuring that designated staff from each Public Water System listed below are duly notified and invited to attend the quarterly MPWOC meetings:

Table 149. Monterey Peninsula Water Operations Committee Stakeholders

Agency/Role	Name/Title/Contact	Name/Title/Contact
MPWMD	Jonathan Lear Water Resources Division Manager jlear@mpwmd.net	Maureen Hamilton District Engineer mhamilton@mpwmd.net
CalAm	Jack Wang Director, Water Quality & Env. Compliance Jack.Wang@amwater.com	Chris Cook Director of Operations Christopher.Cook@amwater.com
City of Seaside	Nisha Patel Public Works Director / City Engineer npatel@ci.seaside.ca.us	Monty Miller Utilities Field Supervisor mmiller@ci.seaside.ca.us
MCWD	Garrett Haertel District Engineer ghaertel@mcwd.org	Derek Cray O&M Manager dcray@mcwd.org
Seaside Groundwater Basin Watermaster	Robert Jaques Technical Program manager Bobj83@comcast.net	Laura Paxton Administrative Officer watermasterseaside@sbcglobal.net
DDW – Recycled Water Unit	Sherly Rosilela Senior Water Resource Control Engineer Sherly.Rosilela@waterboards.ca.gov	Ginachi Amah Recycled Water Unit Supervisor Ginachi.Amah@waterboards.ca.gov
DDW – District 5	Querube Moltrop Querube.Moltrup@waterboards.ca.gov	Jonathan Weininger Monterey District Engineer Jonathan.Weininger@waterboards.ca.gov
Regional Water Board	James Bishop Engineering Geologist James.Bishop@waterboards.ca.gov	Harvey Packard Permitting Unit Manager Harvey.Packard@waterboards.ca.gov
	Jennifer Epp Sr. Water Resources Control Engineer Program Mgr. Jennifer.Epp@waterboards.ca.gov	--
Monterey County EHD	Roger Van Horn Drinking Water Programs Manager VanHornRW@co.monterey.ca.us	Cheryl Sandoval Drinking Water Protection Svcs. Sup. Sandovalcl@co.monterey.ca.us

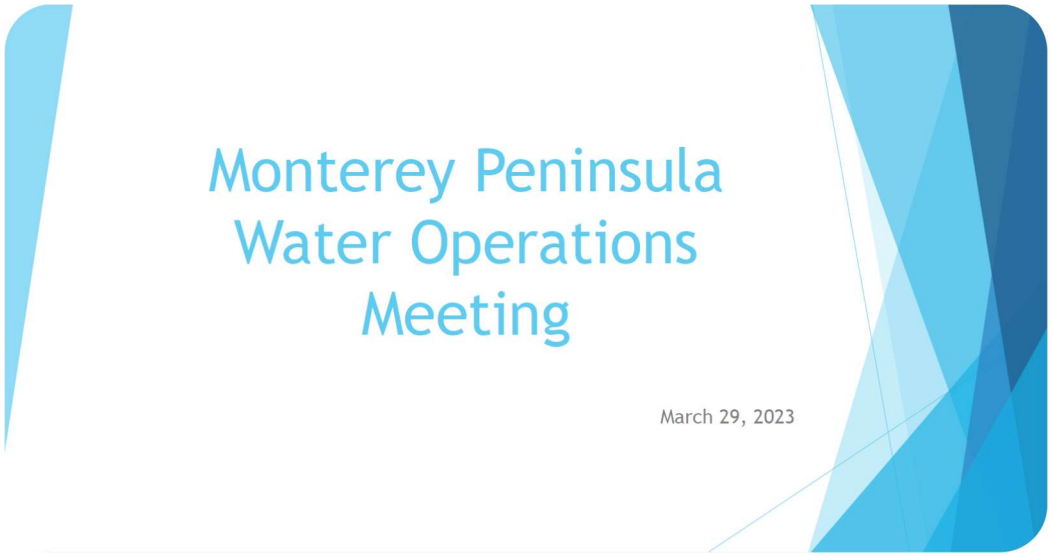


Figure 149. Monterey Peninsula Water Operations Slide Deck, March 29, 2023

Example Agenda

1. *Volumetric Operation*
    a. *PWM – injection volume, planned injection volume, anomalies that have/would affect injection volume, projects that will affect volumes.*
    b. *Current and planned deliver of product water to MCW for urban irrigation.*
    c. *MPWMD's ASR – injection volume, planned injection volume, anomalies that have/would affect injection volume, projects that will affect volumes*
    d. *CalAm's ASR – production volume, planned production volume, anomalies that have/would affect production volume, projects that will affect volumes*
    e. *CalAm and City of Seaside – Production wells volume, planned production volume, anomalies that have/would affect production volume, projects that will affect volumes.*
2. *Water Quality Monitoring*
    a. *PWM product water quality summary*
    b. *Monitoring well anomalies*
3. *Future longer term projects (e.g. ASR4, additional 600 afa, new extraction wells), in alphabetical order*
    a. *Cal Am*
    b. *City of Seaside*
    c. *Marina Coast Water District*
    d. *Monterey One Water*
    e. *Monterey Peninsula Water Management District*
    1. *Banked water*
    2. *Travel time*
    3. *Next agenda*

In addition, CalAm, MPWMD, and M1W management are scheduled to meet on the 4th Wednesday of each month and that meeting includes an agenda item regarding regulatory compliance.

15.2 Coordination with MCWD

M1W and MCWD initiated a separate monthly meeting to discuss the conveyance pipeline and Blackhorse Reservoir operations. See **Appendix I** for 2022 MCWD Blackhorse Reservoir Inspection and Backflow Testing Records as summarized below.

15.2.1 Testing and Maintenance of Backflow Preventers

Backflow testing was conducted on 5 devices in 2022, no deficiencies were found.

15.2.2 Occurrences of Backflow Incidents

No backflow incidents occurred in 2022.

15.2.3 Maintenance Activities of the Purified Recycled Water Reservoir

MCWD performs quarterly inspections of the recycled water reservoir (Blackhorse Reservoir). These inspection schedules are incorporated into MCWD's Computerized Maintenance Management System (CMMS).

16.0 CERTIFICATION STATEMENT

I certify under penalty of law that this document, including all attachments and supplemental information, was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment.

Executed on the 27th day of April 2022 at 12:00pm

Jose O. Guzman *(Signature)*

Jose O. Guzman
Chief Plant Operator

Monterey One Water
Providing Cooperative Water Solutions

Appendix A. Laboratory Proficiency Test Documentation

Laboratory Proficiency Test Documentation can be accessed via OneDrive below:

https://mrwpca1.sharepoint.com/:f:/s/Compliance/EqMUybDIqM9DgKlnKKQm9qwBzdDMoQEs8vfYy9uOuHI9Tg?e=bEAvhE

Monterey One Water
Providing Cooperative Water Solutions

Appendix B. Laboratory ELAP Certificates

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

Accredited Fields of Testing

Weck Laboratories, Inc.

14859 East Clark Avenue

City of Industry, CA 91745

Phone: (626) 336-2139

Certificate No. **1132**

Expiration Date **3/31/2022**

***As of 4/7/2020, this list supersedes all previous lists for this certificate number.**

Customers: Please verify the current accreditation standing with the State.

Field of Testing: 101 – Microbiology of Drinking Water

Subgroup Code	Analyte Code	Analyte	Method
101.010	001	Heterotrophic Bacteria	SM 9215 B
101.020	004	Total Coliform (Enumeration)	SM 9221 B, C
101.020	005	Fecal Coliform (Enumeration)	SM 9221 B, E
101.020	006	E. coli (Enumeration)	SM 9221 B, F
101.050	001	Total Coliform P/A	SM 9223 B Colilert
101.050	002	E. coli P/A	SM 9223 B Colilert
101.050	003	Total Coliform (Enumeration)	SM 9223 B Colilert
101.050	004	E. coli (Enumeration)	SM 9223 B Colilert
101.050	005	Total Coliform P/A	SM 9223 B Colilert 18
101.050	006	E. coli P/A	SM 9223 B Colilert 18
101.050	007	Total Coliform (Enumeration)	SM 9223 B Colilert 18
101.050	008	E. coli (Enumeration)	SM 9223 B Colilert 18
101.050	009	Total Coliform P/A	SM 9223 B Colisure
101.050	010	E. coli P/A	SM 9223 B Colisure
101.140	001	Enterococci	SM 9230 B
101.170	001	Enterococci	Enterolert

Field of Testing: 102 – Inorganic Chemistry of Drinking Water

Subgroup Code	Analyte Code	Analyte	Method
102.020	001	Turbidity	EPA 180.1
102.026	001	Calcium	EPA 200.7
102.026	002	Magnesium	EPA 200.7

Subgroup Code	Analyte Code	Analyte	Method
102.026	003	Potassium	EPA 200.7
102.026	004	Silica	EPA 200.7
102.026	005	Sodium	EPA 200.7
102.026	006	Hardness (Calculation)	EPA 200.7
102.030	001	Bromide	EPA 300.0
102.030	003	Chloride	EPA 300.0
102.030	005	Fluoride	EPA 300.0
102.030	006	Nitrate (as N)	EPA 300.0
102.030	007	Nitrite (as N)	EPA 300.0
102.030	009	Sulfate (as SO4)	EPA 300.0
102.040	001	Bromide	EPA 300.1
102.040	002	Chlorite	EPA 300.1
102.040	003	Chlorate	EPA 300.1
102.040	004	Bromate	EPA 300.1
102.045	001	Perchlorate	EPA 314.0
102.047	001	Perchlorate	EPA 331.0
102.048	001	Perchlorate	EPA 332.0
102.050	001	Cyanide, Total	EPA 335.4
102.060	001	Nitrate (as N) (Calculation)	EPA 353.2
102.061	001	Nitrite (as N)	EPA 353.2
102.070	001	Phosphate, Ortho (as P)	EPA 365.1
102.086	001	Dissolved Organic Carbon (DOC)	EPA 415.3 Revision 1.2
102.086	002	Specific UV Absorbance SUVA	EPA 415.3 Revision 1.2
102.086	003	Organic Carbon-Total (TOC)	EPA 415.3 Revision 1.2
102.086	004	UV254	EPA 415.3 Revision 1.2
102.090	001	Bromate	EPA 557
102.100	001	Alkalinity	SM 2320 B-1997
102.130	001	Specific Conductance	SM 2510 B-1997
102.140	001	Residue, Filterable TDS	SM 2540 C-1997
102.175	001	Chlorine, Free	SM 4500-Cl G-2000
102.175	002	Chlorine, Total Residual	SM 4500-Cl G-2000
102.180	001	Chlorine Dioxide	SM 4500-ClO2 D-2000
102.203	001	Hydrogen Ion (pH)	SM 4500-H+ B-2000
102.260	001	Organic Carbon-Total (TOC)	SM 5310 B-2000
102.261	001	Dissolved Organic Carbon (DOC)	SM 5310 B-2000
102.270	001	Surfactants	SM 5540 C-2000
102.280	001	UV254	SM 5910 B-2011
102.570	001	Cyanide, Free	OIA-1677, DW

Field of Testing: 103 – Toxic Chemical Elements of Drinking Water

Subgroup Code	Analyte Code	Analyte	Method
103.130	001	Aluminum	EPA 200.7

Subgroup Code	Analyte Code	Analyte	Method
103.130	003	Barium	EPA 200.7
103.130	007	Chromium	EPA 200.7
103.130	008	Copper	EPA 200.7
103.130	009	Iron	EPA 200.7
103.130	011	Manganese	EPA 200.7
103.130	012	Nickel	EPA 200.7
103.130	015	Silver	EPA 200.7
103.130	017	Zinc	EPA 200.7
103.130	018	Boron	EPA 200.7
103.140	001	Aluminum	EPA 200.8
103.140	002	Antimony	EPA 200.8
103.140	003	Arsenic	EPA 200.8
103.140	004	Barium	EPA 200.8
103.140	005	Beryllium	EPA 200.8
103.140	006	Cadmium	EPA 200.8
103.140	007	Chromium	EPA 200.8
103.140	008	Copper	EPA 200.8
103.140	009	Lead	EPA 200.8
103.140	010	Manganese	EPA 200.8
103.140	011	Mercury	EPA 200.8
103.140	012	Nickel	EPA 200.8
103.140	013	Selenium	EPA 200.8
103.140	014	Silver	EPA 200.8
103.140	015	Thallium	EPA 200.8
103.140	016	Zinc	EPA 200.8
103.140	017	Boron	EPA 200.8
103.140	018	Vanadium	EPA 200.8
103.140	019	Strontium	EPA 200.8
103.160	001	Mercury	EPA 245.1
103.310	001	Chromium (VI)	EPA 218.6
103.311	001	Chromium (VI)	EPA 218.7

Field of Testing: 104 – Volatile Organic Chemistry of Drinking Water

Subgroup Code	Analyte Code	Analyte	Method
104.030	001	1,2-Dibromoethane (EDB, Ethylene Dibromide)	EPA 504.1
104.030	002	1,2-Dibromo-3-chloropropane (DBCP)	EPA 504.1
104.035	001	1,2,3-Trichloropropane (TCP)	SRL 524M-TCP
104.040	000	Volatile Organic Compounds	EPA 524.2
104.040	001	Benzene	EPA 524.2
104.040	007	n-Butylbenzene	EPA 524.2
104.040	008	sec-Butylbenzene	EPA 524.2
104.040	009	tert-Butylbenzene	EPA 524.2
104.040	010	Carbon Tetrachloride	EPA 524.2
104.040	011	Chlorobenzene	EPA 524.2
104.040	015	2-Chlorotoluene	EPA 524.2

Subgroup Code	Analyte Code	Analyte	Method
104.040	016	4-Chlorotoluene	EPA 524.2
104.040	019	1,3-Dichlorobenzene	EPA 524.2
104.040	020	1,2-Dichlorobenzene	EPA 524.2
104.040	021	1,4-Dichlorobenzene	EPA 524.2
104.040	022	Dichlorodifluoromethane	EPA 524.2
104.040	023	1,1-Dichloroethane	EPA 524.2
104.040	024	1,2-Dichloroethane	EPA 524.2
104.040	025	1,1-Dichloroethene (1,1-Dichloroethylene)	EPA 524.2
104.040	026	cis-1,2-Dichloroethene	EPA 524.2
104.040	027	trans-1,2-Dichloroethene	EPA 524.2
104.040	028	Dichloromethane (Methylene Chloride)	EPA 524.2
104.040	029	1,2-Dichloropropane	EPA 524.2
104.040	033	cis-1,3-Dichloropropene	EPA 524.2
104.040	034	trans-1,3-Dichloropropene	EPA 524.2
104.040	035	Ethylbenzene	EPA 524.2
104.040	037	Isopropylbenzene	EPA 524.2
104.040	039	Naphthalene	EPA 524.2
104.040	041	N-propylbenzene	EPA 524.2
104.040	042	Styrene	EPA 524.2
104.040	043	1,1,1,2-Tetrachloroethane	EPA 524.2
104.040	044	1,1,2,2-Tetrachloroethane	EPA 524.2
104.040	045	Tetrachloroethylene (Tetrachloroethene)	EPA 524.2
104.040	046	Toluene	EPA 524.2
104.040	047	1,2,3-Trichlorobenzene	EPA 524.2
104.040	048	1,2,4-Trichlorobenzene	EPA 524.2
104.040	049	1,1,1-Trichloroethane	EPA 524.2
104.040	050	1,1,2-Trichloroethane	EPA 524.2
104.040	051	Trichloroethene	EPA 524.2
104.040	052	Trichlorofluoromethane	EPA 524.2
104.040	054	1,2,4-Trimethylbenzene	EPA 524.2
104.040	055	1,3,5-Trimethylbenzene	EPA 524.2
104.040	056	Vinyl Chloride	EPA 524.2
104.040	057	Xylenes, Total	EPA 524.2
104.040	061	Carbon Disulfide	EPA 524.2
104.040	062	Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	EPA 524.2
104.045	000	Trihalomethanes, Total	EPA 524.2
104.045	001	Bromodichloromethane	EPA 524.2
104.045	002	Bromoform	EPA 524.2
104.045	003	Chloroform	EPA 524.2
104.045	004	Dibromochloromethane	EPA 524.2
104.050	000	Gasoline Additives	EPA 524.2
104.050	002	Methyl tert-butyl Ether (MTBE)	EPA 524.2
104.050	003	tert-Amyl Methyl Ether (TAME)	EPA 524.2
104.050	004	Ethyl tert-butyl Ether (ETBE)	EPA 524.2

Subgroup Code	Analyte Code	Analyte	Method
104.050	005	Trichlorotrifluoroethane	EPA 524.2
104.050	006	tert-Butyl Alcohol (TBA)	EPA 524.2
104.055	022	1,2-Dibromo-3-chloropropane (DBCP)	EPA 524.3
104.055	023	1,2-Dibromoethane (EDB, Ethylene Dibromide)	EPA 524.3
104.058	000	Volatile Organic Compounds	EPA 524.4
104.058	001	Benzene	EPA 524.4
104.058	002	Carbon Tetrachloride	EPA 524.4
104.058	003	Chlorobenzene	EPA 524.4
104.058	004	1,2-Dichlorobenzene	EPA 524.4
104.058	005	1,4-Dichlorobenzene	EPA 524.4
104.058	006	1,2-Dichloroethane	EPA 524.4
104.058	007	cis-1,2-Dichloroethene	EPA 524.4
104.058	008	trans-1,2-Dichloroethene	EPA 524.4
104.058	009	Dichloromethane (Methylene Chloride)	EPA 524.4
104.058	010	1,2-Dichloropropane	EPA 524.4
104.058	011	Ethylbenzene	EPA 524.4
104.058	012	Styrene	EPA 524.4
104.058	013	Tetrachloroethylene (Tetrachloroethene)	EPA 524.4
104.058	014	1,1,1-Trichloroethane	EPA 524.4
104.058	015	Trichloroethene	EPA 524.4
104.058	016	Toluene	EPA 524.4
104.058	017	1,2,4-Trichlorobenzene	EPA 524.4
104.058	018	1,1-Dichloroethene (1,1-Dichloroethylene)	EPA 524.4
104.058	019	1,1,2-Trichloroethane	EPA 524.4
104.058	020	Vinyl Chloride	EPA 524.4
104.058	021	Xylenes, Total	EPA 524.4
104.059	000	Trihalomethanes, Total	EPA 524.4
104.059	001	Bromodichloromethane	EPA 524.4
104.059	002	Bromoform	EPA 524.4
104.059	003	Chloroform	EPA 524.4
104.059	004	Dibromochloromethane	EPA 524.4
104.061	000	Gasoline Additives	EPA 524.4
104.061	001	Di-isopropyl Ether (DIPE)	EPA 524.4
104.061	003	tert-Amyl Methyl Ether (TAME)	EPA 524.4
104.061	004	Ethyl tert-butyl Ether (ETBE)	EPA 524.4
104.061	005	Trichlorofluoromethane (Freon 11)	EPA 524.4
104.061	006	tert-Butyl Alcohol (TBA)	EPA 524.4
104.061	007	Trichlorotrifluoroethane (Freon 113)	EPA 524.4

Field of Testing: 105 – Semi-volatile Organic Chemistry of Drinking Water

Subgroup Code	Analyte Code	Analyte	Method
105.035	000	Organochlorine Pesticides and PCBs	EPA 508
105.035	001	Aldrin	EPA 508
105.035	005	Endrin	EPA 508
105.035	007	Heptachlor	EPA 508
105.035	008	Heptachlor Epoxide	EPA 508
105.035	009	Hexachlorobenzene	EPA 508
105.035	010	Lindane (HCH-gamma)	EPA 508
105.035	011	Methoxychlor	EPA 508
105.035	012	Propachlor	EPA 508
105.035	013	Chlordane	EPA 508
105.035	014	Toxaphene	EPA 508
105.035	015	PCBs as Aroclors	EPA 508
105.035	016	Aroclor 1016	EPA 508
105.035	017	Aroclor 1221	EPA 508
105.035	018	Aroclor 1232	EPA 508
105.035	019	Aroclor 1242	EPA 508
105.035	020	Aroclor 1248	EPA 508
105.035	021	Aroclor 1254	EPA 508
105.035	022	Aroclor 1260	EPA 508
105.050	000	Organochlorine Pesticides	EPA 508.1
105.050	005	Chlordane (total)	EPA 508.1
105.050	010	Endrin	EPA 508.1
105.050	011	Heptachlor	EPA 508.1
105.050	012	Heptachlor Epoxide	EPA 508.1
105.050	013	Hexachlorobenzene	EPA 508.1
105.050	014	Hexachlorocyclopentadiene	EPA 508.1
105.050	015	Lindane (HCH-gamma)	EPA 508.1
105.050	016	Methoxychlor	EPA 508.1
105.050	019	Propachlor	EPA 508.1
105.050	021	PCB-1016	EPA 508.1
105.050	022	PCB-1221	EPA 508.1
105.050	023	PCB-1232	EPA 508.1
105.050	024	PCB-1242	EPA 508.1
105.050	025	PCB-1248	EPA 508.1
105.050	026	PCB-1254	EPA 508.1
105.050	027	PCB-1260	EPA 508.1
105.050	028	PCBs as Aroclors	EPA 508.1
105.050	029	Toxaphene	EPA 508.1
105.083	000	Chlorinated Acids	EPA 515.4
105.083	001	2,4-D	EPA 515.4
105.083	002	Dinoseb	EPA 515.4
105.083	003	Pentachlorophenol	EPA 515.4
105.083	004	Picloram	EPA 515.4
105.083	005	2,4,5-TP (Silvex)	EPA 515.4
105.083	006	Dalapon	EPA 515.4
105.083	007	Bentazon	EPA 515.4

Subgroup Code	Analyte Code	Analyte	Method
105.083	008	Dicamba	EPA 515.4
105.090	000	Semi-volatile Organic Compounds	EPA 525.2
105.090	001	Alachlor	EPA 525.2
105.090	003	Atrazine	EPA 525.2
105.090	004	Benzo(a)pyrene	EPA 525.2
105.090	005	Butachlor	EPA 525.2
105.090	007	Dieldrin	EPA 525.2
105.090	008	Di(2-ethylhexyl) Adipate	EPA 525.2
105.090	009	Di(2-ethylhexyl) Phthalate	EPA 525.2
105.090	013	Endrin	EPA 525.2
105.090	014	Heptachlor	EPA 525.2
105.090	015	Heptachlor Epoxide	EPA 525.2
105.090	016	Hexachlorobenzene	EPA 525.2
105.090	017	Hexachlorocyclopentadiene	EPA 525.2
105.090	018	Lindane (HCH-gamma)	EPA 525.2
105.090	019	Methoxychlor	EPA 525.2
105.090	022	Molinate	EPA 525.2
105.090	023	Pentachlorophenol	EPA 525.2
105.090	025	Simazine	EPA 525.2
105.090	028	Thiobencarb	EPA 525.2
105.101	000	Carbamates	EPA 531.2
105.101	001	Carbofuran	EPA 531.2
105.101	002	Oxamyl	EPA 531.2
105.101	003	Aldicarb	EPA 531.2
105.101	004	Aldicarb Sulfone	EPA 531.2
105.101	005	Aldicarb Sulfoxide	EPA 531.2
105.101	006	Carbaryl	EPA 531.2
105.101	007	3-Hydroxycarbofuran	EPA 531.2
105.101	008	Methomyl	EPA 531.2
105.106	000	Per- and Polyfluorinated Alkyl Substances (PFAS)	EPA 537.1
105.120	001	Glyphosate	EPA 547
105.140	001	Endothall	EPA 548.1
105.150	001	Diquat	EPA 549.2
105.170	031	Disinfection Byproducts	EPA 551.1
105.201	001	Haloacetic Acids (HAA5)	EPA 552.3
105.210	002	2,4-D	EPA 555
105.210	004	Dinoseb	EPA 555
105.210	005	Pentachlorophenol	EPA 555
105.210	006	Picloram	EPA 555
105.210	007	2,4,5-TP (Silvex)	EPA 555
105.210	008	Bentazon	EPA 555
105.215	001	Haloacetic Acids (HAA5)	EPA 557
105.215	002	Dalapon	EPA 557
105.230	002	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) Screening Only	EPA 1613 B

Field of Testing: 106 – Radionuclides in Drinking Water

Subgroup Code	Analyte Code	Analyte	Method
106.010	001	Gross Alpha	EPA 900.0
106.010	002	Gross Beta	EPA 900.0
106.092	001	Uranium	EPA 200.8
106.270	001	Gross Alpha	SM 7110 C
106.610	001	Radon-222	SM 7500-Rn

Field of Testing: 107 – Microbiological Methods for Non-Potable Water and Sewage Sludge

Subgroup Code	Analyte Code	Analyte	Method
107.001	001	Total Coliform (Enumeration)	SM 9221 B, C-2006
107.001	002	Fecal Coliform (Enumeration)	SM 9221 C, E-2006
107.001	003	E. coli (Enumeration)	SM 9221 C, F-2006
107.007	002	Fecal Streptococci	SM 9230 B-2007
107.013	001	E. coli (Enumeration)	Colilert
107.015	001	E. coli (Enumeration)	Colilert 18
107.015	002	Fecal Coliform (Enumeration)	Colilert 18
107.017	001	Enterococci	Enterolert

Field of Testing: 108 – Inorganic Constituents in Non-Potable Water

Subgroup Code	Analyte Code	Analyte	Method
108.007	001	Residue, Volatile	EPA 160.4 (1971)
108.009	001	Turbidity	EPA 180.1 (1993 Rev. 2.0)
108.013	001	Calcium	EPA 200.7 (1994 Rev. 4.4)
108.013	002	Magnesium	EPA 200.7 (1994 Rev. 4.4)
108.013	003	Phosphorus, Total	EPA 200.7 (1994 Rev. 4.4)
108.013	004	Potassium	EPA 200.7 (1994 Rev. 4.4)
108.013	005	Silica, Dissolved	EPA 200.7 (1994 Rev. 4.4)
108.013	006	Sodium	EPA 200.7 (1994 Rev. 4.4)
108.015	001	Calcium	EPA 200.8 (1994 Rev. 5.4)
108.015	002	Magnesium	EPA 200.8 (1994 Rev. 5.4)
108.015	003	Potassium	EPA 200.8 (1994 Rev. 5.4)
108.015	005	Sodium	EPA 200.8 (1994 Rev. 5.4)
108.017	001	Bromide	EPA 300.0 (1993 Rev. 2.1)

Subgroup Code	Analyte Code	Analyte	Method
108.017	002	Chloride	EPA 300.0 (1993 Rev. 2.1)
108.017	003	Fluoride	EPA 300.0 (1993 Rev. 2.1)
108.017	004	Nitrate (as N)	EPA 300.0 (1993 Rev. 2.1)
108.017	005	Nitrate-Nitrite (as N)	EPA 300.0 (1993 Rev. 2.1)
108.017	006	Nitrite (as N)	EPA 300.0 (1993 Rev. 2.1)
108.017	008	Sulfate (as SO4)	EPA 300.0 (1993 Rev. 2.1)
108.019	001	Bromide	EPA 300.1 (1997 Rev.1.0)
108.023	001	Cyanide, Total	EPA 335.4 (1993 Rev. 1.0)
108.025	001	Ammonia (as N)	EPA 350.1 (1993 Rev. 2.0)
108.029	001	Kjeldahl Nitrogen, Total (as N)	EPA 351.2 (1993 Rev. 2.0)
108.033	001	Nitrate-Nitrite (as N)	EPA 353.2 (1993 Rev. 2.0)
108.033	002	Nitrite (as N)	EPA 353.2 (1993 Rev. 2.0)
108.035	001	Phosphate, Ortho (as P)	EPA 365.1 (1993 Rev. 2.0)
108.035	002	Phosphorus, Total	EPA 365.1 (1993 Rev. 2.0)
108.037	001	Phosphate, Ortho (as P)	EPA 365.3 (1978)
108.037	002	Phosphorus, Total	EPA 365.3 (1978)
108.045	001	Chemical Oxygen Demand	EPA 410.4 (1993 Rev. 2.0)
108.049	001	Phenols, Total	EPA 420.4 (1993 Rev. 2.0)
108.053	002	Oil & Grease Total	EPA 1664 B
108.055	001	Color	SM 2120 B-2011
108.063	001	Alkalinity	SM 2320 B-2011
108.069	001	Specific Conductance	SM 2510 B-2011
108.071	001	Residue, Total	SM 2540 B-2011
108.073	001	Residue, Filterable TDS	SM 2540 C-2011
108.075	001	Residue, Non-filterable TSS	SM 2540 D-2011
108.077	001	Residue, Volatile	SM 2540 E-2011
108.079	001	Residue, Settleable	SM 2540 F-2011
108.080	001	Temperature	SM 2550 B-2010
108.114	001	Chlorine, Total Residual	SM 4500-Cl G-2011
108.114	002	Chlorine, Free	SM 4500-Cl G-2011
108.129	001	Cyanide, Available	SM 4500-CN G-2011
108.137	001	Hydrogen Ion (pH)	SM 4500-H+ B-2011
108.173	001	Oxygen, Dissolved	SM 4500-O G-2011

Subgroup Code	Analyte Code	Analyte	Method
108.189	001	Sulfite (as SO3)	SM 4500-SO3 B-2011
108.201	001	Sulfide (as S)	SM 4500-S D-2011
108.207	001	Biochemical Oxygen Demand	SM 5210 B-2011
108.207	002	Carbonaceous BOD	SM 5210 B-2011
108.215	001	Organic Carbon-Total (TOC)	SM 5310 B-2011
108.225	001	Surfactants	SM 5540 C-2011
108.321	001	Cyanide, Total	ASTM D7511-12
108.339	001	Cyanide, Available	OIA-1677-09

Field of Testing: 109 – Metals and Trace Elements in Non-Potable Water

Subgroup Code	Analyte Code	Analyte	Method
109.623	001	Aluminum	EPA 200.7 (1994 Rev. 4.4)
109.623	002	Antimony	EPA 200.7 (1994 Rev. 4.4)
109.623	003	Arsenic	EPA 200.7 (1994 Rev. 4.4)
109.623	004	Barium	EPA 200.7 (1994 Rev. 4.4)
109.623	005	Beryllium	EPA 200.7 (1994 Rev. 4.4)
109.623	006	Boron	EPA 200.7 (1994 Rev. 4.4)
109.623	007	Cadmium	EPA 200.7 (1994 Rev. 4.4)
109.623	008	Chromium	EPA 200.7 (1994 Rev. 4.4)
109.623	009	Cobalt	EPA 200.7 (1994 Rev. 4.4)
109.623	010	Copper	EPA 200.7 (1994 Rev. 4.4)
109.623	011	Iron	EPA 200.7 (1994 Rev. 4.4)
109.623	012	Lead	EPA 200.7 (1994 Rev. 4.4)
109.623	013	Manganese	EPA 200.7 (1994 Rev. 4.4)
109.623	014	Molybdenum	EPA 200.7 (1994 Rev. 4.4)
109.623	015	Nickel	EPA 200.7 (1994 Rev. 4.4)
109.623	016	Selenium	EPA 200.7 (1994 Rev. 4.4)
109.623	017	Silver	EPA 200.7 (1994 Rev. 4.4)
109.623	018	Thallium	EPA 200.7 (1994 Rev. 4.4)

Subgroup Code	Analyte Code	Analyte	Method
109.623	019	Tin	EPA 200.7 (1994 Rev. 4.4)
109.623	020	Titanium	EPA 200.7 (1994 Rev. 4.4)
109.623	021	Vanadium	EPA 200.7 (1994 Rev. 4.4)
109.623	022	Zinc	EPA 200.7 (1994 Rev. 4.4)
109.625	001	Aluminum	EPA 200.8 (1994 Rev. 5.4)
109.625	002	Antimony	EPA 200.8 (1994 Rev. 5.4)
109.625	003	Arsenic	EPA 200.8 (1994 Rev. 5.4)
109.625	004	Barium	EPA 200.8 (1994 Rev. 5.4)
109.625	005	Beryllium	EPA 200.8 (1994 Rev. 5.4)
109.625	006	Boron	EPA 200.8 (1994 Rev. 5.4)
109.625	007	Cadmium	EPA 200.8 (1994 Rev. 5.4)
109.625	008	Chromium	EPA 200.8 (1994 Rev. 5.4)
109.625	009	Cobalt	EPA 200.8 (1994 Rev. 5.4)
109.625	010	Copper	EPA 200.8 (1994 Rev. 5.4)
109.625	012	Iron	EPA 200.8 (1994 Rev. 5.4)
109.625	013	Lead	EPA 200.8 (1994 Rev. 5.4)
109.625	014	Manganese	EPA 200.8 (1994 Rev. 5.4)
109.625	015	Molybdenum	EPA 200.8 (1994 Rev. 5.4)
109.625	016	Nickel	EPA 200.8 (1994 Rev. 5.4)
109.625	017	Selenium	EPA 200.8 (1994 Rev. 5.4)
109.625	018	Silver	EPA 200.8 (1994 Rev. 5.4)
109.625	019	Thallium	EPA 200.8 (1994 Rev. 5.4)
109.625	020	Tin	EPA 200.8 (1994 Rev. 5.4)
109.625	021	Titanium	EPA 200.8 (1994 Rev. 5.4)

Subgroup Code	Analyte Code	Analyte	Method
109.625	022	Vanadium	EPA 200.8 (1994 Rev. 5.4)
109.625	023	Zinc	EPA 200.8 (1994 Rev. 5.4)
109.629	001	Chromium (VI)	EPA 218.6 (1994 Rev. 3.3)
109.635	001	Mercury	EPA 245.1 (1994 Rev. 3.0)
109.657	001	Mercury	EPA 1631 E (2002)

Field of Testing: 110 – Volatile Organic Constituents in Non-Potable Water

Subgroup Code	Analyte Code	Analyte	Method
110.040	001	Acetone	EPA 624.1
110.040	002	Acetonitrile	EPA 624.1
110.040	003	Acrolein	EPA 624.1
110.040	004	Acrylonitrile	EPA 624.1
110.040	005	Benzene	EPA 624.1
110.040	006	Bromodichloromethane	EPA 624.1
110.040	007	Bromoform	EPA 624.1
110.040	008	Bromomethane (Methyl Bromide)	EPA 624.1
110.040	009	tert-Butyl Alcohol (TBA)	EPA 624.1
110.040	010	Carbon Tetrachloride	EPA 624.1
110.040	011	Chlorobenzene	EPA 624.1
110.040	012	Chloroethane	EPA 624.1
110.040	013	2-Chloroethylvinyl Ether	EPA 624.1
110.040	014	Chloroform	EPA 624.1
110.040	015	Chloromethane (Methyl Chloride)	EPA 624.1
110.040	016	Dibromochloromethane	EPA 624.1
110.040	017	1,2-Dichlorobenzene	EPA 624.1
110.040	018	1,3-Dichlorobenzene	EPA 624.1
110.040	019	1,4-Dichlorobenzene	EPA 624.1
110.040	020	1,1-Dichloroethane	EPA 624.1
110.040	021	1,2-Dichloroethane	EPA 624.1
110.040	022	1,1-Dichloroethene (1,1-Dichloroethylene)	EPA 624.1
110.040	023	trans-1,2-Dichloroethene	EPA 624.1
110.040	024	1,2-Dichloropropane	EPA 624.1
110.040	025	cis-1,3-Dichloropropene	EPA 624.1
110.040	026	trans-1,3-Dichloropropene	EPA 624.1
110.040	029	Ethylbenzene	EPA 624.1
110.040	031	Methylene Chloride (Dichloromethane)	EPA 624.1
110.040	032	4-Methyl-2-pentanone (MIBK)	EPA 624.1
110.040	034	1,1,2,2-Tetrachloroethane	EPA 624.1
110.040	035	Tetrachloroethylene (Tetrachloroethene)	EPA 624.1
110.040	037	Toluene	EPA 624.1

Subgroup Code	Analyte Code	Analyte	Method
110.040	038	1,1,1-Trichloroethane	EPA 624.1
110.040	039	1,1,2-Trichloroethane	EPA 624.1
110.040	040	Trichloroethene	EPA 624.1
110.040	041	Vinyl Chloride	EPA 624.1
110.040	042	m-Xylene	EPA 624.1
110.040	043	o-Xylene	EPA 624.1
110.040	044	p-Xylene	EPA 624.1
110.040	045	Trichlorofluoromethane	EPA 624.1
110.070	002	n-Amyl Acetate	EPA 1666
110.070	004	n-Butyl Acetate	EPA 1666
110.070	005	tert-Butyl Alcohol (TBA)	EPA 1666
110.070	006	Diethylamine	EPA 1666
110.070	007	Dimethyl Sulfoxide	EPA 1666
110.070	009	Ethyl Acetate	EPA 1666
110.070	010	n-Heptane	EPA 1666
110.070	011	n-Hexane	EPA 1666
110.070	012	Isobutyraldehyde	EPA 1666
110.070	013	Isopropyl Acetate	EPA 1666
110.070	014	Isopropyl Alcohol (Isopropanol)	EPA 1666
110.070	015	Isopropyl Ether (DIPE)	EPA 1666
110.070	017	2-Methoxyethanol	EPA 1666
110.070	018	Methyl Formate	EPA 1666
110.070	019	4-Methyl-2-pentanone (MIBK)	EPA 1666
110.070	021	Tetrahydrofuran	EPA 1666
110.070	022	Triethylamine	EPA 1666
110.070	023	m-Xylene	EPA 1666
110.070	024	o-Xylene	EPA 1666
110.070	025	p-Xylene	EPA 1666

Field of Testing: 111 – Semi-volatile Organic Constituents in Non-Potable Water

Subgroup Code	Analyte Code	Analyte	Method
111.055	001	Aldrin	EPA 608.3
111.055	002	alpha-BHC	EPA 608.3
111.055	003	beta-BHC	EPA 608.3
111.055	004	delta-BHC	EPA 608.3
111.055	005	gamma-BHC (Lindane)	EPA 608.3
111.055	006	Chlordane	EPA 608.3
111.055	007	4,4'-DDD	EPA 608.3
111.055	008	4,4'-DDE	EPA 608.3
111.055	009	4,4'-DDT	EPA 608.3
111.055	010	Dieldrin	EPA 608.3
111.055	011	Endosulfan I	EPA 608.3
111.055	012	Endosulfan II	EPA 608.3
111.055	013	Endosulfan Sulfate	EPA 608.3
111.055	014	Endrin	EPA 608.3
111.055	015	Endrin Aldehyde	EPA 608.3
111.055	016	Heptachlor	EPA 608.3

Subgroup Code	Analyte Code	Analyte	Method
111.055	017	Heptachlor Epoxide	EPA 608.3
111.055	019	PCB-1016	EPA 608.3
111.055	020	PCB-1221	EPA 608.3
111.055	021	PCB-1232	EPA 608.3
111.055	022	PCB-1242	EPA 608.3
111.055	023	PCB-1248	EPA 608.3
111.055	024	PCB-1254	EPA 608.3
111.055	025	PCB-1260	EPA 608.3
111.055	046	Methoxychlor	EPA 608.3
111.055	050	Pentachloronitrobenzene (PCNB)	EPA 608.3
111.055	060	Toxaphene	EPA 608.3
111.160	001	Acenaphthene	EPA 625.1
111.160	002	Acenaphthylene	EPA 625.1
111.160	003	Anthracene	EPA 625.1
111.160	004	Benzidine	EPA 625.1
111.160	005	Benzo(a)anthracene	EPA 625.1
111.160	006	Benzo(a)pyrene	EPA 625.1
111.160	007	Benzo(b)fluoranthene	EPA 625.1
111.160	008	Benzo(g,h,i)perylene	EPA 625.1
111.160	009	Benzo(k)fluoranthene	EPA 625.1
111.160	010	Bis(2-chloroethoxy) Methane	EPA 625.1
111.160	011	Bis(2-chloroethyl) Ether	EPA 625.1
111.160	012	Bis(2-chloroisopropyl) Ether	EPA 625.1
111.160	013	Bis(2-ethylhexyl)phthalate	EPA 625.1
111.160	014	4-Bromophenyl Phenyl Ether	EPA 625.1
111.160	015	Butyl Benzyl Phthalate	EPA 625.1
111.160	016	2-Chloronaphthalene	EPA 625.1
111.160	017	4-Chlorophenyl Phenyl Ether	EPA 625.1
111.160	018	Chrysene	EPA 625.1
111.160	019	Dibenz(a,h)anthracene	EPA 625.1
111.160	020	3,3'-Dichlorobenzidine	EPA 625.1
111.160	021	Diethyl Phthalate	EPA 625.1
111.160	022	Dimethyl Phthalate	EPA 625.1
111.160	023	Di-n-butyl Phthalate	EPA 625.1
111.160	024	2,4-Dinitrotoluene	EPA 625.1
111.160	025	2,6-Dinitrotoluene	EPA 625.1
111.160	026	Di-n-octyl Phthalate	EPA 625.1
111.160	027	Fluoranthene	EPA 625.1
111.160	028	Fluorene	EPA 625.1
111.160	029	Hexachlorobenzene	EPA 625.1
111.160	030	Hexachlorobutadiene	EPA 625.1
111.160	031	Hexachloroethane	EPA 625.1
111.160	032	Indeno(1,2,3-c,d)pyrene	EPA 625.1
111.160	033	Isophorone	EPA 625.1
111.160	034	Naphthalene	EPA 625.1
111.160	035	Nitrobenzene	EPA 625.1
111.160	036	N-nitrosodi-n-propylamine	EPA 625.1

Subgroup Code	Analyte Code	Analyte	Method
111.160	037	Phenanthrene	EPA 625.1
111.160	038	Pyrene	EPA 625.1
111.160	039	1,2,4-Trichlorobenzene	EPA 625.1
111.160	040	4-Chloro-3-methylphenol	EPA 625.1
111.160	041	2-Chlorophenol	EPA 625.1
111.160	042	2,4-Dichlorophenol	EPA 625.1
111.160	043	2,4-Dimethylphenol	EPA 625.1
111.160	044	2,4-Dinitrophenol	EPA 625.1
111.160	045	2-Methyl-4,6-dinitrophenol	EPA 625.1
111.160	046	2-Nitrophenol	EPA 625.1
111.160	047	4-Nitrophenol	EPA 625.1
111.160	048	Pentachlorophenol	EPA 625.1
111.160	049	Phenol	EPA 625.1
111.160	050	2,4,6-Trichlorophenol	EPA 625.1
111.210	006	Diuron	EPA 632
111.260	041	N-nitrosodimethylamine	EPA 1625 B
111.260	042	N-nitrosodi-n-propylamine	EPA 1625 B
111.260	043	N-nitrosodiphenylamine	EPA 1625 B

Field of Testing: 112 – Radionuclides in Non-Potable Water

Subgroup Code	Analyte Code	Analyte	Method
112.001	001	Gross Alpha	EPA 900.0
112.001	002	Gross Beta	EPA 900.0

Field of Testing: 114 – Inorganic Chemistry of Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method
114.010	001	Antimony	EPA 6010 B
114.010	002	Arsenic	EPA 6010 B
114.010	003	Barium	EPA 6010 B
114.010	004	Beryllium	EPA 6010 B
114.010	005	Cadmium	EPA 6010 B
114.010	006	Chromium	EPA 6010 B
114.010	007	Cobalt	EPA 6010 B
114.010	008	Copper	EPA 6010 B
114.010	009	Lead	EPA 6010 B
114.010	010	Molybdenum	EPA 6010 B
114.010	011	Nickel	EPA 6010 B
114.010	012	Selenium	EPA 6010 B
114.010	013	Silver	EPA 6010 B
114.010	014	Thallium	EPA 6010 B
114.010	015	Vanadium	EPA 6010 B
114.010	016	Zinc	EPA 6010 B
114.020	001	Antimony	EPA 6020
114.020	002	Arsenic	EPA 6020
114.020	003	Barium	EPA 6020

Subgroup Code	Analyte Code	Analyte	Method
114.020	004	Beryllium	EPA 6020
114.020	005	Cadmium	EPA 6020
114.020	006	Chromium	EPA 6020
114.020	007	Cobalt	EPA 6020
114.020	008	Copper	EPA 6020
114.020	009	Lead	EPA 6020
114.020	010	Molybdenum	EPA 6020
114.020	011	Nickel	EPA 6020
114.020	012	Selenium	EPA 6020
114.020	013	Silver	EPA 6020
114.020	014	Thallium	EPA 6020
114.020	015	Vanadium	EPA 6020
114.020	016	Zinc	EPA 6020
114.106	001	Chromium (VI)	EPA 7199
114.140	001	Mercury	EPA 7470 A
114.141	001	Mercury	EPA 7471 A
114.222	001	Cyanide, Total	EPA 9014
114.240	001	Corrosivity - pH Determination	EPA 9040 B
114.241	001	Corrosivity - pH Determination	EPA 9045 C
114.250	001	Fluoride	EPA 9056

Field of Testing: 115 – Extraction Test of Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method
115.020	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311 (TCLP)
115.021	001	TCLP Inorganics	EPA 1311 (TCLP)
115.022	001	TCLP Extractables	EPA 1311 (TCLP)
115.030	001	Waste Extraction Test (WET)	CCR Chapter 11, Article 5, Appendix II
115.040	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312 (SPLP)

Field of Testing: 116 – Volatile Organic Chemistry of Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method
116.020	030	Nonhalogenated Volatiles	EPA 8015 B
116.020	031	Ethanol and Methanol	EPA 8015 B
116.080	000	Volatile Organic Compounds	EPA 8260 B
116.090	000	Acrylamide, Acrylonitrile, Acrolein	EPA 8316
116.100	001	Total Petroleum Hydrocarbons - Gasoline (GRO)	LUFT GC/MS

Field of Testing: 117 – Semi-volatile Organic Chemistry of Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method
117.010	001	Diesel-range Total Petroleum Hydrocarbons	EPA 8015 B
117.110	000	Extractable Organics	EPA 8270 C
117.111	071	Pesticides	EPA 8270 C
117.150	000	Carbonyl Compounds	EPA 8315 A
117.171	000	Nitroaromatics and Nitramines	EPA 8330 A
117.210	000	Organochlorine Pesticides	EPA 8081 A
117.220	000	PCBs	EPA 8082
117.240	000	Organophosphorus Pesticides	EPA 8141 A
117.250	000	Chlorinated Herbicides	EPA 8151 A
117.270	000	Carbamates, N-methylcarbamates	EPA 8318
117.280	000	Carbamates	EPA 8321 A

Field of Testing: 120 – Physical Properties of Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method
120.010	001	Ignitability	EPA 1010
120.070	001	Corrosivity - pH Determination	EPA 9040 B
120.080	001	Corrosivity - pH Determination	EPA 9045 C

Field of Testing: 126 – Microbiological Methods for Ambient Water

Subgroup Code	Analyte Code	Analyte	Method
126.003	001	Total Coliform (Enumeration)	SM 9221 B, C-2006
126.003	002	Fecal Coliform (Enumeration)	SM 9221 C, E-2006
126.007	001	E. coli (Enumeration)	SM 9223 B-2004
126.015	001	E. coli (Enumeration)	Colilert
126.017	001	E. coli (Enumeration)	Colilert 18
126.019	001	Enterococci	Enterolert

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

Weck Laboratories, Inc.

14859 East Clark Avenue

City of Industry, CA 91745

Scope of the certificate is limited to the
"Fields of Accreditation"
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of
Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **1132**

Effective Date: **4/1/2022**

Expiration Date: **3/31/2024**

Sacramento, California
subject to forfeiture or revocation

Christine Sotelo, Program Manager
Environmental Laboratory Accreditation Program

WECK LABORATORIES, INC.

Fields of Accreditation

Environmental Laboratory Accreditation Program

State Water Resources Control Board, California Environmental Laboratory Accreditation Program (CA ELAP)

Weck Laboratories current CA ELAP Certificate does not include all Fields of Accreditation (FOAs) and/or a complete list of analytes under specific FOAs that were included in our renewal application. Weck has requested an amended certificate to include the analytes and methods shown in the attached table. If you have any questions, please contact us at sales@wecklabs.com.

Subgroup Code	Analyte Code	Analyte	Method
108.059	*001*	*Turbidity*	*SM 2130B-2011*
102.570	001	Cyanide	OIA-1677, DW
104.210	030	Methyl Isobutyl ketone (MIBK, 4-Methyl-2-pentanone)	EPA 524.4
107.015	001	E. coli (Enumeration)	SM 9223 B-2004 Colilert 18
107.015	002	Fecal Coliform (Enumeration)	SM 9223 B-2004 Colilert 18
111.055	050	Pentachloronitrobenzene (PCNB)	EPA 608.3
114.765	001	Organic Carbon-Total (TOC)	EPA 9060A
116.265	028	Nitrobenzene	EPA 8260B
116.265	059	Diisopropyl ether (DIPE)	EPA 8260B
116.265	061	Ethyl tert-butyl ether (ETBE)	EPA 8260B
116.266	001	Gasoline Range Organics (GRO)	EPA 8260B
117.435	087	N-nitrosodiethylamine	EPA 8270C
126.017	001	E. coli (Enumeration)	SM 9223 B-2004 Colilert 18
130.170	001	Chromium VI	EPA 7199
130.490	001	Organic Carbon-Total (TOC)	EPA 9060A
131.060	001	Ignitability	EPA 1010
132.060	002	Bromobenzene	EPA 8260B
132.060	003	Bromochloromethane	EPA 8260B
132.060	007	n-Butylbenzene	EPA 8260B
132.060	008	sec-Butylbenzene	EPA 8260B
132.060	009	tert-Butylbenzene	EPA 8260B
132.060	024	Hexachlorobutadiene	EPA 8260B
132.060	028	Nitrobenzene	EPA 8260B
132.060	029	n-Propylbenzene	EPA 8260B
132.060	056	4-Chlorotoluene	EPA 8260B
132.060	058	t-Butyl alcohol (2-methyl 2-propanol)	EPA 8260B
132.060	059	Diisopropyl ether (DIPE)	EPA 8260B
132.060	061	Ethyl t-butyl ether (ETBE)	EPA 8260B
132.060	062	t-Amyl methyl ether (TAME)	EPA 8260B

Subgroup Code	Analyte Code	Analyte	Method
132.061	001	Gasoline Range Organics (GRO)	EPA 8260B
132.080	001	Acrylamide	EPA 8316
133.190	010	Parathion Methyl	EPA 8141A
133.190	011	Phorate	EPA 8141A
133.190	012	Ronnel	EPA 8141A
133.220	011	4-Nitrophenol	EPA 8151A
133.230	028	N-nitrosodiethylamine	EPA 8270C

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Fields of Accreditation

Weck Laboratories, Inc.

14859 East Clark Avenue
City of Industry, CA 91745
Phone: 6263362139

Certificate Number: **1132**
Expiration Date: **3/31/2024**

Field of Accreditation:101 - Microbiology of Drinking Water				
101.010	001	Heterotrophic Bacteria	SM 9215 B	I
101.010	002	Heterotrophic Bacteria	SimPlate	I
101.020	004	Total Coliform (Enumeration)	SM 9221 B,C	I
101.020	005	Fecal Coliform (Enumeration)	SM 9221 B,E	I
101.020	006	E. coli (Enumeration)	SM 9221 B,F	I
101.050	001	Total Coliform P/A	SM 9223 B Colilert	I
101.050	002	E. coli P/A	SM 9223 B Colilert	I
101.050	003	Total Coliform (Enumeration)	SM 9223 B Colilert	I
101.050	004	E. coli (Enumeration)	SM 9223 B Colilert	I
101.050	005	Total Coliform P/A	SM 9223 B Colilert 18	I
101.050	006	E. coli P/A	SM 9223 B Colilert 18	I
101.050	007	Total Coliform (Enumeration)	SM 9223 B Colilert 18	I
101.050	008	E. coli (Enumeration)	SM 9223 B Colilert 18	I
101.050	009	Total Coliform P/A	SM 9223 B Colisure	I
101.050	010	E. coli P/A	SM 9223 B Colisure	I
101.140	001	Enterococci	SM 9230 B	I
101.170	001	Enterococci	Enterolert	I
Field of Accreditation:102 - Inorganic Chemistry of Drinking Water				
102.020	001	Turbidity	EPA 180.1	I
102.026	001	Calcium	EPA 200.7	I
102.026	002	Magnesium	EPA 200.7	I
102.026	003	Potassium	EPA 200.7	I
102.026	004	Silica	EPA 200.7	I
102.026	005	Sodium	EPA 200.7	I
102.026	006	Hardness (Calculation)	EPA 200.7	I
102.030	001	Bromide	EPA 300.0	I
102.030	003	Chloride	EPA 300.0	I
102.030	005	Fluoride	EPA 300.0	I
102.030	006	Nitrate (as N)	EPA 300.0	I
102.030	007	Nitrite (as N)	EPA 300.0	I
102.030	009	Sulfate (as SO4)	EPA 300.0	I
102.040	001	Bromide	EPA 300.1	I
102.040	002	Chlorite	EPA 300.1	I

102.040	003	Chlorate	EPA 300.1	I
102.040	004	Bromate	EPA 300.1	I
102.045	001	Perchlorate	EPA 314.0	I
102.047	001	Perchlorate	EPA 331.0	I
102.048	001	Perchlorate	EPA 332.0	I
102.050	001	Cyanide, Total	EPA 335.4	I
102.060	001	Nitrate (as N) (Calculation)	EPA 353.2	I
102.061	001	Nitrite (as N)	EPA 353.2	I
102.070	001	Phosphate,Ortho (as P)	EPA 365.1	I
102.086	001	Dissolved Organic Carbon (DOC)	EPA 415.3 Revision 1.2	I
102.086	002	Specific UV Absorbance SUVA	EPA 415.3 Revision 1.2	I
102.086	003	Organic Carbon-Total (TOC)	EPA 415.3 Revision 1.2	I
102.086	004	UV254	EPA 415.3 Revision 1.2	I
102.090	001	Bromate	EPA 557	I
102.100	001	Alkalinity	SM 2320 B-1997	I
102.130	001	Specific Conductance	SM 2510 B-1997	I
102.140	001	Residue, Filterable TDS	SM 2540 C-1997	I
102.175	001	Chlorine, Free	SM 4500-Cl G-2000	I
102.175	002	Chlorine, Total Residual	SM 4500-Cl G-2000	I
102.180	001	Chlorine Dioxide	SM 4500-ClO2 D-2000	I
102.203	001	Hydrogen Ion (pH)	SM 4500-H+ B-2000	I
102.260	001	Organic Carbon-Total (TOC)	SM 5310 B-2000	I
102.261	001	Dissolved Organic Carbon (DOC)	SM 5310 B-2000	I
102.270	001	Surfactants	SM 5540 C-2000	I
102.280	001	UV254	SM 5910 B-2011	I

Field of Accreditation:103 - Toxic Chemical Elements of Drinking Water

103.130	001	Aluminum	EPA 200.7	I
103.130	003	Barium	EPA 200.7	I
103.130	007	Chromium	EPA 200.7	I
103.130	008	Copper	EPA 200.7	I
103.130	009	Iron	EPA 200.7	I
103.130	011	Manganese	EPA 200.7	I
103.130	012	Nickel	EPA 200.7	I
103.130	015	Silver	EPA 200.7	I
103.130	017	Zinc	EPA 200.7	I
103.130	018	Boron	EPA 200.7	I
103.140	001	Aluminum	EPA 200.8	I
103.140	002	Antimony	EPA 200.8	I
103.140	003	Arsenic	EPA 200.8	I
103.140	004	Barium	EPA 200.8	I
103.140	005	Beryllium	EPA 200.8	I
103.140	006	Cadmium	EPA 200.8	I

103.140	007	Chromium	EPA 200.8	I
103.140	008	Copper	EPA 200.8	I
103.140	009	Lead	EPA 200.8	I
103.140	010	Manganese	EPA 200.8	I
103.140	012	Nickel	EPA 200.8	I
103.140	013	Selenium	EPA 200.8	I
103.140	014	Silver	EPA 200.8	I
103.140	015	Thallium	EPA 200.8	I
103.140	016	Zinc	EPA 200.8	I
103.140	017	Boron	EPA 200.8	I
103.140	018	Vanadium	EPA 200.8	I
103.140	019	Strontium	EPA 200.8	I
103.160	001	Mercury	EPA 245.1	I
103.310	001	Chromium VI (Hexavalent Chromium)	EPA 218.6	I
103.311	001	Chromium VI (Hexavalent Chromium)	EPA 218.7	I

Field of Accreditation: 104 - Volatile Organic Chemistry of Drinking Water

104.030	001	1,2-Dibromoethane (EDB)	EPA 504.1	I
104.030	002	1,2-Dibromo-3-chloropropane (DBCP)	EPA 504.1	I
104.035	001	1,2,3-Trichloropropane (TCP)	SRL 524M-TCP	I
104.200	001	1,1,1,2-Tetrachloroethane	EPA 524.2	I
104.200	002	1,1,1-Trichloroethane	EPA 524.2	I
104.200	003	1,1,2,2-Tetrachloroethane	EPA 524.2	I
104.200	004	1,1,2-Trichloroethane	EPA 524.2	I
104.200	005	1,1-Dichloroethane	EPA 524.2	I
104.200	006	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 524.2	I
104.200	007	1,2,3-Trichlorobenzene	EPA 524.2	I
104.200	008	1,2,4-Trichlorobenzene	EPA 524.2	I
104.200	009	1,2,4-Trimethylbenzene	EPA 524.2	I
104.200	010	1,2-Dichlorobenzene	EPA 524.2	I
104.200	011	1,2-Dichloroethane (Ethylene Dichloride)	EPA 524.2	I
104.200	012	1,2-Dichloropropane	EPA 524.2	I
104.200	013	1,3,5-Trimethylbenzene	EPA 524.2	I
104.200	014	1,3-Dichlorobenzene	EPA 524.2	I
104.200	015	1,4-Dichlorobenzene	EPA 524.2	I
104.200	016	2-Chlorotoluene	EPA 524.2	I
104.200	017	4-Chlorotoluene	EPA 524.2	I
104.200	018	Benzene	EPA 524.2	I
104.200	019	Carbon Disulfide	EPA 524.2	I
104.200	020	Carbon Tetrachloride	EPA 524.2	I
104.200	021	Chlorobenzene	EPA 524.2	I
104.200	022	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 524.2	I
104.200	023	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 524.2	I

104.200	024	Dichlorodifluoromethane	EPA 524.2	I
104.200	025	Dichloromethane (Methylene Chloride)	EPA 524.2	I
104.200	027	Ethyl tert-butyl Ether (ETBE)	EPA 524.2	I
104.200	028	Ethylbenzene	EPA 524.2	I
104.200	029	Isopropylbenzene	EPA 524.2	I
104.200	030	Methyl isobutyl ketone (MIBK, 4-Methyl-2-pentanone)	EPA 524.2	I
104.200	031	Methyl tert-butyl Ether (MTBE)	EPA 524.2	I
104.200	032	Naphthalene	EPA 524.2	I
104.200	033	n-Butylbenzene	EPA 524.2	I
104.200	034	N-propylbenzene	EPA 524.2	I
104.200	035	sec-Butylbenzene	EPA 524.2	I
104.200	036	Styrene	EPA 524.2	I
104.200	037	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 524.2	I
104.200	038	tert-Amyl Methyl Ether (TAME)	EPA 524.2	I
104.200	039	tert-Butylbenzene	EPA 524.2	I
104.200	040	Tetrachloroethylene (Tetrachloroethene)	EPA 524.2	I
104.200	041	Toluene	EPA 524.2	I
104.200	042	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 524.2	I
104.200	043	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 524.2	I
104.200	044	Trichloroethylene (Trichloroethene)	EPA 524.2	I
104.200	045	Trichlorofluoromethane	EPA 524.2	I
104.200	046	Trichlorotrifluoroethane	EPA 524.2	I
104.200	047	Vinyl Chloride	EPA 524.2	I
104.200	102	m+p-Xylene	EPA 524.2	I
104.200	103	o-Xylene	EPA 524.2	I
104.200	201	Bromodichloromethane	EPA 524.2	I
104.200	202	Bromoform	EPA 524.2	I
104.200	203	Chloroform	EPA 524.2	I
104.200	204	Dibromochloromethane (Chlorodibromomethane)	EPA 524.2	I
104.205	301	1,2-Dibromoethane (EDB)	EPA 524.3	I
104.205	302	1,2-Dibromo-3-chloropropane (DBCP)	EPA 524.3	I
104.210	001	1,1,1,2-Tetrachloroethane	EPA 524.4	I
104.210	002	1,1,1-Trichloroethane	EPA 524.4	I
104.210	003	1,1,2,2-Tetrachloroethane	EPA 524.4	I
104.210	004	1,1,2-Trichloroethane	EPA 524.4	I
104.210	005	1,1-Dichloroethane	EPA 524.4	I
104.210	006	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 524.4	I
104.210	007	1,2,3-Trichlorobenzene	EPA 524.4	I
104.210	008	1,2,4-Trichlorobenzene	EPA 524.4	I
104.210	009	1,2,4-Trimethylbenzene	EPA 524.4	I
104.210	010	1,2-Dichlorobenzene	EPA 524.4	I
104.210	011	1,2-Dichloroethane (Ethylene Dichloride)	EPA 524.4	I

104.210	012	1,2-Dichloropropane	EPA 524.4	I
104.210	013	1,3,5-Trimethylbenzene	EPA 524.4	I
104.210	014	1,3-Dichlorobenzene	EPA 524.4	I
104.210	015	1,4-Dichlorobenzene	EPA 524.4	I
104.210	016	2-Chlorotoluene	EPA 524.4	I
104.210	017	4-Chlorotoluene	EPA 524.4	I
104.210	018	Benzene	EPA 524.4	I
104.210	019	Carbon Disulfide	EPA 524.4	I
104.210	020	Carbon Tetrachloride	EPA 524.4	I
104.210	021	Chlorobenzene	EPA 524.4	I
104.210	022	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 524.4	I
104.210	023	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 524.4	I
104.210	024	Dichlorodifluoromethane	EPA 524.4	I
104.210	025	Dichloromethane (Methylene Chloride)	EPA 524.4	I
104.210	026	Diisopropyl ether (DIPE)	EPA 524.4	I
104.210	027	Ethyl tert-butyl Ether (ETBE)	EPA 524.4	I
104.210	028	Ethylbenzene	EPA 524.4	I
104.210	029	Isopropylbenzene	EPA 524.4	I
104.210	031	Methyl tert-butyl Ether (MTBE)	EPA 524.4	I
104.210	032	Naphthalene	EPA 524.4	I
104.210	033	n-Butylbenzene	EPA 524.4	I
104.210	034	N-propylbenzene	EPA 524.4	I
104.210	035	sec-Butylbenzene	EPA 524.4	I
104.210	036	Styrene	EPA 524.4	I
104.210	037	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 524.4	I
104.210	038	tert-Amyl Methyl Ether (TAME)	EPA 524.4	I
104.210	039	tert-Butylbenzene	EPA 524.4	I
104.210	040	Tetrachloroethylene (Tetrachloroethene)	EPA 524.4	I
104.210	041	Toluene	EPA 524.4	I
104.210	042	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 524.4	I
104.210	043	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 524.4	I
104.210	044	Trichloroethylene (Trichloroethene)	EPA 524.4	I
104.210	045	Trichlorofluoromethane	EPA 524.4	I
104.210	046	Trichlorotrifluoroethane	EPA 524.4	I
104.210	047	Vinyl Chloride	EPA 524.4	I
104.210	102	m+p-Xylene	EPA 524.4	I
104.210	103	o-Xylene	EPA 524.4	I
104.210	201	Bromodichloromethane	EPA 524.4	I
104.210	202	Bromoform	EPA 524.4	I
104.210	203	Chloroform	EPA 524.4	I
104.210	204	Dibromochloromethane (Chlorodibromomethane)	EPA 524.4	I

Field of Accreditation:105 - Semi-volatile Organic Chemistry of Drinking Water

105.035	001	Aldrin	EPA 508	I
105.035	002	Endosulfan I	EPA 508	I
105.035	003	Endosulfan II	EPA 508	I
105.035	004	Endosulfan Sulfate	EPA 508	I
105.035	005	Endrin	EPA 508	I
105.035	006	Endrin Aldehyde	EPA 508	I
105.035	007	Heptachlor	EPA 508	I
105.035	008	Heptachlor Epoxide	EPA 508	I
105.035	009	Hexachlorobenzene	EPA 508	I
105.035	010	Lindane (HCH-gamma)	EPA 508	I
105.035	011	Methoxychlor	EPA 508	I
105.035	012	Propachlor	EPA 508	I
105.035	013	Chlordane	EPA 508	I
105.035	014	Toxaphene	EPA 508	I
105.035	015	PCBs as Aroclors	EPA 508	I
105.035	016	Aroclor 1016	EPA 508	I
105.035	017	Aroclor 1221	EPA 508	I
105.035	018	Aroclor 1232	EPA 508	I
105.035	019	Aroclor 1242	EPA 508	I
105.035	020	Aroclor 1248	EPA 508	I
105.035	021	Aroclor 1254	EPA 508	I
105.035	022	Aroclor 1260	EPA 508	I
105.050	005	Chlordane (total)	EPA 508.1	I
105.050	010	Endrin	EPA 508.1	I
105.050	011	Heptachlor	EPA 508.1	I
105.050	012	Heptachlor Epoxide	EPA 508.1	I
105.050	013	Hexachlorobenzene	EPA 508.1	I
105.050	014	Hexachlorocyclopentadiene	EPA 508.1	I
105.050	015	Lindane (HCH-gamma)	EPA 508.1	I
105.050	016	Methoxychlor	EPA 508.1	I
105.050	019	Propachlor	EPA 508.1	I
105.050	021	PCB-1016 (Aroclor-1016)	EPA 508.1	I
105.050	022	PCB-1221 (Aroclor-1221)	EPA 508.1	I
105.050	023	PCB-1232 (Aroclor-1232)	EPA 508.1	I
105.050	024	PCB-1242 (Aroclor-1242)	EPA 508.1	I
105.050	025	PCB-1248 (Aroclor-1248)	EPA 508.1	I
105.050	026	PCB-1254 (Aroclor-1254)	EPA 508.1	I
105.050	027	PCB-1260 (Aroclor-1260)	EPA 508.1	I
105.050	028	PCBs as Aroclors	EPA 508.1	I
105.050	029	Toxaphene	EPA 508.1	I
105.083	001	2,4-D	EPA 515.4	I
105.083	002	Dinoseb	EPA 515.4	I

105.083	003	Pentachlorophenol	EPA 515.4	I
105.083	004	Picloram	EPA 515.4	I
105.083	005	2,4,5-TP (Silvex)	EPA 515.4	I
105.083	006	Dalapon	EPA 515.4	I
105.083	007	Bentazon	EPA 515.4	I
105.083	008	Dicamba	EPA 515.4	I
105.085	001	1,4-Dioxane	EPA 522	I
105.090	001	Alachlor	EPA 525.2	I
105.090	002	Aldrin	EPA 525.2	I
105.090	003	Atrazine	EPA 525.2	I
105.090	004	Benzo(a)pyrene	EPA 525.2	I
105.090	005	Butachlor	EPA 525.2	I
105.090	007	Dieldrin	EPA 525.2	I
105.090	008	Di(2-ethylhexyl) Adipate	EPA 525.2	I
105.090	009	Di(2-ethylhexyl) Phthalate	EPA 525.2	I
105.090	013	Endrin	EPA 525.2	I
105.090	014	Heptachlor	EPA 525.2	I
105.090	015	Heptachlor Epoxide	EPA 525.2	I
105.090	016	Hexachlorobenzene	EPA 525.2	I
105.090	017	Hexachlorocyclopentadiene	EPA 525.2	I
105.090	018	Lindane (HCH-gamma)	EPA 525.2	I
105.090	019	Methoxychlor	EPA 525.2	I
105.090	022	Molinate	EPA 525.2	I
105.090	023	Pentachlorophenol	EPA 525.2	I
105.090	025	Simazine	EPA 525.2	I
105.090	028	Thiobencarb	EPA 525.2	I
105.101	001	Carbofuran (Furadan)	EPA 531.2	I
105.101	002	Oxamyl	EPA 531.2	I
105.101	003	Aldicarb (Temik)	EPA 531.2	I
105.101	004	Aldicarb Sulfone	EPA 531.2	I
105.101	005	Aldicarb Sulfoxide	EPA 531.2	I
105.101	006	Carbaryl (Sevin)	EPA 531.2	I
105.101	007	3-Hydroxycarbofuran	EPA 531.2	I
105.101	008	Methomyl (Lannate)	EPA 531.2	I
105.103	001	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	EPA 533	I
105.103	002	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	EPA 533	I
105.103	003	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	EPA 533	I
105.103	004	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	EPA 533	I
105.103	005	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	EPA 533	I
105.103	006	Perfluorobutanoic Acid (PFBA)	EPA 533	I
105.103	007	Perfluorobutane Sulfonic Acid (PFBS)	EPA 533	I
105.103	008	1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2FTS)	EPA 533	I

105.103	009	Perfluorodecanoic Acid (PFDA)	EPA 533	I
105.103	010	Perfluorododecanoic Acid (PFDoA)	EPA 533	I
105.103	011	Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	EPA 533	I
105.103	012	Perfluoroheptane Sulfonic Acid (PFHpS)	EPA 533	I
105.103	013	Perfluoroheptanoic Acid (PFHpA)	EPA 533	I
105.103	014	1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2FTS)	EPA 533	I
105.103	015	Perfluorohexane Sulfonic Acid (PFHxS)	EPA 533	I
105.103	016	Perfluorohexanoic Acid (PFHxA)	EPA 533	I
105.103	017	Perfluoro-3-methoxypropanoic acid (PFMPA)	EPA 533	I
105.103	018	Perfluoro-4-methoxybutanoic acid (PFMBA)	EPA 533	I
105.103	019	Perfluorononanoic Acid (PFNA)	EPA 533	I
105.103	020	1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	EPA 533	I
105.103	021	Perfluorooctane Sulfonic Acid (PFOS)	EPA 533	I
105.103	022	Perfluorooctanoic Acid (PFOA)	EPA 533	I
105.103	023	Perfluoropentanoic Acid (PFPeA)	EPA 533	I
105.103	024	Perfluoropentane Sulfonic Acid (PFPeS)	EPA 533	I
105.103	025	Perfluoroundecanoic Acid (PFUnDA)	EPA 533	I
105.106	001	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	EPA 537.1	I
105.106	002	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	EPA 537.1	I
105.106	003	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	EPA 537.1	I
105.106	004	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	EPA 537.1	I
105.106	005	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	EPA 537.1	I
105.106	006	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	EPA 537.1	I
105.106	007	Perfluorobutane Sulfonic Acid (PFBS)	EPA 537.1	I
105.106	008	Perfluorodecanoic Acid (PFDA)	EPA 537.1	I
105.106	009	Perfluorododecanoic Acid (PFDoA)	EPA 537.1	I
105.106	010	Perfluoroheptanoic Acid (PFHpA)	EPA 537.1	I
105.106	011	Perfluorohexane Sulfonic Acid (PFHxS)	EPA 537.1	I
105.106	012	Perfluorohexanoic Acid (PFHxA)	EPA 537.1	I
105.106	013	Perfluorononanoic Acid (PFNA)	EPA 537.1	I
105.106	014	Perfluorooctanoic Acid (PFOA)	EPA 537.1	I
105.106	015	Perfluorooctane Sulfonic Acid (PFOS)	EPA 537.1	I
105.106	016	Perfluorotetradecanoic Acid (PFTDA)	EPA 537.1	I
105.106	017	Perfluorotridecanoic Acid (PFTrDA)	EPA 537.1	I
105.106	018	Perfluoroundecanoic Acid (PFUnDA)	EPA 537.1	I
105.107	001	Microcystin-LA	EPA 544	I
105.107	002	Microcystin-LF	EPA 544	I
105.107	003	Microcystin-LR	EPA 544	I
105.107	004	Microcystin-LY	EPA 544	I
105.107	005	Microcystin-RR	EPA 544	I
105.107	006	Microcystin-YR	EPA 544	I
105.107	007	Nodularin-R	EPA 544	I

105.108	001	Anatoxin-A	EPA 545	I
105.108	002	Cylindrospermopsin	EPA 545	I
105.109	001	Total microcystins	EPA 546	I
105.120	001	Glyphosate	EPA 547	I
105.140	001	Endothall	EPA 548.1	I
105.150	001	Diquat	EPA 549.2	I
105.201	003	Bromoacetic Acid	EPA 552.3	I
105.201	004	Chloroacetic Acid	EPA 552.3	I
105.201	005	Dibromoacetic Acid	EPA 552.3	I
105.201	006	Dichloroacetic Acid	EPA 552.3	I
105.201	007	Trichloroacetic Acid	EPA 552.3	I
105.210	002	2,4-D	EPA 555	I
105.210	006	Picloram	EPA 555	I
105.210	007	2,4,5-TP (Silvex)	EPA 555	I
105.210	008	Bentazon	EPA 555	I
105.215	003	Bromoacetic Acid	EPA 557	I
105.215	004	Chloroacetic Acid	EPA 557	I
105.215	006	Dibromoacetic Acid	EPA 557	I
105.215	007	Dichloroacetic Acid	EPA 557	I
105.215	008	Trichloroacetic Acid	EPA 557	I
105.230	002	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) Screening Only	EPA 1613 B	I

Field of Accreditation:106 - Radionuclides in Drinking Water

106.010	001	Gross Alpha	EPA 900.0
106.010	002	Gross Beta	EPA 900.0
106.092	001	Uranium	EPA 200.8
106.270	001	Gross Alpha	SM 7110 C
106.610	001	Radon-222	SM 7500-Rn

Field of Accreditation:107 - Microbiological Methods for Non-Potable Water and Sewage Sludge

107.001	001	Total Coliform (Enumeration)	SM 9221 B,C-2006
107.001	002	Fecal Coliform (Enumeration)	SM 9221 C,E-2006
107.001	003	E. coli (Enumeration)	SM 9221 C,F-2006
107.007	002	Fecal Streptococci	SM 9230 B-2007
107.013	001	E. coli (Enumeration)	SM 9223 B-2004 Colilert
107.017	001	Enterococci	Enterolert

Field of Accreditation:108 - Inorganic Constituents in Non-Potable Water

108.007	001	Residue, Volatile	EPA 160.4
108.009	001	Turbidity	EPA 180.1
108.013	001	Calcium	EPA 200.7
108.013	002	Magnesium	EPA 200.7
108.013	003	Phosphorus,Total	EPA 200.7
108.013	004	Potassium	EPA 200.7
108.013	005	Silica, Dissolved	EPA 200.7

108.013	006	Sodium	EPA 200.7
108.015	001	Calcium	EPA 200.8
108.015	002	Magnesium	EPA 200.8
108.015	003	Potassium	EPA 200.8
108.015	005	Sodium	EPA 200.8
108.017	001	Bromide	EPA 300.0
108.017	002	Chloride	EPA 300.0
108.017	003	Fluoride	EPA 300.0
108.017	004	Nitrate (as N)	EPA 300.0
108.017	005	Nitrate-Nitrite (as N)	EPA 300.0
108.017	006	Nitrite (as N)	EPA 300.0
108.017	008	Sulfate (as SO4)	EPA 300.0
108.019	001	Bromide	EPA 300.1
108.023	001	Cyanide, Total	EPA 335.4
108.025	001	Ammonia (as N)	EPA 350.1
108.029	001	Kjeldahl Nitrogen,Total (as N)	EPA 351.2
108.033	001	Nitrate-Nitrite (as N)	EPA 353.2
108.033	002	Nitrite (as N)	EPA 353.2
108.035	001	Phosphate,Ortho (as P)	EPA 365.1
108.035	002	Phosphorus,Total	EPA 365.1
108.037	001	Phosphate,Ortho (as P)	EPA 365.3
108.037	002	Phosphorus,Total	EPA 365.3
108.045	001	Chemical Oxygen Demand	EPA 410.4
108.049	001	Phenols, Total	EPA 420.4
108.053	002	Oil & Grease, Total Recoverable	EPA 1664 B
108.055	001	Color	SM 2120 B-2011
108.063	001	Alkalinity	SM 2320 B-2011
108.069	001	Specific Conductance	SM 2510 B-2011
108.071	001	Residue, Total	SM 2540 B-2011
108.073	001	Residue, Filterable TDS	SM 2540 C-2011
108.075	001	Residue, Non-filterable TSS	SM 2540 D-2011
108.077	001	Residue, Volatile	SM 2540 E-2011
108.077	002	Residue, Fixed Filterable (FDS)	SM 2540 E-2011
108.079	001	Residue, Settleable	SM 2540 F-2011
108.080	001	Temperature	SM 2550 B-2010
108.114	001	Chlorine, Total Residual	SM 4500-Cl G-2011
108.114	002	Chlorine, Free	SM 4500-Cl G-2011
108.129	001	Cyanide, Available	SM 4500-CN G-2011
108.137	001	Hydrogen Ion (pH)	SM 4500-H+ B-2011
108.173	001	Oxygen, Dissolved	SM 4500-O G-2011
108.189	001	Sulfite (as SO3)	SM 4500-SO3 B-2011
108.201	001	Sulfide (as S)	SM 4500-S D-2011

108.207	001	Biochemical Oxygen Demand	SM 5210 B-2011
108.207	002	Carbonaceous BOD	SM 5210 B-2011
108.215	001	Organic Carbon-Total (TOC)	SM 5310 B-2011
108.225	001	Surfactants	SM 5540 C-2011
108.226	001	Non-ionic Surfactants as CTAS	SM 5540 D-2011
108.321	001	Cyanide, Total	ASTM D7511-12
108.339	001	Cyanide, Available	OIA-1677-09

Field of Accreditation:109 - Metals and Trace Elements in Non-Potable Water

109.623	001	Aluminum	EPA 200.7
109.623	002	Antimony	EPA 200.7
109.623	003	Arsenic	EPA 200.7
109.623	004	Barium	EPA 200.7
109.623	005	Beryllium	EPA 200.7
109.623	006	Boron	EPA 200.7
109.623	007	Cadmium	EPA 200.7
109.623	008	Chromium	EPA 200.7
109.623	009	Cobalt	EPA 200.7
109.623	010	Copper	EPA 200.7
109.623	011	Iron	EPA 200.7
109.623	012	Lead	EPA 200.7
109.623	013	Manganese	EPA 200.7
109.623	014	Molybdenum	EPA 200.7
109.623	015	Nickel	EPA 200.7
109.623	016	Selenium	EPA 200.7
109.623	017	Silver	EPA 200.7
109.623	018	Thallium	EPA 200.7
109.623	019	Tin	EPA 200.7
109.623	020	Titanium	EPA 200.7
109.623	021	Vanadium	EPA 200.7
109.623	022	Zinc	EPA 200.7
109.625	001	Aluminum	EPA 200.8
109.625	002	Antimony	EPA 200.8
109.625	003	Arsenic	EPA 200.8
109.625	004	Barium	EPA 200.8
109.625	005	Beryllium	EPA 200.8
109.625	006	Boron	EPA 200.8
109.625	007	Cadmium	EPA 200.8
109.625	008	Chromium	EPA 200.8
109.625	009	Cobalt	EPA 200.8
109.625	010	Copper	EPA 200.8
109.625	012	Iron	EPA 200.8
109.625	013	Lead	EPA 200.8

109.625	014	Manganese	EPA 200.8
109.625	015	Molybdenum	EPA 200.8
109.625	016	Nickel	EPA 200.8
109.625	017	Selenium	EPA 200.8
109.625	018	Silver	EPA 200.8
109.625	019	Thallium	EPA 200.8
109.625	020	Tin	EPA 200.8
109.625	021	Titanium	EPA 200.8
109.625	022	Vanadium	EPA 200.8
109.625	023	Zinc	EPA 200.8
109.629	001	Chromium VI (Hexavalent Chromium)	EPA 218.6
109.635	001	Mercury	EPA 245.1
109.657	001	Mercury	EPA 1631 E
109.800	001	Tributyltin	SM 6710 B - 2011
109.805	001	Tributyltin	EPA 8323

Field of Accreditation: 110 - Volatile Organic Constituents in Non-Potable Water

110.040	001	Acetone	EPA 624.1
110.040	002	Acetonitrile	EPA 624.1
110.040	003	Acrolein	EPA 624.1
110.040	004	Acrylonitrile	EPA 624.1
110.040	005	Benzene	EPA 624.1
110.040	006	Bromodichloromethane	EPA 624.1
110.040	007	Bromoform	EPA 624.1
110.040	008	Bromomethane (Methyl Bromide)	EPA 624.1
110.040	009	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 624.1
110.040	010	Carbon Tetrachloride	EPA 624.1
110.040	011	Chlorobenzene	EPA 624.1
110.040	012	Chloroethane	EPA 624.1
110.040	013	2-Chloroethyl vinyl Ether	EPA 624.1
110.040	014	Chloroform	EPA 624.1
110.040	015	Chloromethane (Methyl Chloride)	EPA 624.1
110.040	016	Dibromochloromethane (Chlorodibromomethane)	EPA 624.1
110.040	017	1,2-Dichlorobenzene	EPA 624.1
110.040	018	1,3-Dichlorobenzene	EPA 624.1
110.040	019	1,4-Dichlorobenzene	EPA 624.1
110.040	020	1,1-Dichloroethane	EPA 624.1
110.040	021	1,2-Dichloroethane (Ethylene Dichloride)	EPA 624.1
110.040	022	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 624.1
110.040	023	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 624.1
110.040	024	1,2-Dichloropropane	EPA 624.1
110.040	025	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 624.1
110.040	026	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 624.1

110.040	029	Ethylbenzene	EPA 624.1
110.040	031	Methylene Chloride (Dichloromethane)	EPA 624.1
110.040	032	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 624.1
110.040	034	1,1,2,2-Tetrachloroethane	EPA 624.1
110.040	035	Tetrachloroethylene (Tetrachloroethene)	EPA 624.1
110.040	037	Toluene	EPA 624.1
110.040	038	1,1,1-Trichloroethane	EPA 624.1
110.040	039	1,1,2-Trichloroethane	EPA 624.1
110.040	040	Trichloroethylene (Trichloroethene)	EPA 624.1
110.040	041	Vinyl Chloride	EPA 624.1
110.040	043	o-Xylene	EPA 624.1
110.040	045	Trichlorofluoromethane	EPA 624.1
110.040	046	m+p-Xylene	EPA 624.1
110.070	002	n-Amyl Acetate	EPA 1666 A
110.070	004	n-Butyl Acetate	EPA 1666 A
110.070	005	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 1666 A
110.070	006	Diethylamine	EPA 1666 A
110.070	007	Dimethyl Sulfoxide	EPA 1666 A
110.070	009	Ethyl Acetate	EPA 1666 A
110.070	010	n-Heptane	EPA 1666 A
110.070	011	n-Hexane	EPA 1666 A
110.070	012	Isobutyraldehyde	EPA 1666 A
110.070	013	Isopropyl Acetate	EPA 1666 A
110.070	014	Isopropyl Alcohol (Isopropanol)	EPA 1666 A
110.070	015	Isopropyl Ether (DIPE)	EPA 1666 A
110.070	017	2-Methoxyethanol	EPA 1666 A
110.070	018	Methyl Formate	EPA 1666 A
110.070	019	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 1666 A
110.070	021	Tetrahydrofuran	EPA 1666 A
110.070	022	Triethylamine	EPA 1666 A
110.070	024	o-Xylene	EPA 1666 A
110.070	026	m+p-Xylene	EPA 1666 A

Field of Accreditation:111 - Semi-volatile Organic Constituents in Non-Potable Water

111.055	001	Aldrin	EPA 608.3
111.055	002	alpha-BHC	EPA 608.3
111.055	003	beta-BHC	EPA 608.3
111.055	004	delta-BHC	EPA 608.3
111.055	005	gamma-BHC (Lindane)	EPA 608.3
111.055	006	Chlordane	EPA 608.3
111.055	007	4,4'-DDD	EPA 608.3
111.055	008	4,4'-DDE	EPA 608.3
111.055	009	4,4'-DDT	EPA 608.3

111.055	010	Dieldrin	EPA 608.3
111.055	011	Endosulfan I	EPA 608.3
111.055	012	Endosulfan II	EPA 608.3
111.055	013	Endosulfan Sulfate	EPA 608.3
111.055	014	Endrin	EPA 608.3
111.055	015	Endrin Aldehyde	EPA 608.3
111.055	016	Heptachlor	EPA 608.3
111.055	017	Heptachlor Epoxide	EPA 608.3
111.055	019	PCB-1016 (Aroclor-1016)	EPA 608.3
111.055	020	PCB-1221 (Aroclor-1221)	EPA 608.3
111.055	021	PCB-1232 (Aroclor-1232)	EPA 608.3
111.055	022	PCB-1242 (Aroclor-1242)	EPA 608.3
111.055	023	PCB-1248 (Aroclor-1248)	EPA 608.3
111.055	024	PCB-1254 (Aroclor-1254)	EPA 608.3
111.055	025	PCB-1260 (Aroclor-1260)	EPA 608.3
111.055	046	Methoxychlor	EPA 608.3
111.055	060	Toxaphene	EPA 608.3
111.120	001	2,4-D	EPA 615
111.120	002	2,4-DB	EPA 615
111.120	003	Dicamba	EPA 615
111.120	004	Dichloroprop	EPA 615
111.120	005	Dinoseb	EPA 615
111.120	006	MCPA	EPA 615
111.120	007	MCPP	EPA 615
111.120	008	2,4,5-T	EPA 615
111.120	009	2,4,5-TP (Silvex)	EPA 615
111.160	001	Acenaphthene	EPA 625.1
111.160	002	Acenaphthylene	EPA 625.1
111.160	003	Anthracene	EPA 625.1
111.160	004	Benzidine	EPA 625.1
111.160	005	Benzo(a)anthracene	EPA 625.1
111.160	006	Benzo(a)pyrene	EPA 625.1
111.160	007	Benzo(b)fluoranthene	EPA 625.1
111.160	008	Benzo(g,h,i)perylene	EPA 625.1
111.160	009	Benzo(k)fluoranthene	EPA 625.1
111.160	010	Bis(2-chloroethoxy) Methane	EPA 625.1
111.160	011	Bis(2-chloroethyl) Ether	EPA 625.1
111.160	012	bis(2-Chloroisopropyl) ether (2,2'-Oxybis[1-chloropropane])	EPA 625.1
111.160	013	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 625.1
111.160	014	4-Bromophenyl Phenyl Ether	EPA 625.1
111.160	015	Butyl Benzyl Phthalate	EPA 625.1
111.160	016	2-Chloronaphthalene	EPA 625.1

111.160	017	4-Chlorophenyl Phenyl Ether	EPA 625.1
111.160	018	Chrysene	EPA 625.1
111.160	019	Dibenz(a,h)anthracene	EPA 625.1
111.160	020	3,3'-Dichlorobenzidine	EPA 625.1
111.160	021	Diethyl Phthalate	EPA 625.1
111.160	022	Dimethyl Phthalate	EPA 625.1
111.160	023	Di-n-butyl Phthalate	EPA 625.1
111.160	024	2,4-Dinitrotoluene	EPA 625.1
111.160	025	2,6-Dinitrotoluene	EPA 625.1
111.160	026	Di-n-octyl Phthalate	EPA 625.1
111.160	027	Fluoranthene	EPA 625.1
111.160	028	Fluorene	EPA 625.1
111.160	029	Hexachlorobenzene	EPA 625.1
111.160	030	Hexachlorobutadiene	EPA 625.1
111.160	031	Hexachloroethane	EPA 625.1
111.160	032	Indeno(1,2,3-c,d)pyrene	EPA 625.1
111.160	033	Isophorone	EPA 625.1
111.160	034	Naphthalene	EPA 625.1
111.160	035	Nitrobenzene	EPA 625.1
111.160	036	N-nitroso-di-n-propylamine	EPA 625.1
111.160	037	Phenanthrene	EPA 625.1
111.160	038	Pyrene	EPA 625.1
111.160	039	1,2,4-Trichlorobenzene	EPA 625.1
111.160	040	4-Chloro-3-methylphenol	EPA 625.1
111.160	041	2-Chlorophenol	EPA 625.1
111.160	042	2,4-Dichlorophenol	EPA 625.1
111.160	043	2,4-Dimethylphenol	EPA 625.1
111.160	044	2,4-Dinitrophenol	EPA 625.1
111.160	045	2-Methyl-4,6-dinitrophenol	EPA 625.1
111.160	046	2-Nitrophenol	EPA 625.1
111.160	047	4-Nitrophenol	EPA 625.1
111.160	048	Pentachlorophenol	EPA 625.1
111.160	049	Phenol	EPA 625.1
111.160	050	2,4,6-Trichlorophenol	EPA 625.1
111.160	056	Azinphos Methyl	EPA 625.1
111.160	073	Chlorpyrifos	EPA 625.1
111.160	079	Demeton-O	EPA 625.1
111.160	080	Demeton-S	EPA 625.1
111.160	081	Diazinon	EPA 625.1
111.160	082	Dichlorvos (DDVP)	EPA 625.1
111.160	085	Disulfoton	EPA 625.1
111.160	092	Ethoprop	EPA 625.1

111.160	098	Hexachlorocyclopentadiene	EPA 625.1
111.160	100	Malathion	EPA 625.1
111.160	130	Stirophos (Tetrachlorovinphos)	EPA 625.1
111.160	140	Carbazole	EPA 625.1
111.160	141	o-Cresol	EPA 625.1
111.160	147	m+p-Cresol	EPA 625.1
111.210	006	Diuron	EPA 632
111.250	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 1613 B
111.250	002	Total Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 1613 B
111.250	003	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	EPA 1613 B
111.250	004	Total Tetrachlorodibenzofuran (TCDF)	EPA 1613 B
111.250	005	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 1613 B
111.250	006	Total Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 1613 B
111.250	007	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 1613 B
111.250	008	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 1613 B
111.250	009	Total Pentachlorodibenzofuran (PeCDF)	EPA 1613 B
111.250	010	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B
111.250	011	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B
111.250	012	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B
111.250	013	Total Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B
111.250	014	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	015	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	016	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	017	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	018	Total Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	019	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 1613 B
111.250	020	Total Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 1613 B
111.250	021	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	EPA 1613 B
111.250	022	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	EPA 1613 B
111.250	023	Total Heptachlorodibenzofuran (HpCDF)	EPA 1613 B
111.250	024	OCDD	EPA 1613 B
111.250	025	OCDF	EPA 1613 B
111.260	041	N-nitrosodimethylamine	EPA 1625 B
111.260	042	N-nitroso-di-n-propylamine	EPA 1625 B
111.345	001	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	DoD QSM Version 5.1 (or newer)
111.345	002	4:2 Fluorotelomer Sulfonic Acid (4:2 FTS)	DoD QSM Version 5.1 (or newer)
111.345	003	6:2 Fluorotelomer Sulfonic Acid (6:2 FTS)	DoD QSM Version 5.1 (or newer)
111.345	004	8:2 Fluorotelomer Sulfonic Acid (8:2 FTS)	DoD QSM Version 5.1 (or newer)
111.345	005	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	DoD QSM Version 5.1 (or newer)
111.345	006	Perfluorobutanoic Acid (PFBA)	DoD QSM Version 5.1 (or newer)
111.345	007	Perfluorobutane Sulfonic Acid (PFBS)	DoD QSM Version 5.1 (or newer)
111.345	008	Perfluorodecanoic Acid (PFDA)	DoD QSM Version 5.1 (or newer)

111.345	009	Perfluorododecanoic Acid (PFDoA)	DoD QSM Version 5.1 (or newer)
111.345	010	Perfluorodecane Sulfonic Acid (PFDS)	DoD QSM Version 5.1 (or newer)
111.345	011	Perfluoroheptanoic Acid (PFHpA)	DoD QSM Version 5.1 (or newer)
111.345	012	Perfluoroheptane Sulfonic Acid (PFHpS)	DoD QSM Version 5.1 (or newer)
111.345	013	Perfluorohexane Sulfonic Acid (PFHxS)	DoD QSM Version 5.1 (or newer)
111.345	014	Perfluorohexanoic Acid (PFHxA)	DoD QSM Version 5.1 (or newer)
111.345	015	Perfluorononanoic Acid (PFNA)	DoD QSM Version 5.1 (or newer)
111.345	016	Perfluorooctanoic Acid (PFOA)	DoD QSM Version 5.1 (or newer)
111.345	017	Perfluorooctane Sulfonic Acid (PFOS)	DoD QSM Version 5.1 (or newer)
111.345	018	Perfluorooctane Sulfonamide (PFOSAm)	DoD QSM Version 5.1 (or newer)
111.345	019	Perfluoropentanoic Acid (PFPeA)	DoD QSM Version 5.1 (or newer)
111.345	020	Perfluoropentane Sulfonic Acid (PFPeS)	DoD QSM Version 5.1 (or newer)
111.345	021	Perfluorotetradecanoic Acid (PFTDA)	DoD QSM Version 5.1 (or newer)
111.345	022	Perfluorotridecanoic Acid (PFTrDA)	DoD QSM Version 5.1 (or newer)
111.345	023	Perfluoroundecanoic Acid (PFUnDA)	DoD QSM Version 5.1 (or newer)
111.345	024	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	DoD QSM Version 5.1 (or newer)
111.345	025	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	DoD QSM Version 5.1 (or newer)
111.345	026	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	DoD QSM Version 5.1 (or newer)
111.345	027	N-Ethylperfluorooctane Sulfonamide (EtFOSAm)	DoD QSM Version 5.1 (or newer)
111.345	028	N-Ethylperfluorooctane Sulfonamido Ethanol (EtFOSE)	DoD QSM Version 5.1 (or newer)
111.345	029	10:2 Fluorotelomer Sulfonic Acid (10:2 FTS)	DoD QSM Version 5.1 (or newer)
111.345	030	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	DoD QSM Version 5.1 (or newer)
111.345	031	N-Methylperfluorooctane Sulfonamide (NMeFOSA)	DoD QSM Version 5.1 (or newer)
111.345	032	N-Methylperfluorooctane Sulfonamido Ethanol (NMeFOSE)	DoD QSM Version 5.1 (or newer)
111.345	033	Perfluorohexadecanoic Acid (PFHxDA)	DoD QSM Version 5.1 (or newer)
111.345	034	Perfluorononane Sulfonic Acid (PFNS)	DoD QSM Version 5.1 (or newer)
111.345	035	Perfluorooctadecanoic Acid (PFODA)	DoD QSM Version 5.1 (or newer)
111.345	036	2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA)	DoD QSM Version 5.1 (or newer)
111.345	037	2H,2H,3H,3H-Perfluorohexaanoic Acid (3:3 FTCA)	DoD QSM Version 5.1 (or newer)
111.345	038	2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	DoD QSM Version 5.1 (or newer)
111.345	039	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	DoD QSM Version 5.1 (or newer)
111.345	040	Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	DoD QSM Version 5.1 (or newer)
111.345	041	Perfluoro-3-methoxypropanoic acid (PFMPA)	DoD QSM Version 5.1 (or newer)
111.345	042	Perfluoro-4-methoxybutanoic acid (PFMBA)	DoD QSM Version 5.1 (or newer)
111.440	001	Bisphenol A	ASTM D7065-17
111.440	002	Nonylphenol	ASTM D7065-17
111.440	003	Nonylphenol Monoethoxylate (NP1EO)	ASTM D7065-17
111.440	004	Nonylphenol Diethoxylate (NP2EO)	ASTM D7065-17
111.440	005	p-tert-Octylphenol (OP)	ASTM D7065-17

Field of Accreditation: 112 - Radionuclides in Non-Potable Water

112.001	001	Gross Alpha	EPA 900.0
112.001	002	Gross Beta	EPA 900.0

Field of Accreditation:114 - Inorganic Constituents in Hazardous Waste

114.315	002	Antimony	EPA 6010 B
114.315	003	Arsenic	EPA 6010 B
114.315	004	Barium	EPA 6010 B
114.315	005	Beryllium	EPA 6010 B
114.315	007	Cadmium	EPA 6010 B
114.315	009	Chromium	EPA 6010 B
114.315	010	Cobalt	EPA 6010 B
114.315	011	Copper	EPA 6010 B
114.315	013	Lead	EPA 6010 B
114.315	016	Molybdenum	EPA 6010 B
114.315	017	Nickel	EPA 6010 B
114.315	019	Selenium	EPA 6010 B
114.315	020	Silver	EPA 6010 B
114.315	023	Thallium	EPA 6010 B
114.315	026	Vanadium	EPA 6010 B
114.315	027	Zinc	EPA 6010 B
114.335	002	Antimony	EPA 6020
114.335	003	Arsenic	EPA 6020
114.335	004	Barium	EPA 6020
114.335	005	Beryllium	EPA 6020
114.335	006	Cadmium	EPA 6020
114.335	007	Chromium	EPA 6020
114.335	008	Cobalt	EPA 6020
114.335	009	Copper	EPA 6020
114.335	010	Lead	EPA 6020
114.335	012	Nickel	EPA 6020
114.335	013	Silver	EPA 6020
114.335	014	Thallium	EPA 6020
114.335	015	Zinc	EPA 6020
114.335	016	Molybdenum	EPA 6020
114.335	017	Selenium	EPA 6020
114.335	018	Vanadium	EPA 6020
114.465	001	Chromium VI (Hexavalent Chromium)	EPA 7199
114.535	001	Mercury	EPA 7471 A
114.745	001	Fluoride	EPA 9056

Field of Accreditation:115 - Leaching/Extraction Tests and Physical Characteristics of Hazardous Waste

115.055	001	Waste Extraction Test (WET)	CCR Chapter11, Article 5, Appendix II
115.085	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311
115.095	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312
115.135	001	Corrosivity - pH Determination	EPA 9045 C

Field of Accreditation:116 - Volatile Organic Compounds in Hazardous Waste

116.265	001	Benzene	EPA 8260 B
116.265	002	Bromobenzene	EPA 8260 B
116.265	003	Bromochloromethane	EPA 8260 B
116.265	004	Bromodichloromethane	EPA 8260 B
116.265	005	Bromoform	EPA 8260 B
116.265	006	Bromomethane (Methyl Bromide)	EPA 8260 B
116.265	007	n-Butylbenzene	EPA 8260 B
116.265	008	sec-Butylbenzene	EPA 8260 B
116.265	009	tert-Butylbenzene	EPA 8260 B
116.265	010	Carbon Disulfide	EPA 8260 B
116.265	011	Carbon Tetrachloride	EPA 8260 B
116.265	012	Chlorobenzene	EPA 8260 B
116.265	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 B
116.265	014	Chloroethane	EPA 8260 B
116.265	015	Chloroform	EPA 8260 B
116.265	016	Chloromethane (Methyl Chloride)	EPA 8260 B
116.265	017	Dibromomethane	EPA 8260 B
116.265	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 B
116.265	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 B
116.265	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 B
116.265	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 B
116.265	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 B
116.265	023	Ethylbenzene	EPA 8260 B
116.265	024	Hexachlorobutadiene	EPA 8260 B
116.265	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 B
116.265	026	Methylene Chloride (Dichloromethane)	EPA 8260 B
116.265	027	Naphthalene	EPA 8260 B
116.265	029	N-propylbenzene	EPA 8260 B
116.265	030	Styrene	EPA 8260 B
116.265	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 B
116.265	032	Toluene	EPA 8260 B
116.265	033	Trichloroethylene (Trichloroethene)	EPA 8260 B
116.265	034	Trichlorofluoromethane	EPA 8260 B
116.265	035	Vinyl Chloride	EPA 8260 B
116.265	036	m+p-Xylene	EPA 8260 B
116.265	037	o-Xylene	EPA 8260 B
116.265	038	m-Xylene	EPA 8260 B
116.265	039	p-Xylene	EPA 8260 B
116.265	040	1,1-Dichloroethane	EPA 8260 B
116.265	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 B
116.265	042	1,1,1-Trichloroethane	EPA 8260 B
116.265	043	1,1,1,2-Tetrachloroethane	EPA 8260 B

116.265	044	1,1,2,2-Tetrachloroethane	EPA 8260 B
116.265	045	1,1,2-Trichloroethane	EPA 8260 B
116.265	046	1,2-Dichlorobenzene	EPA 8260 B
116.265	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 B
116.265	048	1,2-Dibromoethane (EDB)	EPA 8260 B
116.265	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 B
116.265	050	1,2-Dichloropropane	EPA 8260 B
116.265	051	1,2,3-Trichloropropane (TCP)	EPA 8260 B
116.265	052	1,2,4-Trichlorobenzene	EPA 8260 B
116.265	053	1,3-Dichlorobenzene	EPA 8260 B
116.265	054	1,4-Dichlorobenzene	EPA 8260 B
116.265	055	2-Chloroethyl vinyl Ether	EPA 8260 B
116.265	056	4-Chlorotoluene	EPA 8260 B
116.265	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 B
116.265	058	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 8260 B
116.265	062	tert-Amyl Methyl Ether (TAME)	EPA 8260 B
116.285	001	Acrylamide	EPA 8316

Field of Accreditation:117 - Semi-volatile Organic Chemistry of Hazardous Waste

117.235	002	Diesel Range Organics (DRO)	EPA 8015 B
117.235	004	Oil Range Organics (ORO) [LUFT Range]	EPA 8015 B
117.255	012	Ethanol	EPA 8015 B
117.255	020	Methanol	EPA 8015 B
117.315	001	Aldrin	EPA 8081 A
117.315	002	alpha-BHC	EPA 8081 A
117.315	003	beta-BHC	EPA 8081 A
117.315	004	delta-BHC	EPA 8081 A
117.315	005	gamma-BHC (Lindane)	EPA 8081 A
117.315	006	Chlordane (total)	EPA 8081 A
117.315	008	4,4'-DDD	EPA 8081 A
117.315	009	4,4'-DDE	EPA 8081 A
117.315	010	4,4'-DDT	EPA 8081 A
117.315	011	Dieldrin	EPA 8081 A
117.315	012	Endosulfan I	EPA 8081 A
117.315	013	Endosulfan II	EPA 8081 A
117.315	014	Endosulfan Sulfate	EPA 8081 A
117.315	015	Endrin	EPA 8081 A
117.315	016	Endrin Aldehyde	EPA 8081 A
117.315	017	Endrin Ketone	EPA 8081 A
117.315	018	Heptachlor	EPA 8081 A
117.315	019	Heptachlor Epoxide	EPA 8081 A
117.315	020	Methoxychlor	EPA 8081 A
117.315	021	Toxaphene	EPA 8081 A

117.335	001	Aroclor 1016	EPA 8082
117.335	002	Aroclor 1221	EPA 8082
117.335	003	Aroclor 1232	EPA 8082
117.335	004	Aroclor 1242	EPA 8082
117.335	005	Aroclor 1248	EPA 8082
117.335	006	Aroclor 1254	EPA 8082
117.335	007	Aroclor 1260	EPA 8082
117.405	001	Azinphos Methyl	EPA 8141 A
117.405	002	Chlorpyrifos	EPA 8141 A
117.405	003	Demeton-O	EPA 8141 A
117.405	004	Demeton-S	EPA 8141 A
117.405	005	Diazinon	EPA 8141 A
117.405	006	Dichlorvos (DDVP)	EPA 8141 A
117.405	007	Disulfoton	EPA 8141 A
117.405	008	Malathion	EPA 8141 A
117.405	009	Parathion Ethyl	EPA 8141 A
117.405	010	Parathion Methyl	EPA 8141 A
117.405	011	Phorate	EPA 8141 A
117.405	012	Ronnel	EPA 8141 A
117.405	013	Stirophos (Tetrachlorovinphos)	EPA 8141 A
117.425	001	2,4-D	EPA 8151 A
117.425	002	2,4-DB	EPA 8151 A
117.425	003	2,4,5-TP (Silvex)	EPA 8151 A
117.425	004	2,4,5-T	EPA 8151 A
117.425	005	Dalapon	EPA 8151 A
117.425	006	Dicamba	EPA 8151 A
117.425	007	Dichloroprop	EPA 8151 A
117.425	008	Dinoseb	EPA 8151 A
117.425	009	MCPA	EPA 8151 A
117.425	010	MCPP	EPA 8151 A
117.425	011	4-Nitrophenol	EPA 8151 A
117.425	012	Pentachlorophenol	EPA 8151 A
117.435	001	Acenaphthene	EPA 8270 C
117.435	002	Acenaphthylene	EPA 8270 C
117.435	003	Aniline	EPA 8270 C
117.435	004	Anthracene	EPA 8270 C
117.435	005	Benzidine	EPA 8270 C
117.435	006	Benzoic Acid	EPA 8270 C
117.435	007	Benzo(a)anthracene	EPA 8270 C
117.435	008	Benzo(b)fluoranthene	EPA 8270 C
117.435	009	Benzo(k)fluoranthene	EPA 8270 C
117.435	010	Benzo(g,h,i)perylene	EPA 8270 C

117.435	011	Benzo(a)pyrene	EPA 8270 C
117.435	012	Benzyl Alcohol	EPA 8270 C
117.435	013	Bis(2-chloroethoxy) Methane	EPA 8270 C
117.435	014	Bis(2-chloroethyl) Ether	EPA 8270 C
117.435	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 C
117.435	016	Butyl Benzyl Phthalate	EPA 8270 C
117.435	017	Chrysene	EPA 8270 C
117.435	018	Dibenz(a,h)anthracene	EPA 8270 C
117.435	019	Dibenzofuran	EPA 8270 C
117.435	020	Di-n-butyl Phthalate	EPA 8270 C
117.435	021	Diethyl Phthalate	EPA 8270 C
117.435	022	Dimethyl Phthalate	EPA 8270 C
117.435	023	Di-n-octyl Phthalate	EPA 8270 C
117.435	024	Fluoranthene	EPA 8270 C
117.435	025	Fluorene	EPA 8270 C
117.435	026	Naphthalene	EPA 8270 C
117.435	027	Nitrobenzene	EPA 8270 C
117.435	029	Pentachlorophenol	EPA 8270 C
117.435	031	1,2-Dichlorobenzene	EPA 8270 C
117.435	032	1,3-Dichlorobenzene	EPA 8270 C
117.435	033	1,4-Dichlorobenzene	EPA 8270 C
117.435	034	2-Chloronaphthalene	EPA 8270 C
117.435	035	2-Chlorophenol	EPA 8270 C
117.435	036	2,4-Dichlorophenol	EPA 8270 C
117.435	037	2,4-Dimethylphenol	EPA 8270 C
117.435	038	2,4-Dinitrophenol	EPA 8270 C
117.435	039	2,4-Dinitrotoluene	EPA 8270 C
117.435	040	2,6-Dichlorophenol	EPA 8270 C
117.435	041	2,6-Dinitrotoluene	EPA 8270 C
117.435	042	2-Nitroaniline	EPA 8270 C
117.435	043	2-Nitrophenol	EPA 8270 C
117.435	044	3-Nitroaniline	EPA 8270 C
117.435	045	3,3'-Dichlorobenzidine	EPA 8270 C
117.435	046	4-Chloroaniline	EPA 8270 C
117.435	047	4-Chloro-3-methylphenol	EPA 8270 C
117.435	048	4-Bromophenyl Phenyl Ether	EPA 8270 C
117.435	049	4-Chlorophenyl Phenyl Ether	EPA 8270 C
117.435	050	4-Nitroaniline	EPA 8270 C
117.435	051	4-Nitrophenol	EPA 8270 C
117.435	052	Aldrin	EPA 8270 C
117.435	053	alpha-BHC	EPA 8270 C
117.435	054	beta-BHC	EPA 8270 C

117.435	055	delta-BHC	EPA 8270 C
117.435	056	gamma-BHC (Lindane)	EPA 8270 C
117.435	057	4,4'-DDD	EPA 8270 C
117.435	058	4,4'-DDE	EPA 8270 C
117.435	059	4,4'-DDT	EPA 8270 C
117.435	060	Dieldrin	EPA 8270 C
117.435	062	Endosulfan I	EPA 8270 C
117.435	063	Endosulfan II	EPA 8270 C
117.435	064	Endosulfan Sulfate	EPA 8270 C
117.435	065	Endrin	EPA 8270 C
117.435	066	Endrin Aldehyde	EPA 8270 C
117.435	067	Endrin Ketone	EPA 8270 C
117.435	068	Heptachlor	EPA 8270 C
117.435	069	Heptachlor Epoxide	EPA 8270 C
117.435	070	Methoxychlor	EPA 8270 C
117.435	088	N-nitrosodimethylamine	EPA 8270 C
117.435	089	N-nitrosodiphenylamine	EPA 8270 C
117.435	090	N-nitroso-di-n-propylamine	EPA 8270 C
117.435	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 C
117.435	092	Isophorone	EPA 8270 C
117.435	093	2-Methylnaphthalene	EPA 8270 C
117.435	094	Phenanthrene	EPA 8270 C
117.485	001	Acetaldehyde	EPA 8315 A
117.485	010	Formaldehyde	EPA 8315 A
117.495	001	Aldicarb (Temik)	EPA 8318
117.495	002	Aldicarb Sulfone	EPA 8318
117.495	003	Carbaryl (Sevin)	EPA 8318
117.495	004	Carbofuran (Furadan)	EPA 8318
117.495	006	3-Hydroxycarbofuran	EPA 8318
117.495	007	Methiocarb (Mesurol)	EPA 8318
117.495	008	Methomyl (Lannate)	EPA 8318
117.495	009	Oxamyl	EPA 8318
117.495	011	Propoxur (Baygon)	EPA 8318
117.545	001	1,3,5-Trinitrobenzene	EPA 8330 A
117.545	002	1,3-Dinitrobenzene	EPA 8330 A
117.545	003	Nitrobenzene	EPA 8330 A
117.545	004	2,4,6-Trinitrotoluene	EPA 8330 A
117.545	005	2,4-Dinitrotoluene	EPA 8330 A
117.545	006	2,6-Dinitrotoluene	EPA 8330 A
117.545	007	2-Nitrotoluene	EPA 8330 A
117.545	008	3-Nitrotoluene	EPA 8330 A
117.545	009	4-Nitrotoluene	EPA 8330 A

117.575	001	N-Ethylperfluorooctane Sulfonamide (EtFOSAm)	DoD QSM Version 5.1 (or newer)
117.575	002	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	DoD QSM Version 5.1 (or newer)
117.575	003	N-Ethylperfluorooctane Sulfonamido Ethanol (EtFOSE)	DoD QSM Version 5.1 (or newer)
117.575	004	4:2 Fluorotelomer Sulfonic Acid (4:2 FTS)	DoD QSM Version 5.1 (or newer)
117.575	005	6:2 Fluorotelomer Sulfonic Acid (6:2 FTS)	DoD QSM Version 5.1 (or newer)
117.575	006	8:2 Fluorotelomer Sulfonic Acid (8:2 FTS)	DoD QSM Version 5.1 (or newer)
117.575	007	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	DoD QSM Version 5.1 (or newer)
117.575	008	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	DoD QSM Version 5.1 (or newer)
117.575	009	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	DoD QSM Version 5.1 (or newer)
117.575	010	N-Methylperfluorooctane Sulfonamide (NMeFOSA)	DoD QSM Version 5.1 (or newer)
117.575	011	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	DoD QSM Version 5.1 (or newer)
117.575	012	N-Methylperfluorooctane Sulfonamido Ethanol (NMeFOSE)	DoD QSM Version 5.1 (or newer)
117.575	013	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	DoD QSM Version 5.1 (or newer)
117.575	014	Perfluorobutanoic Acid (PFBA)	DoD QSM Version 5.1 (or newer)
117.575	015	Perfluorobutane Sulfonic Acid (PFBS)	DoD QSM Version 5.1 (or newer)
117.575	016	Perfluorodecanoic Acid (PFDA)	DoD QSM Version 5.1 (or newer)
117.575	017	Perfluorododecanoic Acid (PFDoA)	DoD QSM Version 5.1 (or newer)
117.575	018	Perfluorodecane Sulfonic Acid (PFDS)	DoD QSM Version 5.1 (or newer)
117.575	019	Perfluoroheptanoic Acid (PFHpA)	DoD QSM Version 5.1 (or newer)
117.575	020	Perfluoroheptane Sulfonic Acid (PFHpS)	DoD QSM Version 5.1 (or newer)
117.575	021	Perfluorohexane Sulfonic Acid (PFHxS)	DoD QSM Version 5.1 (or newer)
117.575	022	Perfluorohexanoic Acid (PFHxA)	DoD QSM Version 5.1 (or newer)
117.575	023	Perfluorononanoic Acid (PFNA)	DoD QSM Version 5.1 (or newer)
117.575	024	Perfluorooctanoic Acid (PFOA)	DoD QSM Version 5.1 (or newer)
117.575	025	Perfluorooctane Sulfonic Acid (PFOS)	DoD QSM Version 5.1 (or newer)
117.575	026	Perfluorooctane Sulfonamide (PFOSAm)	DoD QSM Version 5.1 (or newer)
117.575	027	Perfluoropentanoic Acid (PFPeA)	DoD QSM Version 5.1 (or newer)
117.575	028	Perfluoropentane Sulfonic Acid (PFPeS)	DoD QSM Version 5.1 (or newer)
117.575	029	Perfluorotetradecanoic Acid (PFTDA)	DoD QSM Version 5.1 (or newer)
117.575	030	Perfluorotridecanoic Acid (PFTrDA)	DoD QSM Version 5.1 (or newer)
117.575	031	Perfluoroundecanoic Acid (PFUnDA)	DoD QSM Version 5.1 (or newer)
117.575	032	10:2 Fluorotelomer Sulfonic Acid (10:2 FTS)	DoD QSM Version 5.1 (or newer)
117.575	033	Perfluorohexadecanoic Acid (PFHxDA)	DoD QSM Version 5.1 (or newer)
117.575	034	Perfluorononane Sulfonic Acid (PFNS)	DoD QSM Version 5.1 (or newer)
117.575	035	Perfluorooctadecanoic Acid (PFODA)	DoD QSM Version 5.1 (or newer)
117.575	036	2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA)	DoD QSM Version 5.1 (or newer)
117.575	037	2H,2H,3H,3H-Perfluorohexaanoic Acid (3:3 FTCA)	DoD QSM Version 5.1 (or newer)
117.575	038	2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	DoD QSM Version 5.1 (or newer)
117.575	039	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	DoD QSM Version 5.1 (or newer)
117.575	040	Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	DoD QSM Version 5.1 (or newer)
117.575	041	Perfluoro-3-methoxypropanoic acid (PFMPA)	DoD QSM Version 5.1 (or newer)
117.575	042	Perfluoro-4-methoxybutanoic acid (PFMBA)	DoD QSM Version 5.1 (or newer)

Field of Accreditation:126 - Microbiological Methods for Ambient Water			
126.003	001	Total Coliform (Enumeration)	SM 9221 B,C-2006
126.003	002	Fecal Coliform (Enumeration)	SM 9221 C,E-2006
126.015	001	E. coli (Enumeration)	SM 9223 B-2004 Colilert
126.019	001	Enterococci	Enterolert
Field of Accreditation:130 - Inorganic constituents in Hazardous waste (Matrix Aqueous)			
130.010	001	Aluminum	EPA 6010 B
130.010	002	Antimony	EPA 6010 B
130.010	003	Arsenic	EPA 6010 B
130.010	004	Barium	EPA 6010 B
130.010	005	Beryllium	EPA 6010 B
130.010	006	Boron	EPA 6010 B
130.010	007	Cadmium	EPA 6010 B
130.010	008	Calcium	EPA 6010 B
130.010	009	Chromium	EPA 6010 B
130.010	010	Cobalt	EPA 6010 B
130.010	011	Copper	EPA 6010 B
130.010	012	Iron	EPA 6010 B
130.010	013	Lead	EPA 6010 B
130.010	014	Magnesium	EPA 6010 B
130.010	015	Manganese	EPA 6010 B
130.010	016	Molybdenum	EPA 6010 B
130.010	017	Nickel	EPA 6010 B
130.010	018	Potassium	EPA 6010 B
130.010	019	Selenium	EPA 6010 B
130.010	020	Silver	EPA 6010 B
130.010	021	Sodium	EPA 6010 B
130.010	022	Strontium	EPA 6010 B
130.010	023	Thallium	EPA 6010 B
130.010	024	Tin	EPA 6010 B
130.010	025	Titanium	EPA 6010 B
130.010	026	Vanadium	EPA 6010 B
130.010	027	Zinc	EPA 6010 B
130.030	001	Aluminum	EPA 6020
130.030	002	Antimony	EPA 6020
130.030	003	Arsenic	EPA 6020
130.030	004	Barium	EPA 6020
130.030	005	Beryllium	EPA 6020
130.030	006	Cadmium	EPA 6020
130.030	007	Chromium	EPA 6020
130.030	008	Cobalt	EPA 6020
130.030	009	Copper	EPA 6020

130.030	010	Lead	EPA 6020
130.030	011	Manganese	EPA 6020
130.030	012	Nickel	EPA 6020
130.030	013	Silver	EPA 6020
130.030	014	Thallium	EPA 6020
130.030	015	Zinc	EPA 6020
130.030	016	Molybdenum	EPA 6020
130.030	017	Selenium	EPA 6020
130.030	018	Vanadium	EPA 6020
130.250	001	Mercury	EPA 7470 A

Field of Accreditation:131 - Leaching/Extraction, Physical Chacterstics in Hazardous Waste (Matrix Aqueous)

131.010	001	Waste Extraction Test (WET)	CCR Chapter11, Article 5, Appendix II
131.040	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311
131.050	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312
131.110	001	Corrosivity - pH Determination	EPA 9040 B

Field of Accreditation:132 - Volatile Organic Compounds in Hazardous Waste (Matrix Aqueous)

132.060	001	Benzene	EPA 8260 B
132.060	004	Bromodichloromethane	EPA 8260 B
132.060	005	Bromoform	EPA 8260 B
132.060	006	Bromomethane (Methyl Bromide)	EPA 8260 B
132.060	010	Carbon Disulfide	EPA 8260 B
132.060	011	Carbon Tetrachloride	EPA 8260 B
132.060	012	Chlorobenzene	EPA 8260 B
132.060	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 B
132.060	014	Chloroethane	EPA 8260 B
132.060	015	Chloroform	EPA 8260 B
132.060	016	Chloromethane (Methyl Chloride)	EPA 8260 B
132.060	017	Dibromomethane	EPA 8260 B
132.060	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 B
132.060	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 B
132.060	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 B
132.060	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 B
132.060	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 B
132.060	023	Ethylbenzene	EPA 8260 B
132.060	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 B
132.060	026	Methylene Chloride (Dichloromethane)	EPA 8260 B
132.060	027	Naphthalene	EPA 8260 B
132.060	030	Styrene	EPA 8260 B
132.060	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 B
132.060	032	Toluene	EPA 8260 B
132.060	033	Trichloroethylene (Trichloroethene)	EPA 8260 B
132.060	034	Trichlorofluoromethane	EPA 8260 B

132.060	035	Vinyl Chloride	EPA 8260 B
132.060	036	m+p-Xylene	EPA 8260 B
132.060	037	o-Xylene	EPA 8260 B
132.060	038	m-Xylene	EPA 8260 B
132.060	039	p-Xylene	EPA 8260 B
132.060	040	1,1-Dichloroethane	EPA 8260 B
132.060	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 B
132.060	042	1,1,1-Trichloroethane	EPA 8260 B
132.060	043	1,1,1,2-Tetrachloroethane	EPA 8260 B
132.060	044	1,1,2,2-Tetrachloroethane	EPA 8260 B
132.060	045	1,1,2-Trichloroethane	EPA 8260 B
132.060	046	1,2-Dichlorobenzene	EPA 8260 B
132.060	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 B
132.060	048	1,2-Dibromoethane (EDB)	EPA 8260 B
132.060	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 B
132.060	050	1,2-Dichloropropane	EPA 8260 B
132.060	051	1,2,3-Trichloropropane (TCP)	EPA 8260 B
132.060	052	1,2,4-Trichlorobenzene	EPA 8260 B
132.060	053	1,3-Dichlorobenzene	EPA 8260 B
132.060	054	1,4-Dichlorobenzene	EPA 8260 B
132.060	055	2-Chloroethyl vinyl Ether	EPA 8260 B
132.060	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 B

Field of Accreditation: 133 - Semi-Volatile Organic Chemistry in Hazardous Waste (Matrix Aqueous)

133.010	002	Diesel Range Organics (DRO)	EPA 8015 B
133.030	012	Ethanol	EPA 8015 B
133.030	020	Methanol	EPA 8015 B
133.090	001	Aldrin	EPA 8081 A
133.090	002	alpha-BHC	EPA 8081 A
133.090	003	beta-BHC	EPA 8081 A
133.090	004	delta-BHC	EPA 8081 A
133.090	005	gamma-BHC (Lindane)	EPA 8081 A
133.090	006	Chlordane	EPA 8081 A
133.090	008	4,4'-DDD	EPA 8081 A
133.090	009	4,4'-DDE	EPA 8081 A
133.090	010	4,4'-DDT	EPA 8081 A
133.090	011	Dieldrin	EPA 8081 A
133.090	012	Endosulfan I	EPA 8081 A
133.090	013	Endosulfan II	EPA 8081 A
133.090	014	Endosulfan Sulfate	EPA 8081 A
133.090	015	Endrin	EPA 8081 A
133.090	016	Endrin Aldehyde	EPA 8081 A
133.090	017	Endrin Ketone	EPA 8081 A

133.090	018	Heptachlor	EPA 8081 A
133.090	019	Heptachlor Epoxide	EPA 8081 A
133.090	020	Methoxychlor	EPA 8081 A
133.090	021	Toxaphene	EPA 8081 A
133.120	001	Aroclor 1016	EPA 8082
133.120	002	Aroclor 1221	EPA 8082
133.120	003	Aroclor 1232	EPA 8082
133.120	004	Aroclor 1242	EPA 8082
133.120	005	Aroclor 1248	EPA 8082
133.120	006	Aroclor 1254	EPA 8082
133.120	007	Aroclor 1260	EPA 8082
133.190	001	Azinphos Methyl	EPA 8141 A
133.190	002	Chlorpyrifos	EPA 8141 A
133.190	003	Demeton-O	EPA 8141 A
133.190	004	Demeton-S	EPA 8141 A
133.190	005	Diazinon	EPA 8141 A
133.190	006	Dichlorvos (DDVP)	EPA 8141 A
133.190	007	Disulfoton	EPA 8141 A
133.190	008	Malathion	EPA 8141 A
133.190	009	Parathion Ethyl	EPA 8141 A
133.190	013	Stirophos (Tetrachlorovinphos)	EPA 8141 A
133.220	001	2,4-D	EPA 8151 A
133.220	002	2,4-DB	EPA 8151 A
133.220	003	2,4,5-TP (Silvex)	EPA 8151 A
133.220	004	2,4,5-T	EPA 8151 A
133.220	005	Dalapon	EPA 8151 A
133.220	006	Dicamba	EPA 8151 A
133.220	007	Dichloroprop	EPA 8151 A
133.220	008	Dinoseb	EPA 8151 A
133.220	009	MCPA	EPA 8151 A
133.220	010	MCPP	EPA 8151 A
133.220	012	Pentachlorophenol	EPA 8151 A
133.230	001	Acenaphthene	EPA 8270 C
133.230	002	Acenaphthylene	EPA 8270 C
133.230	003	Aniline	EPA 8270 C
133.230	004	Anthracene	EPA 8270 C
133.230	005	Benzidine	EPA 8270 C
133.230	006	Benzoic Acid	EPA 8270 C
133.230	007	Benzo(a)anthracene	EPA 8270 C
133.230	008	Benzo(b)fluoranthene	EPA 8270 C
133.230	009	Benzo(k)fluoranthene	EPA 8270 C
133.230	010	Benzo(g,h,i)perylene	EPA 8270 C

133.230	011	Benzo(a)pyrene	EPA 8270 C
133.230	012	Benzyl Alcohol	EPA 8270 C
133.230	013	Bis(2-chloroethoxy) Methane	EPA 8270 C
133.230	014	Bis(2-chloroethyl) Ether	EPA 8270 C
133.230	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 C
133.230	016	Butyl Benzyl Phthalate	EPA 8270 C
133.230	017	Chrysene	EPA 8270 C
133.230	018	Dibenz(a,h)anthracene	EPA 8270 C
133.230	019	Dibenzofuran	EPA 8270 C
133.230	020	Di-n-butyl Phthalate	EPA 8270 C
133.230	021	Diethyl Phthalate	EPA 8270 C
133.230	022	Dimethyl Phthalate	EPA 8270 C
133.230	023	Di-n-octyl Phthalate	EPA 8270 C
133.230	024	Fluoranthene	EPA 8270 C
133.230	025	Fluorene	EPA 8270 C
133.230	026	Naphthalene	EPA 8270 C
133.230	027	Nitrobenzene	EPA 8270 C
133.230	029	Pentachlorophenol	EPA 8270 C
133.230	031	1,2-Dichlorobenzene	EPA 8270 C
133.230	032	1,3-Dichlorobenzene	EPA 8270 C
133.230	033	1,4-Dichlorobenzene	EPA 8270 C
133.230	034	2-Chloronaphthalene	EPA 8270 C
133.230	035	2-Chlorophenol	EPA 8270 C
133.230	036	2,4-Dichlorophenol	EPA 8270 C
133.230	037	2,4-Dimethylphenol	EPA 8270 C
133.230	038	2,4-Dinitrophenol	EPA 8270 C
133.230	039	2,4-Dinitrotoluene	EPA 8270 C
133.230	040	2,6-Dichlorophenol	EPA 8270 C
133.230	041	2,6-Dinitrotoluene	EPA 8270 C
133.230	042	2-Nitroaniline	EPA 8270 C
133.230	043	2-Nitrophenol	EPA 8270 C
133.230	044	3-Nitroaniline	EPA 8270 C
133.230	045	3,3'-Dichlorobenzidine	EPA 8270 C
133.230	046	4-Chloroaniline	EPA 8270 C
133.230	047	4-Chloro-3-methylphenol	EPA 8270 C
133.230	048	4-Bromophenyl Phenyl Ether	EPA 8270 C
133.230	049	4-Chlorophenyl Phenyl Ether	EPA 8270 C
133.230	050	4-Nitroaniline	EPA 8270 C
133.230	051	4-Nitrophenol	EPA 8270 C
133.230	052	Aldrin	EPA 8270 C
133.230	053	alpha-BHC	EPA 8270 C
133.230	054	beta-BHC	EPA 8270 C

133.230	055	delta-BHC	EPA 8270 C
133.230	056	gamma-BHC (Lindane)	EPA 8270 C
133.230	057	4,4'-DDD	EPA 8270 C
133.230	058	4,4'-DDE	EPA 8270 C
133.230	059	4,4'-DDT	EPA 8270 C
133.230	060	Dieldrin	EPA 8270 C
133.230	062	Endosulfan I	EPA 8270 C
133.230	063	Endosulfan II	EPA 8270 C
133.230	064	Endosulfan Sulfate	EPA 8270 C
133.230	065	Endrin	EPA 8270 C
133.230	066	Endrin Aldehyde	EPA 8270 C
133.230	067	Endrin Ketone	EPA 8270 C
133.230	068	Heptachlor	EPA 8270 C
133.230	069	Heptachlor Epoxide	EPA 8270 C
133.230	070	Methoxychlor	EPA 8270 C
133.230	088	N-nitrosodimethylamine	EPA 8270 C
133.230	089	N-nitrosodiphenylamine	EPA 8270 C
133.230	090	N-nitroso-di-n-propylamine	EPA 8270 C
133.230	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 C
133.230	092	Isophorone	EPA 8270 C
133.230	093	2-Methylnaphthalene	EPA 8270 C
133.230	094	Phenanthrene	EPA 8270 C
133.280	001	Acetaldehyde	EPA 8315 A
133.280	010	Formaldehyde	EPA 8315 A
133.290	001	Aldicarb (Temik)	EPA 8318
133.290	002	Aldicarb Sulfone	EPA 8318
133.290	003	Carbaryl (Sevin)	EPA 8318
133.290	004	Carbofuran (Furadan)	EPA 8318
133.290	006	3-Hydroxycarbofuran	EPA 8318
133.290	007	Methiocarb (Mesurol)	EPA 8318
133.290	008	Methomyl (Lannate)	EPA 8318
133.290	009	Oxamyl	EPA 8318
133.290	011	Propoxur (Baygon)	EPA 8318
133.320	001	Aldicarb (Temik)	EPA 8321 A
133.320	002	Aldicarb Sulfone	EPA 8321 A
133.320	003	Aldicarb Sulfoxide	EPA 8321 A
133.320	004	Carbaryl (Sevin)	EPA 8321 A
133.320	005	Carbofuran (Furadan)	EPA 8321 A
133.320	007	Methiocarb (Mesurol)	EPA 8321 A
133.320	008	Methomyl (Lannate)	EPA 8321 A
133.320	009	Oxamyl	EPA 8321 A
133.320	011	Propoxur (Baygon)	EPA 8321 A

133.350	001	1,3,5-Trinitrobenzene	EPA 8330 A
133.350	002	1,3-Dinitrobenzene	EPA 8330 A
133.350	003	Nitrobenzene	EPA 8330 A
133.350	004	2,4,6-Trinitrotoluene	EPA 8330 A
133.350	005	2,4-Dinitrotoluene	EPA 8330 A
133.350	006	2,6-Dinitrotoluene	EPA 8330 A
133.350	007	2-Nitrotoluene	EPA 8330 A
133.350	008	3-Nitrotoluene	EPA 8330 A
133.350	009	4-Nitrotoluene	EPA 8330 A
133.380	001	N-Ethylperfluorooctane Sulfonamide (EtFOSAm)	DoD QSM Version 5.1 (or newer)
133.380	002	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	DoD QSM Version 5.1 (or newer)
133.380	003	N-Ethylperfluorooctane Sulfonamido Ethanol (EtFOSE)	DoD QSM Version 5.1 (or newer)
133.380	004	4:2 Fluorotelomer Sulfonic Acid (4:2 FTS)	DoD QSM Version 5.1 (or newer)
133.380	005	6:2 Fluorotelomer Sulfonic Acid (6:2 FTS)	DoD QSM Version 5.1 (or newer)
133.380	006	8:2 Fluorotelomer Sulfonic Acid (8:2 FTS)	DoD QSM Version 5.1 (or newer)
133.380	007	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	DoD QSM Version 5.1 (or newer)
133.380	008	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	DoD QSM Version 5.1 (or newer)
133.380	009	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	DoD QSM Version 5.1 (or newer)
133.380	010	N-Methylperfluorooctane Sulfonamide (NMeFOSA)	DoD QSM Version 5.1 (or newer)
133.380	011	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	DoD QSM Version 5.1 (or newer)
133.380	012	N-Methylperfluorooctane Sulfonamido Ethanol (NMeFOSE)	DoD QSM Version 5.1 (or newer)
133.380	013	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	DoD QSM Version 5.1 (or newer)
133.380	014	Perfluorobutanoic Acid (PFBA)	DoD QSM Version 5.1 (or newer)
133.380	015	Perfluorobutane Sulfonic Acid (PFBS)	DoD QSM Version 5.1 (or newer)
133.380	016	Perfluorodecanoic Acid (PFDA)	DoD QSM Version 5.1 (or newer)
133.380	017	Perfluorododecanoic Acid (PFDoA)	DoD QSM Version 5.1 (or newer)
133.380	018	Perfluorodecane Sulfonic Acid (PFDS)	DoD QSM Version 5.1 (or newer)
133.380	019	Perfluoroheptanoic Acid (PFHpA)	DoD QSM Version 5.1 (or newer)
133.380	020	Perfluoroheptane Sulfonic Acid (PFHpS)	DoD QSM Version 5.1 (or newer)
133.380	021	Perfluorohexane Sulfonic Acid (PFHxS)	DoD QSM Version 5.1 (or newer)
133.380	022	Perfluorohexanoic Acid (PFHxA)	DoD QSM Version 5.1 (or newer)
133.380	023	Perfluorononanoic Acid (PFNA)	DoD QSM Version 5.1 (or newer)
133.380	024	Perfluorooctanoic Acid (PFOA)	DoD QSM Version 5.1 (or newer)
133.380	025	Perfluorooctane Sulfonic Acid (PFOS)	DoD QSM Version 5.1 (or newer)
133.380	026	Perfluorooctane Sulfonamide (PFOSAm)	DoD QSM Version 5.1 (or newer)
133.380	027	Perfluoropentanoic Acid (PFPeA)	DoD QSM Version 5.1 (or newer)
133.380	028	Perfluoropentane Sulfonic Acid (PFPeS)	DoD QSM Version 5.1 (or newer)
133.380	029	Perfluorotetradecanoic Acid (PFTDA)	DoD QSM Version 5.1 (or newer)
133.380	030	Perfluoroundecanoic Acid (PFUnDA)	DoD QSM Version 5.1 (or newer)
133.380	031	Perfluoroundecanoic Acid (PFUnDA)	DoD QSM Version 5.1 (or newer)
133.380	032	10:2 Fluorotelomer Sulfonic Acid (10:2 FTS)	DoD QSM Version 5.1 (or newer)
133.380	033	Perfluorohexadecanoic Acid (PFHxDA)	DoD QSM Version 5.1 (or newer)

133.380	034	Perfluorononane Sulfonic Acid (PFNS)	DoD QSM Version 5.1 (or newer)
133.380	035	Perfluorooctadecanoic Acid (PFODA)	DoD QSM Version 5.1 (or newer)
133.380	036	2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA)	DoD QSM Version 5.1 (or newer)
133.380	037	2H,2H,3H,3H-Perfluorohexaanoic Acid (3:3 FTCA)	DoD QSM Version 5.1 (or newer)
133.380	038	2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	DoD QSM Version 5.1 (or newer)
133.380	039	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	DoD QSM Version 5.1 (or newer)
133.380	040	Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	DoD QSM Version 5.1 (or newer)
133.380	041	Perfluoro-3-methoxypropanoic acid (PFMPA)	DoD QSM Version 5.1 (or newer)
133.380	042	Perfluoro-4-methoxybutanoic acid (PFMBA)	DoD QSM Version 5.1 (or newer)

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

Monterey One Water (M1W)

Laboratory Division

14811 Del Monte Boulevard

Marina, CA 93933

Scope of the certificate is limited to the
"Fields of Accreditation"
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of
Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **1195**

Effective Date: **6/1/2022**

Expiration Date: **5/31/2024**

Sacramento, California
subject to forfeiture or revocation

Christine Sotelo, Program Manager
Environmental Laboratory Accreditation Program

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

Davi Laboratories, Environmental Associates

730 Alfred Nobel Drive

Hercules, CA 94547

Scope of the certificate is limited to the
"Fields of Accreditation"
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of
Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **1438**

Effective Date: **2/1/2021**

Expiration Date: **1/31/2023**

Sacramento, California
subject to forfeiture or revocation

Christine Sotelo, Program Manager
Environmental Laboratory Accreditation Program

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Fields of Accreditation

Davi Laboratories, Environmental Associates

730 Alfred Nobel Drive
Hercules, CA 94547
Phone: 5107249450

Certificate Number: 1438
Expiration Date: 1/31/2023

Field of Accreditation: 106 - Radionuclides in Drinking Water

106.010	001	Gross Alpha	EPA 900.0
106.010	002	Gross Beta	EPA 900.0
106.050	001	Total Alpha Radium	EPA 903.0
106.051	001	Radium-226	EPA 903.1
106.060	001	Radium-228	EPA 904.0
106.070	003	Strontium-90	EPA 905.0
106.080	001	Tritium	EPA 906.0
106.091	001	Uranium	EPA 908.1

As of 6/17/2022 , this list supersedes all previous lists for this certificate number.
Customers: Please verify the current accreditation standing with the State.

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

Fruit Growers Laboratory, Inc.

Santa Paula

853 Corporation Street

Santa Paula, CA 93060

Scope of the certificate is limited to the
"Fields of Accreditation"
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of
Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **1573**

Effective Date: **8/1/2021**

Expiration Date: **7/31/2023**

Sacramento, California
subject to forfeiture or revocation

Christine Sotelo, Chief
Environmental Laboratory Accreditation Program

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Fields of Accreditation

Fruit Growers Laboratory, Inc.
Santa Paula
853 Corporation Street
Santa Paula, CA 93060
Phone: 8053922000

Certificate Number: **1573**
Expiration Date: **7/31/2023**

Field of Accreditation: 101 - Microbiology of Drinking Water

101.010	001	Heterotrophic Bacteria	SM 9215 B
101.020	001	Total Coliform P/A	SM 9221 B
101.020	002	Fecal Coliform P/A	SM 9221 B,E
101.020	004	Total Coliform (Enumeration)	SM 9221 B,C
101.020	005	Fecal Coliform (Enumeration)	SM 9221 B,E
101.050	001	Total Coliform P/A	SM 9223 B Colilert
101.050	002	E. coli P/A	SM 9223 B Colilert
101.050	003	Total Coliform (Enumeration)	SM 9223 B Colilert
101.050	004	E. coli (Enumeration)	SM 9223 B Colilert
101.050	005	Total Coliform P/A	SM 9223 B Colilert 18
101.050	006	E. coli P/A	SM 9223 B Colilert 18
101.050	007	Total Coliform (Enumeration)	SM 9223 B Colilert 18
101.050	008	E. coli (Enumeration)	SM 9223 B Colilert 18
101.050	009	Total Coliform P/A	SM 9223 B Colisure
101.050	010	E. coli P/A	SM 9223 B Colisure
101.050	011	Total Coliform (Enumeration)	SM 9223 B Colisure
101.050	012	E. coli (Enumeration)	SM 9223 B Colisure
101.170	001	Enterococci	Enterolert

Field of Accreditation: 102 - Inorganic Chemistry of Drinking Water

102.026	001	Calcium	EPA 200.7
102.026	002	Magnesium	EPA 200.7
102.026	003	Potassium	EPA 200.7
102.026	004	Silica	EPA 200.7
102.026	005	Sodium	EPA 200.7
102.026	006	Hardness (Calculation)	EPA 200.7
102.030	001	Bromide	EPA 300.0
102.030	003	Chloride	EPA 300.0
102.030	005	Fluoride	EPA 300.0
102.030	006	Nitrate (as N)	EPA 300.0
102.030	007	Nitrite (as N)	EPA 300.0
102.030	008	Phosphate,Ortho (as P)	EPA 300.0
102.030	009	Sulfate (as SO4)	EPA 300.0
102.045	001	Perchlorate	EPA 314.0

102.095	001	Turbidity	SM 2130 B-2001
102.100	001	Alkalinity	SM 2320 B-1997
102.130	001	Specific Conductance	SM 2510 B-1997
102.140	001	Residue, Filterable TDS	SM 2540 C-1997
102.175	002	Chlorine, Total Residual	SM 4500-Cl G-2000
102.190	001	Cyanide, Total	SM 4500-CN E-1999
102.203	001	Hydrogen Ion (pH)	SM 4500-H+ B-2000
102.220	001	Nitrite (as N)	SM 4500-NO2 B-2000
102.234	001	Nitrite (as N)	SM 4500-NO3 F-2000
102.234	002	Nitrate (as N)	SM 4500-NO3 F-2000
102.240	001	Phosphate,Ortho (as P)	SM 4500-P E-1999
102.262	001	Organic Carbon-Total (TOC)	SM 5310 C-2000
102.263	001	Dissolved Organic Carbon (DOC)	SM 5310 C-2000
102.270	001	Surfactants	SM 5540 C-2000

Field of Accreditation:103 - Toxic Chemical Elements of Drinking Water

103.130	001	Aluminum	EPA 200.7
103.130	003	Barium	EPA 200.7
103.130	004	Beryllium	EPA 200.7
103.130	007	Chromium	EPA 200.7
103.130	008	Copper	EPA 200.7
103.130	009	Iron	EPA 200.7
103.130	011	Manganese	EPA 200.7
103.130	012	Nickel	EPA 200.7
103.130	015	Silver	EPA 200.7
103.130	017	Zinc	EPA 200.7
103.130	018	Boron	EPA 200.7
103.140	001	Aluminum	EPA 200.8
103.140	002	Antimony	EPA 200.8
103.140	003	Arsenic	EPA 200.8
103.140	004	Barium	EPA 200.8
103.140	005	Beryllium	EPA 200.8
103.140	006	Cadmium	EPA 200.8
103.140	007	Chromium	EPA 200.8
103.140	008	Copper	EPA 200.8
103.140	009	Lead	EPA 200.8
103.140	010	Manganese	EPA 200.8
103.140	012	Nickel	EPA 200.8
103.140	013	Selenium	EPA 200.8
103.140	014	Silver	EPA 200.8
103.140	015	Thallium	EPA 200.8
103.140	016	Zinc	EPA 200.8
103.140	017	Boron	EPA 200.8

103.140	018	Vanadium	EPA 200.8
103.160	001	Mercury	EPA 245.1
103.310	001	Chromium VI (Hexavalent Chromium)	EPA 218.6

Field of Accreditation: 104 - Volatile Organic Chemistry of Drinking Water

104.035	001	1,2,3-Trichloropropane (TCP)	SRL 524M-TCP
104.040	001	Benzene	EPA 524.2
104.040	007	n-Butylbenzene	EPA 524.2
104.040	008	sec-Butylbenzene	EPA 524.2
104.040	009	tert-Butylbenzene	EPA 524.2
104.040	010	Carbon Tetrachloride	EPA 524.2
104.040	011	Chlorobenzene	EPA 524.2
104.040	015	2-Chlorotoluene	EPA 524.2
104.040	016	4-Chlorotoluene	EPA 524.2
104.040	019	1,3-Dichlorobenzene	EPA 524.2
104.040	020	1,2-Dichlorobenzene	EPA 524.2
104.040	021	1,4-Dichlorobenzene	EPA 524.2
104.040	022	Dichlorodifluoromethane	EPA 524.2
104.040	023	1,1-Dichloroethane	EPA 524.2
104.040	024	1,2-Dichloroethane (Ethylene Dichloride)	EPA 524.2
104.040	025	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 524.2
104.040	026	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 524.2
104.040	027	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 524.2
104.040	028	Dichloromethane (Methylene Chloride)	EPA 524.2
104.040	029	1,2-Dichloropropane	EPA 524.2
104.040	033	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 524.2
104.040	034	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropen	EPA 524.2
104.040	035	Ethylbenzene	EPA 524.2
104.040	037	Isopropylbenzene	EPA 524.2
104.040	039	Naphthalene	EPA 524.2
104.040	041	N-propylbenzene	EPA 524.2
104.040	042	Styrene	EPA 524.2
104.040	043	1,1,1,2-Tetrachloroethane	EPA 524.2
104.040	044	1,1,2,2-Tetrachloroethane	EPA 524.2
104.040	045	Tetrachloroethylene (Tetrachloroethene)	EPA 524.2
104.040	046	Toluene	EPA 524.2
104.040	047	1,2,3-Trichlorobenzene	EPA 524.2
104.040	048	1,2,4-Trichlorobenzene	EPA 524.2
104.040	049	1,1,1-Trichloroethane	EPA 524.2
104.040	050	1,1,2-Trichloroethane	EPA 524.2
104.040	051	Trichloroethylene (Trichloroethene)	EPA 524.2
104.040	052	Trichlorofluoromethane	EPA 524.2
104.040	054	1,2,4-Trimethylbenzene	EPA 524.2

104.040	055	1,3,5-Trimethylbenzene	EPA 524.2
104.040	056	Vinyl Chloride	EPA 524.2
104.040	059	o-Xylene	EPA 524.2
104.040	063	m+p-Xylene	EPA 524.2
104.045	001	Bromodichloromethane	EPA 524.2
104.045	002	Bromoform	EPA 524.2
104.045	003	Chloroform	EPA 524.2
104.045	004	Dibromochloromethane (Chlorodibromomethane)	EPA 524.2
104.050	002	Methyl tert-butyl Ether (MTBE)	EPA 524.2
104.050	003	tert-Amyl Methyl Ether (TAME)	EPA 524.2
104.050	004	Ethyl tert-butyl Ether (ETBE)	EPA 524.2
104.050	005	Trichlorotrifluoroethane (Freon 113)	EPA 524.2
104.050	006	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 524.2

Field of Accreditation:105 - Semi-volatile Organic Chemistry of Drinking Water

105.010	002	Alachlor	EPA 505
105.010	004	Chlordane	EPA 505
105.010	006	Endrin	EPA 505
105.010	007	Heptachlor	EPA 505
105.010	008	Heptachlor Epoxide	EPA 505
105.010	009	Hexachlorobenzene	EPA 505
105.010	010	Hexachlorocyclopentadiene	EPA 505
105.010	011	Lindane (HCH-gamma)	EPA 505
105.010	012	Methoxychlor	EPA 505
105.010	014	Toxaphene	EPA 505
105.010	015	PCBs as Aroclors (screen)	EPA 505
105.030	001	Alachlor	EPA 507
105.030	002	Atrazine	EPA 507
105.030	003	Butachlor	EPA 507
105.030	005	Metolachlor	EPA 507
105.030	006	Metribuzin	EPA 507
105.030	007	Molinate	EPA 507
105.030	008	Prometryn	EPA 507
105.030	009	Simazine	EPA 507
105.082	001	2,4-D	EPA 515.3
105.082	002	Dinoseb	EPA 515.3
105.082	003	Pentachlorophenol	EPA 515.3
105.082	004	Picloram	EPA 515.3
105.082	005	2,4,5-TP (Silvex)	EPA 515.3
105.082	006	Bentazon	EPA 515.3
105.082	007	Dalapon	EPA 515.3
105.082	008	Dicamba	EPA 515.3
105.100	001	Aldicarb (Temik)	EPA 531.1

105.100	002	Aldicarb Sulfone	EPA 531.1
105.100	003	Aldicarb Sulfoxide	EPA 531.1
105.100	004	Carbaryl (Sevin)	EPA 531.1
105.100	005	Carbofuran (Furadan)	EPA 531.1
105.100	006	3-Hydroxycarbofuran	EPA 531.1
105.100	007	Methomyl (Lannate)	EPA 531.1
105.100	008	Oxamyl	EPA 531.1
105.120	001	Glyphosate	EPA 547
105.140	001	Endothall	EPA 548.1
105.150	001	Diquat	EPA 549.2
105.175	001	Bromodichloromethane	EPA 551.1
105.175	002	Bromoform	EPA 551.1
105.175	003	Chloroform	EPA 551.1
105.175	004	Dibromochloromethane (Chlorodibromomethane)	EPA 551.1
105.200	001	Bromoacetic Acid	EPA 552.2
105.200	003	Chloroacetic Acid	EPA 552.2
105.200	005	Dibromoacetic Acid	EPA 552.2
105.200	006	Dichloroacetic Acid	EPA 552.2
105.200	007	Trichloroacetic Acid	EPA 552.2

Field of Accreditation:106 - Radionuclides in Drinking Water

106.010	001	Gross Alpha	EPA 900.0
106.010	002	Gross Beta	EPA 900.0
106.050	001	Total Alpha Radium	EPA 903.0
106.050	002	Radium-226	EPA 903.0
106.080	001	Tritium	EPA 906.0
106.092	001	Uranium	EPA 200.8
106.170	001	Radium-228	EPA Ra-05
106.270	001	Gross Alpha	SM 7110 C
106.610	001	Radon-222	SM 7500-Rn

Field of Accreditation:107 - Microbiological Methods for Non-Potable Water and Sewage Sludge

107.001	001	Total Coliform (Enumeration)	SM 9221 B,C-2006
107.001	002	Fecal Coliform (Enumeration)	SM 9221 C,E-2006
107.013	001	E. coli (Enumeration)	SM 9223 B-2004 Colilert
107.015	001	E. coli (Enumeration)	SM 9223 B-2004 Colilert 18
107.017	001	Enterococci	Enterolert

Field of Accreditation:108 - Inorganic Constituents in Non-Potable Water

108.007	001	Residue, Volatile	EPA 160.4 (1971)
108.013	001	Calcium	EPA 200.7 (1994 Rev. 4.4)
108.013	002	Magnesium	EPA 200.7 (1994 Rev. 4.4)
108.013	003	Phosphorus,Total	EPA 200.7 (1994 Rev. 4.4)
108.013	004	Potassium	EPA 200.7 (1994 Rev. 4.4)
108.013	005	Silica, Dissolved	EPA 200.7 (1994 Rev. 4.4)

108.013	006	Sodium	EPA 200.7 (1994 Rev. 4.4)
108.017	001	Bromide	EPA 300.0 (1993 Rev. 2.1)
108.017	002	Chloride	EPA 300.0 (1993 Rev. 2.1)
108.017	003	Fluoride	EPA 300.0 (1993 Rev. 2.1)
108.017	004	Nitrate (as N)	EPA 300.0 (1993 Rev. 2.1)
108.017	005	Nitrate-Nitrite (as N)	EPA 300.0 (1993 Rev. 2.1)
108.017	006	Nitrite (as N)	EPA 300.0 (1993 Rev. 2.1)
108.017	007	Phosphate,Ortho (as P)	EPA 300.0 (1993 Rev. 2.1)
108.017	008	Sulfate (as SO4)	EPA 300.0 (1993 Rev. 2.1)
108.029	001	Kjeldahl Nitrogen,Total (as N)	EPA 351.2 (1993 Rev. 2.0)
108.047	001	Phenols, Total	EPA 420.1 (1978 Rev. 1.0)
108.053	001	Oil & Grease Total	EPA 1664 A
108.059	001	Turbidity	SM 2130 B-2011
108.063	001	Alkalinity	SM 2320 B-2011
108.069	001	Specific Conductance	SM 2510 B-2011
108.071	001	Residue, Total	SM 2540 B-2011
108.073	001	Residue, Filterable TDS	SM 2540 C-2011
108.075	001	Residue, Non-filterable TSS	SM 2540 D-2011
108.079	001	Residue, Settleable	SM 2540 F-2011
108.114	001	Chlorine, Total Residual	SM 4500-Cl G-2011
108.125	001	Cyanide, Total	SM 4500-CN E-2011
108.147	001	Ammonia (as N)	SM 4500-NH3 G-2011
108.153	001	Nitrite (as N)	SM 4500-NO2 B-2011
108.159	001	Nitrate-Nitrite (as N)	SM 4500-NO3 F-2011
108.159	002	Nitrite (as N)	SM 4500-NO3 F-2011
108.175	001	Phosphate,Ortho (as P)	SM 4500-P E-2011
108.175	002	Phosphorus,Total	SM 4500-P E-2011
108.201	001	Sulfide (as S)	SM 4500-S D-2011
108.207	001	Biochemical Oxygen Demand	SM 5210 B-2011
108.207	002	Carbonaceous BOD	SM 5210 B-2011
108.213	001	Chemical Oxygen Demand	SM 5220 D-2011
108.217	001	Organic Carbon-Total (TOC)	SM 5310 C-2011
108.225	001	Surfactants	SM 5540 C-2011

Field of Accreditation:109 - Metals and Trace Elements in Non-Potable Water

109.623	001	Aluminum	EPA 200.7 (1994 Rev. 4.4)
109.623	002	Antimony	EPA 200.7 (1994 Rev. 4.4)
109.623	003	Arsenic	EPA 200.7 (1994 Rev. 4.4)
109.623	004	Barium	EPA 200.7 (1994 Rev. 4.4)
109.623	005	Beryllium	EPA 200.7 (1994 Rev. 4.4)
109.623	006	Boron	EPA 200.7 (1994 Rev. 4.4)
109.623	007	Cadmium	EPA 200.7 (1994 Rev. 4.4)
109.623	008	Chromium	EPA 200.7 (1994 Rev. 4.4)

109.623	009	Cobalt	EPA 200.7 (1994 Rev. 4.4)
109.623	010	Copper	EPA 200.7 (1994 Rev. 4.4)
109.623	011	Iron	EPA 200.7 (1994 Rev. 4.4)
109.623	012	Lead	EPA 200.7 (1994 Rev. 4.4)
109.623	013	Manganese	EPA 200.7 (1994 Rev. 4.4)
109.623	014	Molybdenum	EPA 200.7 (1994 Rev. 4.4)
109.623	015	Nickel	EPA 200.7 (1994 Rev. 4.4)
109.623	016	Selenium	EPA 200.7 (1994 Rev. 4.4)
109.623	017	Silver	EPA 200.7 (1994 Rev. 4.4)
109.623	018	Thallium	EPA 200.7 (1994 Rev. 4.4)
109.623	019	Tin	EPA 200.7 (1994 Rev. 4.4)
109.623	020	Titanium	EPA 200.7 (1994 Rev. 4.4)
109.623	021	Vanadium	EPA 200.7 (1994 Rev. 4.4)
109.623	022	Zinc	EPA 200.7 (1994 Rev. 4.4)
109.625	001	Aluminum	EPA 200.8 (1994 Rev. 5.4)
109.625	002	Antimony	EPA 200.8 (1994 Rev. 5.4)
109.625	003	Arsenic	EPA 200.8 (1994 Rev. 5.4)
109.625	004	Barium	EPA 200.8 (1994 Rev. 5.4)
109.625	005	Beryllium	EPA 200.8 (1994 Rev. 5.4)
109.625	006	Boron	EPA 200.8 (1994 Rev. 5.4)
109.625	007	Cadmium	EPA 200.8 (1994 Rev. 5.4)
109.625	008	Chromium	EPA 200.8 (1994 Rev. 5.4)
109.625	009	Cobalt	EPA 200.8 (1994 Rev. 5.4)
109.625	010	Copper	EPA 200.8 (1994 Rev. 5.4)
109.625	012	Iron	EPA 200.8 (1994 Rev. 5.4)
109.625	013	Lead	EPA 200.8 (1994 Rev. 5.4)
109.625	014	Manganese	EPA 200.8 (1994 Rev. 5.4)
109.625	015	Molybdenum	EPA 200.8 (1994 Rev. 5.4)
109.625	016	Nickel	EPA 200.8 (1994 Rev. 5.4)
109.625	017	Selenium	EPA 200.8 (1994 Rev. 5.4)
109.625	018	Silver	EPA 200.8 (1994 Rev. 5.4)
109.625	019	Thallium	EPA 200.8 (1994 Rev. 5.4)
109.625	022	Vanadium	EPA 200.8 (1994 Rev. 5.4)
109.625	023	Zinc	EPA 200.8 (1994 Rev. 5.4)
109.629	001	Chromium VI (Hexavalent Chromium)	EPA 218.6 (1994 Rev. 3.3)
109.635	001	Mercury	EPA 245.1 (1994 Rev. 3.0)

Field of Accreditation:110 - Volatile Organic Constituents in Non-Potable Water

110.040	001	Acetone	EPA 624.1
110.040	003	Acrolein	EPA 624.1
110.040	004	Acrylonitrile	EPA 624.1
110.040	005	Benzene	EPA 624.1
110.040	006	Bromodichloromethane	EPA 624.1

110.040	007	Bromoform	EPA 624.1
110.040	008	Bromomethane (Methyl Bromide)	EPA 624.1
110.040	010	Carbon Tetrachloride	EPA 624.1
110.040	011	Chlorobenzene	EPA 624.1
110.040	012	Chloroethane	EPA 624.1
110.040	013	2-Chloroethyl vinyl Ether	EPA 624.1
110.040	014	Chloroform	EPA 624.1
110.040	015	Chloromethane (Methyl Chloride)	EPA 624.1
110.040	016	Dibromochloromethane (Chlorodibromomethane)	EPA 624.1
110.040	017	1,2-Dichlorobenzene	EPA 624.1
110.040	018	1,3-Dichlorobenzene	EPA 624.1
110.040	019	1,4-Dichlorobenzene	EPA 624.1
110.040	020	1,1-Dichloroethane	EPA 624.1
110.040	021	1,2-Dichloroethane (Ethylene Dichloride)	EPA 624.1
110.040	022	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 624.1
110.040	023	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 624.1
110.040	024	1,2-Dichloropropane	EPA 624.1
110.040	025	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 624.1
110.040	026	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropen	EPA 624.1
110.040	029	Ethylbenzene	EPA 624.1
110.040	031	Methylene Chloride (Dichloromethane)	EPA 624.1
110.040	032	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 624.1
110.040	034	1,1,2,2-Tetrachloroethane	EPA 624.1
110.040	035	Tetrachloroethylene (Tetrachloroethene)	EPA 624.1
110.040	037	Toluene	EPA 624.1
110.040	038	1,1,1-Trichloroethane	EPA 624.1
110.040	039	1,1,2-Trichloroethane	EPA 624.1
110.040	040	Trichloroethylene (Trichloroethene)	EPA 624.1
110.040	041	Vinyl Chloride	EPA 624.1
110.040	043	o-Xylene	EPA 624.1
110.040	045	Trichlorofluoromethane	EPA 624.1
110.040	046	m+p-Xylene	EPA 624.1
110.040	047	2-Butanone (MEK)	EPA 624.1

Field of Accreditation: 111 - Semi-volatile Organic Constituents in Non-Potable Water

111.055	001	Aldrin	EPA 608.3
111.055	002	alpha-BHC	EPA 608.3
111.055	003	beta-BHC	EPA 608.3
111.055	004	delta-BHC	EPA 608.3
111.055	005	gamma-BHC (Lindane)	EPA 608.3
111.055	006	Chlordane	EPA 608.3
111.055	007	4,4'-DDD	EPA 608.3
111.055	008	4,4'-DDE	EPA 608.3

111.055	009	4,4'-DDT	EPA 608.3
111.055	010	Dieldrin	EPA 608.3
111.055	011	Endosulfan I	EPA 608.3
111.055	012	Endosulfan II	EPA 608.3
111.055	013	Endosulfan Sulfate	EPA 608.3
111.055	014	Endrin	EPA 608.3
111.055	015	Endrin Aldehyde	EPA 608.3
111.055	016	Heptachlor	EPA 608.3
111.055	017	Heptachlor Epoxide	EPA 608.3
111.055	019	PCB-1016 (Aroclor-1016)	EPA 608.3
111.055	020	PCB-1221 (Aroclor-1221)	EPA 608.3
111.055	021	PCB-1232 (Aroclor-1232)	EPA 608.3
111.055	022	PCB-1242 (Aroclor-1242)	EPA 608.3
111.055	023	PCB-1248 (Aroclor-1248)	EPA 608.3
111.055	024	PCB-1254 (Aroclor-1254)	EPA 608.3
111.055	025	PCB-1260 (Aroclor-1260)	EPA 608.3
111.055	046	Methoxychlor	EPA 608.3
111.055	060	Toxaphene	EPA 608.3
111.160	001	Acenaphthene	EPA 625.1
111.160	002	Acenaphthylene	EPA 625.1
111.160	003	Anthracene	EPA 625.1
111.160	004	Benzidine	EPA 625.1
111.160	005	Benzo(a)anthracene	EPA 625.1
111.160	006	Benzo(a)pyrene	EPA 625.1
111.160	007	Benzo(b)fluoranthene	EPA 625.1
111.160	008	Benzo(g,h,i)perylene	EPA 625.1
111.160	009	Benzo(k)fluoranthene	EPA 625.1
111.160	010	Bis(2-chloroethoxy) Methane	EPA 625.1
111.160	011	Bis(2-chloroethyl) Ether	EPA 625.1
111.160	012	bis(2-Chloroisopropyl) ether (2,2'-Oxybis[1-chloropro	EPA 625.1
111.160	013	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate	EPA 625.1
111.160	014	4-Bromophenyl Phenyl Ether	EPA 625.1
111.160	015	Butyl Benzyl Phthalate	EPA 625.1
111.160	016	2-Chloronaphthalene	EPA 625.1
111.160	017	4-Chlorophenyl Phenyl Ether	EPA 625.1
111.160	018	Chrysene	EPA 625.1
111.160	019	Dibenz(a,h)anthracene	EPA 625.1
111.160	020	3,3'-Dichlorobenzidine	EPA 625.1
111.160	021	Diethyl Phthalate	EPA 625.1
111.160	022	Dimethyl Phthalate	EPA 625.1
111.160	023	Di-n-butyl Phthalate	EPA 625.1
111.160	024	2,4-Dinitrotoluene	EPA 625.1

111.160	025	2,6-Dinitrotoluene	EPA 625.1
111.160	026	Di-n-octyl Phthalate	EPA 625.1
111.160	027	Fluoranthene	EPA 625.1
111.160	028	Fluorene	EPA 625.1
111.160	029	Hexachlorobenzene	EPA 625.1
111.160	030	Hexachlorobutadiene	EPA 625.1
111.160	031	Hexachloroethane	EPA 625.1
111.160	032	Indeno(1,2,3-c,d)pyrene	EPA 625.1
111.160	033	Isophorone	EPA 625.1
111.160	034	Naphthalene	EPA 625.1
111.160	035	Nitrobenzene	EPA 625.1
111.160	036	N-nitroso-di-n-propylamine	EPA 625.1
111.160	037	Phenanthrene	EPA 625.1
111.160	038	Pyrene	EPA 625.1
111.160	039	1,2,4-Trichlorobenzene	EPA 625.1
111.160	040	4-Chloro-3-methylphenol	EPA 625.1
111.160	041	2-Chlorophenol	EPA 625.1
111.160	042	2,4-Dichlorophenol	EPA 625.1
111.160	043	2,4-Dimethylphenol	EPA 625.1
111.160	044	2,4-Dinitrophenol	EPA 625.1
111.160	045	2-Methyl-4,6-dinitrophenol	EPA 625.1
111.160	046	2-Nitrophenol	EPA 625.1
111.160	047	4-Nitrophenol	EPA 625.1
111.160	048	Pentachlorophenol	EPA 625.1
111.160	049	Phenol	EPA 625.1
111.160	050	2,4,6-Trichlorophenol	EPA 625.1
111.160	052	Aldrin	EPA 625.1
111.160	055	Atrazine	EPA 625.1
111.160	058	alpha-BHC	EPA 625.1
111.160	059	beta-BHC	EPA 625.1
111.160	060	delta-BHC	EPA 625.1
111.160	061	gamma-BHC (Lindane)	EPA 625.1
111.160	073	Chlorpyrifos	EPA 625.1
111.160	076	4,4'-DDD	EPA 625.1
111.160	077	4,4'-DDE	EPA 625.1
111.160	078	4,4'-DDT	EPA 625.1
111.160	081	Diazinon	EPA 625.1
111.160	083	Dieldrin	EPA 625.1
111.160	085	Disulfoton	EPA 625.1
111.160	086	Endosulfan I	EPA 625.1
111.160	087	Endosulfan II	EPA 625.1
111.160	088	Endosulfan Sulfate	EPA 625.1

111.160	089	Endrin	EPA 625.1
111.160	090	Endrin Aldehyde	EPA 625.1
111.160	096	Heptachlor	EPA 625.1
111.160	097	Heptachlor Epoxide	EPA 625.1
111.160	098	Hexachlorocyclopentadiene	EPA 625.1
111.160	100	Malathion	EPA 625.1
111.160	102	Methoxychlor	EPA 625.1
111.160	108	N-nitrosodimethylamine	EPA 625.1
111.160	110	N-nitrosodiphenylamine	EPA 625.1
111.160	129	Simazine	EPA 625.1
111.160	138	Trifluralin	EPA 625.1
111.160	145	Pyridine	EPA 625.1
111.160	151	2,4,5-Trichlorophenol	EPA 625.1

Field of Accreditation: 112 - Radionuclides in Non-Potable Water

112.001	001	Gross Alpha	EPA 900.0
112.001	002	Gross Beta	EPA 900.0
112.003	001	Total Alpha Radium	EPA 903.0

Field of Accreditation: 114 - Inorganic Constituents in Hazardous Waste

114.315	002	Antimony	EPA 6010 B
114.315	003	Arsenic	EPA 6010 B
114.315	004	Barium	EPA 6010 B
114.315	005	Beryllium	EPA 6010 B
114.315	007	Cadmium	EPA 6010 B
114.315	009	Chromium	EPA 6010 B
114.315	010	Cobalt	EPA 6010 B
114.315	011	Copper	EPA 6010 B
114.315	013	Lead	EPA 6010 B
114.315	016	Molybdenum	EPA 6010 B
114.315	017	Nickel	EPA 6010 B
114.315	019	Selenium	EPA 6010 B
114.315	020	Silver	EPA 6010 B
114.315	023	Thallium	EPA 6010 B
114.315	026	Vanadium	EPA 6010 B
114.315	027	Zinc	EPA 6010 B
114.335	003	Arsenic	EPA 6020
114.335	005	Beryllium	EPA 6020
114.335	006	Cadmium	EPA 6020
114.335	007	Chromium	EPA 6020
114.335	008	Cobalt	EPA 6020
114.335	010	Lead	EPA 6020
114.335	012	Nickel	EPA 6020
114.335	014	Thallium	EPA 6020

Field of Accreditation: 115 - Leaching/Extraction Tests and Physical Characteristics of Hazardous Waste

115.055	001	Waste Extraction Test (WET)	CCR Chapter11, Article 5, Appendix II
115.135	001	Corrosivity - pH Determination	EPA 9045 C

Field of Accreditation: 116 - Volatile Organic Compounds in Hazardous Waste

116.265	001	Benzene	EPA 8260 B
116.265	002	Bromobenzene	EPA 8260 B
116.265	003	Bromochloromethane	EPA 8260 B
116.265	004	Bromodichloromethane	EPA 8260 B
116.265	005	Bromoform	EPA 8260 B
116.265	006	Bromomethane (Methyl Bromide)	EPA 8260 B
116.265	007	n-Butylbenzene	EPA 8260 B
116.265	008	sec-Butylbenzene	EPA 8260 B
116.265	009	tert-Butylbenzene	EPA 8260 B
116.265	010	Carbon Disulfide	EPA 8260 B
116.265	011	Carbon Tetrachloride	EPA 8260 B
116.265	012	Chlorobenzene	EPA 8260 B
116.265	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 B
116.265	014	Chloroethane	EPA 8260 B
116.265	015	Chloroform	EPA 8260 B
116.265	016	Chloromethane (Methyl Chloride)	EPA 8260 B
116.265	017	Dibromomethane	EPA 8260 B
116.265	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 B
116.265	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 B
116.265	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 B
116.265	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 B
116.265	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropen	EPA 8260 B
116.265	023	Ethylbenzene	EPA 8260 B
116.265	024	Hexachlorobutadiene	EPA 8260 B
116.265	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 B
116.265	026	Methylene Chloride (Dichloromethane)	EPA 8260 B
116.265	029	N-propylbenzene	EPA 8260 B
116.265	030	Styrene	EPA 8260 B
116.265	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 B
116.265	032	Toluene	EPA 8260 B
116.265	033	Trichloroethylene (Trichloroethene)	EPA 8260 B
116.265	034	Trichlorofluoromethane	EPA 8260 B
116.265	035	Vinyl Chloride	EPA 8260 B
116.265	036	m+p-Xylene	EPA 8260 B
116.265	037	o-Xylene	EPA 8260 B
116.265	038	m-Xylene	EPA 8260 B
116.265	039	p-Xylene	EPA 8260 B
116.265	040	1,1-Dichloroethane	EPA 8260 B

116.265	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 B
116.265	042	1,1,1-Trichloroethane	EPA 8260 B
116.265	043	1,1,1,2-Tetrachloroethane	EPA 8260 B
116.265	044	1,1,2,2-Tetrachloroethane	EPA 8260 B
116.265	045	1,1,2-Trichloroethane	EPA 8260 B
116.265	046	1,2-Dichlorobenzene	EPA 8260 B
116.265	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 B
116.265	048	1,2-Dibromoethane (EDB)	EPA 8260 B
116.265	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 B
116.265	050	1,2-Dichloropropane	EPA 8260 B
116.265	051	1,2,3-Trichloropropane (TCP)	EPA 8260 B
116.265	052	1,2,4-Trichlorobenzene	EPA 8260 B
116.265	053	1,3-Dichlorobenzene	EPA 8260 B
116.265	054	1,4-Dichlorobenzene	EPA 8260 B
116.265	055	2-Chloroethyl vinyl Ether	EPA 8260 B
116.265	056	4-Chlorotoluene	EPA 8260 B
116.265	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 B

Field of Accreditation:117 - Semi-volatile Organic Chemistry of Hazardous Waste

117.235	002	Diesel Range Organics (DRO)	EPA 8015 B

Field of Accreditation:126 - Microbiological Methods for Ambient Water

126.003	001	Total Coliform (Enumeration)	SM 9221 B,C-2006
126.003	002	Fecal Coliform (Enumeration)	SM 9221 C,E-2006
126.015	001	E. coli (Enumeration)	SM 9223 B-2004 Colilert
126.017	001	E. coli (Enumeration)	SM 9223 B-2004 Colilert 18
126.019	001	Enterococci	Enterolert

Field of Accreditation:130 - Inorganic constituents in Hazardous waste (Matrix Aqueous)

130.010	002	Antimony	EPA 6010 B
130.010	003	Arsenic	EPA 6010 B
130.010	004	Barium	EPA 6010 B
130.010	005	Beryllium	EPA 6010 B
130.010	007	Cadmium	EPA 6010 B
130.010	009	Chromium	EPA 6010 B
130.010	010	Cobalt	EPA 6010 B
130.010	011	Copper	EPA 6010 B
130.010	013	Lead	EPA 6010 B
130.010	016	Molybdenum	EPA 6010 B
130.010	017	Nickel	EPA 6010 B
130.010	019	Selenium	EPA 6010 B
130.010	020	Silver	EPA 6010 B
130.010	023	Thallium	EPA 6010 B
130.010	026	Vanadium	EPA 6010 B
130.010	027	Zinc	EPA 6010 B

130.030	003	Arsenic	EPA 6020
130.030	005	Beryllium	EPA 6020
130.030	006	Cadmium	EPA 6020
130.030	007	Chromium	EPA 6020
130.030	008	Cobalt	EPA 6020
130.030	010	Lead	EPA 6020
130.030	012	Nickel	EPA 6020
130.030	014	Thallium	EPA 6020

Field of Accreditation:131 - Leaching/Extraction, Physical Chacterstics in Hazardous Waste (Matrix Aqueous)

131.010	001	Waste Extraction Test (WET)	CCR Chapter11, Article 5, Appendix II

Field of Accreditation:132 - Volatile Organic Compounds in Hazardous Waste (Matrix Aqueous)

132.060	001	Benzene	EPA 8260 B
132.060	002	Bromobenzene	EPA 8260 B
132.060	003	Bromochloromethane	EPA 8260 B
132.060	004	Bromodichloromethane	EPA 8260 B
132.060	005	Bromoform	EPA 8260 B
132.060	006	Bromomethane (Methyl Bromide)	EPA 8260 B
132.060	007	n-Butylbenzene	EPA 8260 B
132.060	008	sec-Butylbenzene	EPA 8260 B
132.060	009	tert-Butylbenzene	EPA 8260 B
132.060	010	Carbon Disulfide	EPA 8260 B
132.060	011	Carbon Tetrachloride	EPA 8260 B
132.060	012	Chlorobenzene	EPA 8260 B
132.060	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 B
132.060	014	Chloroethane	EPA 8260 B
132.060	015	Chloroform	EPA 8260 B
132.060	016	Chloromethane (Methyl Chloride)	EPA 8260 B
132.060	017	Dibromomethane	EPA 8260 B
132.060	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 B
132.060	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 B
132.060	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 B
132.060	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 B
132.060	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropen	EPA 8260 B
132.060	023	Ethylbenzene	EPA 8260 B
132.060	024	Hexachlorobutadiene	EPA 8260 B
132.060	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 B
132.060	026	Methylene Chloride (Dichloromethane)	EPA 8260 B
132.060	027	Naphthalene	EPA 8260 B
132.060	029	N-propylbenzene	EPA 8260 B
132.060	030	Styrene	EPA 8260 B
132.060	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 B
132.060	032	Toluene	EPA 8260 B

132.060	033	Trichloroethylene (Trichloroethene)	EPA 8260 B
132.060	034	Trichlorofluoromethane	EPA 8260 B
132.060	035	Vinyl Chloride	EPA 8260 B
132.060	036	m+p-Xylene	EPA 8260 B
132.060	037	o-Xylene	EPA 8260 B
132.060	038	m-Xylene	EPA 8260 B
132.060	039	p-Xylene	EPA 8260 B
132.060	040	1,1-Dichloroethane	EPA 8260 B
132.060	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 B
132.060	042	1,1,1-Trichloroethane	EPA 8260 B
132.060	043	1,1,1,2-Tetrachloroethane	EPA 8260 B
132.060	044	1,1,2,2-Tetrachloroethane	EPA 8260 B
132.060	045	1,1,2-Trichloroethane	EPA 8260 B
132.060	046	1,2-Dichlorobenzene	EPA 8260 B
132.060	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 B
132.060	048	1,2-Dibromoethane (EDB)	EPA 8260 B
132.060	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 B
132.060	050	1,2-Dichloropropane	EPA 8260 B
132.060	051	1,2,3-Trichloropropane (TCP)	EPA 8260 B
132.060	052	1,2,4-Trichlorobenzene	EPA 8260 B
132.060	053	1,3-Dichlorobenzene	EPA 8260 B
132.060	054	1,4-Dichlorobenzene	EPA 8260 B
132.060	055	2-Chloroethyl vinyl Ether	EPA 8260 B
132.060	056	4-Chlorotoluene	EPA 8260 B
132.060	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 B

Field of Accreditation:133 - Semi-Volatile Organic Chemistry in Hazardous Waste (Matrix Aqueous)

133.010	002	Diesel Range Organics (DRO)	EPA 8015 B
133.090	001	Aldrin	EPA 8081 A
133.090	002	alpha-BHC	EPA 8081 A
133.090	003	beta-BHC	EPA 8081 A
133.090	004	delta-BHC	EPA 8081 A
133.090	005	gamma-BHC (Lindane)	EPA 8081 A
133.090	007	trans-Chlordane	EPA 8081 A
133.090	008	4,4'-DDD	EPA 8081 A
133.090	009	4,4'-DDE	EPA 8081 A
133.090	010	4,4'-DDT	EPA 8081 A
133.090	011	Dieldrin	EPA 8081 A
133.090	012	Endosulfan I	EPA 8081 A
133.090	013	Endosulfan II	EPA 8081 A
133.090	014	Endosulfan Sulfate	EPA 8081 A
133.090	015	Endrin	EPA 8081 A
133.090	016	Endrin Aldehyde	EPA 8081 A

133.090	017	Endrin Ketone	EPA 8081 A
133.090	018	Heptachlor	EPA 8081 A
133.090	019	Heptachlor Epoxide	EPA 8081 A
133.090	020	Methoxychlor	EPA 8081 A
133.090	021	Toxaphene	EPA 8081 A
133.120	001	Aroclor 1016	EPA 8082
133.120	002	Aroclor 1221	EPA 8082
133.120	003	Aroclor 1232	EPA 8082
133.120	004	Aroclor 1242	EPA 8082
133.120	005	Aroclor 1248	EPA 8082
133.120	006	Aroclor 1254	EPA 8082
133.120	007	Aroclor 1260	EPA 8082
133.190	001	Azinphos Methyl	EPA 8141 A
133.190	002	Chlorpyrifos	EPA 8141 A
133.190	003	Demeton-O	EPA 8141 A
133.190	004	Demeton-S	EPA 8141 A
133.190	005	Diazinon	EPA 8141 A
133.190	006	Dichlorvos (DDVP)	EPA 8141 A
133.190	007	Disulfoton	EPA 8141 A
133.190	008	Malathion	EPA 8141 A
133.190	009	Parathion Ethyl	EPA 8141 A
133.190	010	Parathion Methyl	EPA 8141 A
133.190	011	Phorate	EPA 8141 A
133.190	012	Ronnel	EPA 8141 A
133.190	013	Stirophos (Tetrachlorovinphos)	EPA 8141 A
133.230	001	Acenaphthene	EPA 8270 C
133.230	002	Acenaphthylene	EPA 8270 C
133.230	003	Aniline	EPA 8270 C
133.230	004	Anthracene	EPA 8270 C
133.230	005	Benzidine	EPA 8270 C
133.230	006	Benzoic Acid	EPA 8270 C
133.230	007	Benzo(a)anthracene	EPA 8270 C
133.230	008	Benzo(b)fluoranthene	EPA 8270 C
133.230	009	Benzo(k)fluoranthene	EPA 8270 C
133.230	010	Benzo(g,h,i)perylene	EPA 8270 C
133.230	011	Benzo(a)pyrene	EPA 8270 C
133.230	012	Benzyl Alcohol	EPA 8270 C
133.230	013	Bis(2-chloroethoxy) Methane	EPA 8270 C
133.230	014	Bis(2-chloroethyl) Ether	EPA 8270 C
133.230	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 C
133.230	016	Butyl Benzyl Phthalate	EPA 8270 C
133.230	017	Chrysene	EPA 8270 C

133.230	018	Dibenz(a,h)anthracene	EPA 8270 C
133.230	019	Dibenzofuran	EPA 8270 C
133.230	020	Di-n-butyl Phthalate	EPA 8270 C
133.230	021	Diethyl Phthalate	EPA 8270 C
133.230	022	Dimethyl Phthalate	EPA 8270 C
133.230	023	Di-n-octyl Phthalate	EPA 8270 C
133.230	024	Fluoranthene	EPA 8270 C
133.230	025	Fluorene	EPA 8270 C
133.230	026	Naphthalene	EPA 8270 C
133.230	027	Nitrobenzene	EPA 8270 C
133.230	029	Pentachlorophenol	EPA 8270 C
133.230	031	1,2-Dichlorobenzene	EPA 8270 C
133.230	032	1,3-Dichlorobenzene	EPA 8270 C
133.230	033	1,4-Dichlorobenzene	EPA 8270 C
133.230	034	2-Chloronaphthalene	EPA 8270 C
133.230	035	2-Chlorophenol	EPA 8270 C
133.230	036	2,4-Dichlorophenol	EPA 8270 C
133.230	037	2,4-Dimethylphenol	EPA 8270 C
133.230	038	2,4-Dinitrophenol	EPA 8270 C
133.230	039	2,4-Dinitrotoluene	EPA 8270 C
133.230	041	2,6-Dinitrotoluene	EPA 8270 C
133.230	042	2-Nitroaniline	EPA 8270 C
133.230	043	2-Nitrophenol	EPA 8270 C
133.230	044	3-Nitroaniline	EPA 8270 C
133.230	045	3,3'-Dichlorobenzidine	EPA 8270 C
133.230	046	4-Chloroaniline	EPA 8270 C
133.230	047	4-Chloro-3-methylphenol	EPA 8270 C
133.230	048	4-Bromophenyl Phenyl Ether	EPA 8270 C
133.230	049	4-Chlorophenyl Phenyl Ether	EPA 8270 C
133.230	050	4-Nitroaniline	EPA 8270 C
133.230	051	4-Nitrophenol	EPA 8270 C

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Fields of Accreditation

McCampbell Analytical, Inc.

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Pittsburg, CA 94565
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Certificate Number: 1644
Expiration Date: 10/31/2022
INTERIM

Field of Accreditation: 101 - Microbiology of Drinking Water

101.010	001	Heterotrophic Bacteria	SM 9215 B
101.010	002	Heterotrophic Bacteria	SimPlate
101.020	001	Total Coliform P/A	SM 9221 B
101.020	002	Fecal Coliform P/A	SM 9221 B,E
101.020	003	E. coli P/A	SM 9221 B,F
101.020	004	Total Coliform (Enumeration)	SM 9221 B,C
101.020	005	Fecal Coliform (Enumeration)	SM 9221 B,E
101.020	006	E. coli (Enumeration)	SM 9221 B,F
101.040	001	Total Coliform P/A	SM 9222 B
101.040	002	Fecal Coliform P/A	SM 9222 D
101.040	005	Total Coliform (Enumeration)	SM 9222 B
101.040	006	Fecal Coliform (Enumeration)	SM 9222 D
101.050	001	Total Coliform P/A	SM 9223 B Colilert
101.050	002	E. coli P/A	SM 9223 B Colilert
101.050	003	Total Coliform (Enumeration)	SM 9223 B Colilert
101.050	004	E. coli (Enumeration)	SM 9223 B Colilert
101.140	001	Enterococci	SM 9230 B
101.170	001	Enterococci	Enterolert

Field of Accreditation: 102 - Inorganic Chemistry of Drinking Water

102.015	001	Hydrogen Ion (pH)	EPA 150.1
102.020	001	Turbidity	EPA 180.1
102.026	001	Calcium	EPA 200.7
102.026	002	Magnesium	EPA 200.7
102.026	003	Potassium	EPA 200.7
102.026	004	Silica	EPA 200.7
102.026	005	Sodium	EPA 200.7
102.026	006	Hardness (Calculation)	EPA 200.7
102.040	001	Bromide	EPA 300.1
102.040	002	Chlorite	EPA 300.1
102.040	003	Chlorate	EPA 300.1
102.040	004	Bromate	EPA 300.1
102.040	005	Chloride	EPA 300.1
102.040	006	Fluoride	EPA 300.1

102.040	007	Nitrate (as N)	EPA 300.1
102.040	008	Nitrite (as N)	EPA 300.1
102.040	009	Phosphate,Ortho (as P)	EPA 300.1
102.040	010	Sulfate (as SO4)	EPA 300.1
102.045	001	Perchlorate	EPA 314.0
102.050	001	Cyanide, Total	EPA 335.4
102.086	001	Dissolved Organic Carbon (DOC)	EPA 415.3 Revision 1.2
102.086	003	Organic Carbon-Total (TOC)	EPA 415.3 Revision 1.2
102.095	001	Turbidity	SM 2130 B-2001
102.100	001	Alkalinity	SM 2320 B-1997
102.120	001	Hardness (Calculation)	SM 2340 B-1997
102.121	001	Hardness	SM 2340 C-1997
102.130	001	Specific Conductance	SM 2510 B-1997
102.140	001	Residue, Filterable TDS	SM 2540 C-1997
102.175	001	Chlorine, Free	SM 4500-Cl G-2000
102.175	002	Chlorine, Total Residual	SM 4500-Cl G-2000
102.190	001	Cyanide, Total	SM 4500-CN E-1999
102.192	001	Cyanide, Amenable	SM 4500-CN G-1999
102.203	001	Hydrogen Ion (pH)	SM 4500-H+ B-2000
102.243	001	Silica	SM 4500-SiO2 D-1997
102.260	001	Organic Carbon-Total (TOC)	SM 5310 B-2000
102.261	001	Dissolved Organic Carbon (DOC)	SM 5310 B-2000
102.270	001	Surfactants	SM 5540 C-2000
102.280	001	UV254	SM 5910 B-2011
102.564	001	Cyanide, Total	Kelada-01

Field of Accreditation:103 - Toxic Chemical Elements of Drinking Water

103.130	001	Aluminum	EPA 200.7
103.130	009	Iron	EPA 200.7
103.130	011	Manganese	EPA 200.7
103.140	001	Aluminum	EPA 200.8
103.140	002	Antimony	EPA 200.8
103.140	003	Arsenic	EPA 200.8
103.140	004	Barium	EPA 200.8
103.140	005	Beryllium	EPA 200.8
103.140	006	Cadmium	EPA 200.8
103.140	007	Chromium	EPA 200.8
103.140	008	Copper	EPA 200.8
103.140	009	Lead	EPA 200.8
103.140	010	Manganese	EPA 200.8
103.140	011	Mercury	EPA 200.8
103.140	012	Nickel	EPA 200.8
103.140	013	Selenium	EPA 200.8

103.140	014	Silver	EPA 200.8
103.140	015	Thallium	EPA 200.8
103.140	016	Zinc	EPA 200.8
103.140	017	Boron	EPA 200.8
103.140	018	Vanadium	EPA 200.8
103.140	019	Strontium	EPA 200.8
103.160	001	Mercury	EPA 245.1
103.161	001	Mercury	EPA 245.2
103.310	001	Chromium VI (Hexavalent Chromium)	EPA 218.6
103.311	001	Chromium VI (Hexavalent Chromium)	EPA 218.7

Field of Accreditation: 104 - Volatile Organic Chemistry of Drinking Water

104.035	001	1,2,3-Trichloropropane (TCP)	SRL 524M-TCP
104.040	001	Benzene	EPA 524.2
104.040	007	n-Butylbenzene	EPA 524.2
104.040	008	sec-Butylbenzene	EPA 524.2
104.040	009	tert-Butylbenzene	EPA 524.2
104.040	010	Carbon Tetrachloride	EPA 524.2
104.040	011	Chlorobenzene	EPA 524.2
104.040	015	2-Chlorotoluene	EPA 524.2
104.040	016	4-Chlorotoluene	EPA 524.2
104.040	019	1,3-Dichlorobenzene	EPA 524.2
104.040	020	1,2-Dichlorobenzene	EPA 524.2
104.040	021	1,4-Dichlorobenzene	EPA 524.2
104.040	022	Dichlorodifluoromethane	EPA 524.2
104.040	023	1,1-Dichloroethane	EPA 524.2
104.040	024	1,2-Dichloroethane (Ethylene Dichloride)	EPA 524.2
104.040	025	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 524.2
104.040	026	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 524.2
104.040	027	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 524.2
104.040	028	Dichloromethane (Methylene Chloride)	EPA 524.2
104.040	029	1,2-Dichloropropane	EPA 524.2
104.040	033	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 524.2
104.040	034	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 524.2
104.040	035	Ethylbenzene	EPA 524.2
104.040	037	Isopropylbenzene	EPA 524.2
104.040	039	Naphthalene	EPA 524.2
104.040	041	N-propylbenzene	EPA 524.2
104.040	042	Styrene	EPA 524.2
104.040	043	1,1,1,2-Tetrachloroethane	EPA 524.2
104.040	044	1,1,2,2-Tetrachloroethane	EPA 524.2
104.040	045	Tetrachloroethylene (Tetrachloroethene)	EPA 524.2
104.040	046	Toluene	EPA 524.2

104.040	047	1,2,3-Trichlorobenzene	EPA 524.2
104.040	048	1,2,4-Trichlorobenzene	EPA 524.2
104.040	049	1,1,1-Trichloroethane	EPA 524.2
104.040	050	1,1,2-Trichloroethane	EPA 524.2
104.040	051	Trichloroethylene (Trichloroethene)	EPA 524.2
104.040	052	Trichlorofluoromethane	EPA 524.2
104.040	054	1,2,4-Trimethylbenzene	EPA 524.2
104.040	055	1,3,5-Trimethylbenzene	EPA 524.2
104.040	056	Vinyl Chloride	EPA 524.2
104.040	061	Carbon Disulfide	EPA 524.2
104.045	001	Bromodichloromethane	EPA 524.2
104.045	002	Bromoform	EPA 524.2
104.045	003	Chloroform	EPA 524.2
104.045	004	Dibromochloromethane (Chlorodibromomethane)	EPA 524.2
104.050	002	Methyl tert-butyl Ether (MTBE)	EPA 524.2
104.050	003	tert-Amyl Methyl Ether (TAME)	EPA 524.2
104.050	004	Ethyl tert-butyl Ether (ETBE)	EPA 524.2
104.050	005	Trichlorotrifluoroethane (Freon 113)	EPA 524.2
104.050	006	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 524.2
104.055	001	Benzene	EPA 524.3
104.055	002	Carbon Tetrachloride	EPA 524.3
104.055	003	Chlorobenzene	EPA 524.3
104.055	004	1,2-Dichlorobenzene	EPA 524.3
104.055	005	1,4-Dichlorobenzene	EPA 524.3
104.055	006	1,2-Dichloroethane (Ethylene Dichloride)	EPA 524.3
104.055	007	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 524.3
104.055	008	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 524.3
104.055	009	Dichloromethane (Methylene Chloride)	EPA 524.3
104.055	010	1,2-Dichloropropane	EPA 524.3
104.055	011	Ethylbenzene	EPA 524.3
104.055	012	Styrene	EPA 524.3
104.055	013	Tetrachloroethylene (Tetrachloroethene)	EPA 524.3
104.055	014	1,1,1-Trichloroethane	EPA 524.3
104.055	015	Trichloroethylene (Trichloroethene)	EPA 524.3
104.055	016	Toluene	EPA 524.3
104.055	017	1,2,4-Trichlorobenzene	EPA 524.3
104.055	018	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 524.3
104.055	019	1,1,2-Trichloroethane	EPA 524.3
104.055	020	Vinyl Chloride	EPA 524.3
104.055	022	1,2-Dibromo-3-chloropropane (DBCP)	EPA 524.3
104.055	023	1,2-Dibromoethane (EDB)	EPA 524.3
104.056	001	Bromodichloromethane	EPA 524.3

104.056	002	Bromoform	EPA 524.3
104.056	003	Chloroform	EPA 524.3
104.056	004	Dibromochloromethane (Chlorodibromomethane)	EPA 524.3
104.057	001	Di-isopropyl Ether (DIPE)	EPA 524.3
104.057	002	Methyl tert-butyl Ether (MTBE)	EPA 524.3
104.057	003	tert-Amyl Methyl Ether (TAME)	EPA 524.3
104.057	004	Ethyl tert-butyl Ether (ETBE)	EPA 524.3
104.057	005	Trichlorofluoromethane (Freon 11)	EPA 524.3
104.057	006	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 524.3
104.057	007	Trichlorotrifluoroethane (Freon 113)	EPA 524.3

Field of Accreditation:105 - Semi-volatile Organic Chemistry of Drinking Water

105.010	004	Chlordane	EPA 505
105.010	006	Endrin	EPA 505
105.010	007	Heptachlor	EPA 505
105.010	008	Heptachlor Epoxide	EPA 505
105.010	009	Hexachlorobenzene	EPA 505
105.010	010	Hexachlorocyclopentadiene	EPA 505
105.010	011	Lindane (HCH-gamma)	EPA 505
105.010	012	Methoxychlor	EPA 505
105.010	014	Toxaphene	EPA 505
105.010	015	PCBs as Aroclors (screen)	EPA 505
105.082	001	2,4-D	EPA 515.3
105.082	002	Dinoseb	EPA 515.3
105.082	003	Pentachlorophenol	EPA 515.3
105.082	004	Picloram	EPA 515.3
105.082	005	2,4,5-TP (Silvex)	EPA 515.3
105.082	006	Bentazon	EPA 515.3
105.082	007	Dalapon	EPA 515.3
105.082	008	Dicamba	EPA 515.3
105.090	001	Alachlor	EPA 525.2
105.090	003	Atrazine	EPA 525.2
105.090	004	Benzo(a)pyrene	EPA 525.2
105.090	008	Di(2-ethylhexyl) Adipate	EPA 525.2
105.090	009	Di(2-ethylhexyl) Phthalate	EPA 525.2
105.090	016	Hexachlorobenzene	EPA 525.2
105.090	017	Hexachlorocyclopentadiene	EPA 525.2
105.090	022	Molinate	EPA 525.2
105.090	023	Pentachlorophenol	EPA 525.2
105.090	025	Simazine	EPA 525.2
105.091	001	Alachlor	EPA 525.3
105.091	002	Aldrin	EPA 525.3
105.091	003	Atrazine	EPA 525.3

105.091	004	Bromacil	EPA 525.3
105.091	005	Benzo(a)pyrene	EPA 525.3
105.091	006	Butachlor	EPA 525.3
105.091	007	Chlordane	EPA 525.3
105.091	008	Diazinon	EPA 525.3
105.091	009	Di(2-ethylhexyl) Adipate	EPA 525.3
105.091	010	Di(2-ethylhexyl) Phthalate	EPA 525.3
105.091	011	Endrin	EPA 525.3
105.091	012	Heptachlor	EPA 525.3
105.091	013	Heptachlor Epoxide	EPA 525.3
105.091	014	Hexachlorobenzene	EPA 525.3
105.091	015	Hexachlorocyclopentadiene	EPA 525.3
105.091	016	Lindane (HCH-gamma)	EPA 525.3
105.091	017	Methoxychlor	EPA 525.3
105.091	018	Metolachlor	EPA 525.3
105.091	019	Metribuzin	EPA 525.3
105.091	020	Molinate	EPA 525.3
105.091	021	Pentachlorophenol	EPA 525.3
105.091	022	Propachlor	EPA 525.3
105.091	023	Simazine	EPA 525.3
105.091	024	Thiobencarb	EPA 525.3
105.091	025	Toxaphene	EPA 525.3
105.091	027	Dieldrin	EPA 525.3
105.100	001	Aldicarb (Temik)	EPA 531.1
105.100	002	Aldicarb Sulfone	EPA 531.1
105.100	003	Aldicarb Sulfoxide	EPA 531.1
105.100	004	Carbaryl (Sevin)	EPA 531.1
105.100	005	Carbofuran (Furadan)	EPA 531.1
105.100	006	3-Hydroxycarbofuran	EPA 531.1
105.100	007	Methomyl (Lannate)	EPA 531.1
105.100	008	Oxamyl	EPA 531.1
105.106	001	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	EPA 537.1
105.106	002	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	EPA 537.1
105.106	003	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	EPA 537.1
105.106	004	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	EPA 537.1
105.106	005	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	EPA 537.1
105.106	006	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	EPA 537.1
105.106	007	Perfluorobutane Sulfonic Acid (PFBS)	EPA 537.1
105.106	008	Perfluorodecanoic Acid (PFDA)	EPA 537.1
105.106	009	Perfluorododecanoic Acid (PFDoA)	EPA 537.1
105.106	010	Perfluoroheptanoic Acid (PFHpA)	EPA 537.1
105.106	011	Perfluorohexane Sulfonic Acid (PFHxS)	EPA 537.1

105.106	012	Perfluorohexanoic Acid (PFHxA)	EPA 537.1
105.106	013	Perfluorononanoic Acid (PFNA)	EPA 537.1
105.106	014	Perfluorooctanoic Acid (PFOA)	EPA 537.1
105.106	015	Perfluorooctane Sulfonic Acid (PFOS)	EPA 537.1
105.106	016	Perfluorotetradecanoic Acid (PFTDA)	EPA 537.1
105.106	017	Perfluorotridecanoic Acid (PFTrDA)	EPA 537.1
105.106	018	Perfluoroundecanoic Acid (PFUnDA)	EPA 537.1
105.120	001	Glyphosate	EPA 547
105.140	001	Endothall	EPA 548.1
105.150	001	Diquat	EPA 549.2
105.200	001	Bromoacetic Acid	EPA 552.2
105.200	003	Chloroacetic Acid	EPA 552.2
105.200	005	Dibromoacetic Acid	EPA 552.2
105.200	006	Dichloroacetic Acid	EPA 552.2
105.200	007	Trichloroacetic Acid	EPA 552.2
105.230	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 1613 B
105.230	002	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) Screening Only	EPA 1613 B

Field of Accreditation:107 - Microbiological Methods for Non-Potable Water and Sewage Sludge

107.001	001	Total Coliform (Enumeration)	SM 9221 B,C-2006
107.001	002	Fecal Coliform (Enumeration)	SM 9221 C,E-2006
107.001	003	E. coli (Enumeration)	SM 9221 C,F-2006
107.003	001	Total Coliform (Enumeration)	SM 9222 B-2006
107.003	002	Fecal Coliform (Enumeration)	SM 9222 D-2006
107.007	001	Enterococci	SM 9230 B-2007
107.013	001	E. coli (Enumeration)	SM 9223 B-2004 Colilert
107.017	001	Enterococci	Enterolert

Field of Accreditation:108 - Inorganic Constituents in Non-Potable Water

108.001	001	Specific Conductance	EPA 120.1 (1982 Rev.1.0)
108.007	001	Residue, Volatile	EPA 160.4
108.009	001	Turbidity	EPA 180.1
108.009	001	Turbidity	EPA 180.1 (1993 Rev. 2.0)
108.013	001	Calcium	EPA 200.7 (1994 Rev. 4.4)
108.013	002	Magnesium	EPA 200.7 (1994 Rev. 4.4)
108.013	003	Phosphorus,Total	EPA 200.7 (1994 Rev. 4.4)
108.013	004	Potassium	EPA 200.7 (1994 Rev. 4.4)
108.013	006	Sodium	EPA 200.7 (1994 Rev. 4.4)
108.019	001	Bromide	EPA 300.1 (1997 Rev.1.0)
108.019	002	Chloride	EPA 300.1 (1997 Rev.1.0)
108.019	003	Fluoride	EPA 300.1 (1997 Rev.1.0)
108.019	004	Nitrate (as N)	EPA 300.1 (1997 Rev.1.0)
108.019	005	Nitrate-Nitrite (as N)	EPA 300.1 (1997 Rev.1.0)
108.019	006	Nitrite (as N)	EPA 300.1 (1997 Rev.1.0)

108.019	007	Phosphate,Ortho (as P)	EPA 300.1 (1997 Rev.1.0)
108.019	008	Sulfate (as SO4)	EPA 300.1 (1997 Rev.1.0)
108.023	001	Cyanide, Total	EPA 335.4 (1993 Rev. 1.0)
108.025	001	Ammonia (as N)	EPA 350.1 (1993 Rev. 2.0)
108.029	001	Kjeldahl Nitrogen,Total (as N)	EPA 351.2 (1993 Rev. 2.0)
108.033	001	Nitrate-Nitrite (as N)	EPA 353.2 (1993 Rev. 2.0)
108.035	002	Phosphorus,Total	EPA 365.1 (1993 Rev. 2.0)
108.037	001	Phosphate,Ortho (as P)	EPA 365.3 (1978)
108.045	001	Chemical Oxygen Demand	EPA 410.4 (1993 Rev. 2.0)
108.047	001	Phenols, Total	EPA 420.1 (1978 Rev. 1.0)
108.049	001	Phenols, Total	EPA 420.4 (1993 Rev. 2.0)
108.053	001	Oil & Grease, Total Recoverable	EPA 1664 A
108.063	001	Alkalinity	SM 2320 B-2011
108.065	001	Hardness (Calculation)	SM 2340 B-2011
108.067	001	Hardness	SM 2340 C-2011
108.069	001	Specific Conductance	SM 2510 B-2011
108.071	001	Residue, Total	SM 2540 B-2011
108.075	001	Residue, Non-filterable TSS	SM 2540 D-2011
108.077	001	Residue, Volatile	SM 2540 E-2011
108.079	001	Residue, Settleable	SM 2540 F-2011
108.108	001	Chlorine, Total Residual	SM 4500-Cl E-2011
108.114	001	Chlorine, Total Residual	SM 4500-Cl G-2011
108.114	002	Chlorine, Free	SM 4500-Cl G-2011
108.125	001	Cyanide, Total	SM 4500-CN E-2011
108.129	001	Cyanide, Available	SM 4500-CN G-2011
108.137	001	Hydrogen Ion (pH)	SM 4500-H+ B-2011
108.147	001	Ammonia (as N)	SM 4500-NH3 G-2011
108.159	001	Nitrate-Nitrite (as N)	SM 4500-NO3 F-2011
108.173	001	Oxygen, Dissolved	SM 4500-O G-2011
108.207	001	Biochemical Oxygen Demand	SM 5210 B-2011
108.207	002	Carbonaceous BOD	SM 5210 B-2011
108.213	001	Chemical Oxygen Demand	SM 5220 D-2011
108.215	001	Organic Carbon-Total (TOC)	SM 5310 B-2011
108.225	001	Surfactants	SM 5540 C-2011
108.335	001	Cyanide, Total	Kelada-01
108.335	002	Cyanide, Available	Kelada-01

Field of Accreditation:109 - Metals and Trace Elements in Non-Potable Water

109.623	001	Aluminum	EPA 200.7 (1994 Rev. 4.4)
109.623	006	Boron	EPA 200.7 (1994 Rev. 4.4)
109.623	011	Iron	EPA 200.7 (1994 Rev. 4.4)
109.623	013	Manganese	EPA 200.7 (1994 Rev. 4.4)
109.625	001	Aluminum	EPA 200.8 (1994 Rev. 5.4)

109.625	002	Antimony	EPA 200.8 (1994 Rev. 5.4)
109.625	003	Arsenic	EPA 200.8 (1994 Rev. 5.4)
109.625	004	Barium	EPA 200.8 (1994 Rev. 5.4)
109.625	005	Beryllium	EPA 200.8 (1994 Rev. 5.4)
109.625	006	Boron	EPA 200.8 (1994 Rev. 5.4)
109.625	007	Cadmium	EPA 200.8 (1994 Rev. 5.4)
109.625	008	Chromium	EPA 200.8 (1994 Rev. 5.4)
109.625	009	Cobalt	EPA 200.8 (1994 Rev. 5.4)
109.625	010	Copper	EPA 200.8 (1994 Rev. 5.4)
109.625	012	Iron	EPA 200.8 (1994 Rev. 5.4)
109.625	013	Lead	EPA 200.8 (1994 Rev. 5.4)
109.625	014	Manganese	EPA 200.8 (1994 Rev. 5.4)
109.625	015	Molybdenum	EPA 200.8 (1994 Rev. 5.4)
109.625	016	Nickel	EPA 200.8 (1994 Rev. 5.4)
109.625	017	Selenium	EPA 200.8 (1994 Rev. 5.4)
109.625	018	Silver	EPA 200.8 (1994 Rev. 5.4)
109.625	019	Thallium	EPA 200.8 (1994 Rev. 5.4)
109.625	020	Tin	EPA 200.8 (1994 Rev. 5.4)
109.625	021	Titanium	EPA 200.8 (1994 Rev. 5.4)
109.625	022	Vanadium	EPA 200.8 (1994 Rev. 5.4)
109.625	023	Zinc	EPA 200.8 (1994 Rev. 5.4)
109.629	001	Chromium VI (Hexavalent Chromium)	EPA 218.6 (1994 Rev. 3.3)
109.635	001	Mercury	EPA 245.1 (1994 Rev. 3.0)
109.637	001	Mercury	EPA 245.2 (1974)
109.657	001	Mercury	EPA 1631 E (2002)

Field of Accreditation:110 - Volatile Organic Constituents in Non-Potable Water

110.040	001	Acetone	EPA 624.1
110.040	003	Acrolein	EPA 624.1
110.040	004	Acrylonitrile	EPA 624.1
110.040	005	Benzene	EPA 624.1
110.040	006	Bromodichloromethane	EPA 624.1
110.040	007	Bromoform	EPA 624.1
110.040	008	Bromomethane (Methyl Bromide)	EPA 624.1
110.040	010	Carbon Tetrachloride	EPA 624.1
110.040	011	Chlorobenzene	EPA 624.1
110.040	012	Chloroethane	EPA 624.1
110.040	013	2-Chloroethyl vinyl Ether	EPA 624.1
110.040	014	Chloroform	EPA 624.1
110.040	015	Chloromethane (Methyl Chloride)	EPA 624.1
110.040	016	Dibromochloromethane (Chlorodibromomethane)	EPA 624.1
110.040	017	1,2-Dichlorobenzene	EPA 624.1
110.040	018	1,3-Dichlorobenzene	EPA 624.1

110.040	019	1,4-Dichlorobenzene	EPA 624.1
110.040	020	1,1-Dichloroethane	EPA 624.1
110.040	021	1,2-Dichloroethane (Ethylene Dichloride)	EPA 624.1
110.040	022	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 624.1
110.040	024	1,2-Dichloropropane	EPA 624.1
110.040	025	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 624.1
110.040	026	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 624.1
110.040	029	Ethylbenzene	EPA 624.1
110.040	031	Methylene Chloride (Dichloromethane)	EPA 624.1
110.040	032	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 624.1
110.040	034	1,1,2,2-Tetrachloroethane	EPA 624.1
110.040	035	Tetrachloroethylene (Tetrachloroethene)	EPA 624.1
110.040	037	Toluene	EPA 624.1
110.040	038	1,1,1-Trichloroethane	EPA 624.1
110.040	039	1,1,2-Trichloroethane	EPA 624.1
110.040	040	Trichloroethylene (Trichloroethene)	EPA 624.1
110.040	041	Vinyl Chloride	EPA 624.1
110.040	043	o-Xylene	EPA 624.1
110.040	045	Trichlorofluoromethane	EPA 624.1
110.040	046	m+p-Xylene	EPA 624.1

Field of Accreditation:111 - Semi-volatile Organic Constituents in Non-Potable Water

111.055	001	Aldrin	EPA 608.3
111.055	002	alpha-BHC	EPA 608.3
111.055	003	beta-BHC	EPA 608.3
111.055	004	delta-BHC	EPA 608.3
111.055	005	gamma-BHC (Lindane)	EPA 608.3
111.055	006	Chlordane	EPA 608.3
111.055	007	4,4'-DDD	EPA 608.3
111.055	008	4,4'-DDE	EPA 608.3
111.055	009	4,4'-DDT	EPA 608.3
111.055	010	Dieldrin	EPA 608.3
111.055	011	Endosulfan I	EPA 608.3
111.055	012	Endosulfan II	EPA 608.3
111.055	013	Endosulfan Sulfate	EPA 608.3
111.055	014	Endrin	EPA 608.3
111.055	015	Endrin Aldehyde	EPA 608.3
111.055	016	Heptachlor	EPA 608.3
111.055	017	Heptachlor Epoxide	EPA 608.3
111.055	019	PCB-1016 (Aroclor-1016)	EPA 608.3
111.055	020	PCB-1221 (Aroclor-1221)	EPA 608.3
111.055	021	PCB-1232 (Aroclor-1232)	EPA 608.3
111.055	022	PCB-1242 (Aroclor-1242)	EPA 608.3

111.055	023	PCB-1248 (Aroclor-1248)	EPA 608.3
111.055	024	PCB-1254 (Aroclor-1254)	EPA 608.3
111.055	025	PCB-1260 (Aroclor-1260)	EPA 608.3
111.055	046	Methoxychlor	EPA 608.3
111.055	060	Toxaphene	EPA 608.3
111.070	001	Acenaphthene	EPA 610
111.070	002	Acenaphthylene	EPA 610
111.070	003	Anthracene	EPA 610
111.070	004	Benzo(a)anthracene	EPA 610
111.070	005	Benzo(a)pyrene	EPA 610
111.070	006	Benzo(b)fluoranthene	EPA 610
111.070	007	Benzo(g,h,i)perylene	EPA 610
111.070	008	Benzo(k)fluoranthene	EPA 610
111.070	009	Chrysene	EPA 610
111.070	010	Dibenz(a,h)anthracene	EPA 610
111.070	011	Fluoranthene	EPA 610
111.070	012	Fluorene	EPA 610
111.070	013	Indeno(1,2,3-c,d)pyrene	EPA 610
111.070	014	Naphthalene	EPA 610
111.070	015	Phenanthrene	EPA 610
111.070	016	Pyrene	EPA 610
111.110	001	Azinphos Methyl	EPA 614
111.110	004	Diazinon	EPA 614
111.110	005	Disulfoton	EPA 614
111.110	006	Ethion	EPA 614
111.110	007	Malathion	EPA 614
111.110	008	Parathion Ethyl	EPA 614
111.110	009	Parathion Methyl	EPA 614
111.160	001	Acenaphthene	EPA 625.1
111.160	002	Acenaphthylene	EPA 625.1
111.160	003	Anthracene	EPA 625.1
111.160	004	Benzidine	EPA 625.1
111.160	005	Benzo(a)anthracene	EPA 625.1
111.160	006	Benzo(a)pyrene	EPA 625.1
111.160	007	Benzo(b)fluoranthene	EPA 625.1
111.160	008	Benzo(g,h,i)perylene	EPA 625.1
111.160	009	Benzo(k)fluoranthene	EPA 625.1
111.160	010	Bis(2-chloroethoxy) Methane	EPA 625.1
111.160	011	Bis(2-chloroethyl) Ether	EPA 625.1
111.160	013	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 625.1
111.160	014	4-Bromophenyl Phenyl Ether	EPA 625.1
111.160	015	Butyl Benzyl Phthalate	EPA 625.1

111.160	016	2-Chloronaphthalene	EPA 625.1
111.160	017	4-Chlorophenyl Phenyl Ether	EPA 625.1
111.160	018	Chrysene	EPA 625.1
111.160	019	Dibenz(a,h)anthracene	EPA 625.1
111.160	020	3,3'-Dichlorobenzidine	EPA 625.1
111.160	021	Diethyl Phthalate	EPA 625.1
111.160	022	Dimethyl Phthalate	EPA 625.1
111.160	023	Di-n-butyl Phthalate	EPA 625.1
111.160	024	2,4-Dinitrotoluene	EPA 625.1
111.160	025	2,6-Dinitrotoluene	EPA 625.1
111.160	026	Di-n-octyl Phthalate	EPA 625.1
111.160	027	Fluoranthene	EPA 625.1
111.160	028	Fluorene	EPA 625.1
111.160	029	Hexachlorobenzene	EPA 625.1
111.160	030	Hexachlorobutadiene	EPA 625.1
111.160	031	Hexachloroethane	EPA 625.1
111.160	032	Indeno(1,2,3-c,d)pyrene	EPA 625.1
111.160	033	Isophorone	EPA 625.1
111.160	034	Naphthalene	EPA 625.1
111.160	035	Nitrobenzene	EPA 625.1
111.160	036	N-nitroso-di-n-propylamine	EPA 625.1
111.160	037	Phenanthrene	EPA 625.1
111.160	038	Pyrene	EPA 625.1
111.160	039	1,2,4-Trichlorobenzene	EPA 625.1
111.160	040	4-Chloro-3-methylphenol	EPA 625.1
111.160	041	2-Chlorophenol	EPA 625.1
111.160	042	2,4-Dichlorophenol	EPA 625.1
111.160	043	2,4-Dimethylphenol	EPA 625.1
111.160	044	2,4-Dinitrophenol	EPA 625.1
111.160	045	2-Methyl-4,6-dinitrophenol	EPA 625.1
111.160	046	2-Nitrophenol	EPA 625.1
111.160	047	4-Nitrophenol	EPA 625.1
111.160	048	Pentachlorophenol	EPA 625.1
111.160	049	Phenol	EPA 625.1
111.160	050	2,4,6-Trichlorophenol	EPA 625.1
111.160	056	Azinphos Methyl	EPA 625.1
111.160	073	Chlorpyrifos	EPA 625.1
111.160	081	Diazinon	EPA 625.1
111.160	082	Dichlorvos (DDVP)	EPA 625.1
111.160	085	Disulfoton	EPA 625.1
111.160	091	Ethion	EPA 625.1
111.160	092	Ethoprop	EPA 625.1

111.160	098	Hexachlorocyclopentadiene	EPA 625.1
111.160	100	Malathion	EPA 625.1
111.160	110	N-nitrosodiphenylamine	EPA 625.1
111.160	112	Parathion Methyl	EPA 625.1
111.160	122	Phorate	EPA 625.1
111.160	130	Stirophos (Tetrachlorovinphos)	EPA 625.1
111.160	134	Terbufos	EPA 625.1
111.160	140	Carbazole	EPA 625.1
111.160	141	o-Cresol	EPA 625.1
111.160	145	Pyridine	EPA 625.1
111.160	147	m+p-Cresol	EPA 625.1
111.160	148	2-Methylnaphthalene	EPA 625.1
111.160	149	1-Methylphenanthrene	EPA 625.1
111.160	901	Bifenthrin	EPA 625.1
111.160	902	Cyfluthrin	EPA 625.1
111.160	903	Cypermethrin	EPA 625.1
111.160	904	Esfenvalerate	EPA 625.1
111.160	905	Lambda-Cyhalothrin	EPA 625.1
111.160	906	Permethrin (total)	EPA 625.1
111.250	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 1613 B
111.250	002	Total Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 1613 B
111.250	003	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	EPA 1613 B
111.250	004	Total Tetrachlorodibenzofuran (TCDF)	EPA 1613 B
111.250	005	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 1613 B
111.250	006	Total Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 1613 B
111.250	007	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 1613 B
111.250	008	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 1613 B
111.250	009	Total Pentachlorodibenzofuran (PeCDF)	EPA 1613 B
111.250	010	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B
111.250	011	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B
111.250	012	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B
111.250	013	Total Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B
111.250	014	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	015	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	016	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	017	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	018	Total Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	019	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 1613 B
111.250	020	Total Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 1613 B
111.250	021	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	EPA 1613 B
111.250	022	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	EPA 1613 B
111.250	023	Total Heptachlorodibenzofuran (HpCDF)	EPA 1613 B

111.250	024	OCDD	EPA 1613 B
111.250	025	OCDF	EPA 1613 B
111.345	001	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	DoD QSM Version 5.1 (or newe
111.345	002	4:2 Fluorotelomer Sulfonic Acid (4:2 FTS)	DoD QSM Version 5.1 (or newe
111.345	003	6:2 Fluorotelomer Sulfonic Acid (6:2 FTS)	DoD QSM Version 5.1 (or newe
111.345	004	8:2 Fluorotelomer Sulfonic Acid (8:2 FTS)	DoD QSM Version 5.1 (or newe
111.345	005	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	DoD QSM Version 5.1 (or newe
111.345	006	Perfluorobutanoic Acid (PFBA)	DoD QSM Version 5.1 (or newe
111.345	007	Perfluorobutane Sulfonic Acid (PFBS)	DoD QSM Version 5.1 (or newe
111.345	008	Perfluorodecanoic Acid (PFDA)	DoD QSM Version 5.1 (or newe
111.345	009	Perfluorododecanoic Acid (PFDoA)	DoD QSM Version 5.1 (or newe
111.345	010	Perfluorodecane Sulfonic Acid (PFDS)	DoD QSM Version 5.1 (or newe
111.345	011	Perfluoroheptanoic Acid (PFHpA)	DoD QSM Version 5.1 (or newe
111.345	012	Perfluoroheptane Sulfonic Acid (PFHpS)	DoD QSM Version 5.1 (or newe
111.345	013	Perfluorohexane Sulfonic Acid (PFHxS)	DoD QSM Version 5.1 (or newe
111.345	014	Perfluorohexanoic Acid (PFHxA)	DoD QSM Version 5.1 (or newe
111.345	015	Perfluorononanoic Acid (PFNA)	DoD QSM Version 5.1 (or newe
111.345	016	Perfluorooctanoic Acid (PFOA)	DoD QSM Version 5.1 (or newe
111.345	017	Perfluorooctane Sulfonic Acid (PFOS)	DoD QSM Version 5.1 (or newe
111.345	018	Perfluorooctane Sulfonamide (PFOSAm)	DoD QSM Version 5.1 (or newe
111.345	019	Perfluoropentanoic Acid (PFPeA)	DoD QSM Version 5.1 (or newe
111.345	020	Perfluoropentane Sulfonic Acid (PFPeS)	DoD QSM Version 5.1 (or newe
111.345	021	Perfluorotetradecanoic Acid (PFTDA)	DoD QSM Version 5.1 (or newe
111.345	022	Perfluorotridecanoic Acid (PFTrDA)	DoD QSM Version 5.1 (or newe
111.345	023	Perfluoroundecanoic Acid (PFUnDA)	DoD QSM Version 5.1 (or newe
111.345	024	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	DoD QSM Version 5.1 (or newe
111.345	025	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	DoD QSM Version 5.1 (or newe
111.345	026	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	DoD QSM Version 5.1 (or newe
111.345	027	N-Ethylperfluorooctane Sulfonamide (EtFOSAm)	DoD QSM Version 5.1 (or newe
111.345	028	N-Ethylperfluorooctane Sulfonamido Ethanol (EtFOSE)	DoD QSM Version 5.1 (or newe
111.345	030	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	DoD QSM Version 5.1 (or newe
111.345	031	N-Methylperfluorooctane Sulfonamide (NMeFOSA)	DoD QSM Version 5.1 (or newe
111.345	032	N-Methylperfluorooctane Sulfonamido Ethanol (NMeFOSE)	DoD QSM Version 5.1 (or newe
111.345	033	Perfluorohexadecanoic Acid (PFHxDA)	DoD QSM Version 5.1 (or newe
111.345	034	Perfluorononane Sulfonic Acid (PFNS)	DoD QSM Version 5.1 (or newe
111.345	035	Perfluorooctadecanoic Acid (PFODA)	DoD QSM Version 5.1 (or newe

Field of Accreditation: 113 - Environmental Toxicity Methods

113.010	001	Fathead Minnow (P. promelas)	Polisini & Miller (CDFG 1988)
113.010	003	Rainbow trout (O. mykiss)	Polisini & Miller (CDFG 1988)
113.011	001A	Fathead Minnow (P. promelas)	EPA 2000.0, Static
113.011	001B	Fathead Minnow (P. promelas)	EPA 2000.0, Static Renewal
113.011	001C	Fathead Minnow (P. promelas)	EPA 2000.0, Continuous Flow

113.012	011A	Daphnid (C. dubia)	EPA 2002.0, Static
113.012	011B	Daphnid (C. dubia)	EPA 2002.0, Static Renewal
113.013	003A	Rainbow trout (O. mykiss)	EPA 2019.0, Static
113.013	003B	Rainbow trout (O. mykiss)	EPA 2019.0, Static Renewal
113.013	003C	Rainbow trout (O. mykiss)	EPA 2019.0, Continuous Flow
113.014	012A	Daphnids (Daphnia spp.)	EPA 2021.0, Static
113.014	012B	Daphnids (Daphnia spp.)	EPA 2021.0, Static Renewal
113.015	008A	Midge (C. tentans)	EPA-821-R-02-012, Static
113.015	008B	Midge (C. tentans)	EPA-821-R-02-012, Static Rene
113.015	017A	Amphipod (Hyalella spp.)	EPA-821-R-02-012, Static
113.015	017B	Amphipod (Hyalella spp.)	EPA-821-R-02-012, Static Rene
113.020	002A	Sheepshead minnow (C. variegatus)	EPA 2004.0, Static
113.020	002B	Sheepshead minnow (C. variegatus)	EPA 2004.0, Static Renewal
113.020	002C	Sheepshead minnow (C. variegatus)	EPA 2004.0, Continuous Flow
113.021	006A	Silverside (Menidia spp.)	EPA 2006.0, Static
113.021	006B	Silverside (Menidia spp.)	EPA 2006.0, Static Renewal
113.021	006C	Silverside (Menidia spp.)	EPA 2006.0, Continuous Flow
113.022	009A	Mysid (M. bahia)	EPA 2007.0, Static
113.022	009B	Mysid (M. bahia)	EPA 2007.0, Static Renewal
113.022	009C	Mysid (M. bahia)	EPA 2007.0, Continuous Flow
113.023	007A	Topsmelt (A. affinis)	EPA-821-R-02-012, Static
113.023	007B	Topsmelt (A. affinis)	EPA-821-R-02-012, Static Rene
113.023	007C	Topsmelt (A. affinis)	EPA-821-R-02-012, Continuous
113.030	001	Fathead Minnow (P. promelas)	EPA 1000.0
113.032	011	Daphnid (C. dubia)	EPA 1002.0
113.033	025	Green algae (S. capricornutum)	EPA 1003.0
113.034	025	Green algae (S. capricornutum)	ASTM E1218-04
113.040	002	Sheepshead minnow (C. variegatus)	EPA 1004.0
113.042	006	Silverside (Menidia spp.)	EPA 1006.0
113.043	009	Mysid (M. bahia)	EPA 1007.0
113.045	007	Topsmelt (A. affinis)	EPA 600/R-95/136
113.045	019A	Sand dollar (D. excentricus)	EPA 600/R-95/136, Fertilization
113.045	019B	Sand dollar (D. excentricus)	EPA 600/R-95/136, Developme
113.045	021A	Purple sea urchin (S. purpuratus)	EPA 600/R-95/136, Fertilization
113.045	021B	Purple sea urchin (S. purpuratus)	EPA 600/R-95/136, Developme
113.045	023	Mussels (Mytilus spp.)	EPA 600/R-95/136
113.045	024	Giant Kelp (M. pyrifera)	EPA 600/R-95/136
113.046	026	Diatom (T. pseudonana)	ASTM E1218-04
113.050	013	Amphipod (H. azteca)	EPA 600/R-99/064, EPA 100.1
113.051	008	Midge (C. tentans)	EPA 600/R-99/064, EPA 100.2
113.060	014	Amphipod (E. estuarius)	EPA 600/R-94/025, EPA 100.4
113.060	015	Amphipod (L. plumulosus)	EPA 600/R-94/025, EPA 100.4

113.060	016	Amphipod (R. abronius)	EPA 600/R-94/025, EPA 100.4
113.060	028	Amphipod (A. abdita)	EPA 600/R-94/025, EPA 100.4

Field of Accreditation:114 - Inorganic Constituents in Hazardous Waste

114.315	001	Aluminum	EPA 6010 B
114.315	002	Antimony	EPA 6010 B
114.315	003	Arsenic	EPA 6010 B
114.315	004	Barium	EPA 6010 B
114.315	005	Beryllium	EPA 6010 B
114.315	006	Boron	EPA 6010 B
114.315	007	Cadmium	EPA 6010 B
114.315	008	Calcium	EPA 6010 B
114.315	009	Chromium	EPA 6010 B
114.315	010	Cobalt	EPA 6010 B
114.315	011	Copper	EPA 6010 B
114.315	012	Iron	EPA 6010 B
114.315	013	Lead	EPA 6010 B
114.315	014	Magnesium	EPA 6010 B
114.315	015	Manganese	EPA 6010 B
114.315	016	Molybdenum	EPA 6010 B
114.315	017	Nickel	EPA 6010 B
114.315	018	Potassium	EPA 6010 B
114.315	019	Selenium	EPA 6010 B
114.315	020	Silver	EPA 6010 B
114.315	021	Sodium	EPA 6010 B
114.315	022	Strontium	EPA 6010 B
114.315	023	Thallium	EPA 6010 B
114.315	026	Vanadium	EPA 6010 B
114.315	027	Zinc	EPA 6010 B
114.335	001	Aluminum	EPA 6020
114.335	002	Antimony	EPA 6020
114.335	003	Arsenic	EPA 6020
114.335	004	Barium	EPA 6020
114.335	005	Beryllium	EPA 6020
114.335	006	Cadmium	EPA 6020
114.335	007	Chromium	EPA 6020
114.335	008	Cobalt	EPA 6020
114.335	009	Copper	EPA 6020
114.335	010	Lead	EPA 6020
114.335	011	Manganese	EPA 6020
114.335	012	Nickel	EPA 6020
114.335	013	Silver	EPA 6020
114.335	014	Thallium	EPA 6020

114.335	015	Zinc	EPA 6020
114.335	016	Molybdenum	EPA 6020
114.335	017	Selenium	EPA 6020
114.335	018	Vanadium	EPA 6020
114.345	015	Mercury	EPA 6020 B
114.465	001	Chromium VI (Hexavalent Chromium)	EPA 7199
114.545	001	Mercury	EPA 7471 B
114.765	001	Organic Carbon-Total (TOC)	EPA 9060 A
114.805	001	Oil & Grease (n-Hexane Extractable Materials)	EPA 9071 B

Field of Accreditation:115 - Leaching/Extraction Tests and Physical Characteristics of Hazardous Waste

115.055	001	Waste Extraction Test (WET)	CCR Chapter11, Article 5, Appe
115.085	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311
115.095	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312
115.105	001	Ignitability	EPA 1030
115.135	001	Corrosivity - pH Determination	EPA 9045 C

Field of Accreditation:116 - Volatile Organic Compounds in Hazardous Waste

116.220	001	Gasoline Range Organics (GRO)	EPA 8015 B
116.225	001	Benzene	EPA 8021 B
116.225	017	Ethylbenzene	EPA 8021 B
116.225	023	Toluene	EPA 8021 B
116.225	028	m+p-Xylene	EPA 8021 B
116.225	029	o-Xylene	EPA 8021 B
116.265	001	Benzene	EPA 8260 B
116.265	002	Bromobenzene	EPA 8260 B
116.265	003	Bromochloromethane	EPA 8260 B
116.265	004	Bromodichloromethane	EPA 8260 B
116.265	005	Bromoform	EPA 8260 B
116.265	006	Bromomethane (Methyl Bromide)	EPA 8260 B
116.265	007	n-Butylbenzene	EPA 8260 B
116.265	008	sec-Butylbenzene	EPA 8260 B
116.265	009	tert-Butylbenzene	EPA 8260 B
116.265	010	Carbon Disulfide	EPA 8260 B
116.265	011	Carbon Tetrachloride	EPA 8260 B
116.265	012	Chlorobenzene	EPA 8260 B
116.265	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 B
116.265	014	Chloroethane	EPA 8260 B
116.265	015	Chloroform	EPA 8260 B
116.265	016	Chloromethane (Methyl Chloride)	EPA 8260 B
116.265	017	Dibromomethane	EPA 8260 B
116.265	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 B
116.265	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 B
116.265	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 B

116.265	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 B
116.265	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 B
116.265	023	Ethylbenzene	EPA 8260 B
116.265	024	Hexachlorobutadiene	EPA 8260 B
116.265	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 B
116.265	026	Methylene Chloride (Dichloromethane)	EPA 8260 B
116.265	027	Naphthalene	EPA 8260 B
116.265	029	N-propylbenzene	EPA 8260 B
116.265	030	Styrene	EPA 8260 B
116.265	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 B
116.265	032	Toluene	EPA 8260 B
116.265	033	Trichloroethylene (Trichloroethene)	EPA 8260 B
116.265	034	Trichlorofluoromethane	EPA 8260 B
116.265	035	Vinyl Chloride	EPA 8260 B
116.265	036	m+p-Xylene	EPA 8260 B
116.265	037	o-Xylene	EPA 8260 B
116.265	040	1,1-Dichloroethane	EPA 8260 B
116.265	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 B
116.265	042	1,1,1-Trichloroethane	EPA 8260 B
116.265	043	1,1,1,2-Tetrachloroethane	EPA 8260 B
116.265	044	1,1,2,2-Tetrachloroethane	EPA 8260 B
116.265	045	1,1,2-Trichloroethane	EPA 8260 B
116.265	046	1,2-Dichlorobenzene	EPA 8260 B
116.265	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 B
116.265	048	1,2-Dibromoethane (EDB)	EPA 8260 B
116.265	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 B
116.265	050	1,2-Dichloropropane	EPA 8260 B
116.265	051	1,2,3-Trichloropropane (TCP)	EPA 8260 B
116.265	052	1,2,4-Trichlorobenzene	EPA 8260 B
116.265	053	1,3-Dichlorobenzene	EPA 8260 B
116.265	054	1,4-Dichlorobenzene	EPA 8260 B
116.265	055	2-Chloroethyl vinyl Ether	EPA 8260 B
116.265	056	4-Chlorotoluene	EPA 8260 B
116.265	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 B
116.265	059	Diisopropyl ether (DIPE)	EPA 8260 B
116.265	060	1,4-Dioxane	EPA 8260 B
116.265	062	tert-Amyl Methyl Ether (TAME)	EPA 8260 B

Field of Accreditation:117 - Semi-volatile Organic Chemistry of Hazardous Waste

117.235	002	Diesel Range Organics (DRO)	EPA 8015 B
117.235	003	Diesel Range Organics (DRO) [LUFT Range]	EPA 8015 B
117.315	001	Aldrin	EPA 8081 A
117.315	002	alpha-BHC	EPA 8081 A

117.315	003	beta-BHC	EPA 8081 A
117.315	004	delta-BHC	EPA 8081 A
117.315	005	gamma-BHC (Lindane)	EPA 8081 A
117.315	006	Chlordane (total)	EPA 8081 A
117.315	008	4,4'-DDD	EPA 8081 A
117.315	009	4,4'-DDE	EPA 8081 A
117.315	010	4,4'-DDT	EPA 8081 A
117.315	011	Dieldrin	EPA 8081 A
117.315	012	Endosulfan I	EPA 8081 A
117.315	013	Endosulfan II	EPA 8081 A
117.315	014	Endosulfan Sulfate	EPA 8081 A
117.315	015	Endrin	EPA 8081 A
117.315	016	Endrin Aldehyde	EPA 8081 A
117.315	017	Endrin Ketone	EPA 8081 A
117.315	018	Heptachlor	EPA 8081 A
117.315	019	Heptachlor Epoxide	EPA 8081 A
117.315	020	Methoxychlor	EPA 8081 A
117.315	021	Toxaphene	EPA 8081 A
117.335	001	Aroclor 1016	EPA 8082
117.335	002	Aroclor 1221	EPA 8082
117.335	003	Aroclor 1232	EPA 8082
117.335	004	Aroclor 1242	EPA 8082
117.335	005	Aroclor 1248	EPA 8082
117.335	006	Aroclor 1254	EPA 8082
117.335	007	Aroclor 1260	EPA 8082
117.425	001	2,4-D	EPA 8151 A
117.425	002	2,4-DB	EPA 8151 A
117.425	003	2,4,5-TP (Silvex)	EPA 8151 A
117.425	004	2,4,5-T	EPA 8151 A
117.425	005	Dalapon	EPA 8151 A
117.425	006	Dicamba	EPA 8151 A
117.425	007	Dichloroprop	EPA 8151 A
117.425	008	Dinoseb	EPA 8151 A
117.425	009	MCPA	EPA 8151 A
117.425	010	MCPP	EPA 8151 A
117.425	011	4-Nitrophenol	EPA 8151 A
117.425	012	Pentachlorophenol	EPA 8151 A
117.435	001	Acenaphthene	EPA 8270 C
117.435	002	Acenaphthylene	EPA 8270 C
117.435	003	Aniline	EPA 8270 C
117.435	004	Anthracene	EPA 8270 C
117.435	005	Benzidine	EPA 8270 C

117.435	006	Benzoic Acid	EPA 8270 C
117.435	007	Benzo(a)anthracene	EPA 8270 C
117.435	008	Benzo(b)fluoranthene	EPA 8270 C
117.435	009	Benzo(k)fluoranthene	EPA 8270 C
117.435	010	Benzo(g,h,i)perylene	EPA 8270 C
117.435	011	Benzo(a)pyrene	EPA 8270 C
117.435	012	Benzyl Alcohol	EPA 8270 C
117.435	013	Bis(2-chloroethoxy) Methane	EPA 8270 C
117.435	014	Bis(2-chloroethyl) Ether	EPA 8270 C
117.435	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 C
117.435	016	Butyl Benzyl Phthalate	EPA 8270 C
117.435	017	Chrysene	EPA 8270 C
117.435	018	Dibenz(a,h)anthracene	EPA 8270 C
117.435	019	Dibenzofuran	EPA 8270 C
117.435	020	Di-n-butyl Phthalate	EPA 8270 C
117.435	021	Diethyl Phthalate	EPA 8270 C
117.435	022	Dimethyl Phthalate	EPA 8270 C
117.435	023	Di-n-octyl Phthalate	EPA 8270 C
117.435	024	Fluoranthene	EPA 8270 C
117.435	025	Fluorene	EPA 8270 C
117.435	026	Naphthalene	EPA 8270 C
117.435	027	Nitrobenzene	EPA 8270 C
117.435	028	Pentachlorobenzene	EPA 8270 C
117.435	029	Pentachlorophenol	EPA 8270 C
117.435	030	1-Chloronaphthalene	EPA 8270 C
117.435	031	1,2-Dichlorobenzene	EPA 8270 C
117.435	032	1,3-Dichlorobenzene	EPA 8270 C
117.435	033	1,4-Dichlorobenzene	EPA 8270 C
117.435	034	2-Chloronaphthalene	EPA 8270 C
117.435	035	2-Chlorophenol	EPA 8270 C
117.435	036	2,4-Dichlorophenol	EPA 8270 C
117.435	037	2,4-Dimethylphenol	EPA 8270 C
117.435	038	2,4-Dinitrophenol	EPA 8270 C
117.435	039	2,4-Dinitrotoluene	EPA 8270 C
117.435	041	2,6-Dinitrotoluene	EPA 8270 C
117.435	042	2-Nitroaniline	EPA 8270 C
117.435	043	2-Nitrophenol	EPA 8270 C
117.435	044	3-Nitroaniline	EPA 8270 C
117.435	045	3,3'-Dichlorobenzidine	EPA 8270 C
117.435	046	4-Chloroaniline	EPA 8270 C
117.435	047	4-Chloro-3-methylphenol	EPA 8270 C
117.435	048	4-Bromophenyl Phenyl Ether	EPA 8270 C

117.435	049	4-Chlorophenyl Phenyl Ether	EPA 8270 C
117.435	050	4-Nitroaniline	EPA 8270 C
117.435	051	4-Nitrophenol	EPA 8270 C
117.435	073	Dichlorvos (DDVP)	EPA 8270 C
117.435	074	Disulfoton	EPA 8270 C
117.435	075	Malathion	EPA 8270 C
117.435	076	Parathion Ethyl	EPA 8270 C
117.435	077	Parathion Methyl	EPA 8270 C
117.435	078	Phorate	EPA 8270 C
117.435	079	Terbufos	EPA 8270 C
117.435	088	N-nitrosodimethylamine	EPA 8270 C
117.435	089	N-nitrosodiphenylamine	EPA 8270 C
117.435	090	N-nitroso-di-n-propylamine	EPA 8270 C
117.435	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 C
117.435	092	Isophorone	EPA 8270 C
117.435	093	2-Methylnaphthalene	EPA 8270 C
117.435	094	Phenanthrene	EPA 8270 C
117.470	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290
117.470	002	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290
117.470	003	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290
117.470	004	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290
117.470	005	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290
117.470	006	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290
117.470	007	1,2,3,4,5,6,7,8-Octachlorodibenzo-p-dioxin (OCDD)	EPA 8290
117.470	008	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	EPA 8290
117.470	009	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290
117.470	010	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290
117.470	011	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290
117.470	012	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290
117.470	013	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	EPA 8290
117.470	014	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290
117.470	015	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	EPA 8290
117.470	016	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	EPA 8290
117.470	017	1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	EPA 8290
117.470	018	Total Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290
117.470	019	Total Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290
117.470	020	Total Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290
117.470	021	Total Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290
117.470	022	Total Tetrachlorodibenzofuran (TCDF)	EPA 8290
117.470	023	Total Pentachlorodibenzofuran (PeCDF)	EPA 8290
117.470	024	Total Hexachlorodibenzofuran (HxCDF)	EPA 8290
117.470	025	Total Heptachlorodibenzofuran (HpCDF)	EPA 8290

117.475	001	Acenaphthene	EPA 8310
117.475	002	Acenaphthylene	EPA 8310
117.475	003	Anthracene	EPA 8310
117.475	004	Benzo(a)anthracene	EPA 8310
117.475	005	Benzo(a)pyrene	EPA 8310
117.475	006	Benzo(b)fluoranthene	EPA 8310
117.475	007	Benzo(g,h,i)perylene	EPA 8310
117.475	008	Benzo(k)fluoranthene	EPA 8310
117.475	009	Chrysene	EPA 8310
117.475	010	Dibenz(a,h)anthracene	EPA 8310
117.475	011	Fluoranthene	EPA 8310
117.475	012	Fluorene	EPA 8310
117.475	013	Indeno(1,2,3-c,d)pyrene	EPA 8310
117.475	014	Naphthalene	EPA 8310
117.475	015	Phenanthrene	EPA 8310
117.475	016	Pyrene	EPA 8310
117.485	005	Butanal (Butyraldehyde)	EPA 8315 A
117.485	006	Crotonaldehyde	EPA 8315 A
117.485	008	Decanal	EPA 8315 A
117.485	011	Heptanal	EPA 8315 A
117.485	012	Hexanal (Hexaldehyde)	EPA 8315 A
117.485	014	Nonanal	EPA 8315 A
117.485	015	Octanal	EPA 8315 A
117.485	016	Pentanal (Valeraldehyde)	EPA 8315 A
117.485	017	Propanal (Propionaldehyde)	EPA 8315 A
117.495	001	Aldicarb (Temik)	EPA 8318
117.495	002	Aldicarb Sulfone	EPA 8318
117.495	003	Carbaryl (Sevin)	EPA 8318
117.495	004	Carbofuran (Furadan)	EPA 8318
117.495	006	3-Hydroxycarbofuran	EPA 8318
117.495	007	Methiocarb (Mesurol)	EPA 8318
117.495	008	Methomyl (Lannate)	EPA 8318
117.495	009	Oxamyl	EPA 8318
117.495	011	Propoxur (Baygon)	EPA 8318
117.545	001	1,3,5-Trinitrobenzene	EPA 8330 A
117.545	002	1,3-Dinitrobenzene	EPA 8330 A
117.545	003	Nitrobenzene	EPA 8330 A
117.545	004	2,4,6-Trinitrotoluene	EPA 8330 A
117.545	005	2,4-Dinitrotoluene	EPA 8330 A
117.545	006	2,6-Dinitrotoluene	EPA 8330 A
117.545	007	2-Nitrotoluene	EPA 8330 A
117.545	008	3-Nitrotoluene	EPA 8330 A

117.545	009	4-Nitrotoluene	EPA 8330 A
117.575	001	N-Ethylperfluorooctane Sulfonamide (EtFOSAm)	DoD QSM Version 5.1 (or newe
117.575	002	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	DoD QSM Version 5.1 (or newe
117.575	003	N-Ethylperfluorooctane Sulfonamido Ethanol (EtFOSE)	DoD QSM Version 5.1 (or newe
117.575	004	4:2 Fluorotelomer Sulfonic Acid (4:2 FTS)	DoD QSM Version 5.1 (or newe
117.575	005	6:2 Fluorotelomer Sulfonic Acid (6:2 FTS)	DoD QSM Version 5.1 (or newe
117.575	006	8:2 Fluorotelomer Sulfonic Acid (8:2 FTS)	DoD QSM Version 5.1 (or newe
117.575	007	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	DoD QSM Version 5.1 (or newe
117.575	008	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	DoD QSM Version 5.1 (or newe
117.575	009	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	DoD QSM Version 5.1 (or newe
117.575	010	N-Methylperfluorooctane Sulfonamide (NMeFOSA)	DoD QSM Version 5.1 (or newe
117.575	011	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	DoD QSM Version 5.1 (or newe
117.575	012	N-Methylperfluorooctane Sulfonamido Ethanol (NMeFOSE)	DoD QSM Version 5.1 (or newe
117.575	013	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	DoD QSM Version 5.1 (or newe
117.575	014	Perfluorobutanoic Acid (PFBA)	DoD QSM Version 5.1 (or newe
117.575	015	Perfluorobutane Sulfonic Acid (PFBS)	DoD QSM Version 5.1 (or newe
117.575	016	Perfluorodecanoic Acid (PFDA)	DoD QSM Version 5.1 (or newe
117.575	017	Perfluorododecanoic Acid (PFDoA)	DoD QSM Version 5.1 (or newe
117.575	018	Perfluorodecane Sulfonic Acid (PFDS)	DoD QSM Version 5.1 (or newe
117.575	019	Perfluoroheptanoic Acid (PFHpA)	DoD QSM Version 5.1 (or newe
117.575	020	Perfluoroheptane Sulfonic Acid (PFHpS)	DoD QSM Version 5.1 (or newe
117.575	021	Perfluorohexane Sulfonic Acid (PFHxS)	DoD QSM Version 5.1 (or newe
117.575	022	Perfluorohexanoic Acid (PFHxA)	DoD QSM Version 5.1 (or newe
117.575	023	Perfluorononanoic Acid (PFNA)	DoD QSM Version 5.1 (or newe
117.575	024	Perfluorooctanoic Acid (PFOA)	DoD QSM Version 5.1 (or newe
117.575	025	Perfluorooctane Sulfonic Acid (PFOS)	DoD QSM Version 5.1 (or newe
117.575	026	Perfluorooctane Sulfonamide (PFOSAm)	DoD QSM Version 5.1 (or newe
117.575	027	Perfluoropentanoic Acid (PFPeA)	DoD QSM Version 5.1 (or newe
117.575	028	Perfluoropentane Sulfonic Acid (PFPeS)	DoD QSM Version 5.1 (or newe
117.575	029	Perfluorotetradecanoic Acid (PFTDA)	DoD QSM Version 5.1 (or newe
117.575	030	Perfluorotridecanoic Acid (PFTrDA)	DoD QSM Version 5.1 (or newe
117.575	031	Perfluoroundecanoic Acid (PFUnDA)	DoD QSM Version 5.1 (or newe
117.575	033	Perfluorohexadecanoic Acid (PFHxDA)	DoD QSM Version 5.1 (or newe
117.575	034	Perfluorononane Sulfonic Acid (PFNS)	DoD QSM Version 5.1 (or newe
117.575	035	Perfluorooctadecanoic Acid (PFODA)	DoD QSM Version 5.1 (or newe

Field of Accreditation:126 - Microbiological Methods for Ambient Water

126.003	001	Total Coliform (Enumeration)	SM 9221 B,C-2006
126.003	002	Fecal Coliform (Enumeration)	SM 9221 C,E-2006
126.003	003	E. coli (Enumeration)	SM 9221 C,F-2006
126.005	001	Total Coliform (Enumeration)	SM 9222 B-2006
126.005	003	Fecal Coliform (Enumeration)	SM 9222 D-2006
126.009	001	Fecal Streptococci	SM 9230 B-2007

126.015	001	E. coli (Enumeration)	SM 9223 B-2004 Colilert
126.019	001	Enterococci	Enterolert

Field of Accreditation:130 - Inorganic constituents in Hazardous waste (Matrix Aqueous)

130.030	001	Aluminum	EPA 6020
130.030	002	Antimony	EPA 6020
130.030	003	Arsenic	EPA 6020
130.030	004	Barium	EPA 6020
130.030	005	Beryllium	EPA 6020
130.030	006	Cadmium	EPA 6020
130.030	007	Chromium	EPA 6020
130.030	008	Cobalt	EPA 6020
130.030	009	Copper	EPA 6020
130.030	010	Lead	EPA 6020
130.030	011	Manganese	EPA 6020
130.030	012	Nickel	EPA 6020
130.030	013	Silver	EPA 6020
130.030	014	Thallium	EPA 6020
130.030	015	Zinc	EPA 6020
130.030	016	Molybdenum	EPA 6020
130.030	017	Selenium	EPA 6020
130.030	018	Vanadium	EPA 6020
130.040	015	Mercury	EPA 6020 B
130.250	001	Mercury	EPA 7470 A
130.550	001	Total Chlorine	EPA 9075

Field of Accreditation:131 - Leaching/Extraction, Physical Chacterstics in Hazardous Waste (Matrix Aqueous)

131.010	001	Waste Extraction Test (WET)	CCR Chapter11, Article 5, Appe
131.040	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311
131.050	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312
131.060	001	Ignitability	EPA 1010
131.110	001	Corrosivity - pH Determination	EPA 9040 B

Field of Accreditation:132 - Volatile Organic Compounds in Hazardous Waste (Matrix Aqueous)

132.015	001	Gasoline Range Organics (GRO)	EPA 8015 B
132.015	001	Gasoline Range Organics (GRO)	EPA 8015 B
132.020	001	Benzene	EPA 8021 B
132.020	017	Ethylbenzene	EPA 8021 B
132.020	023	Toluene	EPA 8021 B
132.020	028	m+p-Xylene	EPA 8021 B
132.020	029	o-Xylene	EPA 8021 B
132.060	001	Benzene	EPA 8260 B
132.060	002	Bromobenzene	EPA 8260 B
132.060	003	Bromochloromethane	EPA 8260 B
132.060	004	Bromodichloromethane	EPA 8260 B

132.060	005	Bromoform	EPA 8260 B
132.060	006	Bromomethane (Methyl Bromide)	EPA 8260 B
132.060	007	n-Butylbenzene	EPA 8260 B
132.060	008	sec-Butylbenzene	EPA 8260 B
132.060	009	tert-Butylbenzene	EPA 8260 B
132.060	010	Carbon Disulfide	EPA 8260 B
132.060	011	Carbon Tetrachloride	EPA 8260 B
132.060	012	Chlorobenzene	EPA 8260 B
132.060	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 B
132.060	014	Chloroethane	EPA 8260 B
132.060	015	Chloroform	EPA 8260 B
132.060	016	Chloromethane (Methyl Chloride)	EPA 8260 B
132.060	017	Dibromomethane	EPA 8260 B
132.060	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 B
132.060	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 B
132.060	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 B
132.060	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 B
132.060	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 B
132.060	023	Ethylbenzene	EPA 8260 B
132.060	024	Hexachlorobutadiene	EPA 8260 B
132.060	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 B
132.060	026	Methylene Chloride (Dichloromethane)	EPA 8260 B
132.060	027	Naphthalene	EPA 8260 B
132.060	029	N-propylbenzene	EPA 8260 B
132.060	030	Styrene	EPA 8260 B
132.060	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 B
132.060	032	Toluene	EPA 8260 B
132.060	033	Trichloroethylene (Trichloroethene)	EPA 8260 B
132.060	034	Trichlorofluoromethane	EPA 8260 B
132.060	035	Vinyl Chloride	EPA 8260 B
132.060	036	m+p-Xylene	EPA 8260 B
132.060	037	o-Xylene	EPA 8260 B
132.060	040	1,1-Dichloroethane	EPA 8260 B
132.060	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 B
132.060	042	1,1,1-Trichloroethane	EPA 8260 B
132.060	043	1,1,1,2-Tetrachloroethane	EPA 8260 B
132.060	044	1,1,2,2-Tetrachloroethane	EPA 8260 B
132.060	045	1,1,2-Trichloroethane	EPA 8260 B
132.060	046	1,2-Dichlorobenzene	EPA 8260 B
132.060	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 B
132.060	048	1,2-Dibromoethane (EDB)	EPA 8260 B
132.060	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 B

132.060	050	1,2-Dichloropropane	EPA 8260 B
132.060	051	1,2,3-Trichloropropane (TCP)	EPA 8260 B
132.060	052	1,2,4-Trichlorobenzene	EPA 8260 B
132.060	053	1,3-Dichlorobenzene	EPA 8260 B
132.060	054	1,4-Dichlorobenzene	EPA 8260 B
132.060	055	2-Chloroethyl vinyl Ether	EPA 8260 B
132.060	056	4-Chlorotoluene	EPA 8260 B
132.060	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 B
132.060	058	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 8260 B
132.060	059	Diisopropyl ether (DIPE)	EPA 8260 B
132.060	061	Ethyl tert-butyl Ether (ETBE)	EPA 8260 B
132.060	062	tert-Amyl Methyl Ether (TAME)	EPA 8260 B

Field of Accreditation:133 - Semi-Volatile Organic Chemistry in Hazardous Waste (Matrix Aqueous)

133.010	002	Diesel Range Organics (DRO)	EPA 8015 B
133.090	001	Aldrin	EPA 8081 A
133.090	002	alpha-BHC	EPA 8081 A
133.090	003	beta-BHC	EPA 8081 A
133.090	004	delta-BHC	EPA 8081 A
133.090	005	gamma-BHC (Lindane)	EPA 8081 A
133.090	006	Chlordane	EPA 8081 A
133.090	008	4,4'-DDD	EPA 8081 A
133.090	009	4,4'-DDE	EPA 8081 A
133.090	010	4,4'-DDT	EPA 8081 A
133.090	011	Dieldrin	EPA 8081 A
133.090	012	Endosulfan I	EPA 8081 A
133.090	013	Endosulfan II	EPA 8081 A
133.090	014	Endosulfan Sulfate	EPA 8081 A
133.090	015	Endrin	EPA 8081 A
133.090	016	Endrin Aldehyde	EPA 8081 A
133.090	017	Endrin Ketone	EPA 8081 A
133.090	018	Heptachlor	EPA 8081 A
133.090	019	Heptachlor Epoxide	EPA 8081 A
133.090	020	Methoxychlor	EPA 8081 A
133.090	021	Toxaphene	EPA 8081 A
133.120	001	Aroclor 1016	EPA 8082
133.120	002	Aroclor 1221	EPA 8082
133.120	003	Aroclor 1232	EPA 8082
133.120	004	Aroclor 1242	EPA 8082
133.120	005	Aroclor 1248	EPA 8082
133.120	006	Aroclor 1254	EPA 8082
133.120	007	Aroclor 1260	EPA 8082
133.220	001	2,4-D	EPA 8151 A

133.220	002	2,4-DB	EPA 8151 A
133.220	003	2,4,5-TP (Silvex)	EPA 8151 A
133.220	004	2,4,5-T	EPA 8151 A
133.220	005	Dalapon	EPA 8151 A
133.220	006	Dicamba	EPA 8151 A
133.220	007	Dichloroprop	EPA 8151 A
133.220	008	Dinoseb	EPA 8151 A
133.220	009	MCPA	EPA 8151 A
133.220	010	MCPP	EPA 8151 A
133.220	011	4-Nitrophenol	EPA 8151 A
133.220	012	Pentachlorophenol	EPA 8151 A
133.230	001	Acenaphthene	EPA 8270 C
133.230	002	Acenaphthylene	EPA 8270 C
133.230	004	Anthracene	EPA 8270 C
133.230	005	Benzidine	EPA 8270 C
133.230	007	Benzo(a)anthracene	EPA 8270 C
133.230	008	Benzo(b)fluoranthene	EPA 8270 C
133.230	009	Benzo(k)fluoranthene	EPA 8270 C
133.230	010	Benzo(g,h,i)perylene	EPA 8270 C
133.230	011	Benzo(a)pyrene	EPA 8270 C
133.230	012	Benzyl Alcohol	EPA 8270 C
133.230	013	Bis(2-chloroethoxy) Methane	EPA 8270 C
133.230	014	Bis(2-chloroethyl) Ether	EPA 8270 C
133.230	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 C
133.230	016	Butyl Benzyl Phthalate	EPA 8270 C
133.230	017	Chrysene	EPA 8270 C
133.230	018	Dibenz(a,h)anthracene	EPA 8270 C
133.230	019	Dibenzofuran	EPA 8270 C
133.230	020	Di-n-butyl Phthalate	EPA 8270 C
133.230	021	Diethyl Phthalate	EPA 8270 C
133.230	022	Dimethyl Phthalate	EPA 8270 C
133.230	023	Di-n-octyl Phthalate	EPA 8270 C
133.230	024	Fluoranthene	EPA 8270 C
133.230	025	Fluorene	EPA 8270 C
133.230	026	Naphthalene	EPA 8270 C
133.230	027	Nitrobenzene	EPA 8270 C
133.230	029	Pentachlorophenol	EPA 8270 C
133.230	031	1,2-Dichlorobenzene	EPA 8270 C
133.230	032	1,3-Dichlorobenzene	EPA 8270 C
133.230	033	1,4-Dichlorobenzene	EPA 8270 C
133.230	034	2-Chloronaphthalene	EPA 8270 C
133.230	035	2-Chlorophenol	EPA 8270 C

133.230	036	2,4-Dichlorophenol	EPA 8270 C
133.230	037	2,4-Dimethylphenol	EPA 8270 C
133.230	038	2,4-Dinitrophenol	EPA 8270 C
133.230	039	2,4-Dinitrotoluene	EPA 8270 C
133.230	041	2,6-Dinitrotoluene	EPA 8270 C
133.230	042	2-Nitroaniline	EPA 8270 C
133.230	043	2-Nitrophenol	EPA 8270 C
133.230	044	3-Nitroaniline	EPA 8270 C
133.230	045	3,3'-Dichlorobenzidine	EPA 8270 C
133.230	046	4-Chloroaniline	EPA 8270 C
133.230	047	4-Chloro-3-methylphenol	EPA 8270 C
133.230	048	4-Bromophenyl Phenyl Ether	EPA 8270 C
133.230	049	4-Chlorophenyl Phenyl Ether	EPA 8270 C
133.230	050	4-Nitroaniline	EPA 8270 C
133.230	051	4-Nitrophenol	EPA 8270 C
133.230	088	N-nitrosodimethylamine	EPA 8270 C
133.230	089	N-nitrosodiphenylamine	EPA 8270 C
133.230	090	N-nitroso-di-n-propylamine	EPA 8270 C
133.230	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 C
133.230	092	Isophorone	EPA 8270 C
133.230	093	2-Methylnaphthalene	EPA 8270 C
133.230	094	Phenanthrene	EPA 8270 C
133.270	001	Acenaphthene	EPA 8310
133.270	002	Acenaphthylene	EPA 8310
133.270	003	Anthracene	EPA 8310
133.270	004	Benzo(a)anthracene	EPA 8310
133.270	005	Benzo(a)pyrene	EPA 8310
133.270	006	Benzo(b)fluoranthene	EPA 8310
133.270	007	Benzo(g,h,i)perylene	EPA 8310
133.270	008	Benzo(k)fluoranthene	EPA 8310
133.270	009	Chrysene	EPA 8310
133.270	010	Dibenz(a,h)anthracene	EPA 8310
133.270	011	Fluoranthene	EPA 8310
133.270	012	Fluorene	EPA 8310
133.270	013	Indeno(1,2,3-c,d)pyrene	EPA 8310
133.270	014	Naphthalene	EPA 8310
133.270	015	Phenanthrene	EPA 8310
133.270	016	Pyrene	EPA 8310
133.280	005	Butanal (Butyraldehyde)	EPA 8315 A
133.280	006	Crotonaldehyde	EPA 8315 A
133.280	008	Decanal	EPA 8315 A
133.280	011	Heptanal	EPA 8315 A

133.280	012	Hexanal (Hexaldehyde)	EPA 8315 A
133.280	014	Nonanal	EPA 8315 A
133.280	015	Octanal	EPA 8315 A
133.280	016	Pentanal (Valeraldehyde)	EPA 8315 A
133.280	017	Propanal (Propionaldehyde)	EPA 8315 A
133.290	001	Aldicarb (Temik)	EPA 8318
133.290	002	Aldicarb Sulfone	EPA 8318
133.290	003	Carbaryl (Sevin)	EPA 8318
133.290	004	Carbofuran (Furadan)	EPA 8318
133.290	006	3-Hydroxycarbofuran	EPA 8318
133.290	007	Methiocarb (Mesurol)	EPA 8318
133.290	008	Methomyl (Lannate)	EPA 8318
133.290	009	Oxamyl	EPA 8318
133.290	011	Propoxur (Baygon)	EPA 8318
133.350	001	1,3,5-Trinitrobenzene	EPA 8330 A
133.350	002	1,3-Dinitrobenzene	EPA 8330 A
133.350	003	Nitrobenzene	EPA 8330 A
133.350	004	2,4,6-Trinitrotoluene	EPA 8330 A
133.350	005	2,4-Dinitrotoluene	EPA 8330 A
133.350	006	2,6-Dinitrotoluene	EPA 8330 A
133.350	007	2-Nitrotoluene	EPA 8330 A
133.350	008	3-Nitrotoluene	EPA 8330 A
133.350	009	4-Nitrotoluene	EPA 8330 A

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

EMSL Analytical, Inc.

South Pasadena, CA

520 Mission Street

South Pasadena, CA 91030

Scope of the certificate is limited to the
"Fields of Accreditation"
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of
Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **2283**

Effective Date: **1/1/2022**

Expiration Date: **12/31/2023**

Sacramento, California
subject to forfeiture or revocation

Christine Sotelo, Program Manager
Environmental Laboratory Accreditation Program

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Fields of Accreditation

EMSL Analytical, Inc.
South Pasadena, CA
520 Mission Street
South Pasadena, CA 91030
Phone: 3232549960

Certificate Number: 2283
Expiration Date: 12/31/2023

Field of Accreditation: 101 - Microbiology of Drinking Water			
101.010	001	Heterotrophic Bacteria	SM 9215 B
101.050	001	Total Coliform P/A	SM 9223 B Colilert
101.050	001	Total Coliform P/A	SM 9223 B Colilert
101.050	002	E. coli P/A	SM 9223 B Colilert
Field of Accreditation: 103 - Toxic Chemical Elements of Drinking Water			
103.301	001	Asbestos	EPA 100.2
Field of Accreditation: 121 - Bulk Asbestos Analysis of Hazardous Waste			
121.020	001	Bulk Asbestos	EPA 600/R-93-116
Field of Accreditation: 126 - Microbiological Methods for Ambient Water			
126.019	001	Enterococci	Enterolert

As of 10/6/2022 , this list supersedes all previous lists for this certificate number.
Customers: Please verify the current accreditation standing with the State.

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

Monterey Bay Analytical Services, Inc.

4 Justin Court, Suite D

Monterey, CA 93940

Scope of the certificate is limited to the
"Fields of Accreditation"
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of
Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **2385**

Effective Date: **11/1/2021**

Expiration Date: **10/31/2023**

Sacramento, California
subject to forfeiture or revocation

Christine Sotelo, Program Manager
Environmental Laboratory Accreditation Program

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Fields of Accreditation

Monterey Bay Analytical Services, Inc.

4 Justin Court, Suite D
Monterey, CA 93940
Phone: 8313756227

Certificate Number: 2385
Expiration Date: 10/31/2023

Field of Accreditation: 101 - Microbiology of Drinking Water			
101.010	001	Heterotrophic Bacteria	SM 9215 B
101.010	002	Heterotrophic Bacteria	SimPlate
101.050	005	Total Coliform P/A	SM 9223 B Colilert 18
101.050	006	E. coli P/A	SM 9223 B Colilert 18
101.050	007	Total Coliform (Enumeration)	SM 9223 B Colilert 18
101.050	008	E. coli (Enumeration)	SM 9223 B Colilert 18
Field of Accreditation: 102 - Inorganic Chemistry of Drinking Water			
102.020	001	Turbidity	EPA 180.1
102.026	001	Calcium	EPA 200.7
102.026	002	Magnesium	EPA 200.7
102.026	003	Potassium	EPA 200.7
102.026	004	Silica	EPA 200.7
102.026	005	Sodium	EPA 200.7
102.026	006	Hardness (Calculation)	EPA 200.7
102.030	001	Bromide	EPA 300.0
102.030	003	Chloride	EPA 300.0
102.030	005	Fluoride	EPA 300.0
102.030	006	Nitrate (as N)	EPA 300.0
102.030	007	Nitrite (as N)	EPA 300.0
102.030	008	Phosphate,Ortho (as P)	EPA 300.0
102.030	009	Sulfate (as SO4)	EPA 300.0
102.045	001	Perchlorate	EPA 314.0
102.070	001	Phosphate,Ortho (as P)	EPA 365.1
102.100	001	Alkalinity	SM 2320 B-1997
102.130	001	Specific Conductance	SM 2510 B-1997
102.140	001	Residue, Filterable TDS	SM 2540 C-1997
102.175	001	Chlorine, Free	SM 4500-Cl G-2000
102.175	002	Chlorine, Total Residual	SM 4500-Cl G-2000
102.203	001	Hydrogen Ion (pH)	SM 4500-H+ B-2000
102.262	001	Organic Carbon-Total (TOC)	SM 5310 C-2000
102.263	001	Dissolved Organic Carbon (DOC)	SM 5310 C-2000
102.270	001	Surfactants	SM 5540 C-2000
102.280	001	UV254	SM 5910 B-2011

As of 9/8/2022 , this list supersedes all previous lists for this certificate number.
Customers: Please verify the current accreditation standing with the State.

102.570	001	Cyanide, Free	OIA-1677, DW

Field of Accreditation: 103 - Toxic Chemical Elements of Drinking Water

103.130	008	Copper	EPA 200.7
103.130	009	Iron	EPA 200.7
103.130	011	Manganese	EPA 200.7
103.130	017	Zinc	EPA 200.7
103.130	018	Boron	EPA 200.7
103.140	001	Aluminum	EPA 200.8
103.140	002	Antimony	EPA 200.8
103.140	003	Arsenic	EPA 200.8
103.140	004	Barium	EPA 200.8
103.140	005	Beryllium	EPA 200.8
103.140	006	Cadmium	EPA 200.8
103.140	007	Chromium	EPA 200.8
103.140	008	Copper	EPA 200.8
103.140	009	Lead	EPA 200.8
103.140	010	Manganese	EPA 200.8
103.140	011	Mercury	EPA 200.8
103.140	012	Nickel	EPA 200.8
103.140	013	Selenium	EPA 200.8
103.140	014	Silver	EPA 200.8
103.140	015	Thallium	EPA 200.8
103.140	016	Zinc	EPA 200.8
103.140	018	Vanadium	EPA 200.8
103.140	019	Strontium	EPA 200.8

Field of Accreditation: 106 - Radionuclides in Drinking Water

106.092	001	Uranium	EPA 200.8

Field of Accreditation: 107 - Microbiological Methods for Non-Potable Water and Sewage Sludge

107.001	001	Total Coliform (Enumeration)	SM 9221 B,C-2006
107.001	002	Fecal Coliform (Enumeration)	SM 9221 C,E-2006
107.001	003	E. coli (Enumeration)	SM 9221 C,F-2006
107.013	001	E. coli (Enumeration)	SM 9223 B-2004 Colilert
107.015	001	E. coli (Enumeration)	SM 9223 B-2004 Colilert 18
107.015	002	Fecal Coliform (Enumeration)	SM 9223 B-2004 Colilert 18
107.017	001	Enterococci	Enterolert

Field of Accreditation: 108 - Inorganic Constituents in Non-Potable Water

108.009	001	Turbidity	EPA 180.1 (1993 Rev. 2.0)
108.013	001	Calcium	EPA 200.7 (1994 Rev. 4.4)
108.013	002	Magnesium	EPA 200.7 (1994 Rev. 4.4)
108.013	004	Potassium	EPA 200.7 (1994 Rev. 4.4)
108.013	005	Silica, Dissolved	EPA 200.7 (1994 Rev. 4.4)
108.013	006	Sodium	EPA 200.7 (1994 Rev. 4.4)

108.017	001	Bromide	EPA 300.0 (1993 Rev. 2.1)
108.017	002	Chloride	EPA 300.0 (1993 Rev. 2.1)
108.017	003	Fluoride	EPA 300.0 (1993 Rev. 2.1)
108.017	004	Nitrate (as N)	EPA 300.0 (1993 Rev. 2.1)
108.017	005	Nitrate-Nitrite (as N)	EPA 300.0 (1993 Rev. 2.1)
108.017	006	Nitrite (as N)	EPA 300.0 (1993 Rev. 2.1)
108.017	007	Phosphate,Ortho (as P)	EPA 300.0 (1993 Rev. 2.1)
108.017	008	Sulfate (as SO4)	EPA 300.0 (1993 Rev. 2.1)
108.025	001	Ammonia (as N)	EPA 350.1 (1993 Rev. 2.0)
108.029	001	Kjeldahl Nitrogen,Total (as N)	EPA 351.2 (1993 Rev. 2.0)
108.035	001	Phosphate,Ortho (as P)	EPA 365.1 (1993 Rev. 2.0)
108.035	002	Phosphorus,Total	EPA 365.1 (1993 Rev. 2.0)
108.053	002	Oil & Grease, Total Recoverable	EPA 1664 B
108.063	001	Alkalinity	SM 2320 B-2011
108.065	001	Hardness (Calculation)	SM 2340 B-2011
108.069	001	Specific Conductance	SM 2510 B-2011
108.071	001	Residue, Total	SM 2540 B-2011
108.073	001	Residue, Filterable TDS	SM 2540 C-2011
108.075	001	Residue, Non-filterable TSS	SM 2540 D-2011
108.077	001	Residue, Volatile	SM 2540 E-2011
108.079	001	Residue, Settleable	SM 2540 F-2011
108.114	001	Chlorine, Total Residual	SM 4500-Cl G-2011
108.114	002	Chlorine, Free	SM 4500-Cl G-2011
108.137	001	Hydrogen Ion (pH)	SM 4500-H+ B-2011
108.173	001	Oxygen, Dissolved	SM 4500-O G-2011
108.207	001	Biochemical Oxygen Demand	SM 5210 B-2011
108.207	002	Carbonaceous BOD	SM 5210 B-2011
108.213	001	Chemical Oxygen Demand	SM 5220 D-2011
108.217	001	Organic Carbon-Total (TOC)	SM 5310 C-2011
108.321	001	Cyanide, Total	ASTM D7511-12

Field of Accreditation: 109 - Metals and Trace Elements in Non-Potable Water

109.623	006	Boron	EPA 200.7 (1994 Rev. 4.4)
109.623	010	Copper	EPA 200.7 (1994 Rev. 4.4)
109.623	011	Iron	EPA 200.7 (1994 Rev. 4.4)
109.623	013	Manganese	EPA 200.7 (1994 Rev. 4.4)
109.623	022	Zinc	EPA 200.7 (1994 Rev. 4.4)
109.625	001	Aluminum	EPA 200.8 (1994 Rev. 5.4)
109.625	002	Antimony	EPA 200.8 (1994 Rev. 5.4)
109.625	003	Arsenic	EPA 200.8 (1994 Rev. 5.4)
109.625	004	Barium	EPA 200.8 (1994 Rev. 5.4)
109.625	005	Beryllium	EPA 200.8 (1994 Rev. 5.4)
109.625	007	Cadmium	EPA 200.8 (1994 Rev. 5.4)

109.625	008	Chromium	EPA 200.8 (1994 Rev. 5.4)
109.625	009	Cobalt	EPA 200.8 (1994 Rev. 5.4)
109.625	010	Copper	EPA 200.8 (1994 Rev. 5.4)
109.625	012	Iron	EPA 200.8 (1994 Rev. 5.4)
109.625	013	Lead	EPA 200.8 (1994 Rev. 5.4)
109.625	014	Manganese	EPA 200.8 (1994 Rev. 5.4)
109.625	015	Molybdenum	EPA 200.8 (1994 Rev. 5.4)
109.625	016	Nickel	EPA 200.8 (1994 Rev. 5.4)
109.625	017	Selenium	EPA 200.8 (1994 Rev. 5.4)
109.625	018	Silver	EPA 200.8 (1994 Rev. 5.4)
109.625	019	Thallium	EPA 200.8 (1994 Rev. 5.4)
109.625	022	Vanadium	EPA 200.8 (1994 Rev. 5.4)
109.625	023	Zinc	EPA 200.8 (1994 Rev. 5.4)
109.685	002	Chromium VI (Hexavalent Chromium)	SM 3500-Cr B-2011

Field of Accreditation:126 - Microbiological Methods for Ambient Water

126.003	001	Total Coliform (Enumeration)	SM 9221 B,C-2006
126.003	002	Fecal Coliform (Enumeration)	SM 9221 C,E-2006
126.003	003	E. coli (Enumeration)	SM 9221 C,F-2006
126.015	001	E. coli (Enumeration)	SM 9223 B-2004 Colilert
126.017	001	E. coli (Enumeration)	SM 9223 B-2004 Colilert 18
126.019	001	Enterococci	Enterolert

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

Accredited Fields of Testing

Eurofins CEI, Inc.

730 SE Maynard Road

Cary, NC 27511

Phone: (919) 481-1413

Certificate No. 2483 RECIPROCITY

Expiration Date 4/1/2023

***As of 4/22/2022, this list supersedes all previous lists for this certificate number.**

Customers: Please verify the current accreditation standing with the State.

Field of Testing: 103 – Toxic Chemical Elements of Drinking Water

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
103.301	001	Asbestos	EPA 100.2	NY

Field of Testing: 121 – Bulk Asbestos Analysis of Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
121.010	001	Bulk Asbestos	EPA 600/M4-82-020	NY
121.020	001	Bulk Asbestos	EPA 600/R-93-116	NVLAP

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

Eurofins Calscience

Irvine

17461 Derian Avenue

Irvine, CA 92614-5817

Scope of the certificate is limited to the
"Fields of Accreditation"
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of
Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **2706**

Effective Date: **7/1/2020**

Expiration Date: **6/30/2022**

Sacramento, California
subject to forfeiture or revocation

Christine Sotelo, Chief
Environmental Laboratory Accreditation Program

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Fields of Accreditation

Eurofins Calscience
Irvine
17461 Derian Avenue
Irvine, CA 92614-5817
Phone: 9492611022

Certificate Number: **2706**
Expiration Date: **6/30/2022**

Field of Accreditation: 102 - Inorganic Chemistry of Drinking Water

102.015	001	Hydrogen Ion (pH)	EPA 150.1
102.020	001	Turbidity	EPA 180.1
102.026	001	Calcium	EPA 200.7
102.026	002	Magnesium	EPA 200.7
102.026	003	Potassium	EPA 200.7
102.026	004	Silica	EPA 200.7
102.026	005	Sodium	EPA 200.7
102.026	006	Hardness (Calculation)	EPA 200.7
102.030	003	Chloride	EPA 300.0
102.030	005	Fluoride	EPA 300.0
102.030	006	Nitrate (as N)	EPA 300.0
102.030	007	Nitrite (as N)	EPA 300.0
102.030	008	Phosphate,Ortho (as P)	EPA 300.0
102.030	009	Sulfate (as SO4)	EPA 300.0
102.040	001	Bromide	EPA 300.1
102.040	002	Chlorite	EPA 300.1
102.040	003	Chlorate	EPA 300.1
102.040	004	Bromate	EPA 300.1
102.045	001	Perchlorate	EPA 314.0
102.095	001	Turbidity	SM 2130 B-2001
102.100	001	Alkalinity	SM 2320 B-1997
102.120	001	Hardness (Calculation)	SM 2340 B-1997
102.121	001	Hardness	SM 2340 C-1997
102.130	001	Specific Conductance	SM 2510 B-1997
102.140	001	Residue, Filterable TDS	SM 2540 C-1997
102.175	001	Chlorine, Free	SM 4500-Cl G-2000
102.175	002	Chlorine, Total Residual	SM 4500-Cl G-2000
102.190	001	Cyanide, Total	SM 4500-CN E-1999
102.200	001	Fluoride	SM 4500-F C-1997
102.203	001	Hydrogen Ion (pH)	SM 4500-H+ B-2000
102.262	001	Organic Carbon-Total (TOC)	SM 5310 C-2000
102.263	001	Dissolved Organic Carbon (DOC)	SM 5310 C-2000
102.270	001	Surfactants	SM 5540 C-2000

102.564	001	Cyanide, Total	Kelada-01

Field of Accreditation:103 - Toxic Chemical Elements of Drinking Water

103.130	001	Aluminum	EPA 200.7
103.130	003	Barium	EPA 200.7
103.130	004	Beryllium	EPA 200.7
103.130	005	Cadmium	EPA 200.7
103.130	007	Chromium	EPA 200.7
103.130	008	Copper	EPA 200.7
103.130	009	Iron	EPA 200.7
103.130	011	Manganese	EPA 200.7
103.130	012	Nickel	EPA 200.7
103.130	015	Silver	EPA 200.7
103.130	017	Zinc	EPA 200.7
103.130	018	Boron	EPA 200.7
103.140	001	Aluminum	EPA 200.8
103.140	002	Antimony	EPA 200.8
103.140	003	Arsenic	EPA 200.8
103.140	004	Barium	EPA 200.8
103.140	005	Beryllium	EPA 200.8
103.140	006	Cadmium	EPA 200.8
103.140	007	Chromium	EPA 200.8
103.140	008	Copper	EPA 200.8
103.140	009	Lead	EPA 200.8
103.140	010	Manganese	EPA 200.8
103.140	012	Nickel	EPA 200.8
103.140	013	Selenium	EPA 200.8
103.140	014	Silver	EPA 200.8
103.140	015	Thallium	EPA 200.8
103.140	016	Zinc	EPA 200.8
103.140	018	Vanadium	EPA 200.8
103.160	001	Mercury	EPA 245.1
103.310	001	Chromium VI (Hexavalent Chromium)	EPA 218.6
103.311	001	Chromium VI (Hexavalent Chromium)	EPA 218.7

Field of Accreditation:104 - Volatile Organic Chemistry of Drinking Water

104.035	001	1,2,3-Trichloropropane (TCP)	SRL 524M-TCP
104.040	001	Benzene	EPA 524.2
104.040	007	n-Butylbenzene	EPA 524.2
104.040	008	sec-Butylbenzene	EPA 524.2
104.040	009	tert-Butylbenzene	EPA 524.2
104.040	010	Carbon Tetrachloride	EPA 524.2
104.040	011	Chlorobenzene	EPA 524.2
104.040	015	2-Chlorotoluene	EPA 524.2

104.040	016	4-Chlorotoluene	EPA 524.2
104.040	019	1,3-Dichlorobenzene	EPA 524.2
104.040	020	1,2-Dichlorobenzene	EPA 524.2
104.040	021	1,4-Dichlorobenzene	EPA 524.2
104.040	022	Dichlorodifluoromethane	EPA 524.2
104.040	023	1,1-Dichloroethane	EPA 524.2
104.040	024	1,2-Dichloroethane (Ethylene Dichloride)	EPA 524.2
104.040	025	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 524.2
104.040	026	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 524.2
104.040	027	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 524.2
104.040	028	Dichloromethane (Methylene Chloride)	EPA 524.2
104.040	029	1,2-Dichloropropane	EPA 524.2
104.040	033	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 524.2
104.040	034	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 524.2
104.040	035	Ethylbenzene	EPA 524.2
104.040	037	Isopropylbenzene	EPA 524.2
104.040	039	Naphthalene	EPA 524.2
104.040	041	N-propylbenzene	EPA 524.2
104.040	042	Styrene	EPA 524.2
104.040	043	1,1,1,2-Tetrachloroethane	EPA 524.2
104.040	044	1,1,2,2-Tetrachloroethane	EPA 524.2
104.040	045	Tetrachloroethylene (Tetrachloroethene)	EPA 524.2
104.040	046	Toluene	EPA 524.2
104.040	047	1,2,3-Trichlorobenzene	EPA 524.2
104.040	048	1,2,4-Trichlorobenzene	EPA 524.2
104.040	049	1,1,1-Trichloroethane	EPA 524.2
104.040	050	1,1,2-Trichloroethane	EPA 524.2
104.040	051	Trichloroethylene (Trichloroethene)	EPA 524.2
104.040	052	Trichlorofluoromethane	EPA 524.2
104.040	054	1,2,4-Trimethylbenzene	EPA 524.2
104.040	055	1,3,5-Trimethylbenzene	EPA 524.2
104.040	056	Vinyl Chloride	EPA 524.2
104.040	059	o-Xylene	EPA 524.2
104.040	061	Carbon Disulfide	EPA 524.2
104.040	062	Methyl isobutyl ketone (MIBK, 4-Methyl-2-pentanone)	EPA 524.2
104.040	063	m+p-Xylene	EPA 524.2
104.045	001	Bromodichloromethane	EPA 524.2
104.045	002	Bromoform	EPA 524.2
104.045	003	Chloroform	EPA 524.2
104.045	004	Dibromochloromethane (Chlorodibromomethane)	EPA 524.2
104.050	002	Methyl tert-butyl Ether (MTBE)	EPA 524.2
104.050	003	tert-Amyl Methyl Ether (TAME)	EPA 524.2

104.050	004	Ethyl tert-butyl Ether (ETBE)	EPA 524.2
104.050	005	Trichlorotrifluoroethane (Freon 113)	EPA 524.2
104.050	006	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 524.2

Field of Accreditation:106 - Radionuclides in Drinking Water

106.092	001	Uranium	EPA 200.8

Field of Accreditation:108 - Inorganic Constituents in Non-Potable Water

108.001	001	Specific Conductance	EPA 120.1 (1982 Rev.1.0)
108.007	001	Residue, Volatile	EPA 160.4 (1971)
108.009	001	Turbidity	EPA 180.1 (1993 Rev. 2.0)
108.013	001	Calcium	EPA 200.7 (1994 Rev. 4.4)
108.013	002	Magnesium	EPA 200.7 (1994 Rev. 4.4)
108.013	003	Phosphorus,Total	EPA 200.7 (1994 Rev. 4.4)
108.013	004	Potassium	EPA 200.7 (1994 Rev. 4.4)
108.013	005	Silica, Dissolved	EPA 200.7 (1994 Rev. 4.4)
108.013	006	Sodium	EPA 200.7 (1994 Rev. 4.4)
108.017	001	Bromide	EPA 300.0 (1993 Rev. 2.1)
108.017	002	Chloride	EPA 300.0 (1993 Rev. 2.1)
108.017	003	Fluoride	EPA 300.0 (1993 Rev. 2.1)
108.017	004	Nitrate (as N)	EPA 300.0 (1993 Rev. 2.1)
108.017	005	Nitrate-Nitrite (as N)	EPA 300.0 (1993 Rev. 2.1)
108.017	006	Nitrite (as N)	EPA 300.0 (1993 Rev. 2.1)
108.017	007	Phosphate,Ortho (as P)	EPA 300.0 (1993 Rev. 2.1)
108.017	008	Sulfate (as SO4)	EPA 300.0 (1993 Rev. 2.1)
108.025	001	Ammonia (as N)	EPA 350.1 (1993 Rev. 2.0)
108.029	001	Kjeldahl Nitrogen,Total (as N)	EPA 351.2 (1993 Rev. 2.0)
108.037	001	Phosphate,Ortho (as P)	EPA 365.3 (1978)
108.037	002	Phosphorus,Total	EPA 365.3 (1978)
108.045	001	Chemical Oxygen Demand	EPA 410.4 (1993 Rev. 2.0)
108.053	001	Oil & Grease Total	EPA 1664 A
108.053	002	Oil & Grease Total	EPA 1664 B
108.055	001	Color	SM 2120 B-2011
108.059	001	Turbidity	SM 2130 B-2011
108.061	001	Acidity	SM 2310 B-2011
108.063	001	Alkalinity	SM 2320 B-2011
108.065	001	Hardness (Calculation)	SM 2340 B-2011
108.067	001	Hardness	SM 2340 C-2011
108.069	001	Specific Conductance	SM 2510 B-2011
108.071	001	Residue, Total	SM 2540 B-2011
108.073	001	Residue, Filterable TDS	SM 2540 C-2011
108.075	001	Residue, Non-filterable TSS	SM 2540 D-2011
108.077	001	Residue, Volatile	SM 2540 E-2011
108.079	001	Residue, Settleable	SM 2540 F-2011

108.114	001	Chlorine, Total Residual	SM 4500-Cl G-2011
108.114	002	Chlorine, Free	SM 4500-Cl G-2011
108.125	001	Cyanide, Total	SM 4500-CN E-2011
108.129	001	Cyanide, Available	SM 4500-CN G-2011
108.131	001	Fluoride	SM 4500-F C-2011
108.137	001	Hydrogen Ion (pH)	SM 4500-H+ B-2011
108.140	001	Ammonia (as N)	SM 4500-NH3 D-2011
108.147	001	Ammonia (as N)	SM 4500-NH3 G-2011
108.173	001	Oxygen, Dissolved	SM 4500-O G-2011
108.201	001	Sulfide (as S)	SM 4500-S D-2011
108.207	001	Biochemical Oxygen Demand	SM 5210 B-2011
108.207	002	Carbonaceous BOD	SM 5210 B-2011
108.213	001	Chemical Oxygen Demand	SM 5220 D-2011
108.215	001	Organic Carbon-Total (TOC)	SM 5310 B-2011
108.225	001	Surfactants	SM 5540 C-2011
108.335	001	Cyanide, Total	Kelada-01

Field of Accreditation:109 - Metals and Trace Elements in Non-Potable Water

109.623	001	Aluminum	EPA 200.7 (1994 Rev. 4.4)
109.623	002	Antimony	EPA 200.7 (1994 Rev. 4.4)
109.623	003	Arsenic	EPA 200.7 (1994 Rev. 4.4)
109.623	004	Barium	EPA 200.7 (1994 Rev. 4.4)
109.623	005	Beryllium	EPA 200.7 (1994 Rev. 4.4)
109.623	006	Boron	EPA 200.7 (1994 Rev. 4.4)
109.623	007	Cadmium	EPA 200.7 (1994 Rev. 4.4)
109.623	008	Chromium	EPA 200.7 (1994 Rev. 4.4)
109.623	009	Cobalt	EPA 200.7 (1994 Rev. 4.4)
109.623	010	Copper	EPA 200.7 (1994 Rev. 4.4)
109.623	011	Iron	EPA 200.7 (1994 Rev. 4.4)
109.623	012	Lead	EPA 200.7 (1994 Rev. 4.4)
109.623	013	Manganese	EPA 200.7 (1994 Rev. 4.4)
109.623	014	Molybdenum	EPA 200.7 (1994 Rev. 4.4)
109.623	015	Nickel	EPA 200.7 (1994 Rev. 4.4)
109.623	016	Selenium	EPA 200.7 (1994 Rev. 4.4)
109.623	017	Silver	EPA 200.7 (1994 Rev. 4.4)
109.623	018	Thallium	EPA 200.7 (1994 Rev. 4.4)
109.623	019	Tin	EPA 200.7 (1994 Rev. 4.4)
109.623	020	Titanium	EPA 200.7 (1994 Rev. 4.4)
109.623	021	Vanadium	EPA 200.7 (1994 Rev. 4.4)
109.623	022	Zinc	EPA 200.7 (1994 Rev. 4.4)
109.625	001	Aluminum	EPA 200.8 (1994 Rev. 5.4)
109.625	002	Antimony	EPA 200.8 (1994 Rev. 5.4)
109.625	003	Arsenic	EPA 200.8 (1994 Rev. 5.4)

109.625	004	Barium	EPA 200.8 (1994 Rev. 5.4)
109.625	005	Beryllium	EPA 200.8 (1994 Rev. 5.4)
109.625	007	Cadmium	EPA 200.8 (1994 Rev. 5.4)
109.625	008	Chromium	EPA 200.8 (1994 Rev. 5.4)
109.625	009	Cobalt	EPA 200.8 (1994 Rev. 5.4)
109.625	010	Copper	EPA 200.8 (1994 Rev. 5.4)
109.625	012	Iron	EPA 200.8 (1994 Rev. 5.4)
109.625	013	Lead	EPA 200.8 (1994 Rev. 5.4)
109.625	014	Manganese	EPA 200.8 (1994 Rev. 5.4)
109.625	015	Molybdenum	EPA 200.8 (1994 Rev. 5.4)
109.625	016	Nickel	EPA 200.8 (1994 Rev. 5.4)
109.625	017	Selenium	EPA 200.8 (1994 Rev. 5.4)
109.625	018	Silver	EPA 200.8 (1994 Rev. 5.4)
109.625	019	Thallium	EPA 200.8 (1994 Rev. 5.4)
109.625	020	Tin	EPA 200.8 (1994 Rev. 5.4)
109.625	022	Vanadium	EPA 200.8 (1994 Rev. 5.4)
109.625	023	Zinc	EPA 200.8 (1994 Rev. 5.4)
109.629	001	Chromium VI (Hexavalent Chromium)	EPA 218.6 (1994 Rev. 3.3)
109.635	001	Mercury	EPA 245.1 (1994 Rev. 3.0)
109.685	002	Chromium VI (Hexavalent Chromium)	SM 3500-Cr B-2011

Field of Accreditation:110 - Volatile Organic Constituents in Non-Potable Water

110.040	001	Acetone	EPA 624.1
110.040	002	Acetonitrile	EPA 624.1
110.040	003	Acrolein	EPA 624.1
110.040	004	Acrylonitrile	EPA 624.1
110.040	005	Benzene	EPA 624.1
110.040	006	Bromodichloromethane	EPA 624.1
110.040	007	Bromoform	EPA 624.1
110.040	008	Bromomethane (Methyl Bromide)	EPA 624.1
110.040	009	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 624.1
110.040	010	Carbon Tetrachloride	EPA 624.1
110.040	011	Chlorobenzene	EPA 624.1
110.040	012	Chloroethane	EPA 624.1
110.040	013	2-Chloroethyl vinyl Ether	EPA 624.1
110.040	014	Chloroform	EPA 624.1
110.040	015	Chloromethane (Methyl Chloride)	EPA 624.1
110.040	016	Dibromochloromethane (Chlorodibromomethane)	EPA 624.1
110.040	017	1,2-Dichlorobenzene	EPA 624.1
110.040	018	1,3-Dichlorobenzene	EPA 624.1
110.040	019	1,4-Dichlorobenzene	EPA 624.1
110.040	020	1,1-Dichloroethane	EPA 624.1
110.040	021	1,2-Dichloroethane (Ethylene Dichloride)	EPA 624.1

110.040	022	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 624.1
110.040	023	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 624.1
110.040	024	1,2-Dichloropropane	EPA 624.1
110.040	025	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 624.1
110.040	026	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 624.1
110.040	029	Ethylbenzene	EPA 624.1
110.040	031	Methylene Chloride (Dichloromethane)	EPA 624.1
110.040	032	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 624.1
110.040	034	1,1,2,2-Tetrachloroethane	EPA 624.1
110.040	035	Tetrachloroethylene (Tetrachloroethene)	EPA 624.1
110.040	037	Toluene	EPA 624.1
110.040	038	1,1,1-Trichloroethane	EPA 624.1
110.040	039	1,1,2-Trichloroethane	EPA 624.1
110.040	040	Trichloroethylene (Trichloroethene)	EPA 624.1
110.040	041	Vinyl Chloride	EPA 624.1
110.040	043	o-Xylene	EPA 624.1
110.040	045	Trichlorofluoromethane	EPA 624.1
110.040	046	m+p-Xylene	EPA 624.1
110.040	047	2-Butanone (MEK)	EPA 624.1

Field of Accreditation:111 - Semi-volatile Organic Constituents in Non-Potable Water

111.055	001	Aldrin	EPA 608.3
111.055	002	alpha-BHC	EPA 608.3
111.055	003	beta-BHC	EPA 608.3
111.055	004	delta-BHC	EPA 608.3
111.055	005	gamma-BHC (Lindane)	EPA 608.3
111.055	006	Chlordane	EPA 608.3
111.055	007	4,4'-DDD	EPA 608.3
111.055	008	4,4'-DDE	EPA 608.3
111.055	009	4,4'-DDT	EPA 608.3
111.055	010	Dieldrin	EPA 608.3
111.055	011	Endosulfan I	EPA 608.3
111.055	012	Endosulfan II	EPA 608.3
111.055	013	Endosulfan Sulfate	EPA 608.3
111.055	014	Endrin	EPA 608.3
111.055	015	Endrin Aldehyde	EPA 608.3
111.055	016	Heptachlor	EPA 608.3
111.055	017	Heptachlor Epoxide	EPA 608.3
111.055	019	PCB-1016 (Aroclor-1016)	EPA 608.3
111.055	020	PCB-1221 (Aroclor-1221)	EPA 608.3
111.055	021	PCB-1232 (Aroclor-1232)	EPA 608.3
111.055	022	PCB-1242 (Aroclor-1242)	EPA 608.3
111.055	023	PCB-1248 (Aroclor-1248)	EPA 608.3

111.055	024	PCB-1254 (Aroclor-1254)	EPA 608.3
111.055	025	PCB-1260 (Aroclor-1260)	EPA 608.3
111.055	046	Methoxychlor	EPA 608.3
111.055	060	Toxaphene	EPA 608.3
111.160	001	Acenaphthene	EPA 625.1
111.160	002	Acenaphthylene	EPA 625.1
111.160	003	Anthracene	EPA 625.1
111.160	004	Benzidine	EPA 625.1
111.160	005	Benzo(a)anthracene	EPA 625.1
111.160	006	Benzo(a)pyrene	EPA 625.1
111.160	007	Benzo(b)fluoranthene	EPA 625.1
111.160	008	Benzo(g,h,i)perylene	EPA 625.1
111.160	009	Benzo(k)fluoranthene	EPA 625.1
111.160	010	Bis(2-chloroethoxy) Methane	EPA 625.1
111.160	011	Bis(2-chloroethyl) Ether	EPA 625.1
111.160	012	bis(2-Chloroisopropyl) ether (2,2'-Oxybis[1-chloropro	EPA 625.1
111.160	013	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 625.1
111.160	014	4-Bromophenyl Phenyl Ether	EPA 625.1
111.160	015	Butyl Benzyl Phthalate	EPA 625.1
111.160	016	2-Chloronaphthalene	EPA 625.1
111.160	017	4-Chlorophenyl Phenyl Ether	EPA 625.1
111.160	018	Chrysene	EPA 625.1
111.160	019	Dibenz(a,h)anthracene	EPA 625.1
111.160	020	3,3'-Dichlorobenzidine	EPA 625.1
111.160	021	Diethyl Phthalate	EPA 625.1
111.160	022	Dimethyl Phthalate	EPA 625.1
111.160	023	Di-n-butyl Phthalate	EPA 625.1
111.160	024	2,4-Dinitrotoluene	EPA 625.1
111.160	025	2,6-Dinitrotoluene	EPA 625.1
111.160	026	Di-n-octyl Phthalate	EPA 625.1
111.160	027	Fluoranthene	EPA 625.1
111.160	028	Fluorene	EPA 625.1
111.160	029	Hexachlorobenzene	EPA 625.1
111.160	030	Hexachlorobutadiene	EPA 625.1
111.160	031	Hexachloroethane	EPA 625.1
111.160	032	Indeno(1,2,3-c,d)pyrene	EPA 625.1
111.160	033	Isophorone	EPA 625.1
111.160	034	Naphthalene	EPA 625.1
111.160	035	Nitrobenzene	EPA 625.1
111.160	036	N-nitroso-di-n-propylamine	EPA 625.1
111.160	037	Phenanthrene	EPA 625.1
111.160	038	Pyrene	EPA 625.1

111.160	039	1,2,4-Trichlorobenzene	EPA 625.1
111.160	040	4-Chloro-3-methylphenol	EPA 625.1
111.160	041	2-Chlorophenol	EPA 625.1
111.160	042	2,4-Dichlorophenol	EPA 625.1
111.160	043	2,4-Dimethylphenol	EPA 625.1
111.160	044	2,4-Dinitrophenol	EPA 625.1
111.160	045	2-Methyl-4,6-dinitrophenol	EPA 625.1
111.160	046	2-Nitrophenol	EPA 625.1
111.160	047	4-Nitrophenol	EPA 625.1
111.160	048	Pentachlorophenol	EPA 625.1
111.160	049	Phenol	EPA 625.1
111.160	050	2,4,6-Trichlorophenol	EPA 625.1
111.160	098	Hexachlorocyclopentadiene	EPA 625.1
111.160	108	N-nitrosodimethylamine	EPA 625.1
111.160	110	N-nitrosodiphenylamine	EPA 625.1
111.160	141	o-Cresol	EPA 625.1
111.160	145	Pyridine	EPA 625.1
111.260	041	N-nitrosodimethylamine	EPA 1625 B

Field of Accreditation:114 - Inorganic Constituents in Hazardous Waste

114.010	001	Antimony	EPA 6010 B
114.010	002	Arsenic	EPA 6010 B
114.010	003	Barium	EPA 6010 B
114.010	004	Beryllium	EPA 6010 B
114.010	005	Cadmium	EPA 6010 B
114.010	006	Chromium	EPA 6010 B
114.010	007	Cobalt	EPA 6010 B
114.010	008	Copper	EPA 6010 B
114.010	009	Lead	EPA 6010 B
114.010	010	Molybdenum	EPA 6010 B
114.010	011	Nickel	EPA 6010 B
114.010	012	Selenium	EPA 6010 B
114.010	013	Silver	EPA 6010 B
114.010	014	Thallium	EPA 6010 B
114.010	015	Vanadium	EPA 6010 B
114.010	016	Zinc	EPA 6010 B
114.020	001	Antimony	EPA 6020
114.020	002	Arsenic	EPA 6020
114.020	003	Barium	EPA 6020
114.020	004	Beryllium	EPA 6020
114.020	005	Cadmium	EPA 6020
114.020	006	Chromium	EPA 6020
114.020	007	Cobalt	EPA 6020

114.020	008	Copper	EPA 6020
114.020	009	Lead	EPA 6020
114.020	010	Molybdenum	EPA 6020
114.020	011	Nickel	EPA 6020
114.020	012	Selenium	EPA 6020
114.020	013	Silver	EPA 6020
114.020	014	Thallium	EPA 6020
114.020	015	Vanadium	EPA 6020
114.020	016	Zinc	EPA 6020
114.103	001	Chromium VI (Hexavalent Chromium)	EPA 7196 A
114.106	001	Chromium VI (Hexavalent Chromium)	EPA 7199
114.140	001	Mercury	EPA 7470 A
114.141	001	Mercury	EPA 7471 A
114.222	001	Cyanide, Total	EPA 9014
114.230	001	Sulfides	EPA 9034
114.240	001	Corrosivity - pH Determination	EPA 9040 B
114.241	001	Corrosivity - pH Determination	EPA 9045 C
114.250	001	Fluoride	EPA 9056
114.270	001	Fluoride	EPA 9214

Field of Accreditation:115 - Leaching/Extraction Tests and Physical Characteristics of Hazardous Waste

115.020	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311
115.021	001	TCLP Inorganics	EPA 1311
115.022	001	TCLP Extractables	EPA 1311
115.023	001	TCLP Volatiles	EPA 1311
115.030	001	Waste Extraction Test (WET)	CCR Chapter11, Article 5, Appendix II
115.040	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312

Field of Accreditation:116 - Volatile Organic Compounds in Hazardous Waste

116.030	001	Gasoline Range Organics (GRO)	EPA 8015 B
116.080	000	Volatile Organic Compounds	EPA 8260 B
116.080	120	Oxygenates	EPA 8260 B
116.100	001	Total Petroleum Hydrocarbons - Gasoline (GRO)	LUFT GC/MS
116.110	001	Total Petroleum Hydrocarbons - Gasoline (GRO)	LUFT

Field of Accreditation:117 - Semi-volatile Organic Chemistry of Hazardous Waste

117.010	001	Diesel Range Organics (DRO)	EPA 8015 B
117.110	000	Extractable Organics	EPA 8270 C
117.150	000	Carbonyl Compounds	EPA 8315 A
117.210	000	Organochlorine Pesticides	EPA 8081 A
117.220	000	PCBs	EPA 8082

Field of Accreditation:120 - Physical Properties of Hazardous Waste

120.010	001	Ignitability	EPA 1010
120.020	001	Ignitability	EPA 1020 A
120.070	001	Corrosivity - pH Determination	EPA 9040 B

120.080	001	Corrosivity - pH Determination	EPA 9045 C

May 20, 2021

Elizabeth Winger
Eurofins Calscience
17461 Derian Avenue, Suite 100
Irvine, CA 92614-5817

Dear Elizabeth Winger: Certificate No. 2706

Congratulations! This notice advises that the laboratory named above has been accredited as an environmental testing laboratory pursuant to the provisions of the California Health and Safety Code (HSC) Sections 100825-100920. The analyses for which this laboratory is accredited are shown on the enclosed "Fields of Accreditation" List.

The laboratory's accreditation begins on the date printed on the enclosed certificate. If you did not submit your application by the renewal deadline, there may be a lapse in your accreditation. You are responsible for ensuring no data is submitted for regulatory purposes during a period the laboratory is not accredited.

Be advised, the laboratory may have been denied accreditation for one or more analyses for which it applied due to failure to comply with regulatory requirements for application or accreditation. It is the laboratory's responsibility to review the enclosed documents and know which methods it has been accredited for. This accreditation is a final action of the State Water Resources Control Board subject to petition under HSC Section 116701 within 30 days. However, if you believe that an FOA has been left off of your accreditation in error, before you file a petition you may submit to ELAP within 30 days of this letter, an "Accreditation Inquiry Request Form" located at www.waterboards.ca.gov/elap identifying any mistakes or errors you believe occurred in your accreditation. ELAP will then review all timely submitted "Accreditation Inquiry Request Forms" and will make a final determination, which could then be petitioned to the State Water Resources Control Board. **Failure to submit an "Accreditation Inquiry Request Form" to ELAP within 30 days of this letter or to timely petition ELAP's final decision to the State Water Resources Control Board will prohibit you from obtaining any further review of your accreditation.** HSC Section 100890 lists the civil penalties for environmental laboratories that perform analyses for state regulatory purposes without a valid certificate.

Continued accreditation is contingent upon compliance with HSC Sections 100825-100920 and California Code of Regulations, Title 22, Division 4, Chapter 19, Certification of Environmental Laboratories. ELAP reserves the right to take enforcement action, including issuance of civil penalties, or supension and revocation of the laboratory's ELAP certificate, for failure to comply with all applicable regulations, statutes and orders.

Thank you,



Christine Sotelo, Chief
California Environmental Laboratory Accreditation Program (CA ELAP)

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

Accredited Fields of Testing

Eurofins Lancaster Laboratories Environment Testing, LLC

2425 New Holland Pike

Lancaster, PA 17601

Phone: (717) 656-2300

Certificate No. **2792** **RECIPROCITY**

Expiration Date **11/30/2022**

***As of 9/1/2021, this list supersedes all previous lists for this certificate number.**

Customers: Please verify the current accreditation standing with the State.

Field of Testing: 102 – Inorganic Chemistry of Drinking Water

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
102.020	001	Turbidity	EPA 180.1	PA
102.026	001	Calcium	EPA 200.7	PA
102.026	002	Magnesium	EPA 200.7	PA
102.026	003	Potassium	EPA 200.7	PA
102.026	005	Sodium	EPA 200.7	PA
102.030	003	Chloride	EPA 300.0	PA
102.030	005	Fluoride	EPA 300.0	PA
102.030	006	Nitrate (as N)	EPA 300.0	PA
102.030	007	Nitrite (as N)	EPA 300.0	PA
102.030	009	Sulfate (as SO4)	EPA 300.0	PA
102.050	001	Cyanide, Total	EPA 335.4	PA
102.060	001	Nitrate (as N) (Calculation)	EPA 353.2	PA
102.061	001	Nitrite (as N)	EPA 353.2	PA
102.095	001	Turbidity	SM 2130 B-2001	PA
102.100	001	Alkalinity	SM 2320 B-1997	PA
102.121	001	Hardness	SM 2340 C-1997	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
102.130	001	Specific Conductance	SM 2510 B-1997	PA
102.140	001	Residue, Filterable TDS	SM 2540 C-1997	PA
102.174	002	Chlorine, Total Residual	SM 4500-Cl F-2000	PA
102.200	001	Fluoride	SM 4500-F C-1997	PA
102.203	001	Hydrogen Ion (pH)	SM 4500-H+ B-2000	PA
102.240	001	Phosphate,Ortho (as P)	SM 4500-P E-1999	PA
102.242	001	Silica	SM 4500-SiO2 C-1997	PA
102.262	001	Organic Carbon-Total (TOC)	SM 5310 C-2000	PA
102.270	001	Surfactants	SM 5540 C-2000	PA

Field of Testing: 103 – Toxic Chemical Elements of Drinking Water

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
103.130	003	Barium	EPA 200.7	PA
103.130	007	Chromium	EPA 200.7	PA
103.130	008	Copper	EPA 200.7	PA
103.130	009	Iron	EPA 200.7	PA
103.130	011	Manganese	EPA 200.7	PA
103.130	012	Nickel	EPA 200.7	PA
103.130	015	Silver	EPA 200.7	PA
103.130	017	Zinc	EPA 200.7	PA
103.140	001	Aluminum	EPA 200.8	PA
103.140	002	Antimony	EPA 200.8	PA
103.140	003	Arsenic	EPA 200.8	PA
103.140	004	Barium	EPA 200.8	PA
103.140	005	Beryllium	EPA 200.8	PA
103.140	006	Cadmium	EPA 200.8	PA
103.140	007	Chromium	EPA 200.8	PA
103.140	008	Copper	EPA 200.8	PA
103.140	009	Lead	EPA 200.8	PA
103.140	010	Manganese	EPA 200.8	PA
103.140	012	Nickel	EPA 200.8	PA
103.140	013	Selenium	EPA 200.8	PA
103.140	015	Thallium	EPA 200.8	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
103.140	016	Zinc	EPA 200.8	PA
103.140	019	Strontium	EPA 200.8	PA
103.160	001	Mercury	EPA 245.1	PA

Field of Testing: 104 – Volatile Organic Chemistry of Drinking Water

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
104.200	001	1,1,1,2-Tetrachloroethane	EPA 524.2	PA
104.200	002	1,1,1-Trichloroethane	EPA 524.2	PA
104.200	003	1,1,2,2-Tetrachloroethane	EPA 524.2	PA
104.200	004	1,1,2-Trichloroethane	EPA 524.2	PA
104.200	005	1,1-Dichloroethane	EPA 524.2	PA
104.200	006	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 524.2	PA
104.200	007	1,2,3-Trichlorobenzene	EPA 524.2	PA
104.200	008	1,2,4-Trichlorobenzene	EPA 524.2	PA
104.200	009	1,2,4-Trimethylbenzene	EPA 524.2	PA
104.200	010	1,2-Dichlorobenzene	EPA 524.2	PA
104.200	011	1,2-Dichloroethane (Ethylene Dichloride)	EPA 524.2	PA
104.200	012	1,2-Dichloropropane	EPA 524.2	PA
104.200	013	1,3,5-Trimethylbenzene	EPA 524.2	PA
104.200	014	1,3-Dichlorobenzene	EPA 524.2	PA
104.200	015	1,4-Dichlorobenzene	EPA 524.2	PA
104.200	016	2-Chlorotoluene	EPA 524.2	PA
104.200	017	4-Chlorotoluene	EPA 524.2	PA
104.200	018	Benzene	EPA 524.2	PA
104.200	019	Carbon Disulfide	EPA 524.2	PA
104.200	020	Carbon Tetrachloride	EPA 524.2	PA
104.200	021	Chlorobenzene	EPA 524.2	PA
104.200	022	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 524.2	PA
104.200	023	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 524.2	PA
104.200	024	Dichlorodifluoromethane	EPA 524.2	PA
104.200	025	Dichloromethane (Methylene Chloride)	EPA 524.2	PA
104.200	027	Ethyl tert-butyl Ether (ETBE)	EPA 524.2	PA
104.200	028	Ethylbenzene	EPA 524.2	PA
104.200	029	Isopropylbenzene	EPA 524.2	PA
104.200	030	Methyl isobutyl ketone (MIBK, 4-Methyl-2-pentanone)	EPA 524.2	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
104.200	031	Methyl tert-butyl Ether (MTBE)	EPA 524.2	PA
104.200	032	Naphthalene	EPA 524.2	PA
104.200	033	n-Butylbenzene	EPA 524.2	PA
104.200	034	N-propylbenzene	EPA 524.2	PA
104.200	035	sec-Butylbenzene	EPA 524.2	PA
104.200	036	Styrene	EPA 524.2	PA
104.200	037	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 524.2	PA
104.200	038	tert-Amyl Methyl Ether (TAME)	EPA 524.2	PA
104.200	039	tert-Butylbenzene	EPA 524.2	PA
104.200	040	Tetrachloroethylene (Tetrachloroethene)	EPA 524.2	PA
104.200	041	Toluene	EPA 524.2	PA
104.200	042	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 524.2	PA
104.200	043	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 524.2	PA
104.200	044	Trichloroethylene (Trichloroethene)	EPA 524.2	PA
104.200	045	Trichlorofluoromethane	EPA 524.2	PA
104.200	047	Vinyl Chloride	EPA 524.2	PA
104.200	102	m+p-Xylene	EPA 524.2	PA
104.200	103	o-Xylene	EPA 524.2	PA
104.200	201	Bromodichloromethane	EPA 524.2	PA
104.200	202	Bromoform	EPA 524.2	PA
104.200	203	Chloroform	EPA 524.2	PA
104.200	204	Dibromochloromethane (Chlorodibromomethane)	EPA 524.2	PA

Field of Testing: 105 – Semi-volatile Organic Chemistry of Drinking Water

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
105.100	001	Aldicarb (Temik)	EPA 531.1	PA
105.100	002	Aldicarb Sulfone	EPA 531.1	PA
105.100	003	Aldicarb Sulfoxide	EPA 531.1	PA
105.100	004	Carbaryl (Sevin)	EPA 531.1	PA
105.100	005	Carbofuran (Furadan)	EPA 531.1	PA
105.100	006	3-Hydroxycarbofuran	EPA 531.1	PA
105.100	007	Methomyl (Lannate)	EPA 531.1	PA
105.100	008	Oxamyl	EPA 531.1	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
105.103	001	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	EPA 533	PA
105.103	002	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	EPA 533	PA
105.103	003	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	EPA 533	PA
105.103	004	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	EPA 533	PA
105.103	005	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	EPA 533	PA
105.103	006	Perfluorobutanoic Acid (PFBA)	EPA 533	PA
105.103	007	Perfluorobutane Sulfonic Acid (PFBS)	EPA 533	PA
105.103	008	1H,1H, 2H, 2H-Perfluorodecane sulfonic acid (8:2FTS)	EPA 533	PA
105.103	009	Perfluorodecanoic Acid (PFDA)	EPA 533	PA
105.103	010	Perfluorododecanoic Acid (PFDoA)	EPA 533	PA
105.103	011	Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	EPA 533	PA
105.103	012	Perfluoroheptane Sulfonic Acid (PFHpS)	EPA 533	PA
105.103	013	Perfluoroheptanoic Acid (PFHpA)	EPA 533	PA
105.103	014	1H,1H, 2H, 2H-Perfluorohexane sulfonic acid (4:2FTS)	EPA 533	PA
105.103	015	Perfluorohexane Sulfonic Acid (PFHxS)	EPA 533	PA
105.103	016	Perfluorohexanoic Acid (PFHxA)	EPA 533	PA
105.103	017	Perfluoro-3-methoxypropanoic acid (PFMPA)	EPA 533	PA
105.103	018	Perfluoro-4-methoxybutanoic acid (PFMBA)	EPA 533	PA
105.103	019	Perfluorononanoic Acid (PFNA)	EPA 533	PA
105.103	020	1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2FTS)	EPA 533	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
105.103	021	Perfluorooctane Sulfonic Acid (PFOS)	EPA 533	PA
105.103	022	Perfluorooctanoic Acid (PFOA)	EPA 533	PA
105.103	023	Perfluoropentanoic Acid (PFPeA)	EPA 533	PA
105.103	024	Perfluoropentane Sulfonic Acid (PFPeS)	EPA 533	PA
105.103	025	Perfluoroundecanoic Acid (PFUnDA)	EPA 533	PA
105.106	001	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	EPA 537.1	PA
105.106	002	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	EPA 537.1	PA
105.106	003	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	EPA 537.1	PA
105.106	004	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	EPA 537.1	PA
105.106	005	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	EPA 537.1	PA
105.106	006	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	EPA 537.1	PA
105.106	007	Perfluorobutane Sulfonic Acid (PFBS)	EPA 537.1	PA
105.106	008	Perfluorodecanoic Acid (PFDA)	EPA 537.1	PA
105.106	009	Perfluorododecanoic Acid (PFDoA)	EPA 537.1	PA
105.106	010	Perfluoroheptanoic Acid (PFHpA)	EPA 537.1	PA
105.106	011	Perfluorohexane Sulfonic Acid (PFHxS)	EPA 537.1	PA
105.106	012	Perfluorohexanoic Acid (PFHxA)	EPA 537.1	PA
105.106	013	Perfluorononanoic Acid (PFNA)	EPA 537.1	PA
105.106	014	Perfluorooctanoic Acid (PFOA)	EPA 537.1	PA
105.106	015	Perfluorooctane Sulfonic Acid (PFOS)	EPA 537.1	PA
105.106	016	Perfluorotetradecanoic Acid (PFTDA)	EPA 537.1	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
105.106	017	Perfluorotridecanoic Acid (PFTrDA)	EPA 537.1	PA
105.106	018	Perfluoroundecanoic Acid (PFUnDA)	EPA 537.1	PA
105.230	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 1613 B	PA

Field of Testing: 108 – Inorganic Constituents in Non-Potable Water

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
108.009	001	Turbidity	EPA 180.1	PA
108.013	001	Calcium	EPA 200.7	PA
108.013	002	Magnesium	EPA 200.7	PA
108.013	004	Potassium	EPA 200.7	PA
108.013	006	Sodium	EPA 200.7	PA
108.015	001	Calcium	EPA 200.8	PA
108.015	002	Magnesium	EPA 200.8	PA
108.015	003	Potassium	EPA 200.8	PA
108.015	005	Sodium	EPA 200.8	PA
108.017	001	Bromide	EPA 300.0	PA
108.017	002	Chloride	EPA 300.0	PA
108.017	003	Fluoride	EPA 300.0	PA
108.017	004	Nitrate (as N)	EPA 300.0	PA
108.017	006	Nitrite (as N)	EPA 300.0	PA
108.017	008	Sulfate (as SO4)	EPA 300.0	PA
108.023	001	Cyanide, Total	EPA 335.4	PA
108.025	001	Ammonia (as N)	EPA 350.1	PA
108.029	001	Kjeldahl Nitrogen,Total (as N)	EPA 351.2	PA
108.033	001	Nitrate-Nitrite (as N)	EPA 353.2	PA
108.033	002	Nitrite (as N)	EPA 353.2	PA
108.035	002	Phosphorus,Total	EPA 365.1	PA
108.037	001	Phosphate,Ortho (as P)	EPA 365.3	PA
108.045	001	Chemical Oxygen Demand	EPA 410.4	PA
108.049	001	Phenols, Total	EPA 420.4	PA
108.053	002	Oil & Grease, Total Recoverable	EPA 1664 B	PA
108.055	001	Color	SM 2120 B-2011	PA
108.061	001	Acidity	SM 2310 B-2011	PA
108.063	001	Alkalinity	SM 2320 B-2011	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
108.067	001	Hardness	SM 2340 C-2011	PA
108.069	001	Specific Conductance	SM 2510 B-2011	PA
108.071	001	Residue, Total	SM 2540 B-2011	PA
108.073	001	Residue, Filterable TDS	SM 2540 C-2011	PA
108.075	001	Residue, Non-filterable TSS	SM 2540 D-2011	PA
108.079	001	Residue, Settleable	SM 2540 F-2011	PA
108.080	001	Temperature	SM 2550 B-2010	PA
108.109	001	Chlorine, Total Residual	SM 4500-Cl F-2011	PA
108.117	001	Chloride	SM 4500-Chloride C-2011	PA
108.131	001	Fluoride	SM 4500-F C-2011	PA
108.137	001	Hydrogen Ion (pH)	SM 4500-H+ B-2011	PA
108.139	001	Ammonia (as N)	SM 4500-NH3 C-2011	PA
108.140	001	Ammonia (as N)	SM 4500-NH3 D-2011	PA
108.175	001	Phosphate,Ortho (as P)	SM 4500-P E-2011	PA
108.177	002	Phosphorus,Total	SM 4500-P F-2011	PA
108.184	001	Silica, Dissolved	SM 4500-SiO2 C-2011	PA
108.189	001	Sulfite (as SO3)	SM 4500-SO3 B-2011	PA
108.201	001	Sulfide (as S)	SM 4500-S D-2011	PA
108.203	001	Sulfide (as S)	SM 4500-S F-2011	PA
108.207	001	Biochemical Oxygen Demand	SM 5210 B-2011	PA
108.207	002	Carbonaceous BOD	SM 5210 B-2011	PA
108.217	001	Organic Carbon-Total (TOC)	SM 5310 C-2011	PA
108.225	001	Surfactants	SM 5540 C-2011	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
108.321	001	Cyanide, Total	ASTM D7511-12	PA
108.333	001	Oxygen, Dissolved	Hach 10360	PA
108.339	001	Cyanide, Available	OIA-1677-09	PA
108.339	002	Cyanide, Free	OIA-1677-09	PA

Field of Testing: 109 – Metals and Trace Elements in Non-Potable Water

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
109.623	001	Aluminum	EPA 200.7	PA
109.623	002	Antimony	EPA 200.7	PA
109.623	003	Arsenic	EPA 200.7	PA
109.623	004	Barium	EPA 200.7	PA
109.623	005	Beryllium	EPA 200.7	PA
109.623	006	Boron	EPA 200.7	PA
109.623	007	Cadmium	EPA 200.7	PA
109.623	008	Chromium	EPA 200.7	PA
109.623	009	Cobalt	EPA 200.7	PA
109.623	010	Copper	EPA 200.7	PA
109.623	011	Iron	EPA 200.7	PA
109.623	012	Lead	EPA 200.7	PA
109.623	013	Manganese	EPA 200.7	PA
109.623	014	Molybdenum	EPA 200.7	PA
109.623	015	Nickel	EPA 200.7	PA
109.623	016	Selenium	EPA 200.7	PA
109.623	017	Silver	EPA 200.7	PA
109.623	018	Thallium	EPA 200.7	PA
109.623	019	Tin	EPA 200.7	PA
109.623	020	Titanium	EPA 200.7	PA
109.623	021	Vanadium	EPA 200.7	PA
109.623	022	Zinc	EPA 200.7	PA
109.625	001	Aluminum	EPA 200.8	PA
109.625	002	Antimony	EPA 200.8	PA
109.625	003	Arsenic	EPA 200.8	PA
109.625	004	Barium	EPA 200.8	PA
109.625	005	Beryllium	EPA 200.8	PA
109.625	007	Cadmium	EPA 200.8	PA
109.625	008	Chromium	EPA 200.8	PA
109.625	009	Cobalt	EPA 200.8	PA
109.625	010	Copper	EPA 200.8	PA
109.625	012	Iron	EPA 200.8	PA
109.625	013	Lead	EPA 200.8	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
109.625	014	Manganese	EPA 200.8	PA
109.625	015	Molybdenum	EPA 200.8	PA
109.625	016	Nickel	EPA 200.8	PA
109.625	017	Selenium	EPA 200.8	PA
109.625	018	Silver	EPA 200.8	PA
109.625	019	Thallium	EPA 200.8	PA
109.625	020	Tin	EPA 200.8	PA
109.625	021	Titanium	EPA 200.8	PA
109.625	022	Vanadium	EPA 200.8	PA
109.625	023	Zinc	EPA 200.8	PA
109.629	001	Chromium VI (Hexavalent Chromium)	EPA 218.6	PA
109.635	001	Mercury	EPA 245.1	PA
109.685	002	Chromium VI (Hexavalent Chromium)	SM 3500-Cr B-2011	PA
109.693	001	Iron	SM 3500-Fe B-2011	PA

Field of Testing: 110 – Volatile Organic Constituents in Non-Potable Water

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
110.040	001	Acetone	EPA 624.1	PA
110.040	002	Acetonitrile	EPA 624.1	PA
110.040	003	Acrolein	EPA 624.1	PA
110.040	004	Acrylonitrile	EPA 624.1	PA
110.040	005	Benzene	EPA 624.1	PA
110.040	006	Bromodichloromethane	EPA 624.1	PA
110.040	007	Bromoform	EPA 624.1	PA
110.040	008	Bromomethane (Methyl Bromide)	EPA 624.1	PA
110.040	009	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 624.1	PA
110.040	010	Carbon Tetrachloride	EPA 624.1	PA
110.040	011	Chlorobenzene	EPA 624.1	PA
110.040	012	Chloroethane	EPA 624.1	PA
110.040	013	2-Chloroethyl vinyl Ether	EPA 624.1	PA
110.040	014	Chloroform	EPA 624.1	PA
110.040	015	Chloromethane (Methyl Chloride)	EPA 624.1	PA
110.040	016	Dibromochloromethane (Chlorodibromomethane)	EPA 624.1	PA
110.040	017	1,2-Dichlorobenzene	EPA 624.1	PA
110.040	018	1,3-Dichlorobenzene	EPA 624.1	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
110.040	019	1,4-Dichlorobenzene	EPA 624.1	PA
110.040	020	1,1-Dichloroethane	EPA 624.1	PA
110.040	021	1,2-Dichloroethane (Ethylene Dichloride)	EPA 624.1	PA
110.040	022	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 624.1	PA
110.040	023	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 624.1	PA
110.040	024	1,2-Dichloropropane	EPA 624.1	PA
110.040	025	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 624.1	PA
110.040	026	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 624.1	PA
110.040	028	Ethyl Acetate	EPA 624.1	PA
110.040	029	Ethylbenzene	EPA 624.1	PA
110.040	031	Methylene Chloride (Dichloromethane)	EPA 624.1	PA
110.040	032	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 624.1	PA
110.040	034	1,1,2,2-Tetrachloroethane	EPA 624.1	PA
110.040	035	Tetrachloroethylene (Tetrachloroethene)	EPA 624.1	PA
110.040	036	Tetrahydrofuran	EPA 624.1	PA
110.040	037	Toluene	EPA 624.1	PA
110.040	038	1,1,1-Trichloroethane	EPA 624.1	PA
110.040	039	1,1,2-Trichloroethane	EPA 624.1	PA
110.040	040	Trichloroethylene (Trichloroethene)	EPA 624.1	PA
110.040	041	Vinyl Chloride	EPA 624.1	PA
110.040	043	o-Xylene	EPA 624.1	PA
110.040	045	Trichlorofluoromethane	EPA 624.1	PA
110.040	046	m+p-Xylene	EPA 624.1	PA
110.040	047	2-Butanone (MEK)	EPA 624.1	PA
110.070	002	n-Amyl Acetate	EPA 1666 A	PA
110.070	003	n-Amyl Alcohol	EPA 1666 A	PA
110.070	004	n-Butyl Acetate	EPA 1666 A	PA
110.070	005	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 1666 A	PA
110.070	009	Ethyl Acetate	EPA 1666 A	PA
110.070	010	n-Heptane	EPA 1666 A	PA
110.070	011	n-Hexane	EPA 1666 A	PA
110.070	012	Isobutyraldehyde	EPA 1666 A	PA
110.070	013	Isopropyl Acetate	EPA 1666 A	PA
110.070	014	Isopropyl Alcohol (Isopropanol)	EPA 1666 A	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
110.070	015	Isopropyl Ether (DIPE)	EPA 1666 A	PA
110.070	018	Methyl Formate	EPA 1666 A	PA
110.070	019	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 1666 A	PA
110.070	021	Tetrahydrofuran	EPA 1666 A	PA
110.070	023	m-Xylene	EPA 1666 A	PA
110.070	024	o-Xylene	EPA 1666 A	PA
110.070	025	p-Xylene	EPA 1666 A	PA
110.070	026	m+p-Xylene	EPA 1666 A	PA
110.090	001	Acetonitrile	EPA 1671 A	PA
110.090	002	Diethylamine	EPA 1671 A	PA
110.090	003	Dimethyl Sulfoxide	EPA 1671 A	PA
110.090	004	Ethanol	EPA 1671 A	PA
110.090	005	Methanol	EPA 1671 A	PA
110.090	006	2-Methoxyethanol	EPA 1671 A	PA
110.090	007	n-Propanol (1-Propanol)	EPA 1671 A	PA
110.090	008	Triethylamine	EPA 1671 A	PA

Field of Testing: 111 – Semi-volatile Organic Constituents in Non-Potable Water

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
111.055	001	Aldrin	EPA 608.3	PA
111.055	002	alpha-BHC	EPA 608.3	PA
111.055	003	beta-BHC	EPA 608.3	PA
111.055	004	delta-BHC	EPA 608.3	PA
111.055	005	gamma-BHC (Lindane)	EPA 608.3	PA
111.055	006	Chlordane	EPA 608.3	PA
111.055	007	4,4'-DDD	EPA 608.3	PA
111.055	008	4,4'-DDE	EPA 608.3	PA
111.055	009	4,4'-DDT	EPA 608.3	PA
111.055	010	Dieldrin	EPA 608.3	PA
111.055	011	Endosulfan I	EPA 608.3	PA
111.055	012	Endosulfan II	EPA 608.3	PA
111.055	013	Endosulfan Sulfate	EPA 608.3	PA
111.055	014	Endrin	EPA 608.3	PA
111.055	015	Endrin Aldehyde	EPA 608.3	PA
111.055	016	Heptachlor	EPA 608.3	PA
111.055	017	Heptachlor Epoxide	EPA 608.3	PA
111.055	019	PCB-1016 (Aroclor-1016)	EPA 608.3	PA
111.055	020	PCB-1221 (Aroclor-1221)	EPA 608.3	PA
111.055	021	PCB-1232 (Aroclor-1232)	EPA 608.3	PA
111.055	022	PCB-1242 (Aroclor-1242)	EPA 608.3	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
111.055	023	PCB-1248 (Aroclor-1248)	EPA 608.3	PA
111.055	024	PCB-1254 (Aroclor-1254)	EPA 608.3	PA
111.055	025	PCB-1260 (Aroclor-1260)	EPA 608.3	PA
111.055	046	Methoxychlor	EPA 608.3	PA
111.055	048	Mirex	EPA 608.3	PA
111.055	060	Toxaphene	EPA 608.3	PA
111.160	001	Acenaphthene	EPA 625.1	PA
111.160	002	Acenaphthylene	EPA 625.1	PA
111.160	003	Anthracene	EPA 625.1	PA
111.160	004	Benzidine	EPA 625.1	PA
111.160	005	Benzo(a)anthracene	EPA 625.1	PA
111.160	006	Benzo(a)pyrene	EPA 625.1	PA
111.160	007	Benzo(b)fluoranthene	EPA 625.1	PA
111.160	008	Benzo(g,h,i)perylene	EPA 625.1	PA
111.160	009	Benzo(k)fluoranthene	EPA 625.1	PA
111.160	010	Bis(2-chloroethoxy) Methane	EPA 625.1	PA
111.160	011	Bis(2-chloroethyl) Ether	EPA 625.1	PA
111.160	012	bis(2-Chloroisopropyl) ether (2,2'-Oxybis[1-chloropropane])	EPA 625.1	PA
111.160	013	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 625.1	PA
111.160	014	4-Bromophenyl Phenyl Ether	EPA 625.1	PA
111.160	015	Butyl Benzyl Phthalate	EPA 625.1	PA
111.160	016	2-Chloronaphthalene	EPA 625.1	PA
111.160	017	4-Chlorophenyl Phenyl Ether	EPA 625.1	PA
111.160	018	Chrysene	EPA 625.1	PA
111.160	019	Dibenz(a,h)anthracene	EPA 625.1	PA
111.160	020	3,3'-Dichlorobenzidine	EPA 625.1	PA
111.160	021	Diethyl Phthalate	EPA 625.1	PA
111.160	022	Dimethyl Phthalate	EPA 625.1	PA
111.160	023	Di-n-butyl Phthalate	EPA 625.1	PA
111.160	024	2,4-Dinitrotoluene	EPA 625.1	PA
111.160	025	2,6-Dinitrotoluene	EPA 625.1	PA
111.160	026	Di-n-octyl Phthalate	EPA 625.1	PA
111.160	027	Fluoranthene	EPA 625.1	PA
111.160	028	Fluorene	EPA 625.1	PA
111.160	029	Hexachlorobenzene	EPA 625.1	PA
111.160	030	Hexachlorobutadiene	EPA 625.1	PA
111.160	031	Hexachloroethane	EPA 625.1	PA
111.160	032	Indeno(1,2,3-c,d)pyrene	EPA 625.1	PA
111.160	033	Isophorone	EPA 625.1	PA
111.160	034	Naphthalene	EPA 625.1	PA
111.160	035	Nitrobenzene	EPA 625.1	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
111.160	036	N-nitroso-di-n-propylamine	EPA 625.1	PA
111.160	037	Phenanthrene	EPA 625.1	PA
111.160	038	Pyrene	EPA 625.1	PA
111.160	039	1,2,4-Trichlorobenzene	EPA 625.1	PA
111.160	040	4-Chloro-3-methylphenol	EPA 625.1	PA
111.160	041	2-Chlorophenol	EPA 625.1	PA
111.160	042	2,4-Dichlorophenol	EPA 625.1	PA
111.160	043	2,4-Dimethylphenol	EPA 625.1	PA
111.160	044	2,4-Dinitrophenol	EPA 625.1	PA
111.160	045	2-Methyl-4,6-dinitrophenol	EPA 625.1	PA
111.160	046	2-Nitrophenol	EPA 625.1	PA
111.160	047	4-Nitrophenol	EPA 625.1	PA
111.160	048	Pentachlorophenol	EPA 625.1	PA
111.160	049	Phenol	EPA 625.1	PA
111.160	050	2,4,6-Trichlorophenol	EPA 625.1	PA
111.160	098	Hexachlorocyclopentadiene	EPA 625.1	PA
111.160	108	N-nitrosodimethylamine	EPA 625.1	PA
111.160	110	N-nitrosodiphenylamine	EPA 625.1	PA
111.160	139	Acetophenone	EPA 625.1	PA
111.160	140	Carbazole	EPA 625.1	PA
111.160	141	o-Cresol	EPA 625.1	PA
111.160	142	n-decane (n-C10)	EPA 625.1	PA
111.160	143	1,2-Diphenylhydrazine	EPA 625.1	PA
111.160	144	n-octadecane (n-C18)	EPA 625.1	PA
111.160	145	Pyridine	EPA 625.1	PA
111.160	146	Biphenyl (1,1'-biphenyl)	EPA 625.1	PA
111.160	147	m+p-Cresol	EPA 625.1	PA
111.160	148	2-Methylnaphthalene	EPA 625.1	PA
111.160	149	1-Methylphenanthrene	EPA 625.1	PA
111.160	151	2,4,5-Trichlorophenol	EPA 625.1	PA
111.250	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 1613 B	PA
111.250	002	Total Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 1613 B	PA
111.250	003	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	EPA 1613 B	PA
111.250	004	Total Tetrachlorodibenzofuran (TCDF)	EPA 1613 B	PA
111.250	005	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 1613 B	PA
111.250	006	Total Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 1613 B	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
111.250	007	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 1613 B	PA
111.250	008	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 1613 B	PA
111.250	009	Total Pentachlorodibenzofuran (PeCDF)	EPA 1613 B	PA
111.250	010	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B	PA
111.250	011	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B	PA
111.250	012	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B	PA
111.250	013	Total Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B	PA
111.250	014	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B	PA
111.250	015	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B	PA
111.250	016	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B	PA
111.250	017	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B	PA
111.250	018	Total Hexachlorodibenzofuran (HxCDF)	EPA 1613 B	PA
111.250	019	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 1613 B	PA
111.250	020	Total Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 1613 B	PA
111.250	021	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	EPA 1613 B	PA
111.250	022	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	EPA 1613 B	PA
111.250	023	Total Heptachlorodibenzofuran (HpCDF)	EPA 1613 B	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
111.250	024	OCDD	EPA 1613 B	PA
111.250	025	OCDF	EPA 1613 B	PA
111.345	001	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	DoD QSM Version 5.1 (or newer)	DOD
111.345	002	4:2 Fluorotelomer Sulfonic Acid (4:2 FTS)	DoD QSM Version 5.1 (or newer)	DOD
111.345	003	6:2 Fluorotelomer Sulfonic Acid (6:2 FTS)	DoD QSM Version 5.1 (or newer)	DOD
111.345	004	8:2 Fluorotelomer Sulfonic Acid (8:2 FTS)	DoD QSM Version 5.1 (or newer)	DOD
111.345	005	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	DoD QSM Version 5.1 (or newer)	DOD
111.345	006	Perfluorobutanoic Acid (PFBA)	DoD QSM Version 5.1 (or newer)	DOD
111.345	007	Perfluorobutane Sulfonic Acid (PFBS)	DoD QSM Version 5.1 (or newer)	DOD
111.345	008	Perfluorodecanoic Acid (PFDA)	DoD QSM Version 5.1 (or newer)	DOD
111.345	009	Perfluorododecanoic Acid (PFDoA)	DoD QSM Version 5.1 (or newer)	DOD
111.345	010	Perfluorodecane Sulfonic Acid (PFDS)	DoD QSM Version 5.1 (or newer)	DOD
111.345	011	Perfluoroheptanoic Acid (PFHpA)	DoD QSM Version 5.1 (or newer)	DOD
111.345	012	Perfluoroheptane Sulfonic Acid (PFHpS)	DoD QSM Version 5.1 (or newer)	DOD
111.345	013	Perfluorohexane Sulfonic Acid (PFHxS)	DoD QSM Version 5.1 (or newer)	DOD
111.345	014	Perfluorohexanoic Acid (PFHxA)	DoD QSM Version 5.1 (or newer)	DOD
111.345	015	Perfluorononanoic Acid (PFNA)	DoD QSM Version 5.1 (or newer)	DOD

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
111.345	016	Perfluorooctanoic Acid (PFOA)	DoD QSM Version 5.1 (or newer)	DOD
111.345	017	Perfluorooctane Sulfonic Acid (PFOS)	DoD QSM Version 5.1 (or newer)	DOD
111.345	018	Perfluorooctane Sulfonamide (PFOSAm)	DoD QSM Version 5.1 (or newer)	DOD
111.345	019	Perfluoropentanoic Acid (PFPeA)	DoD QSM Version 5.1 (or newer)	DOD
111.345	020	Perfluoropentane Sulfonic Acid (PFPeS)	DoD QSM Version 5.1 (or newer)	DOD
111.345	021	Perfluorotetradecanoic Acid (PFTDA)	DoD QSM Version 5.1 (or newer)	DOD
111.345	022	Perfluorotridecanoic Acid (PFTrDA)	DoD QSM Version 5.1 (or newer)	DOD
111.345	023	Perfluoroundecanoic Acid (PFUnDA)	DoD QSM Version 5.1 (or newer)	DOD
111.345	024	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	DoD QSM Version 5.1 (or newer)	DOD
111.345	025	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	DoD QSM Version 5.1 (or newer)	DOD
111.345	026	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	DoD QSM Version 5.1 (or newer)	DOD
111.345	027	N-Ethylperfluorooctane Sulfonamide (EtFOSAm)	DoD QSM Version 5.1 (or newer)	DOD
111.345	028	N-Ethylperfluorooctane Sulfonamido Ethanol (EtFOSE)	DoD QSM Version 5.1 (or newer)	DOD
111.345	029	10:2 Fluorotelomer Sulfonic Acid (10:2 FTS)	DoD QSM Version 5.1 (or newer)	DOD
111.345	030	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	DoD QSM Version 5.1 (or newer)	DOD
111.345	031	N-Methylperfluorooctane Sulfonamide (NMeFOSA)	DoD QSM Version 5.1 (or newer)	DOD

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
111.345	032	N-Methylperfluorooctane Sulfonamido Ethanol (NMeFOSE)	DoD QSM Version 5.1 (or newer)	DOD
111.345	033	Perfluorohexadecanoic Acid (PFHxDA)	DoD QSM Version 5.1 (or newer)	DOD
111.345	034	Perfluorononane Sulfonic Acid (PFNS)	DoD QSM Version 5.1 (or newer)	DOD
111.345	035	Perfluorooctadecanoic Acid (PFODA)	DoD QSM Version 5.1 (or newer)	DOD

Field of Testing: 114 – Inorganic Chemistry of Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
114.325	001	Aluminum	EPA 6010 D	PA
114.325	002	Antimony	EPA 6010 D	PA
114.325	003	Arsenic	EPA 6010 D	PA
114.325	004	Barium	EPA 6010 D	PA
114.325	005	Beryllium	EPA 6010 D	PA
114.325	006	Boron	EPA 6010 D	PA
114.325	007	Cadmium	EPA 6010 D	PA
114.325	008	Calcium	EPA 6010 D	PA
114.325	009	Chromium	EPA 6010 D	PA
114.325	010	Cobalt	EPA 6010 D	PA
114.325	011	Copper	EPA 6010 D	PA
114.325	012	Iron	EPA 6010 D	PA
114.325	013	Lead	EPA 6010 D	PA
114.325	014	Magnesium	EPA 6010 D	PA
114.325	015	Manganese	EPA 6010 D	PA
114.325	016	Molybdenum	EPA 6010 D	PA
114.325	017	Nickel	EPA 6010 D	PA
114.325	018	Potassium	EPA 6010 D	PA
114.325	019	Selenium	EPA 6010 D	PA
114.325	020	Silver	EPA 6010 D	PA
114.325	021	Sodium	EPA 6010 D	PA
114.325	022	Strontium	EPA 6010 D	PA
114.325	023	Thallium	EPA 6010 D	PA
114.325	024	Tin	EPA 6010 D	PA
114.325	025	Titanium	EPA 6010 D	PA
114.325	026	Vanadium	EPA 6010 D	PA
114.325	027	Zinc	EPA 6010 D	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
114.345	001	Aluminum	EPA 6020 B	PA
114.345	002	Antimony	EPA 6020 B	PA
114.345	003	Arsenic	EPA 6020 B	PA
114.345	004	Barium	EPA 6020 B	PA
114.345	005	Beryllium	EPA 6020 B	PA
114.345	006	Cadmium	EPA 6020 B	PA
114.345	007	Calcium	EPA 6020 B	PA
114.345	008	Chromium	EPA 6020 B	PA
114.345	009	Cobalt	EPA 6020 B	PA
114.345	010	Copper	EPA 6020 B	PA
114.345	011	Iron	EPA 6020 B	PA
114.345	012	Lead	EPA 6020 B	PA
114.345	013	Magnesium	EPA 6020 B	PA
114.345	014	Manganese	EPA 6020 B	PA
114.345	016	Nickel	EPA 6020 B	PA
114.345	017	Potassium	EPA 6020 B	PA
114.345	018	Selenium	EPA 6020 B	PA
114.345	019	Silver	EPA 6020 B	PA
114.345	020	Sodium	EPA 6020 B	PA
114.345	021	Thallium	EPA 6020 B	PA
114.345	022	Vanadium	EPA 6020 B	PA
114.345	023	Zinc	EPA 6020 B	PA
114.345	024	Molybdenum	EPA 6020 B	PA
114.435	001	Chromium VI (Hexavalent Chromium)	EPA 7196 A	PA
114.465	001	Chromium VI (Hexavalent Chromium)	EPA 7199	PA
114.545	001	Mercury	EPA 7471 B	PA
114.715	001	Cyanide, Total	EPA 9012 B	PA
114.755	001	Fluoride	EPA 9056 A	PA
114.805	001	Oil & Grease (n-Hexane Extractable Materials)	EPA 9071 B	PA

Field of Testing: 115 – Extraction Test of Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
115.085	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311	PA
115.095	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312	PA
115.145	001	Corrosivity - pH Determination	EPA 9045 D	PA

Field of Testing: 116 – Volatile Organic Chemistry of Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
116.215	001	1,2-Dibromoethane (EDB)	EPA 8011	PA
116.215	002	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8011	PA
116.221	001	Gasoline Range Organics (GRO)	EPA 8015 C	PA
116.275	001	Benzene	EPA 8260 D	PA
116.275	002	Bromobenzene	EPA 8260 D	PA
116.275	003	Bromochloromethane	EPA 8260 D	PA
116.275	004	Bromodichloromethane	EPA 8260 D	PA
116.275	005	Bromoform	EPA 8260 D	PA
116.275	006	Bromomethane (Methyl Bromide)	EPA 8260 D	PA
116.275	007	n-Butylbenzene	EPA 8260 D	PA
116.275	008	sec-Butylbenzene	EPA 8260 D	PA
116.275	009	tert-Butylbenzene	EPA 8260 D	PA
116.275	010	Carbon Disulfide	EPA 8260 D	PA
116.275	011	Carbon Tetrachloride	EPA 8260 D	PA
116.275	012	Chlorobenzene	EPA 8260 D	PA
116.275	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 D	PA
116.275	014	Chloroethane	EPA 8260 D	PA
116.275	015	Chloroform	EPA 8260 D	PA
116.275	016	Chloromethane (Methyl Chloride)	EPA 8260 D	PA
116.275	017	Dibromomethane	EPA 8260 D	PA
116.275	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 D	PA
116.275	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 D	PA
116.275	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 D	PA
116.275	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 D	PA
116.275	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 D	PA
116.275	023	Ethylbenzene	EPA 8260 D	PA
116.275	024	Hexachlorobutadiene	EPA 8260 D	PA
116.275	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 D	PA
116.275	026	Methylene Chloride (Dichloromethane)	EPA 8260 D	PA
116.275	027	Naphthalene	EPA 8260 D	PA
116.275	029	N-propylbenzene	EPA 8260 D	PA
116.275	030	Styrene	EPA 8260 D	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
116.275	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 D	PA
116.275	032	Toluene	EPA 8260 D	PA
116.275	033	Trichloroethylene (Trichloroethene)	EPA 8260 D	PA
116.275	034	Trichlorofluoromethane	EPA 8260 D	PA
116.275	035	Vinyl Chloride	EPA 8260 D	PA
116.275	036	m+p-Xylene	EPA 8260 D	PA
116.275	037	o-Xylene	EPA 8260 D	PA
116.275	040	1,1-Dichloroethane	EPA 8260 D	PA
116.275	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 D	PA
116.275	042	1,1,1-Trichloroethane	EPA 8260 D	PA
116.275	043	1,1,1,2-Tetrachloroethane	EPA 8260 D	PA
116.275	044	1,1,2,2-Tetrachloroethane	EPA 8260 D	PA
116.275	045	1,1,2-Trichloroethane	EPA 8260 D	PA
116.275	046	1,2-Dichlorobenzene	EPA 8260 D	PA
116.275	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 D	PA
116.275	048	1,2-Dibromoethane (EDB)	EPA 8260 D	PA
116.275	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 D	PA
116.275	050	1,2-Dichloropropane	EPA 8260 D	PA
116.275	051	1,2,3-Trichloropropane (TCP)	EPA 8260 D	PA
116.275	052	1,2,4-Trichlorobenzene	EPA 8260 D	PA
116.275	053	1,3-Dichlorobenzene	EPA 8260 D	PA
116.275	054	1,4-Dichlorobenzene	EPA 8260 D	PA
116.275	055	2-Chloroethyl vinyl Ether	EPA 8260 D	PA
116.275	056	4-Chlorotoluene	EPA 8260 D	PA
116.275	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 D	PA
116.275	058	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 8260 D	PA
116.275	059	Diisopropyl ether (DIPE)	EPA 8260 D	PA
116.275	060	1,4-Dioxane	EPA 8260 D	PA
116.275	061	Ethyl tert-butyl Ether (ETBE)	EPA 8260 D	PA
116.275	062	tert-Amyl Methyl Ether (TAME)	EPA 8260 D	PA

Field of Testing: 117 – Semi-volatile Organic Chemistry of Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
117.245	002	Diesel Range Organics (DRO)	EPA 8015 C	PA
117.265	012	Ethanol	EPA 8015 C	PA
117.265	014	Ethylene Glycol	EPA 8015 C	PA
117.265	017	Isopropyl Alcohol (Isopropanol)	EPA 8015 C	PA
117.265	018	Methanol	EPA 8015 C	PA
117.325	001	Aldrin	EPA 8081 B	PA
117.325	002	alpha-BHC	EPA 8081 B	PA
117.325	003	beta-BHC	EPA 8081 B	PA
117.325	004	delta-BHC	EPA 8081 B	PA
117.325	005	gamma-BHC (Lindane)	EPA 8081 B	PA
117.325	006	Chlordane (total)	EPA 8081 B	PA
117.325	008	4,4'-DDD	EPA 8081 B	PA
117.325	009	4,4'-DDE	EPA 8081 B	PA
117.325	010	4,4'-DDT	EPA 8081 B	PA
117.325	011	Dieldrin	EPA 8081 B	PA
117.325	012	Endosulfan I	EPA 8081 B	PA
117.325	013	Endosulfan II	EPA 8081 B	PA
117.325	014	Endosulfan Sulfate	EPA 8081 B	PA
117.325	015	Endrin	EPA 8081 B	PA
117.325	016	Endrin Aldehyde	EPA 8081 B	PA
117.325	017	Endrin Ketone	EPA 8081 B	PA
117.325	018	Heptachlor	EPA 8081 B	PA
117.325	019	Heptachlor Epoxide	EPA 8081 B	PA
117.325	020	Methoxychlor	EPA 8081 B	PA
117.325	021	Toxaphene	EPA 8081 B	PA
117.345	001	Aroclor 1016	EPA 8082 A	PA
117.345	002	Aroclor 1221	EPA 8082 A	PA
117.345	003	Aroclor 1232	EPA 8082 A	PA
117.345	004	Aroclor 1242	EPA 8082 A	PA
117.345	005	Aroclor 1248	EPA 8082 A	PA
117.345	006	Aroclor 1254	EPA 8082 A	PA
117.345	007	Aroclor 1260	EPA 8082 A	PA
117.425	001	2,4-D	EPA 8151 A	PA
117.425	002	2,4-DB	EPA 8151 A	PA
117.425	003	2,4,5-TP (Silvex)	EPA 8151 A	PA
117.425	004	2,4,5-T	EPA 8151 A	PA
117.425	005	Dalapon	EPA 8151 A	PA
117.425	006	Dicamba	EPA 8151 A	PA
117.425	007	Dichloroprop	EPA 8151 A	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
117.425	008	Dinoseb	EPA 8151 A	PA
117.425	009	MCPA	EPA 8151 A	PA
117.425	010	MCPP	EPA 8151 A	PA
117.425	012	Pentachlorophenol	EPA 8151 A	PA
117.445	001	Acenaphthene	EPA 8270 E	PA
117.445	002	Acenaphthylene	EPA 8270 E	PA
117.445	003	Aniline	EPA 8270 E	PA
117.445	004	Anthracene	EPA 8270 E	PA
117.445	005	Benzidine	EPA 8270 E	PA
117.445	006	Benzoic Acid	EPA 8270 E	PA
117.445	007	Benzo(a)anthracene	EPA 8270 E	PA
117.445	008	Benzo(b)fluoranthene	EPA 8270 E	PA
117.445	009	Benzo(k)fluoranthene	EPA 8270 E	PA
117.445	010	Benzo(g,h,i)perylene	EPA 8270 E	PA
117.445	011	Benzo(a)pyrene	EPA 8270 E	PA
117.445	012	Benzyl Alcohol	EPA 8270 E	PA
117.445	013	Bis(2-chloroethoxy) Methane	EPA 8270 E	PA
117.445	014	Bis(2-chloroethyl) Ether	EPA 8270 E	PA
117.445	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 E	PA
117.445	016	Butyl Benzyl Phthalate	EPA 8270 E	PA
117.445	017	Chrysene	EPA 8270 E	PA
117.445	018	Dibenz(a,h)anthracene	EPA 8270 E	PA
117.445	019	Dibenzofuran	EPA 8270 E	PA
117.445	020	Di-n-butyl Phthalate	EPA 8270 E	PA
117.445	021	Diethyl Phthalate	EPA 8270 E	PA
117.445	022	Dimethyl Phthalate	EPA 8270 E	PA
117.445	023	Di-n-octyl Phthalate	EPA 8270 E	PA
117.445	024	Fluoranthene	EPA 8270 E	PA
117.445	025	Fluorene	EPA 8270 E	PA
117.445	026	Naphthalene	EPA 8270 E	PA
117.445	027	Nitrobenzene	EPA 8270 E	PA
117.445	028	Pentachlorobenzene	EPA 8270 E	PA
117.445	029	Pentachlorophenol	EPA 8270 E	PA
117.445	030	1-Chloronaphthalene	EPA 8270 E	PA
117.445	031	1,2-Dichlorobenzene	EPA 8270 E	PA
117.445	032	1,3-Dichlorobenzene	EPA 8270 E	PA
117.445	033	1,4-Dichlorobenzene	EPA 8270 E	PA
117.445	034	2-Chloronaphthalene	EPA 8270 E	PA
117.445	035	2-Chlorophenol	EPA 8270 E	PA
117.445	036	2,4-Dichlorophenol	EPA 8270 E	PA
117.445	037	2,4-Dimethylphenol	EPA 8270 E	PA
117.445	038	2,4-Dinitrophenol	EPA 8270 E	PA
117.445	039	2,4-Dinitrotoluene	EPA 8270 E	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
117.445	040	2,6-Dichlorophenol	EPA 8270 E	PA
117.445	041	2,6-Dinitrotoluene	EPA 8270 E	PA
117.445	042	2-Nitroaniline	EPA 8270 E	PA
117.445	043	2-Nitrophenol	EPA 8270 E	PA
117.445	044	3-Nitroaniline	EPA 8270 E	PA
117.445	045	3,3'-Dichlorobenzidine	EPA 8270 E	PA
117.445	046	4-Chloroaniline	EPA 8270 E	PA
117.445	047	4-Chloro-3-methylphenol	EPA 8270 E	PA
117.445	048	4-Bromophenyl Phenyl Ether	EPA 8270 E	PA
117.445	049	4-Chlorophenyl Phenyl Ether	EPA 8270 E	PA
117.445	050	4-Nitroaniline	EPA 8270 E	PA
117.445	051	4-Nitrophenol	EPA 8270 E	PA
117.445	076	Parathion Ethyl	EPA 8270 E	PA
117.445	077	Parathion Methyl	EPA 8270 E	PA
117.445	078	Phorate	EPA 8270 E	PA
117.445	087	N-nitrosodiethylamine	EPA 8270 E	PA
117.445	088	N-nitrosodimethylamine	EPA 8270 E	PA
117.445	089	N-nitrosodiphenylamine	EPA 8270 E	PA
117.445	090	N-nitroso-di-n-propylamine	EPA 8270 E	PA
117.445	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 E	PA
117.445	092	Isophorone	EPA 8270 E	PA
117.445	093	2-Methylnaphthalene	EPA 8270 E	PA
117.445	094	Phenanthrene	EPA 8270 E	PA
117.472	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290 A	PA
117.472	002	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290 A	PA
117.472	003	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A	PA
117.472	004	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A	PA
117.472	005	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A	PA
117.472	006	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290 A	PA
117.472	007	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 8290 A	PA
117.472	008	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	EPA 8290 A	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
117.472	009	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290 A	PA
117.472	010	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290 A	PA
117.472	011	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A	PA
117.472	012	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A	PA
117.472	013	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A	PA
117.472	014	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A	PA
117.472	015	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	EPA 8290 A	PA
117.472	016	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	EPA 8290 A	PA
117.472	017	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 8290 A	PA
117.472	018	Total Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290 A	PA
117.472	019	Total Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290 A	PA
117.472	020	Total Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A	PA
117.472	021	Total Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290 A	PA
117.472	022	Total Tetrachlorodibenzofuran (TCDF)	EPA 8290 A	PA
117.472	023	Total Pentachlorodibenzofuran (PeCDF)	EPA 8290 A	PA
117.472	024	Total Hexachlorodibenzofuran (HxCDF)	EPA 8290 A	PA
117.472	025	Total Heptachlorodibenzofuran (HpCDF)	EPA 8290 A	PA
117.485	001	Acetaldehyde	EPA 8315 A	PA
117.485	010	Formaldehyde	EPA 8315 A	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
117.505	001	Aldicarb (Temik)	EPA 8318 A	PA
117.505	002	Aldicarb Sulfone	EPA 8318 A	PA
117.505	003	Carbaryl (Sevin)	EPA 8318 A	PA
117.505	004	Carbofuran (Furadan)	EPA 8318 A	PA
117.505	006	3-Hydroxycarbofuran	EPA 8318 A	PA
117.505	007	Methiocarb (Mesurol)	EPA 8318 A	PA
117.505	008	Methomyl (Lannate)	EPA 8318 A	PA
117.505	009	Oxamyl	EPA 8318 A	PA
117.505	011	Propoxur (Baygon)	EPA 8318 A	PA
117.575	001	N-Ethylperfluorooctane Sulfonamide (EtFOSAm)	DoD QSM Version 5.1 (or newer)	DOD
117.575	002	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	DoD QSM Version 5.1 (or newer)	DOD
117.575	003	N-Ethylperfluorooctane Sulfonamido Ethanol (EtFOSE)	DoD QSM Version 5.1 (or newer)	DOD
117.575	004	4:2 Fluorotelomer Sulfonic Acid (4:2 FTS)	DoD QSM Version 5.1 (or newer)	DOD
117.575	005	6:2 Fluorotelomer Sulfonic Acid (6:2 FTS)	DoD QSM Version 5.1 (or newer)	DOD
117.575	006	8:2 Fluorotelomer Sulfonic Acid (8:2 FTS)	DoD QSM Version 5.1 (or newer)	DOD
117.575	007	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	DoD QSM Version 5.1 (or newer)	DOD
117.575	008	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	DoD QSM Version 5.1 (or newer)	DOD
117.575	009	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	DoD QSM Version 5.1 (or newer)	DOD
117.575	010	N-Methylperfluorooctane Sulfonamide (NMeFOSA)	DoD QSM Version 5.1 (or newer)	DOD
117.575	011	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	DoD QSM Version 5.1 (or newer)	DOD
117.575	012	N-Methylperfluorooctane Sulfonamido Ethanol (NMeFOSE)	DoD QSM Version 5.1 (or newer)	DOD

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
117.575	013	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	DoD QSM Version 5.1 (or newer)	DOD
117.575	014	Perfluorobutanoic Acid (PFBA)	DoD QSM Version 5.1 (or newer)	DOD
117.575	015	Perfluorobutane Sulfonic Acid (PFBS)	DoD QSM Version 5.1 (or newer)	DOD
117.575	016	Perfluorodecanoic Acid (PFDA)	DoD QSM Version 5.1 (or newer)	DOD
117.575	017	Perfluorododecanoic Acid (PFDoA)	DoD QSM Version 5.1 (or newer)	DOD
117.575	018	Perfluorodecane Sulfonic Acid (PFDS)	DoD QSM Version 5.1 (or newer)	DOD
117.575	019	Perfluoroheptanoic Acid (PFHpA)	DoD QSM Version 5.1 (or newer)	DOD
117.575	020	Perfluoroheptane Sulfonic Acid (PFHpS)	DoD QSM Version 5.1 (or newer)	DOD
117.575	021	Perfluorohexane Sulfonic Acid (PFHxS)	DoD QSM Version 5.1 (or newer)	DOD
117.575	022	Perfluorohexanoic Acid (PFHxA)	DoD QSM Version 5.1 (or newer)	DOD
117.575	023	Perfluorononanoic Acid (PFNA)	DoD QSM Version 5.1 (or newer)	DOD
117.575	024	Perfluorooctanoic Acid (PFOA)	DoD QSM Version 5.1 (or newer)	DOD
117.575	025	Perfluorooctane Sulfonic Acid (PFOS)	DoD QSM Version 5.1 (or newer)	DOD
117.575	026	Perfluorooctane Sulfonamide (PFOSAm)	DoD QSM Version 5.1 (or newer)	DOD
117.575	027	Perfluoropentanoic Acid (PFPeA)	DoD QSM Version 5.1 (or newer)	DOD
117.575	028	Perfluoropentane Sulfonic Acid (PFPeS)	DoD QSM Version 5.1 (or newer)	DOD

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
117.575	029	Perfluorotetradecanoic Acid (PFTDA)	DoD QSM Version 5.1 (or newer)	DOD
117.575	030	Perfluorotridecanoic Acid (PFTrDA)	DoD QSM Version 5.1 (or newer)	DOD
117.575	031	Perfluoroundecanoic Acid (PFUnDA)	DoD QSM Version 5.1 (or newer)	DOD
117.575	032	10:2 Fluorotelomer Sulfonic Acid (10:2 FTS)	DoD QSM Version 5.1 (or newer)	DOD
117.575	033	Perfluorohexadecanoic Acid (PFHxDA)	DoD QSM Version 5.1 (or newer)	DOD
117.575	034	Perfluorononane Sulfonic Acid (PFNS)	DoD QSM Version 5.1 (or newer)	DOD
117.575	035	Perfluorooctadecanoic Acid (PFODA)	DoD QSM Version 5.1 (or newer)	DOD

Field of Testing: 130 – Inorganic Constituents in Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
130.020	001	Aluminum	EPA 6010 D	PA
130.020	002	Antimony	EPA 6010 D	PA
130.020	003	Arsenic	EPA 6010 D	PA
130.020	004	Barium	EPA 6010 D	PA
130.020	005	Beryllium	EPA 6010 D	PA
130.020	006	Boron	EPA 6010 D	PA
130.020	007	Cadmium	EPA 6010 D	PA
130.020	008	Calcium	EPA 6010 D	PA
130.020	009	Chromium	EPA 6010 D	PA
130.020	010	Cobalt	EPA 6010 D	PA
130.020	011	Copper	EPA 6010 D	PA
130.020	012	Iron	EPA 6010 D	PA
130.020	013	Lead	EPA 6010 D	PA
130.020	014	Magnesium	EPA 6010 D	PA
130.020	015	Manganese	EPA 6010 D	PA
130.020	016	Molybdenum	EPA 6010 D	PA
130.020	017	Nickel	EPA 6010 D	PA
130.020	018	Potassium	EPA 6010 D	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
130.020	019	Selenium	EPA 6010 D	PA
130.020	020	Silver	EPA 6010 D	PA
130.020	021	Sodium	EPA 6010 D	PA
130.020	022	Strontium	EPA 6010 D	PA
130.020	023	Thallium	EPA 6010 D	PA
130.020	024	Tin	EPA 6010 D	PA
130.020	025	Titanium	EPA 6010 D	PA
130.020	026	Vanadium	EPA 6010 D	PA
130.020	027	Zinc	EPA 6010 D	PA
130.040	001	Aluminum	EPA 6020 B	PA
130.040	002	Antimony	EPA 6020 B	PA
130.040	003	Arsenic	EPA 6020 B	PA
130.040	004	Barium	EPA 6020 B	PA
130.040	005	Beryllium	EPA 6020 B	PA
130.040	006	Cadmium	EPA 6020 B	PA
130.040	007	Calcium	EPA 6020 B	PA
130.040	008	Chromium	EPA 6020 B	PA
130.040	009	Cobalt	EPA 6020 B	PA
130.040	010	Copper	EPA 6020 B	PA
130.040	011	Iron	EPA 6020 B	PA
130.040	012	Lead	EPA 6020 B	PA
130.040	013	Magnesium	EPA 6020 B	PA
130.040	014	Manganese	EPA 6020 B	PA
130.040	016	Nickel	EPA 6020 B	PA
130.040	017	Potassium	EPA 6020 B	PA
130.040	018	Selenium	EPA 6020 B	PA
130.040	019	Silver	EPA 6020 B	PA
130.040	020	Sodium	EPA 6020 B	PA
130.040	021	Thallium	EPA 6020 B	PA
130.040	022	Vanadium	EPA 6020 B	PA
130.040	023	Zinc	EPA 6020 B	PA
130.040	024	Molybdenum	EPA 6020 B	PA
130.140	001	Chromium VI (Hexavalent Chromium)	EPA 7196 A	PA
130.170	001	Chromium VI (Hexavalent Chromium)	EPA 7199	PA
130.250	001	Mercury	EPA 7470 A	PA
130.440	001	Cyanide, Total	EPA 9012 B	PA
130.480	001	Fluoride	EPA 9056 A	PA
130.490	001	Organic Carbon-Total (TOC)	EPA 9060 A	PA

Field of Testing: 131 – Leaching/Extraction Tests, Physical Characteristics in Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
131.040	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311	PA
131.050	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312	PA
131.070	001	Ignitability	EPA 1010 A	PA
131.120	001	Corrosivity - pH Determination	EPA 9040 C	PA

Field of Testing: 132 – Volatile Organic Compounds in Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
132.010	001	1,2-Dibromoethane (EDB)	EPA 8011	PA
132.010	002	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8011	PA
132.016	001	Gasoline Range Organics (GRO)	EPA 8015 C	PA
132.070	001	Benzene	EPA 8260 D	PA
132.070	002	Bromobenzene	EPA 8260 D	PA
132.070	003	Bromochloromethane	EPA 8260 D	PA
132.070	004	Bromodichloromethane	EPA 8260 D	PA
132.070	005	Bromoform	EPA 8260 D	PA
132.070	006	Bromomethane (Methyl Bromide)	EPA 8260 D	PA
132.070	007	n-Butylbenzene	EPA 8260 D	PA
132.070	008	sec-Butylbenzene	EPA 8260 D	PA
132.070	009	tert-Butylbenzene	EPA 8260 D	PA
132.070	010	Carbon Disulfide	EPA 8260 D	PA
132.070	011	Carbon Tetrachloride	EPA 8260 D	PA
132.070	012	Chlorobenzene	EPA 8260 D	PA
132.070	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 D	PA
132.070	014	Chloroethane	EPA 8260 D	PA
132.070	015	Chloroform	EPA 8260 D	PA
132.070	016	Chloromethane (Methyl Chloride)	EPA 8260 D	PA
132.070	017	Dibromomethane	EPA 8260 D	PA
132.070	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 D	PA
132.070	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 D	PA
132.070	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 D	PA
132.070	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 D	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
132.070	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 D	PA
132.070	023	Ethylbenzene	EPA 8260 D	PA
132.070	024	Hexachlorobutadiene	EPA 8260 D	PA
132.070	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 D	PA
132.070	026	Methylene Chloride (Dichloromethane)	EPA 8260 D	PA
132.070	027	Naphthalene	EPA 8260 D	PA
132.070	029	N-propylbenzene	EPA 8260 D	PA
132.070	030	Styrene	EPA 8260 D	PA
132.070	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 D	PA
132.070	032	Toluene	EPA 8260 D	PA
132.070	033	Trichloroethylene (Trichloroethene)	EPA 8260 D	PA
132.070	034	Trichlorofluoromethane	EPA 8260 D	PA
132.070	035	Vinyl Chloride	EPA 8260 D	PA
132.070	036	m+p-Xylene	EPA 8260 D	PA
132.070	037	o-Xylene	EPA 8260 D	PA
132.070	040	1,1-Dichloroethane	EPA 8260 D	PA
132.070	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 D	PA
132.070	042	1,1,1-Trichloroethane	EPA 8260 D	PA
132.070	043	1,1,1,2-Tetrachloroethane	EPA 8260 D	PA
132.070	044	1,1,2,2-Tetrachloroethane	EPA 8260 D	PA
132.070	045	1,1,2-Trichloroethane	EPA 8260 D	PA
132.070	046	1,2-Dichlorobenzene	EPA 8260 D	PA
132.070	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 D	PA
132.070	048	1,2-Dibromoethane (EDB)	EPA 8260 D	PA
132.070	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 D	PA
132.070	050	1,2-Dichloropropane	EPA 8260 D	PA
132.070	051	1,2,3-Trichloropropane (TCP)	EPA 8260 D	PA
132.070	052	1,2,4-Trichlorobenzene	EPA 8260 D	PA
132.070	053	1,3-Dichlorobenzene	EPA 8260 D	PA
132.070	054	1,4-Dichlorobenzene	EPA 8260 D	PA
132.070	055	2-Chloroethyl vinyl Ether	EPA 8260 D	PA
132.070	056	4-Chlorotoluene	EPA 8260 D	PA
132.070	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 D	PA
132.070	058	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 8260 D	PA
132.070	059	Diisopropyl ether (DIPE)	EPA 8260 D	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
132.070	060	1,4-Dioxane	EPA 8260 D	PA
132.070	061	Ethyl tert-butyl Ether (ETBE)	EPA 8260 D	PA
132.070	062	tert-Amyl Methyl Ether (TAME)	EPA 8260 D	PA

Field of Testing: 133 – Semi-Volatile Organic Chemistry in Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
133.020	002	Diesel Range Organics (DRO)	EPA 8015 C	PA
133.040	012	Ethanol	EPA 8015 C	PA
133.040	014	Ethylene Glycol	EPA 8015 C	PA
133.040	017	Isopropyl Alcohol (Isopropanol)	EPA 8015 C	PA
133.040	018	Methanol	EPA 8015 C	PA
133.110	001	Aldrin	EPA 8081 B	PA
133.110	002	alpha-BHC	EPA 8081 B	PA
133.110	003	beta-BHC	EPA 8081 B	PA
133.110	004	delta-BHC	EPA 8081 B	PA
133.110	005	gamma-BHC (Lindane)	EPA 8081 B	PA
133.110	006	Chlordane	EPA 8081 B	PA
133.110	008	4,4'-DDD	EPA 8081 B	PA
133.110	009	4,4'-DDE	EPA 8081 B	PA
133.110	010	4,4'-DDT	EPA 8081 B	PA
133.110	011	Dieldrin	EPA 8081 B	PA
133.110	012	Endosulfan I	EPA 8081 B	PA
133.110	013	Endosulfan II	EPA 8081 B	PA
133.110	014	Endosulfan Sulfate	EPA 8081 B	PA
133.110	015	Endrin	EPA 8081 B	PA
133.110	016	Endrin Aldehyde	EPA 8081 B	PA
133.110	017	Endrin Ketone	EPA 8081 B	PA
133.110	018	Heptachlor	EPA 8081 B	PA
133.110	019	Heptachlor Epoxide	EPA 8081 B	PA
133.110	020	Methoxychlor	EPA 8081 B	PA
133.110	021	Toxaphene	EPA 8081 B	PA
133.130	001	Aroclor 1016	EPA 8082 A	PA
133.130	002	Aroclor 1221	EPA 8082 A	PA
133.130	003	Aroclor 1232	EPA 8082 A	PA
133.130	004	Aroclor 1242	EPA 8082 A	PA
133.130	005	Aroclor 1248	EPA 8082 A	PA
133.130	006	Aroclor 1254	EPA 8082 A	PA
133.130	007	Aroclor 1260	EPA 8082 A	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
133.220	001	2,4-D	EPA 8151 A	PA
133.220	002	2,4-DB	EPA 8151 A	PA
133.220	003	2,4,5-TP (Silvex)	EPA 8151 A	PA
133.220	004	2,4,5-T	EPA 8151 A	PA
133.220	005	Dalapon	EPA 8151 A	PA
133.220	006	Dicamba	EPA 8151 A	PA
133.220	007	Dichloroprop	EPA 8151 A	PA
133.220	008	Dinoseb	EPA 8151 A	PA
133.220	009	MCPA	EPA 8151 A	PA
133.220	010	MCPP	EPA 8151 A	PA
133.220	012	Pentachlorophenol	EPA 8151 A	PA
133.240	001	Acenaphthene	EPA 8270 E	PA
133.240	002	Acenaphthylene	EPA 8270 E	PA
133.240	003	Aniline	EPA 8270 E	PA
133.240	004	Anthracene	EPA 8270 E	PA
133.240	005	Benzidine	EPA 8270 E	PA
133.240	006	Benzoic Acid	EPA 8270 E	PA
133.240	007	Benzo(a)anthracene	EPA 8270 E	PA
133.240	008	Benzo(b)fluoranthene	EPA 8270 E	PA
133.240	009	Benzo(k)fluoranthene	EPA 8270 E	PA
133.240	010	Benzo(g,h,i)perylene	EPA 8270 E	PA
133.240	011	Benzo(a)pyrene	EPA 8270 E	PA
133.240	012	Benzyl Alcohol	EPA 8270 E	PA
133.240	013	Bis(2-chloroethoxy) Methane	EPA 8270 E	PA
133.240	014	Bis(2-chloroethyl) Ether	EPA 8270 E	PA
133.240	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 E	PA
133.240	016	Butyl Benzyl Phthalate	EPA 8270 E	PA
133.240	017	Chrysene	EPA 8270 E	PA
133.240	018	Dibenz(a,h)anthracene	EPA 8270 E	PA
133.240	019	Dibenzofuran	EPA 8270 E	PA
133.240	020	Di-n-butyl Phthalate	EPA 8270 E	PA
133.240	021	Diethyl Phthalate	EPA 8270 E	PA
133.240	022	Dimethyl Phthalate	EPA 8270 E	PA
133.240	023	Di-n-octyl Phthalate	EPA 8270 E	PA
133.240	024	Fluoranthene	EPA 8270 E	PA
133.240	025	Fluorene	EPA 8270 E	PA
133.240	026	Naphthalene	EPA 8270 E	PA
133.240	027	Nitrobenzene	EPA 8270 E	PA
133.240	028	Pentachlorobenzene	EPA 8270 E	PA
133.240	029	Pentachlorophenol	EPA 8270 E	PA
133.240	030	1-Chloronaphthalene	EPA 8270 E	PA
133.240	031	1,2-Dichlorobenzene	EPA 8270 E	PA
133.240	032	1,3-Dichlorobenzene	EPA 8270 E	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
133.240	033	1,4-Dichlorobenzene	EPA 8270 E	PA
133.240	034	2-Chloronaphthalene	EPA 8270 E	PA
133.240	035	2-Chlorophenol	EPA 8270 E	PA
133.240	036	2,4-Dichlorophenol	EPA 8270 E	PA
133.240	037	2,4-Dimethylphenol	EPA 8270 E	PA
133.240	038	2,4-Dinitrophenol	EPA 8270 E	PA
133.240	039	2,4-Dinitrotoluene	EPA 8270 E	PA
133.240	040	2,6-Dichlorophenol	EPA 8270 E	PA
133.240	041	2,6-Dinitrotoluene	EPA 8270 E	PA
133.240	042	2-Nitroaniline	EPA 8270 E	PA
133.240	043	2-Nitrophenol	EPA 8270 E	PA
133.240	044	3-Nitroaniline	EPA 8270 E	PA
133.240	045	3,3'-Dichlorobenzidine	EPA 8270 E	PA
133.240	046	4-Chloroaniline	EPA 8270 E	PA
133.240	047	4-Chloro-3-methylphenol	EPA 8270 E	PA
133.240	048	4-Bromophenyl Phenyl Ether	EPA 8270 E	PA
133.240	049	4-Chlorophenyl Phenyl Ether	EPA 8270 E	PA
133.240	050	4-Nitroaniline	EPA 8270 E	PA
133.240	051	4-Nitrophenol	EPA 8270 E	PA
133.240	076	Parathion Ethyl	EPA 8270 E	PA
133.240	077	Parathion Methyl	EPA 8270 E	PA
133.240	078	Phorate	EPA 8270 E	PA
133.240	087	N-nitrosodiethylamine	EPA 8270 E	PA
133.240	088	N-nitrosodimethylamine	EPA 8270 E	PA
133.240	089	N-nitrosodiphenylamine	EPA 8270 E	PA
133.240	090	N-nitroso-di-n-propylamine	EPA 8270 E	PA
133.240	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 E	PA
133.240	092	Isophorone	EPA 8270 E	PA
133.240	093	2-Methylnaphthalene	EPA 8270 E	PA
133.240	094	Phenanthrene	EPA 8270 E	PA
133.267	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290 A	PA
133.267	002	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290 A	PA
133.267	003	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A	PA
133.267	004	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A	PA
133.267	005	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
133.267	006	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290 A	PA
133.267	007	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 8290 A	PA
133.267	008	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	EPA 8290 A	PA
133.267	009	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290 A	PA
133.267	010	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290 A	PA
133.267	011	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A	PA
133.267	012	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A	PA
133.267	013	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A	PA
133.267	014	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A	PA
133.267	015	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	EPA 8290 A	PA
133.267	016	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	EPA 8290 A	PA
133.267	017	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 8290 A	PA
133.267	018	Total Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290 A	PA
133.267	019	Total Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290 A	PA
133.267	020	Total Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A	PA
133.267	021	Total Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290 A	PA
133.267	022	Total Tetrachlorodibenzofuran (TCDF)	EPA 8290 A	PA

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
133.267	023	Total Pentachlorodibenzofuran (PeCDF)	EPA 8290 A	PA
133.267	024	Total Hexachlorodibenzofuran (HxCDF)	EPA 8290 A	PA
133.267	025	Total Heptachlorodibenzofuran (HpCDF)	EPA 8290 A	PA
133.280	001	Acetaldehyde	EPA 8315 A	PA
133.280	010	Formaldehyde	EPA 8315 A	PA
133.380	001	N-Ethylperfluorooctane Sulfonamide (EtFOSAm)	DoD QSM Version 5.1 (or newer)	DOD
133.380	002	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	DoD QSM Version 5.1 (or newer)	DOD
133.380	003	N-Ethylperfluorooctane Sulfonamido Ethanol (EtFOSE)	DoD QSM Version 5.1 (or newer)	DOD
133.380	004	4:2 Fluorotelomer Sulfonic Acid (4:2 FTS)	DoD QSM Version 5.1 (or newer)	DOD
133.380	005	6:2 Fluorotelomer Sulfonic Acid (6:2 FTS)	DoD QSM Version 5.1 (or newer)	DOD
133.380	006	8:2 Fluorotelomer Sulfonic Acid (8:2 FTS)	DoD QSM Version 5.1 (or newer)	DOD
133.380	007	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	DoD QSM Version 5.1 (or newer)	DOD
133.380	008	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	DoD QSM Version 5.1 (or newer)	DOD
133.380	009	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	DoD QSM Version 5.1 (or newer)	DOD
133.380	010	N-Methylperfluorooctane Sulfonamide (NMeFOSA)	DoD QSM Version 5.1 (or newer)	DOD
133.380	011	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	DoD QSM Version 5.1 (or newer)	DOD
133.380	012	N-Methylperfluorooctane Sulfonamido Ethanol (NMeFOSE)	DoD QSM Version 5.1 (or newer)	DOD

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
133.380	013	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	DoD QSM Version 5.1 (or newer)	DOD
133.380	014	Perfluorobutanoic Acid (PFBA)	DoD QSM Version 5.1 (or newer)	DOD
133.380	015	Perfluorobutane Sulfonic Acid (PFBS)	DoD QSM Version 5.1 (or newer)	DOD
133.380	016	Perfluorodecanoic Acid (PFDA)	DoD QSM Version 5.1 (or newer)	DOD
133.380	017	Perfluorododecanoic Acid (PFDoA)	DoD QSM Version 5.1 (or newer)	DOD
133.380	018	Perfluorodecane Sulfonic Acid (PFDS)	DoD QSM Version 5.1 (or newer)	DOD
133.380	019	Perfluoroheptanoic Acid (PFHpA)	DoD QSM Version 5.1 (or newer)	DOD
133.380	020	Perfluoroheptane Sulfonic Acid (PFHpS)	DoD QSM Version 5.1 (or newer)	DOD
133.380	021	Perfluorohexane Sulfonic Acid (PFHxS)	DoD QSM Version 5.1 (or newer)	DOD
133.380	022	Perfluorohexanoic Acid (PFHxA)	DoD QSM Version 5.1 (or newer)	DOD
133.380	023	Perfluorononanoic Acid (PFNA)	DoD QSM Version 5.1 (or newer)	DOD
133.380	024	Perfluorooctanoic Acid (PFOA)	DoD QSM Version 5.1 (or newer)	DOD
133.380	025	Perfluorooctane Sulfonic Acid (PFOS)	DoD QSM Version 5.1 (or newer)	DOD
133.380	026	Perfluorooctane Sulfonamide (PFOSAm)	DoD QSM Version 5.1 (or newer)	DOD
133.380	027	Perfluoropentanoic Acid (PFPeA)	DoD QSM Version 5.1 (or newer)	DOD
133.380	028	Perfluoropentane Sulfonic Acid (PFPeS)	DoD QSM Version 5.1 (or newer)	DOD

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
133.380	029	Perfluorotetradecanoic Acid (PFTDA)	DoD QSM Version 5.1 (or newer)	DOD
133.380	030	Perfluoroundecanoic Acid (PFUnDA)	DoD QSM Version 5.1 (or newer)	DOD
133.380	031	Perfluoroundecanoic Acid (PFUnDA)	DoD QSM Version 5.1 (or newer)	DOD
133.380	032	10:2 Fluorotelomer Sulfonic Acid (10:2 FTS)	DoD QSM Version 5.1 (or newer)	DOD
133.380	033	Perfluorohexadecanoic Acid (PFHxDA)	DoD QSM Version 5.1 (or newer)	DOD
133.380	034	Perfluorononane Sulfonic Acid (PFNS)	DoD QSM Version 5.1 (or newer)	DOD
133.380	035	Perfluorooctadecanoic Acid (PFODA)	DoD QSM Version 5.1 (or newer)	DOD

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

Eurofins Eaton Analytical, LLC - Monrovia

750 Royal Oaks Drive, Suite 100

Monrovia, CA 91016

Scope of the certificate is limited to the
"Fields of Accreditation"
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of
Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **2813**

Effective Date: **2/2/2021**

Expiration Date: **2/1/2023**

Sacramento, California
subject to forfeiture or revocation

Christine Sotelo, Chief
Environmental Laboratory Accreditation Program

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Accredited Fields of Testing

Eurofins Eaton Analytical, LLC - Monrovia

750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016
Phone: 6263861100

Certificate No. **2813**
Expiration Date **2/1/2023**

Field of Testing: 101 - Microbiology of Drinking Water

101.010	001	Heterotrophic Bacteria	SM 9215 B
101.020	001	Total Coliform P/A	SM 9221 B
101.020	002	Fecal Coliform P/A	SM 9221 B,E
101.020	003	E. coli P/A	SM 9221 B,F
101.020	004	Total Coliform (Enumeration)	SM 9221 B,C
101.020	005	Fecal Coliform (Enumeration)	SM 9221 B,E
101.020	006	E. coli (Enumeration)	SM 9221 B,F
101.050	001	Total Coliform P/A	SM 9223 B Colilert
101.050	002	E. coli P/A	SM 9223 B Colilert
101.050	003	Total Coliform (Enumeration)	SM 9223 B Colilert
101.050	004	E. coli (Enumeration)	SM 9223 B Colilert
101.050	005	Total Coliform P/A	SM 9223 B Colilert 18
101.050	006	E. coli P/A	SM 9223 B Colilert 18
101.050	007	Total Coliform (Enumeration)	SM 9223 B Colilert 18
101.050	008	E. coli (Enumeration)	SM 9223 B Colilert 18
101.050	009	Total Coliform P/A	SM 9223 B Colisure
101.050	010	E. coli P/A	SM 9223 B Colisure
101.140	001	Enterococci	SM 9230 B
101.170	001	Enterococci	Enterolert

Field of Testing: 102 - Inorganic Chemistry of Drinking Water

102.015	001	Hydrogen Ion (pH)	EPA 150.1
102.020	001	Turbidity	EPA 180.1
102.026	001	Calcium	EPA 200.7
102.026	002	Magnesium	EPA 200.7
102.026	003	Potassium	EPA 200.7
102.026	004	Silica	EPA 200.7
102.026	005	Sodium	EPA 200.7
102.026	006	Hardness (Calculation)	EPA 200.7
102.030	001	Bromide	EPA 300.0
102.030	002	Chlorate	EPA 300.0
102.030	003	Chloride	EPA 300.0
102.030	004	Chlorite	EPA 300.0
102.030	006	Nitrate (as N)	EPA 300.0

102.030	007	Nitrite (as N)	EPA 300.0
102.030	009	Sulfate (as SO4)	EPA 300.0
102.040	001	Bromide	EPA 300.1
102.040	003	Chlorate	EPA 300.1
102.040	004	Bromate	EPA 300.1
102.040	008	Nitrite (as N)	EPA 300.1
102.044	001	Bromate	EPA 317.0
102.045	001	Perchlorate	EPA 314.0
102.047	001	Perchlorate	EPA 331.0
102.050	001	Cyanide, Total	EPA 335.4
102.060	001	Nitrate (as N) (Calculation)	EPA 353.2
102.061	001	Nitrite (as N)	EPA 353.2
102.100	001	Alkalinity	SM 2320 B-1997
102.120	001	Hardness (Calculation)	SM 2340 B-1997
102.130	001	Specific Conductance	SM 2510 B-1997
102.140	001	Residue, Filterable TDS	SM 2540 C-1997
102.175	001	Chlorine, Free	SM 4500-Cl G-2000
102.175	002	Chlorine, Total Residual	SM 4500-Cl G-2000
102.180	001	Chlorine Dioxide	SM 4500-ClO2 D-2000
102.191	001	Cyanide, Total	SM 4500-CN F-1999
102.200	001	Fluoride	SM 4500-F C-1997
102.203	001	Hydrogen Ion (pH)	SM 4500-H+ B-2000
102.240	001	Phosphate,Ortho (as P)	SM 4500-P E-1999
102.242	001	Silica	SM 4500-SiO2 C-1997
102.262	001	Organic Carbon-Total (TOC)	SM 5310 C-2000
102.263	001	Dissolved Organic Carbon (DOC)	SM 5310 C-2000
102.270	001	Surfactants	SM 5540 C-2000
102.280	001	UV254	SM 5910 B-2011

Field of Testing: 103 - Toxic Chemical Elements of Drinking Water

103.130	001	Aluminum	EPA 200.7
103.130	003	Barium	EPA 200.7
103.130	004	Beryllium	EPA 200.7
103.130	007	Chromium	EPA 200.7
103.130	008	Copper	EPA 200.7
103.130	009	Iron	EPA 200.7
103.130	011	Manganese	EPA 200.7
103.130	012	Nickel	EPA 200.7
103.130	015	Silver	EPA 200.7
103.130	017	Zinc	EPA 200.7
103.130	018	Boron	EPA 200.7
103.140	001	Aluminum	EPA 200.8
103.140	002	Antimony	EPA 200.8

103.140	003	Arsenic	EPA 200.8
103.140	004	Barium	EPA 200.8
103.140	005	Beryllium	EPA 200.8
103.140	006	Cadmium	EPA 200.8
103.140	007	Chromium	EPA 200.8
103.140	008	Copper	EPA 200.8
103.140	009	Lead	EPA 200.8
103.140	010	Manganese	EPA 200.8
103.140	011	Mercury	EPA 200.8
103.140	012	Nickel	EPA 200.8
103.140	013	Selenium	EPA 200.8
103.140	014	Silver	EPA 200.8
103.140	015	Thallium	EPA 200.8
103.140	016	Zinc	EPA 200.8
103.140	018	Vanadium	EPA 200.8
103.301	001	Asbestos	EPA 100.2
103.310	001	Chromium VI (Hexavalent Chromium)	EPA 218.6
103.311	001	Chromium VI (Hexavalent Chromium)	EPA 218.7

Field of Testing: 104 - Volatile Organic Chemistry of Drinking Water

104.030	001	1,2-Dibromoethane (EDB)	EPA 504.1
104.030	002	1,2-Dibromo-3-chloropropane (DBCP)	EPA 504.1
104.035	001	1,2,3-Trichloropropane (TCP)	SRL 524M-TCP
104.040	001	Benzene	EPA 524.2
104.040	007	n-Butylbenzene	EPA 524.2
104.040	008	sec-Butylbenzene	EPA 524.2
104.040	009	tert-Butylbenzene	EPA 524.2
104.040	010	Carbon Tetrachloride	EPA 524.2
104.040	011	Chlorobenzene	EPA 524.2
104.040	015	2-Chlorotoluene	EPA 524.2
104.040	016	4-Chlorotoluene	EPA 524.2
104.040	019	1,3-Dichlorobenzene	EPA 524.2
104.040	020	1,2-Dichlorobenzene	EPA 524.2
104.040	021	1,4-Dichlorobenzene	EPA 524.2
104.040	022	Dichlorodifluoromethane	EPA 524.2
104.040	023	1,1-Dichloroethane	EPA 524.2
104.040	024	1,2-Dichloroethane (Ethylene Dichloride)	EPA 524.2
104.040	025	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 524.2
104.040	026	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 524.2
104.040	027	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 524.2
104.040	028	Dichloromethane (Methylene Chloride)	EPA 524.2
104.040	029	1,2-Dichloropropane	EPA 524.2
104.040	033	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 524.2

104.040	034	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 524.2
104.040	035	Ethylbenzene	EPA 524.2
104.040	037	Isopropylbenzene	EPA 524.2
104.040	039	Naphthalene	EPA 524.2
104.040	041	N-propylbenzene	EPA 524.2
104.040	042	Styrene	EPA 524.2
104.040	043	1,1,1,2-Tetrachloroethane	EPA 524.2
104.040	044	1,1,2,2-Tetrachloroethane	EPA 524.2
104.040	045	Tetrachloroethylene (Tetrachloroethene)	EPA 524.2
104.040	046	Toluene	EPA 524.2
104.040	047	1,2,3-Trichlorobenzene	EPA 524.2
104.040	048	1,2,4-Trichlorobenzene	EPA 524.2
104.040	049	1,1,1-Trichloroethane	EPA 524.2
104.040	050	1,1,2-Trichloroethane	EPA 524.2
104.040	051	Trichloroethylene (Trichloroethene)	EPA 524.2
104.040	052	Trichlorofluoromethane	EPA 524.2
104.040	054	1,2,4-Trimethylbenzene	EPA 524.2
104.040	055	1,3,5-Trimethylbenzene	EPA 524.2
104.040	056	Vinyl Chloride	EPA 524.2
104.040	058	m-Xylene	EPA 524.2
104.040	059	o-Xylene	EPA 524.2
104.040	060	p-Xylene	EPA 524.2
104.040	061	Carbon Disulfide	EPA 524.2
104.040	062	Methyl isobutyl ketone (MIBK, 4-Methyl-2-pentanone)	EPA 524.2
104.040	063	m+p-Xylene	EPA 524.2
104.045	001	Bromodichloromethane	EPA 524.2
104.045	002	Bromoform	EPA 524.2
104.045	003	Chloroform	EPA 524.2
104.045	004	Dibromochloromethane (Chlorodibromomethane)	EPA 524.2
104.050	002	Methyl tert-butyl Ether (MTBE)	EPA 524.2
104.050	003	tert-Amyl Methyl Ether (TAME)	EPA 524.2
104.050	004	Ethyl tert-butyl Ether (ETBE)	EPA 524.2
104.050	005	Trichlorotrifluoroethane (Freon 113)	EPA 524.2
104.050	006	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 524.2

Field of Testing: 105 - Semi-volatile Organic Chemistry of Drinking Water

105.010	002	Alachlor	EPA 505
105.010	004	Chlordane	EPA 505
105.010	006	Endrin	EPA 505
105.010	007	Heptachlor	EPA 505
105.010	008	Heptachlor Epoxide	EPA 505
105.010	011	Lindane (HCH-gamma)	EPA 505
105.010	012	Methoxychlor	EPA 505

105.010	014	Toxaphene	EPA 505
105.010	015	PCBs as Aroclors (screen)	EPA 505
105.083	001	2,4-D	EPA 515.4
105.083	002	Dinoseb	EPA 515.4
105.083	003	Pentachlorophenol	EPA 515.4
105.083	004	Picloram	EPA 515.4
105.083	005	2,4,5-TP (Silvex)	EPA 515.4
105.083	006	Dalapon	EPA 515.4
105.083	007	Bentazon	EPA 515.4
105.083	008	Dicamba	EPA 515.4
105.085	001	1,4-Dioxane	EPA 522
105.090	001	Alachlor	EPA 525.2
105.090	002	Aldrin	EPA 525.2
105.090	003	Atrazine	EPA 525.2
105.090	004	Benzo(a)pyrene	EPA 525.2
105.090	005	Butachlor	EPA 525.2
105.090	006	Chlordane	EPA 525.2
105.090	007	Dieldrin	EPA 525.2
105.090	008	Di(2-ethylhexyl) Adipate	EPA 525.2
105.090	009	Di(2-ethylhexyl) Phthalate	EPA 525.2
105.090	013	Endrin	EPA 525.2
105.090	014	Heptachlor	EPA 525.2
105.090	015	Heptachlor Epoxide	EPA 525.2
105.090	016	Hexachlorobenzene	EPA 525.2
105.090	017	Hexachlorocyclopentadiene	EPA 525.2
105.090	018	Lindane (HCH-gamma)	EPA 525.2
105.090	019	Methoxychlor	EPA 525.2
105.090	022	Molinate	EPA 525.2
105.090	025	Simazine	EPA 525.2
105.090	028	Thiobencarb	EPA 525.2
105.101	001	Carbofuran (Furadan)	EPA 531.2
105.101	002	Oxamyl	EPA 531.2
105.101	003	Aldicarb (Temik)	EPA 531.2
105.101	004	Aldicarb Sulfone	EPA 531.2
105.101	005	Aldicarb Sulfoxide	EPA 531.2
105.101	006	Carbaryl (Sevin)	EPA 531.2
105.101	007	3-Hydroxycarbofuran	EPA 531.2
105.101	008	Methomyl (Lannate)	EPA 531.2
105.106	001	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	EPA 537.1
105.106	002	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	EPA 537.1
105.106	003	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	EPA 537.1
105.106	004	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	EPA 537.1

105.106	005	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	EPA 537.1
105.106	006	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	EPA 537.1
105.106	007	Perfluorobutane Sulfonic Acid (PFBS)	EPA 537.1
105.106	008	Perfluorodecanoic Acid (PFDA)	EPA 537.1
105.106	009	Perfluorododecanoic Acid (PFDoA)	EPA 537.1
105.106	010	Perfluoroheptanoic Acid (PFHpA)	EPA 537.1
105.106	011	Perfluorohexane Sulfonic Acid (PFHxS)	EPA 537.1
105.106	012	Perfluorohexanoic Acid (PFHxA)	EPA 537.1
105.106	013	Perfluorononanoic Acid (PFNA)	EPA 537.1
105.106	014	Perfluorooctanoic Acid (PFOA)	EPA 537.1
105.106	015	Perfluorooctane Sulfonic Acid (PFOS)	EPA 537.1
105.106	016	Perfluorotetradecanoic Acid (PFTDA)	EPA 537.1
105.106	017	Perfluorotridecanoic Acid (PFTrDA)	EPA 537.1
105.106	018	Perfluoroundecanoic Acid (PFUnDA)	EPA 537.1
105.120	001	Glyphosate	EPA 547
105.140	001	Endothall	EPA 548.1
105.150	001	Diquat	EPA 549.2
105.170	010	1,2-Dibromo-3-chloropropane (DBCP)	EPA 551.1
105.170	011	1,2-Dibromoethane (EDB)	EPA 551.1
105.175	001	Bromodichloromethane	EPA 551.1
105.175	002	Bromoform	EPA 551.1
105.175	003	Chloroform	EPA 551.1
105.175	004	Dibromochloromethane (Chlorodibromomethane)	EPA 551.1
105.190	001	Bromoacetic Acid	SM 6251 B
105.190	003	Chloroacetic Acid	SM 6251 B
105.190	005	Dibromoacetic Acid	SM 6251 B
105.190	006	Dichloroacetic Acid	SM 6251 B
105.190	007	Trichloroacetic Acid	SM 6251 B
105.230	002	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) Screening Only	EPA 1613 B

Field of Testing: 106 - Radionuclides in Drinking Water

106.010	001	Gross Alpha	EPA 900.0
106.010	002	Gross Beta	EPA 900.0
106.092	001	Uranium	EPA 200.8
106.270	001	Gross Alpha	SM 7110 C
106.610	001	Radon-222	SM 7500-Rn
106.640	001	Radium-226	Georgia Inst. of Tech. rev 1.2
106.640	002	Radium-228	Georgia Inst. of Tech. rev 1.2

Field of Testing: 107 - Microbiological Methods for Non-Potable Water and Sewage Sludge

107.001	001	Total Coliform (Enumeration)	SM 9221 B,C-2006
107.001	002	Fecal Coliform (Enumeration)	SM 9221 C,E-2006
107.001	003	E. coli (Enumeration)	SM 9221 C,F-2006
107.007	001	Enterococci	SM 9230 B-2007

107.007	002	Fecal Streptococci	SM 9230 B-2007
107.013	001	E. coli (Enumeration)	SM 9223 B-2004
107.015	001	E. coli (Enumeration)	SM 9223 B-2004 Colilert 18
107.017	001	Enterococci	Enterolert

Field of Testing: 108 - Inorganic Constituents in Non-Potable Water

108.001	001	Specific Conductance	EPA 120.1 (1982 Rev.1.0)
108.007	001	Residue, Volatile	EPA 160.4 (1971)
108.009	001	Turbidity	EPA 180.1 (1993 Rev. 2.0)
108.013	001	Calcium	EPA 200.7 (1994 Rev. 4.4)
108.013	002	Magnesium	EPA 200.7 (1994 Rev. 4.4)
108.013	004	Potassium	EPA 200.7 (1994 Rev. 4.4)
108.013	005	Silica, Dissolved	EPA 200.7 (1994 Rev. 4.4)
108.013	006	Sodium	EPA 200.7 (1994 Rev. 4.4)
108.017	001	Bromide	EPA 300.0 (1993 Rev. 2.1)
108.017	002	Chloride	EPA 300.0 (1993 Rev. 2.1)
108.017	004	Nitrate (as N)	EPA 300.0 (1993 Rev. 2.1)
108.017	005	Nitrate-Nitrite (as N)	EPA 300.0 (1993 Rev. 2.1)
108.017	006	Nitrite (as N)	EPA 300.0 (1993 Rev. 2.1)
108.017	008	Sulfate (as SO4)	EPA 300.0 (1993 Rev. 2.1)
108.023	001	Cyanide, Total	EPA 335.4 (1993 Rev. 1.0)
108.025	001	Ammonia (as N)	EPA 350.1 (1993 Rev. 2.0)
108.029	001	Kjeldahl Nitrogen,Total (as N)	EPA 351.2 (1993 Rev. 2.0)
108.033	001	Nitrate-Nitrite (as N)	EPA 353.2 (1993 Rev. 2.0)
108.033	002	Nitrite (as N)	EPA 353.2 (1993 Rev. 2.0)
108.035	001	Phosphate,Ortho (as P)	EPA 365.1 (1993 Rev. 2.0)
108.035	002	Phosphorus,Total	EPA 365.1 (1993 Rev. 2.0)
108.045	001	Chemical Oxygen Demand	EPA 410.4 (1993 Rev. 2.0)
108.047	001	Phenols, Total	EPA 420.1 (1978 Rev. 1.0)
108.049	001	Phenols, Total	EPA 420.4 (1993 Rev. 2.0)
108.055	001	Color	SM 2120 B-2011
108.063	001	Alkalinity	SM 2320 B-2011
108.065	001	Hardness (Calculation)	SM 2340 B-2011
108.069	001	Specific Conductance	SM 2510 B-2011
108.071	001	Residue, Total	SM 2540 B-2011
108.073	001	Residue, Filterable TDS	SM 2540 C-2011
108.075	001	Residue, Non-filterable TSS	SM 2540 D-2011
108.077	001	Residue, Volatile	SM 2540 E-2011
108.079	001	Residue, Settleable	SM 2540 F-2011
108.114	001	Chlorine, Total Residual	SM 4500-Cl G-2011
108.114	002	Chlorine, Free	SM 4500-Cl G-2011
108.129	001	Cyanide, Available	SM 4500-CN G-2011
108.137	001	Hydrogen Ion (pH)	SM 4500-H+ B-2011

108.175	001	Phosphate,Ortho (as P)	SM 4500-P E-2011
108.175	002	Phosphorus,Total	SM 4500-P E-2011
108.184	001	Silica, Dissolved	SM 4500-SiO2 C-2011
108.201	001	Sulfide (as S)	SM 4500-S D-2011
108.207	001	Biochemical Oxygen Demand	SM 5210 B-2011
108.207	002	Carbonaceous BOD	SM 5210 B-2011
108.213	001	Chemical Oxygen Demand	SM 5220 D-2011
108.217	001	Organic Carbon-Total (TOC)	SM 5310 C-2011
108.225	001	Surfactants	SM 5540 C-2011

Field of Testing: 109 - Metals and Trace Elements in Non-Potable Water

109.623	001	Aluminum	EPA 200.7 (1994 Rev. 4.4)
109.623	002	Antimony	EPA 200.7 (1994 Rev. 4.4)
109.623	004	Barium	EPA 200.7 (1994 Rev. 4.4)
109.623	005	Beryllium	EPA 200.7 (1994 Rev. 4.4)
109.623	006	Boron	EPA 200.7 (1994 Rev. 4.4)
109.623	007	Cadmium	EPA 200.7 (1994 Rev. 4.4)
109.623	008	Chromium	EPA 200.7 (1994 Rev. 4.4)
109.623	009	Cobalt	EPA 200.7 (1994 Rev. 4.4)
109.623	010	Copper	EPA 200.7 (1994 Rev. 4.4)
109.623	011	Iron	EPA 200.7 (1994 Rev. 4.4)
109.623	012	Lead	EPA 200.7 (1994 Rev. 4.4)
109.623	013	Manganese	EPA 200.7 (1994 Rev. 4.4)
109.623	014	Molybdenum	EPA 200.7 (1994 Rev. 4.4)
109.623	015	Nickel	EPA 200.7 (1994 Rev. 4.4)
109.623	017	Silver	EPA 200.7 (1994 Rev. 4.4)
109.623	018	Thallium	EPA 200.7 (1994 Rev. 4.4)
109.623	019	Tin	EPA 200.7 (1994 Rev. 4.4)
109.623	020	Titanium	EPA 200.7 (1994 Rev. 4.4)
109.623	021	Vanadium	EPA 200.7 (1994 Rev. 4.4)
109.623	022	Zinc	EPA 200.7 (1994 Rev. 4.4)
109.625	001	Aluminum	EPA 200.8 (1994 Rev. 5.4)
109.625	002	Antimony	EPA 200.8 (1994 Rev. 5.4)
109.625	003	Arsenic	EPA 200.8 (1994 Rev. 5.4)
109.625	004	Barium	EPA 200.8 (1994 Rev. 5.4)
109.625	005	Beryllium	EPA 200.8 (1994 Rev. 5.4)
109.625	007	Cadmium	EPA 200.8 (1994 Rev. 5.4)
109.625	008	Chromium	EPA 200.8 (1994 Rev. 5.4)
109.625	009	Cobalt	EPA 200.8 (1994 Rev. 5.4)
109.625	010	Copper	EPA 200.8 (1994 Rev. 5.4)
109.625	013	Lead	EPA 200.8 (1994 Rev. 5.4)
109.625	014	Manganese	EPA 200.8 (1994 Rev. 5.4)
109.625	015	Molybdenum	EPA 200.8 (1994 Rev. 5.4)

109.625	016	Nickel	EPA 200.8 (1994 Rev. 5.4)
109.625	017	Selenium	EPA 200.8 (1994 Rev. 5.4)
109.625	018	Silver	EPA 200.8 (1994 Rev. 5.4)
109.625	019	Thallium	EPA 200.8 (1994 Rev. 5.4)
109.625	020	Tin	EPA 200.8 (1994 Rev. 5.4)
109.625	021	Titanium	EPA 200.8 (1994 Rev. 5.4)
109.625	022	Vanadium	EPA 200.8 (1994 Rev. 5.4)
109.625	023	Zinc	EPA 200.8 (1994 Rev. 5.4)
109.629	001	Chromium VI (Hexavalent Chromium)	EPA 218.6 (1994 Rev. 3.3)
109.685	002	Chromium VI (Hexavalent Chromium)	SM 3500-Cr B-2011

Field of Testing: 112 - Radionuclides in Non-Potable Water

112.001	001	Gross Alpha	EPA 900.0
112.001	002	Gross Beta	EPA 900.0

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

Eurofins St. Louis

13715 Rider Trail North

Earth City, MO 63045

Scope of the certificate is limited to the
"Fields of Accreditation"
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of
Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **2886**

Effective Date: **7/1/2022**

Expiration Date: **6/30/2023**

Sacramento, California
subject to forfeiture or revocation

Christine Sotelo, Program Manager
Environmental Laboratory Accreditation Program

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Fields of Accreditation

Eurofins St. Louis

13715 Rider Trail North
Earth City, MO 63045
Phone: 3142988566

Certificate Number: 2886
Expiration Date: 6/30/2023

				Primary Accreditation Body
Field of Accreditation: 106 - Radionuclides in Drinking Water				
106.010	001	Gross Alpha	EPA 900.0	FL / LA
106.010	002	Gross Beta	EPA 900.0	FL / LA
106.050	002	Radium-226	EPA 903.0	FL / LA
106.060	001	Radium-228	EPA 904.0	FL / LA
106.070	003	Strontium-90	EPA 905.0	FL / LA
106.080	001	Tritium	EPA 906.0	FL / LA
106.092	001	Uranium	EPA 200.8	FL / LA
106.220	001	Strontium-89, 90	DOE Sr-02	FL / LA
106.230	001	Uranium	DOE U-02	FL / LA
106.270	001	Gross Alpha	SM 7110 C	FL / LA
106.610	001	Radon-222	SM 7500-Rn	FL / LA
Field of Accreditation: 108 - Inorganic Constituents in Non-Potable Water				
108.013	001	Calcium	EPA 200.7	FL / LA
108.013	002	Magnesium	EPA 200.7	FL / LA
108.013	004	Potassium	EPA 200.7	FL / LA
108.013	006	Sodium	EPA 200.7	FL / LA
108.015	001	Calcium	EPA 200.8	FL / LA
108.015	002	Magnesium	EPA 200.8	FL / LA
108.015	003	Potassium	EPA 200.8	FL / LA
108.015	005	Sodium	EPA 200.8	FL / LA
Field of Accreditation: 109 - Metals and Trace Elements in Non-Potable Water				
109.623	001	Aluminum	EPA 200.7	FL / LA
109.623	002	Antimony	EPA 200.7	FL / LA
109.623	003	Arsenic	EPA 200.7	FL / LA
109.623	004	Barium	EPA 200.7	FL / LA
109.623	005	Beryllium	EPA 200.7	FL / LA
109.623	006	Boron	EPA 200.7	FL / LA
109.623	007	Cadmium	EPA 200.7	FL / LA
109.623	008	Chromium	EPA 200.7	FL / LA
109.623	009	Cobalt	EPA 200.7	FL / LA
109.623	010	Copper	EPA 200.7	FL / LA
109.623	011	Iron	EPA 200.7	FL / LA
109.623	012	Lead	EPA 200.7	FL / LA

109.623	013	Manganese	EPA 200.7	FL / LA
109.623	014	Molybdenum	EPA 200.7	FL / LA
109.623	015	Nickel	EPA 200.7	FL / LA
109.623	016	Selenium	EPA 200.7	FL / LA
109.623	017	Silver	EPA 200.7	FL / LA
109.623	018	Thallium	EPA 200.7	FL / LA
109.623	019	Tin	EPA 200.7	FL / LA
109.623	020	Titanium	EPA 200.7	FL / LA
109.623	021	Vanadium	EPA 200.7	FL / LA
109.623	022	Zinc	EPA 200.7	FL / LA
109.625	001	Aluminum	EPA 200.8	FL / LA
109.625	002	Antimony	EPA 200.8	FL / LA
109.625	003	Arsenic	EPA 200.8	FL / LA
109.625	004	Barium	EPA 200.8	FL / LA
109.625	005	Beryllium	EPA 200.8	FL / LA
109.625	007	Cadmium	EPA 200.8	FL / LA
109.625	008	Chromium	EPA 200.8	FL / LA
109.625	009	Cobalt	EPA 200.8	FL / LA
109.625	010	Copper	EPA 200.8	FL / LA
109.625	012	Iron	EPA 200.8	FL / LA
109.625	013	Lead	EPA 200.8	FL / LA
109.625	014	Manganese	EPA 200.8	FL / LA
109.625	015	Molybdenum	EPA 200.8	FL / LA
109.625	016	Nickel	EPA 200.8	FL / LA
109.625	017	Selenium	EPA 200.8	FL / LA
109.625	018	Silver	EPA 200.8	FL / LA
109.625	019	Thallium	EPA 200.8	FL / LA
109.625	020	Tin	EPA 200.8	FL / LA
109.625	021	Titanium	EPA 200.8	FL / LA
109.625	022	Vanadium	EPA 200.8	FL / LA
109.625	023	Zinc	EPA 200.8	FL / LA
109.635	001	Mercury	EPA 245.1	FL / LA

Field of Accreditation:112 - Radionuclides in Non-Potable Water

112.001	001	Gross Alpha	EPA 900.0	FL / LA
112.001	002	Gross Beta	EPA 900.0	FL / LA
112.003	001	Total Alpha Radium	EPA 903.0	FL / LA

Field of Accreditation:114 - Inorganic Constituents in Hazardous Waste

114.315	002	Antimony	EPA 6010 B	ANAB
114.315	003	Arsenic	EPA 6010 B	ANAB
114.315	004	Barium	EPA 6010 B	ANAB
114.315	005	Beryllium	EPA 6010 B	ANAB
114.315	007	Cadmium	EPA 6010 B	ANAB

114.315	009	Chromium	EPA 6010 B	ANAB
114.315	010	Cobalt	EPA 6010 B	ANAB
114.315	011	Copper	EPA 6010 B	ANAB
114.315	013	Lead	EPA 6010 B	ANAB
114.315	016	Molybdenum	EPA 6010 B	ANAB
114.315	017	Nickel	EPA 6010 B	ANAB
114.315	019	Selenium	EPA 6010 B	ANAB
114.315	020	Silver	EPA 6010 B	ANAB
114.315	023	Thallium	EPA 6010 B	ANAB
114.315	026	Vanadium	EPA 6010 B	ANAB
114.315	027	Zinc	EPA 6010 B	ANAB
114.325	001	Aluminum	EPA 6010 D	FL / LA
114.325	002	Antimony	EPA 6010 D	FL / LA
114.325	003	Arsenic	EPA 6010 D	FL / LA
114.325	004	Barium	EPA 6010 D	FL / LA
114.325	005	Beryllium	EPA 6010 D	FL / LA
114.325	006	Boron	EPA 6010 D	FL / LA
114.325	007	Cadmium	EPA 6010 D	FL / LA
114.325	008	Calcium	EPA 6010 D	FL / LA
114.325	009	Chromium	EPA 6010 D	FL / LA
114.325	010	Cobalt	EPA 6010 D	FL / LA
114.325	011	Copper	EPA 6010 D	FL / LA
114.325	012	Iron	EPA 6010 D	FL / LA
114.325	013	Lead	EPA 6010 D	FL / LA
114.325	014	Magnesium	EPA 6010 D	FL / LA
114.325	015	Manganese	EPA 6010 D	FL / LA
114.325	016	Molybdenum	EPA 6010 D	FL / LA
114.325	017	Nickel	EPA 6010 D	FL / LA
114.325	018	Potassium	EPA 6010 D	FL / LA
114.325	019	Selenium	EPA 6010 D	FL / LA
114.325	020	Silver	EPA 6010 D	FL / LA
114.325	021	Sodium	EPA 6010 D	FL / LA
114.325	022	Strontium	EPA 6010 D	FL / LA
114.325	023	Thallium	EPA 6010 D	FL / LA
114.325	024	Tin	EPA 6010 D	FL / LA
114.325	025	Titanium	EPA 6010 D	FL / LA
114.325	026	Vanadium	EPA 6010 D	FL / LA
114.325	027	Zinc	EPA 6010 D	FL / LA
114.335	002	Antimony	EPA 6020	ANAB
114.335	003	Arsenic	EPA 6020	ANAB
114.335	004	Barium	EPA 6020	ANAB
114.335	005	Beryllium	EPA 6020	ANAB

114.335	006	Cadmium	EPA 6020	ANAB
114.335	007	Chromium	EPA 6020	ANAB
114.335	008	Cobalt	EPA 6020	ANAB
114.335	009	Copper	EPA 6020	ANAB
114.335	010	Lead	EPA 6020	ANAB
114.335	012	Nickel	EPA 6020	ANAB
114.335	013	Silver	EPA 6020	ANAB
114.335	014	Thallium	EPA 6020	ANAB
114.335	015	Zinc	EPA 6020	ANAB
114.345	001	Aluminum	EPA 6020 B	FL / LA
114.345	002	Antimony	EPA 6020 B	FL / LA
114.345	003	Arsenic	EPA 6020 B	FL / LA
114.345	004	Barium	EPA 6020 B	FL / LA
114.345	005	Beryllium	EPA 6020 B	FL / LA
114.345	006	Cadmium	EPA 6020 B	FL / LA
114.345	007	Calcium	EPA 6020 B	FL / LA
114.345	008	Chromium	EPA 6020 B	FL / LA
114.345	009	Cobalt	EPA 6020 B	FL / LA
114.345	010	Copper	EPA 6020 B	FL / LA
114.345	011	Iron	EPA 6020 B	FL / LA
114.345	012	Lead	EPA 6020 B	FL / LA
114.345	013	Magnesium	EPA 6020 B	FL / LA
114.345	014	Manganese	EPA 6020 B	FL / LA
114.345	016	Nickel	EPA 6020 B	FL / LA
114.345	017	Potassium	EPA 6020 B	FL / LA
114.345	018	Selenium	EPA 6020 B	FL / LA
114.345	019	Silver	EPA 6020 B	FL / LA
114.345	020	Sodium	EPA 6020 B	FL / LA
114.345	021	Thallium	EPA 6020 B	FL / LA
114.345	022	Vanadium	EPA 6020 B	FL / LA
114.345	023	Zinc	EPA 6020 B	FL / LA
114.345	024	Molybdenum	EPA 6020 B	FL / LA
114.535	001	Mercury	EPA 7471 A	FL / LA
114.545	001	Mercury	EPA 7471 B	FL / LA

Field of Accreditation:118 - Radionuclides in Hazardous Waste

118.315	001	Gross Alpha	EPA 9310	FL / LA
118.315	002	Gross Beta	EPA 9310	FL / LA
118.325	001	Total Alpha Radium	EPA 9315	FL / LA
118.335	001	Radium-228	EPA 9320	FL / LA
118.465	001	Strontium	DOE Sr-02	FL / LA
118.485	001	Uranium	DOE U-02	FL / LA

Field of Accreditation:130 - Inorganic constituents in Hazardous waste (Matrix Aqueous)

130.010	002	Antimony	EPA 6010 B	ANAB
130.010	003	Arsenic	EPA 6010 B	ANAB
130.010	004	Barium	EPA 6010 B	ANAB
130.010	005	Beryllium	EPA 6010 B	ANAB
130.010	007	Cadmium	EPA 6010 B	ANAB
130.010	008	Calcium	EPA 6010 B	ANAB
130.010	009	Chromium	EPA 6010 B	ANAB
130.010	010	Cobalt	EPA 6010 B	ANAB
130.010	011	Copper	EPA 6010 B	ANAB
130.010	013	Lead	EPA 6010 B	ANAB
130.010	016	Molybdenum	EPA 6010 B	ANAB
130.010	017	Nickel	EPA 6010 B	ANAB
130.010	021	Sodium	EPA 6010 B	ANAB
130.010	022	Strontium	EPA 6010 B	ANAB
130.010	024	Tin	EPA 6010 B	ANAB
130.010	025	Titanium	EPA 6010 B	ANAB
130.020	001	Aluminum	EPA 6010 D	FL / LA
130.020	002	Antimony	EPA 6010 D	FL / LA
130.020	003	Arsenic	EPA 6010 D	FL / LA
130.020	004	Barium	EPA 6010 D	FL / LA
130.020	005	Beryllium	EPA 6010 D	FL / LA
130.020	006	Boron	EPA 6010 D	FL / LA
130.020	007	Cadmium	EPA 6010 D	FL / LA
130.020	008	Calcium	EPA 6010 D	FL / LA
130.020	009	Chromium	EPA 6010 D	FL / LA
130.020	010	Cobalt	EPA 6010 D	FL / LA
130.020	011	Copper	EPA 6010 D	FL / LA
130.020	012	Iron	EPA 6010 D	FL / LA
130.020	013	Lead	EPA 6010 D	FL / LA
130.020	014	Magnesium	EPA 6010 D	FL / LA
130.020	015	Manganese	EPA 6010 D	FL / LA
130.020	016	Molybdenum	EPA 6010 D	FL / LA
130.020	017	Nickel	EPA 6010 D	FL / LA
130.020	018	Potassium	EPA 6010 D	FL / LA
130.020	019	Selenium	EPA 6010 D	FL / LA
130.020	020	Silver	EPA 6010 D	FL / LA
130.020	021	Sodium	EPA 6010 D	FL / LA
130.020	022	Strontium	EPA 6010 D	FL / LA
130.020	023	Thallium	EPA 6010 D	FL / LA
130.020	024	Tin	EPA 6010 D	FL / LA
130.020	025	Titanium	EPA 6010 D	FL / LA
130.020	026	Vanadium	EPA 6010 D	FL / LA

130.020	027	Zinc	EPA 6010 D	FL / LA
130.030	002	Antimony	EPA 6020	ANAB
130.030	003	Arsenic	EPA 6020	ANAB
130.030	004	Barium	EPA 6020	ANAB
130.030	005	Beryllium	EPA 6020	ANAB
130.030	006	Cadmium	EPA 6020	ANAB
130.030	007	Chromium	EPA 6020	ANAB
130.030	008	Cobalt	EPA 6020	ANAB
130.030	009	Copper	EPA 6020	ANAB
130.030	010	Lead	EPA 6020	ANAB
130.030	012	Nickel	EPA 6020	ANAB
130.030	013	Silver	EPA 6020	ANAB
130.030	014	Thallium	EPA 6020	ANAB
130.030	015	Zinc	EPA 6020	ANAB
130.040	001	Aluminum	EPA 6020 B	FL / LA
130.040	002	Antimony	EPA 6020 B	FL / LA
130.040	003	Arsenic	EPA 6020 B	FL / LA
130.040	004	Barium	EPA 6020 B	FL / LA
130.040	005	Beryllium	EPA 6020 B	FL / LA
130.040	006	Cadmium	EPA 6020 B	FL / LA
130.040	007	Calcium	EPA 6020 B	FL / LA
130.040	008	Chromium	EPA 6020 B	FL / LA
130.040	009	Cobalt	EPA 6020 B	FL / LA
130.040	010	Copper	EPA 6020 B	FL / LA
130.040	011	Iron	EPA 6020 B	FL / LA
130.040	012	Lead	EPA 6020 B	FL / LA
130.040	013	Magnesium	EPA 6020 B	FL / LA
130.040	014	Manganese	EPA 6020 B	FL / LA
130.040	016	Nickel	EPA 6020 B	FL / LA
130.040	017	Potassium	EPA 6020 B	FL / LA
130.040	018	Selenium	EPA 6020 B	FL / LA
130.040	019	Silver	EPA 6020 B	FL / LA
130.040	020	Sodium	EPA 6020 B	FL / LA
130.040	021	Thallium	EPA 6020 B	FL / LA
130.040	022	Vanadium	EPA 6020 B	FL / LA
130.040	023	Zinc	EPA 6020 B	FL / LA
130.040	024	Molybdenum	EPA 6020 B	FL / LA
130.250	001	Mercury	EPA 7470 A	FL / LA

Field of Accreditation:134 - Radionucleotides in Hazardous Waste (Matrix Aqueous)

134.010	001	Gross Alpha	EPA 9310	FL / LA
134.010	002	Gross Beta	EPA 9310	FL / LA
134.020	001	Total Alpha Radium	EPA 9315	FL / LA

134.030	001	Radium-228	EPA 9320	FL / LA
134.170	001	Strontium	DOE Sr-02	FL / LA
134.190	001	Uranium	DOE U-02	FL / LA

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

Accredited Fields of Testing

Eurofins Sacramento

880 Riverside Parkway

West Sacramento, CA 95605

Phone: (916) 373-5600

Certificate No. **2897**

Expiration Date **1/31/2023** **INTERIM**

***As of 3/9/2022, this list supersedes all previous lists for this certificate number.**

Customers: Please verify the current accreditation standing with the State.

Field of Testing: 102 – Inorganic Chemistry of Drinking Water

Subgroup Code	Analyte Code	Analyte	Method	
102.045	001	Perchlorate	EPA 314.0	Interim
102.047	001	Perchlorate	EPA 331.0	Interim

Field of Testing: 105 – Semi-volatile Organic Chemistry of Drinking Water

Subgroup Code	Analyte Code	Analyte	Method	
105.106	001	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	EPA 537.1	Interim
105.106	002	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	EPA 537.1	Interim
105.106	003	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	EPA 537.1	Interim
105.106	004	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	EPA 537.1	Interim
105.106	005	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	EPA 537.1	Interim
105.106	006	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	EPA 537.1	Interim

Subgroup Code	Analyte Code	Analyte	Method
105.106	007	Perfluorobutane Sulfonic Acid (PFBS)	EPA 537.1 Interim
105.106	008	Perfluorodecanoic Acid (PFDA)	EPA 537.1 Interim
105.106	009	Perfluorododecanoic Acid (PFDoA)	EPA 537.1 Interim
105.106	010	Perfluoroheptanoic Acid (PFHpA)	EPA 537.1 Interim
105.106	011	Perfluorohexane Sulfonic Acid (PFHxS)	EPA 537.1 Interim
105.106	012	Perfluorohexanoic Acid (PFHxA)	EPA 537.1 Interim
105.106	013	Perfluorononanoic Acid (PFNA)	EPA 537.1 Interim
105.106	014	Perfluorooctanoic Acid (PFOA)	EPA 537.1 Interim
105.106	015	Perfluorooctane Sulfonic Acid (PFOS)	EPA 537.1 Interim
105.106	016	Perfluorotetradecanoic Acid (PFTDA)	EPA 537.1 Interim
105.106	017	Perfluorotridecanoic Acid (PFTrDA)	EPA 537.1 Interim
105.106	018	Perfluoroundecanoic Acid (PFUnDA)	EPA 537.1 Interim
105.230	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 1613 B Interim

Field of Testing: 108 – Inorganic Constituents in Non-Potable Water

Subgroup Code	Analyte Code	Analyte	Method
108.001	001	Specific Conductance	EPA 120.1 (1982 Rev.1.0)
108.009	001	Turbidity	EPA 180.1 (1993 Rev. 2.0)
108.015	001	Calcium	EPA 200.8 (1994 Rev. 5.4)
108.015	002	Magnesium	EPA 200.8 (1994 Rev. 5.4)
108.015	003	Potassium	EPA 200.8 (1994 Rev. 5.4)
108.017	001	Bromide	EPA 300.0 (1993 Rev. 2.1)
108.017	002	Chloride	EPA 300.0 (1993 Rev. 2.1)
108.017	003	Fluoride	EPA 300.0 (1993 Rev. 2.1)
108.017	004	Nitrate (as N)	EPA 300.0 (1993 Rev. 2.1)
108.017	005	Nitrate-Nitrite (as N)	EPA 300.0 (1993 Rev. 2.1)
108.017	006	Nitrite (as N)	EPA 300.0 (1993 Rev. 2.1)

Subgroup Code	Analyte Code	Analyte	Method
108.017	007	Phosphate,Ortho (as P)	EPA 300.0 (1993 Rev. 2.1)
108.017	008	Sulfate (as SO4)	EPA 300.0 (1993 Rev. 2.1)
108.033	001	Nitrate-Nitrite (as N)	EPA 353.2 (1993 Rev. 2.0)
108.033	002	Nitrite (as N)	EPA 353.2 (1993 Rev. 2.0)
108.045	001	Chemical Oxygen Demand	EPA 410.4 (1993 Rev. 2.0)
108.059	001	Turbidity	SM 2130 B-2011
108.063	001	Alkalinity	SM 2320 B-2011
108.065	001	Hardness (Calculation)	SM 2340 B-2011
108.069	001	Specific Conductance	SM 2510 B-2011
108.071	001	Residue, Total	SM 2540 B-2011
108.073	001	Residue, Filterable TDS	SM 2540 C-2011
108.075	001	Residue, Non-filterable TSS	SM 2540 D-2011
108.137	001	Hydrogen Ion (pH)	SM 4500-H+ B-2011
108.173	001	Oxygen, Dissolved	SM 4500-O G-2011
108.213	001	Chemical Oxygen Demand	SM 5220 D-2011

Field of Testing: 109 – Metals and Trace Elements in Non-Potable Water

Subgroup Code	Analyte Code	Analyte	Method
109.625	001	Aluminum	EPA 200.8 (1994 Rev. 5.4)
109.625	002	Antimony	EPA 200.8 (1994 Rev. 5.4)
109.625	003	Arsenic	EPA 200.8 (1994 Rev. 5.4)
109.625	004	Barium	EPA 200.8 (1994 Rev. 5.4)
109.625	005	Beryllium	EPA 200.8 (1994 Rev. 5.4)
109.625	007	Cadmium	EPA 200.8 (1994 Rev. 5.4)
109.625	008	Chromium	EPA 200.8 (1994 Rev. 5.4)
109.625	009	Cobalt	EPA 200.8 (1994 Rev. 5.4)
109.625	010	Copper	EPA 200.8 (1994 Rev. 5.4)
109.625	012	Iron	EPA 200.8 (1994 Rev. 5.4)
109.625	013	Lead	EPA 200.8 (1994 Rev. 5.4)
109.625	014	Manganese	EPA 200.8 (1994 Rev. 5.4)

Subgroup Code	Analyte Code	Analyte	Method
109.625	015	Molybdenum	EPA 200.8 (1994 Rev. 5.4)
109.625	016	Nickel	EPA 200.8 (1994 Rev. 5.4)
109.625	017	Selenium	EPA 200.8 (1994 Rev. 5.4)
109.625	018	Silver	EPA 200.8 (1994 Rev. 5.4)
109.625	019	Thallium	EPA 200.8 (1994 Rev. 5.4)
109.625	020	Tin	EPA 200.8 (1994 Rev. 5.4)
109.625	021	Titanium	EPA 200.8 (1994 Rev. 5.4)
109.625	022	Vanadium	EPA 200.8 (1994 Rev. 5.4)
109.625	023	Zinc	EPA 200.8 (1994 Rev. 5.4)

Field of Testing: 111 – Semi-volatile Organic Constituents in Non-Potable Water

Subgroup Code	Analyte Code	Analyte	Method
111.250	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 1613 B
111.250	002	Total Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 1613 B
111.250	003	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	EPA 1613 B
111.250	004	Total Tetrachlorodibenzofuran (TCDF)	EPA 1613 B
111.250	005	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 1613 B
111.250	006	Total Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 1613 B
111.250	007	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 1613 B
111.250	008	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 1613 B
111.250	009	Total Pentachlorodibenzofuran (PeCDF)	EPA 1613 B

Subgroup Code	Analyte Code	Analyte	Method
111.250	010	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B
111.250	011	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B
111.250	012	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B
111.250	013	Total Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 1613 B
111.250	014	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	015	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	016	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	017	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	018	Total Hexachlorodibenzofuran (HxCDF)	EPA 1613 B
111.250	019	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 1613 B
111.250	020	Total Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 1613 B
111.250	021	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	EPA 1613 B
111.250	022	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	EPA 1613 B
111.250	023	Total Heptachlorodibenzofuran (HpCDF)	EPA 1613 B
111.250	024	OCDD	EPA 1613 B
111.250	025	OCDF	EPA 1613 B
111.345	001	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	DoD QSM Version 5.1 (or newer)
111.345	002	4:2 Fluorotelomer Sulfonic Acid (4:2 FTS)	DoD QSM Version 5.1 (or newer)
111.345	003	6:2 Fluorotelomer Sulfonic Acid (6:2 FTS)	DoD QSM Version 5.1 (or newer)

Subgroup Code	Analyte Code	Analyte	Method
111.345	004	8:2 Fluorotelomer Sulfonic Acid (8:2 FTS)	DoD QSM Version 5.1 (or newer)
111.345	005	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	DoD QSM Version 5.1 (or newer)
111.345	006	Perfluorobutanoic Acid (PFBA)	DoD QSM Version 5.1 (or newer)
111.345	007	Perfluorobutane Sulfonic Acid (PFBS)	DoD QSM Version 5.1 (or newer)
111.345	008	Perfluorodecanoic Acid (PFDA)	DoD QSM Version 5.1 (or newer)
111.345	009	Perfluorododecanoic Acid (PFDoA)	DoD QSM Version 5.1 (or newer)
111.345	010	Perfluorodecane Sulfonic Acid (PFDS)	DoD QSM Version 5.1 (or newer)
111.345	011	Perfluoroheptanoic Acid (PFHpA)	DoD QSM Version 5.1 (or newer)
111.345	012	Perfluoroheptane Sulfonic Acid (PFHpS)	DoD QSM Version 5.1 (or newer)
111.345	013	Perfluorohexane Sulfonic Acid (PFHxS)	DoD QSM Version 5.1 (or newer)
111.345	014	Perfluorohexanoic Acid (PFHxA)	DoD QSM Version 5.1 (or newer)
111.345	015	Perfluorononanoic Acid (PFNA)	DoD QSM Version 5.1 (or newer)
111.345	016	Perfluorooctanoic Acid (PFOA)	DoD QSM Version 5.1 (or newer)
111.345	017	Perfluorooctane Sulfonic Acid (PFOS)	DoD QSM Version 5.1 (or newer)
111.345	018	Perfluorooctane Sulfonamide (PFOSAm)	DoD QSM Version 5.1 (or newer)
111.345	019	Perfluoropentanoic Acid (PFPeA)	DoD QSM Version 5.1 (or newer)
111.345	020	Perfluoropentane Sulfonic Acid (PFPeS)	DoD QSM Version 5.1 (or newer)
111.345	021	Perfluorotetradecanoic Acid (PFTDA)	DoD QSM Version 5.1 (or newer)
111.345	022	Perfluorotridecanoic Acid (PFTrDA)	DoD QSM Version 5.1 (or newer)
111.345	023	Perfluoroundecanoic Acid (PFUnDA)	DoD QSM Version 5.1 (or newer)
111.345	024	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	DoD QSM Version 5.1 (or newer)
111.345	025	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	DoD QSM Version 5.1 (or newer)

Subgroup Code	Analyte Code	Analyte	Method
111.345	026	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	DoD QSM Version 5.1 (or newer)
111.345	027	N-Ethylperfluorooctane Sulfonamide (EtFOSAm)	DoD QSM Version 5.1 (or newer)
111.345	028	N-Ethylperfluorooctane Sulfonamido Ethanol (EtFOSE)	DoD QSM Version 5.1 (or newer)
111.345	029	10:2 Fluorotelomer Sulfonic Acid (10:2 FTS)	DoD QSM Version 5.1 (or newer)
111.345	030	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	DoD QSM Version 5.1 (or newer)
111.345	031	N-Methylperfluorooctane Sulfonamide (NMeFOSA)	DoD QSM Version 5.1 (or newer)
111.345	032	N-Methylperfluorooctane Sulfonamido Ethanol (NMeFOSE)	DoD QSM Version 5.1 (or newer)
111.345	033	Perfluorohexadecanoic Acid (PFHxDA)	DoD QSM Version 5.1 (or newer)
111.345	034	Perfluorononane Sulfonic Acid (PFNS)	DoD QSM Version 5.1 (or newer)
111.345	035	Perfluorooctadecanoic Acid (PFODA)	DoD QSM Version 5.1 (or newer)
111.345	036	2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA)	DoD QSM Version 5.1 (or newer)
111.345	037	2H,2H,3H,3H-Perfluorohexaanoic Acid (3:3 FTCA)	DoD QSM Version 5.1 (or newer)
111.345	038	2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	DoD QSM Version 5.1 (or newer)
111.345	039	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	DoD QSM Version 5.1 (or newer)
111.345	040	Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	DoD QSM Version 5.1 (or newer)
111.345	041	Perfluoro-3-methoxypropanoic acid (PFMPA)	DoD QSM Version 5.1 (or newer)
111.345	042	Perfluoro-4-methoxybutanoic acid (PFMBA)	DoD QSM Version 5.1 (or newer)

Field of Testing: 114 – Inorganic Chemistry of Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method
114.315	001	Aluminum	EPA 6010 B
114.315	002	Antimony	EPA 6010 B

Subgroup Code	Analyte Code	Analyte	Method
114.315	003	Arsenic	EPA 6010 B
114.315	004	Barium	EPA 6010 B
114.315	005	Beryllium	EPA 6010 B
114.315	006	Boron	EPA 6010 B
114.315	007	Cadmium	EPA 6010 B
114.315	008	Calcium	EPA 6010 B
114.315	009	Chromium	EPA 6010 B
114.315	010	Cobalt	EPA 6010 B
114.315	011	Copper	EPA 6010 B
114.315	012	Iron	EPA 6010 B
114.315	013	Lead	EPA 6010 B
114.315	014	Magnesium	EPA 6010 B
114.315	015	Manganese	EPA 6010 B
114.315	016	Molybdenum	EPA 6010 B
114.315	017	Nickel	EPA 6010 B
114.315	018	Potassium	EPA 6010 B
114.315	019	Selenium	EPA 6010 B
114.315	020	Silver	EPA 6010 B
114.315	021	Sodium	EPA 6010 B
114.315	023	Thallium	EPA 6010 B
114.315	024	Tin	EPA 6010 B
114.315	025	Titanium	EPA 6010 B
114.315	026	Vanadium	EPA 6010 B
114.315	027	Zinc	EPA 6010 B
114.335	001	Aluminum	EPA 6020
114.335	002	Antimony	EPA 6020
114.335	003	Arsenic	EPA 6020
114.335	004	Barium	EPA 6020
114.335	005	Beryllium	EPA 6020
114.335	006	Cadmium	EPA 6020
114.335	007	Chromium	EPA 6020
114.335	008	Cobalt	EPA 6020
114.335	009	Copper	EPA 6020
114.335	010	Lead	EPA 6020
114.335	011	Manganese	EPA 6020
114.335	012	Nickel	EPA 6020
114.335	013	Silver	EPA 6020
114.335	014	Thallium	EPA 6020
114.335	015	Zinc	EPA 6020
114.335	016	Molybdenum	EPA 6020
114.335	017	Selenium	EPA 6020
114.335	018	Vanadium	EPA 6020
114.535	001	Mercury	EPA 7471 A
114.545	001	Mercury	EPA 7471 B
114.745	001	Fluoride	EPA 9056
114.755	001	Fluoride	EPA 9056 A

Field of Testing: 115 – Extraction Test of Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method
115.055	001	Waste Extraction Test (WET)	CCR Chapter11, Article 5, Appendix II
115.085	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311
115.095	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312
115.135	001	Corrosivity - pH Determination	EPA 9045 C
115.145	001	Corrosivity - pH Determination	EPA 9045 D

Field of Testing: 116 – Volatile Organic Chemistry of Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method
116.265	001	Benzene	EPA 8260 B
116.265	002	Bromobenzene	EPA 8260 B
116.265	003	Bromochloromethane	EPA 8260 B
116.265	004	Bromodichloromethane	EPA 8260 B
116.265	005	Bromoform	EPA 8260 B
116.265	006	Bromomethane (Methyl Bromide)	EPA 8260 B
116.265	007	n-Butylbenzene	EPA 8260 B
116.265	008	sec-Butylbenzene	EPA 8260 B
116.265	009	tert-Butylbenzene	EPA 8260 B
116.265	010	Carbon Disulfide	EPA 8260 B
116.265	011	Carbon Tetrachloride	EPA 8260 B
116.265	012	Chlorobenzene	EPA 8260 B
116.265	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 B
116.265	014	Chloroethane	EPA 8260 B
116.265	015	Chloroform	EPA 8260 B
116.265	016	Chloromethane (Methyl Chloride)	EPA 8260 B
116.265	017	Dibromomethane	EPA 8260 B
116.265	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 B
116.265	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 B
116.265	020	trans-1,2-Dichloroethylene (trans-1,2 Dichloroethene)	EPA 8260 B
116.265	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 B
116.265	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 B
116.265	023	Ethylbenzene	EPA 8260 B
116.265	024	Hexachlorobutadiene	EPA 8260 B
116.265	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 B

Subgroup Code	Analyte Code	Analyte	Method
116.265	026	Methylene Chloride (Dichloromethane)	EPA 8260 B
116.265	027	Naphthalene	EPA 8260 B
116.265	029	N-propylbenzene	EPA 8260 B
116.265	030	Styrene	EPA 8260 B
116.265	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 B
116.265	032	Toluene	EPA 8260 B
116.265	033	Trichloroethylene (Trichloroethene)	EPA 8260 B
116.265	034	Trichlorofluoromethane	EPA 8260 B
116.265	035	Vinyl Chloride	EPA 8260 B
116.265	036	m+p-Xylene	EPA 8260 B
116.265	037	o-Xylene	EPA 8260 B
116.265	038	m-Xylene	EPA 8260 B
116.265	039	p-Xylene	EPA 8260 B
116.265	040	1,1-Dichloroethane	EPA 8260 B
116.265	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 B
116.265	042	1,1,1-Trichloroethane	EPA 8260 B
116.265	043	1,1,1,2-Tetrachloroethane	EPA 8260 B
116.265	044	1,1,2,2-Tetrachloroethane	EPA 8260 B
116.265	045	1,1,2-Trichloroethane	EPA 8260 B
116.265	046	1,2-Dichlorobenzene	EPA 8260 B
116.265	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 B
116.265	048	1,2-Dibromoethane (EDB)	EPA 8260 B
116.265	050	1,2-Dichloropropane	EPA 8260 B
116.265	051	1,2,3-Trichloropropane (TCP)	EPA 8260 B
116.265	052	1,2,4-Trichlorobenzene	EPA 8260 B
116.265	053	1,3-Dichlorobenzene	EPA 8260 B
116.265	054	1,4-Dichlorobenzene	EPA 8260 B
116.265	055	2-Chloroethyl vinyl Ether	EPA 8260 B
116.265	056	4-Chlorotoluene	EPA 8260 B
116.265	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 B
116.265	059	Diisopropyl ether (DIPE)	EPA 8260 B
116.265	062	tert-Amyl Methyl Ether (TAME)	EPA 8260 B
116.266	001	Gasoline Range Organics (GRO)	EPA 8260 B
116.266	002	Gasoline Range Organics (GRO) [LUFT Range]	EPA 8260 B

Field of Testing: 117 – Semi-volatile Organic Chemistry of Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method
117.235	002	Diesel Range Organics (DRO)	EPA 8015 B

Subgroup Code	Analyte Code	Analyte	Method
117.235	003	Diesel Range Organics (DRO) [LUFT Range]	EPA 8015 B
117.235	004	Oil Range Organics (ORO) [LUFT Range]	EPA 8015 B
117.245	002	Diesel Range Organics (DRO)	EPA 8015 C
117.245	003	Diesel Range Organics (DRO) [LUFT Range]	EPA 8015 C
117.245	004	Oil Range Organics (ORO) [LUFT Range]	EPA 8015 C
117.315	001	Aldrin	EPA 8081 A
117.315	002	alpha-BHC	EPA 8081 A
117.315	003	beta-BHC	EPA 8081 A
117.315	004	delta-BHC	EPA 8081 A
117.315	005	gamma-BHC (Lindane)	EPA 8081 A
117.315	006	Chlordane (total)	EPA 8081 A
117.315	008	4,4'-DDD	EPA 8081 A
117.315	009	4,4'-DDE	EPA 8081 A
117.315	010	4,4'-DDT	EPA 8081 A
117.315	011	Dieldrin	EPA 8081 A
117.315	012	Endosulfan I	EPA 8081 A
117.315	013	Endosulfan II	EPA 8081 A
117.315	014	Endosulfan Sulfate	EPA 8081 A
117.315	015	Endrin	EPA 8081 A
117.315	016	Endrin Aldehyde	EPA 8081 A
117.315	017	Endrin Ketone	EPA 8081 A
117.315	018	Heptachlor	EPA 8081 A
117.315	019	Heptachlor Epoxide	EPA 8081 A
117.315	020	Methoxychlor	EPA 8081 A
117.315	021	Toxaphene	EPA 8081 A
117.325	001	Aldrin	EPA 8081 B
117.325	002	alpha-BHC	EPA 8081 B
117.325	003	beta-BHC	EPA 8081 B
117.325	004	delta-BHC	EPA 8081 B
117.325	005	gamma-BHC (Lindane)	EPA 8081 B
117.325	006	Chlordane (total)	EPA 8081 B
117.325	008	4,4'-DDD	EPA 8081 B
117.325	009	4,4'-DDE	EPA 8081 B
117.325	010	4,4'-DDT	EPA 8081 B
117.325	011	Dieldrin	EPA 8081 B
117.325	012	Endosulfan I	EPA 8081 B
117.325	013	Endosulfan II	EPA 8081 B
117.325	014	Endosulfan Sulfate	EPA 8081 B
117.325	015	Endrin	EPA 8081 B
117.325	016	Endrin Aldehyde	EPA 8081 B
117.325	017	Endrin Ketone	EPA 8081 B

Subgroup Code	Analyte Code	Analyte	Method
117.325	018	Heptachlor	EPA 8081 B
117.325	019	Heptachlor Epoxide	EPA 8081 B
117.325	020	Methoxychlor	EPA 8081 B
117.325	021	Toxaphene	EPA 8081 B
117.335	001	Aroclor 1016	EPA 8082
117.335	002	Aroclor 1221	EPA 8082
117.335	003	Aroclor 1232	EPA 8082
117.335	004	Aroclor 1242	EPA 8082
117.335	005	Aroclor 1248	EPA 8082
117.335	006	Aroclor 1254	EPA 8082
117.335	007	Aroclor 1260	EPA 8082
117.345	001	Aroclor 1016	EPA 8082 A
117.345	002	Aroclor 1221	EPA 8082 A
117.345	003	Aroclor 1232	EPA 8082 A
117.345	004	Aroclor 1242	EPA 8082 A
117.345	005	Aroclor 1248	EPA 8082 A
117.345	006	Aroclor 1254	EPA 8082 A
117.345	007	Aroclor 1260	EPA 8082 A
117.435	001	Acenaphthene	EPA 8270 C
117.435	002	Acenaphthylene	EPA 8270 C
117.435	003	Aniline	EPA 8270 C
117.435	004	Anthracene	EPA 8270 C
117.435	006	Benzoic Acid	EPA 8270 C
117.435	007	Benzo(a)anthracene	EPA 8270 C
117.435	008	Benzo(b)fluoranthene	EPA 8270 C
117.435	009	Benzo(k)fluoranthene	EPA 8270 C
117.435	010	Benzo(g,h,i)perylene	EPA 8270 C
117.435	011	Benzo(a)pyrene	EPA 8270 C
117.435	012	Benzyl Alcohol	EPA 8270 C
117.435	013	Bis(2-chloroethoxy) Methane	EPA 8270 C
117.435	014	Bis(2-chloroethyl) Ether	EPA 8270 C
117.435	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 C
117.435	016	Butyl Benzyl Phthalate	EPA 8270 C
117.435	017	Chrysene	EPA 8270 C
117.435	018	Dibenz(a,h)anthracene	EPA 8270 C
117.435	019	Dibenzofuran	EPA 8270 C
117.435	020	Di-n-butyl Phthalate	EPA 8270 C
117.435	021	Diethyl Phthalate	EPA 8270 C
117.435	022	Dimethyl Phthalate	EPA 8270 C
117.435	023	Di-n-octyl Phthalate	EPA 8270 C
117.435	024	Fluoranthene	EPA 8270 C
117.435	025	Fluorene	EPA 8270 C
117.435	026	Naphthalene	EPA 8270 C
117.435	027	Nitrobenzene	EPA 8270 C

Subgroup Code	Analyte Code	Analyte	Method
117.435	028	Pentachlorobenzene	EPA 8270 C
117.435	029	Pentachlorophenol	EPA 8270 C
117.435	031	1,2-Dichlorobenzene	EPA 8270 C
117.435	032	1,3-Dichlorobenzene	EPA 8270 C
117.435	033	1,4-Dichlorobenzene	EPA 8270 C
117.435	034	2-Chloronaphthalene	EPA 8270 C
117.435	035	2-Chlorophenol	EPA 8270 C
117.435	036	2,4-Dichlorophenol	EPA 8270 C
117.435	037	2,4-Dimethylphenol	EPA 8270 C
117.435	038	2,4-Dinitrophenol	EPA 8270 C
117.435	039	2,4-Dinitrotoluene	EPA 8270 C
117.435	040	2,6-Dichlorophenol	EPA 8270 C
117.435	041	2,6-Dinitrotoluene	EPA 8270 C
117.435	042	2-Nitroaniline	EPA 8270 C
117.435	043	2-Nitrophenol	EPA 8270 C
117.435	044	3-Nitroaniline	EPA 8270 C
117.435	045	3,3'-Dichlorobenzidine	EPA 8270 C
117.435	046	4-Chloroaniline	EPA 8270 C
117.435	047	4-Chloro-3-methylphenol	EPA 8270 C
117.435	048	4-Bromophenyl Phenyl Ether	EPA 8270 C
117.435	049	4-Chlorophenyl Phenyl Ether	EPA 8270 C
117.435	050	4-Nitroaniline	EPA 8270 C
117.435	051	4-Nitrophenol	EPA 8270 C
117.435	088	N-nitrosodimethylamine	EPA 8270 C
117.435	089	N-nitrosodiphenylamine	EPA 8270 C
117.435	090	N-nitroso-di-n-propylamine	EPA 8270 C
117.435	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 C
117.435	092	Isophorone	EPA 8270 C
117.435	093	2-Methylnaphthalene	EPA 8270 C
117.435	094	Phenanthrene	EPA 8270 C
117.455	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8280 A
117.455	002	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8280 A
117.455	003	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8280 A
117.455	004	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8280 A
117.455	005	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8280 A

Subgroup Code	Analyte Code	Analyte	Method
117.455	006	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8280 A
117.455	007	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 8280 A
117.455	008	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	EPA 8280 A
117.455	009	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8280 A
117.455	010	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8280 A
117.455	011	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8280 A
117.455	012	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8280 A
117.455	013	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	EPA 8280 A
117.455	014	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8280 A
117.455	015	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	EPA 8280 A
117.455	016	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	EPA 8280 A
117.455	017	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 8280 A
117.455	018	Total Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8280 A
117.455	019	Total Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8280 A
117.455	020	Total Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8280 A
117.455	021	Total Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8280 A
117.455	022	Total Tetrachlorodibenzofuran (TCDF)	EPA 8280 A

Subgroup Code	Analyte Code	Analyte	Method
117.455	023	Total Pentachlorodibenzofuran (PeCDF)	EPA 8280 A
117.455	024	Total Hexachlorodibenzofuran (HxCDF)	EPA 8280 A
117.455	025	Total Heptachlorodibenzofuran (HpCDF)	EPA 8280 A
117.465	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8280 B
117.465	002	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8280 B
117.465	003	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8280 B
117.465	004	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8280 B
117.465	005	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8280 B
117.465	006	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8280 B
117.465	007	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 8280 B
117.465	008	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	EPA 8280 B
117.465	009	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8280 B
117.465	010	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8280 B
117.465	011	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8280 B
117.465	012	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8280 B
117.465	013	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	EPA 8280 B

Subgroup Code	Analyte Code	Analyte	Method
117.465	014	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8280 B
117.465	015	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	EPA 8280 B
117.465	016	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	EPA 8280 B
117.465	017	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 8280 B
117.465	018	Total Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8280 B
117.465	019	Total Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8280 B
117.465	020	Total Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8280 B
117.465	021	Total Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8280 B
117.465	022	Total Tetrachlorodibenzofuran (TCDF)	EPA 8280 B
117.465	023	Total Pentachlorodibenzofuran (PeCDF)	EPA 8280 B
117.465	024	Total Hexachlorodibenzofuran (HxCDF)	EPA 8280 B
117.465	025	Total Heptachlorodibenzofuran (HpCDF)	EPA 8280 B
117.470	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290
117.470	002	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290
117.470	003	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290
117.470	004	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290
117.470	005	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290
117.470	006	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290

Subgroup Code	Analyte Code	Analyte	Method
117.470	007	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 8290
117.470	008	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	EPA 8290
117.470	009	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290
117.470	010	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290
117.470	011	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290
117.470	012	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290
117.470	013	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	EPA 8290
117.470	014	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290
117.470	015	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	EPA 8290
117.470	016	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	EPA 8290
117.470	017	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 8290
117.470	018	Total Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290
117.470	019	Total Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290
117.470	020	Total Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290
117.470	021	Total Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290
117.470	022	Total Tetrachlorodibenzofuran (TCDF)	EPA 8290
117.470	023	Total Pentachlorodibenzofuran (PeCDF)	EPA 8290

Subgroup Code	Analyte Code	Analyte	Method
117.470	024	Total Hexachlorodibenzofuran (HxCDF)	EPA 8290
117.470	025	Total Heptachlorodibenzofuran (HpCDF)	EPA 8290
117.472	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290 A
117.472	002	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290 A
117.472	003	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A
117.472	004	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A
117.472	005	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A
117.472	006	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290 A
117.472	007	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 8290 A
117.472	008	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	EPA 8290 A
117.472	009	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290 A
117.472	010	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290 A
117.472	011	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A
117.472	012	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A
117.472	013	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A
117.472	014	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A

Subgroup Code	Analyte Code	Analyte	Method
117.472	015	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	EPA 8290 A
117.472	016	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	EPA 8290 A
117.472	017	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 8290 A
117.472	018	Total Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290 A
117.472	019	Total Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290 A
117.472	020	Total Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A
117.472	021	Total Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290 A
117.472	022	Total Tetrachlorodibenzofuran (TCDF)	EPA 8290 A
117.472	023	Total Pentachlorodibenzofuran (PeCDF)	EPA 8290 A
117.472	024	Total Hexachlorodibenzofuran (HxCDF)	EPA 8290 A
117.472	025	Total Heptachlorodibenzofuran (HpCDF)	EPA 8290 A
117.575	001	N-Ethylperfluorooctane Sulfonamide (EtFOSAm)	DoD QSM Version 5.1 (or newer)
117.575	002	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	DoD QSM Version 5.1 (or newer)
117.575	003	N-Ethylperfluorooctane Sulfonamido Ethanol (EtFOSE)	DoD QSM Version 5.1 (or newer)
117.575	004	4:2 Fluorotelomer Sulfonic Acid (4:2 FTS)	DoD QSM Version 5.1 (or newer)
117.575	005	6:2 Fluorotelomer Sulfonic Acid (6:2 FTS)	DoD QSM Version 5.1 (or newer)
117.575	006	8:2 Fluorotelomer Sulfonic Acid (8:2 FTS)	DoD QSM Version 5.1 (or newer)
117.575	007	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	DoD QSM Version 5.1 (or newer)
117.575	008	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	DoD QSM Version 5.1 (or newer)

Subgroup Code	Analyte Code	Analyte	Method
117.575	009	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	DoD QSM Version 5.1 (or newer)
117.575	010	N-Methylperfluorooctane Sulfonamide (NMeFOSA)	DoD QSM Version 5.1 (or newer)
117.575	011	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	DoD QSM Version 5.1 (or newer)
117.575	012	N-Methylperfluorooctane Sulfonamido Ethanol (NMeFOSE)	DoD QSM Version 5.1 (or newer)
117.575	013	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	DoD QSM Version 5.1 (or newer)
117.575	014	Perfluorobutanoic Acid (PFBA)	DoD QSM Version 5.1 (or newer)
117.575	015	Perfluorobutane Sulfonic Acid (PFBS)	DoD QSM Version 5.1 (or newer)
117.575	016	Perfluorodecanoic Acid (PFDA)	DoD QSM Version 5.1 (or newer)
117.575	017	Perfluorododecanoic Acid (PFDoA)	DoD QSM Version 5.1 (or newer)
117.575	018	Perfluorodecane Sulfonic Acid (PFDS)	DoD QSM Version 5.1 (or newer)
117.575	019	Perfluoroheptanoic Acid (PFHpA)	DoD QSM Version 5.1 (or newer)
117.575	020	Perfluoroheptane Sulfonic Acid (PFHpS)	DoD QSM Version 5.1 (or newer)
117.575	021	Perfluorohexane Sulfonic Acid (PFHxS)	DoD QSM Version 5.1 (or newer)
117.575	022	Perfluorohexanoic Acid (PFHxA)	DoD QSM Version 5.1 (or newer)
117.575	023	Perfluorononanoic Acid (PFNA)	DoD QSM Version 5.1 (or newer)
117.575	024	Perfluorooctanoic Acid (PFOA)	DoD QSM Version 5.1 (or newer)
117.575	025	Perfluorooctane Sulfonic Acid (PFOS)	DoD QSM Version 5.1 (or newer)
117.575	026	Perfluorooctane Sulfonamide (PFOSAm)	DoD QSM Version 5.1 (or newer)
117.575	027	Perfluoropentanoic Acid (PFPeA)	DoD QSM Version 5.1 (or newer)
117.575	028	Perfluoropentane Sulfonic Acid (PFPeS)	DoD QSM Version 5.1 (or newer)
117.575	029	Perfluorotetradecanoic Acid (PFTDA)	DoD QSM Version 5.1 (or newer)
117.575	030	Perfluorotridecanoic Acid (PFTrDA)	DoD QSM Version 5.1 (or newer)
117.575	031	Perfluoroundecanoic Acid (PFUnDA)	DoD QSM Version 5.1 (or newer)

Subgroup Code	Analyte Code	Analyte	Method
117.575	032	10:2 Fluorotelomer Sulfonic Acid (10:2 FTS)	DoD QSM Version 5.1 (or newer)
117.575	033	Perfluorohexadecanoic Acid (PFHxDA)	DoD QSM Version 5.1 (or newer)
117.575	034	Perfluorononane Sulfonic Acid (PFNS)	DoD QSM Version 5.1 (or newer)
117.575	035	Perfluorooctadecanoic Acid (PFODA)	DoD QSM Version 5.1 (or newer)
117.575	036	2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA)	DoD QSM Version 5.1 (or newer)
117.575	037	2H,2H,3H,3H-Perfluorohexaanoic Acid (3:3 FTCA)	DoD QSM Version 5.1 (or newer)
117.575	038	2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	DoD QSM Version 5.1 (or newer)
117.575	039	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	DoD QSM Version 5.1 (or newer)
117.575	040	Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	DoD QSM Version 5.1 (or newer)
117.575	041	Perfluoro-3-methoxypropanoic acid (PFMPA)	DoD QSM Version 5.1 (or newer)
117.575	042	Perfluoro-4-methoxybutanoic acid (PFMBA)	DoD QSM Version 5.1 (or newer)

Field of Testing: 130 – Inorganic Constituents in Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method
130.010	001	Aluminum	EPA 6010 B
130.010	002	Antimony	EPA 6010 B
130.010	003	Arsenic	EPA 6010 B
130.010	004	Barium	EPA 6010 B
130.010	005	Beryllium	EPA 6010 B
130.010	006	Boron	EPA 6010 B
130.010	007	Cadmium	EPA 6010 B
130.010	008	Calcium	EPA 6010 B
130.010	009	Chromium	EPA 6010 B
130.010	010	Cobalt	EPA 6010 B
130.010	011	Copper	EPA 6010 B
130.010	012	Iron	EPA 6010 B
130.010	013	Lead	EPA 6010 B
130.010	014	Magnesium	EPA 6010 B
130.010	015	Manganese	EPA 6010 B
130.010	016	Molybdenum	EPA 6010 B

Subgroup Code	Analyte Code	Analyte	Method
130.010	017	Nickel	EPA 6010 B
130.010	019	Selenium	EPA 6010 B
130.010	020	Silver	EPA 6010 B
130.010	021	Sodium	EPA 6010 B
130.010	023	Thallium	EPA 6010 B
130.010	024	Tin	EPA 6010 B
130.010	025	Titanium	EPA 6010 B
130.010	026	Vanadium	EPA 6010 B
130.010	027	Zinc	EPA 6010 B
130.030	001	Aluminum	EPA 6020
130.030	002	Antimony	EPA 6020
130.030	003	Arsenic	EPA 6020
130.030	004	Barium	EPA 6020
130.030	005	Beryllium	EPA 6020
130.030	006	Cadmium	EPA 6020
130.030	007	Chromium	EPA 6020
130.030	008	Cobalt	EPA 6020
130.030	009	Copper	EPA 6020
130.030	010	Lead	EPA 6020
130.030	011	Manganese	EPA 6020
130.030	012	Nickel	EPA 6020
130.030	013	Silver	EPA 6020
130.030	014	Thallium	EPA 6020
130.030	015	Zinc	EPA 6020
130.030	016	Molybdenum	EPA 6020
130.030	017	Selenium	EPA 6020
130.030	018	Vanadium	EPA 6020
130.140	001	Chromium VI (Hexavalent Chromium)	EPA 7196 A
130.170	001	Chromium VI (Hexavalent Chromium)	EPA 7199
130.250	001	Mercury	EPA 7470 A
130.470	001	Fluoride	EPA 9056
130.480	001	Fluoride	EPA 9056 A

Field of Testing: 131 – Leaching/Extraction Tests, Physical Characteristics in Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method
131.010	001	Waste Extraction Test (WET)	CCR Chapter11, Article 5, Appendix II
131.040	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311

Subgroup Code	Analyte Code	Analyte	Method
131.050	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312
131.110	001	Corrosivity - pH Determination	EPA 9040 B
131.120	001	Corrosivity - pH Determination	EPA 9040 C

Field of Testing: 132 – Volatile Organic Compounds in Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method
132.060	001	Benzene	EPA 8260 B
132.060	002	Bromobenzene	EPA 8260 B
132.060	003	Bromochloromethane	EPA 8260 B
132.060	004	Bromodichloromethane	EPA 8260 B
132.060	005	Bromoform	EPA 8260 B
132.060	006	Bromomethane (Methyl Bromide)	EPA 8260 B
132.060	007	n-Butylbenzene	EPA 8260 B
132.060	008	sec-Butylbenzene	EPA 8260 B
132.060	009	tert-Butylbenzene	EPA 8260 B
132.060	010	Carbon Disulfide	EPA 8260 B
132.060	011	Carbon Tetrachloride	EPA 8260 B
132.060	012	Chlorobenzene	EPA 8260 B
132.060	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 B
132.060	014	Chloroethane	EPA 8260 B
132.060	015	Chloroform	EPA 8260 B
132.060	016	Chloromethane (Methyl Chloride)	EPA 8260 B
132.060	017	Dibromomethane	EPA 8260 B
132.060	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 B
132.060	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 B
132.060	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 B
132.060	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 B
132.060	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 B
132.060	023	Ethylbenzene	EPA 8260 B
132.060	024	Hexachlorobutadiene	EPA 8260 B
132.060	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 B

Subgroup Code	Analyte Code	Analyte	Method
132.060	026	Methylene Chloride (Dichloromethane)	EPA 8260 B
132.060	027	Naphthalene	EPA 8260 B
132.060	029	N-propylbenzene	EPA 8260 B
132.060	030	Styrene	EPA 8260 B
132.060	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 B
132.060	032	Toluene	EPA 8260 B
132.060	033	Trichloroethylene (Trichloroethene)	EPA 8260 B
132.060	034	Trichlorofluoromethane	EPA 8260 B
132.060	035	Vinyl Chloride	EPA 8260 B
132.060	036	m+p-Xylene	EPA 8260 B
132.060	037	o-Xylene	EPA 8260 B
132.060	038	m-Xylene	EPA 8260 B
132.060	039	p-Xylene	EPA 8260 B
132.060	040	1,1-Dichloroethane	EPA 8260 B
132.060	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 B
132.060	042	1,1,1-Trichloroethane	EPA 8260 B
132.060	043	1,1,1,2-Tetrachloroethane	EPA 8260 B
132.060	044	1,1,2,2-Tetrachloroethane	EPA 8260 B
132.060	045	1,1,2-Trichloroethane	EPA 8260 B
132.060	046	1,2-Dichlorobenzene	EPA 8260 B
132.060	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 B
132.060	048	1,2-Dibromoethane (EDB)	EPA 8260 B
132.060	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 B
132.060	050	1,2-Dichloropropane	EPA 8260 B
132.060	051	1,2,3-Trichloropropane (TCP)	EPA 8260 B
132.060	052	1,2,4-Trichlorobenzene	EPA 8260 B
132.060	053	1,3-Dichlorobenzene	EPA 8260 B
132.060	054	1,4-Dichlorobenzene	EPA 8260 B
132.060	055	2-Chloroethyl vinyl Ether	EPA 8260 B
132.060	056	4-Chlorotoluene	EPA 8260 B
132.060	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 B
132.061	001	Gasoline Range Organics (GRO)	EPA 8260 B
132.061	002	Gasoline Range Organics (GRO) [LUFT Range]	EPA 8260 B

Field of Testing: 133 – Semi-Volatile Organic Chemistry in Hazardous Waste

Subgroup Code	Analyte Code	Analyte	Method
133.010	002	Diesel Range Organics (DRO)	EPA 8015 B
133.010	003	Diesel Range Organics (DRO) [LUFT Range]	EPA 8015 B
133.020	002	Diesel Range Organics (DRO)	EPA 8015 C
133.020	003	Diesel Range Organics (DRO) [LUFT Range]	EPA 8015 C
133.090	001	Aldrin	EPA 8081 A
133.090	002	alpha-BHC	EPA 8081 A
133.090	003	beta-BHC	EPA 8081 A
133.090	004	delta-BHC	EPA 8081 A
133.090	005	gamma-BHC (Lindane)	EPA 8081 A
133.090	006	Chlordane	EPA 8081 A
133.090	008	4,4'-DDD	EPA 8081 A
133.090	009	4,4'-DDE	EPA 8081 A
133.090	010	4,4'-DDT	EPA 8081 A
133.090	011	Dieldrin	EPA 8081 A
133.090	012	Endosulfan I	EPA 8081 A
133.090	013	Endosulfan II	EPA 8081 A
133.090	014	Endosulfan Sulfate	EPA 8081 A
133.090	015	Endrin	EPA 8081 A
133.090	016	Endrin Aldehyde	EPA 8081 A
133.090	017	Endrin Ketone	EPA 8081 A
133.090	018	Heptachlor	EPA 8081 A
133.090	019	Heptachlor Epoxide	EPA 8081 A
133.090	020	Methoxychlor	EPA 8081 A
133.090	021	Toxaphene	EPA 8081 A
133.110	001	Aldrin	EPA 8081 B
133.110	002	alpha-BHC	EPA 8081 B
133.110	003	beta-BHC	EPA 8081 B
133.110	004	delta-BHC	EPA 8081 B
133.110	005	gamma-BHC (Lindane)	EPA 8081 B
133.110	006	Chlordane	EPA 8081 B
133.110	008	4,4'-DDD	EPA 8081 B
133.110	009	4,4'-DDE	EPA 8081 B
133.110	010	4,4'-DDT	EPA 8081 B
133.110	011	Dieldrin	EPA 8081 B
133.110	012	Endosulfan I	EPA 8081 B
133.110	013	Endosulfan II	EPA 8081 B
133.110	014	Endosulfan Sulfate	EPA 8081 B
133.110	015	Endrin	EPA 8081 B
133.110	016	Endrin Aldehyde	EPA 8081 B
133.110	017	Endrin Ketone	EPA 8081 B
133.110	018	Heptachlor	EPA 8081 B

Subgroup Code	Analyte Code	Analyte	Method
133.110	019	Heptachlor Epoxide	EPA 8081 B
133.110	020	Methoxychlor	EPA 8081 B
133.110	021	Toxaphene	EPA 8081 B
133.120	001	Aroclor 1016	EPA 8082
133.120	002	Aroclor 1221	EPA 8082
133.120	003	Aroclor 1232	EPA 8082
133.120	004	Aroclor 1242	EPA 8082
133.120	005	Aroclor 1248	EPA 8082
133.120	006	Aroclor 1254	EPA 8082
133.120	007	Aroclor 1260	EPA 8082
133.130	001	Aroclor 1016	EPA 8082 A
133.130	002	Aroclor 1221	EPA 8082 A
133.130	003	Aroclor 1232	EPA 8082 A
133.130	004	Aroclor 1242	EPA 8082 A
133.130	005	Aroclor 1248	EPA 8082 A
133.130	006	Aroclor 1254	EPA 8082 A
133.130	007	Aroclor 1260	EPA 8082 A
133.230	001	Acenaphthene	EPA 8270 C
133.230	002	Acenaphthylene	EPA 8270 C
133.230	003	Aniline	EPA 8270 C
133.230	004	Anthracene	EPA 8270 C
133.230	006	Benzoic Acid	EPA 8270 C
133.230	007	Benzo(a)anthracene	EPA 8270 C
133.230	008	Benzo(b)fluoranthene	EPA 8270 C
133.230	009	Benzo(k)fluoranthene	EPA 8270 C
133.230	010	Benzo(g,h,i)perylene	EPA 8270 C
133.230	011	Benzo(a)pyrene	EPA 8270 C
133.230	012	Benzyl Alcohol	EPA 8270 C
133.230	013	Bis(2-chloroethoxy) Methane	EPA 8270 C
133.230	014	Bis(2-chloroethyl) Ether	EPA 8270 C
133.230	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 C
133.230	016	Butyl Benzyl Phthalate	EPA 8270 C
133.230	017	Chrysene	EPA 8270 C
133.230	018	Dibenz(a,h)anthracene	EPA 8270 C
133.230	019	Dibenzofuran	EPA 8270 C
133.230	020	Di-n-butyl Phthalate	EPA 8270 C
133.230	021	Diethyl Phthalate	EPA 8270 C
133.230	022	Dimethyl Phthalate	EPA 8270 C
133.230	023	Di-n-octyl Phthalate	EPA 8270 C
133.230	024	Fluoranthene	EPA 8270 C
133.230	025	Fluorene	EPA 8270 C
133.230	026	Naphthalene	EPA 8270 C
133.230	027	Nitrobenzene	EPA 8270 C
133.230	028	Pentachlorobenzene	EPA 8270 C

Subgroup Code	Analyte Code	Analyte	Method
133.230	029	Pentachlorophenol	EPA 8270 C
133.230	031	1,2-Dichlorobenzene	EPA 8270 C
133.230	032	1,3-Dichlorobenzene	EPA 8270 C
133.230	033	1,4-Dichlorobenzene	EPA 8270 C
133.230	034	2-Chloronaphthalene	EPA 8270 C
133.230	035	2-Chlorophenol	EPA 8270 C
133.230	036	2,4-Dichlorophenol	EPA 8270 C
133.230	037	2,4-Dimethylphenol	EPA 8270 C
133.230	038	2,4-Dinitrophenol	EPA 8270 C
133.230	039	2,4-Dinitrotoluene	EPA 8270 C
133.230	040	2,6-Dichlorophenol	EPA 8270 C
133.230	041	2,6-Dinitrotoluene	EPA 8270 C
133.230	042	2-Nitroaniline	EPA 8270 C
133.230	043	2-Nitrophenol	EPA 8270 C
133.230	044	3-Nitroaniline	EPA 8270 C
133.230	045	3,3'-Dichlorobenzidine	EPA 8270 C
133.230	046	4-Chloroaniline	EPA 8270 C
133.230	047	4-Chloro-3-methylphenol	EPA 8270 C
133.230	048	4-Bromophenyl Phenyl Ether	EPA 8270 C
133.230	049	4-Chlorophenyl Phenyl Ether	EPA 8270 C
133.230	050	4-Nitroaniline	EPA 8270 C
133.230	051	4-Nitrophenol	EPA 8270 C
133.230	088	N-nitrosodimethylamine	EPA 8270 C
133.230	089	N-nitrosodiphenylamine	EPA 8270 C
133.230	090	N-nitroso-di-n-propylamine	EPA 8270 C
133.230	091	Indeno(1,2,3-c,d)pyrene	EPA 8270 C
133.230	092	Isophorone	EPA 8270 C
133.230	093	2-Methylnaphthalene	EPA 8270 C
133.230	094	Phenanthrene	EPA 8270 C
133.265	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290
133.265	002	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290
133.265	003	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290
133.265	004	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290
133.265	005	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290

Subgroup Code	Analyte Code	Analyte	Method
133.265	006	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290
133.265	007	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 8290
133.265	008	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	EPA 8290
133.265	009	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290
133.265	010	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290
133.265	011	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290
133.265	012	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290
133.265	013	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	EPA 8290
133.265	014	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290
133.265	015	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	EPA 8290
133.265	016	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	EPA 8290
133.265	017	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 8290
133.265	018	Total Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290
133.265	019	Total Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290
133.265	020	Total Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290
133.265	021	Total Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290
133.265	022	Total Tetrachlorodibenzofuran (TCDF)	EPA 8290

Subgroup Code	Analyte Code	Analyte	Method
133.265	023	Total Pentachlorodibenzofuran (PeCDF)	EPA 8290
133.265	024	Total Hexachlorodibenzofuran (HxCDF)	EPA 8290
133.265	025	Total Heptachlorodibenzofuran (HpCDF)	EPA 8290
133.267	001	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290 A
133.267	002	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290 A
133.267	003	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A
133.267	004	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A
133.267	005	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A
133.267	006	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290 A
133.267	007	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 8290 A
133.267	008	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	EPA 8290 A
133.267	009	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290 A
133.267	010	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	EPA 8290 A
133.267	011	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A
133.267	012	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A
133.267	013	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A

Subgroup Code	Analyte Code	Analyte	Method
133.267	014	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	EPA 8290 A
133.267	015	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	EPA 8290 A
133.267	016	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	EPA 8290 A
133.267	017	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 8290 A
133.267	018	Total Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 8290 A
133.267	019	Total Pentachlorodibenzo-p-dioxin (PeCDD)	EPA 8290 A
133.267	020	Total Hexachlorodibenzo-p-dioxin (HxCDD)	EPA 8290 A
133.267	021	Total Heptachlorodibenzo-p-dioxin (HpCDD)	EPA 8290 A
133.267	022	Total Tetrachlorodibenzofuran (TCDF)	EPA 8290 A
133.267	023	Total Pentachlorodibenzofuran (PeCDF)	EPA 8290 A
133.267	024	Total Hexachlorodibenzofuran (HxCDF)	EPA 8290 A
133.267	025	Total Heptachlorodibenzofuran (HpCDF)	EPA 8290 A
133.380	001	N-Ethylperfluorooctane Sulfonamide (EtFOSAm)	DoD QSM Version 5.1 (or newer)
133.380	002	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	DoD QSM Version 5.1 (or newer)
133.380	003	N-Ethylperfluorooctane Sulfonamido Ethanol (EtFOSE)	DoD QSM Version 5.1 (or newer)
133.380	004	4:2 Fluorotelomer Sulfonic Acid (4:2 FTS)	DoD QSM Version 5.1 (or newer)
133.380	005	6:2 Fluorotelomer Sulfonic Acid (6:2 FTS)	DoD QSM Version 5.1 (or newer)
133.380	006	8:2 Fluorotelomer Sulfonic Acid (8:2 FTS)	DoD QSM Version 5.1 (or newer)
133.380	007	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	DoD QSM Version 5.1 (or newer)

Subgroup Code	Analyte Code	Analyte	Method
133.380	008	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	DoD QSM Version 5.1 (or newer)
133.380	009	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	DoD QSM Version 5.1 (or newer)
133.380	010	N-Methylperfluorooctane Sulfonamide (NMeFOSA)	DoD QSM Version 5.1 (or newer)
133.380	011	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	DoD QSM Version 5.1 (or newer)
133.380	012	N-Methylperfluorooctane Sulfonamido Ethanol (NMeFOSE)	DoD QSM Version 5.1 (or newer)
133.380	013	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	DoD QSM Version 5.1 (or newer)
133.380	014	Perfluorobutanoic Acid (PFBA)	DoD QSM Version 5.1 (or newer)
133.380	015	Perfluorobutane Sulfonic Acid (PFBS)	DoD QSM Version 5.1 (or newer)
133.380	016	Perfluorodecanoic Acid (PFDA)	DoD QSM Version 5.1 (or newer)
133.380	017	Perfluorododecanoic Acid (PFDoA)	DoD QSM Version 5.1 (or newer)
133.380	018	Perfluorodecane Sulfonic Acid (PFDS)	DoD QSM Version 5.1 (or newer)
133.380	019	Perfluoroheptanoic Acid (PFHpA)	DoD QSM Version 5.1 (or newer)
133.380	020	Perfluoroheptane Sulfonic Acid (PFHpS)	DoD QSM Version 5.1 (or newer)
133.380	021	Perfluorohexane Sulfonic Acid (PFHxS)	DoD QSM Version 5.1 (or newer)
133.380	022	Perfluorohexanoic Acid (PFHxA)	DoD QSM Version 5.1 (or newer)
133.380	023	Perfluorononanoic Acid (PFNA)	DoD QSM Version 5.1 (or newer)
133.380	024	Perfluorooctanoic Acid (PFOA)	DoD QSM Version 5.1 (or newer)
133.380	025	Perfluorooctane Sulfonic Acid (PFOS)	DoD QSM Version 5.1 (or newer)
133.380	026	Perfluorooctane Sulfonamide (PFOSAm)	DoD QSM Version 5.1 (or newer)
133.380	027	Perfluoropentanoic Acid (PFPeA)	DoD QSM Version 5.1 (or newer)
133.380	028	Perfluoropentane Sulfonic Acid (PFPeS)	DoD QSM Version 5.1 (or newer)
133.380	029	Perfluorotetradecanoic Acid (PFTDA)	DoD QSM Version 5.1 (or newer)

Subgroup Code	Analyte Code	Analyte	Method
133.380	030	Perfluoroundecanoic Acid (PFUnDA)	DoD QSM Version 5.1 (or newer)
133.380	031	Perfluoroundecanoic Acid (PFUnDA)	DoD QSM Version 5.1 (or newer)
133.380	032	10:2 Fluorotelomer Sulfonic Acid (10:2 FTS)	DoD QSM Version 5.1 (or newer)
133.380	033	Perfluorohexadecanoic Acid (PFHxDA)	DoD QSM Version 5.1 (or newer)
133.380	034	Perfluorononane Sulfonic Acid (PFNS)	DoD QSM Version 5.1 (or newer)
133.380	035	Perfluorooctadecanoic Acid (PFODA)	DoD QSM Version 5.1 (or newer)
133.380	036	2H,2H,3H,3H-Perfluorodecanoic Acid (7:3 FTCA)	DoD QSM Version 5.1 (or newer)
133.380	037	2H,2H,3H,3H-Perfluorohexaanoic Acid (3:3 FTCA)	DoD QSM Version 5.1 (or newer)
133.380	038	2H,2H,3H,3H-Perfluorooctanoic Acid (5:3 FTCA)	DoD QSM Version 5.1 (or newer)
133.380	039	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	DoD QSM Version 5.1 (or newer)
133.380	040	Perfluoro(2-ethoxyethane) sulfonic acid (PFEESA)	DoD QSM Version 5.1 (or newer)
133.380	041	Perfluoro-3-methoxypropanoic acid (PFMPA)	DoD QSM Version 5.1 (or newer)
133.380	042	Perfluoro-4-methoxybutanoic acid (PFMBA)	DoD QSM Version 5.1 (or newer)

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

Eberline Analytical Corporation

601 Scarboro Road

Oak Ridge, TN 37830

Scope of the certificate is limited to the
"Fields of Accreditation"
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **2912**

Effective Date: **10/1/2021**

Expiration Date: **9/30/2023**

Sacramento, California
subject to forfeiture or revocation

Christine Sotelo, Program Manager
Environmental Laboratory Accreditation Program

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Fields of Accreditation

Eberline Analytical Corporation

601 Scarboro Road
Oak Ridge, TN 37830
Phone: 8654810683

Certificate Number: 2912
Expiration Date: 9/30/2023

				Primary Accreditation Body
Field of Accreditation:106 - Radionuclides in Drinking Water				
106.010	001	Gross Alpha	EPA 900.0	UT
106.010	002	Gross Beta	EPA 900.0	UT
106.030	001	Radioactive Cesium	EPA 901.1	UT
106.030	003	Gamma Emitters	EPA 901.1	UT
106.050	001	Total Alpha Radium	EPA 903.0	UT
106.050	002	Radium-226	EPA 903.0	UT
106.060	001	Radium-228	EPA 904.0	UT
106.070	001	Strontium-89, 90	EPA 905.0	UT
106.070	002	Strontium-89	EPA 905.0	UT
106.070	003	Strontium-90	EPA 905.0	UT
106.080	001	Tritium	EPA 906.0	UT
106.090	001	Uranium	EPA 908.0	UT
Field of Accreditation:112 - Radionuclides in Non-Potable Water				
112.001	001	Gross Alpha	EPA 900.0	UT
112.001	002	Gross Beta	EPA 900.0	UT
Field of Accreditation:118 - Radionuclides in Hazardous Waste				
118.315	001	Gross Alpha	EPA 9310	UT
118.315	002	Gross Beta	EPA 9310	UT
118.325	001	Total Alpha Radium	EPA 9315	UT
118.335	001	Radium-228	EPA 9320	UT

As of 10/1/2021, this list supersedes all previous lists for this certificate number.
Customers: Please verify the current accreditation standing with the State.

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

Accredited Fields of Testing

Eurofins Eaton Analytical, LLC

110 South Hill Street

South Bend, IN 46617

Phone: (574) 233-4777

Certificate No. **2920 RECIPROCITY**

Expiration Date **6/30/2022**

***As of 7/1/2021, this list supersedes all previous lists for this certificate number.**

Customers: Please verify the current accreditation standing with the State.

Field of Testing: 102 – Inorganic Chemistry of Drinking Water

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
102.015	001	Hydrogen Ion (pH)	EPA 150.1	FL
102.020	001	Turbidity	EPA 180.1	FL
102.026	001	Calcium	EPA 200.7	FL
102.026	002	Magnesium	EPA 200.7	FL
102.026	003	Potassium	EPA 200.7	FL
102.026	004	Silica	EPA 200.7	FL
102.026	005	Sodium	EPA 200.7	FL
102.030	001	Bromide	EPA 300.0	FL
102.030	002	Chlorate	EPA 300.0	FL
102.030	003	Chloride	EPA 300.0	FL
102.030	004	Chlorite	EPA 300.0	FL
102.030	005	Fluoride	EPA 300.0	FL
102.030	006	Nitrate (as N)	EPA 300.0	FL
102.030	009	Sulfate (as SO4)	EPA 300.0	FL
102.040	004	Bromate	EPA 300.1	FL

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
102.044	001	Bromate	EPA 317.0	FL
102.047	001	Perchlorate	EPA 331.0	FL
102.050	001	Cyanide, Total	EPA 335.4	FL
102.060	001	Nitrate (as N) (Calculation)	EPA 353.2	FL
102.061	001	Nitrite (as N)	EPA 353.2	FL
102.100	001	Alkalinity	SM 2320 B-1997	FL
102.120	001	Hardness (Calculation)	SM 2340 B-1997	FL
102.130	001	Specific Conductance	SM 2510 B-1997	FL
102.140	001	Residue, Filterable TDS	SM 2540 C-1997	FL
102.175	001	Chlorine, Free	SM 4500-Cl G-2000	FL
102.175	002	Chlorine, Total Residual	SM 4500-Cl G-2000	FL
102.200	001	Fluoride	SM 4500-F C-1997	FL
102.240	001	Phosphate,Ortho (as P)	SM 4500-P E-1999	FL
102.262	001	Organic Carbon-Total (TOC)	SM 5310 C-2000	FL
102.263	001	Dissolved Organic Carbon (DOC)	SM 5310 C-2000	FL
102.280	001	UV254	SM 5910 B-2011	FL

Field of Testing: 103 – Toxic Chemical Elements of Drinking Water

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
103.140	001	Aluminum	EPA 200.8	FL
103.140	002	Antimony	EPA 200.8	FL
103.140	003	Arsenic	EPA 200.8	FL
103.140	004	Barium	EPA 200.8	FL
103.140	005	Beryllium	EPA 200.8	FL

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
103.140	006	Cadmium	EPA 200.8	FL
103.140	007	Chromium	EPA 200.8	FL
103.140	008	Copper	EPA 200.8	FL
103.140	009	Lead	EPA 200.8	FL
103.140	010	Manganese	EPA 200.8	FL
103.140	001	Aluminum	EPA 200.8	FL
103.140	012	Nickel	EPA 200.8	FL
103.140	013	Selenium	EPA 200.8	FL
103.140	014	Silver	EPA 200.8	FL
103.140	015	Thallium	EPA 200.8	FL
103.140	016	Zinc	EPA 200.8	FL
103.140	018	Vanadium	EPA 200.8	FL
103.160	001	Mercury	EPA 245.1	FL
103.310	001	Chromium VI (Hexavalent Chromium)	EPA 218.6	FL
103.311	001	Chromium VI (Hexavalent Chromium)	EPA 218.7	FL

Field of Testing: 104 – Volatile Organic Chemistry of Drinking Water

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
104.030	001	1,2-Dibromoethane (EDB)	EPA 504.1	FL
104.030	002	1,2-Dibromo-3-chloropropane (DBCP)	EPA 504.1	FL
104.035	001	1,2,3-Trichloropropane (TCP)	SRL 524M-TCP	FL
104.040	001	Benzene	EPA 524.2	FL
104.040	007	n-Butylbenzene	EPA 524.2	FL
104.040	008	sec-Butylbenzene	EPA 524.2	FL
104.040	009	tert-Butylbenzene	EPA 524.2	FL
104.040	010	Carbon Tetrachloride	EPA 524.2	FL
104.040	011	Chlorobenzene	EPA 524.2	FL
104.040	015	2-Chlorotoluene	EPA 524.2	FL
104.040	016	4-Chlorotoluene	EPA 524.2	FL
104.040	019	1,3-Dichlorobenzene	EPA 524.2	FL

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
104.040	020	1,2-Dichlorobenzene	EPA 524.2	FL
104.040	021	1,4-Dichlorobenzene	EPA 524.2	FL
104.040	022	Dichlorodifluoromethane	EPA 524.2	FL
104.040	023	1,1-Dichloroethane	EPA 524.2	FL
104.040	024	1,2-Dichloroethane (Ethylene Dichloride)	EPA 524.2	FL
104.040	025	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 524.2	FL
104.040	026	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 524.2	FL
104.040	027	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 524.2	FL
104.040	028	Dichloromethane (Methylene Chloride)	EPA 524.2	FL
104.040	029	1,2-Dichloropropane	EPA 524.2	FL
104.040	033	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 524.2	FL
104.040	034	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 524.2	FL
104.040	035	Ethylbenzene	EPA 524.2	FL
104.040	037	Isopropylbenzene	EPA 524.2	FL
104.040	039	Naphthalene	EPA 524.2	FL
104.040	041	N-propylbenzene	EPA 524.2	FL
104.040	042	Styrene	EPA 524.2	FL
104.040	043	1,1,1,2-Tetrachloroethane	EPA 524.2	FL
104.040	044	1,1,2,2-Tetrachloroethane	EPA 524.2	FL
104.040	045	Tetrachloroethylene (Tetrachloroethene)	EPA 524.2	FL
104.040	046	Toluene	EPA 524.2	FL
104.040	047	1,2,3-Trichlorobenzene	EPA 524.2	FL
104.040	048	1,2,4-Trichlorobenzene	EPA 524.2	FL
104.040	049	1,1,1-Trichloroethane	EPA 524.2	FL
104.040	050	1,1,2-Trichloroethane	EPA 524.2	FL
104.040	051	Trichloroethylene (Trichloroethene)	EPA 524.2	FL
104.040	052	Trichlorofluoromethane	EPA 524.2	FL
104.040	054	1,2,4-Trimethylbenzene	EPA 524.2	FL
104.040	055	1,3,5-Trimethylbenzene	EPA 524.2	FL

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
104.040	056	Vinyl Chloride	EPA 524.2	FL
104.040	057	Xylenes, Total	EPA 524.2	FL
104.040	059	o-Xylene	EPA 524.2	FL
104.040	061	Carbon Disulfide	EPA 524.2	FL
104.040	062	Methyl isobutyl ketone (MIBK, 4-Methyl-2-pentanone)	EPA 524.2	FL
104.040	063	m+p-Xylene	EPA 524.2	FL
104.045	001	Bromodichloromethane	EPA 524.2	FL
104.045	002	Bromoform	EPA 524.2	FL
104.045	003	Chloroform	EPA 524.2	FL
104.045	004	Dibromochloromethane (Chlorodibromomethane)	EPA 524.2	FL
104.050	002	Methyl tert-butyl Ether (MTBE)	EPA 524.2	FL
104.050	003	tert-Amyl Methyl Ether (TAME)	EPA 524.2	FL
104.050	004	Ethyl tert-butyl Ether (ETBE)	EPA 524.2	FL
104.050	005	Trichlorotrifluoroethane (Freon 113)	EPA 524.2	FL
104.050	006	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 524.2	FL
104.055	022	1,2-Dibromo-3-chloropropane (DBCP)	EPA 524.3	FL
104.055	023	1,2-Dibromoethane (EDB)	EPA 524.3	FL
104.056	001	Bromodichloromethane	EPA 524.3	FL
104.056	002	Bromoform	EPA 524.3	FL
104.056	003	Chloroform	EPA 524.3	FL
104.056	004	Dibromochloromethane (Chlorodibromomethane)	EPA 524.3	FL
105.010	014	Toxaphene	EPA 505	FL
105.010	015	PCBs as Aroclors (screen)	EPA 505	FL
105.082	001	2,4-D	EPA 515.3	FL
105.082	002	Dinoseb	EPA 515.3	FL
105.082	003	Pentachlorophenol	EPA 515.3	FL
105.082	004	Picloram	EPA 515.3	FL
105.082	005	2,4,5-TP (Silvex)	EPA 515.3	FL
105.082	006	Bentazon	EPA 515.3	FL
105.082	007	Dalapon	EPA 515.3	FL

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
105.082	008	Dicamba	EPA 515.3	FL
105.085	001	1,4-Dioxane	EPA 522	FL
105.090	001	Alachlor	EPA 525.2	FL
105.090	002	Aldrin	EPA 525.2	FL
105.090	003	Atrazine	EPA 525.2	FL
105.090	004	Benzo(a)pyrene	EPA 525.2	FL
105.090	005	Butachlor	EPA 525.2	FL
105.090	007	Dieldrin	EPA 525.2	FL
105.090	008	Di(2-ethylhexyl) Adipate	EPA 525.2	FL
105.090	009	Di(2-ethylhexyl) Phthalate	EPA 525.2	FL
105.090	013	Endrin	EPA 525.2	FL
105.090	014	Heptachlor	EPA 525.2	FL
105.090	015	Heptachlor Epoxide	EPA 525.2	FL
105.090	016	Hexachlorobenzene	EPA 525.2	FL
105.090	017	Hexachlorocyclopentadiene	EPA 525.2	FL
105.090	018	Lindane (HCH-gamma)	EPA 525.2	FL
105.090	019	Methoxychlor	EPA 525.2	FL
105.090	022	Molinate	EPA 525.2	FL
105.090	025	Simazine	EPA 525.2	FL
105.090	028	Thiobencarb	EPA 525.2	A2LA
105.101	001	Carbofuran (Furadan)	EPA 531.2	FL
105.101	002	Oxamyl	EPA 531.2	FL
105.101	003	Aldicarb (Temik)	EPA 531.2	FL
105.101	004	Aldicarb Sulfone	EPA 531.2	FL
105.101	005	Aldicarb Sulfoxide	EPA 531.2	FL
105.101	006	Carbaryl (Sevin)	EPA 531.2	FL
105.101	007	3-Hydroxycarbofuran	EPA 531.2	FL
105.101	008	Methomyl (Lannate)	EPA 531.2	FL
105.106	001	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	EPA 537.1	FL
105.106	002	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	EPA 537.1	FL

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
105.106	003	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	EPA 537.1	FL
105.106	004	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	EPA 537.1	FL
105.106	005	N-Ethylperfluorooctane Sulfonamido Acetic Acid (NEtFOSAA)	EPA 537.1	FL
105.106	006	N-Methylperfluorooctane Sulfonamido Acetic Acid (NMeFOSAA)	EPA 537.1	FL
105.106	007	Perfluorobutane Sulfonic Acid (PFBS)	EPA 537.1	FL
105.106	008	Perfluorodecanoic Acid (PFDA)	EPA 537.1	FL
105.106	009	Perfluorododecanoic Acid (PFDoA)	EPA 537.1	FL
105.106	010	Perfluoroheptanoic Acid (PFHpA)	EPA 537.1	FL
105.106	011	Perfluorohexane Sulfonic Acid (PFHxS)	EPA 537.1	FL
105.106	012	Perfluorohexanoic Acid (PFHxA)	EPA 537.1	FL
105.106	013	Perfluorononanoic Acid (PFNA)	EPA 537.1	FL
105.106	014	Perfluorooctanoic Acid (PFOA)	EPA 537.1	FL
105.106	015	Perfluorooctane Sulfonic Acid (PFOS)	EPA 537.1	FL
105.106	016	Perfluorotetradecanoic Acid (PFTDA)	EPA 537.1	FL
105.106	017	Perfluorotridecanoic Acid (PFTrDA)	EPA 537.1	FL
105.106	018	Perfluoroundecanoic Acid (PFUnDA)	EPA 537.1	FL
105.120	001	Glyphosate	EPA 547	FL
105.140	001	Endothall	EPA 548.1	FL
105.150	001	Diquat	EPA 549.2	FL
105.200	001	Bromoacetic Acid	EPA 552.2	FL
105.200	003	Chloroacetic Acid	EPA 552.2	FL
105.200	005	Dibromoacetic Acid	EPA 552.2	FL
105.200	006	Dichloroacetic Acid	EPA 552.2	FL
105.200	007	Trichloroacetic Acid	EPA 552.2	FL

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
105.201	003	Bromoacetic Acid	EPA 552.3	FL
105.201	004	Chloroacetic Acid	EPA 552.3	FL
105.201	005	Dibromoacetic Acid	EPA 552.3	FL
105.201	006	Dichloroacetic Acid	EPA 552.3	FL
105.201	007	Trichloroacetic Acid	EPA 552.3	FL

Field of Testing: 106 – Radionuclides in Drinking Water

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
106.080	001	Tritium	EPA 906.0	FL
106.092	001	Uranium	EPA 200.8	FL
106.260	001	Gross Alpha	SM 7110 B	FL
106.260	002	Gross Beta	SM 7110 B	FL
106.270	001	Gross Alpha	SM 7110 C	FL
106.340	002	Radium-226	SM 7500-Ra B	FL
106.360	001	Radium-228	SM 7500-Ra D	FL

Field of Testing: 129 – Parasites in Potable Water

Subgroup Code	Analyte Code	Analyte	Method	Primary Accreditation Body
129.020	001	Cryptosporidium and Giardia	EPA 1623	FL

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

Eurofins TestAmerica Savannah

5102 LaRoche Avenue

Savannah, GA 31404

Scope of the certificate is limited to the
"Fields of Accreditation"
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of
Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **2939**

Effective Date: **7/1/2021**

Expiration Date: **6/30/2022**

Sacramento, California
subject to forfeiture or revocation

Christine Sotelo, Chief
Environmental Laboratory Accreditation Program

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Fields of Accreditation

Eurofins TestAmerica Savannah

5102 LaRoche Avenue
Savannah, GA 31404
Phone: 9123547858

Certificate Number: 2939
Expiration Date: 6/30/2022

				Primary Accreditation Body
Field of Accreditation: 102 - Inorganic Chemistry of Drinking Water				
102.015	001	Hydrogen Ion (pH)	EPA 150.1	FL
102.020	001	Turbidity	EPA 180.1	FL
102.026	001	Calcium	EPA 200.7	FL
102.026	002	Magnesium	EPA 200.7	FL
102.026	003	Potassium	EPA 200.7	FL
102.026	004	Silica	EPA 200.7	FL
102.026	005	Sodium	EPA 200.7	FL
102.030	003	Chloride	EPA 300.0	FL
102.030	005	Fluoride	EPA 300.0	FL
102.030	006	Nitrate (as N)	EPA 300.0	FL
102.030	007	Nitrite (as N)	EPA 300.0	FL
102.030	009	Sulfate (as SO4)	EPA 300.0	FL
102.040	001	Bromide	EPA 300.1	FL
102.040	002	Chlorite	EPA 300.1	FL
102.040	003	Chlorate	EPA 300.1	FL
102.040	004	Bromate	EPA 300.1	FL
102.050	001	Cyanide, Total	EPA 335.4	FL
102.060	001	Nitrate (as N) (Calculation)	EPA 353.2	FL
102.061	001	Nitrite (as N)	EPA 353.2	FL
102.070	001	Phosphate,Ortho (as P)	EPA 365.1	FL
102.095	001	Turbidity	SM 2130 B-2001	FL
102.100	001	Alkalinity	SM 2320 B-1997	FL
102.120	001	Hardness (Calculation)	SM 2340 B-1997	FL
102.121	001	Hardness	SM 2340 C-1997	FL
102.130	001	Specific Conductance	SM 2510 B-1997	FL
102.140	001	Residue, Filterable TDS	SM 2540 C-1997	FL
102.190	001	Cyanide, Total	SM 4500-CN E-1999	FL
102.203	001	Hydrogen Ion (pH)	SM 4500-H+ B-2000	FL
102.241	001	Phosphate,Ortho (as P)	SM 4500-P F-1999	FL
102.260	001	Organic Carbon-Total (TOC)	SM 5310 B-2000	FL
102.261	001	Dissolved Organic Carbon (DOC)	SM 5310 B-2000	FL
102.280	001	UV254	SM 5910 B-2011	FL
Field of Accreditation: 103 - Toxic Chemical Elements of Drinking Water				

103.130	001	Aluminum	EPA 200.7	FL
103.130	003	Barium	EPA 200.7	FL
103.130	004	Beryllium	EPA 200.7	FL
103.130	007	Chromium	EPA 200.7	FL
103.130	008	Copper	EPA 200.7	FL
103.130	009	Iron	EPA 200.7	FL
103.130	011	Manganese	EPA 200.7	FL
103.130	012	Nickel	EPA 200.7	FL
103.130	015	Silver	EPA 200.7	FL
103.130	017	Zinc	EPA 200.7	FL
103.130	018	Boron	EPA 200.7	FL
103.140	001	Aluminum	EPA 200.8	FL
103.140	002	Antimony	EPA 200.8	FL
103.140	003	Arsenic	EPA 200.8	FL
103.140	004	Barium	EPA 200.8	FL
103.140	005	Beryllium	EPA 200.8	FL
103.140	006	Cadmium	EPA 200.8	FL
103.140	007	Chromium	EPA 200.8	FL
103.140	008	Copper	EPA 200.8	FL
103.140	009	Lead	EPA 200.8	FL
103.140	010	Manganese	EPA 200.8	FL
103.140	011	Mercury	EPA 200.8	FL
103.140	012	Nickel	EPA 200.8	FL
103.140	013	Selenium	EPA 200.8	FL
103.140	014	Silver	EPA 200.8	FL
103.140	015	Thallium	EPA 200.8	FL
103.140	016	Zinc	EPA 200.8	FL
103.140	018	Vanadium	EPA 200.8	FL
103.160	001	Mercury	EPA 245.1	FL

Field of Accreditation: 104 - Volatile Organic Chemistry of Drinking Water

104.030	001	1,2-Dibromoethane (EDB)	EPA 504.1	FL
104.030	002	1,2-Dibromo-3-chloropropane (DBCP)	EPA 504.1	FL
104.040	001	Benzene	EPA 524.2	FL
104.040	007	n-Butylbenzene	EPA 524.2	FL
104.040	008	sec-Butylbenzene	EPA 524.2	FL
104.040	009	tert-Butylbenzene	EPA 524.2	FL
104.040	010	Carbon Tetrachloride	EPA 524.2	FL
104.040	011	Chlorobenzene	EPA 524.2	FL
104.040	015	2-Chlorotoluene	EPA 524.2	FL
104.040	016	4-Chlorotoluene	EPA 524.2	FL
104.040	019	1,3-Dichlorobenzene	EPA 524.2	FL
104.040	020	1,2-Dichlorobenzene	EPA 524.2	FL

104.040	021	1,4-Dichlorobenzene	EPA 524.2	FL
104.040	022	Dichlorodifluoromethane	EPA 524.2	FL
104.040	023	1,1-Dichloroethane	EPA 524.2	FL
104.040	024	1,2-Dichloroethane (Ethylene Dichloride)	EPA 524.2	FL
104.040	025	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 524.2	FL
104.040	026	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 524.2	FL
104.040	027	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 524.2	FL
104.040	028	Dichloromethane (Methylene Chloride)	EPA 524.2	FL
104.040	029	1,2-Dichloropropane	EPA 524.2	FL
104.040	033	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 524.2	FL
104.040	034	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 524.2	FL
104.040	035	Ethylbenzene	EPA 524.2	FL
104.040	037	Isopropylbenzene	EPA 524.2	FL
104.040	039	Naphthalene	EPA 524.2	FL
104.040	041	N-propylbenzene	EPA 524.2	FL
104.040	042	Styrene	EPA 524.2	FL
104.040	043	1,1,1,2-Tetrachloroethane	EPA 524.2	FL
104.040	044	1,1,2,2-Tetrachloroethane	EPA 524.2	FL
104.040	045	Tetrachloroethylene (Tetrachloroethene)	EPA 524.2	FL
104.040	046	Toluene	EPA 524.2	FL
104.040	047	1,2,3-Trichlorobenzene	EPA 524.2	FL
104.040	048	1,2,4-Trichlorobenzene	EPA 524.2	FL
104.040	049	1,1,1-Trichloroethane	EPA 524.2	FL
104.040	050	1,1,2-Trichloroethane	EPA 524.2	FL
104.040	051	Trichloroethylene (Trichloroethene)	EPA 524.2	FL
104.040	052	Trichlorofluoromethane	EPA 524.2	FL
104.040	054	1,2,4-Trimethylbenzene	EPA 524.2	FL
104.040	055	1,3,5-Trimethylbenzene	EPA 524.2	FL
104.040	056	Vinyl Chloride	EPA 524.2	FL
104.040	058	m-Xylene	EPA 524.2	FL
104.040	059	o-Xylene	EPA 524.2	FL
104.040	060	p-Xylene	EPA 524.2	FL
104.040	062	Methyl isobutyl ketone (MIBK, 4-Methyl-2-pentanone)	EPA 524.2	FL
104.040	063	m+p-Xylene	EPA 524.2	FL
104.045	001	Bromodichloromethane	EPA 524.2	FL
104.045	002	Bromoform	EPA 524.2	FL
104.045	003	Chloroform	EPA 524.2	FL
104.045	004	Dibromochloromethane (Chlorodibromomethane)	EPA 524.2	FL
104.050	002	Methyl tert-butyl Ether (MTBE)	EPA 524.2	FL

Field of Accreditation: 105 - Semi-volatile Organic Chemistry of Drinking Water

105.200	001	Bromoacetic Acid	EPA 552.2	FL
105.200	003	Chloroacetic Acid	EPA 552.2	FL

105.200	005	Dibromoacetic Acid	EPA 552.2	FL
105.200	006	Dichloroacetic Acid	EPA 552.2	FL
105.200	007	Trichloroacetic Acid	EPA 552.2	FL

Field of Accreditation:108 - Inorganic Constituents in Non-Potable Water

108.001	001	Specific Conductance	EPA 120.1 (1982 Rev.1.0)	FL
108.007	001	Residue, Volatile	EPA 160.4 (1971)	FL
108.009	001	Turbidity	EPA 180.1 (1993 Rev. 2.0)	FL
108.013	001	Calcium	EPA 200.7 (1994 Rev. 4.4)	FL
108.013	002	Magnesium	EPA 200.7 (1994 Rev. 4.4)	FL
108.013	004	Potassium	EPA 200.7 (1994 Rev. 4.4)	FL
108.013	005	Silica, Dissolved	EPA 200.7 (1994 Rev. 4.4)	FL
108.013	006	Sodium	EPA 200.7 (1994 Rev. 4.4)	FL
108.017	001	Bromide	EPA 300.0 (1993 Rev. 2.1)	FL
108.017	002	Chloride	EPA 300.0 (1993 Rev. 2.1)	FL
108.017	003	Fluoride	EPA 300.0 (1993 Rev. 2.1)	FL
108.017	004	Nitrate (as N)	EPA 300.0 (1993 Rev. 2.1)	FL
108.017	005	Nitrate-Nitrite (as N)	EPA 300.0 (1993 Rev. 2.1)	FL
108.017	006	Nitrite (as N)	EPA 300.0 (1993 Rev. 2.1)	FL
108.017	008	Sulfate (as SO4)	EPA 300.0 (1993 Rev. 2.1)	FL
108.019	001	Bromide	EPA 300.1 (1997 Rev.1.0)	FL
108.023	001	Cyanide, Total	EPA 335.4 (1993 Rev. 1.0)	FL
108.025	001	Ammonia (as N)	EPA 350.1 (1993 Rev. 2.0)	FL
108.029	001	Kjeldahl Nitrogen,Total (as N)	EPA 351.2 (1993 Rev. 2.0)	FL
108.033	001	Nitrate-Nitrite (as N)	EPA 353.2 (1993 Rev. 2.0)	FL
108.033	002	Nitrite (as N)	EPA 353.2 (1993 Rev. 2.0)	FL
108.035	001	Phosphate,Ortho (as P)	EPA 365.1 (1993 Rev. 2.0)	FL
108.039	001	Phosphorus,Total	EPA 365.4 (1974)	FL
108.045	001	Chemical Oxygen Demand	EPA 410.4 (1993 Rev. 2.0)	FL
108.047	001	Phenols, Total	EPA 420.1 (1978 Rev. 1.0)	FL
108.053	001	Oil & Grease Total	EPA 1664 A	FL
108.055	001	Color	SM 2120 B-2011	FL
108.059	001	Turbidity	SM 2130 B-2011	FL
108.063	001	Alkalinity	SM 2320 B-2011	FL
108.065	001	Hardness (Calculation)	SM 2340 B-2011	FL
108.067	001	Hardness	SM 2340 C-2011	FL
108.069	001	Specific Conductance	SM 2510 B-2011	FL
108.073	001	Residue, Filterable TDS	SM 2540 C-2011	FL
108.075	001	Residue, Non-filterable TSS	SM 2540 D-2011	FL
108.077	001	Residue, Volatile	SM 2540 E-2011	FL
108.079	001	Residue, Settleable	SM 2540 F-2011	FL
108.103	001	Chlorine, Total Residual	SM 4500-Cl B-2011	FL
108.108	001	Chlorine, Total Residual	SM 4500-Cl E-2011	FL

108.125	001	Cyanide, Total	SM 4500-CN E-2011	FL
108.129	001	Cyanide, Available	SM 4500-CN G-2011	FL
108.137	001	Hydrogen Ion (pH)	SM 4500-H+ B-2011	FL
108.203	001	Sulfide (as S)	SM 4500-S F-2011	FL
108.207	001	Biochemical Oxygen Demand	SM 5210 B-2011	FL
108.207	002	Carbonaceous BOD	SM 5210 B-2011	FL
108.213	001	Chemical Oxygen Demand	SM 5220 D-2011	FL
108.215	001	Organic Carbon-Total (TOC)	SM 5310 B-2011	FL

Field of Accreditation: 109 - Metals and Trace Elements in Non-Potable Water

109.623	001	Aluminum	EPA 200.7 (1994 Rev. 4.4)	FL
109.623	002	Antimony	EPA 200.7 (1994 Rev. 4.4)	FL
109.623	003	Arsenic	EPA 200.7 (1994 Rev. 4.4)	FL
109.623	004	Barium	EPA 200.7 (1994 Rev. 4.4)	FL
109.623	005	Beryllium	EPA 200.7 (1994 Rev. 4.4)	FL
109.623	006	Boron	EPA 200.7 (1994 Rev. 4.4)	FL
109.623	007	Cadmium	EPA 200.7 (1994 Rev. 4.4)	FL
109.623	008	Chromium	EPA 200.7 (1994 Rev. 4.4)	FL
109.623	009	Cobalt	EPA 200.7 (1994 Rev. 4.4)	FL
109.623	010	Copper	EPA 200.7 (1994 Rev. 4.4)	FL
109.623	011	Iron	EPA 200.7 (1994 Rev. 4.4)	FL
109.623	012	Lead	EPA 200.7 (1994 Rev. 4.4)	FL
109.623	013	Manganese	EPA 200.7 (1994 Rev. 4.4)	FL
109.623	014	Molybdenum	EPA 200.7 (1994 Rev. 4.4)	FL
109.623	015	Nickel	EPA 200.7 (1994 Rev. 4.4)	FL
109.623	016	Selenium	EPA 200.7 (1994 Rev. 4.4)	FL
109.623	017	Silver	EPA 200.7 (1994 Rev. 4.4)	FL
109.623	018	Thallium	EPA 200.7 (1994 Rev. 4.4)	FL
109.623	019	Tin	EPA 200.7 (1994 Rev. 4.4)	FL
109.623	020	Titanium	EPA 200.7 (1994 Rev. 4.4)	FL
109.623	021	Vanadium	EPA 200.7 (1994 Rev. 4.4)	FL
109.623	022	Zinc	EPA 200.7 (1994 Rev. 4.4)	FL
109.625	001	Aluminum	EPA 200.8 (1994 Rev. 5.4)	FL
109.625	002	Antimony	EPA 200.8 (1994 Rev. 5.4)	FL
109.625	003	Arsenic	EPA 200.8 (1994 Rev. 5.4)	FL
109.625	004	Barium	EPA 200.8 (1994 Rev. 5.4)	FL
109.625	005	Beryllium	EPA 200.8 (1994 Rev. 5.4)	FL
109.625	007	Cadmium	EPA 200.8 (1994 Rev. 5.4)	FL
109.625	008	Chromium	EPA 200.8 (1994 Rev. 5.4)	FL
109.625	009	Cobalt	EPA 200.8 (1994 Rev. 5.4)	FL
109.625	010	Copper	EPA 200.8 (1994 Rev. 5.4)	FL
109.625	013	Lead	EPA 200.8 (1994 Rev. 5.4)	FL
109.625	014	Manganese	EPA 200.8 (1994 Rev. 5.4)	FL

109.625	015	Molybdenum	EPA 200.8 (1994 Rev. 5.4)	FL
109.625	016	Nickel	EPA 200.8 (1994 Rev. 5.4)	FL
109.625	017	Selenium	EPA 200.8 (1994 Rev. 5.4)	FL
109.625	018	Silver	EPA 200.8 (1994 Rev. 5.4)	FL
109.625	019	Thallium	EPA 200.8 (1994 Rev. 5.4)	FL
109.625	022	Vanadium	EPA 200.8 (1994 Rev. 5.4)	FL
109.625	023	Zinc	EPA 200.8 (1994 Rev. 5.4)	FL
109.635	001	Mercury	EPA 245.1 (1994 Rev. 3.0)	FL
109.685	002	Chromium VI (Hexavalent Chromium)	SM 3500-Cr B-2011	FL

Field of Accreditation: 110 - Volatile Organic Constituents in Non-Potable Water

110.040	003	Acrolein	EPA 624.1	FL
110.040	004	Acrylonitrile	EPA 624.1	FL
110.040	005	Benzene	EPA 624.1	FL
110.040	006	Bromodichloromethane	EPA 624.1	FL
110.040	007	Bromoform	EPA 624.1	FL
110.040	008	Bromomethane (Methyl Bromide)	EPA 624.1	FL
110.040	010	Carbon Tetrachloride	EPA 624.1	FL
110.040	011	Chlorobenzene	EPA 624.1	FL
110.040	012	Chloroethane	EPA 624.1	FL
110.040	013	2-Chloroethyl vinyl Ether	EPA 624.1	FL
110.040	014	Chloroform	EPA 624.1	FL
110.040	015	Chloromethane (Methyl Chloride)	EPA 624.1	FL
110.040	016	Dibromochloromethane (Chlorodibromomethane)	EPA 624.1	FL
110.040	017	1,2-Dichlorobenzene	EPA 624.1	FL
110.040	018	1,3-Dichlorobenzene	EPA 624.1	FL
110.040	019	1,4-Dichlorobenzene	EPA 624.1	FL
110.040	020	1,1-Dichloroethane	EPA 624.1	FL
110.040	021	1,2-Dichloroethane (Ethylene Dichloride)	EPA 624.1	FL
110.040	022	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 624.1	FL
110.040	023	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 624.1	FL
110.040	024	1,2-Dichloropropane	EPA 624.1	FL
110.040	025	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 624.1	FL
110.040	026	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 624.1	FL
110.040	029	Ethylbenzene	EPA 624.1	FL
110.040	031	Methylene Chloride (Dichloromethane)	EPA 624.1	FL
110.040	034	1,1,2,2-Tetrachloroethane	EPA 624.1	FL
110.040	035	Tetrachloroethylene (Tetrachloroethene)	EPA 624.1	FL
110.040	037	Toluene	EPA 624.1	FL
110.040	038	1,1,1-Trichloroethane	EPA 624.1	FL
110.040	039	1,1,2-Trichloroethane	EPA 624.1	FL
110.040	040	Trichloroethylene (Trichloroethene)	EPA 624.1	FL
110.040	041	Vinyl Chloride	EPA 624.1	FL

110.040	042	m-Xylene	EPA 624.1	FL
110.040	043	o-Xylene	EPA 624.1	FL
110.040	044	p-Xylene	EPA 624.1	FL
110.040	045	Trichlorofluoromethane	EPA 624.1	FL
110.040	046	m+p-Xylene	EPA 624.1	FL

Field of Accreditation:111 - Semi-volatile Organic Constituents in Non-Potable Water

111.055	001	Aldrin	EPA 608.3	FL
111.055	002	alpha-BHC	EPA 608.3	FL
111.055	003	beta-BHC	EPA 608.3	FL
111.055	004	delta-BHC	EPA 608.3	FL
111.055	005	gamma-BHC (Lindane)	EPA 608.3	FL
111.055	006	Chlordane	EPA 608.3	FL
111.055	007	4,4'-DDD	EPA 608.3	FL
111.055	008	4,4'-DDE	EPA 608.3	FL
111.055	009	4,4'-DDT	EPA 608.3	FL
111.055	010	Dieldrin	EPA 608.3	FL
111.055	011	Endosulfan I	EPA 608.3	FL
111.055	012	Endosulfan II	EPA 608.3	FL
111.055	013	Endosulfan Sulfate	EPA 608.3	FL
111.055	014	Endrin	EPA 608.3	FL
111.055	015	Endrin Aldehyde	EPA 608.3	FL
111.055	016	Heptachlor	EPA 608.3	FL
111.055	017	Heptachlor Epoxide	EPA 608.3	FL
111.055	019	PCB-1016 (Aroclor-1016)	EPA 608.3	FL
111.055	020	PCB-1221 (Aroclor-1221)	EPA 608.3	FL
111.055	021	PCB-1232 (Aroclor-1232)	EPA 608.3	FL
111.055	022	PCB-1242 (Aroclor-1242)	EPA 608.3	FL
111.055	023	PCB-1248 (Aroclor-1248)	EPA 608.3	FL
111.055	024	PCB-1254 (Aroclor-1254)	EPA 608.3	FL
111.055	025	PCB-1260 (Aroclor-1260)	EPA 608.3	FL
111.055	046	Methoxychlor	EPA 608.3	FL
111.055	060	Toxaphene	EPA 608.3	FL
111.055	060	Toxaphene	EPA 608.3	FL
111.120	001	2,4-D	EPA 615	FL
111.120	002	2,4-DB	EPA 615	FL
111.120	003	Dicamba	EPA 615	FL
111.120	004	Dichloroprop	EPA 615	FL
111.120	005	Dinoseb	EPA 615	FL
111.120	006	MCPA	EPA 615	FL
111.120	007	MCPP	EPA 615	FL
111.120	008	2,4,5-T	EPA 615	FL
111.120	009	2,4,5-TP (Silvex)	EPA 615	FL

111.160	001	Acenaphthene	EPA 625.1	FL
111.160	002	Acenaphthylene	EPA 625.1	FL
111.160	003	Anthracene	EPA 625.1	FL
111.160	004	Benzidine	EPA 625.1	FL
111.160	005	Benzo(a)anthracene	EPA 625.1	FL
111.160	006	Benzo(a)pyrene	EPA 625.1	FL
111.160	007	Benzo(b)fluoranthene	EPA 625.1	FL
111.160	008	Benzo(g,h,i)perylene	EPA 625.1	FL
111.160	009	Benzo(k)fluoranthene	EPA 625.1	FL
111.160	010	Bis(2-chloroethoxy) Methane	EPA 625.1	FL
111.160	011	Bis(2-chloroethyl) Ether	EPA 625.1	FL
111.160	012	bis(2-Chloroisopropyl) ether (2,2'-Oxybis[1-chloropropane])	EPA 625.1	FL
111.160	013	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 625.1	FL
111.160	014	4-Bromophenyl Phenyl Ether	EPA 625.1	FL
111.160	015	Butyl Benzyl Phthalate	EPA 625.1	FL
111.160	016	2-Chloronaphthalene	EPA 625.1	FL
111.160	017	4-Chlorophenyl Phenyl Ether	EPA 625.1	FL
111.160	018	Chrysene	EPA 625.1	FL
111.160	019	Dibenz(a,h)anthracene	EPA 625.1	FL
111.160	020	3,3'-Dichlorobenzidine	EPA 625.1	FL
111.160	021	Diethyl Phthalate	EPA 625.1	FL
111.160	022	Dimethyl Phthalate	EPA 625.1	FL
111.160	023	Di-n-butyl Phthalate	EPA 625.1	FL
111.160	024	2,4-Dinitrotoluene	EPA 625.1	FL
111.160	025	2,6-Dinitrotoluene	EPA 625.1	FL
111.160	026	Di-n-octyl Phthalate	EPA 625.1	FL
111.160	027	Fluoranthene	EPA 625.1	FL
111.160	028	Fluorene	EPA 625.1	FL
111.160	029	Hexachlorobenzene	EPA 625.1	FL
111.160	030	Hexachlorobutadiene	EPA 625.1	FL
111.160	031	Hexachloroethane	EPA 625.1	FL
111.160	032	Indeno(1,2,3-c,d)pyrene	EPA 625.1	FL
111.160	033	Isophorone	EPA 625.1	FL
111.160	034	Naphthalene	EPA 625.1	FL
111.160	035	Nitrobenzene	EPA 625.1	FL
111.160	036	N-nitroso-di-n-propylamine	EPA 625.1	FL
111.160	037	Phenanthrene	EPA 625.1	FL
111.160	038	Pyrene	EPA 625.1	FL
111.160	039	1,2,4-Trichlorobenzene	EPA 625.1	FL
111.160	040	4-Chloro-3-methylphenol	EPA 625.1	FL
111.160	041	2-Chlorophenol	EPA 625.1	FL
111.160	042	2,4-Dichlorophenol	EPA 625.1	FL

111.160	043	2,4-Dimethylphenol	EPA 625.1	FL
111.160	044	2,4-Dinitrophenol	EPA 625.1	FL
111.160	045	2-Methyl-4,6-dinitrophenol	EPA 625.1	FL
111.160	046	2-Nitrophenol	EPA 625.1	FL
111.160	047	4-Nitrophenol	EPA 625.1	FL
111.160	048	Pentachlorophenol	EPA 625.1	FL
111.160	049	Phenol	EPA 625.1	FL
111.160	050	2,4,6-Trichlorophenol	EPA 625.1	FL
111.160	143	1,2-Diphenylhydrazine	EPA 625.1	FL

Field of Accreditation: 114 - Inorganic Constituents in Hazardous Waste

114.315	001	Aluminum	EPA 6010 B	FL
114.315	002	Antimony	EPA 6010 B	FL
114.315	003	Arsenic	EPA 6010 B	FL
114.315	004	Barium	EPA 6010 B	FL
114.315	005	Beryllium	EPA 6010 B	FL
114.315	006	Boron	EPA 6010 B	FL
114.315	007	Cadmium	EPA 6010 B	FL
114.315	008	Calcium	EPA 6010 B	FL
114.315	009	Chromium	EPA 6010 B	FL
114.315	010	Cobalt	EPA 6010 B	FL
114.315	011	Copper	EPA 6010 B	FL
114.315	012	Iron	EPA 6010 B	FL
114.315	013	Lead	EPA 6010 B	FL
114.315	014	Magnesium	EPA 6010 B	FL
114.315	015	Manganese	EPA 6010 B	FL
114.315	016	Molybdenum	EPA 6010 B	FL
114.315	017	Nickel	EPA 6010 B	FL
114.315	018	Potassium	EPA 6010 B	FL
114.315	019	Selenium	EPA 6010 B	FL
114.315	020	Silver	EPA 6010 B	FL
114.315	021	Sodium	EPA 6010 B	FL
114.315	022	Strontium	EPA 6010 B	FL
114.315	023	Thallium	EPA 6010 B	FL
114.315	024	Tin	EPA 6010 B	FL
114.315	025	Titanium	EPA 6010 B	FL
114.315	026	Vanadium	EPA 6010 B	FL
114.315	027	Zinc	EPA 6010 B	FL
114.325	001	Aluminum	EPA 6010 D	FL
114.325	002	Antimony	EPA 6010 D	FL
114.325	003	Arsenic	EPA 6010 D	FL
114.325	004	Barium	EPA 6010 D	FL
114.325	005	Beryllium	EPA 6010 D	FL

114.325	006	Boron	EPA 6010 D	FL
114.325	007	Cadmium	EPA 6010 D	FL
114.325	008	Calcium	EPA 6010 D	FL
114.325	009	Chromium	EPA 6010 D	FL
114.325	010	Cobalt	EPA 6010 D	FL
114.325	011	Copper	EPA 6010 D	FL
114.325	012	Iron	EPA 6010 D	FL
114.325	013	Lead	EPA 6010 D	FL
114.325	014	Magnesium	EPA 6010 D	FL
114.325	015	Manganese	EPA 6010 D	FL
114.325	016	Molybdenum	EPA 6010 D	FL
114.325	017	Nickel	EPA 6010 D	FL
114.325	018	Potassium	EPA 6010 D	FL
114.325	019	Selenium	EPA 6010 D	FL
114.325	020	Silver	EPA 6010 D	FL
114.325	021	Sodium	EPA 6010 D	FL
114.325	022	Strontium	EPA 6010 D	FL
114.325	023	Thallium	EPA 6010 D	FL
114.325	024	Tin	EPA 6010 D	FL
114.325	025	Titanium	EPA 6010 D	FL
114.325	026	Vanadium	EPA 6010 D	FL
114.325	027	Zinc	EPA 6010 D	FL
114.335	002	Antimony	EPA 6020	FL
114.335	003	Arsenic	EPA 6020	FL
114.335	004	Barium	EPA 6020	FL
114.335	005	Beryllium	EPA 6020	FL
114.335	006	Cadmium	EPA 6020	FL
114.335	007	Chromium	EPA 6020	FL
114.335	008	Cobalt	EPA 6020	FL
114.335	009	Copper	EPA 6020	FL
114.335	010	Lead	EPA 6020	FL
114.335	011	Manganese	EPA 6020	FL
114.335	012	Nickel	EPA 6020	FL
114.335	013	Silver	EPA 6020	FL
114.335	014	Thallium	EPA 6020	FL
114.335	015	Zinc	EPA 6020	FL
114.345	001	Aluminum	EPA 6020 B	FL
114.345	002	Antimony	EPA 6020 B	FL
114.345	003	Arsenic	EPA 6020 B	FL
114.345	004	Barium	EPA 6020 B	FL
114.345	005	Beryllium	EPA 6020 B	FL
114.345	006	Cadmium	EPA 6020 B	FL

114.345	007	Calcium	EPA 6020 B	FL
114.345	008	Chromium	EPA 6020 B	FL
114.345	009	Cobalt	EPA 6020 B	FL
114.345	010	Copper	EPA 6020 B	FL
114.345	011	Iron	EPA 6020 B	FL
114.345	012	Lead	EPA 6020 B	FL
114.345	013	Magnesium	EPA 6020 B	FL
114.345	014	Manganese	EPA 6020 B	FL
114.345	015	Mercury	EPA 6020 B	FL
114.345	016	Nickel	EPA 6020 B	FL
114.345	017	Potassium	EPA 6020 B	FL
114.345	018	Selenium	EPA 6020 B	FL
114.345	019	Silver	EPA 6020 B	FL
114.345	020	Sodium	EPA 6020 B	FL
114.345	021	Thallium	EPA 6020 B	FL
114.345	022	Vanadium	EPA 6020 B	FL
114.345	023	Zinc	EPA 6020 B	FL
114.435	001	Chromium VI (Hexavalent Chromium)	EPA 7196 A	FL
114.545	001	Mercury	EPA 7471 B	FL
114.705	001	Cyanide, Total	EPA 9012 A	FL
114.705	002	Cyanide, Amenable	EPA 9012 A	FL
114.715	001	Cyanide, Total	EPA 9012 B	FL
114.715	002	Cyanide, Amenable	EPA 9012 B	FL
114.735	001	Sulfides	EPA 9034	FL
114.755	001	Fluoride	EPA 9056 A	FL

Field of Accreditation:115 - Leaching/Extraction Tests and Physical Characteristics of Hazardous Waste

115.085	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311	FL
115.095	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312	FL
115.105	001	Ignitability	EPA 1030	FL
115.135	001	Corrosivity - pH Determination	EPA 9045 C	FL
115.145	001	Corrosivity - pH Determination	EPA 9045 D	FL

Field of Accreditation:116 - Volatile Organic Compounds in Hazardous Waste

116.265	001	Benzene	EPA 8260 B	FL
116.265	002	Bromobenzene	EPA 8260 B	FL
116.265	003	Bromochloromethane	EPA 8260 B	FL
116.265	004	Bromodichloromethane	EPA 8260 B	FL
116.265	005	Bromoform	EPA 8260 B	FL
116.265	006	Bromomethane (Methyl Bromide)	EPA 8260 B	FL
116.265	007	n-Butylbenzene	EPA 8260 B	FL
116.265	008	sec-Butylbenzene	EPA 8260 B	FL
116.265	009	tert-Butylbenzene	EPA 8260 B	FL
116.265	010	Carbon Disulfide	EPA 8260 B	FL

116.265	011	Carbon Tetrachloride	EPA 8260 B	FL
116.265	012	Chlorobenzene	EPA 8260 B	FL
116.265	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 B	FL
116.265	014	Chloroethane	EPA 8260 B	FL
116.265	015	Chloroform	EPA 8260 B	FL
116.265	016	Chloromethane (Methyl Chloride)	EPA 8260 B	FL
116.265	017	Dibromomethane	EPA 8260 B	FL
116.265	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 B	FL
116.265	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 B	FL
116.265	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 B	FL
116.265	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 B	FL
116.265	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 B	FL
116.265	023	Ethylbenzene	EPA 8260 B	FL
116.265	024	Hexachlorobutadiene	EPA 8260 B	FL
116.265	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 B	FL
116.265	026	Methylene Chloride (Dichloromethane)	EPA 8260 B	FL
116.265	027	Naphthalene	EPA 8260 B	FL
116.265	029	N-propylbenzene	EPA 8260 B	FL
116.265	030	Styrene	EPA 8260 B	FL
116.265	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 B	FL
116.265	032	Toluene	EPA 8260 B	FL
116.265	033	Trichloroethylene (Trichloroethene)	EPA 8260 B	FL
116.265	034	Trichlorofluoromethane	EPA 8260 B	FL
116.265	035	Vinyl Chloride	EPA 8260 B	FL
116.265	036	m+p-Xylene	EPA 8260 B	FL
116.265	037	o-Xylene	EPA 8260 B	FL
116.265	038	m-Xylene	EPA 8260 B	FL
116.265	039	p-Xylene	EPA 8260 B	FL
116.265	040	1,1-Dichloroethane	EPA 8260 B	FL
116.265	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 B	FL
116.265	042	1,1,1-Trichloroethane	EPA 8260 B	FL
116.265	043	1,1,1,2-Tetrachloroethane	EPA 8260 B	FL
116.265	044	1,1,2,2-Tetrachloroethane	EPA 8260 B	FL
116.265	045	1,1,2-Trichloroethane	EPA 8260 B	FL
116.265	046	1,2-Dichlorobenzene	EPA 8260 B	FL
116.265	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 B	FL
116.265	048	1,2-Dibromoethane (EDB)	EPA 8260 B	FL
116.265	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 B	FL
116.265	050	1,2-Dichloropropane	EPA 8260 B	FL
116.265	051	1,2,3-Trichloropropane (TCP)	EPA 8260 B	FL
116.265	052	1,2,4-Trichlorobenzene	EPA 8260 B	FL
116.265	053	1,3-Dichlorobenzene	EPA 8260 B	FL

116.265	054	1,4-Dichlorobenzene	EPA 8260 B	FL
116.265	055	2-Chloroethyl vinyl Ether	EPA 8260 B	FL
116.265	056	4-Chlorotoluene	EPA 8260 B	FL
116.265	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 B	FL
116.275	001	Benzene	EPA 8260 D	FL
116.275	002	Bromobenzene	EPA 8260 D	FL
116.275	003	Bromochloromethane	EPA 8260 D	FL
116.275	004	Bromodichloromethane	EPA 8260 D	FL
116.275	005	Bromoform	EPA 8260 D	FL
116.275	006	Bromomethane (Methyl Bromide)	EPA 8260 D	FL
116.275	007	n-Butylbenzene	EPA 8260 D	FL
116.275	008	sec-Butylbenzene	EPA 8260 D	FL
116.275	009	tert-Butylbenzene	EPA 8260 D	FL
116.275	010	Carbon Disulfide	EPA 8260 D	FL
116.275	011	Carbon Tetrachloride	EPA 8260 D	FL
116.275	012	Chlorobenzene	EPA 8260 D	FL
116.275	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 D	FL
116.275	014	Chloroethane	EPA 8260 D	FL
116.275	015	Chloroform	EPA 8260 D	FL
116.275	016	Chloromethane (Methyl Chloride)	EPA 8260 D	FL
116.275	017	Dibromomethane	EPA 8260 D	FL
116.275	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 D	FL
116.275	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 D	FL
116.275	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 D	FL
116.275	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 D	FL
116.275	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 D	FL
116.275	023	Ethylbenzene	EPA 8260 D	FL
116.275	024	Hexachlorobutadiene	EPA 8260 D	FL
116.275	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 D	FL
116.275	026	Methylene Chloride (Dichloromethane)	EPA 8260 D	FL
116.275	027	Naphthalene	EPA 8260 D	FL
116.275	029	N-propylbenzene	EPA 8260 D	FL
116.275	030	Styrene	EPA 8260 D	FL
116.275	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 D	FL
116.275	032	Toluene	EPA 8260 D	FL
116.275	033	Trichloroethylene (Trichloroethene)	EPA 8260 D	FL
116.275	034	Trichlorofluoromethane	EPA 8260 D	FL
116.275	035	Vinyl Chloride	EPA 8260 D	FL
116.275	036	m+p-Xylene	EPA 8260 D	FL
116.275	037	o-Xylene	EPA 8260 D	FL
116.275	038	m-Xylene	EPA 8260 D	FL
116.275	039	p-Xylene	EPA 8260 D	FL

116.275	040	1,1-Dichloroethane	EPA 8260 D	FL
116.275	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 D	FL
116.275	042	1,1,1-Trichloroethane	EPA 8260 D	FL
116.275	043	1,1,1,2-Tetrachloroethane	EPA 8260 D	FL
116.275	044	1,1,2,2-Tetrachloroethane	EPA 8260 D	FL
116.275	045	1,1,2-Trichloroethane	EPA 8260 D	FL
116.275	046	1,2-Dichlorobenzene	EPA 8260 D	FL
116.275	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 D	FL
116.275	048	1,2-Dibromoethane (EDB)	EPA 8260 D	FL
116.275	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 D	FL
116.275	050	1,2-Dichloropropane	EPA 8260 D	FL
116.275	051	1,2,3-Trichloropropane (TCP)	EPA 8260 D	FL
116.275	052	1,2,4-Trichlorobenzene	EPA 8260 D	FL
116.275	053	1,3-Dichlorobenzene	EPA 8260 D	FL
116.275	054	1,4-Dichlorobenzene	EPA 8260 D	FL
116.275	055	2-Chloroethyl vinyl Ether	EPA 8260 D	FL
116.275	056	4-Chlorotoluene	EPA 8260 D	FL
116.275	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 D	FL

Field of Accreditation: 117 - Semi-volatile Organic Chemistry of Hazardous Waste

117.245	001	Gasoline Range Organics (GRO)	EPA 8015 C	FL
117.245	002	Diesel Range Organics (DRO)	EPA 8015 C	FL
117.265	006	n-Butyl Alcohol (1-Butanol)	EPA 8015 C	FL
117.265	007	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 8015 C	FL
117.265	012	Ethanol	EPA 8015 C	FL
117.265	013	Ethyl Acetate	EPA 8015 C	FL
117.265	014	Ethylene Glycol	EPA 8015 C	FL
117.265	016	Isobutyl Alcohol	EPA 8015 C	FL
117.265	017	Isopropyl Alcohol (Isopropanol)	EPA 8015 C	FL
117.265	018	Methanol	EPA 8015 C	FL
117.265	025	1-Propanol	EPA 8015 C	FL
117.325	001	Aldrin	EPA 8081 B	FL
117.325	002	alpha-BHC	EPA 8081 B	FL
117.325	003	beta-BHC	EPA 8081 B	FL
117.325	004	delta-BHC	EPA 8081 B	FL
117.325	005	gamma-BHC (Lindane)	EPA 8081 B	FL
117.325	006	Chlordane (total)	EPA 8081 B	FL
117.325	007	trans-Chlordane	EPA 8081 B	FL
117.325	008	4,4'-DDD	EPA 8081 B	FL
117.325	009	4,4'-DDE	EPA 8081 B	FL
117.325	010	4,4'-DDT	EPA 8081 B	FL
117.325	011	Dieldrin	EPA 8081 B	FL
117.325	012	Endosulfan I	EPA 8081 B	FL

117.325	013	Endosulfan II	EPA 8081 B	FL
117.325	014	Endosulfan Sulfate	EPA 8081 B	FL
117.325	015	Endrin	EPA 8081 B	FL
117.325	016	Endrin Aldehyde	EPA 8081 B	FL
117.325	017	Endrin Ketone	EPA 8081 B	FL
117.325	018	Heptachlor	EPA 8081 B	FL
117.325	019	Heptachlor Epoxide	EPA 8081 B	FL
117.325	020	Methoxychlor	EPA 8081 B	FL
117.325	021	Toxaphene	EPA 8081 B	FL
117.345	001	Aroclor 1016	EPA 8082 A	FL
117.345	001	Aroclor 1016	EPA 8082 A	FL
117.345	002	Aroclor 1221	EPA 8082 A	FL
117.345	002	Aroclor 1221	EPA 8082 A	FL
117.345	003	Aroclor 1232	EPA 8082 A	FL
117.345	003	Aroclor 1232	EPA 8082 A	FL
117.345	004	Aroclor 1242	EPA 8082 A	FL
117.345	004	Aroclor 1242	EPA 8082 A	FL
117.345	005	Aroclor 1248	EPA 8082 A	FL
117.345	005	Aroclor 1248	EPA 8082 A	FL
117.345	006	Aroclor 1254	EPA 8082 A	FL
117.345	006	Aroclor 1254	EPA 8082 A	FL
117.345	007	Aroclor 1260	EPA 8082 A	FL
117.345	007	Aroclor 1260	EPA 8082 A	FL
117.425	001	2,4-D	EPA 8151 A	FL
117.425	002	2,4-DB	EPA 8151 A	FL
117.425	003	2,4,5-TP (Silvex)	EPA 8151 A	FL
117.425	004	2,4,5-T	EPA 8151 A	FL
117.425	005	Dalapon	EPA 8151 A	FL
117.425	006	Dicamba	EPA 8151 A	FL
117.425	007	Dichloroprop	EPA 8151 A	FL
117.425	008	Dinoseb	EPA 8151 A	FL
117.425	009	MCPA	EPA 8151 A	FL
117.425	010	MCPP	EPA 8151 A	FL
117.425	012	Pentachlorophenol	EPA 8151 A	FL
117.445	001	Acenaphthene	EPA 8270 E	FL
117.445	002	Acenaphthylene	EPA 8270 E	FL
117.445	003	Aniline	EPA 8270 E	FL
117.445	004	Anthracene	EPA 8270 E	FL
117.445	005	Benzidine	EPA 8270 E	FL
117.445	006	Benzoic Acid	EPA 8270 E	FL
117.445	007	Benzo(a)anthracene	EPA 8270 E	FL
117.445	008	Benzo(b)fluoranthene	EPA 8270 E	FL

117.445	009	Benzo(k)fluoranthene	EPA 8270 E	FL
117.445	010	Benzo(g,h,i)perylene	EPA 8270 E	FL
117.445	011	Benzo(a)pyrene	EPA 8270 E	FL
117.445	012	Benzyl Alcohol	EPA 8270 E	FL
117.445	013	Bis(2-chloroethoxy) Methane	EPA 8270 E	FL
117.445	014	Bis(2-chloroethyl) Ether	EPA 8270 E	FL
117.445	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 E	FL
117.445	016	Butyl Benzyl Phthalate	EPA 8270 E	FL
117.445	017	Chrysene	EPA 8270 E	FL
117.445	018	Dibenz(a,h)anthracene	EPA 8270 E	FL
117.445	019	Dibenzofuran	EPA 8270 E	FL
117.445	020	Di-n-butyl Phthalate	EPA 8270 E	FL
117.445	021	Diethyl Phthalate	EPA 8270 E	FL
117.445	022	Dimethyl Phthalate	EPA 8270 E	FL
117.445	023	Di-n-octyl Phthalate	EPA 8270 E	FL
117.445	024	Fluoranthene	EPA 8270 E	FL
117.445	025	Fluorene	EPA 8270 E	FL
117.445	026	Naphthalene	EPA 8270 E	FL
117.445	027	Nitrobenzene	EPA 8270 E	FL
117.445	028	Pentachlorobenzene	EPA 8270 E	FL
117.445	029	Pentachlorophenol	EPA 8270 E	FL
117.445	031	1,2-Dichlorobenzene	EPA 8270 E	FL
117.445	032	1,3-Dichlorobenzene	EPA 8270 E	FL
117.445	033	1,4-Dichlorobenzene	EPA 8270 E	FL
117.445	034	2-Chloronaphthalene	EPA 8270 E	FL
117.445	035	2-Chlorophenol	EPA 8270 E	FL
117.445	036	2,4-Dichlorophenol	EPA 8270 E	FL
117.445	037	2,4-Dimethylphenol	EPA 8270 E	FL
117.445	038	2,4-Dinitrophenol	EPA 8270 E	FL
117.445	039	2,4-Dinitrotoluene	EPA 8270 E	FL
117.445	040	2,6-Dichlorophenol	EPA 8270 E	FL
117.445	041	2,6-Dinitrotoluene	EPA 8270 E	FL
117.445	042	2-Nitroaniline	EPA 8270 E	FL
117.445	043	2-Nitrophenol	EPA 8270 E	FL
117.445	044	3-Nitroaniline	EPA 8270 E	FL
117.445	045	3,3'-Dichlorobenzidine	EPA 8270 E	FL
117.445	046	4-Chloroaniline	EPA 8270 E	FL
117.445	047	4-Chloro-3-methylphenol	EPA 8270 E	FL
117.445	048	4-Bromophenyl Phenyl Ether	EPA 8270 E	FL
117.445	049	4-Chlorophenyl Phenyl Ether	EPA 8270 E	FL
117.445	050	4-Nitroaniline	EPA 8270 E	FL
117.445	051	4-Nitrophenol	EPA 8270 E	FL

117.445	061	Dinoseb	EPA 8270 E	FL
117.445	074	Disulfoton	EPA 8270 E	FL
117.445	076	Parathion Ethyl	EPA 8270 E	FL
117.445	077	Parathion Methyl	EPA 8270 E	FL
117.445	078	Phorate	EPA 8270 E	FL
117.445	087	N-nitrosodiethylamine	EPA 8270 E	FL
117.445	088	N-nitrosodimethylamine	EPA 8270 E	FL
117.445	089	N-nitrosodiphenylamine	EPA 8270 E	FL
117.445	090	N-nitroso-di-n-propylamine	EPA 8270 E	FL

Field of Accreditation:130 - Inorganic constituents in Hazardous waste (Matrix Aqueous)

130.010	001	Aluminum	EPA 6010 B	FL
130.010	002	Antimony	EPA 6010 B	FL
130.010	003	Arsenic	EPA 6010 B	FL
130.010	004	Barium	EPA 6010 B	FL
130.010	005	Beryllium	EPA 6010 B	FL
130.010	006	Boron	EPA 6010 B	FL
130.010	007	Cadmium	EPA 6010 B	FL
130.010	008	Calcium	EPA 6010 B	FL
130.010	009	Chromium	EPA 6010 B	FL
130.010	010	Cobalt	EPA 6010 B	FL
130.010	011	Copper	EPA 6010 B	FL
130.010	012	Iron	EPA 6010 B	FL
130.010	013	Lead	EPA 6010 B	FL
130.010	014	Magnesium	EPA 6010 B	FL
130.010	015	Manganese	EPA 6010 B	FL
130.010	016	Molybdenum	EPA 6010 B	FL
130.010	017	Nickel	EPA 6010 B	FL
130.010	018	Potassium	EPA 6010 B	FL
130.010	019	Selenium	EPA 6010 B	FL
130.010	020	Silver	EPA 6010 B	FL
130.010	021	Sodium	EPA 6010 B	FL
130.010	022	Strontium	EPA 6010 B	FL
130.010	023	Thallium	EPA 6010 B	FL
130.010	024	Tin	EPA 6010 B	FL
130.010	025	Titanium	EPA 6010 B	FL
130.010	026	Vanadium	EPA 6010 B	FL
130.010	027	Zinc	EPA 6010 B	FL
130.020	001	Aluminum	EPA 6010 D	FL
130.020	002	Antimony	EPA 6010 D	FL
130.020	003	Arsenic	EPA 6010 D	FL
130.020	004	Barium	EPA 6010 D	FL
130.020	005	Beryllium	EPA 6010 D	FL

130.020	006	Boron	EPA 6010 D	FL
130.020	007	Cadmium	EPA 6010 D	FL
130.020	008	Calcium	EPA 6010 D	FL
130.020	009	Chromium	EPA 6010 D	FL
130.020	010	Cobalt	EPA 6010 D	FL
130.020	011	Copper	EPA 6010 D	FL
130.020	012	Iron	EPA 6010 D	FL
130.020	013	Lead	EPA 6010 D	FL
130.020	014	Magnesium	EPA 6010 D	FL
130.020	015	Manganese	EPA 6010 D	FL
130.020	016	Molybdenum	EPA 6010 D	FL
130.020	017	Nickel	EPA 6010 D	FL
130.020	018	Potassium	EPA 6010 D	FL
130.020	019	Selenium	EPA 6010 D	FL
130.020	020	Silver	EPA 6010 D	FL
130.020	021	Sodium	EPA 6010 D	FL
130.020	022	Strontium	EPA 6010 D	FL
130.020	023	Thallium	EPA 6010 D	FL
130.020	024	Tin	EPA 6010 D	FL
130.020	025	Titanium	EPA 6010 D	FL
130.020	026	Vanadium	EPA 6010 D	FL
130.020	027	Zinc	EPA 6010 D	FL
130.030	001	Aluminum	EPA 6020	FL
130.030	002	Antimony	EPA 6020	FL
130.030	003	Arsenic	EPA 6020	FL
130.030	004	Barium	EPA 6020	FL
130.030	005	Beryllium	EPA 6020	FL
130.030	006	Cadmium	EPA 6020	FL
130.030	007	Chromium	EPA 6020	FL
130.030	008	Cobalt	EPA 6020	FL
130.030	009	Copper	EPA 6020	FL
130.030	010	Lead	EPA 6020	FL
130.030	011	Manganese	EPA 6020	FL
130.030	012	Nickel	EPA 6020	FL
130.030	013	Silver	EPA 6020	FL
130.030	014	Thallium	EPA 6020	FL
130.030	015	Zinc	EPA 6020	FL
130.040	001	Aluminum	EPA 6020 B	FL
130.040	002	Antimony	EPA 6020 B	FL
130.040	003	Arsenic	EPA 6020 B	FL
130.040	004	Barium	EPA 6020 B	FL
130.040	005	Beryllium	EPA 6020 B	FL

130.040	006	Cadmium	EPA 6020 B	FL
130.040	007	Calcium	EPA 6020 B	FL
130.040	008	Chromium	EPA 6020 B	FL
130.040	009	Cobalt	EPA 6020 B	FL
130.040	010	Copper	EPA 6020 B	FL
130.040	011	Iron	EPA 6020 B	FL
130.040	012	Lead	EPA 6020 B	FL
130.040	013	Magnesium	EPA 6020 B	FL
130.040	014	Manganese	EPA 6020 B	FL
130.040	015	Mercury	EPA 6020 B	FL
130.040	016	Nickel	EPA 6020 B	FL
130.040	017	Potassium	EPA 6020 B	FL
130.040	018	Selenium	EPA 6020 B	FL
130.040	019	Silver	EPA 6020 B	FL
130.040	020	Sodium	EPA 6020 B	FL
130.040	021	Thallium	EPA 6020 B	FL
130.040	022	Vanadium	EPA 6020 B	FL
130.040	023	Zinc	EPA 6020 B	FL
130.140	001	Chromium VI (Hexavalent Chromium)	EPA 7196 A	FL
130.250	001	Mercury	EPA 7470 A	FL
130.430	001	Cyanide, Total	EPA 9012 A	FL
130.430	002	Cyanide, Amenable	EPA 9012 A	FL
130.440	001	Cyanide, Total	EPA 9012 B	FL
130.440	002	Cyanide, Amenable	EPA 9012 B	FL
130.460	001	Sulfides	EPA 9034	FL
130.480	001	Fluoride	EPA 9056 A	FL
130.490	001	Organic Carbon-Total (TOC)	EPA 9060 A	FL

Field of Accreditation:131 - Leaching/Extraction, Physical Chacterstics in Hazardous Waste (Matrix Aqueous)

131.120	001	Corrosivity - pH Determination	EPA 9040 C	FL

Field of Accreditation:132 - Volatile Organic Compounds in Hazardous Waste (Matrix Aqueous)

132.010	001	1,2-Dibromoethane (EDB)	EPA 8011	FL
132.010	002	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8011	FL
132.060	001	Benzene	EPA 8260 B	FL
132.060	002	Bromobenzene	EPA 8260 B	FL
132.060	003	Bromochloromethane	EPA 8260 B	FL
132.060	004	Bromodichloromethane	EPA 8260 B	FL
132.060	005	Bromoform	EPA 8260 B	FL
132.060	006	Bromomethane (Methyl Bromide)	EPA 8260 B	FL
132.060	007	n-Butylbenzene	EPA 8260 B	FL
132.060	008	sec-Butylbenzene	EPA 8260 B	FL
132.060	009	tert-Butylbenzene	EPA 8260 B	FL
132.060	010	Carbon Disulfide	EPA 8260 B	FL

132.060	011	Carbon Tetrachloride	EPA 8260 B	FL
132.060	012	Chlorobenzene	EPA 8260 B	FL
132.060	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 B	FL
132.060	014	Chloroethane	EPA 8260 B	FL
132.060	015	Chloroform	EPA 8260 B	FL
132.060	016	Chloromethane (Methyl Chloride)	EPA 8260 B	FL
132.060	017	Dibromomethane	EPA 8260 B	FL
132.060	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 B	FL
132.060	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 B	FL
132.060	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 B	FL
132.060	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 B	FL
132.060	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 B	FL
132.060	023	Ethylbenzene	EPA 8260 B	FL
132.060	024	Hexachlorobutadiene	EPA 8260 B	FL
132.060	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 B	FL
132.060	026	Methylene Chloride (Dichloromethane)	EPA 8260 B	FL
132.060	027	Naphthalene	EPA 8260 B	FL
132.060	028	Nitrobenzene	EPA 8260 B	FL
132.060	029	N-propylbenzene	EPA 8260 B	FL
132.060	030	Styrene	EPA 8260 B	FL
132.060	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 B	FL
132.060	032	Toluene	EPA 8260 B	FL
132.060	033	Trichloroethylene (Trichloroethene)	EPA 8260 B	FL
132.060	034	Trichlorofluoromethane	EPA 8260 B	FL
132.060	035	Vinyl Chloride	EPA 8260 B	FL
132.060	036	m+p-Xylene	EPA 8260 B	FL
132.060	037	o-Xylene	EPA 8260 B	FL
132.060	038	m-Xylene	EPA 8260 B	FL
132.060	039	p-Xylene	EPA 8260 B	FL
132.060	040	1,1-Dichloroethane	EPA 8260 B	FL
132.060	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 B	FL
132.060	042	1,1,1-Trichloroethane	EPA 8260 B	FL
132.060	043	1,1,1,2-Tetrachloroethane	EPA 8260 B	FL
132.060	044	1,1,2,2-Tetrachloroethane	EPA 8260 B	FL
132.060	045	1,1,2-Trichloroethane	EPA 8260 B	FL
132.060	046	1,2-Dichlorobenzene	EPA 8260 B	FL
132.060	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 B	FL
132.060	048	1,2-Dibromoethane (EDB)	EPA 8260 B	FL
132.060	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 B	FL
132.060	050	1,2-Dichloropropane	EPA 8260 B	FL
132.060	051	1,2,3-Trichloropropane (TCP)	EPA 8260 B	FL
132.060	052	1,2,4-Trichlorobenzene	EPA 8260 B	FL

132.060	053	1,3-Dichlorobenzene	EPA 8260 B	FL
132.060	054	1,4-Dichlorobenzene	EPA 8260 B	FL
132.060	055	2-Chloroethyl vinyl Ether	EPA 8260 B	FL
132.060	056	4-Chlorotoluene	EPA 8260 B	FL
132.060	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 B	FL
132.070	001	Benzene	EPA 8260 D	FL
132.070	002	Bromobenzene	EPA 8260 D	FL
132.070	003	Bromochloromethane	EPA 8260 D	FL
132.070	004	Bromodichloromethane	EPA 8260 D	FL
132.070	005	Bromoform	EPA 8260 D	FL
132.070	006	Bromomethane (Methyl Bromide)	EPA 8260 D	FL
132.070	007	n-Butylbenzene	EPA 8260 D	FL
132.070	008	sec-Butylbenzene	EPA 8260 D	FL
132.070	009	tert-Butylbenzene	EPA 8260 D	FL
132.070	010	Carbon Disulfide	EPA 8260 D	FL
132.070	011	Carbon Tetrachloride	EPA 8260 D	FL
132.070	012	Chlorobenzene	EPA 8260 D	FL
132.070	013	Chlorodibromomethane (Dibromochloromethane)	EPA 8260 D	FL
132.070	014	Chloroethane	EPA 8260 D	FL
132.070	015	Chloroform	EPA 8260 D	FL
132.070	016	Chloromethane (Methyl Chloride)	EPA 8260 D	FL
132.070	017	Dibromomethane	EPA 8260 D	FL
132.070	018	Dichlorodifluoromethane (Freon 12)	EPA 8260 D	FL
132.070	019	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 8260 D	FL
132.070	020	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 8260 D	FL
132.070	021	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 8260 D	FL
132.070	022	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 8260 D	FL
132.070	023	Ethylbenzene	EPA 8260 D	FL
132.070	024	Hexachlorobutadiene	EPA 8260 D	FL
132.070	025	Methyl tert-butyl Ether (MTBE)	EPA 8260 D	FL
132.070	026	Methylene Chloride (Dichloromethane)	EPA 8260 D	FL
132.070	027	Naphthalene	EPA 8260 D	FL
132.070	028	Nitrobenzene	EPA 8260 D	FL
132.070	029	N-propylbenzene	EPA 8260 D	FL
132.070	030	Styrene	EPA 8260 D	FL
132.070	031	Tetrachloroethylene (Tetrachloroethene)	EPA 8260 D	FL
132.070	032	Toluene	EPA 8260 D	FL
132.070	033	Trichloroethylene (Trichloroethene)	EPA 8260 D	FL
132.070	034	Trichlorofluoromethane	EPA 8260 D	FL
132.070	035	Vinyl Chloride	EPA 8260 D	FL
132.070	036	m+p-Xylene	EPA 8260 D	FL
132.070	037	o-Xylene	EPA 8260 D	FL

132.070	038	m-Xylene	EPA 8260 D	FL
132.070	039	p-Xylene	EPA 8260 D	FL
132.070	040	1,1-Dichloroethane	EPA 8260 D	FL
132.070	041	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 8260 D	FL
132.070	042	1,1,1-Trichloroethane	EPA 8260 D	FL
132.070	043	1,1,1,2-Tetrachloroethane	EPA 8260 D	FL
132.070	044	1,1,2,2-Tetrachloroethane	EPA 8260 D	FL
132.070	045	1,1,2-Trichloroethane	EPA 8260 D	FL
132.070	046	1,2-Dichlorobenzene	EPA 8260 D	FL
132.070	047	1,2-Dichloroethane (Ethylene Dichloride)	EPA 8260 D	FL
132.070	048	1,2-Dibromoethane (EDB)	EPA 8260 D	FL
132.070	049	1,2-Dibromo-3-chloropropane (DBCP)	EPA 8260 D	FL
132.070	050	1,2-Dichloropropane	EPA 8260 D	FL
132.070	051	1,2,3-Trichloropropane (TCP)	EPA 8260 D	FL
132.070	052	1,2,4-Trichlorobenzene	EPA 8260 D	FL
132.070	053	1,3-Dichlorobenzene	EPA 8260 D	FL
132.070	054	1,4-Dichlorobenzene	EPA 8260 D	FL
132.070	055	2-Chloroethyl vinyl Ether	EPA 8260 D	FL
132.070	056	4-Chlorotoluene	EPA 8260 D	FL
132.070	057	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 8260 D	FL

Field of Accreditation: 133 - Semi-Volatile Organic Chemistry in Hazardous Waste (Matrix Aqueous)

133.020	001	Gasoline Range Organics (GRO)	EPA 8015 C	FL
133.020	002	Diesel Range Organics (DRO)	EPA 8015 C	FL
133.040	005	Allyl Alcohol	EPA 8015 C	FL
133.040	006	n-Butyl Alcohol (1-Butanol)	EPA 8015 C	FL
133.040	007	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 8015 C	FL
133.040	012	Ethanol	EPA 8015 C	FL
133.040	013	Ethyl Acetate	EPA 8015 C	FL
133.040	014	Ethylene Glycol	EPA 8015 C	FL
133.040	016	Isobutyl Alcohol	EPA 8015 C	FL
133.040	017	Isopropyl Alcohol (Isopropanol)	EPA 8015 C	FL
133.040	018	Methanol	EPA 8015 C	FL
133.040	023	2-Pentanone	EPA 8015 C	FL
133.040	025	1-Propanol	EPA 8015 C	FL
133.110	001	Aldrin	EPA 8081 B	FL
133.110	001	Aldrin	EPA 8081 B	FL
133.110	002	alpha-BHC	EPA 8081 B	FL
133.110	002	alpha-BHC	EPA 8081 B	FL
133.110	003	beta-BHC	EPA 8081 B	FL
133.110	003	beta-BHC	EPA 8081 B	FL
133.110	004	delta-BHC	EPA 8081 B	FL
133.110	004	delta-BHC	EPA 8081 B	FL

133.110	005	gamma-BHC (Lindane)	EPA 8081 B	FL
133.110	005	gamma-BHC (Lindane)	EPA 8081 B	FL
133.110	006	Chlordane	EPA 8081 B	FL
133.110	006	Chlordane	EPA 8081 B	FL
133.110	007	trans-Chlordane	EPA 8081 B	FL
133.110	007	trans-Chlordane	EPA 8081 B	FL
133.110	008	4,4'-DDD	EPA 8081 B	FL
133.110	008	4,4'-DDD	EPA 8081 B	FL
133.110	009	4,4'-DDE	EPA 8081 B	FL
133.110	009	4,4'-DDE	EPA 8081 B	FL
133.110	010	4,4'-DDT	EPA 8081 B	FL
133.110	010	4,4'-DDT	EPA 8081 B	FL
133.110	011	Dieldrin	EPA 8081 B	FL
133.110	011	Dieldrin	EPA 8081 B	FL
133.110	012	Endosulfan I	EPA 8081 B	FL
133.110	012	Endosulfan I	EPA 8081 B	FL
133.110	013	Endosulfan II	EPA 8081 B	FL
133.110	013	Endosulfan II	EPA 8081 B	FL
133.110	014	Endosulfan Sulfate	EPA 8081 B	FL
133.110	014	Endosulfan Sulfate	EPA 8081 B	FL
133.110	015	Endrin	EPA 8081 B	FL
133.110	015	Endrin	EPA 8081 B	FL
133.110	016	Endrin Aldehyde	EPA 8081 B	FL
133.110	016	Endrin Aldehyde	EPA 8081 B	FL
133.110	017	Endrin Ketone	EPA 8081 B	FL
133.110	017	Endrin Ketone	EPA 8081 B	FL
133.110	018	Heptachlor	EPA 8081 B	FL
133.110	018	Heptachlor	EPA 8081 B	FL
133.110	019	Heptachlor Epoxide	EPA 8081 B	FL
133.110	019	Heptachlor Epoxide	EPA 8081 B	FL
133.110	020	Methoxychlor	EPA 8081 B	FL
133.110	020	Methoxychlor	EPA 8081 B	FL
133.110	021	Toxaphene	EPA 8081 B	FL
133.110	021	Toxaphene	EPA 8081 B	FL
133.130	001	Aroclor 1016	EPA 8082 A	FL
133.130	001	Aroclor 1016	EPA 8082 A	FL
133.130	002	Aroclor 1221	EPA 8082 A	FL
133.130	002	Aroclor 1221	EPA 8082 A	FL
133.130	003	Aroclor 1232	EPA 8082 A	FL
133.130	003	Aroclor 1232	EPA 8082 A	FL
133.130	004	Aroclor 1242	EPA 8082 A	FL
133.130	004	Aroclor 1242	EPA 8082 A	FL

133.130	005	Aroclor 1248	EPA 8082 A	FL
133.130	005	Aroclor 1248	EPA 8082 A	FL
133.130	006	Aroclor 1254	EPA 8082 A	FL
133.130	006	Aroclor 1254	EPA 8082 A	FL
133.130	007	Aroclor 1260	EPA 8082 A	FL
133.130	007	Aroclor 1260	EPA 8082 A	FL
133.220	001	2,4-D	EPA 8151 A	FL
133.220	002	2,4-DB	EPA 8151 A	FL
133.220	003	2,4,5-TP (Silvex)	EPA 8151 A	FL
133.220	004	2,4,5-T	EPA 8151 A	FL
133.220	005	Dalapon	EPA 8151 A	FL
133.220	006	Dicamba	EPA 8151 A	FL
133.220	007	Dichloroprop	EPA 8151 A	FL
133.220	008	Dinoseb	EPA 8151 A	FL
133.220	009	MCPA	EPA 8151 A	FL
133.220	010	MCPP	EPA 8151 A	FL
133.220	012	Pentachlorophenol	EPA 8151 A	FL
133.240	001	Acenaphthene	EPA 8270 E	FL
133.240	001	Acenaphthene	EPA 8270 E	FL
133.240	002	Acenaphthylene	EPA 8270 E	FL
133.240	002	Acenaphthylene	EPA 8270 E	FL
133.240	003	Aniline	EPA 8270 E	FL
133.240	003	Aniline	EPA 8270 E	FL
133.240	004	Anthracene	EPA 8270 E	FL
133.240	004	Anthracene	EPA 8270 E	FL
133.240	005	Benzidine	EPA 8270 E	FL
133.240	005	Benzidine	EPA 8270 E	FL
133.240	006	Benzoic Acid	EPA 8270 E	FL
133.240	006	Benzoic Acid	EPA 8270 E	FL
133.240	007	Benzo(a)anthracene	EPA 8270 E	FL
133.240	007	Benzo(a)anthracene	EPA 8270 E	FL
133.240	008	Benzo(b)fluoranthene	EPA 8270 E	FL
133.240	008	Benzo(b)fluoranthene	EPA 8270 E	FL
133.240	009	Benzo(k)fluoranthene	EPA 8270 E	FL
133.240	009	Benzo(k)fluoranthene	EPA 8270 E	FL
133.240	010	Benzo(g,h,i)perylene	EPA 8270 E	FL
133.240	010	Benzo(g,h,i)perylene	EPA 8270 E	FL
133.240	011	Benzo(a)pyrene	EPA 8270 E	FL
133.240	011	Benzo(a)pyrene	EPA 8270 E	FL
133.240	012	Benzyl Alcohol	EPA 8270 E	FL
133.240	012	Benzyl Alcohol	EPA 8270 E	FL
133.240	013	Bis(2-chloroethoxy) Methane	EPA 8270 E	FL

133.240	013	Bis(2-chloroethoxy) Methane	EPA 8270 E	FL
133.240	014	Bis(2-chloroethyl) Ether	EPA 8270 E	FL
133.240	014	Bis(2-chloroethyl) Ether	EPA 8270 E	FL
133.240	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 E	FL
133.240	015	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 8270 E	FL
133.240	016	Butyl Benzyl Phthalate	EPA 8270 E	FL
133.240	016	Butyl Benzyl Phthalate	EPA 8270 E	FL
133.240	017	Chrysene	EPA 8270 E	FL
133.240	017	Chrysene	EPA 8270 E	FL
133.240	018	Dibenz(a,h)anthracene	EPA 8270 E	FL
133.240	018	Dibenz(a,h)anthracene	EPA 8270 E	FL
133.240	019	Dibenzofuran	EPA 8270 E	FL
133.240	019	Dibenzofuran	EPA 8270 E	FL
133.240	020	Di-n-butyl Phthalate	EPA 8270 E	FL
133.240	020	Di-n-butyl Phthalate	EPA 8270 E	FL
133.240	021	Diethyl Phthalate	EPA 8270 E	FL
133.240	021	Diethyl Phthalate	EPA 8270 E	FL
133.240	022	Dimethyl Phthalate	EPA 8270 E	FL
133.240	022	Dimethyl Phthalate	EPA 8270 E	FL
133.240	023	Di-n-octyl Phthalate	EPA 8270 E	FL
133.240	023	Di-n-octyl Phthalate	EPA 8270 E	FL
133.240	024	Fluoranthene	EPA 8270 E	FL
133.240	024	Fluoranthene	EPA 8270 E	FL
133.240	025	Fluorene	EPA 8270 E	FL
133.240	025	Fluorene	EPA 8270 E	FL
133.240	026	Naphthalene	EPA 8270 E	FL
133.240	026	Naphthalene	EPA 8270 E	FL
133.240	027	Nitrobenzene	EPA 8270 E	FL
133.240	027	Nitrobenzene	EPA 8270 E	FL
133.240	028	Pentachlorobenzene	EPA 8270 E	FL
133.240	028	Pentachlorobenzene	EPA 8270 E	FL
133.240	029	Pentachlorophenol	EPA 8270 E	FL
133.240	029	Pentachlorophenol	EPA 8270 E	FL
133.240	030	1-Chloronaphthalene	EPA 8270 E	FL
133.240	030	1-Chloronaphthalene	EPA 8270 E	FL
133.240	031	1,2-Dichlorobenzene	EPA 8270 E	FL
133.240	031	1,2-Dichlorobenzene	EPA 8270 E	FL
133.240	032	1,3-Dichlorobenzene	EPA 8270 E	FL
133.240	032	1,3-Dichlorobenzene	EPA 8270 E	FL
133.240	033	1,4-Dichlorobenzene	EPA 8270 E	FL
133.240	033	1,4-Dichlorobenzene	EPA 8270 E	FL
133.240	034	2-Chloronaphthalene	EPA 8270 E	FL

133.240	034	2-Chloronaphthalene	EPA 8270 E	FL
133.240	035	2-Chlorophenol	EPA 8270 E	FL
133.240	035	2-Chlorophenol	EPA 8270 E	FL
133.240	036	2,4-Dichlorophenol	EPA 8270 E	FL
133.240	036	2,4-Dichlorophenol	EPA 8270 E	FL
133.240	037	2,4-Dimethylphenol	EPA 8270 E	FL
133.240	037	2,4-Dimethylphenol	EPA 8270 E	FL
133.240	038	2,4-Dinitrophenol	EPA 8270 E	FL
133.240	038	2,4-Dinitrophenol	EPA 8270 E	FL
133.240	039	2,4-Dinitrotoluene	EPA 8270 E	FL
133.240	039	2,4-Dinitrotoluene	EPA 8270 E	FL
133.240	040	2,6-Dichlorophenol	EPA 8270 E	FL
133.240	040	2,6-Dichlorophenol	EPA 8270 E	FL
133.240	041	2,6-Dinitrotoluene	EPA 8270 E	FL
133.240	041	2,6-Dinitrotoluene	EPA 8270 E	FL
133.240	042	2-Nitroaniline	EPA 8270 E	FL
133.240	042	2-Nitroaniline	EPA 8270 E	FL
133.240	043	2-Nitrophenol	EPA 8270 E	FL
133.240	043	2-Nitrophenol	EPA 8270 E	FL
133.240	044	3-Nitroaniline	EPA 8270 E	FL
133.240	044	3-Nitroaniline	EPA 8270 E	FL
133.240	045	3,3'-Dichlorobenzidine	EPA 8270 E	FL
133.240	045	3,3'-Dichlorobenzidine	EPA 8270 E	FL
133.240	046	4-Chloroaniline	EPA 8270 E	FL
133.240	046	4-Chloroaniline	EPA 8270 E	FL
133.240	047	4-Chloro-3-methylphenol	EPA 8270 E	FL
133.240	047	4-Chloro-3-methylphenol	EPA 8270 E	FL
133.240	048	4-Bromophenyl Phenyl Ether	EPA 8270 E	FL
133.240	048	4-Bromophenyl Phenyl Ether	EPA 8270 E	FL
133.240	049	4-Chlorophenyl Phenyl Ether	EPA 8270 E	FL
133.240	049	4-Chlorophenyl Phenyl Ether	EPA 8270 E	FL
133.240	050	4-Nitroaniline	EPA 8270 E	FL
133.240	050	4-Nitroaniline	EPA 8270 E	FL
133.240	051	4-Nitrophenol	EPA 8270 E	FL
133.240	051	4-Nitrophenol	EPA 8270 E	FL
133.240	074	Disulfoton	EPA 8270 E	FL
133.240	074	Disulfoton	EPA 8270 E	FL
133.240	076	Parathion Ethyl	EPA 8270 E	FL
133.240	076	Parathion Ethyl	EPA 8270 E	FL
133.240	077	Parathion Methyl	EPA 8270 E	FL
133.240	077	Parathion Methyl	EPA 8270 E	FL
133.240	078	Phorate	EPA 8270 E	FL

133.240	078	Phorate	EPA 8270 E	FL
133.240	087	N-nitrosodiethylamine	EPA 8270 E	FL
133.240	087	N-nitrosodiethylamine	EPA 8270 E	FL
133.240	088	N-nitrosodimethylamine	EPA 8270 E	FL
133.240	088	N-nitrosodimethylamine	EPA 8270 E	FL
133.240	089	N-nitrosodiphenylamine	EPA 8270 E	FL
133.240	089	N-nitrosodiphenylamine	EPA 8270 E	FL
133.240	090	N-nitroso-di-n-propylamine	EPA 8270 E	FL
133.240	090	N-nitroso-di-n-propylamine	EPA 8270 E	FL

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

Eurofins Calscience, LLC

7440 Lincoln Way

Garden Grove, CA 92841-1427

Scope of the certificate is limited to the
"Fields of Accreditation"
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of
Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **2944**

Effective Date: **10/1/2020**

Expiration Date: **9/30/2022**

Sacramento, California
subject to forfeiture or revocation

Christine Sotelo, Chief
Environmental Laboratory Accreditation Program

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Fields of Accreditation

Eurofins Calscience, LLC

7440 Lincoln Way
Garden Grove, CA 92841-1427
Phone: 7148955494

Certificate Number: 2944
Expiration Date: 9/30/2022

Field of Accreditation:102 - Inorganic Chemistry of Drinking Water			
102.040	003	Chlorate	EPA 300.1
102.045	001	Perchlorate	EPA 314.0
102.047	001	Perchlorate	EPA 331.0
102.264	001	Organic Carbon-Total (TOC)	SM 5310 D-2000
102.265	001	Dissolved Organic Carbon (DOC)	SM 5310 D-2000
Field of Accreditation:103 - Toxic Chemical Elements of Drinking Water			
103.140	019	Strontium	EPA 200.8
Field of Accreditation:104 - Volatile Organic Chemistry of Drinking Water			
104.030	001	1,2-Dibromoethane (EDB)	EPA 504.1
104.030	002	1,2-Dibromo-3-chloropropane (DBCP)	EPA 504.1
104.035	001	1,2,3-Trichloropropane (TCP)	SRL 524M-TCP
104.040	001	Benzene	EPA 524.2
104.040	007	n-Butylbenzene	EPA 524.2
104.040	008	sec-Butylbenzene	EPA 524.2
104.040	009	tert-Butylbenzene	EPA 524.2
104.040	010	Carbon Tetrachloride	EPA 524.2
104.040	011	Chlorobenzene	EPA 524.2
104.040	015	2-Chlorotoluene	EPA 524.2
104.040	016	4-Chlorotoluene	EPA 524.2
104.040	019	1,3-Dichlorobenzene	EPA 524.2
104.040	020	1,2-Dichlorobenzene	EPA 524.2
104.040	021	1,4-Dichlorobenzene	EPA 524.2
104.040	022	Dichlorodifluoromethane	EPA 524.2
104.040	023	1,1-Dichloroethane	EPA 524.2
104.040	024	1,2-Dichloroethane (Ethylene Dichloride)	EPA 524.2
104.040	025	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 524.2
104.040	026	cis-1,2-Dichloroethylene (cis 1,2 Dichloroethene)	EPA 524.2
104.040	027	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 524.2
104.040	028	Dichloromethane (Methylene Chloride)	EPA 524.2
104.040	029	1,2-Dichloropropane	EPA 524.2
104.040	033	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 524.2
104.040	034	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 524.2
104.040	035	Ethylbenzene	EPA 524.2

104.040	037	Isopropylbenzene	EPA 524.2
104.040	039	Naphthalene	EPA 524.2
104.040	041	N-propylbenzene	EPA 524.2
104.040	042	Styrene	EPA 524.2
104.040	043	1,1,1,2-Tetrachloroethane	EPA 524.2
104.040	044	1,1,2,2-Tetrachloroethane	EPA 524.2
104.040	045	Tetrachloroethylene (Tetrachloroethene)	EPA 524.2
104.040	046	Toluene	EPA 524.2
104.040	047	1,2,3-Trichlorobenzene	EPA 524.2
104.040	048	1,2,4-Trichlorobenzene	EPA 524.2
104.040	049	1,1,1-Trichloroethane	EPA 524.2
104.040	050	1,1,2-Trichloroethane	EPA 524.2
104.040	051	Trichloroethylene (Trichloroethene)	EPA 524.2
104.040	052	Trichlorofluoromethane	EPA 524.2
104.040	054	1,2,4-Trimethylbenzene	EPA 524.2
104.040	055	1,3,5-Trimethylbenzene	EPA 524.2
104.040	056	Vinyl Chloride	EPA 524.2
104.040	059	o-Xylene	EPA 524.2
104.040	063	m+p-Xylene	EPA 524.2
104.045	001	Bromodichloromethane	EPA 524.2
104.045	002	Bromoform	EPA 524.2
104.045	003	Chloroform	EPA 524.2
104.045	004	Dibromochloromethane (Chlorodibromomethane)	EPA 524.2
104.050	002	Methyl tert-butyl Ether (MTBE)	EPA 524.2
104.050	003	tert-Amyl Methyl Ether (TAME)	EPA 524.2
104.050	004	Ethyl tert-butyl Ether (ETBE)	EPA 524.2
104.050	005	Trichlorotrifluoroethane (Freon 113)	EPA 524.2
104.050	006	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 524.2

Field of Accreditation:105 - Semi-volatile Organic Chemistry of Drinking Water

105.085	001	1,4-Dioxane	EPA 522

Field of Accreditation:108 - Inorganic Constituents in Non-Potable Water

108.001	001	Specific Conductance	EPA 120.1 (1982 Rev.1.0)
108.013	001	Calcium	EPA 200.7 (1994 Rev. 4.4)
108.013	002	Magnesium	EPA 200.7 (1994 Rev. 4.4)
108.013	003	Phosphorus,Total	EPA 200.7 (1994 Rev. 4.4)
108.013	004	Potassium	EPA 200.7 (1994 Rev. 4.4)
108.013	005	Silica, Dissolved	EPA 200.7 (1994 Rev. 4.4)
108.013	006	Sodium	EPA 200.7 (1994 Rev. 4.4)
108.015	001	Calcium	EPA 200.8 (1994 Rev. 5.4)
108.015	002	Magnesium	EPA 200.8 (1994 Rev. 5.4)
108.015	003	Potassium	EPA 200.8 (1994 Rev. 5.4)
108.015	005	Sodium	EPA 200.8 (1994 Rev. 5.4)

108.017	001	Bromide	EPA 300.0 (1993 Rev. 2.1)
108.017	002	Chloride	EPA 300.0 (1993 Rev. 2.1)
108.017	003	Fluoride	EPA 300.0 (1993 Rev. 2.1)
108.017	004	Nitrate (as N)	EPA 300.0 (1993 Rev. 2.1)
108.017	005	Nitrate-Nitrite (as N)	EPA 300.0 (1993 Rev. 2.1)
108.017	006	Nitrite (as N)	EPA 300.0 (1993 Rev. 2.1)
108.017	007	Phosphate,Ortho (as P)	EPA 300.0 (1993 Rev. 2.1)
108.017	008	Sulfate (as SO4)	EPA 300.0 (1993 Rev. 2.1)
108.025	001	Ammonia (as N)	EPA 350.1 (1993 Rev. 2.0)
108.029	001	Kjeldahl Nitrogen,Total (as N)	EPA 351.2 (1993 Rev. 2.0)
108.035	001	Phosphate,Ortho (as P)	EPA 365.1 (1993 Rev. 2.0)
108.035	002	Phosphorus,Total	EPA 365.1 (1993 Rev. 2.0)
108.045	001	Chemical Oxygen Demand	EPA 410.4 (1993 Rev. 2.0)
108.047	001	Phenols, Total	EPA 420.1 (1978 Rev. 1.0)
108.053	001	Oil & Grease Total	EPA 1664 A
108.055	001	Color	SM 2120 B-2011
108.059	001	Turbidity	SM 2130 B-2011
108.063	001	Alkalinity	SM 2320 B-2011
108.065	001	Hardness (Calculation)	SM 2340 B-2011
108.067	001	Hardness	SM 2340 C-2011
108.069	001	Specific Conductance	SM 2510 B-2011
108.071	001	Residue, Total	SM 2540 B-2011
108.073	001	Residue, Filterable TDS	SM 2540 C-2011
108.075	001	Residue, Non-filterable TSS	SM 2540 D-2011
108.077	001	Residue, Volatile	SM 2540 E-2011
108.079	001	Residue, Settleable	SM 2540 F-2011
108.109	001	Chlorine, Total Residual	SM 4500-Cl F-2011
108.117	001	Chloride	SM 4500-Chloride C-2011
108.125	001	Cyanide, Total	SM 4500-CN E-2011
108.131	001	Fluoride	SM 4500-F C-2011
108.137	001	Hydrogen Ion (pH)	SM 4500-H+ B-2011
108.139	001	Ammonia (as N)	SM 4500-NH3 C-2011
108.139	002	Kjeldahl Nitrogen,Total (as N)	SM 4500-NH3 C-2011
108.140	001	Ammonia (as N)	SM 4500-NH3 D-2011
108.153	001	Nitrite (as N)	SM 4500-NO2 B-2011
108.157	001	Nitrate-Nitrite (as N)	SM 4500-NO3 E-2011
108.173	001	Oxygen, Dissolved	SM 4500-O G-2011
108.175	001	Phosphate,Ortho (as P)	SM 4500-P E-2011
108.175	002	Phosphorus,Total	SM 4500-P E-2011
108.201	001	Sulfide (as S)	SM 4500-S D-2011
108.207	001	Biochemical Oxygen Demand	SM 5210 B-2011
108.207	002	Carbonaceous BOD	SM 5210 B-2011

108.219	001	Organic Carbon-Total (TOC)	SM 5310 D-2011
108.225	001	Surfactants	SM 5540 C-2011

Field of Accreditation:109 - Metals and Trace Elements in Non-Potable Water

109.623	001	Aluminum	EPA 200.7 (1994 Rev. 4.4)
109.623	002	Antimony	EPA 200.7 (1994 Rev. 4.4)
109.623	003	Arsenic	EPA 200.7 (1994 Rev. 4.4)
109.623	004	Barium	EPA 200.7 (1994 Rev. 4.4)
109.623	005	Beryllium	EPA 200.7 (1994 Rev. 4.4)
109.623	006	Boron	EPA 200.7 (1994 Rev. 4.4)
109.623	007	Cadmium	EPA 200.7 (1994 Rev. 4.4)
109.623	008	Chromium	EPA 200.7 (1994 Rev. 4.4)
109.623	009	Cobalt	EPA 200.7 (1994 Rev. 4.4)
109.623	010	Copper	EPA 200.7 (1994 Rev. 4.4)
109.623	011	Iron	EPA 200.7 (1994 Rev. 4.4)
109.623	012	Lead	EPA 200.7 (1994 Rev. 4.4)
109.623	013	Manganese	EPA 200.7 (1994 Rev. 4.4)
109.623	014	Molybdenum	EPA 200.7 (1994 Rev. 4.4)
109.623	015	Nickel	EPA 200.7 (1994 Rev. 4.4)
109.623	016	Selenium	EPA 200.7 (1994 Rev. 4.4)
109.623	017	Silver	EPA 200.7 (1994 Rev. 4.4)
109.623	018	Thallium	EPA 200.7 (1994 Rev. 4.4)
109.623	019	Tin	EPA 200.7 (1994 Rev. 4.4)
109.623	020	Titanium	EPA 200.7 (1994 Rev. 4.4)
109.623	021	Vanadium	EPA 200.7 (1994 Rev. 4.4)
109.623	022	Zinc	EPA 200.7 (1994 Rev. 4.4)
109.625	001	Aluminum	EPA 200.8 (1994 Rev. 5.4)
109.625	002	Antimony	EPA 200.8 (1994 Rev. 5.4)
109.625	003	Arsenic	EPA 200.8 (1994 Rev. 5.4)
109.625	004	Barium	EPA 200.8 (1994 Rev. 5.4)
109.625	005	Beryllium	EPA 200.8 (1994 Rev. 5.4)
109.625	006	Boron	EPA 200.8 (1994 Rev. 5.4)
109.625	007	Cadmium	EPA 200.8 (1994 Rev. 5.4)
109.625	008	Chromium	EPA 200.8 (1994 Rev. 5.4)
109.625	009	Cobalt	EPA 200.8 (1994 Rev. 5.4)
109.625	010	Copper	EPA 200.8 (1994 Rev. 5.4)
109.625	012	Iron	EPA 200.8 (1994 Rev. 5.4)
109.625	013	Lead	EPA 200.8 (1994 Rev. 5.4)
109.625	014	Manganese	EPA 200.8 (1994 Rev. 5.4)
109.625	015	Molybdenum	EPA 200.8 (1994 Rev. 5.4)
109.625	016	Nickel	EPA 200.8 (1994 Rev. 5.4)
109.625	017	Selenium	EPA 200.8 (1994 Rev. 5.4)
109.625	018	Silver	EPA 200.8 (1994 Rev. 5.4)

109.625	019	Thallium	EPA 200.8 (1994 Rev. 5.4)
109.625	020	Tin	EPA 200.8 (1994 Rev. 5.4)
109.625	021	Titanium	EPA 200.8 (1994 Rev. 5.4)
109.625	022	Vanadium	EPA 200.8 (1994 Rev. 5.4)
109.625	023	Zinc	EPA 200.8 (1994 Rev. 5.4)
109.629	001	Chromium VI (Hexavalent Chromium)	EPA 218.6 (1994 Rev. 3.3)
109.635	001	Mercury	EPA 245.1 (1994 Rev. 3.0)
109.693	001	Iron	SM 3500-Fe B-2011

Field of Accreditation: 110 - Volatile Organic Constituents in Non-Potable Water

110.020	001	Benzene	EPA 602
110.020	006	Ethylbenzene	EPA 602
110.020	007	Toluene	EPA 602
110.040	001	Acetone	EPA 624.1
110.040	003	Acrolein	EPA 624.1
110.040	004	Acrylonitrile	EPA 624.1
110.040	005	Benzene	EPA 624.1
110.040	006	Bromodichloromethane	EPA 624.1
110.040	007	Bromoform	EPA 624.1
110.040	008	Bromomethane (Methyl Bromide)	EPA 624.1
110.040	009	t-Butyl alcohol (2-Methyl-2-propanol)	EPA 624.1
110.040	010	Carbon Tetrachloride	EPA 624.1
110.040	011	Chlorobenzene	EPA 624.1
110.040	012	Chloroethane	EPA 624.1
110.040	013	2-Chloroethyl vinyl Ether	EPA 624.1
110.040	014	Chloroform	EPA 624.1
110.040	015	Chloromethane (Methyl Chloride)	EPA 624.1
110.040	016	Dibromochloromethane (Chlorodibromomethane)	EPA 624.1
110.040	017	1,2-Dichlorobenzene	EPA 624.1
110.040	018	1,3-Dichlorobenzene	EPA 624.1
110.040	019	1,4-Dichlorobenzene	EPA 624.1
110.040	020	1,1-Dichloroethane	EPA 624.1
110.040	021	1,2-Dichloroethane (Ethylene Dichloride)	EPA 624.1
110.040	022	1,1-Dichloroethylene (1,1-Dichloroethene)	EPA 624.1
110.040	023	trans-1,2-Dichloroethylene (trans- 1,2 Dichloroethene)	EPA 624.1
110.040	024	1,2-Dichloropropane	EPA 624.1
110.040	025	cis-1,3-Dichloropropylene (cis 1,3 Dichloropropene)	EPA 624.1
110.040	026	trans-1,3-Dichloropropylene (trans-1,3 Dichloropropene)	EPA 624.1
110.040	029	Ethylbenzene	EPA 624.1
110.040	031	Methylene Chloride (Dichloromethane)	EPA 624.1
110.040	032	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	EPA 624.1
110.040	034	1,1,2,2-Tetrachloroethane	EPA 624.1
110.040	035	Tetrachloroethylene (Tetrachloroethene)	EPA 624.1

110.040	037	Toluene	EPA 624.1
110.040	038	1,1,1-Trichloroethane	EPA 624.1
110.040	039	1,1,2-Trichloroethane	EPA 624.1
110.040	040	Trichloroethylene (Trichloroethene)	EPA 624.1
110.040	041	Vinyl Chloride	EPA 624.1
110.040	043	o-Xylene	EPA 624.1
110.040	045	Trichlorofluoromethane	EPA 624.1
110.040	046	m+p-Xylene	EPA 624.1
110.040	047	2-Butanone (MEK)	EPA 624.1

Field of Accreditation: 111 - Semi-volatile Organic Constituents in Non-Potable Water

111.055	001	Aldrin	EPA 608.3
111.055	002	alpha-BHC	EPA 608.3
111.055	003	beta-BHC	EPA 608.3
111.055	004	delta-BHC	EPA 608.3
111.055	005	gamma-BHC (Lindane)	EPA 608.3
111.055	006	Chlordane	EPA 608.3
111.055	007	4,4'-DDD	EPA 608.3
111.055	008	4,4'-DDE	EPA 608.3
111.055	009	4,4'-DDT	EPA 608.3
111.055	010	Dieldrin	EPA 608.3
111.055	011	Endosulfan I	EPA 608.3
111.055	012	Endosulfan II	EPA 608.3
111.055	013	Endosulfan Sulfate	EPA 608.3
111.055	014	Endrin	EPA 608.3
111.055	015	Endrin Aldehyde	EPA 608.3
111.055	016	Heptachlor	EPA 608.3
111.055	017	Heptachlor Epoxide	EPA 608.3
111.055	019	PCB-1016 (Aroclor-1016)	EPA 608.3
111.055	020	PCB-1221 (Aroclor-1221)	EPA 608.3
111.055	021	PCB-1232 (Aroclor-1232)	EPA 608.3
111.055	022	PCB-1242 (Aroclor-1242)	EPA 608.3
111.055	023	PCB-1248 (Aroclor-1248)	EPA 608.3
111.055	024	PCB-1254 (Aroclor-1254)	EPA 608.3
111.055	025	PCB-1260 (Aroclor-1260)	EPA 608.3
111.055	046	Methoxychlor	EPA 608.3
111.055	060	Toxaphene	EPA 608.3
111.070	001	Acenaphthene	EPA 610
111.070	002	Acenaphthylene	EPA 610
111.070	003	Anthracene	EPA 610
111.070	004	Benzo(a)anthracene	EPA 610
111.070	005	Benzo(a)pyrene	EPA 610
111.070	006	Benzo(b)fluoranthene	EPA 610

111.070	007	Benzo(g,h,i)perylene	EPA 610
111.070	008	Benzo(k)fluoranthene	EPA 610
111.070	009	Chrysene	EPA 610
111.070	010	Dibenz(a,h)anthracene	EPA 610
111.070	011	Fluoranthene	EPA 610
111.070	012	Fluorene	EPA 610
111.070	013	Indeno(1,2,3-c,d)pyrene	EPA 610
111.070	014	Naphthalene	EPA 610
111.070	015	Phenanthrene	EPA 610
111.070	016	Pyrene	EPA 610
111.160	001	Acenaphthene	EPA 625.1
111.160	002	Acenaphthylene	EPA 625.1
111.160	003	Anthracene	EPA 625.1
111.160	004	Benzidine	EPA 625.1
111.160	005	Benzo(a)anthracene	EPA 625.1
111.160	006	Benzo(a)pyrene	EPA 625.1
111.160	007	Benzo(b)fluoranthene	EPA 625.1
111.160	008	Benzo(g,h,i)perylene	EPA 625.1
111.160	009	Benzo(k)fluoranthene	EPA 625.1
111.160	010	Bis(2-chloroethoxy) Methane	EPA 625.1
111.160	011	Bis(2-chloroethyl) Ether	EPA 625.1
111.160	012	bis(2-Chloroisopropyl) ether (2,2'-Oxybis[1-chloropropane])	EPA 625.1
111.160	013	Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl) phthalate)	EPA 625.1
111.160	014	4-Bromophenyl Phenyl Ether	EPA 625.1
111.160	015	Butyl Benzyl Phthalate	EPA 625.1
111.160	016	2-Chloronaphthalene	EPA 625.1
111.160	017	4-Chlorophenyl Phenyl Ether	EPA 625.1
111.160	018	Chrysene	EPA 625.1
111.160	019	Dibenz(a,h)anthracene	EPA 625.1
111.160	020	3,3'-Dichlorobenzidine	EPA 625.1
111.160	021	Diethyl Phthalate	EPA 625.1
111.160	022	Dimethyl Phthalate	EPA 625.1
111.160	023	Di-n-butyl Phthalate	EPA 625.1
111.160	024	2,4-Dinitrotoluene	EPA 625.1
111.160	025	2,6-Dinitrotoluene	EPA 625.1
111.160	026	Di-n-octyl Phthalate	EPA 625.1
111.160	027	Fluoranthene	EPA 625.1
111.160	028	Fluorene	EPA 625.1
111.160	029	Hexachlorobenzene	EPA 625.1
111.160	030	Hexachlorobutadiene	EPA 625.1
111.160	031	Hexachloroethane	EPA 625.1
111.160	032	Indeno(1,2,3-c,d)pyrene	EPA 625.1

111.160	033	Isophorone	EPA 625.1
111.160	034	Naphthalene	EPA 625.1
111.160	035	Nitrobenzene	EPA 625.1
111.160	036	N-nitroso-di-n-propylamine	EPA 625.1
111.160	037	Phenanthrene	EPA 625.1
111.160	038	Pyrene	EPA 625.1
111.160	039	1,2,4-Trichlorobenzene	EPA 625.1
111.160	040	4-Chloro-3-methylphenol	EPA 625.1
111.160	041	2-Chlorophenol	EPA 625.1
111.160	042	2,4-Dichlorophenol	EPA 625.1
111.160	043	2,4-Dimethylphenol	EPA 625.1
111.160	044	2,4-Dinitrophenol	EPA 625.1
111.160	045	2-Methyl-4,6-dinitrophenol	EPA 625.1
111.160	046	2-Nitrophenol	EPA 625.1
111.160	047	4-Nitrophenol	EPA 625.1
111.160	048	Pentachlorophenol	EPA 625.1
111.160	049	Phenol	EPA 625.1
111.160	050	2,4,6-Trichlorophenol	EPA 625.1
111.160	098	Hexachlorocyclopentadiene	EPA 625.1
111.160	108	N-nitrosodimethylamine	EPA 625.1
111.160	110	N-nitrosodiphenylamine	EPA 625.1
111.160	140	Carbazole	EPA 625.1
111.160	141	o-Cresol	EPA 625.1
111.160	143	1,2-Diphenylhydrazine	EPA 625.1
111.160	145	Pyridine	EPA 625.1
111.260	041	N-nitrosodimethylamine	EPA 1625 B

Field of Accreditation:114 - Inorganic Constituents in Hazardous Waste

114.010	001	Antimony	EPA 6010 B
114.010	002	Arsenic	EPA 6010 B
114.010	003	Barium	EPA 6010 B
114.010	004	Beryllium	EPA 6010 B
114.010	005	Cadmium	EPA 6010 B
114.010	006	Chromium	EPA 6010 B
114.010	007	Cobalt	EPA 6010 B
114.010	008	Copper	EPA 6010 B
114.010	009	Lead	EPA 6010 B
114.010	010	Molybdenum	EPA 6010 B
114.010	011	Nickel	EPA 6010 B
114.010	012	Selenium	EPA 6010 B
114.010	013	Silver	EPA 6010 B
114.010	014	Thallium	EPA 6010 B
114.010	015	Vanadium	EPA 6010 B

114.010	016	Zinc	EPA 6010 B	
114.020	001	Antimony	EPA 6020	
114.020	002	Arsenic	EPA 6020	
114.020	003	Barium	EPA 6020	
114.020	004	Beryllium	EPA 6020	
114.020	005	Cadmium	EPA 6020	
114.020	006	Chromium	EPA 6020	
114.020	007	Cobalt	EPA 6020	
114.020	008	Copper	EPA 6020	
114.020	009	Lead	EPA 6020	
114.020	010	Molybdenum	EPA 6020	
114.020	011	Nickel	EPA 6020	
114.020	012	Selenium	EPA 6020	
114.020	013	Silver	EPA 6020	
114.020	014	Thallium	EPA 6020	
114.020	015	Vanadium	EPA 6020	
114.020	016	Zinc	EPA 6020	
114.103	001	Chromium VI (Hexavalent Chromium)	EPA 7196 A	
114.106	001	Chromium VI (Hexavalent Chromium)	EPA 7199	
114.140	001	Mercury	EPA 7470 A	Aqueous Only
114.141	001	Mercury	EPA 7471 A	
114.222	001	Cyanide, Total	EPA 9014	
114.241	001	Corrosivity - pH Determination	EPA 9045 C	
114.250	001	Fluoride	EPA 9056	
114.280	001	Organic Lead	HML 939-M	

Field of Accreditation:115 - Leaching/Extraction Tests and Physical Characteristics of Hazardous Waste

115.020	001	Toxicity Characteristic Leaching Procedure (TCLP)	EPA 1311	
115.021	001	TCLP Inorganics	EPA 1311	
115.022	001	TCLP Extractables	EPA 1311	
115.023	001	TCLP Volatiles	EPA 1311	
115.030	001	Waste Extraction Test (WET)	CCR Chapter11, Article 5, Appe	
115.040	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312	

Field of Accreditation:116 - Volatile Organic Compounds in Hazardous Waste

116.020	030	Nonhalogenated Volatiles	EPA 8015 B	
116.030	001	Gasoline Range Organics (GRO)	EPA 8015 B	
116.040	041	Methyl tert-butyl Ether (MTBE)	EPA 8021 B	
116.040	061	Aromatic Volatiles	EPA 8021 B	
116.040	062	BTEX	EPA 8021 B	
116.080	000	Volatile Organic Compounds	EPA 8260 B	
116.080	120	Oxygenates	EPA 8260 B	
116.100	001	Total Petroleum Hydrocarbons - Gasoline (GRO)	LUFT GC/MS	
116.100	010	BTEX and MTBE	LUFT GC/MS	

116.110	001	Total Petroleum Hydrocarbons - Gasoline (GRO)	LUFT

Field of Accreditation:117 - Semi-volatile Organic Chemistry of Hazardous Waste

117.010	001	Diesel Range Organics (DRO)	EPA 8015 B
117.016	001	Diesel Range Organics (DRO)	LUFT
117.110	000	Extractable Organics	EPA 8270 C
117.140	000	Polynuclear Aromatic Hydrocarbons	EPA 8310
117.170	000	Nitroaromatics and Nitramines	EPA 8330
117.171	000	Nitroaromatics and Nitramines	EPA 8330 A
117.210	000	Organochlorine Pesticides	EPA 8081 A
117.220	000	PCBs	EPA 8082
117.240	000	Organophosphorus Pesticides	EPA 8141 A
117.250	000	Chlorinated Herbicides	EPA 8151 A

Field of Accreditation:120 - Physical Properties of Hazardous Waste

120.010	001	Ignitability	EPA 1010
120.040	001	Reactive Cyanide	Section 7.3 SW-846
120.050	001	Reactive Sulfide	Section 7.3 SW-846
120.080	001	Corrosivity - pH Determination	EPA 9045 C

March 16, 2022

William Billings
Pace Analytical Services, LLC-Pittsburg PA
1638 Roseytown Road, Suites 2, 3, & 4
Greensburg, PA 15601

Dear William Billings: Certificate No. 2950

Congratulations! This notice advises that the laboratory named above has been accredited as an environmental testing laboratory pursuant to the provisions of the California Health and Safety Code (HSC) Sections 100825-100920. The analyses for which this laboratory is accredited are shown on the enclosed "Fields of Accreditation" List.

The laboratory's accreditation begins on the date printed on the enclosed certificate. If you did not submit your application by the renewal deadline, there may be a lapse in your accreditation. You are responsible for ensuring no data is submitted for regulatory purposes during a period the laboratory is not accredited.

Be advised, the laboratory may have been denied accreditation for one or more analyses for which it applied due to failure to comply with regulatory requirements for application or accreditation. It is the laboratory's responsibility to review the enclosed documents and know which methods it has been accredited for. This accreditation is a final action of the State Water Resources Control Board subject to petition under HSC Section 116701 within 30 days. However, if you believe that an FOA has been left off of your accreditation in error, before you file a petition you may submit to ELAP within 30 days of this letter, an "Accreditation Inquiry Request Form" located at www.waterboards.ca.gov/elap identifying any mistakes or errors you believe occurred in your accreditation. ELAP will then review all timely submitted "Accreditation Inquiry Request Forms" and will make a final determination, which could then be petitioned to the State Water Resources Control Board. **Failure to submit an "Accreditation Inquiry Request Form" to ELAP within 30 days of this letter or to timely petition ELAP's final decision to the State Water Resources Control Board will prohibit you from obtaining any further review of your accreditation.** HSC Section 100890 lists the civil penalties for environmental laboratories that perform analyses for state regulatory purposes without a valid certificate.

Continued accreditation is contingent upon compliance with HSC Sections 100825-100920 and California Code of Regulations, Title 22, Division 4, Chapter 19, Certification of Environmental Laboratories. ELAP reserves the right to take enforcement action, including issuance of civil penalties, or supension and revocation of the laboratory's ELAP certificate, for failure to comply with all applicable regulations, statutes and orders.

Thank you,



Christine Sotelo, Program Manager
California Environmental Laboratory Accreditation Program (CA ELAP)

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

CERTIFICATE OF ENVIRONMENTAL LABORATORY ACCREDITATION

Is hereby granted to

Pace Analytical Services, LLC-Pittsburg PA

1638 Roseytown Road

Greensburg, PA 15601

Scope of the certificate is limited to the
"Fields of Accreditation"
which accompany this Certificate.

Continued accredited status depends on compliance with applicable laws and regulations, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of
Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **2950**

Effective Date: **4/1/2022**

Expiration Date: **3/31/2023**

Sacramento, California
subject to forfeiture or revocation

Christine Sotelo, Program Manager
Environmental Laboratory Accreditation Program

CALIFORNIA STATE
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM
Fields of Accreditation

Pace Analytical Services, LLC-Pittsburg PA

1638 Roseytown Road
Greensburg, PA 15601
Phone: 7248505600

Certificate Number: 2950
Expiration Date: 3/31/2023

				Primary Accreditation Body
Field of Accreditation: 106 - Radionuclides in Drinking Water				
106.010	001	Gross Alpha	EPA 900.0	PA
106.010	002	Gross Beta	EPA 900.0	PA
106.030	003	Gamma Emitters	EPA 901.1	PA
106.050	001	Total Alpha Radium	EPA 903.0	PA
106.051	001	Radium-226	EPA 903.1	PA
106.060	001	Radium-228	EPA 904.0	PA
106.070	003	Strontium-90	EPA 905.0	PA
106.080	001	Tritium	EPA 906.0	PA
106.270	001	Gross Alpha	SM 7110 C	PA
106.480	001	Uranium	ASTM D5174-97	PA
Field of Accreditation: 112 - Radionuclides in Non-Potable Water				
112.001	001	Gross Alpha	EPA 900.0	PA
112.001	002	Gross Beta	EPA 900.0	PA
Field of Accreditation: 118 - Radionuclides in Hazardous Waste				
118.315	001	Gross Alpha	EPA 9310	PA
118.315	002	Gross Beta	EPA 9310	

As of 4/1/2022 , this list supersedes all previous lists for this certificate number.
Customers: Please verify the current accreditation standing with the State.

Monterey One Water
Providing Cooperative Water Solutions

Appendix C. 2021 CalAm Water System #2710004 Consumer Confidence Report



2021 Annual

WATER QUALITY REPORT

MONTEREY
PWS ID: CA2710004

QUALITY. ONE MORE WAY
WE KEEP LIFE FLOWING.

CALIFORNIA
AMERICAN WATER

WE KEEP LIFE FLOWING®

What is a **Consumer Confidence Report (CCR)**

Once again, we proudly present our Annual Water Quality Report, also referred to as a Consumer Confidence Report (CCR). CCRs let consumers know what contaminants, if any, were detected in their drinking water as well as related potential health effects. CCRs also include details about where your water comes from and how it is treated. Additionally, they educate customers on what it takes to deliver safe drinking water and highlight the need to protect drinking water sources.

We are committed to delivering high quality drinking water service. To that end, we remain vigilant in meeting the challenges of source water protection, water conservation, environmental compliance, sustainability and community education while continuing to serve the needs of all our water users.

This report contains important information about your drinking water. Translate it, or speak with someone who understands it at 1-888-237-1333.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien al 1-888-237-1333.

Ntawm no yog ib co lus qhia tseem ceeb heev txog koj cov dej seb huv npaum li cas. Yog tias koj xav tau kev pab txhais cov lus qhia no, thov hu rau peb ntawm 1-888-237-1333.

這是關於您的水質的十分重要的資訊。如果您需要幫助翻譯此資訊請致電 **1-888-237-1333** 與我們聯繫。

आपके पानी की गुणवत्ता के बारे में यह बहुत महत्वपूर्ण सूचना है। यदि इस सूचना के अनुवाद के लिए आपको सहायता की जरूरत हो, तो कृपया **1-888-237-1333** र हमें काल करें।

Это очень важная информация о качестве Вашей воды. Если Вам требуется перевод этой информации, позвоните нам по телефону 1-888-237-1333.

Ito ay isang napakahalagang impormasyon tungkol sa kalidad ng iyong tubig. Kung iyong kailangan ng tulong sa pagsalin ng impormasyon na ito, mangyaring tumawag sa amin sa 1-888-237-1333.

Đây là thông tin rất quan trọng về chất lượng nước của quý vị. Nếu quý vị cần thông dịch thông tin này, xin gọi chúng tôi theo số 1-888-237-1333.

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A message from **California American Water's President**



KEVIN TILDEN

President
California American Water

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Dear California American Water Customer,

Our top priority is providing safe, reliable drinking water to our more than 880,000 people. Most people take their water quality for granted in the United States and expect clean water to be always available.

I believe this expectation is affirmation of the hard work and investment we and other water utilities across the country have made in providing this essential service. I am pleased to share with you our 2021 Consumer Confidence Report. During the COVID-19 public health emergency, California American Water activated its business continuity plans to ensure our ability to provide reliable, high-quality service to our customers.

According to the U.S. Environmental Protection Agency review of current research, the risk to water supplies from COVID – 19 is low.

The USEPA has also relayed that Americans can continue to use and drink water from their tap as usual. California American Water remains committed to the delivery of safe, reliable water. We have rigorous safeguards in place to help provide water to you that meets or surpasses increasingly stringent water quality standards.

Across California, we conducted approximately 650 different tests on more than 25,000 water samples for nearly 3,000 constituents last year. We are proud and pleased to confirm that those tests showed that we met every primary and secondary state and federal water quality standard.

SERVICE: Last year, we invested more than $85 million in water infrastructure in the California communities we serve. This investment helps maintain the safety and reliability of the facilities and technology needed to draw, treat, and distribute water.

VALUE: While costs to provide water service continue to increase across the country, our investments help us provide high quality water service that remains an exceptional value for such an essential service.

California American Water also offers a variety of Customer Assistance Programs and Conservation services to help our customers. If you have any questions or concerns, you can contact us by phone, email, online at www.californiaamwater.com, or in person at our local Customer Center. Please take the time to review this report as it provides details about the source and quality of your drinking water, using data from water quality testing conducted for your local system between January and December 2021.

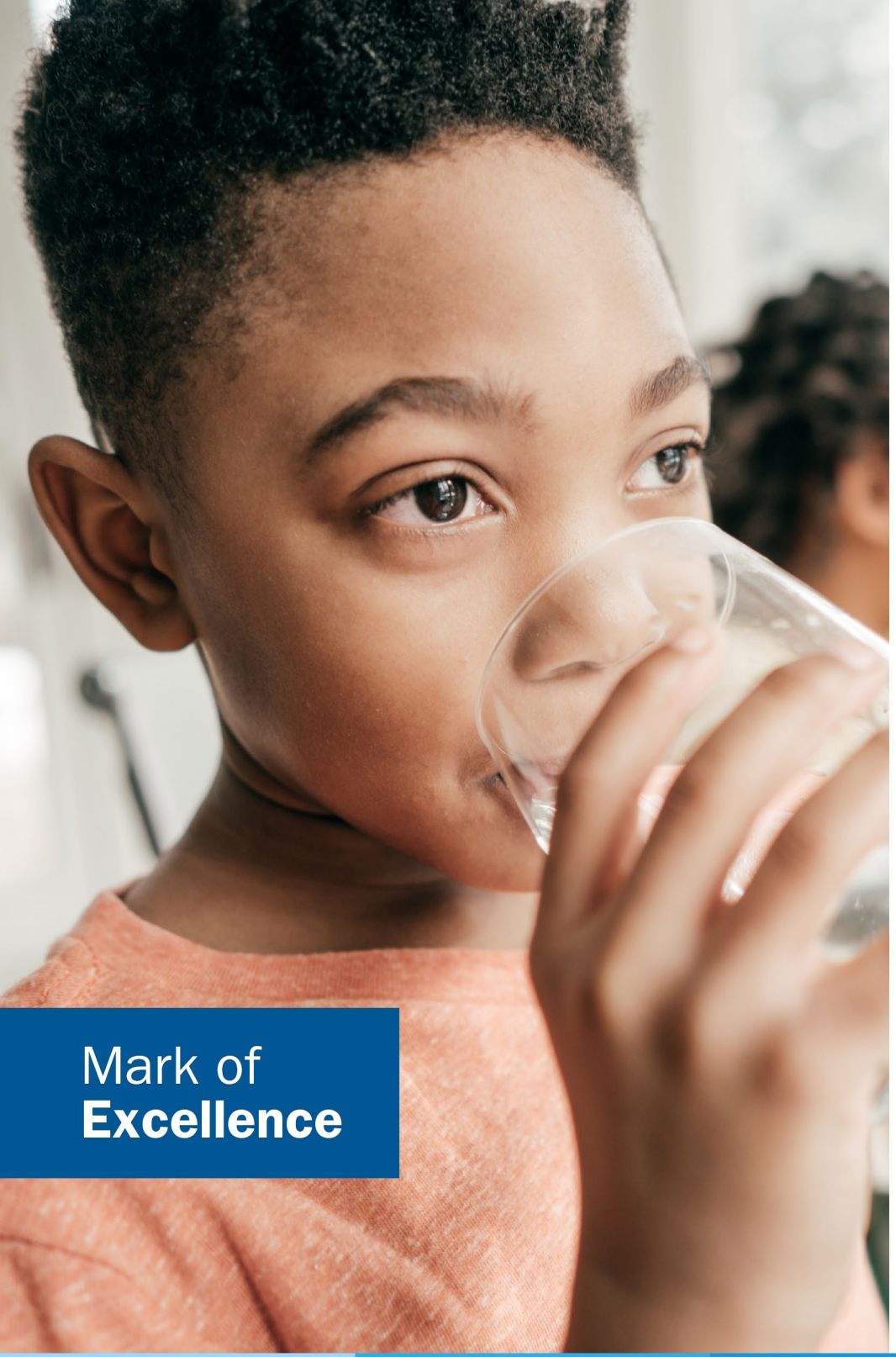
Kevin Tilden
California American Water

This report contains important information about your drinking water. Translate it or speak with someone who understands it at (888) 237-1333, Monday-Friday, 7 a.m. to 7 p.m.



ATTENTION: Landlords and Apartment Owners

Please share a copy of this notice with your tenants. It includes important information about their drinking water quality.



Mark of **Excellence**

EVERY STEP OF THE WAY.

Our team monitors and tests your water at multiple points throughout our process of drawing it from its source, treating it to meet drinking water standards, and distributing it through our pipeline systems. **In fact, American Water performs over one million tests annually for about 100 regulated contaminants, nationwide.**

EXPERTISE. RECOGNIZED AT THE HIGHEST LEVEL.

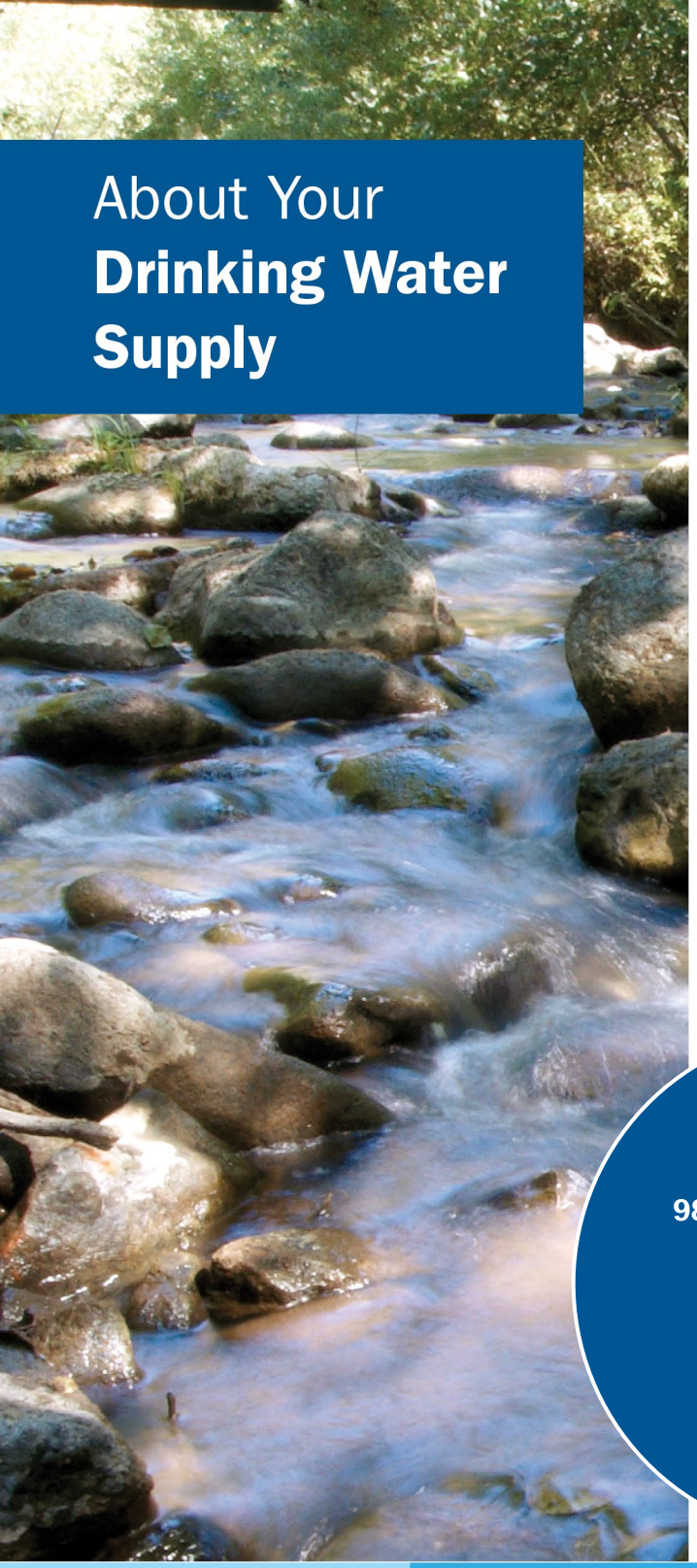
American Water is an expert in water quality testing, compliance and treatment and has established industry-leading water testing facilities. Our dedicated team of scientists and researchers are committed to finding solutions for water quality challenges and implementing new technologies. American Water is recognized as an industry leader in water quality and works cooperatively with the EPA so that drinking water standards and new regulations produce benefits for customers and public water suppliers. American Water has earned awards from the EPA's Partnership for Safe Water as well as awards for superior water quality from state regulators, industry organizations, individual communities, and government and environmental agencies.

WATER QUALITY. DOWN TO A SCIENCE.

Our team also has access to American Water's Central Laboratory in Belleville, Illinois, which conducts sophisticated drinking water testing and analysis. American Water scientists refine testing procedures, innovate new methods, and set new standards for detecting potentially new contaminants—even before regulations are in place.

MAINTAINING QUALITY FOR FUTURE GENERATIONS.

Just as California American Water is investing in research and testing, we also understand the importance of investing in the infrastructure that provides high-quality water service to you. Last year alone, **we invested more than $85 million to improve our water and wastewater treatment and pipeline systems.**



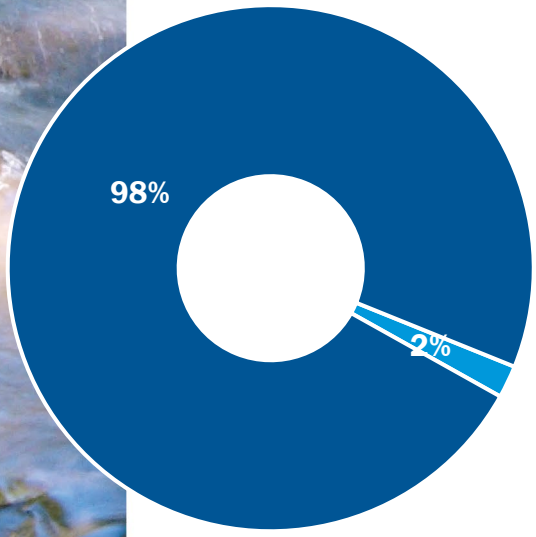
About Your **Drinking Water Supply**

WHERE YOUR WATER COMES FROM

Monterey is served by groundwater sources from the Santa Margarita, Paso Robles, and Carmel Alluvial aquifers as well as surface water from the Sand City Desalination Plant and groundwater recharged by the Pure Water Monterey Project.

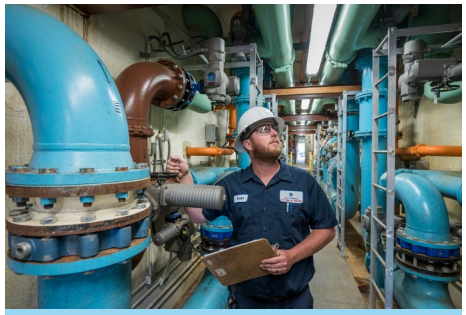
Drinking water treatment technologies used in the system include reverse osmosis, iron and manganese removal, corrosion control, and disinfection for bacteriological quality. The water supply is distributed for residential and commercial use in the communities of Carmel-by-the-Sea, Carmel Highlands, Carmel Valley, Del Rey Oaks, Monterey, Pacific Grove, Pebble Beach, Sand City, Seaside, Ryan Ranch business park and Bishop.

An assessment of the drinking water sources for the California American Water - Monterey water system was completed in February 2003. This assessment is an evaluation of drinking water sources to determine the “possible contaminating activities” (PCAs) to which a source is most vulnerable. PCAs are current or historic human activities that are actual or potential origins of contamination for a drinking water source. PCAs include activities that use, store, produce or dispose of chemicals that have the potential to contaminate drinking water supplies. A copy of the completed assessment may be viewed at California American Water, 511 Forest Lodge Road, Suite 100, Pacific Grove, CA.



SOURCE OF SUPPLY FOR THE SYSTEM

- Surface Water
- Groundwater

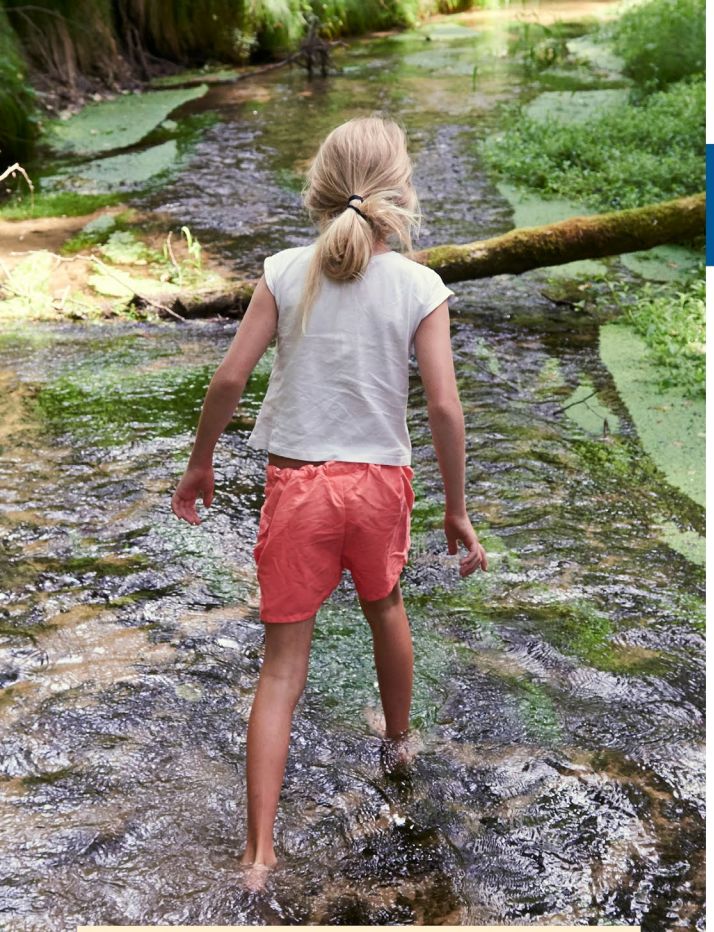


QUICK FACTS ABOUT MONTEREY WATER SYSTEM

Communities served:
Carmel-by-the-Sea, Carmel Highlands, Carmel Valley, Del Rey Oaks, Monterey, Pacific Grove, Pebble Beach, Sand City, Seaside. Monterey system also serves Ryan Ranch business park and Bishop area, which started from December 2020.

Water source:
Groundwater wells in Carmel Valley, Groundwater Wells in Seaside, Sand City Desal Plan, and Pure Water Monterey Project

Water treatment:
Selection of treatment technologies was based on the quality of source waters. Treatment technologies used in the system include reverse osmosis, GAC filtration, iron and manganese removal and corrosion control. The treated water is disinfected with chlorine for bacteriological quality before distributed for customers’ consumption.



SPECIAL HEALTH INFORMATION

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

What are the **Sources of Contaminants**?

To provide tap water that is safe to drink, EPA and the State Water Resources Control Board prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, aquifers and/or groundwater. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

CONTAMINANTS THAT MAY BE PRESENT IN SOURCE WATER INCLUDE:	
Microbial Contaminants	such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
Inorganic Contaminants	such as salts and metals, which can be naturally occurring or may result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
Pesticides and Herbicides	which may come from a variety of sources, such as agriculture, urban storm water runoff, and residential uses.
Organic Chemical Contaminants	including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also, come from gas stations, urban storm water runoff, and septic systems.
Radioactive Contaminants	which can be naturally occurring or may be the result of oil and gas production and mining activities.



Protecting **Your Drinking Water Supply**

Protecting drinking water at its source is an important part of the process to treat and deliver high quality water. It takes a community effort to protect our shared water resources. This includes utilities, businesses, residents, government agencies and organizations. Everyone who lives, works, and plays in the area has a role and stake in clean water supplies.

WHAT CAN YOU DO?

Quality drinking water starts upstream. Everyone can help maintain and improve drinking water supplies through the following actions:

- Properly dispose of pharmaceuticals, household chemicals, oils and paints. Materials can impact water ways if poured down the drain, flushed down the toilet, or dumped on the ground.
- Check for leaks from automobiles and heating fuel tanks. Clean up any spills using an absorbent material like cat litter. Sweep up the material and put it in a sealed bag. Check with the local refuse facility for proper disposal.
- Clean up after your pets and limit the use of fertilizers and pesticides.
- Take part in watershed activities.

Report any spills, illegal dumping or suspicious activity to California Governor's Office of Emergency Services (Cal OES) Warning Center here: (800) 852-7550

FOR MORE INFORMATION

To learn more about your water supply and local activities, visit us online at californiaamwater.com or contact the regional Source Water Protection Lead, Dr. Jack Wang, at 831-646-3269.

WHAT ARE WE DOING?

Here are a few of the efforts underway to protect our shared water resources:

Community Involvement: We have a proactive public outreach program to help spread the word and get people involved. This includes school education, contests, and other community activities.

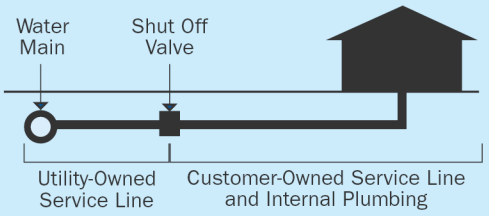
Environmental Grant Program: Each year, we fund projects that improve water resources in our local communities.

Pharmaceutical Collection: We sponsor drop box locations across the state for residents to safely dispose of unwanted drugs for free. This helps keep pharmaceutical products from entering water supplies.

About **Lead**

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. American Water is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

UTILITY-OWNED VS. CUSTOMER-OWNED PORTION OF THE SERVICE LINE



Please note: This diagram is a generic representation. Variations may apply.

The most common source of lead in tap water is from the customer's plumbing and their service line.

Our water mains are not made of lead; however, the water service line that carries the water from the water main in the street to your home could be. Homeowners' service lines may be made of lead, copper, galvanized steel or plastic. You can assess your service line material where it enters your home, typically in your basement, crawl space or garage, near the inlet valve.

MINIMIZING YOUR POTENTIAL EXPOSURE

You cannot see, smell or taste lead, and boiling water will not remove lead. Here are steps you can take to reduce your potential exposure if lead exists in your home plumbing.

CHECK YOUR PLUMBING AND SERVICE LINE

If you live in an older home, consider having a licensed plumber check your plumbing for lead. If your service line is made of lead, and you're planning to replace it, be sure to contact us at 1-888-237-1333.



1. **Flush your taps.** The longer the water lies dormant in your home's plumbing, the more lead it might contain. If the water in your faucet has gone unused for more than six hours, flush the tap with cold water for 30 seconds to two minutes before drinking or using it to cook. To conserve water, catch the running water and use it to water your plants.



2. **Use cold water for drinking and cooking.** Hot water has the potential to contain more lead than cold water. If hot water is needed for cooking, heat cold water on the stove or in the microwave.



3. **Routinely remove and clean all faucet aerators.**



4. **Look for the "Lead Free" label** when replacing or installing plumbing fixtures.



5. **Follow manufacturer's instructions for replacing water filters** in household appliances, such as refrigerators and ice makers, as well as home water treatment units and pitchers. Look for NSF 53 certified filters.



6. **Flush after plumbing changes.** Changes to your service line, meter, or interior plumbing may result in sediment, possibly containing lead, in your water supply. Remove the strainers from each faucet and run the water for 3 to 5 minutes.



Important Information About **Drinking Water**

UNREGULATED CONTAMINANT MONITORING RULE (UCMR)

The EPA created the Unregulated Contaminants Monitoring Rule (UCMR) to assist them in determining the occurrence of unregulated contaminants in drinking water and whether new regulations are warranted. The first Unregulated Contaminants Monitoring Rule (UCMR1) testing was completed in 2003 for a list of contaminants specified by the EPA. Unregulated contaminants are those for which the EPA has not established drinking water standards. UCMR2 testing was conducted between November 2008 and August 2009, and UCMR3 assessment monitoring was conducted between January 2013 and December 2016. The fourth list of contaminants to monitor as part of the UCMR was published by the EPA in December 2016. UCMR4 testing began in 2018 and was completed in 2020. The results from the UCMR monitoring are reported directly to the EPA. The results of this monitoring are incorporated in the data tables in this report as appropriate. For more information, contact our Customer Service Center at 1-888-237-1333.

PFAS MONITORING

PFAS refers to per- and polyfluoroalkyl substances, a class of synthetic chemicals, manufactured for industrial applications and commercial household products such as: non-stick cookware; waterproof and stain resistant fabrics and carpets; firefighting foam and cleaning products. The properties that make these chemicals useful in so many of our every-day products also resist breaking down and therefore persist in the environment. Exposure may be from food, food packaging, consumer products, house dust, indoor and outdoor air, drinking water and at workplaces where PFAS are made or used.

In accordance with Orders received from the Division of Drinking Water (DDW) California American Water is sampling designated sources for PFAS constituents. In 2019 DDW established Notification Levels (NLs) at 6.5 ppt for the PFAS constituents perfluorooctanesulfonic acid (PFOS) and 5.1 ppt for perfluorooctanoic acid (PFOA) in drinking water. In 2020 DDW established Consumer Confidence Detection Levels (CCRDL) of 4 ppt for both PFOS and PFOA. In 2021, DDW established an NL of 0.5 ppb for perfluorobutane sulfonic acid (PFBS).

The science and regulation of PFAS and other contaminants is always evolving, and California American Water strives to be a leader in research and development. PFAS contamination is one of the most rapidly changing areas in the drinking water field. We have invested in our own independent research, as well as engaging with other experts in the field to understand PFAS occurrence in the environment. We are also actively assessing treatment technologies that can effectively remove PFAS from drinking water, because we believe that investment in research is critically important to addressing this issue.

> This is one of the most rapidly changing landscapes in drinking water contamination. We have invested time and effort on our own independent research, as well as engaging with other experts in the field to understand PFAS occurrence, fate and transport in the environment. We are also actively assessing treatment technologies that can effectively remove PFAS from drinking water, because we believe that investment in research is critical for addressing this issue.
>
> **Lauren Weinrich**
> Principal Scientist,
> Water Research and Development



Water Quality **Results**

WATER QUALITY STATEMENT

We are pleased to report that during calendar year 2021, the results of testing of your drinking water complied with all state and federal drinking water requirements.

For your information, we have compiled a list in the table below showing the testing of your drinking water during 2021. The Division of Drinking Water allows us to monitor for some contaminants less than once per year because the concentration of the contaminants does not change frequently. Some of our data, though representative, are more than one year old.

OTHER INFORMATION

Monterey system started to serve Bishop and Ryan Ranch in late December of 2020, and they are now considered one consolidated system with Monterey. As a result, the 2021 water quality results also include samples collected from Bishop and Ryan Ranch.

Definition of Terms

These are terms that may appear in your report.

Action Level (AL): The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, that a water system must follow.

DDW: Division of Drinking Water

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

LRAA: Locational Running Annual Average

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology. Secondary MCLs (SMCL) are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

MFL: Million fibers per liter.

micromhos per centimeter (µmhos/cm): A measure of electrical conductance.

NA: Not applicable

N/A: No data available

ND: Not detected

Nephelometric Turbidity Units (NTU): Measurement of the clarity, or turbidity, of the water.

Notification Level (NL): The concentration of a contaminant, which, if exceeded, requires notification to DDW and the consumer. Not an enforceable standard.

pH: A measurement of acidity, 7.0 being neutral.

picocuries per liter (pCi/L): Measurement of the natural rate of disintegration of radioactive contaminants in water (also beta particles).

parts per billion (ppb): One part substance per billion parts water, or micrograms per liter.

parts per million (ppm): One part substance per million parts water, or milligrams per liter.

parts per trillion (ppt): One part substance per trillion parts water, or nanograms per liter.

Primary Drinking Water Standard (PDWS): MCLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA.

RAA: Running Annual Average

Secondary Maximum Contaminant Level (SMCL): Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

SWRCB: State Water Resources Control Board

TON: Threshold Odor Number

Total Dissolved Solids (TDS): An overall indicator of the amount of minerals in water.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Variances and Exemptions: State or EPA permission not to meet an MCL or utilize a treatment technique under certain conditions.

%: Percent

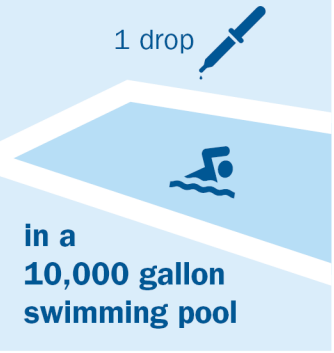
MEASUREMENTS

Parts Per Million



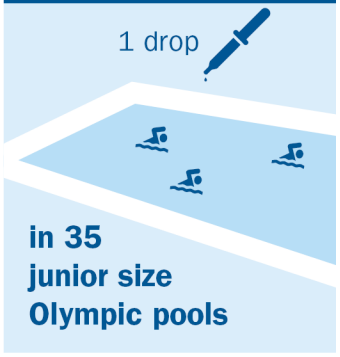
in a 10 gallon fish tank

Parts Per Billion



in a 10,000 gallon swimming pool

Parts Per Trillion



in 35 junior size Olympic pools

Water Quality **Results**

California American Water conducts extensive monitoring to determine if your water meets all water quality standards. The detections of our monitoring are reported in the following tables. While most monitoring was conducted in 2021, certain substances are monitored less than once per year because the levels do not change frequently. For help with interpreting the tables below, see the "Definition of Terms" on the previous page. Some unregulated substances are measured, but maximum contaminant levels have not been established by the government. These contaminants are shown for your information.

NOTE: Regulated contaminants not listed in this table were not found in the treated water supply.

LEAD AND COPPER MONITORING PROGRAM for Monterey – At least 30 tap water samples collected at customers' taps every 3 years

Substance (with units)	Year Sampled	Compliance Achieved	MCLG /PHG	Action Level (AL)	90th Percentile	No. of Homes Sampled	Homes Above Action Level	Typical Source
Lead (ppb)	2021	Yes	0.2	15	2	30	0	Corrosion of household plumbing systems.
Copper (ppm)	2021	Yes	0.3	1.3	0.525	30	0	Corrosion of household plumbing systems.

LEAD AND COPPER MONITORING PROGRAM for Bishop - At least 10 tap water samples collected at customers' taps every 3 years

Substance (with units)	Year Sampled	Compliance Achieved	MCLG /PHG	Action Level (AL)	90th Percentile	No. of Homes Sampled	Homes Above Action Level	Typical Source
Lead (ppb)	2020	Yes	0.2	15	1	10	0	Corrosion of household plumbing systems.
Copper (ppm)	2020	Yes	0.3	1.3	0.406	10	0	Corrosion of household plumbing systems.

LEAD AND COPPER MONITORING PROGRAM for Ryan Ranch - At least 10 tap water samples collected at customers' taps every 3 years

Substance (with units)	Year Sampled	Compliance Achieved	MCLG /PHG	Action Level (AL)	90th Percentile	No. of Homes Sampled	Homes Above Action Level	Typical Source
Lead (ppb)	2021	Yes	0.2	15	ND	10	0	Corrosion of household plumbing systems.
Copper (ppm)	2021	Yes	0.3	1.3	0.474	10	0	Corrosion of household plumbing systems.

DISINFECTION BYPRODUCTS - Collected in the Distribution System (including Bishop and Ryan Ranch)							
Substance (with units)	**Year Sampled**	**Compliance Achieved**	**MCLG**	**MCL**	**Highest LRAA**	**Range Detected**	**Typical Source**
Total Trihalomethanes (TTHMs) (ppb)	2021	Yes	NA	80	61.2	ND to 75.4	By-product of drinking water disinfection.
Haloacetic Acids (HAAs) (ppb)	2021	Yes	NA	60	22.5	ND to 26.1	By-product of drinking water disinfection.

NOTE: Compliance is based on the running annual average at each location (LRAA). The Highest LRAA reflects the highest average at any location and the Range Detected reflects all samples used to calculate the running annual averages.

DISINFECTANTS - Collected in the Distribution System (including Bishop and Ryan Ranch)								
Substance (with units)	**Year Sampled**	**Compliance Achieved**	**MRDLG**	**MRDL**	**Minimum Chlorine Residual**	**Compliance Result**	**Range Detected**	**Typical Source**
Distribution System Chlorine Residual (ppm)[1]	2021	Yes	4	4	0.08	1.15	0.08 to 3.1	Water additive used to control microbes.

1 - Data represents chlorine residuals measured throughout our distribution system. Compliance result represents the highest running annual average.

TURBIDITY - Continuous Monitoring at Sand City Treatment Plant							
Substance (with units)	**Year Sampled**	**Compliance Achieved**	**MCLG**	**MCL**	**Highest Single Measurement and Lowest Monthly % of Samples ≤0.1 NTU**	**Sample Date of Highest and Lowest Compliance Result**	**Typical Source**
Turbidity (NTU)	2021	Yes	0	TT: Single result >1 NTU	0.17	08/15/2021	Soil runoff.
	2021	Yes	NA	TT: At least 95% of samples ≤0.1 NTU	95.96%	September 2021	Soil runoff.

PRIMARY REGULATED SUBSTANCES - Collected at the Treatment Plant Effluent and/or the Sources							
Substance (with units)	**Year Sampled**	**Compliance Achieved**	**MCLG/PHG**	**MCL**	**Highest Compliance Result**	**Range Detected**	**Typical Source**
Gross Alpha Particle Activity (pCi/L)	2015-2021	Yes	(0)	15	4.04	ND - 4.04	Erosion of natural deposits
Gross Beta Particle Activity (pCi/L)	2012	Yes	(0)	50	4.05	ND - 4.05	Erosion of natural deposits
Chromium VI (Hexavalent Chromium) (ppb)	2016 - 2018	Yes	0.02	NA	2.23	ND - 2.23	Erosion of natural deposits
Radium 226 (pCi/L)	2015-2021	Yes	0.05	5	1.09	ND - 1.09	Erosion of natural deposits
Radium 228 (pCi/L)	2015-2021	Yes	0.019	5	1.96	ND - 1.96	Erosion of natural deposits
Uranium (pCi/L)	2014-2021	Yes	0.43	20	4.05	ND - 4.05	Erosion of natural deposits
Arsenic (ppb)[1]	2021	Yes	0.004	10	7	ND - 7	Erosion of natural deposits
Fluoride (naturally occurring) (ppm)[2]	2019-2021	Yes	1	2.0	0.42	ND - 0.42	Erosion of natural deposits
Mercury (ppb)[3]	2019-2021	Yes	1.2	2	2.1	ND - 2.1	Erosion of natural deposits
Nitrate as N (ppm)[4]	2021	Yes	10	10	6.98	ND - 6.98	Erosion of natural deposits
Selenium (ppb)	2019-2021	Yes	30	50	7	ND - 7	Erosion of natural deposits

1. Arsenic: While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic in some of the system's source waters with one source had a detection of more than 5 ppb. The arsenic standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.
2. Fluoride: Monterey does not add fluoride to the water. Fluoride occurs naturally in the groundwater we serve.
3. Mercury: detected in one source only.
4. Nitrate: Nitrate in drinking water at levels above 10 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

SECONDARY REGULATED SUBSTANCES - Collected at the Treatment Plant Effluent and/or the Sources						
Substance (with units)	**Year Sampled**	**Compliance Achieved[1]**	**SMCL**	**Average Compliance Result**	**Range Detected**	**Typical Source**
Chloride (ppm)	2019-2021	Yes	500	53	10 – 202	Leaching from natural deposits
Odor (Units)	2021	Yes	3	0.5	ND – 4	Naturally-occurring organic materials
Specific Conductance (mmhos/cm)	2021	Yes	1600	573	350 – 856	Substances that form ions when in water
Sulfate (ppm)	2019-2021	Yes	500	60	1 – 104	Leaching from natural deposits
Total Dissolved Solids (ppm)	2020-2021	Yes	1000	331	234 – 410	Leaching from natural deposits
Zinc (ppm)	2019-2021	Yes	5	0.05	ND – 0.4	Water treatment additive

1 – Yes: There are no PHGs, MCLGs, or mandatory standard health effects language for Secondary Substances because secondary MCLs are set based on aesthetic concerns

ADDITIONAL WATER QUALITY PARAMETERS OF INTEREST - Collected at the Treatment Plant Effluent and/or the Sources				
Substance (with units)	**Year Sampled**	**Average Result**	**Range Detected**	**Typical Source**
Alkalinity as $CaCO_3$ (ppm)	2021	157	112 – 210	Natural occurring
Boron (ppm)	2021	0.5	ND – 1.1	Leaching from natural deposits
Calcium (ppm)	2021	47	33 – 65	Leaching from natural deposits
Magnesium (ppm)	2019-2021	14	ND – 25	Leaching from natural deposits
pH (pH Units)	2021	7.43	6.80 – 8.06	Controlled by water treatment
Sodium (ppm)	2019-2021	48	16 – 132	Natural occurring and treatment chemical additive for pH control
Strontium (ppb)	2019-2021	233	ND – 500	Leaching from natural deposits
Total Hardness as $CaCO_3$ (ppm)	2019-2021	165	102 – 276	Natural occurring
Total Hardness as Grains per Gallon (gpg)	2019-2021	10	6 – 16	Natural occurring
Vanadium (ppb)	2019-2021	0.2	ND – 5	Leaching from natural deposits

UNREGULATED CONTAMINANT MONITORING

Unregulated contaminants are those for which the EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is necessary. Every five years, the EPA issues a new list of no more than 30 unregulated contaminants to be monitored.

UCMR4 MONITORING - Collected at the Treatment Plant Effluent and/or in the Distribution System					
Parameter	**Units**	**Year Sampled**	**Average Result**	**Range Detected**	**Typical Source**
Bromochloroacetic Acid	ppb	2019	4.1	0.7 – 7.4	By-product of drinking water disinfection
Bromodichloroacetic acid	ppb	2019	3.8	ND – 6.3	By-product of drinking water disinfection
Chlorodibromoacetic acid	ppb	2019	2.1	ND – 3.5	By-product of drinking water disinfection
Dibromoacetic Acid	ppb	2019	1.8	0.3 – 3.3	By-product of drinking water disinfection
Dichloroacetic Acid	ppb	2019	5.3	0.5 – 13	By-product of drinking water disinfection
Monobromoacetic Acid	ppb	2019	0.3	ND – 0.6	By-product of drinking water disinfection
Total Haloacetic Acids - Br	ppb	2019	12	1.4 – 21	By-product of drinking water disinfection
Total Haloacetic Acids- HAA9	ppb	2019	22	2 – 40	By-product of drinking water disinfection
Trichloroacetic Acid	ppb	2019	4.6	ND – 7.5	By-product of drinking water disinfection

PFAS MONITORING

PFAS refers to per- and polyfluoroalkyl substances, a class of synthetic chemicals, manufactured for industrial applications and commercial household products such as: non-stick cookware; waterproof and stain resistant fabrics and carpets; firefighting foam and cleaning products. The properties that make these chemicals useful in so many of our every-day products also resist breaking down and therefore persist in the environment. Exposure may be from food, food packaging, consumer products, house dust, indoor and outdoor air, drinking water and at workplaces where PFAS are made or used.

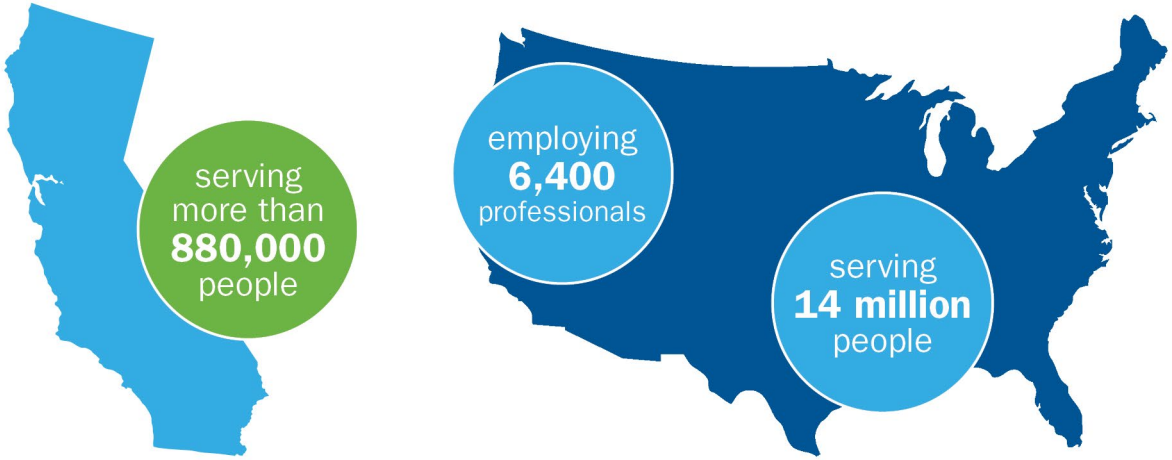
UNREGULATED PERFLUORINATED COMPOUNDS					
Parameter	**Units**	**Year Sampled**	**Average Result**	**Range Detected**	**Typical Source**
Perfluorooctanoic Acid (PFOA)	ppt	2021	1.5	ND – 11	Manufactured chemical(s); used in household goods for stain, grease, heat and water resistance
Perfluorooctanesulfonic Acid (PFOS)	ppt	2021	1.9	ND – 16.5	
Perfluorobutane sulfonic acid (PFBS)	ppt	2021	2.5	ND – 17.7	



About Us

California American Water, a subsidiary of American Water, provides high-quality and reliable water and/or wastewater services to more than 880,000 people. For more information, visit **californiaamwater.com** and follow us on Twitter, Facebook, Instagram and YouTube.

With a history dating back to 1886, **American Water** (NYSE:AWK) is the largest and most geographically diverse U.S. publicly traded water and wastewater utility company. The company employs approximately 6,400 dedicated professionals who provide regulated and regulated-like drinking water and wastewater services to an estimated 14 million people in 25 states. American Water provides safe, clean, affordable and reliable water services to our customers to help keep their lives flowing.



CALIFORNIA AMERICAN WATER FACTS AT A GLANCE

- **COMMUNITIES SERVED**
  78 communities in 10 counties
- **PEOPLE SERVED**
  Approx. 880,000 people
- **EMPLOYEES**
  322
- **SYSTEM DELIVERY**
  122 million gallons per day (MGD) of water is produced and treated
- **MILES OF PIPELINE**
  2,280 miles of water pipeline and 48.5 miles of wastewater pipe
- **STORAGE**
  185 water storage facilities

How to **Contact Us**



If you have any questions about this report, your drinking water, or service, please contact California American Water's Customer Service Center Monday to Friday, 7 a.m. to 7 p.m. at 1-888-237-1333.

WATER INFORMATION SOURCES

California American Water
www.californiaamwater.com

State Water Resources Control Board (State Board), Division of Drinking Water (DDW:
www.waterboards.ca.gov/drinking_water/programs/index.shtml

County of Monterey Health Department
https://www.co.monterey.ca.us/government/departments-a-h/health

United States Environmental Protection Agency (USEPA):
www.epa.gov/safewater

Safe Drinking Water Hotline: (800) 426-4791

Centers for Disease Control and Prevention: www.cdc.gov

American Water Works Association: www.awwa.org

Water Quality Association: www.wqa.org

National Library of Medicine/National Institute of Health:
www.nlm.nih.gov/medlineplus/drinkingwater.html

This report contains important information about your drinking water. Translate it, or speak with someone who understands it at 1-888-237-1333.

This report contains important information about your drinking water. Translate it, or speak with someone who understands it at 1-888-237-1333.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien al 1-888-237-1333.

Ntawm no yog ib co lus qhia tseem ceeb heev txog koj cov dej seb huv npaum li cas. Yog tias koj xav tau kev pab txhais cov lus qhia no, thov hu rau peb ntawm 1-888-237-1333.

這是關於您的水質的十分重要的資訊。如果您需要幫助翻譯此資訊請致電 **1-888-237-1333** 與我們聯繫。

आपके पानी की गुणवत्ता के बारे में यह बहुत महत्वपूर्ण सूचना है। यदि इस सूचना के अनुवाद के लिए आपको सहायता की जरूरत हो, तो कृपया **1-888-237-1333** र हमें काल करें।

Это очень важная информация о качестве Вашей воды. Если Вам требуется перевод этой информации, позвоните нам по телефону 1-888-237-1333.

Ito ay isang napakahalagang impormasyon tungkol sa kalidad ng iyong tubig. Kung iyong kailangan ng tulong sa pagsalin ng impormasyon na ito, mangyaring tumawag sa amin sa 1-888-237-1333.

Đây là thông tin rất quan trọng về chất lượng nước của quý vị. Nếu quý vị cần thông dịch thông tin này, xin gọi chúng tôi theo số 1-888-237-1333.

Monterey One Water
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Appendix D. GeoTracker Report Access Instructions for Quarterly Monitoring Reports

GeoTracker: https://geotracker.waterboards.ca.gov/

- Search WDR100039680 and click on 'PURE WATER MONTEREY GROUNDWATER REPLENISHMENT PROJECT (WDR100039680)' when it appears below the search box.
- Reports can be found under the 'Site Maps / Documents' tab.

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Appendix E. M1W Data Qualifiers

Qualifier	Description
B	Analyte detected above the method reporting limit in an associated blank, but not in the sample
DNQ	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J1	ICV/CCV failed to meet QC criteria for either precision or accuracy
J2	Reported value is estimated; No known QC criteria for this component
J3	LCS/LFB failed to meet QC criteria for either precision or accuracy
J4	MS/MSD, Duplicate or other Matrix check failed to meet QC criteria for either precision or accuracy
N	The sample did not have the proper preservation
Q	Sample held beyond the accepted holding time
R	Rejected data; Not suitable for the projects intended use
T	Value reported is less than the laboratory method detection limit
ND or <	Compound was analyzed for but not detected
V	Analyte was detected in both the sample and the associated method blank
Z	Too Numerous to Count (TNTC)

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Appendix F. Technical Memorandum, SUBJECT: Pure Water Monterey Project Groundwater Replenishment Reuse Project Added Tracer Study Field Results. May 6, 2022

May 6, 2022

MEMORANDUM

To: Aidé Ortiz, Sherly Rosilela, Brian Bernados, Jonathan Weininger, Querube Moltrup, State Water Resources Control Board, Division of Drinking Water

James Bishop, Jennifer Epp, Harvey Packard, Central Coast Regional Water Quality Control Board

From: Gus Yates, Senior Hydrologist

Re: Pure Water Monterey Groundwater Replenishment Reuse Project, Added Tracer Study Field Results

Introduction and Purpose

The Pure Water Monterey groundwater replenishment project (PWM Project) injects recycled water purified by advanced treatment (purified water) into the Seaside Basin at four injection wells, including two that recently began to operate. An intrinsic tracer study was conducted during the first year of injection—from March 2020 through March 2021—to estimate subsurface travel time of injected water to downgradient potable supply wells. This memorandum presents the results of an extrinsic (added) tracer study, the purpose of which is to request credit for underground retention and virus log-removal related to subsurface travel time of PWM project injected water to the nearest downgradient extraction well. The Recycled Water Regulations provide that for each month retained underground as validated by an added tracer test, the recycled water will be credited with a 1-log virus reduction, up to a maximum of 6-log reduction credits (Article 5.2 Section 60320.208(d)). In contrast, retention time demonstrated by an intrinsic tracer test is credited with 0.67-log virus reduction per month of underground retention.

HYDROGEOLOGIC SETTING AND WELLS

The PWM project injection wells are located in the Seaside Basin, which extends onshore and offshore along the Monterey Bay coastline between Monterey and Marina. The PWM injection wells are located in close proximity to other injection and extraction wells operated by Monterey Peninsula Water Management District (MPWMD) or California American Water Company (Cal-Am). The locations of PWM's deep injection wells, MPWMD's nearby injection/extraction (ASR) wells and Cal-Am's nearby municipal production wells are shown in **Figure 1**. Deep injection wells 1 and 2 (DIW-1 and DIW-2) are currently the primary PWM injection wells. Two new wells (DIW-3 and DIW-4) have been installed, are undergoing testing, and have recently come online.

Approximately 1,100 ft northwest of DIW-1 and DIW-2 are wells ASR-1 and ASR-2. Those wells inject water from wells near the Carmel River at various times during December-April, depending on Carmel River flow conditions. River flow must exceed a specified threshold before ASR injection is allowed. ASR-1 and ASR-2 are not permitted to function as municipal extraction wells and consequently are not considered downgradient drinking water wells. They are permitted for injection only.

Farther north are two additional ASR wells: ASR-3 and ASR-4. They are 2,050-2,400 ft from DIW-1 and 2,500-2,900 ft from DIW-2. Both can inject Carmel River water, and ASR-3 is permitted to extract water for municipal use. When extracting, it pumps into the Monterey Pipeline that conveys water to the Monterey Peninsula area.

Cal-Am's nearest production wells are the Paralta Well (1,600 ft from DIW-1 and 1,800 ft from DIW-2) and Ord Grove #2 Well (1,700 ft from DIW-2). These are the two largest wells supplying Cal-Am's Seaside service area. At present, the Seaside distribution system has limited connectivity to the Monterey Peninsula distribution system, so the two service areas are managed somewhat separately.

Additional information regarding well locations, screened intervals, injection and extraction capacities and historical operations during December 2019-April 2022 is documented in the fourth quarterly monitoring report for the intrinsic tracer test, which is attached as **Appendix A**.

Most of these wells are screened in the Santa Margarita Sandstone (SM Aquifer), which is the deeper of the two primary water supply aquifers in the area. It consists of a marine sandstone of Pliocene/Miocene age and is present throughout most of the Seaside Basin. The sandstone is poorly consolidated and is approximately 250 feet thick in the Northern Coastal subarea of the basin. The Laguna Seca Anticline passes through the area in a northwest-southeast orientation. Because of the anticline, the depth and thickness of the Santa Margarita aquifer varies among the wells. A geologic cross section along a north-south transect west of the PWM wells is shown in **Figure 2**. Relative to the overlying Paso Robles Formation, the Santa Margarita aquifer has greater permeability and higher concentrations of dissolved minerals.

The SM Aquifer is overlain by the Paso Robles Formation (PR Aquifer), which in turn is overlain by the relatively thin, surficial Aromas Sand Formation. The PR Aquifer consists of discontinuous layers of gravels, sands, silts and clays of continental origin. Relative to the SM Aquifer, the PR Aquifer has lower permeability and lower dissolved solids. At the PWM project location, the Aromas Sand Formation is unsaturated, and the water table is near the top of the PR Aquifer. PWM operates two wells that inject into the unsaturated zone of the Aromas Sand Formation at the same sites as DIW-1 and DIW-2 (VZW-1 and VZW-2). The injection capacities of the vadose zone wells proved to be smaller than anticipated, accounting for only 3 percent of total injection. Because of the small injection volumes, the vertical flow required to reach the PR Aquifer, and the lower permeability of the PR Aquifer, subsurface travel times from the vadose zone wells to the nearest shallow extraction wells are on the order of years, or substantially longer than travel times through the SM Aquifer

of water injected by the DIWs. Accordingly, the vadose zone injection wells were not included in the added tracer study.

The Ord Grove #2 and Paralta Wells are screened in both the PR and SM Aquifers. Between 65 and 90 percent of the water pumped by these two wells is thought to derive from the Santa Margarita aquifer[1]. Consequently, they both create drawdown in that aquifer and contribute to the gradient between injection and extraction wells, which is one of the main factors affecting subsurface travel time of injected water.

Figure 3 shows contours of simulated groundwater elevation in the SM Aquifer in the PWM project area. Measured groundwater elevations are posted at the wells for which data are available. The regional water-level gradient is from inland areas toward the coast. However, pumping at the Ord Grove #2, Paralta and ASR-3/4 Wells creates a water-level trough with elevations as much as 60 feet below sea level at times. Because of this pumping trough, the local water-level gradient near the PWM wells is to the northwest, from DIW-1 and DIW-2 toward Paralta and Ord Grove #2.

SUMMARY OF INTRINSIC TRACER STUDY

The recently completed intrinsic tracer test consisted of a year of background monitoring (April 2019-March 2020) followed by a year of PWM injection (March 2020-March 2021). PWM injection into the Santa Margarita aquifer was at wells DIW-1 and DIW-2 at rates of approximately 1,300 and 900 gpm, respectively.

Water quality was measured monthly and later biweekly at four monitoring wells. The "on-site" monitoring wells were MW-1D and MW-2D, located within a few tens of feet of DIW-1 and DIW-2, respectively. The "off-site" monitoring wells were MW-1AD and MW-2AD, located slightly more than 600 feet away in the direction of ASR-1, ASR-2 and the Paralta Well. Water quality constituents monitored at the wells were temperature, specific conductance (SC), and major ions. Injected purified water was detected at MW-2D four days following the start of injection and at MW-1D eleven days following the start of injection. The difference in travel times was attributed to the greater aquifer thickness and longer screened interval at DIW-1, which create lower horizontal flow velocity.

Decreases in SC were later detected at off-site wells MW-2AD and MW-1AD. Interpretation of the SC measurements at the off-site monitoring wells was complicated by the concurrent operation of ASR-2 in injection mode. ASR-2 is located 500-600 feet away, in the opposite direction from DIW-1 and DIW-2. ASR-2 also injects water that has a SC lower than that of native groundwater but not as low as PWM purified water. ASR-2 injected at varying rates every month from December 2019 to April 2020. ASR-1 did not inject during that season. Throughout most of 2020, it was unclear whether reduced SC at monitoring wells MW-1AD

[1] Water quality in these wells falls between the water quality of wells screened only in each aquifer; Santa Margarita formation is between 2 and 20 times more conductive than the Paso Robles (resulting in more flow per unit screen length); and the water level trends correlate better with the Santa Margarita formation than the Paso Robles formation.

and MW-2AD was due to ASR injection or PWM injection. Eventually, SC dropped below the Carmel River value (486-534 µS/cm), proving with certainty that PWM water had arrived. This occurred around September 2, 2020 at MW-2AD and February 1, 2021 at MW-1AD.

After PWM water had been detected in all of the monitoring wells, modeling was used to separate the effects of ASR injection from those of PWM injection and to calculate travel times as specified in DDW regulations. Article 5.2 Section 60320.208(d) of the State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) Recycled Water Regulations define travel time to a downgradient well as the time when the concentration of injected water at that well reaches 10 percent of its maximum concentration at that well[2]. The modeling analysis consisted of two steps. First, the travel time of the peak concentration (t_{50} travel time) was simulated using a numerical flow model with particle tracking. Second, mathematical equations representing the effects of dispersion were applied to estimate the time when concentration reached 10 percent of its maximum concentration (t_{10} travel time). Dispersion describes the variation in flow velocity at micro- and macro-scales in an aquifer. It causes some water molecules to arrive faster than average and some to arrive slower. The t_{10} travel time represents the leading edge of the arriving plume of injected water and is shorter than the t_{50} travel time.

Operational conditions in the second half of 2020 were conducive to fast travel times. DIW-1 and DIW-2 were both injecting, and ASR-1, Paralta and Ord Grove #2 were all extracting. Preliminary tests of future operations showed that t_{10} travel times from well DIW-1, and possibly well DIW-2, to well ASR-1 would be below but very close to the regulatory minimum underground retention time of 2 months after applying the 0.67 travel time credit allowed for travel times derived for an intrinsic tracer study. ASR-1 was taken offline in January, 2021, and is no longer permitted to extract. With ASR-1 offline, the closest extraction well was Paralta with a modeled underground travel time of 2.2 months after applying the 0.67 credit factor.

The results of the intrinsic tracer study pointed to the need for an added tracer study. Factors that influenced the decision to pursue an added tracer study included complications in data interpretation caused by concurrent injection of two low-SC sources, simulated travel times that were estimated to be very close to the 2-month regulatory minimum for ASR-1, and the larger log virus removal credit obtainable using an added tracer study (1.0 versus 0.67 log virus removal per month of travel time).

SELECTION AND INJECTION OF TRACER COMPOUNDS

Two fluorescent dyes were selected to serve as the tracer compounds. Other tracer options such as bromide and xenon gas were considered less desirable because of the large mass that would be required, the more limited range of detectable concentrations, the need for

[2] An alternative criterion is the time when concentration reaches 2 percent of the injectate concentration. Because the concentrations at the downgradient wells never reached the full injectate concentration, the 10 percent-of-maximum criterion was selected as more appropriate. This was confirmed by DDW staff during a meeting on July 14, 2021.

specialized and more expensive sampling and laboratory equipment, and greenhouse gas considerations. Fluorescent dyes such as fluorescein and eosine have been commonly used as tracers for surface and subsurface flow studies and were provided by a manufacturer that received certification by ANSI NSF 60 as safe for use in drinking water treatment applications. They can be detected at very low concentrations (parts per trillion), so relatively small amounts need to be injected. Mixing, injection and sampling are straightforward, and sample analysis cost is relatively low. Also, non-reactive dyes such as fluorescein and eosine are covered by the Central Coast Regional Board's low-threat waiver (Order R3-2019-0089, Attachment A, Section B, Item 1g), whereas xenon is not. By using a different fluorescent dye in each injection well, the travel times from each injection were uniquely identified. Additional information about the dyes and handling procedures is presented in **Appendix B**.

The dyes were injected on October 26, 2021. Fluorescein was injected into DIW-1 by means of a high-pressure pump attached to a sample port on the main well supply line. The dye solution consisted of 20 pounds of Fluorescent FLT Yellow/Green Powder (fluorescein dye) obtained from Kingscote Chemicals that had been dissolved into 15 gallons of deionized water the previous day. The dye powder is 100 percent fluorescein, and the concentration of the dye solution was approximately 160,000 mg/L. Injection occurred over a period of approximately 1 hour while DIW-1 injected at its normal rate of 1,300 gpm. The estimated average concentration of the blend exiting the well was 31 mg/L. The dye solutions were kept in the shade throughout the mixing, storage and injection process to avoid possible photodegradation by sunlight.

The dye solution for DIW-2 consisted of 50 pounds of Fluorescent FLT Orange Powder (eosine dye) purchased from Kingscote Chemicals dissolved into 30 gallons of deionized water the previous day. The dye powder consists of 50 percent by weight eosine. The estimated concentration of the dye solution was 100,000 mg/L as eosine. The eosine solution was more viscous than the fluorescein solution and created difficulties with the injection pump. The injection pressure and flow rate of DIW-2 were reduced to 12 psi and 790 gpm to achieve successful injection. The dye was injected over a period of approximately 2.5 hours. The average concentration of the blend exiting the well was estimated to be 25 mg/L as eosine.

DIW-1 and DIW-2 resumed normal operation following addition of the dye. The well injection rates have continued at 1,300 gpm and 850-900 gpm, respectively, nearly continuously since October 26, 2021. Both wells are backflushed twice a week for 2 hours, and the first backflush events were two days after the dye injection. The Paralta and Ord Grove #2 production wells have extracted at average rates of 930 gpm and 744 gpm since dye injection. A brief increase in Carmel River flow in December 2021 allowed 70 AF of Carmel River water to be injected at well ASR-4 during December 15, 2021 to January 3, 2022. Because of the distant location and small volume of injection, that event could not have significantly affected travel time from DIW-1 or DIW-2 to ASR-1. ASR-1 and ASR-2 have been idle throughout the testing period.

DOWNGRADIENT MONITORING

Measured water levels and previous modeling indicated that regional groundwater flow in the Santa Margarita aquifer near DIW-1 and DIW-2 is northwest toward a pumping trough created by pumping at Ord Grove #2, Paralta and ASR-3/4. Wells selected for monitoring were MW-1AD, MW-2AD, MW-1 (a monitoring well next to ASR-1), Paralta and Ord Grove #2. The start dates for monitoring ranged from 2 weeks to 5 months after the dye was injected, based on travel times estimated with the intrinsic tracer study and groundwater model. Sampling intervals ranged from twice a week to once every two weeks. At wells close to the source (MW-1AD, MW-2AD and MW-1) twice-weekly sampling was done during the period of dye arrival to accurately define the breakthrough curve. Due to attenuation during flow through the aquifer, dye arrival at the more distant wells was more gradual, and weekly or biweekly sampling was adequate to define the breakthrough curve.

Dye concentrations were measured at downgradient wells by two methods: water samples and charcoal sampling packets. The charcoal packets were installed in flow-through sampling chambers at the wellhead. The dyes strongly adsorb to the charcoal, and by passing a large volume of water through the charcoal packet, the concentration is effectively increased and represents the cumulative amount integrated over the flow-through sampling period. Water samples were collected by filling a 30 mL plastic sample container. The packets and containers were provided by Ozark Underground Laboratory (OUL). Samples were kept refrigerated and shipped in weekly batches in chilled containers to OUL, which performed the analysis.

At the OUL laboratory, fluorescein and eosine were measured using a spectrofluorophotometer (Shimadzu Model RF-5301). The detection limit for fluorescein and eosine in the water samples are 0.002 µg/L and 0.015 µg/L, respectively. For the charcoal sampling packets, the dyes are first eluted using an ammonia-alcohol solution. The charcoal packet samples were analyzed first to determine whether any dye was detected during the sampling interval. If dye was detected, the water sample was analyzed to obtain the exact concentration at the time of sampling.

Wells MW-1AD and MW-2AD were sampled weekly from November 16, 2021 to February 2, 2022, with additional mid-week samples collected between December 10, 2021 and January 21, 2022. Weekly sampling commenced at MW-1 (ASR-1) on December 22, 2021, at the Paralta well on January 18, 2022 and at Ord Grove #2 on March 1, 2022. Sampling at those wells is ongoing.

SAMPLING RESULTS FOR DOWNGRADIENT WELLS

Measured fluorescein and eosine concentrations at the monitoring wells through April 15, 2022 are shown in **Table 1** and **Figure 4**. The data are measured concentrations in the water samples. The charcoal samplers were used for initial presence/absence detection. As expected, fluorescein arrived at MW-1AD, and eosine arrived at MW-2AD. At MW-1AD the peak concentration of 14.5 µg/L was reached 65 days after injection. The t_{10} travel time was 58 days, which was when the concentration reached 10% of the peak concentration. The

second peak at day 80 is interpreted as dye that arrived via a second, slower flow path. The first peak is the one used for regulatory compliance because it reached a higher concentration. At MW-2AD the peak concentration of 150 µg/L occurred 70 days after injection. The t_{10} travel time was 66 days. A second, muted peak was also observed at this well and also attributed to multiple flow paths caused by aquifer heterogeneity.

The observed t_{10} travel times (58 and 66 days) were similar to the travels times simulated by the groundwater model after it was calibrated to the intrinsic tracer study results (52 and 60 days). This lends credibility to modeling results for other pathways and pumping regimes. Although conditions during the added tracer study were close to "worst case" in terms of producing fast travel times, the groundwater model was used to simulate future operational scenarios that might produce even faster travel times after it was calibrated to these results. The modeling work is reported in a separate memorandum.

Fluorescein was first detected in the Paralta Well on March 1, 2022 and reached its peak concentration on April 21, 2022. The t_{50} travel time for the peak concentration was 177 days, and the t_{10} travel time from the time-concentration plot was 139 days, or 4.6 months (see **Figure 4**). This t10 travel time greatly exceeds the required minimum of 2 months. Eosine had not yet been detected at the Paralta Well as of the end of April 2022.

Fluorescein dye was first detected at Well MW-1 near ASR-1 on April 19, 2022, or about 6 weeks after it arrived at the more distant Paralta Well. This leapfrogging is attributable to preferential flow paths and the difference in capture zones for non-pumping versus pumping wells. MW-1 is a monitoring well with negligible pumping. Dye would only be detected if the well screen intersects one of the two plumes migrating from the injection wells. Preferential flow paths tend to create relatively long, narrow plumes. Modeling has shown that MW-1 is in a low-velocity zone between the DIW-1 and DIW-2 injection plumes. The delayed arrival at MW-1 is consistent with this modeling results. Also, MW-1 is a passive irrigation well with a very limited radial capture zone. Flow in preferential pathways could bypass that well. In contrast, the Paralta Well is a major municipal supply well that pumps water at about 950 gpm and operated 55-90 percent of the time during the months of the added tracer study. Radial flow toward the well creates a wide "capture zone" for dye migrating from upgradient areas. This creates a much higher probability that dye would arrive with or without preferential flow paths. Radial flow around the well also dilutes water arriving from a single upstream direction. That partially explains why dye concentrations at Paralta have been lower than at MW-1AD and MW-2AD.

The added tracer data confirm that monitoring wells MW-1AD and MW-2AD meet all three regulatory criteria for GRRP monitoring wells:

- They are located between the injection wells and the Paralta Well, which is the nearest downgradient drinking water (§60320.226(a)(2)). See Figure 1.
- They are located no less than two weeks but no more than six months of travel time from the GRRP (§60320.226(a)(1)(A)). The t_{10} travel times for MW-1AD and MW-2AD were 8.3 and 9.4 weeks, respectively.

- They are located at least 30 days upgradient of the nearest drinking water well ((§60320.226(a)(1)(B)). The difference in t_{10} travel time for MW-1AD/2AD and Paralta is 76-81 days.

The lack of dye detection to date at Ord Grove #2 is expected. Modeling before the tracer test estimated an arrival in 177 days, and measured arrivals have thus far been slightly longer than the simulated arrivals. There might also be an anticlinal structure limiting flow from DIW-2 toward Ord Grove 2. That possibility is explored in the companion modeling memo.

CONCLUSIONS

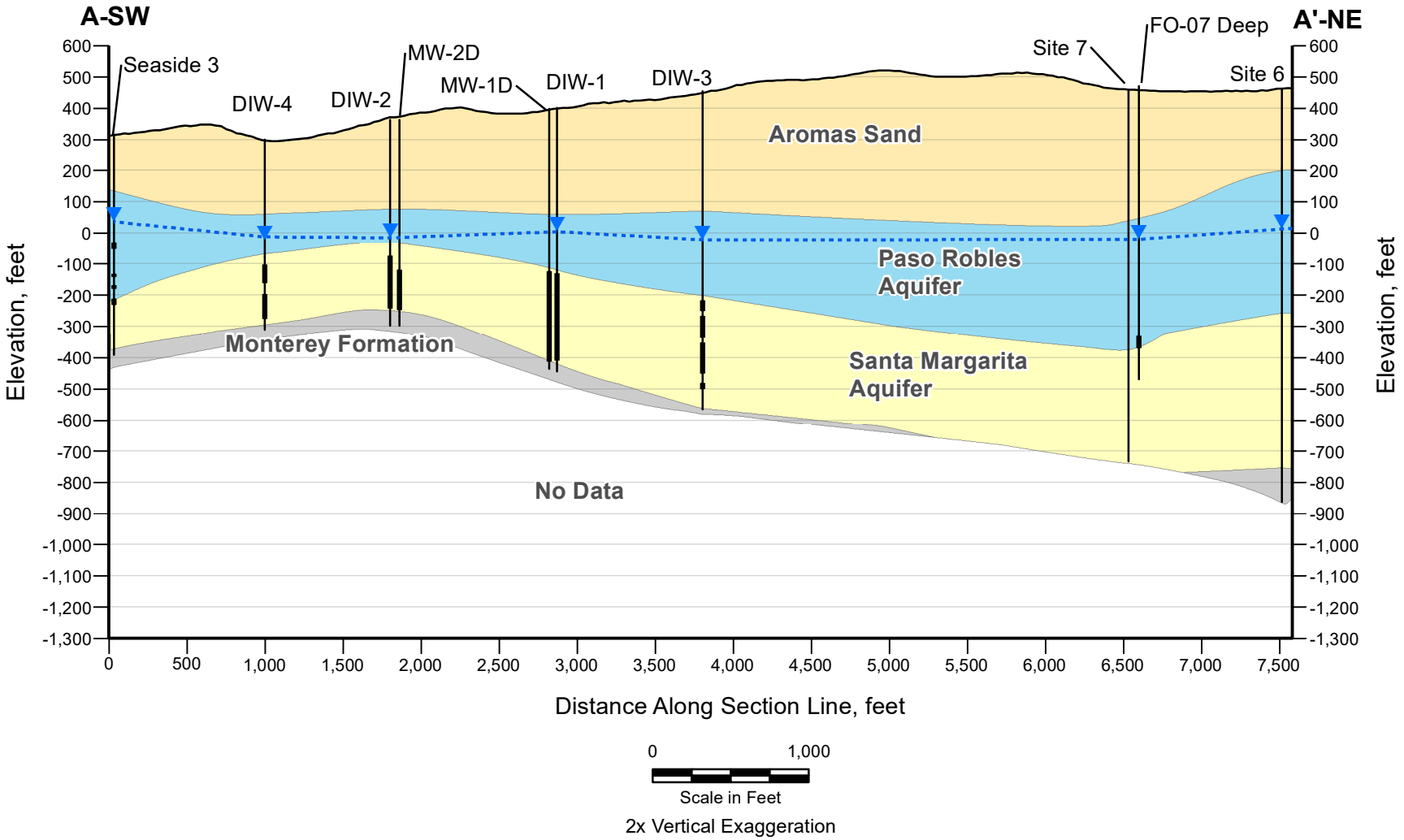
Conclusions that can be reached from the added tracer study include the following:

- Fluorescent dyes work well in the Santa Margarita Formation. They are safe to inject into potable supply aquifers (NSF60 certified), only small quantities are needed (20-50 pounds), and they can be accurately measured over five or more orders of magnitude. They appeared to move without significant adsorption or retardation in the aquifer.
- The Paralta Well is the nearest downgradient drinking water well from injection wells DIW-1 and DIW-2.
- The t_{10} travel time to the Paralta Well was 4.6 months, or more than double the regulatory minimum of 2 months. This reflects injection and extraction rates close to the worst-case condition in terms of travel time. Groundwater modeling explored worst-case conditions and is reported separately.
- The added tracer study qualifies injection at DIW-1 and DIW-2 for 4.6 virus log removal credits.
- Travel times from DIW-3 and DIW-4 to their respective nearest downgradient drinking water wells (Paralta and Ord Grove 2) are expected to be longer than the travel time from DIW-1 to Paralta based on a comparison of distances between the wells and their injection and extraction rates. Those travel times were simulated by the groundwater model and reported in the modeling memorandum.

Table 1. Measured Dye Concentrations in Wells MW-1AD and MW-2AD

Days Since Injection	Date	MW-1AD				MW-2AD				MW-1				Paralta				Ord Grove 2			
		Fluorescein		Eosine		Fluorescein		Eosine		Fluorescein		Eosine		Fluorescein		Eosine		Fluorescein		Eosine	
		Charcoal	Water (µg/L)	Charcoal	Water (µg/L)	Charcoal	Water (µg/L)	Charcoal	Water (µg/L)	Charcoal	Water (µg/L)	Charcoal	Water (µg/L)	Charcoal	Water (µg/L)	Charcoal	Water (µg/L)	Charcoal	Water (µg/L)	Charcoal	Water (µg/L)
21	11/16/2021	ND	0	ND	0	ND	0	ND	0												
28	11/23/2021	ND	0	ND	0	ND	0	ND	0												
35	11/30/2021	ND	0	ND	0	ND	0	ND	0												
42	12/7/2021	ND	0	ND	0	ND	0	ND	0												
45	12/10/2021	ND	0	ND	0	ND	0	ND	0												
49	12/14/2021	Detected	0.031	ND	0	ND	0	ND	0												
52	12/17/2021	Detected	0.056	ND	0	ND	0	ND	0												
57	12/22/2021	Detected	0.411	ND	0	ND	0	ND	0	ND	0	ND	0								
63	12/28/2021	Detected	11.1	ND	0	ND	0	Detected	2.1	ND	0	ND	0								
65	12/30/2021	Detected	14.5	ND	0	ND	0	Detected	14.6												
70	1/4/2022	Detected	10.8	ND	0	ND	0	Detected	150	ND	0	ND	0								
73	1/7/2022	Detected	10.5	ND	0	ND	0	Detected	114												
77	1/11/2022	Detected	11	ND	0	ND	0	Detected	62.8	ND	0	ND	0								
80	1/14/2022	Detected	13.2	ND	0	ND	0	Detected	69.3												
84	1/18/2022	Detected	7.84	ND	0	ND	0	Detected	68	ND	0	ND	0	ND	0	ND	0				
87	1/21/2022	Detected	4.25	ND	0	ND	0	Detected	68.5												
91	1/25/2022	Detected	2.41	ND	0	ND	0	Detected	57.5	ND	0	ND	0	ND	0	ND	0				
98	2/1/2022	Detected	1.07	ND	0	ND	0	Detected	47.3	ND	0	ND	0	ND	0	ND	0				
105	2/8/2022									ND	0	ND	0	ND	0	ND	0				
112	2/15/2022									ND	0	ND	0	ND	0	ND	0				
119	2/22/2022									ND	0	ND	0	ND	0	ND	0				
126	3/1/2022									ND	0	ND	0	Detected	0	ND	0	ND	0	ND	0
133	3/8/2022									ND	0	ND	0	Detected	0.134	ND	0	ND	0	ND	0
135	3/10/2022									ND	0	ND	0	Detected	0.201	ND	0	ND	0	ND	0
140	3/15/2022									ND	0	ND	0	Detected	0.438	ND	0	ND	0	ND	0
142	3/17/2022									ND	0	ND	0	Detected	0.544	ND	0	ND	0	ND	0
147	3/22/2022									ND	0	ND	0	Detected	0.850	ND	0	ND	0	ND	0
149	3/24/2022									ND	0	ND	0	Detected	0.990	ND	0	ND	0	ND	0
154	3/29/2022									ND	0	ND	0	Detected	1.580	ND	0				
156	31-Mar									ND	0	ND	0	Detected	1.670	ND	0				
161	4/5/2022									ND	0	ND	0	Detected	2.200	ND	0	ND	0	ND	0
163	4/7/2022									ND	0	ND	0	Detected	2.490	ND	0				
168	4/12/2022									ND	0	ND	0	Detected	3.400	ND	0	ND	0	ND	0
170	4/14/2022									ND	0	ND	0	Detected	3.800	ND	0				
175	4/19/2022									Detected	0.016	ND	0	Detected	3.980	ND	0	ND	0	ND	0
177	4/21/2022									Detected	0.074	ND	0	Detected	4.010	ND	0				
182	4/26/2022									Detected	1.93	ND	0	Detected	3.850	ND	0	ND	0	ND	0
184	4/28/2022									Detected	1.75	ND	0	Detected	3.760	ND	0				

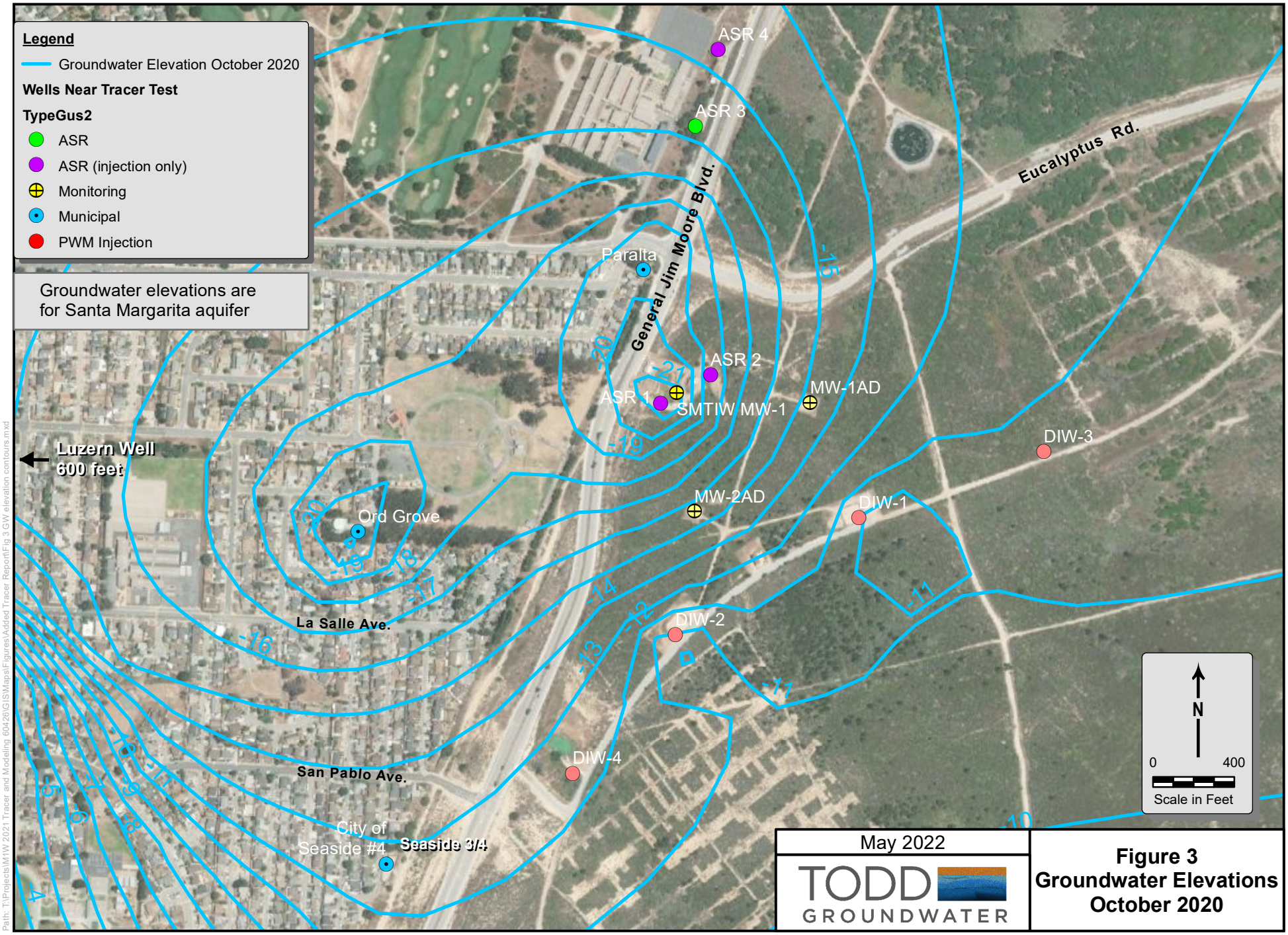

Legend
Section Line A-A'
Wells Near Tracer Test
TypeGus2
ASR
ASR (injection only)
Monitoring
Municipal
PWM Injection
ASR 4
ASR 3
Eucalyptus Rd.
General Jim Moore Blvd.
Paralta
ASR 2
SMTIW MW-1
ASR 1
MW-1AD
DIW-3
Luzern Well
600 feet
MW-2AD
DIW-1
Ord Grove
DIW-2
La Salle Ave.
DIW-4
San Pablo Ave.
City of
Seaside #4
Seaside 3/4
N
0
400
Scale in Feet
May 2022
TODD GROUNDWATER
Figure 1
PWM Tracer
Test Wells
Path: T:\Projects\M1W 2021 Tracer and Modeling 604260\GIS\Maps\Figures\Added Tracer Report\Fig 1 Well location map.mxd



April 2022

TODD GROUNDWATER

Figure 2
Geologic Cross Section
PWM Injection Field
Seaside, CA



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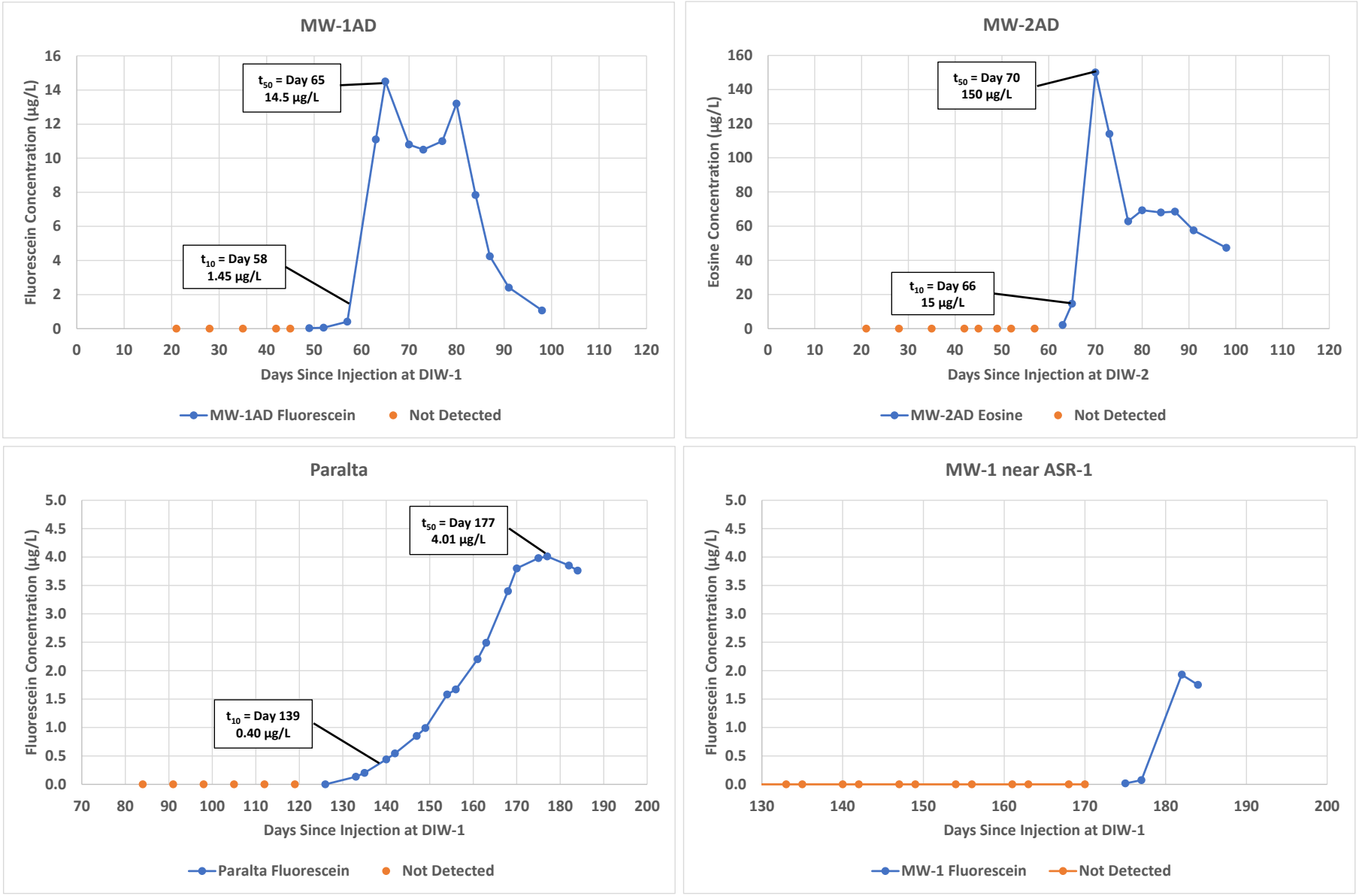


Figure 4. Breakthrough Curves at Monitoring Wells

APPENDIX A. INTRINSIC TRACER STUDY 4TH QUARTER MONITORING REPORT

June 30, 2021

TECHNICAL MEMORANDUM

To: Sherly Rosilela
State Water Resources Control Board
Division of Drinking Water
Sherly.Rosilela@waterboards.ca.gov

From: Gus Yates, PG, CHG, Senior Hydrogeologist
Nicole Grimm, Staff Geologist

Re: Intrinsic Tracer Test Status Report No. 4 (through March 2021)
Pure Water Monterey, Groundwater Replenishment Project

This technical memorandum (TM) presents the 4th and final status report for the intrinsic tracer test. The TM documents intrinsic tracer test data collected through March 31, 2021. While injection of purified recycled water began in the vadose zone wells (VZWs) on February 11, 2020, the focus of the Tracer Work Plan and tracer test results is on injection into the deep injection wells (DIWs) and underground travel time in the Santa Margarita (SM) Aquifer, which has received most of the purified recycled water recharge to date and will exhibit the shorter underground retention time compared to the overlying Paso Robles (PR) Aquifer. Initial injection of purified recycled water into both DIWs occurred on March 13, 2020. This status report thus includes approximately one year of post-DIW injection data. This TM also documents baseline water level and water quality information dating back to March 2019.

The following information is to be included in the quarterly status report:

1. Injection and extraction volumes for Pure Water Monterey (PWM) injection wells, Monterey Peninsula Water Management District (MPWMD) aquifer storage and recovery (ASR) Wells 1 through 4, and three nearby Cal-Am water supply wells (Ord Grove #2, Luzern, and Paralta).

2. Groundwater elevation information in the vicinity of the PWM Injection Facilities Area.

3. Water quality data for PWM groundwater monitoring wells and injected waters (PWM purified recycled water and treated Carmel River water for the MPWMD ASR project).

Laboratory water quality reports and QA-QC data are provided in **Appendix A** and **Appendix B**, respectively.

For background information refer to the Tracer Work Plan[1] and the Intrinsic Tracer Test Status Reports No. 1[2], No. 2[3], and No. 3[4]. The main conclusion from the first report was that arrival and breakthrough of purified recycled water occurred in both onsite monitoring wells, MW-1D and MW-2D, within 11 days and 4 days, respectively, of injection. The second report concluded that breakthrough of purified recycled water had occurred at the offsite monitoring well, MW-2AD. The third report found the breakthrough of purified recycled water at the offsite monitoring well, MW-1AD, to be inconclusive and recommended further monitoring. Specific criteria related to arrival and breakthrough are defined below under "Groundwater Quality".

PWM WELLS AND DRINKING WATER WELLS

Figure 1 shows the location of injection wells, monitoring wells and nearby drinking water wells in the vicinity of the PWM Injection Facilities Area. Pertinent well information is provided in **Table 1**. **Table 2** shows the dates of water quality sampling and analysis during the third quarter.

Nearby Seaside Basin drinking water wells include MPWMD ASR-1 through ASR-4 (SM Aquifer), Paralta (PR/SM Aquifers), Ord Grove #2 (PR/SM Aquifers), and City of Seaside 3 and 4 (PR Aquifer). An additional production well, Luzern (PR), is located 600 feet west of the mapped area on **Figure 1**, approximately 0.5 miles west of Ord Grove #2.

[1] The Tracer Work Plan was accompanied by a Technical Memorandum, titled "Pure Water Monterey Project Wellfield Design Modeling results with Updated Local Santa Margarita Aquifer Properties and 70/30 Deep/Shallow Recharge Split." March 25, 2019. Prepared by Montgomery and Associates.
[2] "The Intrinsic Tracer Test Status Report No. 1." August 19, 2020. Prepared by Todd Groundwater.
[3] "The Intrinsic Tracer Test Status Report No. 2." November 5, 2020. Prepared by Todd Groundwater.
[4] "The Intrinsic Tracer Test Status Report No. 3." January 27, 2020. Prepared by Todd Groundwater.

Table 1
Summary of Pure Water Monterey Wells and Other Local Wells

Well Name	Well Type	Aquifer	Latitude	Longitude	Ground Elevation (feet msl)	Casing Diameter (inches)	Well Casing Material	Well Screen Material	Completion Date	Screen Interval (feet-bgs)	Total Well Depth
DIW-1	DIW	SM	36.618227	-121.814010	401	24	Type 304 Stainless Steel	Type 316 Stainless Steel	12/1/2017	530-810	830
DIW-2	DIW	SM	36.616571	-121.817082	363	24	Type 304 Stainless Steel	Type 316 Stainless Steel	1/21/2019	435-605	635
VZW-1B	VZW	Aromas	36.618196	-121.814179	398	12	Schedule 80 PVC	Schedule 80 PVC	7/30/2019	28-139	139
VZW-2	VZW	Aromas	36.616767	-121.816987	364	14	Schedule 80 PVC	Schedule 80 PVC	1/31/2019	28-98	98
MW-1D	MW	SM	36.618315	-121.814318	398	4	Schedule 80 PVC	Schedule 80 PVC	6/1/2017	510-810	820
MW-2D	MW	SM	36.616824	-121.817066	362	4	Schedule 80 PVC	Schedule 80 PVC	7/1/2018	480-610	620
MW-1AD	MW	SM	36.619760	-121.814946	395	4	Schedule 80 PVC	Schedule 80 PVC	8/1/2018	610-870	880
MW-2AD	MW	SM	36.618247	-121.816827	365	4	Schedule 80 PVC	Schedule 80 PVC	7/1/2018	480-690	700
MW-1S	MW	PR	36.618276	-121.814298	398	4	Schedule 80 PVC	Schedule 80 PVC	6/1/2017	380-440	450
MW-1AS	MW	PR	36.619721	-121.814960	395	4	Schedule 80 PVC	Schedule 80 PVC	8/10/2018	380-460	470
MW-2AS	MW	PR	36.618228	-121.816782	365	4	Schedule 80 PVC	Schedule 80 PVC	8/24/2018	340-420	430
ASR-1	ASR	SM	36.619695	-121.817447	330	20/22	Stainless Steel	Stainless Steel	4/24/2001	480-590; 610-700	720
ASR-2	ASR	SM	36.620096	-121.816622	360	20/22	Stainless Steel	Stainless Steel	5/3/2007	540-650; 670-790	790
ASR-3	ASR	SM	36.623456	-121.817000	335	20/22	Stainless Steel	Stainless Steel	2/9/2011	700-780; 800-840; 860-940	960
ASR-4	ASR	SM	36.624491	-121.816655	335	20/22	Stainless Steel	Stainless Steel	10/19/2012	750-990	1010
SM MW-1	MW	SM	36.619839	-121.817186	345	8	PVC	PVC	2007	495-715	715
Luzern	Prod	PR/SM	36.618595	-121.830402	151		Steel	Steel	N/A	172-182	302
Paralta	Prod	PR/SM	36.621497	-121.817806	333	16	Steel	Steel	5/6/1991	440-560; 630-810	820
Ord Grove #2	Prod	PS/SM	36.617834	-121.822457	293	8/12	Steel	Steel	11/1/1999	353-393; 438-483	483

Notes:
Geographic coordinates (Northing and Easting) in State Plane US Feet, North American Datum 1983
MW = Monitoring Well / VZW = Vadose Zone Well / DIW = Deep Injection Well
PR = Paso Robles Aquifer
SM = Santa Margarita Aquifer
Aromas = Aromas Sand Formation
feet msl = feet above mean sea level
feet-bgs = feet below ground surface
PVC = polyvinyl chloride

Table 2
PWM Intrinsic Tracer Test Sampling Dates, 4th Quarter

Post-Injection		2021												
		Jan 4 Jan 10	Jan 11 Jan 17	Jan 18 Jan 24	Jan 25 Jan 31	Feb 1 Feb 7	Feb 8 Feb 15	Feb 16 Feb 21	Feb 22 Feb 28	Mar 1 Mar 7	Mar 8 Mar 14	Mar 15 Mar 21	Mar 22 Mar 28	Mar 29 Apr 4
		Week 42	Week 43	Week 44	Week 45	Week 46	Week 47	Week 48	Week 49	Week 50	Week 51	Week 52	Week 53	Week 54
MW-1D	Sample (TDS/SC/Major Ions/pH)			x				x				x		
MW-2D	Continuous SC/Temp/WL Monitoring													
	Sample (TDS/SC/Major Ions/pH)			x				x				x		
MW-1AD	Continuous SC/Temp/WL Monitoring													
	Sample (TDS/SC/Major Ions/pH)	x		x		x		x		x		x		x
MW-2AD	Continuous SC/Temp/WL Monitoring													
	Sample (TDS/SC/Major Ions/pH)	x		x		x		x		x		x		x
MW-1S	Sample (TDS/SC/Major Ions/pH)			x				x				x		
MW-1AS	Sample (TDS/SC/Major Ions/pH)			x				x				x		
MW-2AS	Sample (TDS/SC/Major Ions/pH)			x				x				x		

Notes:

AquaTroll 200 transducer recording continuous EC, water level, and temperature.

PWM INJECTION VOLUMES

Table 3 and Figure 2 show the monthly and cumulative injection volumes by well for the PWM Project through March 2021. As shown in the table and chart, a total of 2,505 AF of purified recycled water was injected into the Seaside Basin from February 2020 through March 2021. Injection into both DIWs commenced on March 13, 2020 with most of the purified recycled water (2,349 AF; 94%) injected into DIW-1 and DIW-2. The remaining volume entered the vadose zone as injection into VZW-1B and VZW-2 (69 AF; 3%) or percolation of backflush water at the IWF Backflush Basin (86 AF; 3%).

During the third quarter, injection of purified recycled water at DIW-1 ceased when well rehabilitation work began on August 17, 2020 and resumed on October 10, 2020. Well rehabilitation work began on DIW-2 on November 16, 2020 and resumed on December 31, 2021.

Table 3
PWM Injection Volumes (through March 2021)

	Deep Injection					Vadose Injection				Total	
Month	DIW-1	DIW-2	IWF Backflush Basin	Net Monthly Deep Injection	Cumulative Net Deep Injection	VZW-1B	VZW-2	Monthly VZW	Cumulative VZW	Total Net Monthly Injection[1]	Cumulative Net Injection
	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)
Feb-20[2]	0	24	-24	0	0	4	22	26	26	50	50
Mar-20[2]	68	68	-2	135	135	5	36	41	66	177	227
Apr-20	94	74	-11	158	292	0	0	0	66	168	395
May-20	90	77	-8	160	452	0	0	0	66	168	563
Jun-20	81	74	-6	149	602	0	0	0	66	155	718
Jul-20	93	62	-6	149	751	0	0	0	66	155	873
Aug-20	70	90	-4	156	906	0	0	0	66	160	1,033
Sep-20	0	88	-6	83	989	0	0	0	66	88	1,121
Oct-20	99	91	-2	188	1177	0	0	0	66	190	1,311
Nov-20	177	44	-1	220	1397	2	0	2	68	223	1,534
Dec-20	167	1	-1	167	1564	6	0	6	74	174	1,708
Jan-21	173	115	-5	283	1847	6	3	9	83	297	2,005
Feb-21	147	111	-4	254	2101	6	3	8	91	266	2,272
Mar-21	169	135	-5	299	2400	6	3	10	101	314	2,585

Notes:
[1] Backflush water percolated at the IWF Backflush Basin is included as "injection" into the vadose zone.
[2] Values for February and March 2020 corrected from previous quarterly reports.

ASR INJECTION AND EXTRACTION VOLUMES

Local hydraulic conditions (primarily in the SM Aquifer) are influenced by the MPWMD ASR Project's injection and extraction volumes which are dependent on the climate/hydrology beyond the control of the PWM Project. Currently, injection of treated Carmel River water for the MPWMD ASR Project occurs in four ASR wells (ASR-1 through ASR-4 on Figure 1) that are screened in the SM Aquifer, and extraction for potable use occurs only using ASR-1.

ASR Injection

The period when injection can occur for the ASR Project spans a 6-month period from December 1 to May 30; actual injection volumes are dependent on the timing and volume of excess flows in the Carmel River based on the relevant water rights.

Table 4 and Figure 3 show the monthly volumes of treated Carmel River water injection into ASR wells and extraction from those wells during the 2019-2020 and 2020-2021 cycles. ASR injection commenced on December 3, 2019, with the last day of injection occurring on May 2, 2020. A total of 916 AF of treated Carmel River water was injected over this 5-month period. No additional injection occurred from July 1 to September 30, 2020. ASR injection during the 2020-2021 cycle commenced on January 28, 2021 with injection into ASR-3 and ASR-4 wells.

ASR Extraction

For MPWMD/CalAm ASR Wells, a rest period following the final day of injection is required to allow for attenuation of disinfection byproducts (DBPs) in the subsurface prior to extraction. The rest period is dependent on the reaction rate of DBPs. A typical rest period is between 6 and 8 weeks.

Extraction from ASR-1 in 2020 commenced on July 27, 2020 and continued through December 31, 2020. No other ASR wells extracted water during this cycle. **Table 4 and Figure 3** show the monthly volumes of treated Carmel River water injection and extraction since December 2019.

Table 4
ASR Injection and Extraction Volumes December 2019 to March 2021

Cycle	Month	ASR-1	ASR-2	ASR-3	ASR-4	Total Monthly Volume	Cumulative Volume
		(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)
Injection 2019-2020	Dec	0	256	34	119	409	**409**
	Jan	0	8	0	0	8	**417**
	Feb	0	13	8	31	52	**469**
	Mar	0	155	0	154	308	**778**
	Apr	0	70	0	69	139	**916**
	May	0	0	0	0	0	**916**
Extraction 2019-2020	Jun	0	0	0	0	0	**916**
	Jul	-151	0	0	0	-151	766
	Aug	-160	0	0	0	-160	606
	Sep	-123	0	0	0	-123	483
	Oct	-187	0	0	0	-187	296
	Nov	-166	0	0	0	-166	130
	Dec	-132	0	0	0	-132	-2
Injection 2020-2021	Jan	0	0	18	26	44	41
	Feb	0	0	9	14	23	64
	Mar	0	0	0	0	0	**64**

CAL-AM WELL EXTRACTION VOLUMES

Table 5 and **Figure 4** show the monthly extraction volumes for the three Cal-Am wells within the study area (Ord Grove #2, Paralta, and Luzern) from March 2020 through March 2021.

Table 5
Extraction Volumes for Cal-Am Seaside Basin Wells (March 2020 through March 2021)

Month	Ord Grove #2	Paralta	Luzern	Total Monthly Volume	Cumulative Production Volume
	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)
March-20	53	74	0	128	**128**
April-20	76	127	0	203	**331**
May-20	16	101	0	117	**448**
June-20	16	153	0	169	**617**
July-20	0	152	34	186	**803**
August-20	115	130	15	260	**1063**
September-20	121	90	55	266	**1329**
October-20	121	108	63	292	**1621**
November-20	117	102	59	277	**1898**
December-20	121	66	25	213	**2111**
January-21	120	0	0	120	**2232**
February-21	29	8	0	37	**2268**
March-21	52	95	38	185	**2453**

GROUNDWATER ELEVATIONS

Groundwater elevation data from PWM injection and monitoring wells and in other local wells in the vicinity of the PWM Injection Facilities Area were collected for this status report. Near continuous water level data are collected using pressure transducers deployed in both DIWs (DIW-1 and DIW-2) and the four deep Project monitoring wells (MW-1D, MW-2D, MW-1AD, MW-2AD). Additionally, pressure transducers are installed in ASR-2 and SM MW-1. Currently, no pressure transducer is installed in ASR-1.

Table 6 summarizes the pressure transducer information for the six PWM wells, MPWMD ASR-2, and SM MW-1.

Santa Margarita Aquifer Wells

Figure 5 shows groundwater elevation data for DIW-1, DIW-2, MW-1D, MW-2D, MW-1AD, and MW-2AD from January 1, 2021 to March 31, 2021. Injection at DIW-2 resumed on December 31, 2021 after well rehabilitation.

As shown on the upper chart, water levels in DIW-1 shows fluctuations between a high during injection to a low during routine backflushing. The overall groundwater elevation is relatively stable. The lower chart of **Figure 5** shows water levels in DIW-2 gradually increasing as

groundwater levels recovered as injection resumed following the pause for well rehabilitation. The larger fluctuations caused by backflushing in water levels in DIW-2 compared to DIW-1 reflects the smaller aquifer transmissivity and specific injection capacity at DIW-2. This is attributable primarily to the thinner SM Aquifer and shorter well screen in DIW-2 (170 feet versus 280 feet). It is noted that the water level transducer in DIW-1 malfunctioned and produced unreliable data until January 15, 2021.

Table 6
PWM Project and ASR-2 and SM MW-1 Transducer Information

Well Name	Well Type	Aquifer	Screen Interval (feet-bgs)	Total Well Depth	Transducer Water Level/Temp	Transducer Electrical Conductivity	Transducer Depth (feet-bgs)	Transducer Elevation (feet-msl)	Transducer Model
DIW-1	DIW	SM	530-810	830	Yes		520	-119	Endress Houser
DIW-2	DIW	SM	435-605	635	Yes		520	-157	Endress Houser
MW-1D	MW	SM	510-810	820	Yes		505	-107	LevelTroll 700 (vented, 300 psi)
MW-2D	MW	SM	480-610	620	Yes	Yes	550	-188	AquaTroll 200 (vented, 300 psi)
MW-1AD	MW	SM	610-870	880	Yes	Yes	740	-345	AquaTroll 200 (vented, 300 psi)
MW-2AD	MW	SM	480-690	700	Yes	Yes	590	-225	AquaTroll 200 (vented, 300 psi)
ASR-2	ASR	SM	540-650; 670-790	790	Yes				Level Troll 700 (vented, 300 psi)
SM MW-1	MW	SM	495-715	715	Yes				Level Troll 700 (vented, 300 psi)

Table 7 shows the groundwater elevations in the Cal-Am Ord Grove #2, Paralta, and Luzern wells from January through March 2021.

Table 7
Groundwater Elevations in Cal-Am Wells (January 2020 to March 2021)

Date	Ord Grove #2	Paralta	Luzern
	(feet-msl)	(feet-msl)	(feet-msl)
Jan-20	-39	-13	-28
Feb-20	-27	-1	-26
Mar-20	-25	-10	-25
Apr-20	-67	-15	-21
May-20	Blocked	-22	-22
Jun-20	Blocked	-30	-21
Jul-20	Blocked	-33	-35
Aug-20	-60	-26	-34
Sep-20	-61	-30	-45
Oct-20	-63	-31	-49
Nov-20	-58	37	-50
Dec-20	-58	-17	-33
Jan-21	-61	-7	-30
Feb-21	-24	-4	-26
Mar-21	-55	-21	-41

Note: Water levels for Ord Grove #2 in May through July not available (listed as blocked).

Paso Robles Aquifer Wells

Three Project monitoring wells are screened in the Paso Robles Aquifer (MW-1S, MW-1AS, MW-2AS). Pressure transducers are not installed in these wells. **Table 8** shows groundwater elevations measured during discrete water quality sampling and one-time groundwater level measurements.

Table 8
Groundwater Elevations in Shallow Monitoring Wells (May 2020 to March 2021)

Ground Water Elevation (ft-msl)			
Date	MW-1S	MW-1AS	MW-2AS
	(feet-msl)	(feet-msl)	(feet-msl)
05/31/2020	--	20.0	-13.3
06/09/2020	-8.0	19.7	--
06/10/2020	--	--	-14.3
06/23/2020	--	19.1	-14.6
07/07/2020	--	--	-15.8
07/09/2020	--	18.9	--
08/04/2020	-1.8	17.9	--
09/02/2020	--	--	-26.1
10/27/2020	--	16.8	-27.4
10/28/2020	-1.3	--	--
11/03/2020	--	17.1	-26.7
11/04/2020	-2.2	--	--
11/17/2020	-1.5	--	--
11/23/2020	--	20.2	-26.4
12/07/2020	--	18.5	-27.1
12/08/2020	-2.3	--	--
12/21/2020	-2.4	21.1	--
12/22/2020	--	--	-25.8
1/19/2021	-1.9	22.1	--
1/20/2021	--	--	-19.3
2/16/2021	-2.9	23.6	--
2/17/2021	--	--	-11.9
3/15/2021	-2.9	20.6	--
3/16/2021	--	--	-10.7

The water level in MW-1S is approximately 7 feet lower than when constructed in July 2017. While data are limited, the data suggest little to no influence in MW-1S water levels from the 9 AF of purified recycled water injected in February/March 2020 at VZW-1B.

GROUNDWATER QUALITY

The technical basis for the intrinsic tracer test is based on the evaluation of water quality characteristics of the Project purified recycled water, local groundwater, and treated Carmel River water (associated with the MPWMD ASR Project). Data sources used for this evaluation include results from the Advanced Water Purification Plant (AWPF) (purified recycled water quality), ASR monitoring/operational data (ASR-related groundwater quality, treated Carmel River water quality, and ASR injection volumes), and results of baseline and post-injection

sampling of PWM monitoring wells (groundwater quality beneath the Injection Facilities Area and between the Injection Facilities Area and ASR wells). Key data and findings that support the tracer test design are discussed below.

Due to mixing with ambient groundwater, injected water does not arrive at a downgradient location abruptly. The injected water arrives as a dispersed front, such that the percentage of injected water gradually increases and eventually stabilizes at a value representing steady mixing with ambient groundwater. In this report, "arrival" is used to indicate the time when injected water is first detected at the downgradient well, and "breakthrough" is used to indicate when the concentration of a constituent in the downgradient sample reaches either of two thresholds specified in Division of Drinking Water (DDW) regulations for response retention time: 2% of the concentration in the injected water, or 10% of the peak concentration measured in the downgradient well. With continuous injection, the peak concentration manifests as the stabilized long-term concentration associated with the steady blend of injected water and ambient groundwater.

Discrete Water Quality Samples

Twenty-three rounds of baseline water quality samples were collected from the seven Project monitoring wells from April 29, 2019 through March 15, 2020 to characterize baseline native groundwater quality in the SM and PR aquifers prior to PWM injection to support the intrinsic tracer test. Samples were collected on average every two weeks, with only one interruption to the schedule in December 2019.

As of March 2021, fourteen rounds of sampling since startup of DIW injection have been completed on a monthly basis in the seven Project monitoring wells. Additional discrete samples and SC continuous measurements were collected in MW-1D, MW-2D and MW-2AD to characterize the relative contribution of purified recycled water in those monitoring wells where it has arrived. Biweekly discrete samples and SC continuous measurements were also collected in MW-1AD in anticipation of the arrival of purified recycled water at that well.

Due to clogging in DIW-1 and DIW-2, the pre-injection treatment method for purified recycled water was shifted from lime stabilization to CaCl/NaOH on October 10, 2020. A discrete sample was collected at the AWPF on October 29, 2020 to determine the new ionic composition.

Table 9 shows the range in major ion and specific conductance concentrations in baseline and the most recent post-injection water sample collected from the seven Project monitoring wells through March 2021. Also shown are concentrations for purified recycled water sampled at the AWPF on October 29, 2020. Comparison of purified recycled water quality from the AWPF and at the DIW wellheads in April indicated a relatively tight range in major ion and specific conductance concentrations, indicating that future purified recycled water sampling at the AWPF is representative of injected water quality at DIW-1 and DIW-2 (and vice versa). Concentrations of many ions for the latest post-injection sample in MW-1D, MW-2D, MW-1AD, and MW-2AD fell outside (below in all cases) the historical baseline concentration range and are indicated in bold font. The shallow monitoring wells, MW-1AS, MW-2AS, and MW-1S,

all had specific conductance outside of baseline levels. The ASR injectate concentration ranges are from samples collected between December 2019 and April 2020.

Specific Conductance (SC)

Figure 6 shows the SC data for each of the four deep Project monitoring wells (including MW-1D which had only manual SC data). Continuous data were collected with the AquaTroll 200 transducer, while diamond shapes represent discrete baseline and post-injection water quality samples. The transducer data appears more erratic than the discrete samples in each of the wells.

The SC of the injected water was changed with the implementation of a new chemical stabilizer on October 10, 2020. The new SC is 185.2 µS/cm, up from about 98 µS/cm.

The upper two charts show the SC data for the onsite monitoring wells. MW-1D shows arrival of purified recycled water occurring on March 24, 2020, eleven days after injections began, while MW-2D shows arrival occurring on March 17, 2020, four days after injections began. Because those wells are close to the injection wells, there was little dispersion of the injection front. Breakthrough defined by either the 2% or 10% metric occurred within about 1 day after arrival. Conductivity was decreasing by 7-9% per day during the week following arrival. Since breakthrough, both wells continue to have SC gradually declining with a low of 188 µS/cm for MW-1D on September 29, 2020 and a low of 205 µS/cm for MW-2D on February 17, 2021. SC concentrations shifted in MW-1D and MW-2D following the shift in AWPF water on October 10, 2020. A two-end member mixing calculation based on a pre-injection native groundwater SC concentration of 1,279 µS/cm and 1,141 µS/cm for MW-1D and MW-2D, respectively, and the new purified water SC concentration of 185.2 µS/cm signifies that purified recycled water has constituted up to 98 percent of the water in MW-1D and up to 97 percent of the water in MW-2D as of March 15, 2021 and March 16, 2021, respectively.

The lower two charts on **Figure 6** show SC data collected for the offsite monitoring wells MW-1AD and MW-2AD. As shown on the MW-1AD chart, post-injection transducer data show SC concentrations temporarily dipping to 688 µS/cm in mid-May 2020 then climbing back to near the baseline level by July 2020. This temporary dip could plausibly have been caused by ASR injection. A second, long-term decline commenced in early August 2020. The SC concentration did not drop below the range of ASR injectate concentrations (486-534 µS/cm) until February 1, 2021 (485 µS/cm) and continued to decrease thereafter. The SC concentration appeared to be leveling out at about 403 µS/cm in late March 2021. The low concentrations in February-March 2021 can be definitively attributed to purified recycled water. Results prior to February 2021 were ambiguous because low SC concentrations could theoretically have been from ASR water only or a blend of ASR and purified recycled water.

The MW-2AD chart shows post-injection transducer data fluctuating in SC concentrations with a gradual decrease beginning about May 20, 2020 and leveling out around 270 µS/cm beginning November 3, 2020. On the basis of SC only, the earliest confirmed arrival of purified recycled water occurred on September 2, 2020, when the measured SC dropped below the SC range of ASR water. Decreased SC prior to that date could have been from ASR water only or

a blend of ASR and purified recycled water. SC rose rapidly during December 2020 and January 2021 because injection at DIW-2 ceased during November 16- December 30, 2020 for well maintenance activities. Water quality at MW-2AD responded about three weeks after injection ceased and after injection resumed. SC concentrations resumed their decline in late January and by mid-February leveled out at about the same concentration that was present in early November, prior to the rehabilitation work (270-310 µS/cm).

Figure 7 shows the SC data for pre- and post-injection samples collected from the three shallow Project monitoring wells (MW-1S, MW-1AS, and MW-2AS). The chart shows stable SC in all three wells prior to and following DIW injection through December 2020. A temporary increase in SC in MW-2AS was observed in the samples collected in December 2019, January, April, and October 2020. Since December 2020, SC concentrations have remained elevated in MW-2AS. The cause of the temporary increases is not certain, but they may be related indirectly with hydraulic pressure gradients in the PR Aquifer caused by ASR injection in the SM Aquifer.

Temperature

Temperature data has been recorded in three deep Project monitoring wells (MW-2D, MW-1AD, and MW-2AD). **Figure 8** shows the temperature data for these three wells. The LevelTroll 700 in MW-1D is positioned within the blank PVC sounding tube at a depth above the well screen and thus cannot reliably record water temperature.

A temperature decline of approximately 4 degrees Celsius was recorded from March 21 to April 20, 2020 in MW-2D, corresponding with the arrival and breakthrough of purified recycled water at this well. The transducer in MW-2D malfunctioned in late April, resulting in unreliable temperature data until it was replaced on November 16, 2020. That was the date when DIW-2 was taken off-line for rehabilitation. Temperature at MW-2D remained stable at an intermediate temperature of 23.5 degrees Celsius. DIW-2 resumed injecting on December 31, 2020, and within four days the temperature at MW-2D began dropping. The decline continued, reaching a minimum of 20 degrees Celsius on February 20, 2021. Meanwhile, the temperature at offsite well MW-2AD began decreasing about 3 weeks after DIW-2 began injecting and appeared to reach a minimum temperature of 24 degrees Celsius about 4 weeks after the minimum was reached at MW-2D. These data suggest a temperature travel time of 3-4 weeks from DIW-2 to MW-2AD, which is comparable to the travel time for SC described earlier. One caveat to this interpretation is the absence of an observed temperature decline at MW-2AD during April-November, 2020, when DIW-2 was injecting. If the temperature drop in early 2021 was due to DIW-2 injection, a similar drop should have occurred during the earlier period of sustained injection.

The lack of an observed temperature change at offsite well MW-1AD could be due to the same process that caused a delayed and muted decrease in SC. Under the influence of the westward regional groundwater flow gradient, the plume of injected water from DIW-1 is thought to pass mostly west of MW-1AD, so that water quality effects at MW-1AD only occur as the plume widens over time due to dispersion. This process would apply to temperature as well as SC.

Table 9

Summary of Baseline and Post-Injection Major Ion Concentrations and Specific conductance

	Well / Water		Calcium (mg/L)		Magnesium (mg/L)		Sodium (mg/L)		Potassium (mg/L)		Bicarbonate (mg/L)		Chloride (mg/L)		Sulfate (mg/L)		Specific Conductance (uS/cm)	
	New Purified Recycled Water	Latest Result	9.8		0.23		26		1.6		52.5		29		<0.5		185.2	
	Old Purified Recycled Water	Min - Max [Average]	7.0 - 13	[11.0]	0.1 - 0.2	[0.13]	8.4 - 10.0	[9.9]	<0.4 - <0.4	[<0.4]	7.8 - 45	[36]	6.6 - 10	[8.5]	<0.5 - <1.5	[<0.5]	89 - 123	[107]
	ASR Injectate	Min - Max [Average]	37 - 42	[40]	13 - 13	[13]	41 - 47	[44.5]	2.8 - 3.1	[2.9]	136 - 138	[137]	28 - 37	[33]	62 - 72	[68]	486 - 534	[507]
Santa Margarita Formation																		
	MW-1D Baseline	Min - Max [Average]	67 - 122	[96]	16 - 30	[23]	90 - 130	[108]	4.4 - 7.2	[5.5]	262 - 342	[305]	82 - 167	[134]	85 - 151	[113]	872 - 1,310	[1,118]
	MW-1D Post Injection 15-Mar-21	Latest Result	**13**		**0.86**		**15**		**1.5**		**23.2**		**40**		**0.0**		**202**	
	MW-2D Baseline	Min - Max [Average]	89 - 102	[97]	21 - 26	[23]	102 - 130	[114]	4.5 - 6.7	[5.5]	305 - 335	[320]	125- 146	[137]	90- 113	[101]	1,057 - 1,214	[1,131]
	MW-2D Post Injection 16-Mar-21	Latest Result	**12**		**2.1**		**19**		**1.5**		**30.5**		**40**		**2.2**		**211**	
	MW-1AD Baseline	Min - Max [Average]	45 - 78	[64]	10 - 18	[14]	57 - 86	[74]	2.7 - 5.5	[3.8]	200 - 287	[254]	39- 96	[71]	46- 60	[51]	575 - 842	[733]
	MW-1AD Post Injection 29-Mar-21	Latest Result	**34**		**7.0**		**39**		**2.6**		**101**		57		**15**		**403**	
	MW-2AD Baseline	Min - Max [Average]	50 - 108	[82]	12 - 26	[19]	69 - 111	[92]	3.3 - 6.6	[4.6]	194 - 305	[257]	50 - 150	[104]	69 - 130	[101]	639 - 1,146	[936]
	MW-2AD Post Injection 29-Mar-21	Latest Result	**23**		**4.8**		**30**		**2.5**		**71**		**41**		**11**		**294**	
Paseo Robles Formation																		
	MW-1AS Baseline	Min - Max [Average]	11 - 16	[14]	4.6 - 5.9	[5.1]	34 - 42	[40]	1.9 - 3.1	[2.3]	55 - 59	[57]	46 - 55	[50]	15 - 19	[17]	301 - 311	[304]
	MW-1AS Post Injection 15-Mar-21	Latest Result	12		**4.5**		38		2.0		**54**		53		16		**318**	
	MW-2AS Baseline	Min - Max [Average]	21 - 40	[28]	4.9 - 8.2	[6.0]	40 - 55	[48]	1.8 - 2.8	[2.2]	89.1 - 146	[104]	60 - 75	[66]	6.2 - 11	[8.7]	387 - 517	[413]
	MW-2AS Post Injection 16-Mar-21	Latest Result	40		7.0		55		2.4		**151**		**79**		**12**		**561**	
	MW-1S Baseline	Min - Max [Average]	14 - 19	[17]	4.0 - 4.9	[4.4]	36 - 44	[41]	1.6 - 2.5	[1.9]	55 - 62	[59]	52 - 63	[59]	4.9 - 8.3	[7.0]	310 - 323	[317]
	MW-1S Post Injection 15-Mar-21	Latest Result	14		**3.3**		36		**1.5**		57		54		5.4		**307**	

Notes:
Bold font: concentration falls outside (below) the historical baseline concentration range
mg/L: milligrams/Liter
µS/cm: microSiemens/centimeter

Geochemical Plotting Methods

Three geochemical plotting techniques were used to characterize the three source waters in groundwater in the vicinity of the PWM Injection Facilities Area (purified recycled water, native groundwater, and treated Carmel River water) and relative contributions of each in Project monitoring wells. **Figures 9 through 11** show the results using Trilinear Diagrams, while **Figures 12 through 14** show water quality results using a geochemical plotting method called the Radial Plot, and Stiff Plots are used in **Figures 15 through 17**.

Cation proportions at all four deep monitoring wells have remained close to the proportions observed in the baseline samples, with the exception of a slight shift toward AWPF composition in MW-1D (**Figures 9 and 10**). Anions, on the other hand have exhibited a trend toward increased chloride percentage that up until the third quarter appeared to be approaching the current AWPF composition. During the fourth quarter, however, the trend in the on-site monitoring wells overshot to a high-chloride composition that is not intermediate between the baseline and AWPF compositions. The trend in the two off-site monitoring wells appears to be following the same pattern. This pattern can be explained by a chemical reaction that removes bicarbonate, resulting in a higher relative proportion of chloride. The measured chloride concentrations of 39-40 mg/L match the concentrations added as calcium chloride and sodium hypochlorite to the AWPF water. The AWPF water also contains 2-3 mg/L (as N) of ammonia. Biological reactions in the aquifer can nitrify the ammonia in a reaction that consumes bicarbonate at a ratio of 7 mg/L $CaCO_3$ to 1 mg/L as N of ammonia. This would decrease the amount of bicarbonate enough to raise the chloride percentage to about 74 percent, which is approximately the percentage observed in the most recent samples (Kenny, 2021).

Shallow monitoring wells MW-1S, MW-1AS, and MW-2AS continue to show major ion compositions in tight clusters within the range of baseline conditions (**Figures 11, 14, and 17**).

CONCLUSIONS AND SUMMARY OF TRACER STUDY

Conclusions

Based on the evaluation of data collected through March 31, 2021 in compliance with the PWM Tracer Work Plan, the following conclusions can be made:

- The arrival of purified recycled water in offsite deep monitoring wells MW-1AD and MW-2AD has been confirmed with continuous transducer-recorded data and discrete water quality samples. Geochemical plotting techniques, including trilinear diagrams, radial plots, and stiff plots, support this conclusion.

- The gradual decline in SC in offsite well MW-1AD between August 1, 2020 and February 1, 2021 was very likely due to arrival of purified recycled water. This conclusion is based on injection histories in addition to water quality. The SC during that period was in a range that could have been caused by the arrival of ASR water or purified recycled water. However, ASR injection had ceased in April 2020, whereas

PWM injection continued in all months thereafter. The greater the elapsed time since the end of ASR injection, the less likely ASR injection could have caused the observed decline in SC at MW-1AD. The eventual confirmation of the arrival of purified recycled water in February 2021 further supports a conclusion that the declines in SC leading up to that point were also from purified recycled water. Finally, it took only 65 days for purified recycled water to travel from DIW-2 to offsite well MW-2AD. It would be reasonable for arrival of purified recycled water from DIW-1 at offsite well MW-1AD to take 138 days, considering the slightly greater distance (600 feet versus 500 feet) and the time required for lateral dispersion.

- The later arrival and more gradual decline in SC at MW-1AD compared to MW-2AD can be explained by the effect of the regional groundwater flow gradient on the plume trajectory of water injected at DIW-1. Offsite well MW-1AD is not directly downgradient of DIW-1. The westward regional gradient probably pushed the centerline of the plume to a path slightly west of MW-1AD. The width of the plume increased over time due to lateral dispersion, which mixes injected water with ambient groundwater. Thus, the gradual decline in SC at MW-1AD reflected the widening of the plume, and the higher final SC concentration (relative to offsite well MW-2AD) was caused by a greater degree of mixing with ambient groundwater.

- SC and major ion data in MW-2D, and MW-2AD began returning to ambient groundwater values when DIW-2 stopped injecting for a 6-week period and resumed their trends toward the purified recycled water values when injection started again. There was a delay of 2-3 weeks between the change in injection and the change in measured water quality at offsite well MW-2AD (500 feet away).

- Major ion compositions support a conclusion that the observed decrease in SC at off-site wells MW-1AD and MW-2AD was from arrival of purified recycled water, not ASR water. Cation ratios have remained relatively stable, but anions have shifted toward a more chloride-rich composition.

Summary of the Tracer Study

The tracer study successfully measured the travel times of purified recycled water from the two deep injection wells to the two pairs of on-site and offsite monitoring wells. The one-year study period proved to be long enough to reach stable SC concentrations in all of the monitoring wells. The data are sufficient to support recalibration of the groundwater flow model. Quantitative estimates of the subsurface travel times for the 2-percent and 10-percent concentration criteria at various monitoring wells will be developed and presented in the groundwater modeling report. This will allow field data and modeling results to both be factored into the calculated travel times.

This fourth report is the final monitoring report for the Tracer Study. The monitoring program successfully achieved all of its objectives within the planned one-year time frame. Monitoring was discontinued as of April 1, 2021.

References Cited

Kenny, John. Chemist. Trussell Technologies. April 26, 2021. E-mail to Gus Yates evaluating ion ratio patterns.

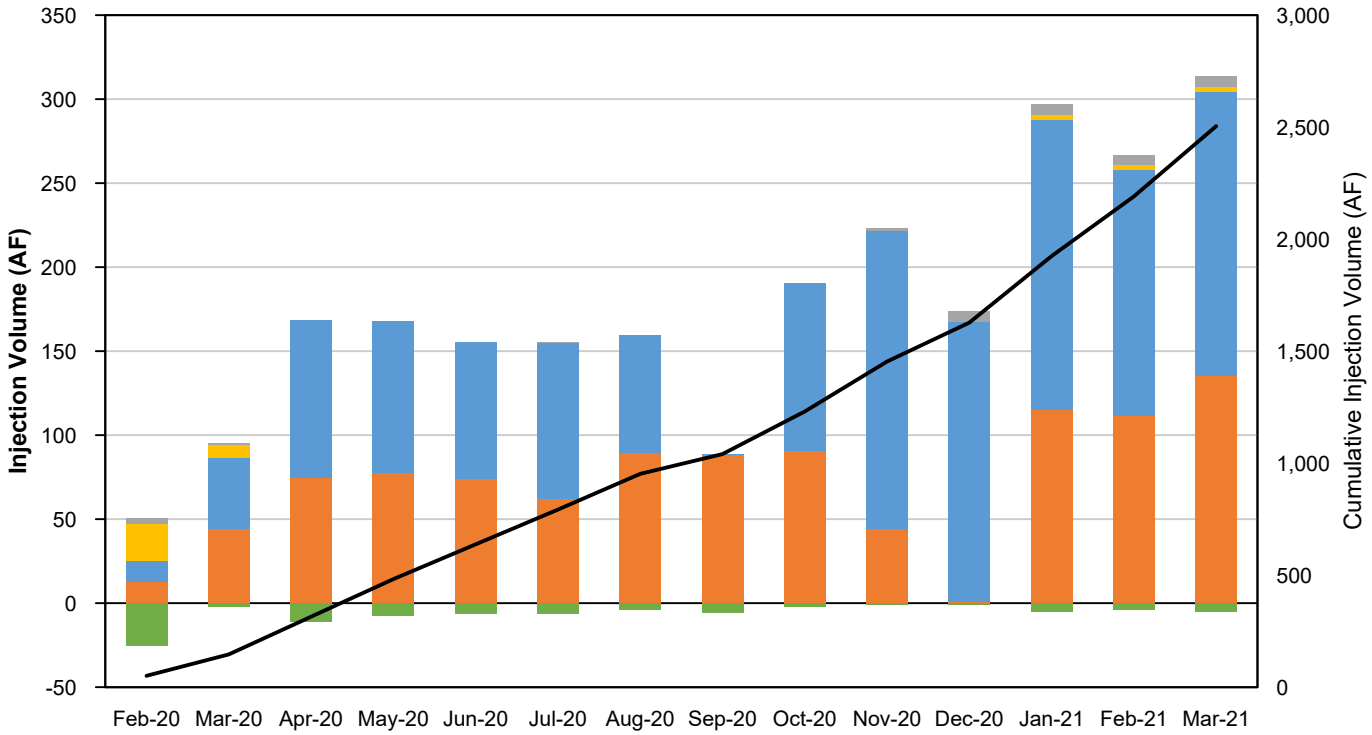


April 2021

TODD GROUNDWATER

Figure 1
PWM Project Wells

Path: T:\Projects\MRWPCA PWM 2Z Hydrogeological Support DIW Field Program 60425\GIS\Figure 1 PWM Project Wells.mxd



DIW to IWF Backflush Basin
VZW-1B
VZW-2
DIW-1
DIW-2
Cumulative Net Injection

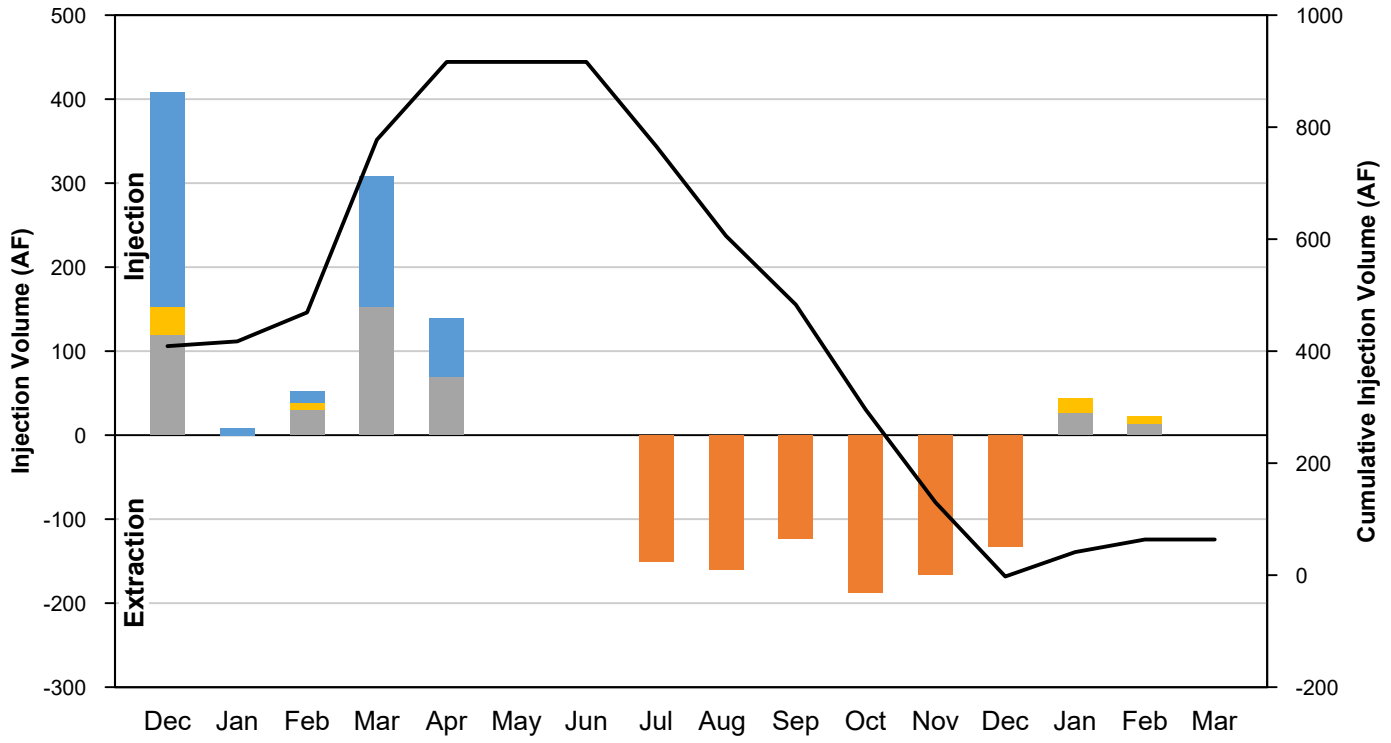
Note: DIW amounts are gross injection volumes. Subtract backflush flows to obtain net deep

April 2021

TODD GROUNDWATER

Figure 2
PWM Injection Volumes
(through Mar. 31, 2021)

Path: T:\Projects\MRWPCA PWM ZZ Hydrogeological Support 2020-01 60424\GRAPHICS\2021-04\Figure 2 PWM Injection Volumes.gpj



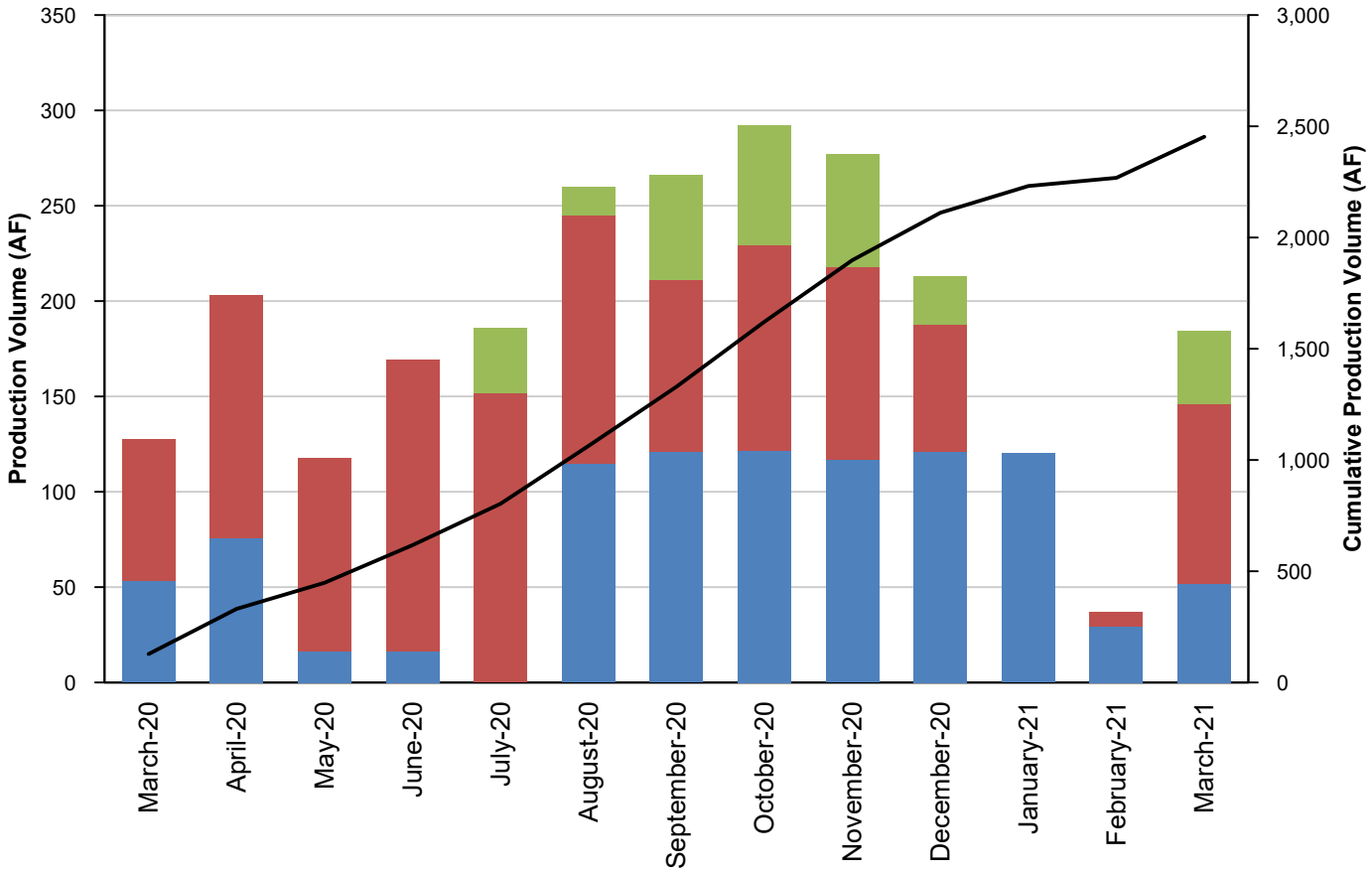
ASR-4
ASR-3
ASR-2
ASR-1
Cumulative Injection Volume

April 2021

TODD GROUNDWATER

Figure 3
ASR Injection and Extraction Volumes 2019-2021

Path: T:\Projects\MRWPCA PWM ZZ Hydrogeological Support 2020-01 60424\GRAPHICS\2021-04\Figure 3 ASR Injection Volumes.grp

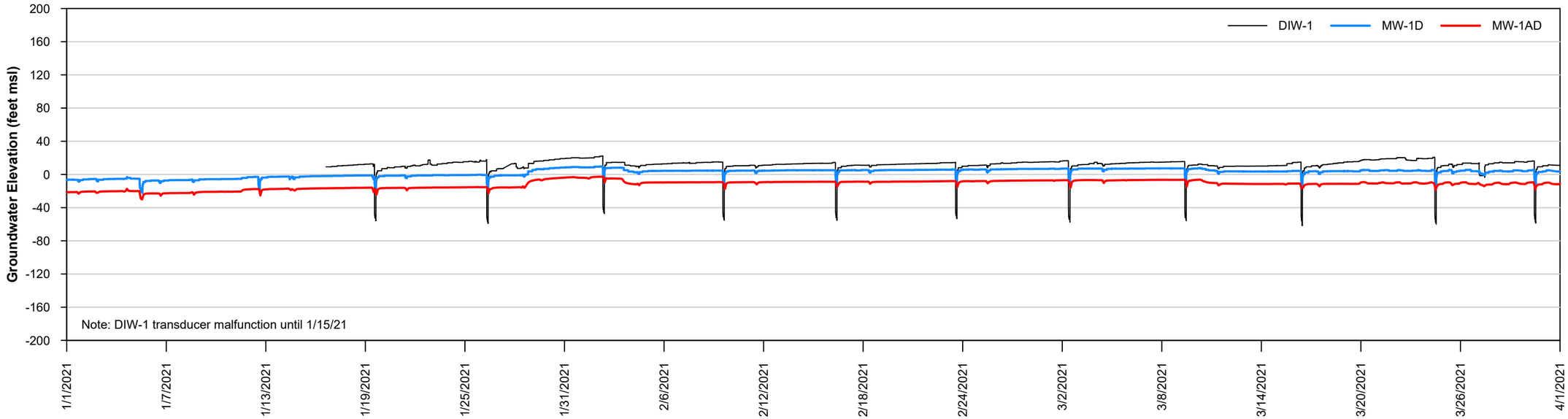


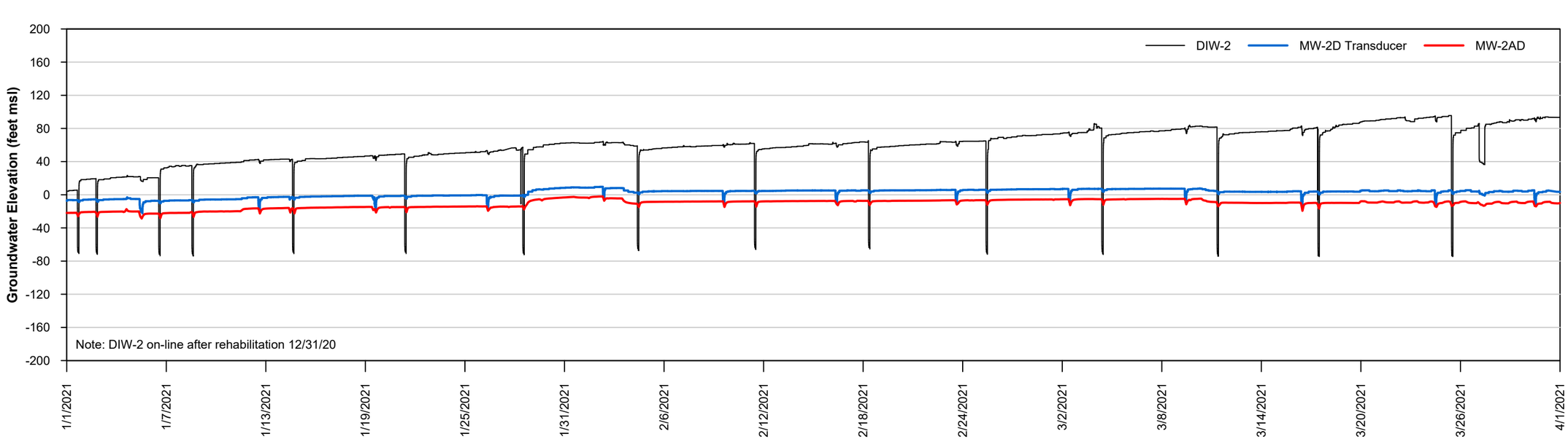
April 2021

TODD GROUNDWATER

Figure 4
Cal-Am Well Monthly Extraction Volumes (Mar. 2020 – Mar. 2021)

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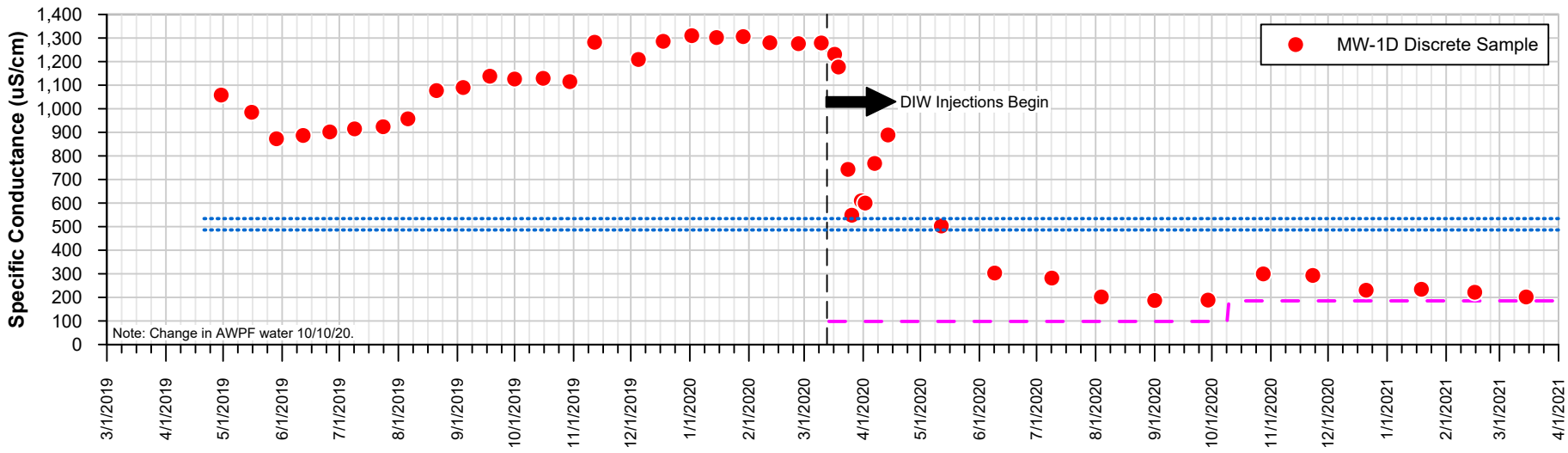
April 2021

TODD GROUNDWATER

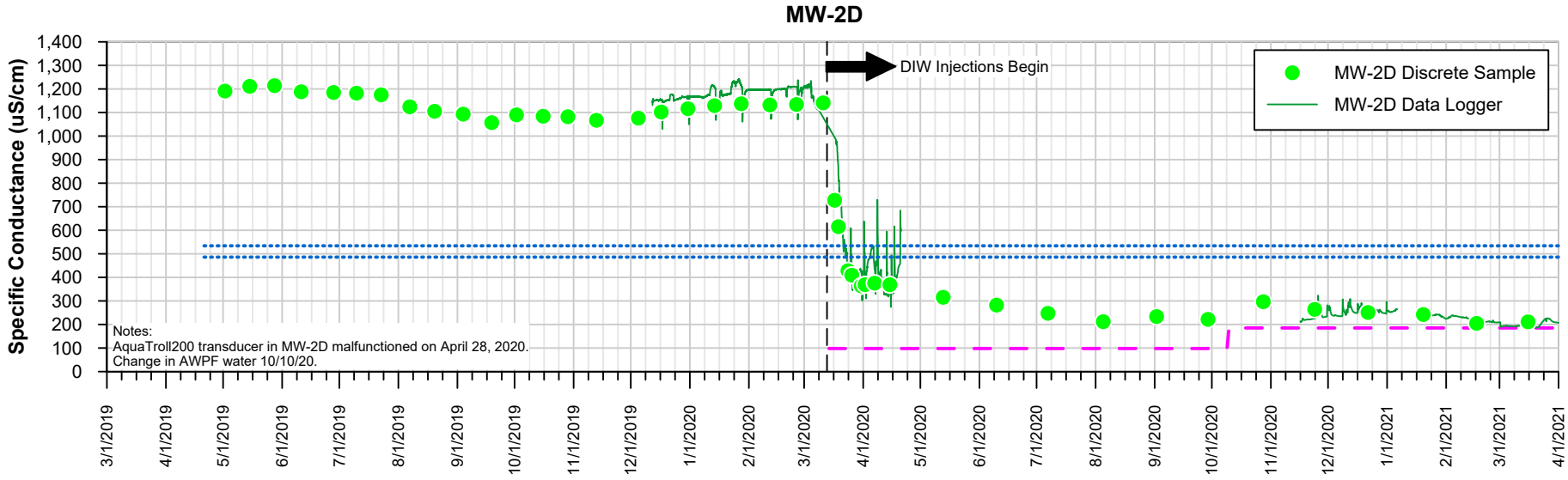
Figure 5
Groundwater Elevations in DIW-1/MW-1D/MW-1AD and DIW-2/MW-2D/MW-2AD

Path: T:\Projects\MRWPCA PWM ZZ Hydrogeological Support 2020\01 60424\GRAPHICS\2021-04\Figure 5 Groundwater Elevations in DIW-1_MW-1D_MW-1AD and DIW-2_MW-2D_MW-2AD.ppt

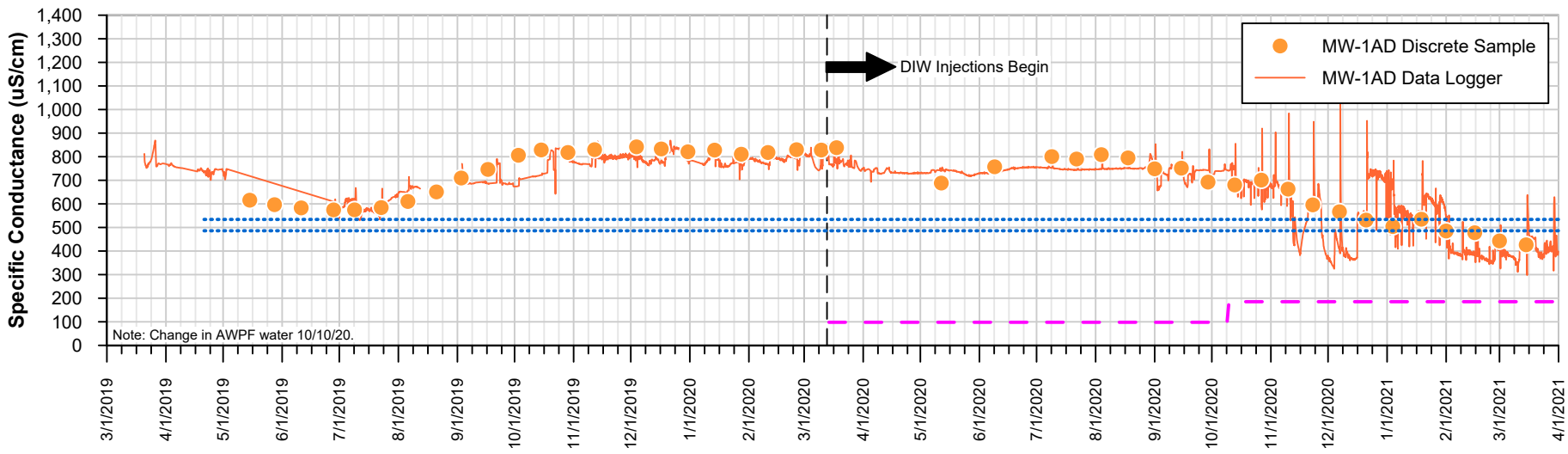
MW-1D



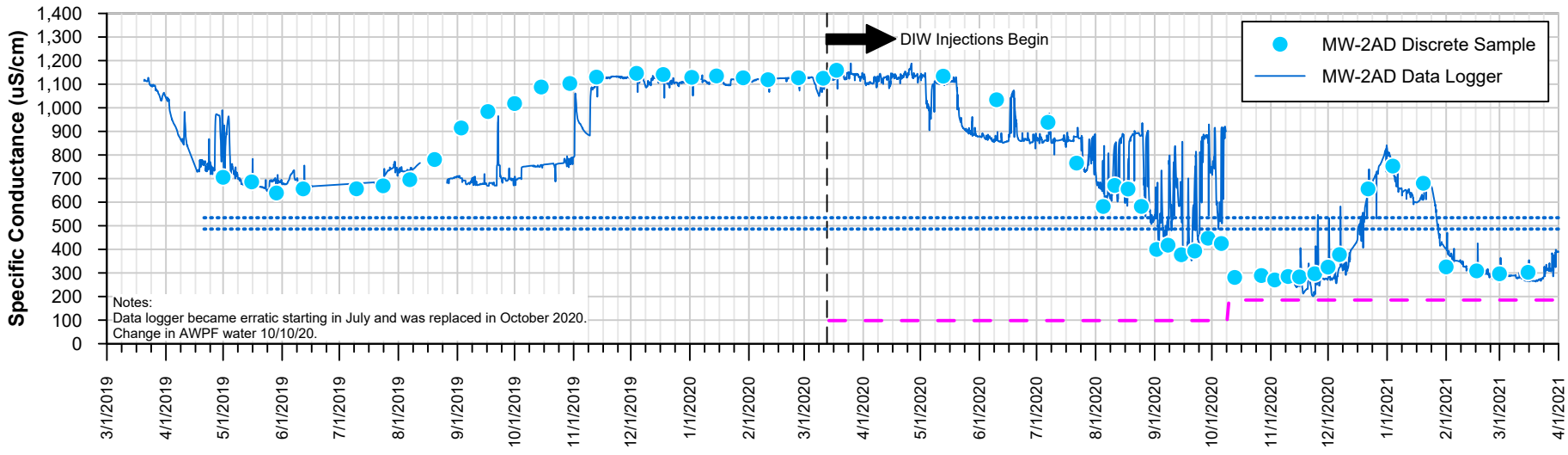
MW-2D



MW-1AD



MW-2AD



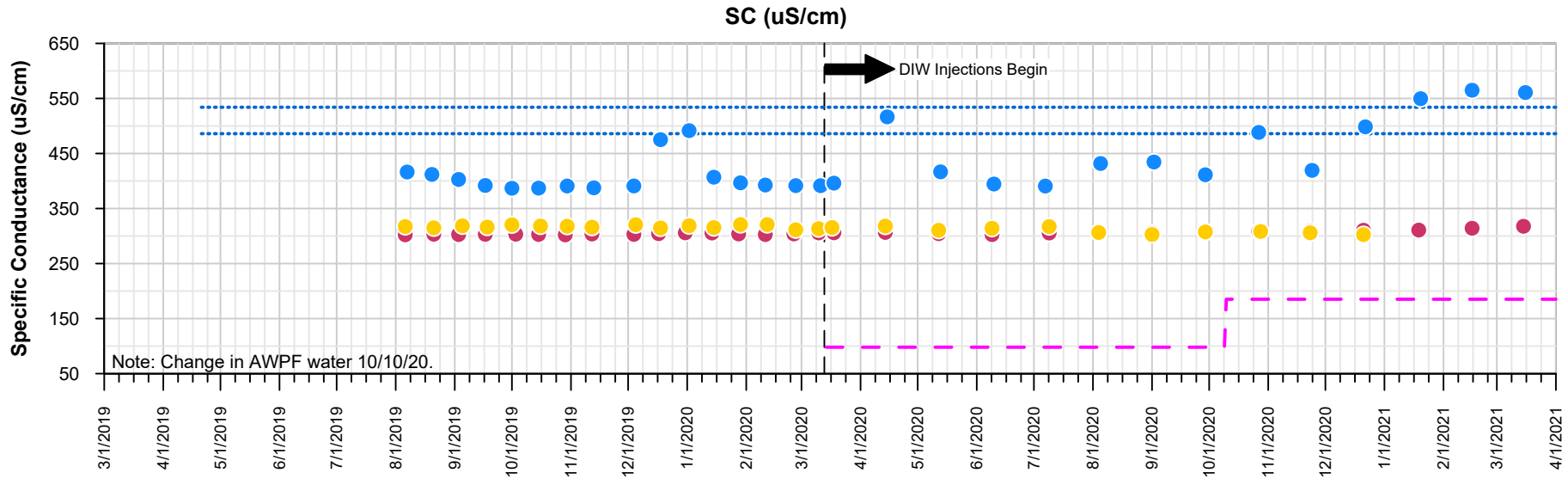
AWPF
ASR Injectate (Low)
ASR Injectate (High)

April 2021

TODD GROUNDWATER

Figure 6
Specific Conductance
Deep Monitoring Wells
MW-1D/MW-1AD/MW-2D/MW-2AD

Path: T:\Projects\MRWPCA PWM ZZ Hydrogeological Support 2020-01 60424\GRAPHICS\2021-04\Figure 6 EC Data.gpj



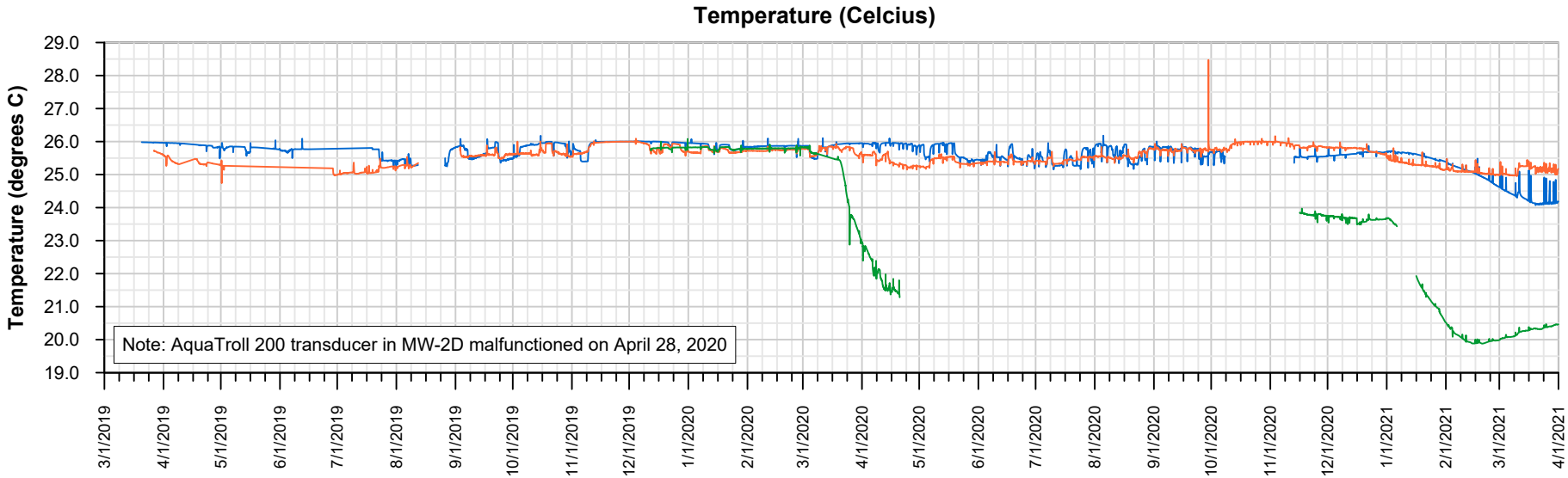
MW-1S Discrete Sample
MW-1AS Discrete Sample
MW-2AS Discrete Sample
AWPF
ASR Injectate (High)
ASR Injectate (Low)

April 2021

TODD GROUNDWATER

Figure 7
Specific Conductance
Shallow Monitoring Wells
MW-1S/MW-1AS/MW-2AS

Path: T:\Projects\MRWPCA PWM ZZ Hydrogeological Support 2020-01 6042A\GRAPHICS\2021-04\Figure 7 EC Data.gpj



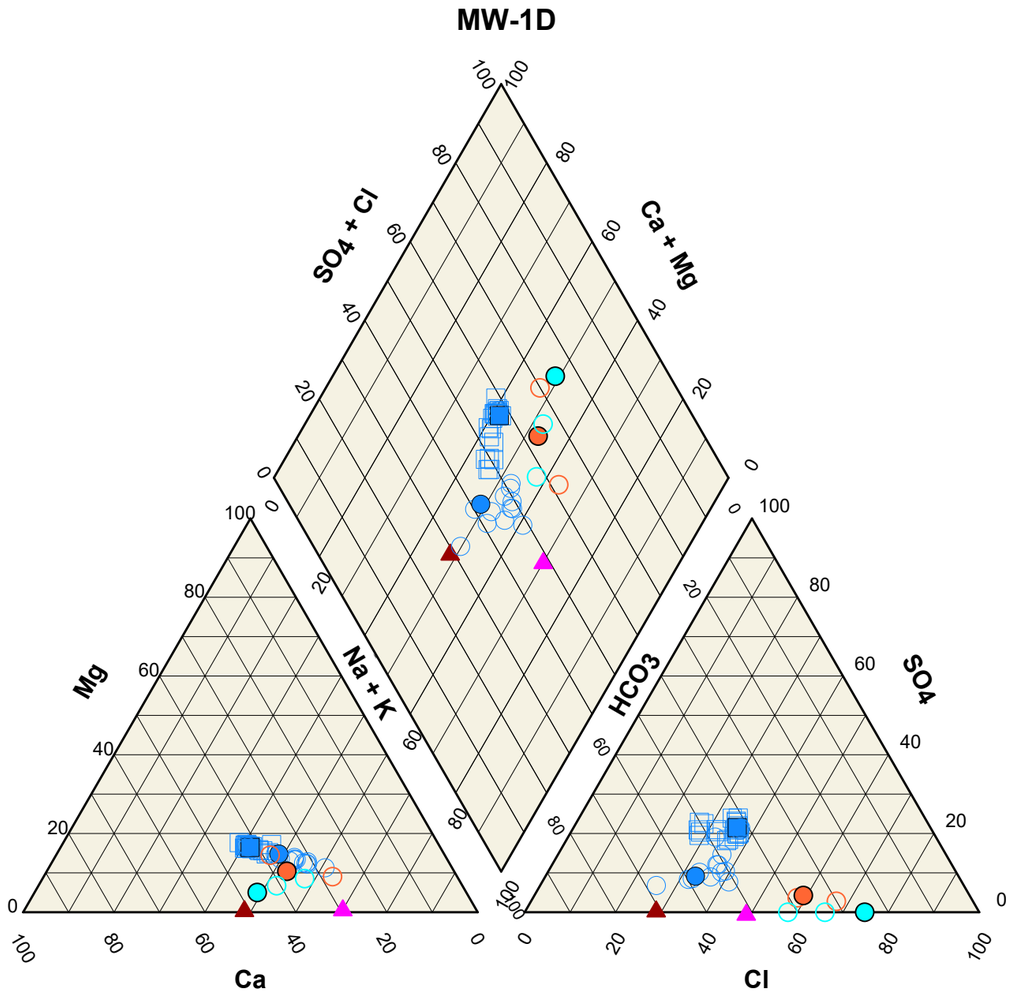
MW-2D
MW-1AD
MW-2AD

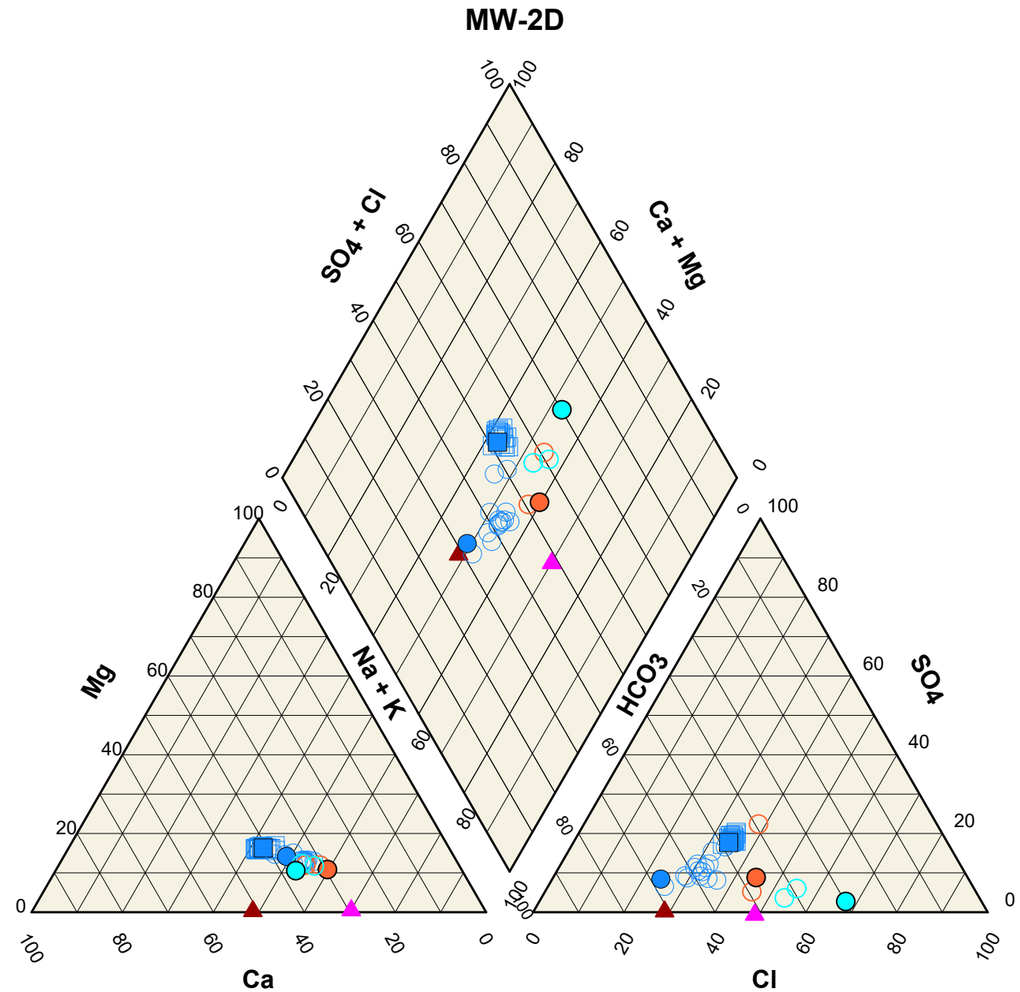
April 2021

TODD GROUNDWATER

Figure 8
Temperature in
Deep Monitoring Wells
MW-2D/MW-1AD/MW-2AD

Path: \\todd-file\data\Projects\MRW\PCA PWM ZZ Hydrogeological Support 2020-01 60424\GRAPHICS\2021-04\Figure 8 Temperature.grpj





- MW-1D Baseline
- MW-1D Baseline 3/10/2020
- MW-1D Post Injection
- MW-1D Post Injection 9/29/2020
- MW-1D Post Injection (3rd Quarter)
- MW-1D Post Injection 12/21/2020
- MW-1D Post Injection (4th Quarter)
- MW-1D Post Injection 3/15/2021
- AWPF (4/7/2020)
- AWPF (10/29/2020)

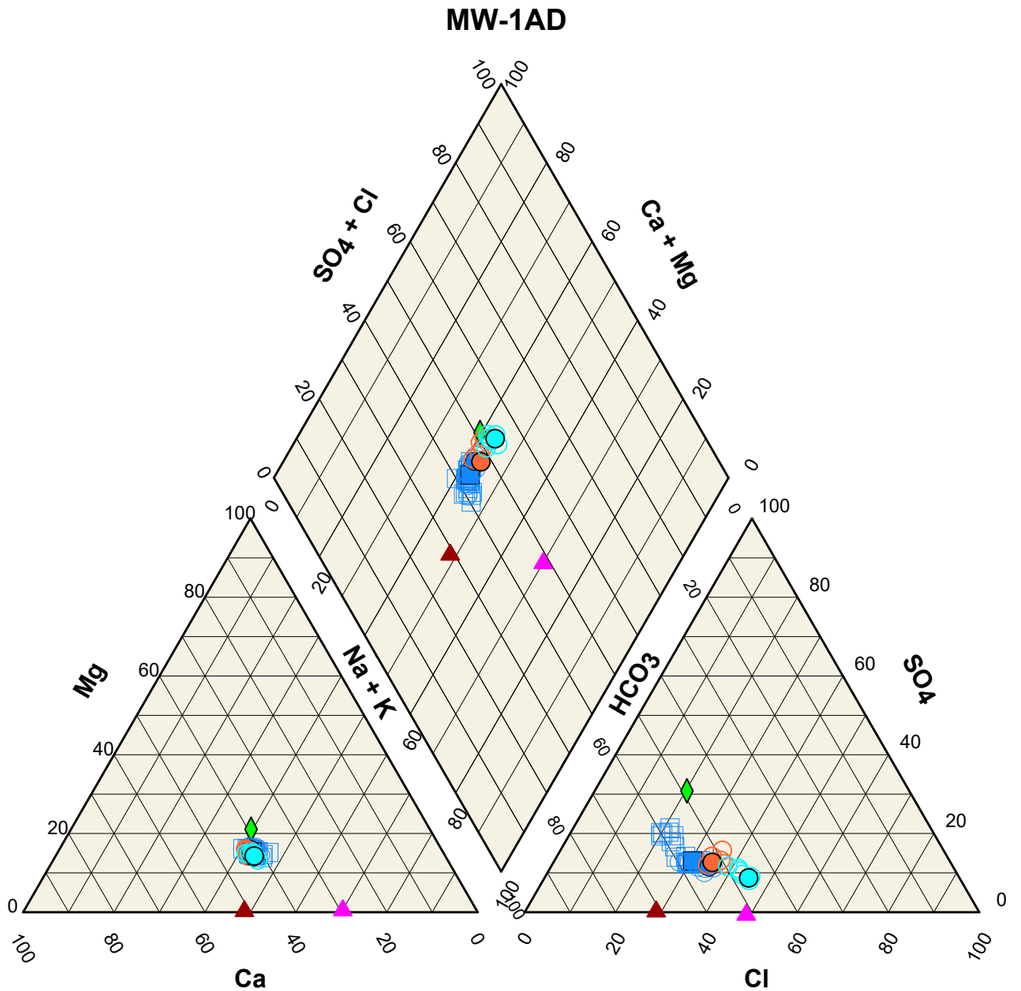
- MW-2D Baseline
- MW-2D Baseline 3/11/2020
- MW-2D Post Injection
- MW-2D Post Injection 9/29/2020
- MW-2D Post Injection (3rd Quarter)
- MW-2D Post Injection 12/22/2020
- MW-2D Post Injection (4th Quarter)
- MW-2D Post Injection 3/16/2021
- AWPF (4/7/2020)
- AWPF (10/29/2020)

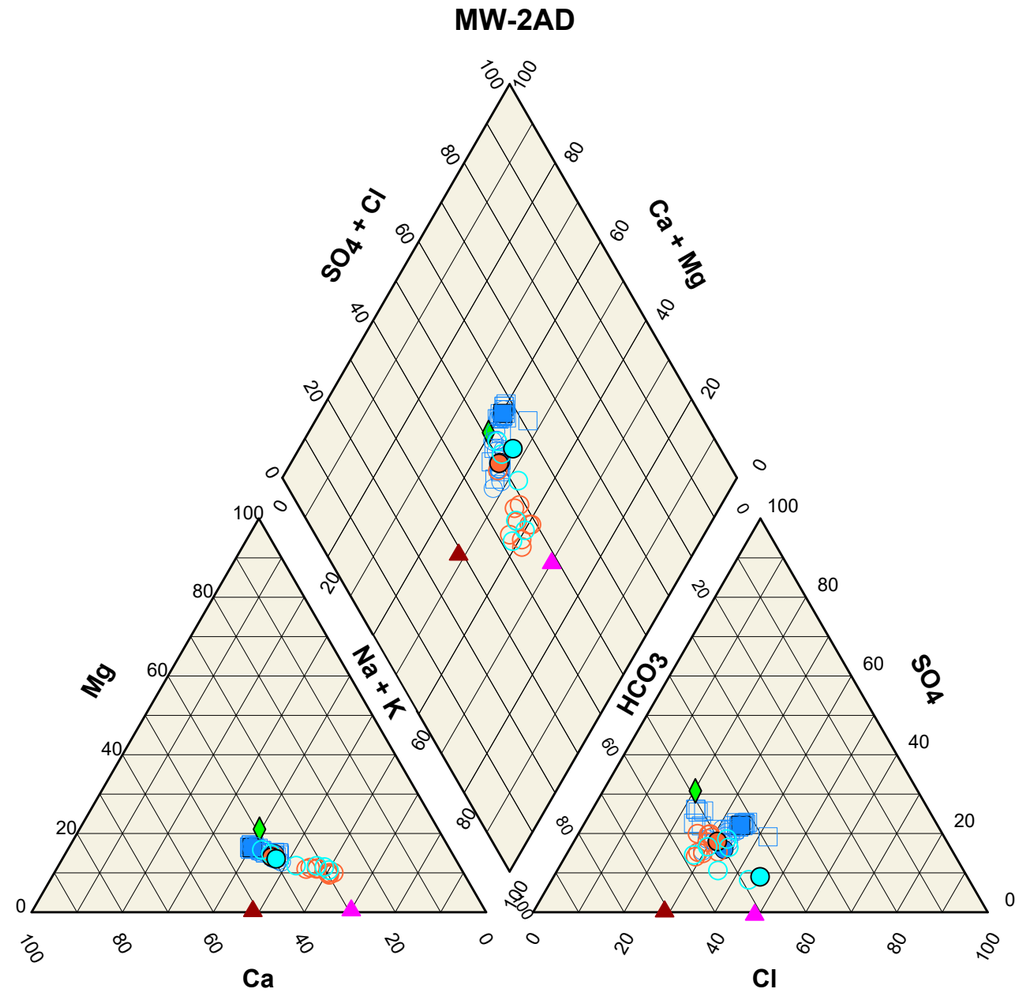
April 2021

TODD GROUNDWATER

Figure 9
Trilinear Diagrams for MW-1D and MW-2D

G:\Projects\NWIRCA PWM FY21\Hydrographs Figures\ FY2021 GW\GRAPHICS\WORKING\Figure 9 MW-1D and MW-2D Trilinear Diagrams.dgn





- MW-1AD Baseline
- MW-1AD Baseline 3/10/2020
- MW-1AD Post Injection
- MW-1AD Post Injection 9/29/2020
- MW-1AD Post Injection (3rd Quarter)
- MW-1AD Post Injection 12/21/2020
- MW-1AD Post Injection (4th Quarter)
- MW-1AD Post Injection 3/29/2021
- AWPF (4/7/2020)
- AWPF (10/29/2020)
- ASR Injectate

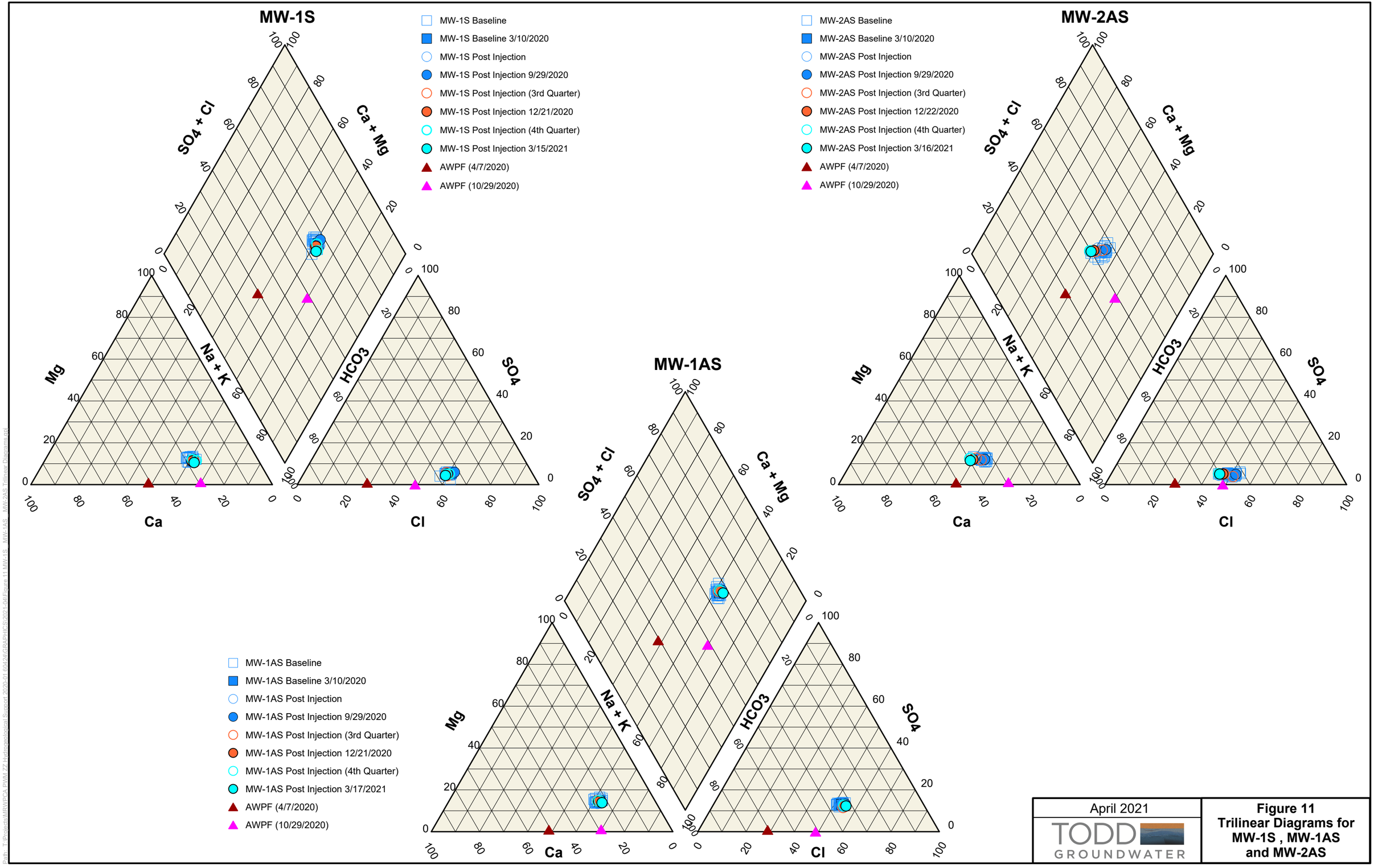
- MW-2AD Baseline
- MW-2AD Baseline 3/11/2020
- MW-2AD Post Injection
- MW-2AD Post Injection 9/29/2020
- MW-2AD Post Injection (3rd Quarter)
- MW-2AD Post Injection 12/22/2020
- MW-2AD Post Injection (4th Quarter)
- MW-2AD Post Injection 3/29/2021
- AWPF (4/7/2020)
- AWPF (10/29/2020)
- ASR Injectate

April 2021

TODD GROUNDWATER

Figure 10
Trilinear Diagrams for MW-1AD and MW-2AD

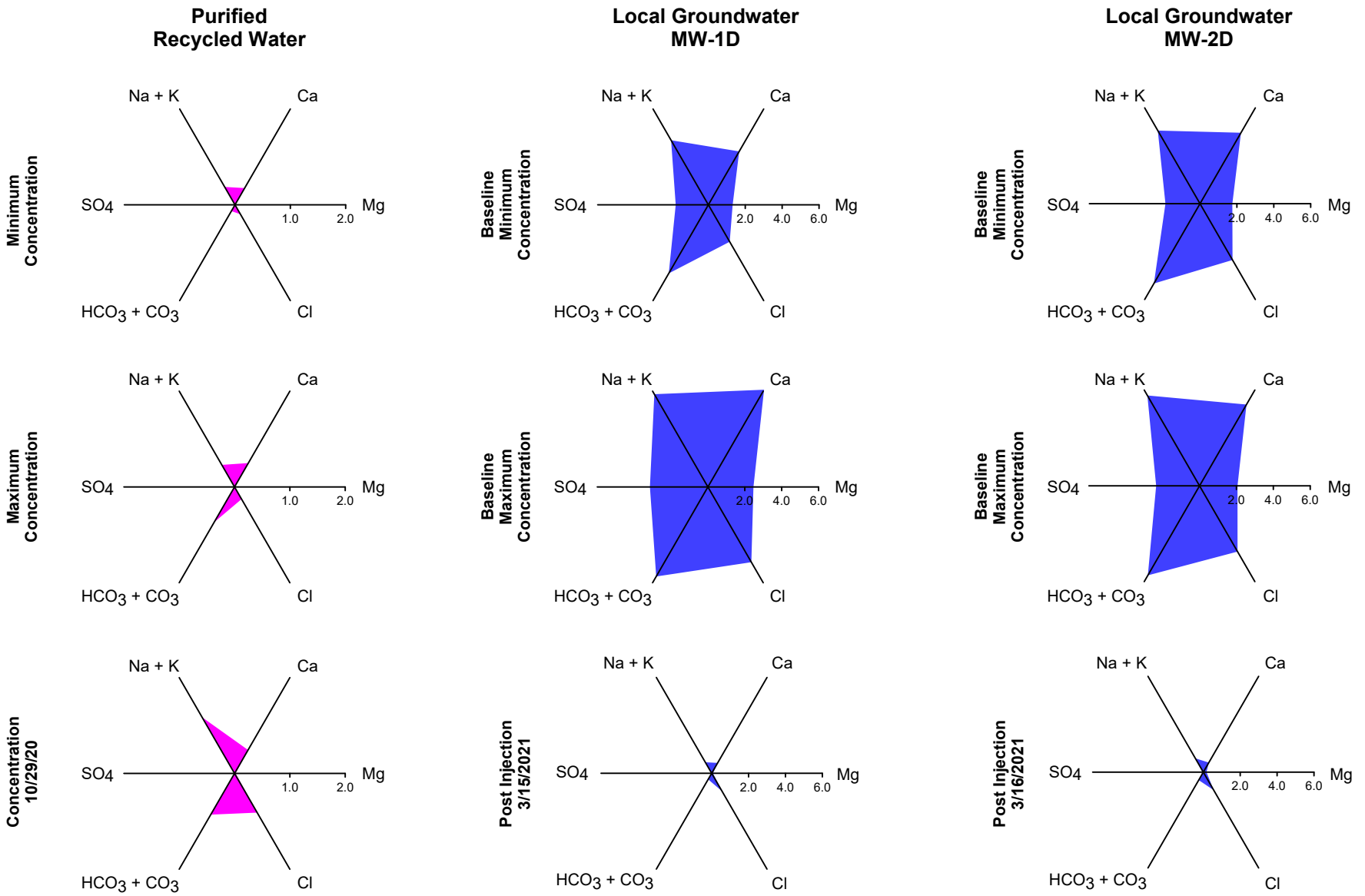
G:\Projects\KIWCA DWR ZZ Hydrogeologic Support\2021\Figures\GRAPHICS\WORKING\Figure 10 MW-1AD and MW-2AD Trilinear Diagrams.jpg



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Figure 11
Trilinear Diagrams for MW-1S , MW-1AS and MW-2AS



meq/L - milliequivalents per liter

Note:
Radial plot scales are exaggerated for purified recycled water relative to groundwater to illustrate the shape of the radial plot.

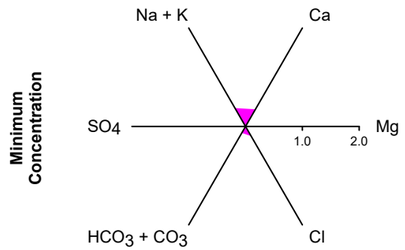
April 2021

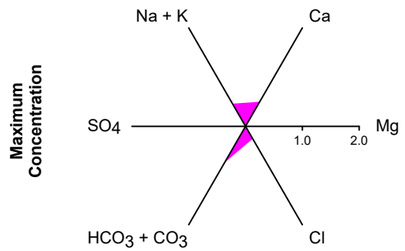
TODD GROUNDWATER

Figure 12
Radial Plots for MW-1D and MW-2D

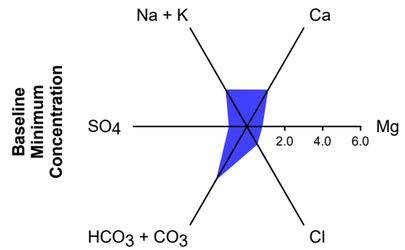
Path: T:\Projects\MRW\PCA PWM ZZ Hydrogeological Support 2020-01 60424\GRAPHICS\2021-04\Figure 12 Radial Plots for MW-1D and MW-2D.gpj

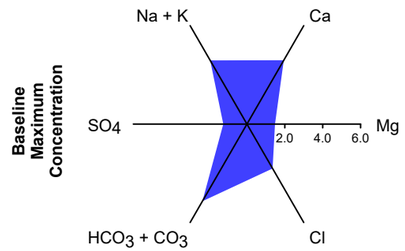
Purified Recycled Water



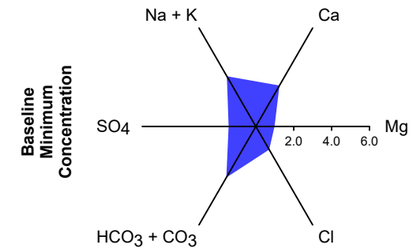


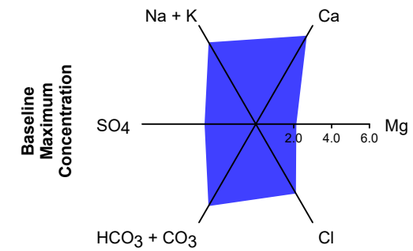
Local Groundwater MW-1AD



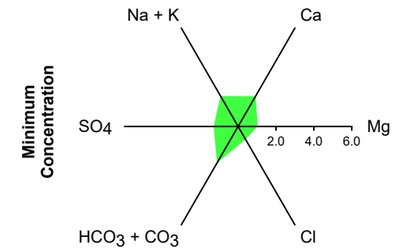


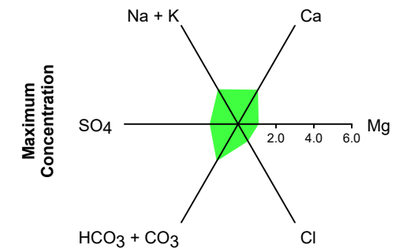
Local Groundwater MW-2AD

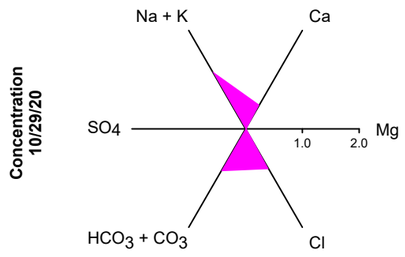


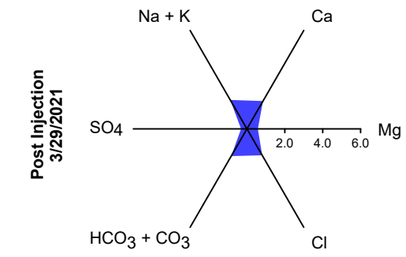


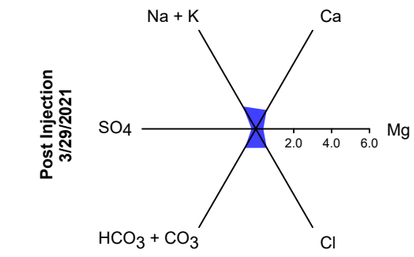
Treated Carmel River Water











meq/L - milliequivalents per liter

Note:
Radial plot scales are exaggerated for purified recycled water relative to groundwater to illustrate the shape of the radial plot.

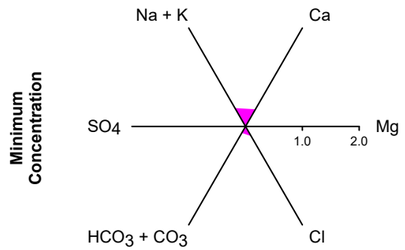
April 2021

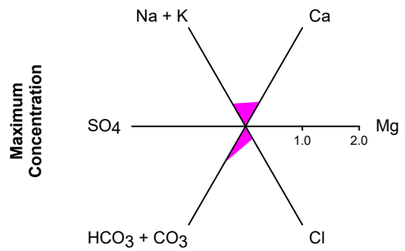
TODD GROUNDWATER

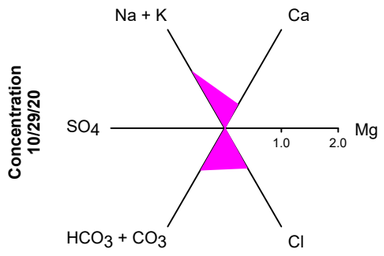
Figure 13
Radial Plots for MW-1AD and MW-2AD

Plot: T:\Projects\MRWPCA PWM FY 21\Figures\Figure Support 2020\01 RADIALGRAPHICS\RG_LatEFigure 13 Radial Plots for MW-1AD and MW-2AD.ggb

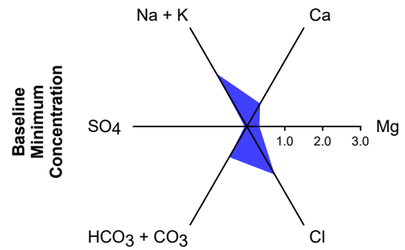
Purified Recycled Water

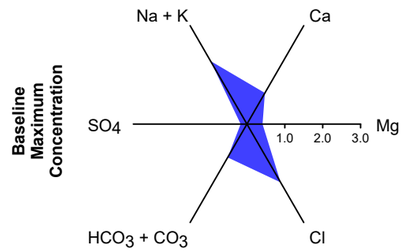


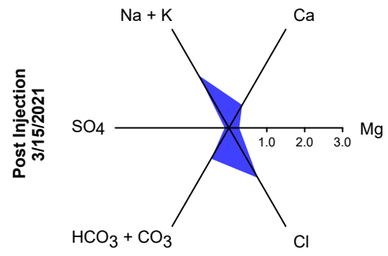




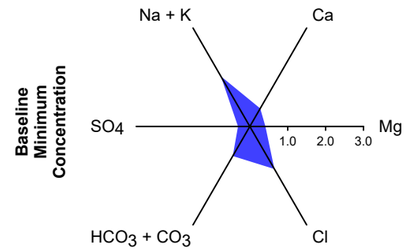
Local Groundwater MW-1S

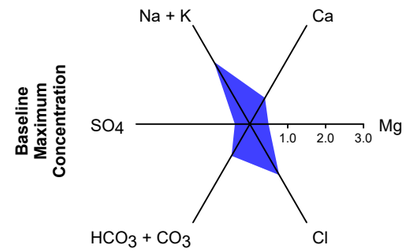


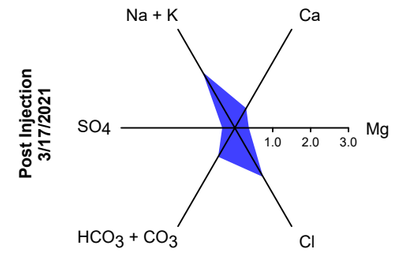




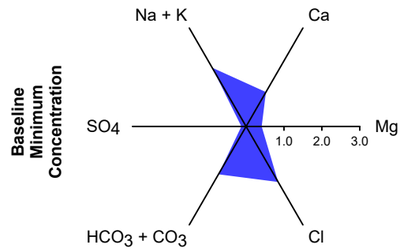
Local Groundwater MW-1AS

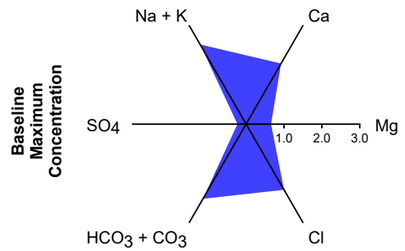


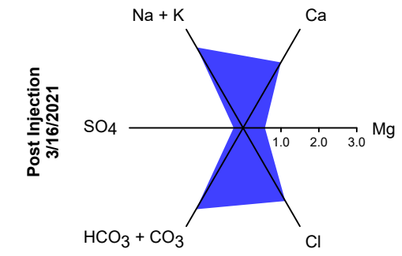




Local Groundwater MW-2AS







meq/L - milliequivalents per liter

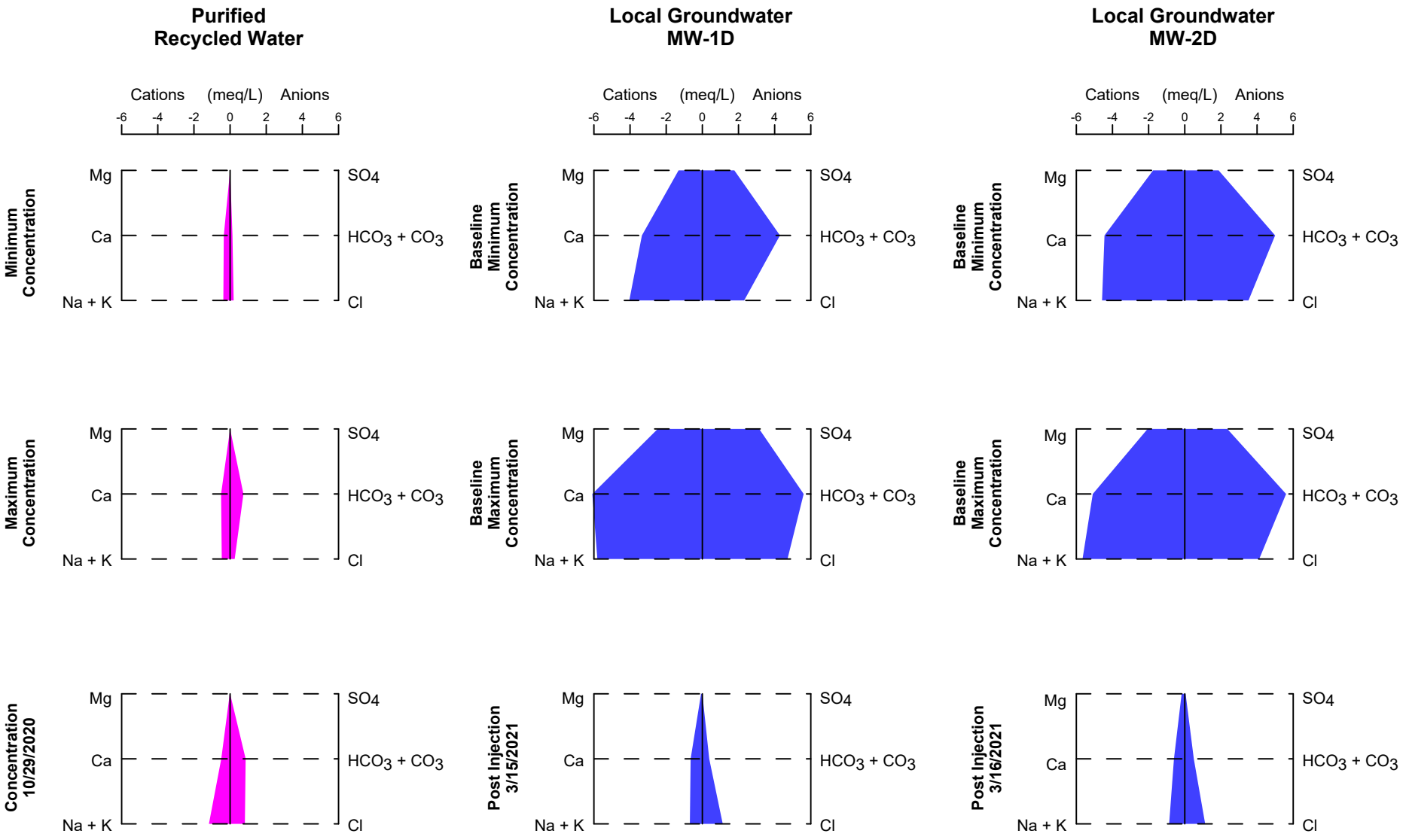
Note:
Radial plot scales are exaggerated for purified recycled water relative to groundwater to illustrate the shape of the radial plot.

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Figure 14
Radial Plots for MW-1S, MW-1AS and MW-2AS

Plot By: TPeterson,WWPCA,PWP,Z:\Projects\Sunnyvale\2020\01 BWR\GRAPHICS\GW Fig\Figure 14 Radial Plots for MW-1S, MW-1AS, MW-2AS.grf



meq/L - milliequivalents per liter

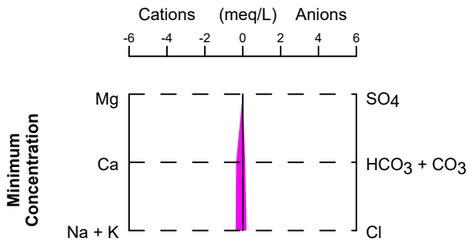
April 2021

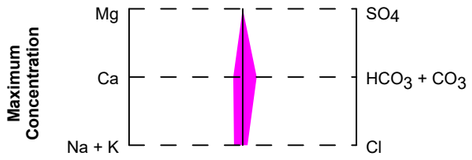
TODD GROUNDWATER

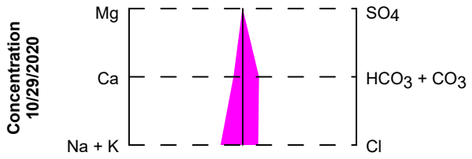
Figure 15
Stiff Plots for MW-1D and MW-2D

Path: T:\Projects\MRWPCA PWM ZZ Hydrogeological Support 2020-01 6042A\GRAPHICS\2021-04\Figure 15 Stiff Plots for MW-1D and MW-2D.gpj

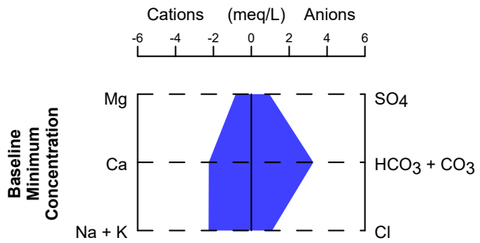
Purified Recycled Water

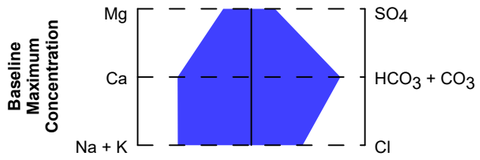


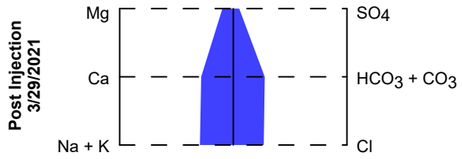




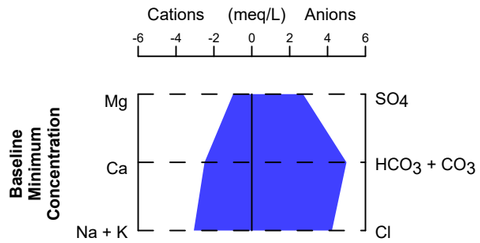
Local Groundwater MW-1AD

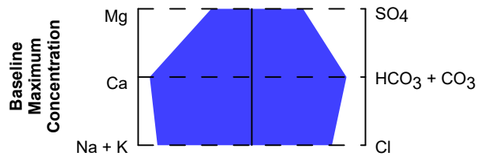


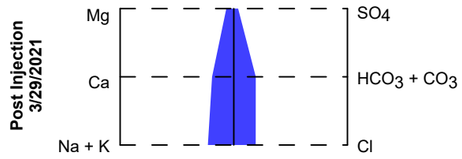




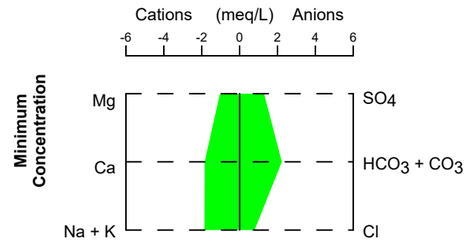
Local Groundwater MW-2AD

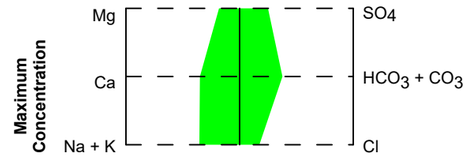






Treated Carmel River Water





meq/L - milliequivalents per liter

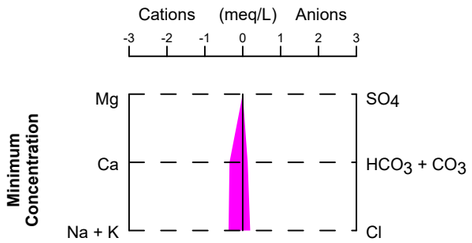
April 2021

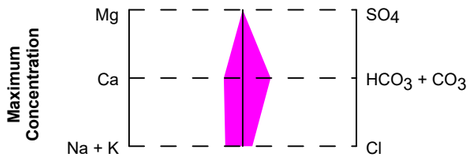
TODD GROUNDWATER

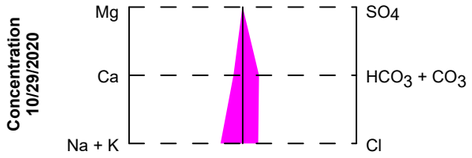
Figure 16
Stiff Plots for MW-1AD and MW-2AD

Path: T:\Projects\RWYPCA PWM ZZ Hydrogeological Support 2020\01 GW\AGRAPHICS\2021 04\Figure 16 Stiff Plots for MW-1AD and MW-2AD.ppt

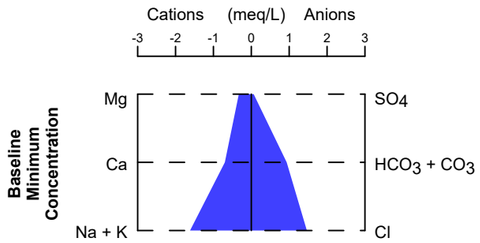
Purified Recycled Water

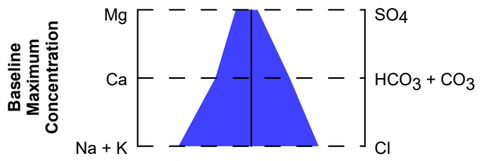


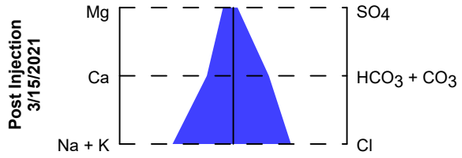




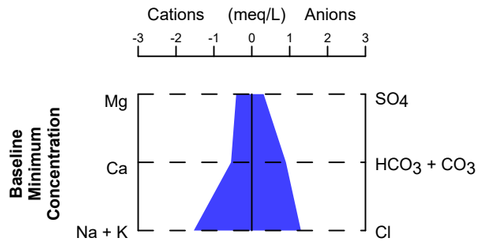
Local Groundwater MW-1S

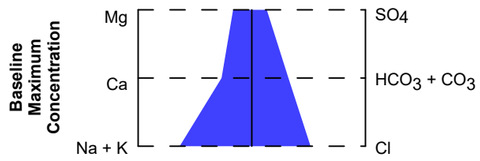


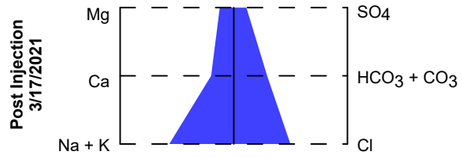




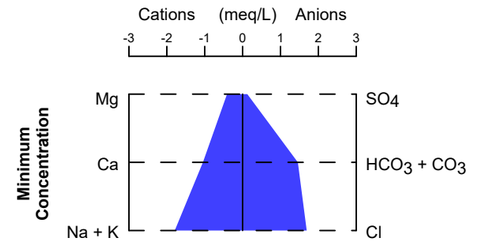
Local Groundwater MW-1AS

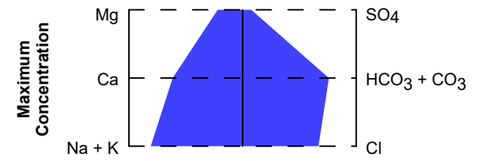


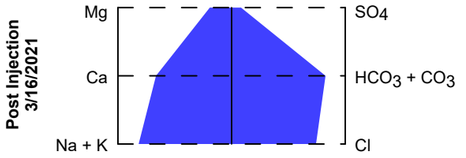




Local Groundwater MW-2AS







meq/L - milliequivalents per liter

April 2021

TODD GROUNDWATER

Figure 17
Stiff Plots for MW-1S, MW-1AS, and MW-2AS

Path: T:\Projects\RWDCA PWTF Hydrogeologic Support 2020\Figures\2020\Q4\GRAPHICS\MW1-4W\Figure 17 Stiff Plots for MW-1S MW-1AS and MW-2AS.ai

APPENDIX B. FLUORESCENT DYE SAFETY DATA SHEETS, AND PROCEDURES FOR USE AND ANALYSIS

SAFETY DATA SHEET (SDS)
REVISION DATE: 03/03/2016

HUE CORPORATION

Color your everything, may your Hue come true

SECTION I. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

PRODUCT IDENTIFIER:

PRODUCT NAME ..... **HUE URANINE CONC** (Also known as Fluorescein)
PRODUCT NUMBER 1-C8-073PC
COLOR INDEX NAME ..... ACID YELLOW 073
COLOR INDEX NO 45350
C. A. S. # 518-47-8
CHEMICAL FAMILY..... XANTHENE

INTENDED USE OF THE PRODUCT:

FELT TIP, MARKER INKS, WATER BASED COATINGS AND LEAK DETECTION

NAME, ADDRESS AND TELEPHONE OF RESPONSIBLE PARTY:

HUE CORPORATION	TELEPHONE	714-389-3130
P.O. BOX 509	FAX	714-389-9731
TUSTIN, CA 92781	EMAIL	SUPPORT@HUECORPORATION.COM

EMERGENCY TELEPHONE NUMBER:

CHEMTREC (USA)	1-800-424-9300
CHEMTREC (OUTSIDE USA)	1-703-527-3887

SECTION 2. HAZARD(S) IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:

GHS-US
ACUTE TOX. - INHALATION (CATEGORY 5)
EYE DAM./IRRITATION (CATEGORY 2B)
SKIN CORR./IRRITATION (CATEGORY 3)

GHS LABELING:

HAZARD PICTOGRAMS (GHS-US):	NO SYMBOL
SIGNAL WORD	WARNING
HAZARD STATEMENT(S)	H333 - MAY BE HARMFUL IF INHALED H320 - CAUSES EYE IRRITATION H316 - CAUSES MILD SKIN IRRITATION
PRECAUTIONARY STATEMENTS	P305 + 351 + P338 - IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACT LENSES IF PRESENT AND EASY

TO DO. CONTINUE RINSING.
P337 + P313 - IF EYE IRRITATION OCCURS/PERSISTS:
GET MEDICAL ADVICE AND ATTENTION.
P261 - AVOID BREATHING DUST/FUMES/GAS/MIST/VAPORS/SPRAY
P264 - WASH FACE THOROUGHLY AFTER HANDLING.
P322 + P313 - IF SKIN IRRITATION OCCURS: GET MEDICAL ADVICE/ ATTENTION.
P304 + 312 - IF INHALED: CALL A POISON CENTER/DOCTOR/PHYSICIAN IF YOU FEEL UNWELL

OTHER HAZARDS NO DATA AVAILABLE
UNKNOWN ACUTE TOXICITY NO DATA AVAILABLE

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

DESCRIPTION OF MIXTURE: PROPRIETARY MIXTURE OF DYES.

SUBSTANCE:

NAME	C.A.S.#	WEIGHT 100%	GHS-US CLASSIFICATION
ACID YELLOW 073	518-47-8	100%	ACUTE TOX. - INHALATION (CATEGORY 5) EYE DAM./IRRITATION (CATEGORY 2B) SKIN CORR./IRRITATION (CATEGORY 3)

SECTION 4. FIRST AID MEASURES

FIRST AID MEASURES GENERAL:

INHALATION: REMOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, GIVE OXYGEN AND GET IMMEDIATE MEDICAL ATTENTION.

SKIN: WASH WITH MILD SOAP AND WATER. IF IRRITATION OCCURS GET MEDICAL ATTENTION. IF CLOTHING IS CONTAMINATED, RE-MOVE AND WASH BEFORE REUSE.

EYES: FLUSH EYES WITH WATER FOR AT LEAST 15 MINUTES, HOLDING EYELIDS APART FOR THOROUGH IRRIGATION. GET IMMEDIATE MEDICAL ATTENTION.

INGESTION: INDUCE VOMITING - SEEK IMMEDIATE MEDICAL ATTENTION.

MOST IMPORTANT SYMPTOMS AND EFFECTS, ACUTE AND DELAYED:

THIS PRODUCT IS NOT HAZARDOUS AS DEFINED BY HAZARDOUS COMMUNICATION STANDARD. HOWEVER, AS WITH ALL CHEMICAL; HANDLE WITH CARE, AVOID EYE AND SKIN CONTACT, AVOID INHALATION OF DUSTS OR VAPORS. WASH THOROUGHLY AFTER HANDLING. KEEP CONTAINERS CLOSED.

SECTION 5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA:

WATER, DRY CHEMICAL, CARBON DIOXIDE, FOAM.

SPECIAL HAZARDS ARISING FROM SUBSTANCE OR MEDIA:

FIREFIGHTERS SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS TO GUARD AGAINST POTENTIALLY TOXIC AND IRRITATING FUMES. AVOID DUSTING. DUST CAN FORM EXPLOSIVE MIXTURES WITH AIR.

PROTECTION/ADVICE FOR FIREFIGHTER(S):

BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

REMOVE PERSONS FROM DANGER AREA.

ENVIROMENTAL PRECAUTIONS:

AVOID ANY UNCONTROLLED RELEASE OF MATERIAL. DO NOT EMPTY INTO DRAINS OR THE AQUATIC ENVIRONMENT.

EMERGENCY PROCEDURES:

NO ADDITIONAL INFORMATION

METHODS AND MATERIALS FOR CONTAMINENT AND CLEANING UP:

WHERE SPILLS ARE POSSIBLE, A COMPREHENSIVE SPILL RESPONSE PLAN SHOULD BE DEVELOPED AND IMPLEMENTED. AVOID ANY UNCONTROLLED RELEASE OF MATERIAL.

UTILIZE RECOMMENDED PROTECTIVE CLOTHING AND EQUIPMENT (SEE SECTION 8).
SPILLS SHOULD BE SWEPT UP USING AN ABSORBENT DUST CONTROL PRODUCT AND PLACED IN CONTAINERS. SPILL AREA CAN BE WASHED WITH WATER. COLLECT WATER FOR APPROVED DISPOSAL.
IN THE EVENT OF UNCONTROLLED RELEASE OF THIS MATERIAL, THE USER SHOULD DETERMINE IF THE RELEASE IS REPORTABLE UNDER APPLICABLE LAWS AND REGULATIONS.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING:

HANDLE WITH CARE. AVOID OVER EXPOSURE. USE NIOSH/OSHA APPROVED RESPIRATOR, WORK GLOVES, AND CLOTHING. WASH AFTER HANDLING. SENSITIVE INDIVIDUALS MAY EXPERIENCE RESPIRATORY ALLERGIES. MAY CAUSE SKIN IRRITATION. USE WITH LOCAL VENTILATION.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

USE PROCESS ENCLOSURES, LOCAL EXHAUST VENTILATION OR OTHER ENGINEERING CONTROLS TO KEEP AIRBORNE LEVELS BELOW RECOMMENDED EXPOSURE LIMITS.

KEEP AWAY FROM HEAT. KEEP AWAY FROM SOURCES OF IGNITION.

KEEP AWAY FROM STRONG OXIDIZING AND REDUSING AGENTS.

SPECIFIC END USES:

FELT TIP, MARKER INKS, WATER BASED COATINGS AND LEAK DETECTION

SECTION 8. EXPOSURE CONTROLS /PERSONAL PROTECTION

CONTROL PARAMETERS:

INGREDIENTS WITH LIMIT VALUES THAT REQUIRE MONITORING AT THE WORKPLACE - NOT REQUIRED

EXPOSURE CONTROLS:

APPROPRIATE ENGINEERING CONTROLS - THE USUAL PRECAUTIONARY MEASURES ARE TO BE ADHERED TO WHEN HANDLING CHEMICALS.

PERSONAL PROTECTIVE EQUIPMENT:



HAND PROTECTION	WEAR IMPERMEABLE RUBBER OR PLASTIC GLOVES
EYE PROTECTION	TIGHTLY SEALED SAFETY GOGGLES OR FULL FACE SIDE SHIELDS.
SKIN AND BODY	APRON, COVERALLS AND NON-LEATHER SOLED WORK SHOES. WASH DYE CONTAMINATED CLOTHES AND SKIN WITH MILD SOAP AND DETERGENTS.
RESPIRATORY	WEAR OSHA/NIOSH APPROVED DUST MASK/RESPIRATOR
HYGIENE MEASURES	HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICES. WASH HANDS AFTER HANDLING MATERIAL.
OTHER PROTECTION	DELUGE SAFETY SHOWER AND EYE WASH STATION SHOULD BE LOCATED NEAR WORK AREA.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES :

APPEARANCE, COLOR, ODOR	YELLOW POWDER, NO ODOR
pH	8.0 - 9.0
MELTING POINT/FREEZING POINT	ND
INITIAL BOILING POINT/BOILING RANGE	0.00
FLASHPOINT	NORMALLY STABLE, NOT COMBUSTIBLE NOR FLAMMABLE
EVAPORATION RATE	NO DATA
FLAMMABILITY (SOLID,GAS)	NORMALLY STABLE, NOT COMBUSTIBLE NOR FLAMMABLE
UPPER EXPLOSIVE LIMITS	NA
LOWER EXPLOSIVE LIMITS	NA
VAPOR PRESSURE	NA
VAPOR DENSITY	NA
RELATIVE DENSITY	NA
SOLUBILITY IN WATER	SOLUBLE
PARTITION COEFFICIENT N-OCTANOL/WATER	NO DATA

AUTO-IGNITION TEMPERATURE	NO DATA
DECOMPOSITION TEMPERATURE	NO DATA
VISCOSITY, DYNAMIC	NO DATA
VISCOSITY, CINEMATIC	NO DATA
EXPLOSIVE PROPERTIES	N/A
OXIDIZING PROPERTIES	NA
OTHER INFORMATION	NA

SECTION 10. STABILITY AND REACTIVITY

CHEMICAL STABILITY	STABLE UNDER NORMAL STORAGE AND HANDLING CONDITIONS.
CONDITIONS TO AVOID	OXIDIZING & REDUCING AGENTS MAY DESTROY COLOR.
INCOMPATIBLE MATERIALS	OXIDIZING & REDUCING AGENTS MAY DESTROY COLOR.
HAZARDOUS DECOMPOSITION PRODUCTS	CO, CO2, OXIDES OF NITROGEN AND OTHER POTENTIALLY TOXIC FUMES.

SECTION 11. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL EFFECTS :

ORAL (ANIMAL	GREATER THAN 7,000 MG/KG - RAT
DERMAL (ANIMAL)	NA
EFFECTS TO EYES (ANIMAL)	EYES - RABBIT, NOT IRRITATING
SKIN IRRITATION (ANIMAL)	SKIN - RABBIT, SLIGHT IRRITANT

SKIN CORROSION/IRRITATION	NOT CLASSIFIED
SERIOUS EYE DAMAGE/IRRITATION	CAUSES EYE IRRITATION
RESPIRATORY OR SKIN SENSITIZATION	NOT CLASSIFIED
GERM CELL MUTAGENICITY	NOT CLASSIFIED
CARCINOGENICITY	NOT CLASSIFIED
REPRODUCTIVE TOXICITY	NOT CLASSIFIED
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)	MAY CAUSE DROWSINESS OR DIZZINESS.
ASPIRATION HAZARD	NOT CLASSIFIED
INHALATION	MAY CAUSE DROWSINESS OR DIZZINESS.
EYE CONTACT	CAUSES SERIOUS EYE IRRITATION.
INGESTION	INGESTION MAY CAUSE NAUSEA, VOMITING AND DIARRHEA

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY	NA
PERSISTENCE AND DEGRADABILITY	NA
BIOACCUMULATIVE POTENTIAL	NA
MOBILITY IN SOIL	LC-50 (LETHAL CONCENTRATION) UG = MICROGRAMS/LITER CHANNEL CATFISH - 2,267,000 UG/LITER RAINBOW TROUT - 1,372,000 UG/LITER BLUEGILL - 3,433,000 UG/LITER
OTHER ADVERSE EFFECTS	NA

SECTION 13. DISPOSAL CONSIDERATION

WASTE DISPOSAL RECOMMENDATION :

EMPTY BAGS THOROUGHLY. CARRY OUT THE PROPER RECYLING, REUSAGE OR DISPOSAL.
PLEASE REFER TO THE RELEVANT EU REGULATIONS, IN PARTICULAR THE GUIDELINES/DECISIONS OF THE COUNCIL REGARDING HANDLING OF WASTES (E.G. 75/442/EEC, 91/689/EEC, 94/67/EC, 94/904/EC) AS IMPLEMENTED IN NATIONAL REGULATIONS.

REGIONAL RECOMMENDATION :

BURY OR INCINERATE ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

CONTAINERS SHOULD NOT BE REUSED WITHOUT PROFESSIONAL CLEANING AND RECONDITIONING.
OBSERVE ALL LABELED SAFEGUARDS UNTIL CLEANED, RECONDITIONED OR DESTROYED.

PLEASE REFER TO SECTION 8 (EXPOSURE CONTROLS /PERSONAL PROTECTION) OF THIS SDS.

SECTION 14. TRANSPORTATION INFORMATION

UN NUMBER	NONE
UN PROPER SHIPPING NAME	NONE

DEPARTMENT OF TRANSPORTATION (DOT) : NOT HAZARDOUS FOR TRANSPORTATION

TRANSPORT HAZARD CLASS(ES)

HAZARD LABLES (DOT) :

PACKING GROUP (DOT)	NA
DOT SPECIAL PROVISIONS	NA

ADDITIONAL INFORMATION:

OVERLAND TRANSPORT	NONE
TRANSPORT BY SEA	NONE
AIR TRANSPORT	NONE
DOT QUANTITY LIMITATIONS PASSENGER AIRCRAFT	NA
DOT QUANTITY LIMITATIONS CARGO AIRCRAFT	NA

SECTION 15. REGULATORY INFORMATION

US FEDERAL REGULATIONS:

THE SUBSTANCES IS LISTED ON UNITED STATES TSCA (TOXIC SUBSTANCE CONTROL ACT) INVENTORY.

US STATE REGULATIONS:

NONE

CHEMICAL IDENTITY:

518-47-8	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	CHINA	KECL	PICCS	AICS
	X	-	-	-	-	-	-	-	-	-

TSCA STATUS	IN COMPLIANCE
E C CLASSIFICATION	(67/548/EEC - 88/379/EEC) N/A
EINECS NUMBER	
REACH CLASSIFICATION	
R PHRASES	
ADDITIONAL REGULATORY INFORMATION	

SECTION 16. OTHER INFORMATION

INDICATION OF CHANGES:

NA

OTHER INFORMATION:

NA

GHS FULL TEXT PHRASES:

MAY BE HARMFUL IF INHALED	H333
CAUSES EYE IRRITATION	H320
CASUES MILD SKIN IRRITATION	H316

	HEALTH	FLAMMABILITY	REACTIVITY	PERSONAL PROT
H. M. I. S. CLASSIFICATION:	1	0	0	D

HMIS CODE: **4** - SEVERE HAZARD, **3** - SERIOUS HAZARD, **2** - MODERATE HAZARD, **1** - SLIGHT HAZARD, **0** - MINIMAL HAZARD

SAFETY DATA SHEET (SDS)
REVISION DATE: 03/03/2016

ALL INFORMATION AND DATA APPEARING ON THIS SDS ARE BELIEVED TO BE RELIABLE AND ACCURATE. HOWEVER, IT IS THE USER' S RESPONSIBILITY TO DETERMINE THE SAFETY, TOXICITY, AND SUITABILITY FOR USE OF THE PRODUCT DESCRIBED. SINCE THE ACTUAL USE BY OTHERS IS BEYOND OUR CONTROL, NO GUARANTEE, EXPRESSED OR IMPLIED, IS MADE BY HUE CORPORATION.
USER ASSUMES ALL RISK AND RESPONSIBILITY.

SAFETY DATA SHEET (SDS)
REVISION DATE: 03/03/2016

HUE CORPORATION

Color your everything, may your Hue come true

SECTION I. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

PRODUCT IDENTIFIER:

PRODUCT NAME ..... **HUE EOSINE EX CONC**
PRODUCT NUMBER 1-C6-087-XPC
COLOR INDEX NAME ..... ACID RED 087
COLOR INDEX NO 45380
C. A. S. # 17372-87-1
CHEMICAL FAMILY..... XANTHENE DYE

INTENDED USE OF THE PRODUCT:

FELT TIP, MARKER INKS, WATER BASED COATINGS AND SPECIALTY INKS, PRINTING ON NYLON, SILK AND WOOL.

NAME, ADDRESS AND TELEPHONE OF RESPONSIBLE PARTY:

HUE CORPORATION	TELEPHONE	714-389-3130
P.O. BOX 509	FAX	714-389-9731
TUSTIN, CA 92781	EMAIL	SUPPORT@HUECORPORATION.COM

EMERGENCY TELEPHONE NUMBER:

CHEMTREC (USA)	1-800-424-9300
CHEMTREC (OUTSIDE USA)	1-703-527-3887

SECTION 2. HAZARD(S) IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:

GHS-US
ACUTE TOX. - INHALATION (CATEGORY 5)
EYE DAM./IRRITATION (CATEGORY 2B)
SKIN CORR./IRRITATION (CATEGORY 3)

GHS LABELING:

HAZARD PICTOGRAMS (GHS-US):	NO SYMBOL
SIGNAL WORD	WARNING
HAZARD STATEMENT(S)	H333 - MAY BE HARMFUL IF INHALED H320 - CAUSES EYE IRRITATION H316 - CAUSES MILD SKIN IRRITATION
PRECAUTIONARY STATEMENTS	P305 + 351 + P338 - IF IN EYES: RINSE CAUTIOUSLY WITH WATER FOR

SEVERAL MINUTES. REMOVE CONTACT LENSES IF PRESENT AND EASY TO DO. CONTINUE RINSING.
P337 + P313 - IF EYE IRRITATION OCCURS/PERSISTS: GET MEDICAL ADVICE AND ATTENTION.
P261 - AVOID BREATHING DUST/FUMES/GAS/MIST/VAPORS/SPRAY
P264 - WASH FACE THOROUGHLY AFTER HANDLING.
P322 + P313 - IF SKIN IRRITATION OCCURS: GET MEDICAL ADVICE/ ATTENTION.
P304 + 312 - IF INHALED: CALL A POISON CENTER/DOCTOR/PHYSICIAN IF YOU FEEL UNWELL
P501 - DISPOSE OF CONTENTS/ CONTAINER IN ACCORDANCE WITH LOCAL/ REGIONAL/ NATIONAL INTERNATIONAL REGULATIONS.

OTHER HAZARDS NO DATA AVAILABLE
UNKNOWN ACUTE TOXICITY NO DATA AVAILABLE

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

DESCRIPTION OF MIXTURE: PROPRIETARY MIXTURE OF DYES.

SUBSTANCE:

NAME	C.A.S.#	WEIGHT 100%	GHS-US CLASSIFICATION
ACID RED 087	17372-87-1	100%	ACUTE TOX. - INHALATION (CATEGORY 5) EYE DAM./IRRITATION (CATEGORY 2B) SKIN CORR./IRRITATION (CATEGORY 3)

SECTION 4. FIRST AID MEASURES

FIRST AID MEASURES GENERAL:

INHALATION: REMOVE TO FRESH AIR. IF BREATHING IS DIFFICULT, GIVE OXYGEN AND GET IMMEDIATE MEDICAL ATTENTION.

SKIN: WASH WITH MILD SOAP AND WATER. IF IRRITATION OCCURS GET MEDICAL ATTENTION. IF CLOTHING IS CONTAMINATED, RE-MOVE AND WASH BEFORE REUSE.

EYES: FLUSH EYES WITH WATER FOR AT LEAST 15 MINUTES, HOLDING EYELIDS APART FOR THOROUGH IRRIGATION. GET IMMEDIATE MEDICAL ATTENTION.

INGESTION: INDUCE VOMITING - SEEK IMMEDIATE MEDICAL ATTENTION.

MOST IMPORTANT SYMPTOMS AND EFFECTS, ACUTE AND DELAYED:

THIS PRODUCT IS NOT HAZARDOUS AS DEFINED BY HAZARDOUS COMMUNICATION STANDARD. HOWEVER, AS WITH ALL CHEMICAL; HANDLE WITH CARE, AVOID EYE AND SKIN CONTACT, AVOID INHALATION OF DUSTS OR VAPORS. WASH THOROUGHLY AFTER HANDLING. KEEP CONTAINERS CLOSED.

SECTION 5. FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA:

WATER, DRY CHEMICAL, CARBON DIOXIDE, FOAM.

SPECIAL HAZARDS ARISING FROM SUBSTANCE OR MEDIA:

FIREFIGHTERS SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS TO GUARD AGAINST POTENTIALLY TOXIC AND IRRITATING FUMES. AVOID DUSTING. DUST CAN FORM EXPLOSIVE MIXTURES WITH AIR.

PROTECTION/ADVICE FOR FIREFIGHTER(S):

BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

REMOVE PERSONS FROM DANGER AREA.

ENVIROMENTAL PRECAUTIONS:

AVOID ANY UNCONTROLLED RELEASE OF MATERIAL. DO NOT EMPTY INTO DRAINS OR THE AQUATIC ENVIRONMENT.

EMERGENCY PROCEDURES:

NO ADDITIONAL INFORMATION

METHODS AND MATERIALS FOR CONTAMINENT AND CLEANING UP:

WHERE SPILLS ARE POSSIBLE, A COMPREHENSIVE SPILL RESPONSE PLAN SHOULD BE DEVELOPED AND IMPLEMENTED. AVOID ANY UNCONTROLLED RELEASE OF MATERIAL.

UTILIZE RECOMMENDED PROTECTIVE CLOTHING AND EQUIPMENT (SEE SECTION 8).
SPILLS SHOULD BE SWEPT UP USING AN ABSORBENT DUST CONTROL PRODUCT AND PLACED IN CONTAINERS. SPILL AREA CAN BE WASHED WITH WATER. COLLECT WATER FOR APPROVED DISPOSAL.
IN THE EVENT OF UNCONTROLLED RELEASE OF THIS MATERIAL, THE USER SHOULD DETERMINE IF THE RELEASE IS REPORTABLE UNDER APPLICABLE LAWS AND REGULATIONS.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING:

HANDLE WITH CARE. AVOID OVER EXPOSURE. USE NIOSH/OSHA APPROVED RESPIRATOR, WORK GLOVES, AND CLOTHING. WASH AFTER HANDLING. SENSITIVE INDIVIDUALS MAY EXPERIENCE RESPIRATORY ALLERGIES. MAY CAUSE SKIN IRRITATION. USE WITH LOCAL VENTILATION.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

USE PROCESS ENCLOSURES, LOCAL EXHAUST VENTILATION OR OTHER ENGINEERING CONTROLS TO KEEP AIRBORNE LEVELS BELOW RECOMMENDED EXPOSURE LIMITS.

KEEP AWAY FROM HEAT. KEEP AWAY FROM SOURCES OF IGNITION.

KEEP AWAY FROM STRONG OXIDIZING AND REDUSING AGENTS.

SPECIFIC END USES:

FELT TIP, MARKER INKS, WATER BASED COATINGS AND SPECIALTY INKS, PRINTING ON NYLON, SILK AND WOOL.

SECTION 8. EXPOSURE CONTROLS /PERSONAL PROTECTION

CONTROL PARAMETERS:

INGREDIENTS WITH LIMIT VALUES THAT REQUIRE MONITORING AT THE WORKPLACE - NOT REQUIRED

EXPOSURE CONTROLS:

APPROPRIATE ENGINEERING CONTROLS - THE USUAL PRECAUTIONARY MEASURES ARE TO BE ADHERED TO WHEN HANDLING CHEMICALS.

PERSONAL PROTECTIVE EQUIPMENT:



HAND PROTECTION	WEAR IMPERMEABLE RUBBER OR PLASTIC GLOVES
EYE PROTECTION	TIGHTLY SEALED SAFETY GOGGLES OR FULL FACE SIDE SHIELDS.
SKIN AND BODY	APRON, COVERALLS AND NON-LEATHER SOLED WORK SHOES. WASH DYE CONTAMINATED CLOTHES AND SKIN WITH MILD SOAP AND DETERGENTS.
RESPIRATORY	WEAR OSHA/NIOSH APPROVED DUST MASK/RESPIRATOR
HYGIENE MEASURES	HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICES. WASH HANDS AFTER HANDLING MATERIAL.
OTHER PROTECTION	DELUGE SAFETY SHOWER AND EYE WASH STATION SHOULD BE LOCATED NEAR WORK AREA.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES :

APPEARANCE, COLOR, ODOR	POWDER, NO ODOR
pH	7.0 - 8.5
MELTING POINT/FREEZING POINT	ND
INITIAL BOILING POINT/BOILING RANGE	0.00
FLASHPOINT	NOT APPLICABLE
EVAPORATION RATE	NO DATA
FLAMMABILITY (SOLID,GAS)	NORMALLY STABLE, NOT COMBUSTIBLE NOR FLAMMABLE
UPPER EXPLOSIVE LIMITS	NA
LOWER EXPLOSIVE LIMITS	NA
VAPOR PRESSURE	NA
VAPOR DENSITY	NA
RELATIVE DENSITY	NA

SOLUBILITY IN WATER	SOLUBLE
PARTITION COEFFICIENT N-OCTANOL/WATER	NO DATA
AUTO-IGNITION TEMPERATURE	NO DATA
DECOMPOSITION TEMPERATURE	NO DATA
VISCOSITY, DYNAMIC	NO DATA
VISCOSITY, CINEMATIC	NO DATA
EXPLOSIVE PROPERTIES	N/A
OXIDIZING PROPERTIES	NA
OTHER INFORMATION	NA

SECTION 10. STABILITY AND REACTIVITY

CHEMICAL STABILITY	STABLE UNDER NORMAL STORAGE AND HANDLING CONDITIONS.
CONDITIONS TO AVOID	OXIDIZING & REDUCING AGENTS MAY DESTROY COLOR.
INCOMPATIBLE MATERIALS	OXIDIZING & REDUCING AGENTS MAY DESTROY COLOR.
HAZARDOUS DECOMPOSITION	PRODUCTS - CO, CO2, OXIDES OF NITROGEN AND OTHER POTENTIALLY TOXIC FUMES.

SECTION 11. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL EFFECTS :

ORAL (ANIMAL	GREATER THAN 2000 MG/KG - RAT
DERMAL (ANIMAL)	NO DATA AVAILABLE
EFFECTS TO EYES (ANIMAL)	NO DATA AVAILABLE
SKIN IRRITATION (ANIMAL)	NO DATA AVAILABLE

SKIN CORROSION/IRRITATION	NOT CLASSIFIED
SERIOUS EYE DAMAGE/IRRITATION	CAUSES SERIOUS EYE IRRITATION
RESPIRATORY OR SKIN SENSITIZATION	NOT CLASSIFIED
GERM CELL MUTAGENICITY	NOT CLASSIFIED
CARCINOGENICITY	NOT CLASSIFIED
REPRODUCTIVE TOXICITY	NOT CLASSIFIED
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE)	MAY CAUSE DROWSINESS OR DIZZINESS.
ASPIRATION HAZARD	NOT CLASSIFIED
INHALATION	MAY CAUSE DROWSINESS OR DIZZINESS.
EYE CONTACT	CAUSES SERIOUS EYE IRRITATION.
INGESTION	INGESTION MAY CAUSE NAUSEA, VOMITING AND DIARRHEA

SECTION 12. ECOLOGICAL INFORMATION

TOXICITY	NA
PERSISTENCE AND DEGRADABILITY	NA
BIOACCUMULATIVE POTENTIAL	NA
MOBILITY IN SOIL	NA
OTHER ADVERSE EFFECTS	NA

SECTION 13. DISPOSAL CONSIDERATION

WASTE DISPOSAL RECOMMENDATION :

EMPTY BAGS THOROUGHLY. CARRY OUT THE PROPER RECYLING, REUSAGE OR DISPOSAL.
PLEASE REFER TO THE RELEVANT EU REGULATIONS, IN PARTICULAR THE GUIDELINES/DECISIONS OF THE COUNCIL REGARDING HANDLING OF WASTES (E.G. 75/442/EEC, 91/689/EEC, 94/67/EC, 94/904/EC) AS IMPLEMENTED IN NATIONAL REGULATIONS.

REGIONAL RECOMMENDATION :

BURY OR INCINERATE ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

CONTAINERS SHOULD NOT BE REUSED WITHOUT PROFESSIONAL CLEANING AND RECONDITIONING.
OBSERVE ALL LABELED SAFEGUARDS UNTIL CLEANED, RECONDITIONED OR DESTROYED.

PLEASE REFER TO SECTION 8 (EXPOSURE CONTROLS /PERSONAL PROTECTION) OF THIS SDS.

SECTION 14. TRANSPORTATION INFORMATION

UN NUMBER	NONE
UN PROPER SHIPPING NAME	NONE

DEPARTMENT OF TRANSPORTATION (DOT) : NOT HAZARDOUS FOR TRANSPORTATION

TRANSPORT HAZARD CLASS(ES)

HAZARD LABLES (DOT) :

PACKING GROUP (DOT)	NA
DOT SPECIAL PROVISIONS	NA

ADDITIONAL INFORMATION:

OVERLAND TRANSPORT	NONE
TRANSPORT BY SEA	NONE
AIR TRANSPORT	NONE
DOT QUANTITY LIMITATIONS PASSENGER AIRCRAFT	NA
DOT QUANTITY LIMITATIONS CARGO AIRCRAFT	NA

SECTION 15. REGULATORY INFORMATION

US FEDERAL REGULATIONS:

THIS SUBSTANCE IS LISTED ON UNITED STATES TSCA (TOXIC SUBSTANCE CONTROL ACT) INVENTORY.

US STATE REGULATIONS:

NONE

CHEMICAL IDENTITY:

	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	CHINA	KECL	PICCS	AICS
17372-87-1	X	-	-	-	-	-	-	-	-	-

TSCA STATUS	IN COMPLIANCE
E C CLASSIFICATION	(67/548/EEC - 88/379/EEC) N/A
EINECS NUMBER	
REACH CLASSIFICATION	
R PHRASES	
ADDITIONAL REGULATORY INFORMATION	CONTAINS: <11PPM BENZENE, (CAS#71-43-2) <11PPM TOLUENE, (CAS#108-88-3) <11PPM XYLENES, (CAS#1330-20-7)

SECTION 16. OTHER INFORMATION

INDICATION OF CHANGES:

NA

OTHER INFORMATION:

NA

GHS FULL TEXT PHRASES:

MAY BE HARMFUL IF INHALED	H333
CAUSES EYE IRRITATION	H320
CASUES MILD SKIN IRRITATION	H316

	HEALTH	FLAMMABILITY	REACTIVITY	PERSONAL PROT
H. M. I. S. CLASSIFICATION:	1	0	0	D

HMIS CODE: **4** - SEVERE HAZARD, **3** - SERIOUS HAZARD, **2** - MODERATE HAZARD, **1** - SLIGHT HAZARD, **0** - MINIMAL HAZARD

SAFETY DATA SHEET (SDS)
REVISION DATE: 03/03/2016

ALL INFORMATION AND DATA APPEARING ON THIS SDS ARE BELIEVED TO BE RELIABLE AND ACCURATE. HOWEVER, IT IS THE USER' S RESPONSIBILITY TO DETERMINE THE SAFETY, TOXICITY, AND SUITABILITY FOR USE OF THE PRODUCT DESCRIBED. SINCE THE ACTUAL USE BY OTHERS IS BEYOND OUR CONTROL, NO GUARANTEE, EXPRESSED OR IMPLIED, IS MADE BY HUE CORPORATION.
USER ASSUMES ALL RISK AND RESPONSIBILITY.

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PROCEDURES AND CRITERIA
ANALYSIS OF FLUORESCENT DYES
IN WATER AND CHARCOAL SAMPLERS:

FLUORESCEIN, EOSINE, RHODAMINE WT, AND SULFORHODAMINE B DYES

Revision Date:
March 3, 2015

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INTRODUCTION

This document describes standard procedures and criteria currently in use at the Ozark Underground Laboratory (OUL) as of the date shown on the title page. Some samples may be subjected to different procedures and criteria because of unique conditions; such non-standard procedures and criteria are identified in reports for those samples. Standard procedures and criteria change as knowledge and experience increases and as equipment is improved or up-graded. The OUL maintains a summary of changes in standard procedures and criteria.

TRACER DYES AND SAMPLE TYPES

Dye Nomenclature

Dye manufacturers and retailers use a myriad of names for the dyes. This causes confusion among dye users and report readers. The primary dyes used at the OUL and described in this document are included in Table 1 below.

Table 1. Primary OUL Dye Nomenclature.

OUL Common Name	Color Index Number	Color Index Name	Other Names
Fluorescein	45350	Acid Yellow 73	uranine, uranine C, sodium fluorescein, fluorescein LT and fluorescent yellow/green
Eosine	45380	Acid Red 87	eosin, eosine OJ, and D&C Red 22
Rhodamine WT	None assigned	Acid Red 388	fluorescent red (but not the same as rhodamine B)
Sulforhodamine B	45100	Acid Red 52	pontacyl brilliant pink B, lissamine red 4B, and fluoro brilliant pink

The OUL routinely provides dye for tracing projects. Dyes purchased for groundwater tracing are always mixtures that contain both dye and an associated diluent. Diluents enable the manufacturer to standardize the dye mixture so that there are minimal differences among batches. Additionally, diluents are often designed to make it easier to dissolve the dye mixture in water, or to produce a product which meets a particular market need (groundwater tracing is only a tiny fraction of the dye market). The percent of dye in "as-sold" dye mixtures often varies dramatically among manufacturers and retailers, and retailers are sometimes incorrect about the percent of dye in their products. The OUL subjects all of its dyes to strict quality control (QC) testing. Table 2 summarizes the as-sold dye mixtures used by the OUL.

Table 2. As-Sold Dye Mixtures at the OUL.

OUL Common Name	Form	Dye Equivalent
Fluorescein	Powder	75% dye equivalent, 25% diluent
Eosine	Powder	75% dye equivalent, 25% diluent
Rhodamine WT	Liquid	20% dye equivalent, 80% diluent
Sulforhodamine B	Powder	75% dye equivalent, 25% diluent

Analytical results are based on the as-sold weights of the dyes provided by the OUL. The use of dyes from other sources is discouraged due to the wide variability of dye equivalents within the market. However, if alternate source dyes are used, a sample should be provided to the OUL for quality control and to determine if a correction factor is necessary for the analytical results.

Types of Samples

Typical samples that are collected for fluorescent tracer dye analysis include charcoal samplers (also called activated carbon or charcoal packets) and water samples.

The charcoal samplers are packets of fiberglass screening partially filled with 4.25 grams of activated coconut charcoal. The charcoal used by the OUL is Calgon 207C coconut shell carbon, 6 to 12 mesh, or equivalent. The most commonly used charcoal samplers are about 4 inches long by 2 inches wide. A cigar-shaped sampler is made for use in very small diameter wells (such as 1-inch diameter piezometers); this is a special order item and should be specifically requested in advance when needed. All of the samplers are closed by heat sealing.

In specialized projects, soil samples have been collected from soil cores and analyzed for fluorescent tracer dyes. Project-specific procedures have been developed for projects such as these. For additional information, please contact the OUL.

FIELD PROCEDURES

Field procedures included in this section are intended as guidance, and not firm requirements. Placement of samplers and other field procedures require adjustment to field conditions. Personnel at the OUL are available to provide additional assistance for implementation of field procedures specific to specialized field conditions.

Placement of Samplers

Charcoal samplers are placed so as to be exposed to as much water as possible. Water should flow through the packet. In springs and streams they are typically attached to a rock or other anchor in a riffle area. Attachment of the packets often uses plastic tie wires. In swifter water galvanized wire (such as electric fence wire) is often used. Other types of anchoring wire can be used. Electrical wire with plastic insulation is also good. Packets are attached so that they extend outward from the anchor rather than laying flat against it. Two or more separately anchored packets are typically used for sampling springs and streams. The placement of multiple packets is recommended in order to minimize the chance of loss during the sampling period. The use of fewer packets is discouraged except when the spring or stream is so small that there is not appropriate space for placing multiple packets.

When pumping wells are being sampled, the samplers are typically placed in sample holders made of plastic pipe fittings. Brass hose fittings can be at the end of the sample holders so that the sample holders can be installed on outside hose bibs and water which has run through the samplers can be directed to waste through a connected garden hose. The samplers can be unscrewed in the middle so that charcoal packets can be changed. The middle portions of the samplers consist of 1.5 inch diameter pipe and pipe fitting.

Charcoal packets can be lowered into monitoring wells for sampling purposes. In general, if the well is screened, samplers should be placed approximately in the middle of the screened interval. Due to the typically lower volume of water that flows through a well, only one charcoal sampler should be used per well. However, multiple packets can be placed in a single well at depths to test different depth horizons when desirable. A weight should be added near the charcoal packet to ensure that it will not float. The weight should be of such a nature that it will not affect water quality. One common approach is to anchor the packets with a white or uncolored plastic cable tie to the top of a dedicated weighted disposable bailer. We typically run nylon cord from the top of the well to the charcoal packet and its weight. ***Do not use colored cord*** since some of them are colored with fluorescent dyes. Nylon fishing line should not be used since it can be readily cut by a sharp projection in the well.

In some cases, especially with small diameter wells and appreciable well depths, the weighted disposable bailers sink very slowly or may even fail to sink because of friction and floating of the anchoring cord. In such cases a weight may be added to the top of the disposable bailer. Stainless steel weights are ideal, but are not needed in all cases. All weights should be cleaned prior to use; the cleaning approach should comply with decontamination procedures in use at the project site.

Optional Preparation of Charcoal Samplers

Charcoal packets routinely contain some fine powder that washes off rapidly when they are placed in water. While not usually necessary, the following optional preparation step is suggested if the fine charcoal powder is problematic.

Charcoal packets can be triple rinsed with distilled, demineralized, or reagent water known to be free of tracer dyes. This rinsing is typically done by soaking. With this approach,

approximately 25 packets are placed in one gallon of water and soaked for at least 10 minutes. The packets are then removed from the water and excess water is shaken off the packets. The packets are then placed in a second gallon of water and again soaked for at least 10 minutes. After this soaking they are removed from the water and excess water is shaken off the packets. The packets are then placed in a third gallon of water and the procedure is again repeated. Rinsed packets are placed in plastic bags and are placed at sampling stations within three days. Packets can also be rinsed in jets of water for about one minute; this requires more water and is typically difficult to do in the field with water known to be free of tracer dyes.

Collection and Replacement of Samplers

Samplers are routinely collected and replaced at each of the sampling stations. The frequency of sampler collection and replacement is determined by the nature of the study. Collections at one week intervals are common, but shorter or longer collection frequencies are acceptable and sometimes more appropriate. Shorter sampling frequencies are often used in the early phases of a study to better characterize time of travel. As an illustration, we often collect and change charcoal packets 1, 2, 4, and 7 days after dye injection. Subsequent sampling is then weekly.

The sampling interval in wells at hazardous wastes sites should generally be no longer than about a week. Contaminants in the water can sometimes use up sorption sites on the charcoal that would otherwise adsorb the dye. This is especially important if the dye might pass in a relatively short duration pulse.

Where convenient, the collected samplers should be briefly rinsed in the water being sampled to remove dirt and accumulated organic material. This is not necessary with well samples. The packets are shaken to remove excess water. Next, the packet (or packets) are placed in a plastic bag (Whirl-Pak® bags are ideal). The bag is labeled on the outside with a black permanent type felt marker pen, such as a Sharpie®. ***Use only pens that have black ink***; colored inks may contain fluorescent dyes. The notations include station name or number and the date and time of collection. Labels must not be inserted inside the sample bags.

Collected samplers are kept in the dark to minimize algal growth on the charcoal prior to analysis work. New charcoal samplers are routinely placed when used charcoal packets are collected. The last set of samplers placed at a stream or spring is commonly not collected.

Water Samples

Water samples are often collected. They should be collected in either glass or plastic; the OUL routinely uses 50 milliliter (mL) research-grade polypropylene copolymer Perfector Scientific vials (Catalog Number 2650) for such water samples. No more than 30 mL of water is required for analysis. The sides of the vials should be labeled with the project name, sample ID, sample date and time with a black permanent felt tip pen. ***Do not label the lid only***. The vials should be placed in the dark and refrigerated immediately after collection, and maintained under refrigeration until shipment. The OUL supplies vials for the collection of water samples.

Sample Shipment

When water or charcoal samplers are collected for shipment to the OUL they should be shipped promptly. We prefer (and in some studies require) that samples be refrigerated with frozen re-usable ice packs upon collection and that they be shipped refrigerated with frozen ice packs by overnight express. ***Do not ship samplers packed in wet ice*** since this can create a potential for cross contamination when the ice melts. Our experience indicates that it is not essential for samplers to be maintained under refrigeration; yet maintaining them under refrigeration clearly minimizes some potential problems. A product known as "green ice" should not be used for maintaining the samples in a refrigerated condition since this product contains a dye which could contaminate samples if the "green ice" container were to break or leak.

We receive good overnight and second day air service from both UPS and FedEx. The U.S. Postal Service does not typically provide next day service to us. DHL does not provide overnight service to us. FedEx is recommended for international shipments. The OUL does not receive Saturday delivery.

Each shipment of charcoal samplers or water samples ***must be accompanied by a sample custody document***. The OUL provides a sheet (which bears the title "Samples for Fluorescence Analysis") that can be used if desired. These sheets can be augmented by a client's chain-of-custody forms or any other relevant documentation. OUL's custody document works well for charcoal samplers because it allows for both the placement date and time as well as the collection date and time. Many other standard chain-of-custody documents do not allow for these types of samples. Attachment 1 includes a copy of OUL's Sample Collection Data Sheet.

Please write legibly on the custody documents and ***use black ink***. Check the accuracy of the sample sheet against the samples prior to shipment to identify and correct errors that may delay the analysis of your samples following receipt at the laboratory.

Supplies Provided by the OUL

The OUL provides supplies for the collection of fluorescent tracer dyes. Supplies provided upon request are charcoal packets, Whirl-Pak® bags (to contain the charcoal packets after collection for shipment to the laboratory), and water vials. These supplies are subjected to strict QA/QC procedures to ensure the materials are free of any potential tracer dye contaminants. The charge for these materials is included in the cost of sample analysis. Upon request, coolers and re-freezable ice packs are also provided for return shipment of samples.

The OUL also has tracer dyes available for purchase. These dyes are subject to strict QA/QC testing. All analytical work is based upon the OUL as-sold weight of the dyes.

LABORATORY PROCEDURES

The following procedures are followed upon receipt of samples at the laboratory.

Receipt of Samples

Samplers shipped to the OUL are logged in and refrigerated upon receipt. Prior to cleaning and analysis, samplers are assigned a laboratory identification number.

It sometimes occurs that there are discrepancies between the sample collection data sheet and the actual samples received. When this occurs, a "Discrepancy Sheet" form is completed and sent to the shipper of the sample for resolution. The purpose of the form is to help resolve discrepancies, even when they may be minor. Many discrepancies arise from illegible custody documents. ***Please write legibly*** on the custody documents and ***use black ink***. Check the accuracy of the sample sheet against the samples prior to shipment to identify and correct errors that may delay the analysis of your samples following receipt at the laboratory.

Cleaning of Charcoal Samplers

Samplers are cleaned by spraying them with jets of clean water from a laboratory well in a carbonate aquifer. OUL uses non-chlorinated water for the cleansing to minimize dye deterioration. We do not wash samplers in public water supplies. Effective cleansing cannot generally be accomplished simply by washing in a conventional laboratory sink even if the sink is equipped with a spray unit.

The duration of packet washing depends upon the condition of the sampler. Very clean samplers may require less than a minute of washing; dirtier samplers may require several minutes of washing.

Elution of the Charcoal

There are various eluting solutions that can be used for the recovery of tracer dyes. The solutions typically include an alcohol, water, and a strong basic solution such as aqueous ammonia and /or potassium hydroxide.

The standard elution solution used at the OUL is a mixture of 5% aqua ammonia and 95% isopropyl alcohol solution and sufficient potassium hydroxide pellets to saturate the solution. The isopropyl alcohol solution is 70% alcohol and 30% water. The aqua ammonia solution is 29% ammonia. The potassium hydroxide is added until a super-saturated layer is visible in the bottom of the container. This super-saturated layer is not used for elution. Preparation of eluting solutions uses dedicated glassware which is never used in contact with dyes or dye solutions.

The eluting solution will elute fluorescein, eosine, rhodamine WT, and sulforhodamine B dyes. It is also suitable for separating fluorescein peaks from peaks of some naturally present materials found in may be found in samplers.

Fifteen mL of the eluting solution is poured over the washed charcoal in a disposable sample beaker. The sample beaker is capped. The sample is allowed to stand for 60 minutes. After this time, the liquid is carefully poured off the charcoal into a new disposable beaker which has been appropriately labeled with the laboratory identification number. A few grains of charcoal may inadvertently pass into the second beaker; no attempt is made to remove these from the second sample beaker. After the pouring, a small amount of the elutant will remain in the initial sample beaker. After the transfer of the elutant to the second sample beaker, the contents of the first sample beaker (the eluted charcoal) are discarded. Samples are kept refrigerated until analyzed.

pH Adjustment of Water Samples

The fluorescence intensity of several of the commonly used fluorescent tracer dyes is pH dependent. The pH of samples analyzed for fluorescein, eosine, and pyranine dyes are adjust to a target pH of greater than 9.5 in order to obtain maximum fluorescence intensities.

Adjustment of pH is achieved by placing samples in a high ammonia atmosphere for at least two hours in order to increase the pH of the sample. Reagent water standards are placed in the same atmosphere as the samples. If dye concentrations in a sample are off-scale and require dilution for quantification of the dye concentration, the diluting water used is OUL reagent water that has been pH adjusted in a high ammonia atmosphere. Samples that are only analyzed for rhodamine WT or sulforhodamine B are not required to be pH adjusted.

Analysis on the Shimadzu RF-5301

The OUL uses a Shimadzu spectrofluorophotometer model RF-5301. This instrument is capable of synchronous scanning. The OUL also owns a Shimadzu RF-540 spectrofluorometers that is occasionally used for special purposes.

A sample of the elutant or water is withdrawn from the sample container using a disposable polyethylene pipette. Approximately 3 mL of the sample is then placed in disposable rectangular polystyrene cuvette. The cuvette has a maximum capacity of 3.5 mL. The cuvette is designed for fluorometric analysis; all four sides and the bottom are clear. The acceptable spectral range of these cuvettes is 340 to 800 nm. The pipettes and cuvettes are discarded after one use.

The cuvette is then placed in the RF-5301. This instrument is controlled by a programmable computer and operated by proprietary software developed for dye tracing applications.

Our instruments are operated and maintained in accordance with the manufacturer's recommendations. On-site installation of our first instrument and a training session on its use was provided by the instrument supplier. Repairs are made by a Shimadzu-authorized repairman.

Our typical analysis of an elutant sample where fluorescein, eosine, rhodamine WT, or sulforhodamine B dyes may be present includes synchronous scanning of excitation and emission spectra with a 17 nm separation between excitation and emission wavelengths. For these dyes,

the excitation scan is from 443 to 613 nm; the emission scan is from 460 to 630 nm. The emission fluorescence from the scan is plotted on a graph. The typical scan speed setting is “fast” on the RF-5301. The typical sensitivity setting used is "high."

Table 3. Excitation and emission slit width settings routinely used for dye analysis.

Parameter	**Excitation Slit (nm)**	**Emission Slit (nm)**
ES, FL, RWT, and SRB in elutant	3	1.5
ES, FL, RWT, and SRB in water	5	3

Note: ES = Eosine. FL = Fluorescein. RWT = Rhodamine WT. SRB = Sulforhodamine B.

The instrument produces a plot of the synchronous scan for each sample; the plot shows emission fluorescence only. The synchronous scans are subjected to computer peak picks using proprietary software; peaks are picked to the nearest 0.1 nm. Instrument operators have the ability to manually adjust peaks as necessary based upon computer-picked peaks and experience. All samples run on the RF-5301 are stored electronically with sample information. All samples analyzed are recorded in a bound journal.

Quantification

We calculate the magnitude of fluorescence peaks for fluorescein, eosine, rhodamine WT, and sulforhodamine B dyes in both elutant and water samples. Dye quantities are expressed in microgram per liter (parts per billion; ppb). The dye concentrations are calculated by separating fluorescence peaks due to dyes from background fluorescence on the charts, and then calculating the area within the fluorescence peak. This area is proportional to areas obtained from standard solutions.

We run dye concentration standards each day the RF-5301 is used. Six standards are used; the standard or standards appropriate for the analysis work being conducted are selected. All standards are based upon the as-sold weights of the dyes. The standards are as follows:

1) 10 ppb fluorescein and 100 ppb rhodamine WT in well water from the Jefferson City-Cotter Formation
2) 10 ppb eosine in well water from the Jefferson City-Cotter Formation
3) 100 ppb sulforhodamine B in well water from the Jefferson City-Cotter Formation.
4) 10 ppb fluorescein and 100 ppb rhodamine WT in elutant.
5) 10 ppb eosine in elutant.
6) 100 ppb sulforhodamine B in elutant.

Preparation of Standards

Dye standards are prepared as follows:

Step 1. A small sample of the as-sold dye is placed in a pre-weighed sample vial and the vial is again weighed to determine the weight of the dye. We attempt to use a sample weighing between 1 and 5 grams. This sample is then diluted with well water to make a 1% dye solution by weight (based upon the as-sold weight of the dye). The resulting dye solution is allowed to sit for at least four hours to ensure that all dye is fully dissolved.

Step 2. One part of each dye solution from Step 1 is placed in a mixing container with 99 parts of well water. Separate mixtures are made for fluorescein, rhodamine WT, eosine, and sulforhodamine B. The resulting solutions contain 100 mg/L dye (100 parts per million dye mixture). The typical prepared volume of this mixture is appropriate for the sample bottles being used; we commonly prepare about 50 mL of the Step 2 solutions. The dye solution from Step 1 that is used in making the Step 2 solution is withdrawn with a digital Finnpipette which is capable of measuring volumes between 0.200 and 1.000 mL at intervals of 0.005 mL. The calibration certificate with this instrument indicates that the accuracy (in percent) is as follows:

At 0.200 mL, 0.90%

At 0.300 mL, 0.28%

At 1.000 mL, 0.30%

The Step 2 solution is called the long term standard. OUL experience indicates that Step 2 solutions, if kept refrigerated, will not deteriorate appreciably over periods of less than a year. Furthermore, these Step 2 solutions may last substantially longer than one year.

Step 3. A series of intermediate-term dye solutions are made. Approximately 45 mL. of each intermediate-term dye solution is made. All volume measurements of less than 5 mL are made with a digital Finnpipette. (see description in Step 2). All other volume measurements are made with Rheinland Kohn Geprufte Sicherheit 50 mL capacity pump dispenser which will pump within plus or minus 1% of the set value. The following solutions are made; all concentrations are based on the as-sold weight of the dyes:

1) 1 ppm fluorescein dye and 10 ppm rhodamine WT dye.

2) 1 ppm eosine.

3) 10 ppm sulforhodamine B dye.

Step 4. A series of six short-term dye standards are made from solutions in Step 3. These standards were identified earlier in this section. In the experience of the OUL these standards have a useful shelf life in excess of one week. However, in practice, Step 4 elutant standards are made weekly, and Step 4 water standards are made daily.

Dilution of Samples

Samples with peaks that have arbitrary fluorescence unit values of 500 or more are diluted a hundred fold to ensure accurate quantification.

Some water samples have high turbidity or color which interferes with accurate detection and measurement of dye concentrations. It is often possible to dilute these samples and then measure the dye concentration in the diluted sample.

The typical dilutions are either 10 fold (1:10) or 100 fold (1:100). A 1:10 dilution involves combining one part of the test sample with 9 parts of water (if the sample is water) or elutant (if the sample is elutant). A 1:100 dilution involves combining one part of the test sample is combined with 99 parts of water or elutant, based upon the sample media. Typically, 0.300 mL of the test solution is combined with 29.700 mL of water (or elutant as appropriate) to yield a new test solution.

All volume measurements of less than 5 mL are made with a digital Finnpipette. All other volume measurements are made with Rheinland Kohn Geprufte Sicherheit 50 mL capacity pump dispenser which will pump within plus or minus 1% of the set value.

The water used for dilution is from a carbonate aquifer. All dilution water is pH adjusted to greater than pH 9.5 by holding it in open containers in a high ammonia concentration chamber. This adjustment takes a minimum of two hours.

Quality Control

Laboratory blanks are run for every sample where the last two digits of the laboratory numbers are 00, 20, 40, 60, or 80. A charcoal packet is placed in a pumping well sampler and at least 25 gallons of unchlorinated water is passed through the sampler at a rate of about 2.5 gallons per minute. The sampler is then subjected to the same analytical protocol as all other samplers.

System functioning tests of the analytical instruments are conducted in accordance with the manufacturer's recommendations. Spiked samples are also analyzed when appropriate for quality control purposes.

All materials used in sampling and analysis work are routinely analyzed for the presence of any compounds that might create fluorescence peaks in or near the acceptable wavelength ranges for any of the tracer dyes. This testing includes approximately 1% of materials used.

Project specific QA/QC samples may include sample replicates and sample duplicates. A replicate sample is when a single sample is analyzed twice. A sample duplicate is where two samples are collected in a single location and both are analyzed. Sample replicates and duplicates are run for QA/QC purposes upon request of the client. These results are reported in the Certificate of Analysis.

Reports

Sample analysis results are typically reported in a Certificate of Analysis. However, specialized reports are provided in accordance with the needs of the client. Certificates of Analysis typically provide a listing of station number, sample ID, and dye concentrations if detected. Standard data format includes deliverables in MS Excel and Adobe Acrobat (.pdf)

format. Hard copy of the data package, and copies of the analytical charts are available upon request.

Work at the OUL is directed by Mr. Thomas Aley. Mr. Aley has 45 years of professional experience in hydrology and hydrogeology. He is certified as a Professional Hydrogeologist (Certificate #179) by the American Institute of Hydrology and licenced as a Professional Geologist in Missouri, Arkansas, Kentucky, and Alabama. Additional details regarding laboratory qualifications are available upon request.

Waste Disposal

All laboratory wastes are disposed of according to applicable state and federal regulations. Waste elutant and water samples are collected in 15 gallon poly drums and disposed with a certified waste disposal facilityas non-hazardous waste.

In special cases, wastes for a particular project may be segregated and returned to the client upon completion of the project. These projects may have samples that contain contaminants that the client must account for all materials generated and disposed. These situations are managed on a case-by-case basis.

CRITERIA FOR DETERMINATION OF POSITIVE DYE RECOVERIES

Normal Emission Ranges and Detection Limits

The OUL has established normal emission fluorescence wavelength ranges for each of the four dyes described in this document. The normal acceptable range equals mean values plus and minus two standard deviations. These values are derived from actual groundwater tracing studies conducted by the OUL.

The detection limits are based upon concentrations of dye necessary to produce emission fluorescence peaks where the signal to noise ratio is 3. The detection limits are realistic for most field studies since they are based upon results from actual field samples rather than being based upon values from spiked samples in a matrix of reagent water or the elutants from unused activated carbon samplers. In some cases detection limits may be smaller than reported if the water being sampled has very little fluorescent material in it. In some cases detection limits may be greater than reported; this most commonly occurs if the sample is turbid due to suspended material or a coloring agent such as tannic compounds. Turbid samples are typically allowed to settle, centrifuged, or, if these steps are not effective, diluted prior to analysis.

Table 4 provides normal emission wavelength ranges and detection limits for the four dyes when analyzed on the OUL's RF-5301 for samples analyzed as of March 3, 2015.

Table 4. RF-5301 Spectrofluorophotometer. Normal emission wavelength ranges and detection limits for fluorescein, eosine, rhodamine WT, and sulforhodamine B dyes in water and elutant samples.

Fluorescent Dye	**Normal Acceptable Emission Wavelength Range (nm)**		**Detection Limit (ppb)**	
	Elutant	**Water**	**Elutant**	**Water**
Eosine	539.3 to 545.1	532.5 to 537.0	0.050	0.015
Fluorescein	514.1 to 519.2	505.9 to 509.7	0.025	0.002
Rhodamine WT	564.6 to 571.2	571.9 to 577.2	0.170	0.015
Sulforhodamine B	575.2 to 582.0	580.1 to 583.7	0.080	0.008

Note: Detection limits are based upon the as-sold weight of the dye mixtures normally used by the OUL.
Fluorescein and eosine detection limits in water are based on samples pH adjusted to greater than 9.5.

It is important to note that the normal acceptable emission wavelength ranges are subject to change based on instrument maintenance, a change in instrumentation, or slight changes in dye formulation. Significant changes in normal acceptable emission wavelength ranges will be updated in this document as they occur.

Fluorescence Background

Due to the nature of fluorescence analysis, it is important to identify and characterize any potential background fluorescence at dye introduction and monitoring locations prior to the introduction of any tracer dyes.

There is generally little or no detectable fluorescence background in or near the general range of eosine, rhodamine WT, and sulforhodamine B dyes encountered in most groundwater tracing studies. There is often some fluorescence background in or near the range of fluorescein dye present at some of the stations used in groundwater tracing studies.

Criteria for Determining Dye Recoveries

The following sections identify normal criteria used by the OUL for determining dye recoveries. The primary instrument in use is a Shimadzu RF-5301.

EOSINE

Normal Criteria Used by the OUL for Determining Eosine Dye Recoveries in Elutants from Charcoal Samplers

Criterion 1. There must be at least one fluorescence peak in the range of 540.0 to 545.8 nm in the sample.

Criterion 2. The dye concentration associated with the fluorescence peak must be at least 3 times the detection limit. The eosine detection limit in elutant samples is 0.050 ppb, thus this dye concentration limit equals 0.150 ppb.

Criterion 3. The dye concentration must be at least 10 times greater than any other concentration reflective of background at the sampling station in question.

Criterion 4. The shape of the fluorescence peak must be typical of eosine. Much background fluorescence yields low, broad, and asymmetrical fluorescence peaks rather than the more narrow and symmetrical fluorescence peaks typical of eosine. In addition, there must be no other factors which suggest that the fluorescence peak may not be eosine dye from our groundwater tracing work.

Normal Criteria Used by the OUL for Determining Eosine Dye Recoveries in Water Samples

Criterion 1. In most cases, the associated charcoal samplers for the station should also contain eosine dye in accordance with the criteria listed above. This criterion may be waived if no charcoal sampler exists.

Criterion 2. There must be no factors which suggest that the fluorescence peak may not be eosine dye from our groundwater tracing work. The fluorescence peak should generally be in the range of 532.8 to 537.3 nm.

Criterion 3. The dye concentration associated with the fluorescence peak must be at least three times the detection limit. Our eosine detection limit in water samples is 0.015 ppb, thus this dye concentration limit equals 0.045 ppb.

Criterion 4. The dye concentration must be at least 10 times greater than any other concentration reflective of background at the sampling station in question.

FLUORESCEIN

Normal Criteria Used by the OUL for Determining Fluorescein Dye Recoveries in Elutants from Charcoal Samplers

Criterion 1. There must be at least one fluorescence peak in the range of 514.5 to 519.6 nm in the sample.

Criterion 2. The dye concentration associated with the fluorescence peak must be at least 3 times the detection limit. The fluorescein detection limit in elutant samples is 0.025 ppb, thus this dye concentration limit equals 0.075 ppb.

Criterion 3. The dye concentration must be at least 10 times greater than any other concentration reflective of background at the sampling station in question.

Criterion 4. The shape of the fluorescence peak must be typical of fluorescein. Much background fluorescence yields low, broad, and asymmetrical fluorescence peaks rather than the more narrow and symmetrical fluorescence peaks typical of fluorescein. In addition, there must be no other factors which suggest that the fluorescence peak may not be fluorescein dye from our groundwater tracing work.

Normal Criteria Used by the OUL for Determining Fluorescein Dye Recoveries in Water Samples

Criterion 1. In most cases, the associated charcoal samplers for the station should also contain fluorescein dye in accordance with the criteria listed above. This criterion may be waived if no charcoal sampler exists.

Criterion 2. There must be no factors which suggest that the fluorescence peak may not be fluorescein dye from our groundwater tracing work. The fluorescence peak should generally be in the range of 506.8 to 510.6 nm.

Criterion 3. The dye concentration associated with the fluorescence peak must be at least three times the detection limit. Our fluorescein detection limit in water samples is 0.002 ppb, thus this dye concentration limit equals 0.006 ppb.

Criterion 4. The dye concentration must be at least 10 times greater than any other concentration reflective of background at the sampling station in question.

RHODAMINE WT

Normal Criteria Used by the OUL for Determining Rhodamine WT Dye Recoveries in Elutants from Charcoal Samplers

Criterion 1. There must be at least one fluorescence peak in the sample in the range of 565.2 to 571.8 nm.

Criterion 2. The dye concentration associated with the rhodamine WT peak must be at least 3 times the detection limit. The detection limit in elutant samples is 0.170 ppb, thus this dye concentration limit equals 0.510 ppb.

Criterion 3. The dye concentration must be at least 10 times greater than any other concentration reflective of background at the sampling station in question.

Criterion 4. The shape of the fluorescence peak must be typical of rhodamine WT. In addition, there must be no other factors which suggest that the fluorescence peak may not be dye from the groundwater tracing work under investigation.

Normal Criteria Used by the OUL for Determining Rhodamine WT Dye Recoveries in Water Samples

Criterion 1. In most cases, the associated charcoal samplers for the station should also contain rhodamine WT dye in accordance with the criteria listed above. These criteria may be waived if no charcoal sampler exists.

Criterion 2. There must be no factors which suggest that the fluorescence peak may not be rhodamine WT dye from the tracing work under investigation. The fluorescence peak should generally be in the range of 572.4 to 577.7 nm.

Criterion 3. The dye concentration associated with the fluorescence peak must be at least three times the detection limit. Our rhodamine WT detection limit in water samples is 0.015 ppb, thus this dye concentration limit is 0.045 ppb.

Criterion 4. The dye concentration must be at least 10 times greater than any other concentration reflective of background at the sampling station in question.

SULFORHODAMINE B

Normal Criteria Used by the OUL for Determining Sulforhodamine B Dye Recoveries in Elutants from Charcoal Samplers

Criterion 1. There must be at least one fluorescence peak in the sample in the range of 576.4 to 583.2 nm.

Criterion 2. The dye concentration associated with the sulforhodamine B peak must be at least 3 times the detection limit. The detection limit in elutant samples is 0.080 ppb, thus this dye concentration limit equals 0.240 ppb.

Criterion 3. The dye concentration must be at least 10 times greater than any other concentration reflective of background at the sampling station in question.

Criterion 4. The shape of the fluorescence peak must be typical of sulforhodamine B. In addition, there must be no other factors which suggest that the fluorescence peak may not be dye from the groundwater tracing work under investigation.

Normal Criteria Used by the OUL for Determining Sulforhodamine B dye Recoveries in Water Samples

Criterion 1. In most cases, the associated charcoal samplers for the station should also contain sulforhodamine B dye in accordance with the criteria listed earlier. This criterion may be waived if no charcoal sampler exists.

Criterion 2. There must be no factors which suggest that the fluorescence peak may not be sulforhodamine B dye from the tracing work under investigation. The fluorescence peak should generally be in the range of 580.8 to 584.4 nm.

Criterion 3. The dye concentration associated with the fluorescence peak must be at least three times the detection limit. The detection limit in water is 0.008 ppb, thus this dye concentration limit equals 0.024 ppb.

Criterion 4. The dye concentration must be at least 10 times greater than any other concentration reflective of background at the sampling station in question.

Standard Footnotes

Sometimes not all the criteria are met for a straight forward determination of tracer dye in a sample. For these reasons, the emission graph is scrutinized carefully by the analytical technician and again during the QA/QC process. Sometimes the emission graphs require interpretation as to whether or not a fluorescence peak represents the tracer dye or not. Background samples from each of the sampling stations aid in the interpretation of the emission fluorescence graphs. When the results do not meet all the criteria for a positive dye detection, often the fluorescence peak is quantified and flagged with a footnote to the result as not meeting all the criteria for a positive dye detection. Standard footnotes are as follows:

Single asterisk (*): A fluorescence peak is present that does not meet all the criteria for a positive dye recovery. However, it has been calculated as though it were the tracer dye.

Double asterisk (**): A fluorescence peak is present that does not meet all the criteria for this dye. However, it has been calculated as a positive dye recovery.

Other footnotes specific to the fluorescence signature are sometimes also used. These footnotes are often developed for a specific project.

The quantification of fluorescence peaks that do not meet all the criteria for a positive dye detection can be important for interpretation of the dataset as a whole.

ATTACHMENT 1

Sample Collection Data Sheet

OZARK UNDERGROUND LABORATORY, INC.

1572 Aley Lane Protem, MO 65733 (417) 785-4289 fax (417) 785-4290 email: contact@ozarkundergroundlab.com

SAMPLE COLLECTION DATA SHEET for FLUORESCENCE ANALYSIS

Project _____ **Week No:** ___ **Samples Collected By:** _____

Samples Shipped By: _____ **Samples Received By:** _____

Date Samples Shipped: _____ **Date Samples Received:** _____ **Time Samples Received:** _____ **Return Cooler? Yes** ☐ **No** ☐

Bill to: _____ **Send Results to:** _____

Analyze for: ☐ **Fluorescein** ☐ **Eosine** ☐ **Rhodamine WT** ☐ **Other** _____ **Ship cooler to:** _____

OUL use only		***Please indicate stations where dye was visible in the field*** *for field technician use - use black ink only*						*OUL use only*
# CHAR REC'D	**LAB NUMBER**	**STATION NUMBER 1-4 Numbers**	**STATION NAME**	**PLACED**		**COLLECTED**		**# WATER REC'D**
				DATE	**TIME**	**DATE**	**TIME**	

COMMENTS _____

_____

This sheet filled out by OUL staff? Yes ☐ **No** ☐ **Charts for samples on this page proofed by OUL:** _____

OUL Project No._____ **Date Analyzed:**_____ **Analyzed By:**_____

Monterey One Water
Providing Cooperative Water Solutions

Appendix G. Todd Groundwater, Technical Memorandum, SUBJECT: Pure Water Monterey Project Groundwater Replenishment Reuse Project, Intrinsic Tracer Study Results for Deep Injection Wells 3 and 4. November 3, 2022

November 3, 2022

MEMORANDUM

To: Aidé Ortiz, Sherly Rosilela, Brian Bernados, Jonathan Weininger, Querube Moltrup, State Water Resources Control Board, Division of Drinking Water

James Bishop, Jennifer Epp, Harvey Packard, Central Coast Regional Water Quality Control Board

From: Gus Yates, Senior Hydrologist

Re: Pure Water Monterey Groundwater Replenishment Reuse Project, Intrinsic Tracer Study Results for Deep Injection Wells 3 and 4

INTRODUCTION AND PURPOSE

Construction of the Pure Water Monterey Groundwater Replenishment Project (PWM Project) injection well facilities has been incremental. The first two deep injection wells (DIW-1 and DIW-2) began operating in spring 2020. Deep injection wells DIW-3 and DIW-4 were constructed later and began operating in March and April 2022, respectively. Intrinsic and added tracer studies were completed for DIW-1 and DIW-2, and the results were used to calibrate a regional groundwater flow model to accurately simulate subsurface travel time from the wells to the nearest downgradient drinking water wells (Monterey One Water 2021; Todd Groundwater 2022a). The model was then used to simulate subsurface travel time with all four deep injection wells operating simultaneously. Specifically, the calibrated model was used to identify injection rates at the four deep injection wells that would result in a minimum 4.0-month travel time when the downgradient municipal supply wells are extracting at the highest rates of pumping that occurred during 2021. High rates of extraction result in relatively fast travel times, so the simulation results represented conservatively short estimates of travel time under normal operating conditions. Those results were incorporated into the draft Engineering Report Addendum for the PWM Project submitted to DDW on June 10, 2022 (Monterey One Water, 2022).

DDW comments on the draft Addendum included a request to conduct tracer studies for DIW-3 and DIW-4. An added tracer study is now in progress. In addition, operation of DIW-3 and DIW-4 since April 2022 created an opportunity for an intrinsic tracer test because the injected water has a significantly lower electrical conductivity (EC) than ambient groundwater at the downgradient wells. A workplan to monitor EC at the downgradient wells, detect the arrival of injected PWM water and calculate subsurface travel times was submitted to DDW on October 10, 2022 and is included as **Appendix A** to this memorandum

(Todd Groundwater 2022b). DDW approved the workplan on October 17, 2022. This memorandum presents the results of the intrinsic tracer study for DIW-3 and DIW-4.

The general purpose of the intrinsic tracer study is to determine whether calibrated model parameters for the area near DIW-1 and DIW-2 also represent aquifer conditions near DIW-3 and DIW-4, which are 900-1,000 feet away. The specific purpose is to confirm that the closest downgradient extraction well from any PWM Project injection well is indeed the Paralta well and that the fastest travel time is 4 months from DIW-1. DDW regulations grant 0.67 virus log removal value (LRV) credits per month of travel time.

HYDROGEOLOGIC SETTING AND WELLS

The PWM project injection wells are located in the Seaside Basin, which extends onshore and offshore along the Monterey Bay coastline between Monterey and Marina. The PWM injection wells are located in close proximity to other injection and extraction wells operated by the City of Seaside, Monterey Peninsula Water Management District (MPWMD) or California American Water Company (CalAm). The locations of nearby wells are shown in **Figure 1**.



Figure 1. Locations of Wells near Intrinsic Tracer Study Area

Four of the nearby wells are aquifer storage and recovery (ASR) wells operated by MPWMD in the project area. Approximately 1,100 ft northwest of DIW-1 and DIW-2 are wells ASR-1 and ASR-2. Farther north, ASR-3 and ASR-4 are 2,050-2,400 ft from DIW-1 and 2,500-2,900 ft from DIW-2. All four wells can inject Carmel River water, and ASR-3 is permitted to extract water for municipal use. When extracting, it pumps into the Monterey Pipeline that conveys water to the Monterey Peninsula area. The ASR wells inject water from wells near the Carmel River at various times during December-April, depending on Carmel River flow conditions. River flow must exceed a specified threshold before ASR injection is allowed. Due to drought conditions and low Carmel River flows, only 70.55 AF of water was injected last winter. All of it was injected at ASR-4 between December 15, 2021 and January 3, 2022. The volume of injected water was small enough, far enough away and long enough ago to have negligible effect on the flow of water from DIW-3 to ASR-3 and/or Paralta during March-October 2022.

The nearest downgradient drinking water well for each of the DIWs is listed in **Table 1**. The distance from DIW-3 to ASR-3 (2,350 ft) and from DIW-4 to Ord Grove 2 (1,600 ft) are of the same general magnitude as the distances from DIW-1 and DIW-2 to Paralta (1,630-1,807 ft). Thus, travel times are expected to be of the same general magnitude.

Table 1. Closest Drinking Water Wells to Injection Wells

Project Wells[a]	Target Aquifer	Closest Downgradient Production Well	Approximate Distance (feet)
DIW-1	Santa Margarita	Paralta	1,630
DIW-2	Santa Margarita	Paralta	1,807
DIW-3	Santa Margarita	ASR-3	2,350
DIW-4	Santa Margarita	Ord Grove 2	1,600

[a]Vadose zone injection wells are not shown due to the low injection rates and long travel times.

INJECTION AND EXTRACTION RATES DURING TEST

Table 2 shows injection and extraction rates for all major wells in the study area during January-October 2022. The rates are expressed as monthly average rates in gallons per minute (gpm). For injection wells, net injection is shown, which is gross injection minus water extracted during 2-hour backflush cycles 1-2 times per week. DIW-3 began normal injection on March 15, 2022, and DIW-4 began normal injection on April 7, 2022. Small amounts of test injection occurred on a few days during the week prior to normal operation.

Table 2. Monthly Injection and Extraction Rates, January-October 2022

Month	Ord Grove 2	Paralta	ASR-3	Seaside Muni 4	DIW-1	DIW-2	DIW-3	DIW-4[1]
Jan-22	-537	-823	-1,058	-85	1,409	811	0	0
Feb-22	-760	-905	-1,452	-106	1,377	784	0	0
Mar-22	-778	-702	-1,425	-116	1,311	570	446	-3
Apr-22	-773	-778	-1,441	-107	1,076	381	1,022	129
May-22	-746	-964	-1,429	-122	720	323	771	220
Jun-22	-732	-1,001	-1,407	-111	567	375	608	326
Jul-22	-774	-1,017	-1,372	-1	542	333	679	341
Aug-22	-811	-892	-1,359	-102	541	340	695	326
Sep-22	-781	-859	-1,208	-108	573	383	936	368
Oct-22[2]	*-752*	*-827*	*-1,073*	*-100*	505	363	1,202	360
April-October average	-767	-906	-1,327	-93	645	357	845	302

Notes:

Rates are monthly average rates in gallons per minute. Negative sign indicates extraction.

[1] For DIW-4 average injection during April 7-30 was assumed to apply to the entire month for the purpose of comparison among wells.

[2] Extraction rates for October at Ord Grove 2, Paralta, ASR-3 and Seaside Muni #4 are estimates based on seasonal trend.

All of the deep injection wells are screened exclusively in the Santa Margarita Sandstone (SM Aquifer), which is the deeper of the two primary water supply aquifers in the area. It consists of a marine sandstone of Pliocene/Miocene age and is present throughout most of the Seaside Basin. The sandstone is poorly consolidated and is approximately 250 feet thick in the Northern Coastal subarea of the basin. The Laguna Seca Anticline passes through the area in a northwest-southeast orientation. Because of the anticline, the depth and thickness of the Santa Margarita aquifer varies among the wells. A geologic cross section along a north-south transect west of the PWM wells is shown in **Figure 2**. Relative to the overlying Paso Robles Formation (PR Aquifer), the SM Aquifer has greater permeability and higher concentrations of dissolved minerals.

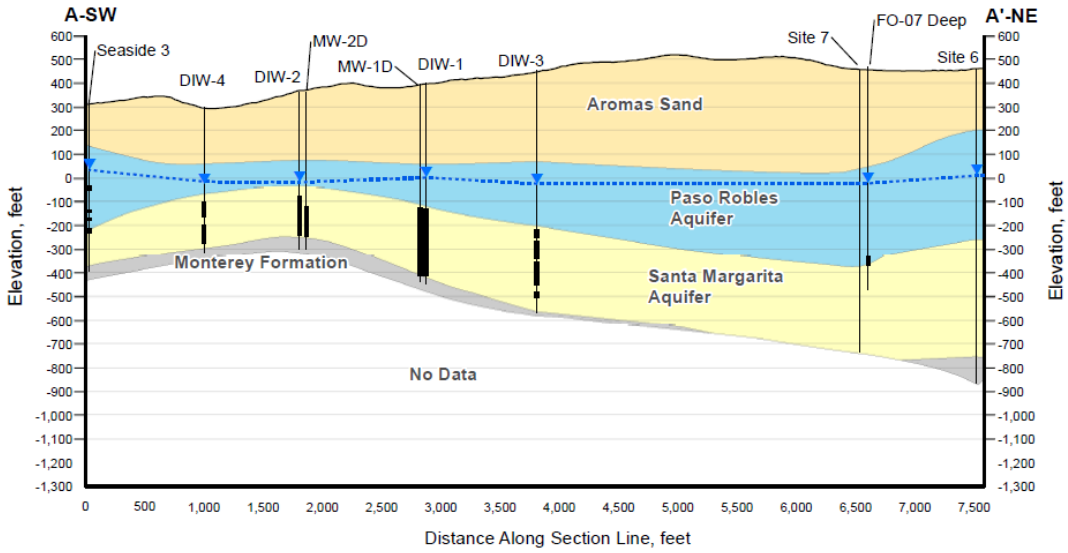


Figure 2. Geologic Cross Section through PWM Wells

The SM Aquifer is overlain by the Paso Robles Formation (PR Aquifer), which in turn is overlain by the relatively thin, surficial Aromas Sand Formation. The PR Aquifer consists of discontinuous layers of gravels, sands, silts and clays of continental origin. Relative to the SM Aquifer, the PR Aquifer has lower permeability and lower dissolved solids. At the PWM project location, the Aromas Sand Formation is unsaturated, and the water table is near the top of the PR Aquifer.

The Ord Grove #2, Paralta and Seaside Muni #4 Wells are screened in both the PR and SM Aquifers. Based on chloride and total dissolved solids (TDS) mixing ratios, approximately 67 percent of the water pumped from the Paralta Well and 69 percent of the water pumped from the Ord Grove 2 well is thought to derive from the SM Aquifer. Also, water level trends in both wells correlate better with other Santa Margarita wells than Paso Robles wells. Both wells create significant drawdown in the Santa Margarita Aquifer and contribute to the gradient between injection and extraction wells, which is one of the main factors affecting subsurface travel time of injected water.

Figure 3 shows contours of simulated groundwater elevation in the SM Aquifer in the PWM project area. Measured groundwater elevations are posted at the wells for which data are available. The general pattern of water levels has been the same for many years. The regional water-level gradient is from inland areas toward the coast. Pumping at the Ord Grove #2, Paralta and ASR-3/4 Wells creates a water-level trough superimposed on the regional gradient, with elevations as much as 60 feet below sea level at times. Because of this pumping trough, the local water-level gradient near the PWM wells is to the northwest, from DIW-1 and DIW-2 toward Paralta, from DIW-3 toward ASR-3 and from DIW-4 toward Ord Grove #2.

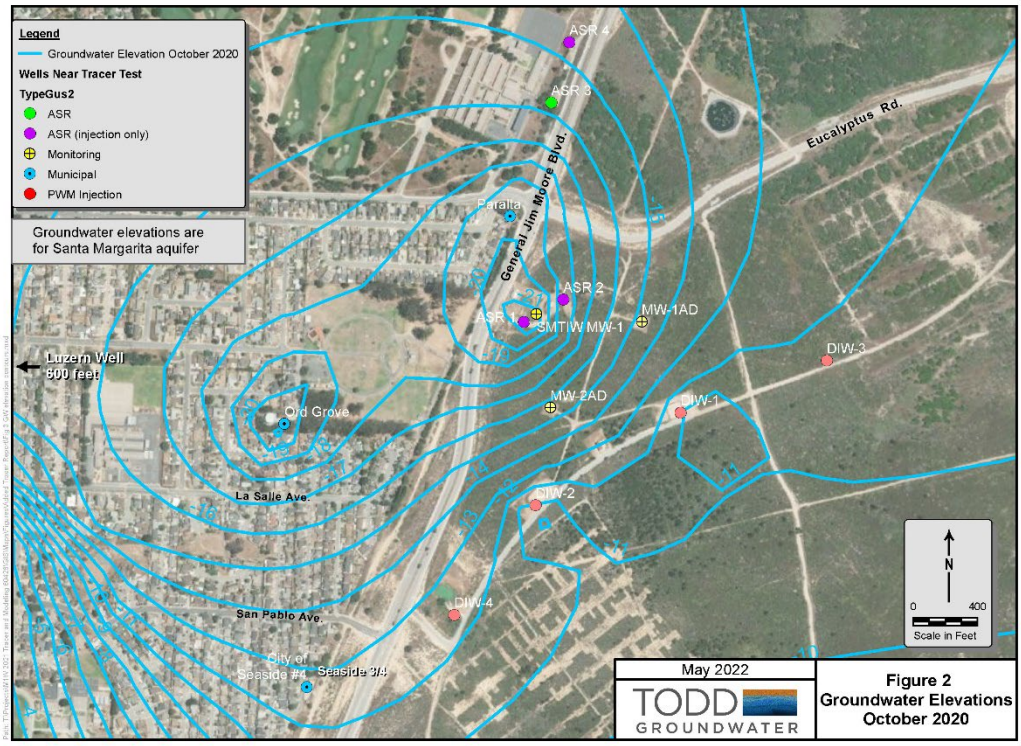


Figure 3. Contours of Regional Groundwater Elevations in the Santa Margarita Aquifer

DOWNGRADIENT MONITORING

The downgradient wells monitored for the intrinsic tracer study are all municipal supply wells with a history of EC measurements. The data are reported as specific conductance, which is the measured EC value adjusted to a standard temperature of 25 °C. Frequent additional measurements were made for this study to detect the arrival time and breakthrough curve for low-EC water from the upgradient injection well.

EC was measured at the Paralta, Ord Grove 2 and Seaside Muni #4 wells using a Hanna HI 17698194 multi parameter probe calibrated with Hanna Quick Calibration solution at the start of each sampling event. The Paralta and Ord Grove 2 wells are heavily used and were usually running at the time of each sampling event. The probe was immersed in water obtained from a sampling port at the well head. EC was measured for a minimum of 5 minutes to ensure that readings were stable. Seaside Muni #4 is used less frequently and was usually off at the time of the site visit. City staff turned on the well at the time of each site visit and the well was operated until three casing volumes had been discharged before starting the 5-minute sampling routine.

SAMPLING RESULTS FOR DOWNGRADIENT WELLS

Historical EC at the downgradient wells has been fairly stable, as shown in **Figure 4**. At Ord Grove 2, EC has been 830-901 µS/cm since 2011 with one low outlier that is a questionable data point. At ASR-3, EC was 800-820 µS/cm during the past year. At the Paralta Well, EC has been much more variable, ranging from 421-918 µS/cm since 2011. The variability is likely due to periodic injection of Carmel River water at the upgradient ASR wells. EC is lower at Seaside Muni #4 (381-464 µS/cm) because that well obtains a higher percentage of flow from the Paso Robles Aquifer. In contrast the EC of PWM injected water (measured as it leaves the treatment plant) has been 178-233 µS/cm since November 2020.

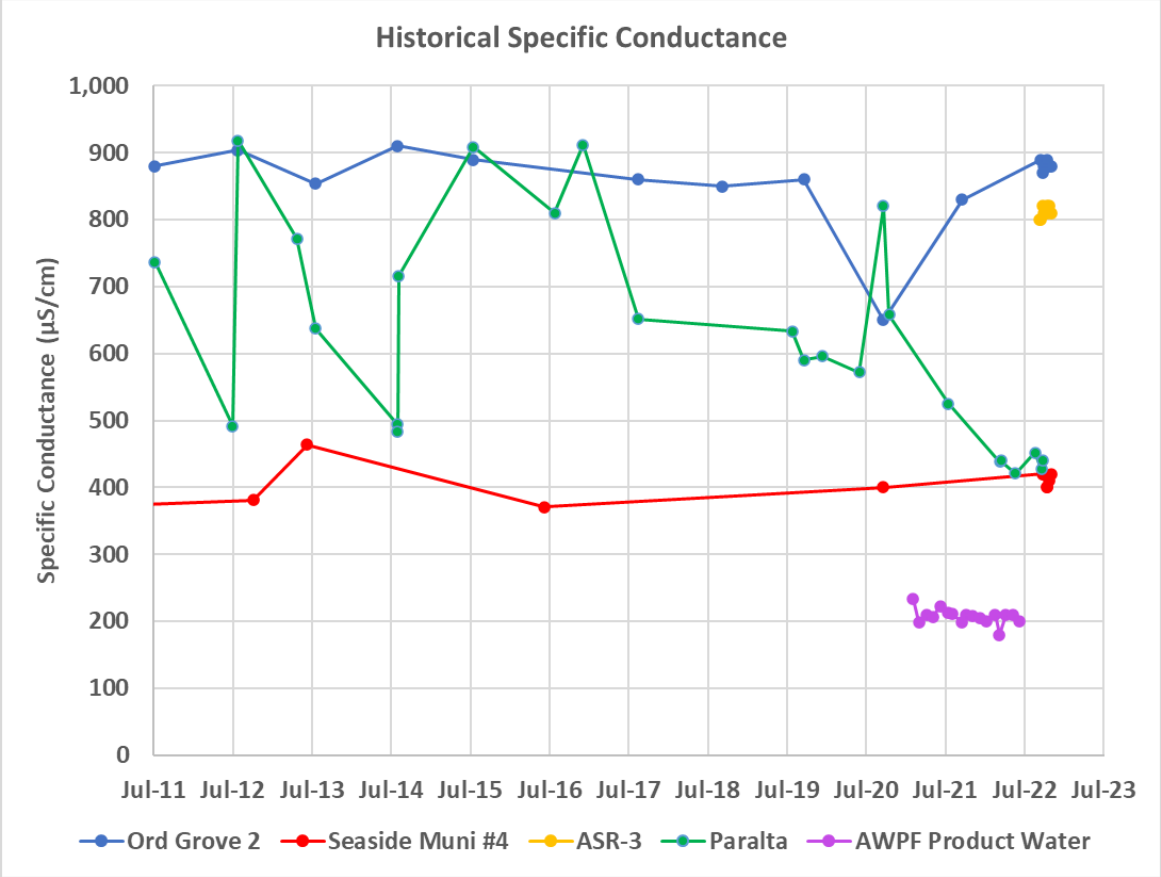


Figure 4. Historical EC Measurements at Downgradient Wells

EC measurements collected in recent months for the intrinsic tracer study are shown in **Figure 5**. Measurements collected through October 2022 show no downward deflection in EC, which means that PWM water had not reached any downgradient well within 7.5 months for DIW-3 and within 6.7 months for DIW-4.

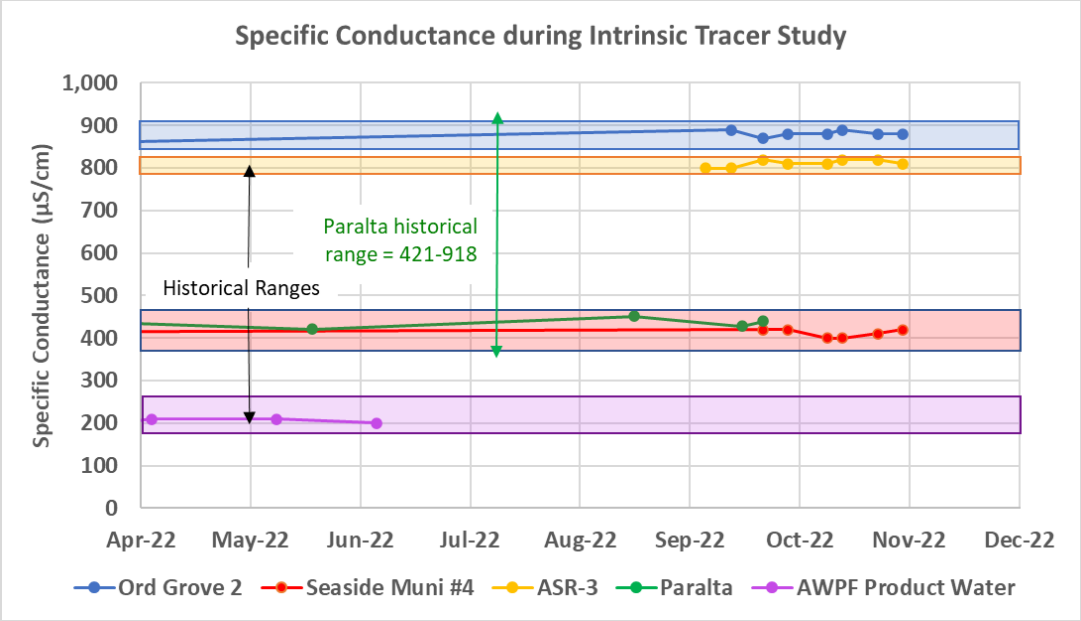


Figure 4. EC Measurements at Downgradient Wells during Intrinsic Tracer Study

CONCLUSIONS

Conclusions that can be reached from the DIW-3 and DIW-4 intrinsic tracer study include the following:

- PWM water injected at DIW-3 and DIW-4 did not reach any of the four potential downgradient wells within 6.7 months (DIW-4) to 7.5 months (DIW-3) following the start of injection.
- Injection and extraction conditions during the intrinsic tracer study were within the normal range of operating conditions. The PWM injection rates for DIW-3 and DIW-4 were 53-76 percent of their long-term sustainable capacities. Conditions were also relatively conservative in terms of travel time because of the relatively high CalAm extraction rates (equal to the maximum monthly rate during 2021) and because of the absence of substantial recent or concurrent ASR injection (which would increase travel time).
- PWM deep injection wells DIW-3 and DIW-4 qualify for 0.67 virus LRV credits per month of subsurface travel time measured by means of an intrinsic tracer. Applying that factor, DIW-3 qualifies for a virus LRV credit of 5.0 and DIW-4 qualifies for a virus LRV credit of 4.5.

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Monterey One Water (M1W). June 2022. Monterey One Water Pure Water Monterey groundwater replenishment project, engineering report addendum (Addendum to April 2019 Engineering Report). Monterey, CA.

Todd Groundwater. May 6, 2022a. Pure Water Monterey Groundwater Replenishment Reuse Project, added tracer study field results. Memorandum to California State Water Resources Control Board, Division of Drinking Water.

Todd Groundwater. October 10, 2022b. Pure Water Monterey Groundwater Replenishment Reuse Project, DIW-3 and DIW-4 intrinsic tracer study work plan. Memorandum to California State Water Resources Control Board, Division of Drinking Water.

APPENDIX A: DIW-3 AND DIW-4 INTRINSIC TRACER STUDY WORK PLAN

TODD GROUNDWATER

October 10, 2022

MEMORANDUM

To: Sherly Rosilela
State Water Resources Control Board
Division of Drinking Water

From: Gus Yates, Senior Hydrologist

Re: Pure Water Monterey Deep Injection Wells 3 and 4 Intrinsic Tracer Study Work Plan—Draft

Monterey One Water (M1W) submitted a draft update to the engineering report for its Pure Water Monterey (PWM) groundwater replenishment project to the Division of Drinking Water (DDW) on June 10, 2022. DDW responded with comments on August 30, 2022. Among the comments was a request for an added (extrinsic) tracer study for Deep Injection Wells 3 and 4 (DIW-3 and DIW-4).

Current operating conditions represent a de facto intrinsic tracer as long as downgradient wells are monitored for the arrival and peak of PWM water. The work plan described here is for capturing the results of this intrinsic tracer study. A separate memorandum presents a work plan for a subsequent added tracer study.

Current operating conditions approximate those represented by Scenario 6—the "likely operating scenario"—described in the engineering report update. **Figure 1** below is copied from Appendix O of the engineering report update and shows that the nearest downgradient drinking water well for DIW-3 is well ASR-3, and the nearest for DIW-4 is Ord Grove 2. The simulated t_{10} travel time from DIW-3 to ASR-3 for that scenario was 6.2 months. The t_{10} travel time from DIW-4 to Ord Grove 2 was 4.0 months. The t_{10} travel time is the time when the concentration of the tracer reaches 10 percent of its eventual peak concentration. The GRRP regulations state that one virus log removal credit will be given for each month of t_{10} travel time, up to a maximum of 6 months.

DIW-3 and DIW-4 began injecting in mid-March and early April 2022, respectively. **Table 1** shows that the average injection rates during April-August 2022 was less than the rates assumed in Scenario 6. Travel time is a function of the average rates up to the time of arrival; brief periods above or below the average have little effect. The table also shows that the average extraction rates at ASR-3 and Ord Grove 2 were also smaller than the rates assumed in Scenario 6. Travel time between an injection well and downgradient extraction well is approximately proportional to the sum of the injection and extraction rates (as absolute values). Based on this proportionality, the expected t_{10} travel time for DIW-3 to

ASR-3 is about 6.9 months, which corresponds to mid-October 2022. The expected t_{10} travel time for DIW-4 to Ord Grove 2 is 5.8 months, which corresponds to early October 2022. Monitoring of water quality at ASR-3 and Ord Grove 2 has already commenced to ensure that this opportunity to obtain intrinsic tracer results is not missed. Details of the sampling schedule are provided below.

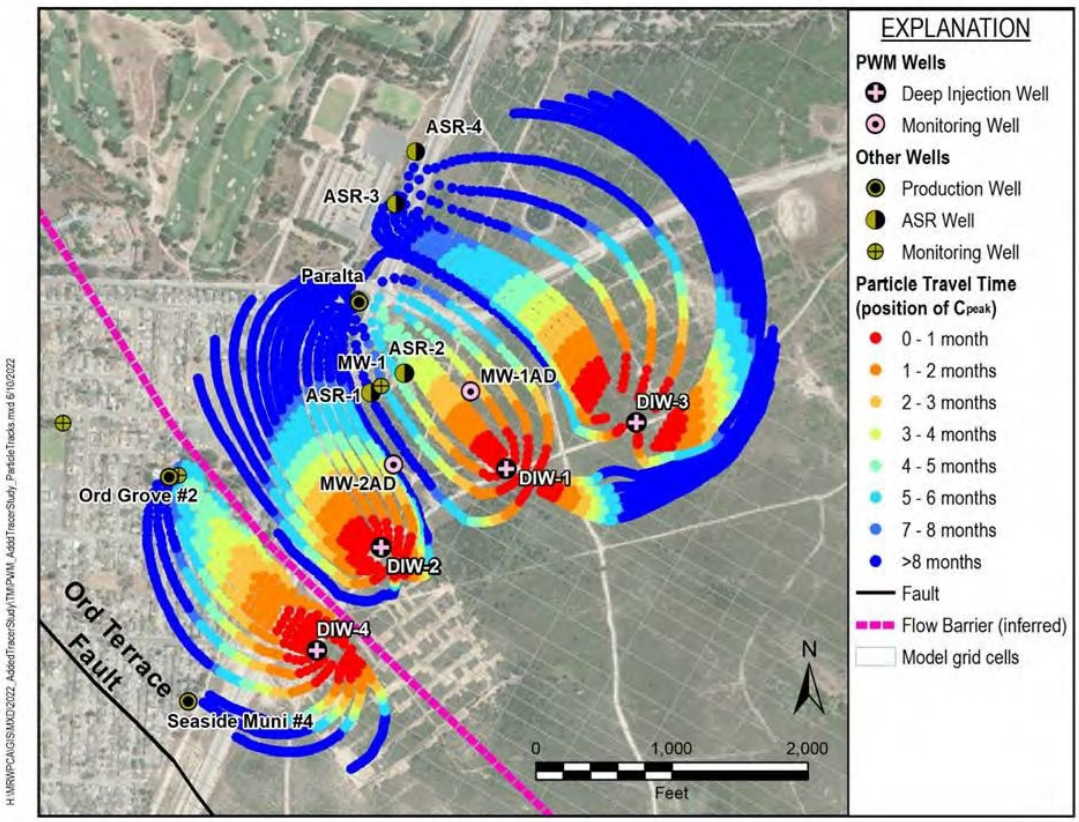


Figure 1. Particle Traces Showing Travel Times for Scenario 6

Table 1. Simulated and Actual Injection/Extraction Rates and Estimated Travel Times

Well	Scenario 6 (gpm)	April-August 2022 Actual Extraction and Injection Rates (gpm)[1]							T_{10} Travel Time (months)	
		April	May	June	July	August	Average	(% of Scenario 6)	Scenario 6	Expected 2022
DIW-3 Injection	851	1,022	771	608	679	722	760	89%		
ASR-3 Extraction	1,568	1,441	1,429	1,407	1,372	1,359	1,402	89%		
Sum	2,419	2,462	2,200	2,015	2,051	2,082	2,162	89%	6.2	6.9
DIW-4 Injection	630	129	220	326	341	339	271	43%		
Ord Grove 2 Extraction	874	773	746	732	774	811	767	88%		
Sum	1,504	903	966	1,058	1,115	1,150	1,038	69%	4.0	5.8
DIW-4 Injection	630	129	220	326	341	339	271	43%		
Seaside Muni #4 Extraction	127	107	122	111	1	102	89	70%		
Sum	757	236	341	438	342	441	360	47%	12.4	26.1

Notes:

[1] Values are averaged over each month. Injection rates are net injection (gross injection minus backflush).

Hydrogeologic Conditions

DIW-3 and DIW-4 inject into the Santa Margarita sandstone. ASR-3 extracts entirely from that formation. Ord Grove 2 extracts primarily from the Santa Margarita Formation and partly from the Paso Robles Formation. Seaside Muni #4 extracts primarily from the Paso Robles and only slightly from the Santa Margarita. Hydrogeologic conditions and wells in the PWM project area were previously described in the intrinsic tracer study work plan for DIW-1 and DIW-2 (Todd Groundwater, 2019) and the added tracer study work plan for DIW-1 and DIW-2 (Todd Groundwater, 2021).

Intrinsic Tracer Composition

Water injected at DIW-3 and DIW-4 is advanced purified recycled water that has gone through numerous purification steps, including reverse osmosis. It is also stabilized and the pH is adjusted to prevent pipe corrosion and subsurface mineral dissolution. The dissolved solids content of the product water is much lower than that of native groundwater, and this difference will serve as the "tracer" for the intrinsic study. The chemical marker that will be measured is specific conductance. Historical specific conductance measurements of injected water (AWPF product water) and groundwater from the monitoring wells are compared in **Figure 2**. The specific conductance of the injected water has remained steady at around 200 µS/cm over the past two years. Historical measurements at Ord Grove 2 and ASR-3 have been in the 800-900 µS/cm, or about four times the specific conductance of the injected water. Historical specific conductance at Seaside Muni #4 has always been lower because the well is screened primarily in the Paso Robles Formation. Nevertheless, the values have been about double the value of injected water, which is a large enough difference to detect arrival of injected water. When injected water arrives, measured specific conductance at the downgradient wells will start to decline. If injection continues, specific conductance will level out within a few months at a level that reflects the steady-state mixing of injected water and groundwater along the flow path. This was the observed pattern for the previous intrinsic tracer study for DIW-1 and DIW-2.

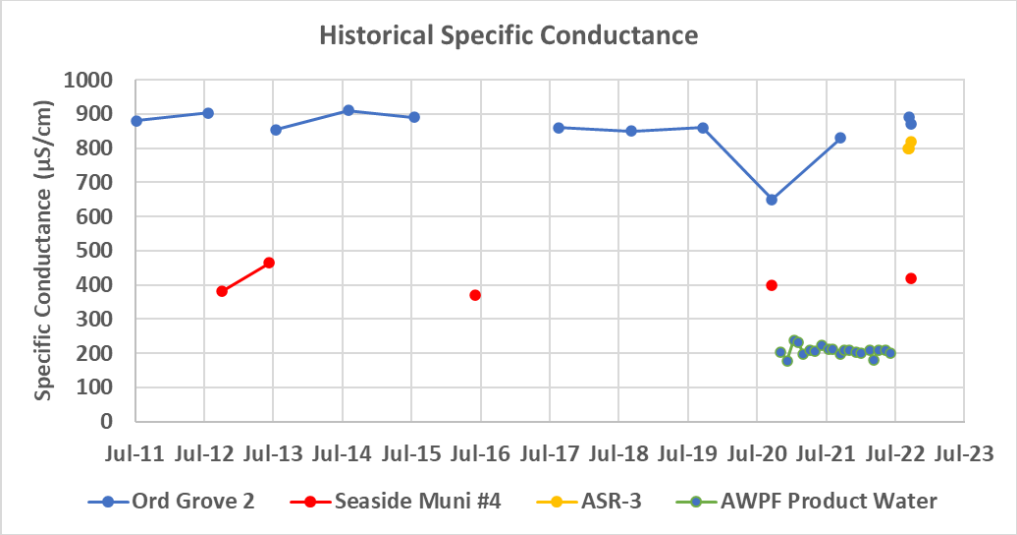


Figure 2. Pre-Test Specific Conductances of Injection and Monitoring Wells

Monitoring Locations and Schedule

ASR-3, ASR-4, Ord Grove 2 and Seaside Muni #4 will be monitored for the study. The monitoring schedule is shown in **Table 3**. Weekly measurements of specific conductance commenced at ASR-3 on September 6, 2022 and will continue until it reaches a minimum value. When injected PWM water arrives at the downgradient wells, specific conductance is expected to decline and then stabilize at a lower value that reflects a blend of PWM water and local groundwater. This pattern was observed during the intrinsic tracer study for DIW-1 and DIW-2.

Table 3. Monitoring Schedule

Well	Start Date	Frequency	Approximate End Date[1]
ASR-3	9/6/2022	Weekly	12/31/2022
Ord Grove 2	9/13/2022	Weekly	11/30/2022
Seaside Muni #4	9/22/2022	Weekly	12/31/2022
ASR-4	TBD[2]	Weekly	12/31/2022

Notes:

[1] If specific conductances stabilizes at a low level prior to this date, sampling may be distontinued.

[2] Sampling will commence the week that ASR-4 comes on-line with its new treatment systed, expected to be in October 2022.

Specific conductance will be measured at wellhead sampling ports for all of the monitored wells. None of the wells has continuously monitored specific conductance that is reported to

a SCADA data logging system. Accordingly, samples will be grab samples at the time of each weekly site visit. Measurements will be made using a Hanna© HI 17698194 multi-parameter probe calibrated with Hanna Quick Calibration solution prior to collection of field parameters. If the well is not running when staff arrive for the site visit, they will ask the Cal-Am or Seaside municipal well operators to turn the well on and wait for three casing volumes to be discharged and specific conductance to stabilize prior to recording the measurement.

Treatment equipment is being installed at ASR-4 that will allow it to be used as a municipal supply well. The equipment is expected to come on-line in October. Although that well is farther from DIW-3 than ASR-3 is, it will be added to the monitoring network to provide a measured value of travel time, if possible. Weekly monitoring of specific conductance at that well will commence when it comes on-line. Weekly monitoring at Ord Grove 2 commenced on September 13, 2022 and will continue until specific conductance reaches a minimum value.

The results of the added tracer study for flow from DIW-1 to the Paralta Well showed that the peak tracer concentration occurred 38 days after the concentration reached the t_{10} level. The distance from DIW-4 to Ord Grove 2 is similar to the distance from DIW-1 to Paralta, so the delay from t_{10} to peak concentration is expected to be similar. Thus, specific conductance is expected to reach a minimum sometime in November at Ord Grove 2. Dispersion is roughly proportional to distance traveled, and the time from t_{10} to t_{peak} would likely increase in proportion to the distance traveled. Thus, for planning purposes, sampling at ASR-3 will continue through December 2022 if a clear minimum has not been reached. If concentrations are still changing at that time, monitoring may be continued into January.

Water injected at DIW-4 since April 2022 is not expected to reach Seaside Muni #4 in less than two years (Table 1). That well is being monitored to confirm that water does not arrive in less than 4 months or before it arrives at Ord Grove 2. Monitoring at Seaside Muni #4 will be discontinued when monitoring at Ord Grove 2 is discontinued.

Data Analysis and Reporting

Graphs of specific conductance over time will be the basis for evaluating the travel time of injected water. This was the primary tool used for the DIW-1 and DIW-2 intrinsic tracer study in 2020-2021. Results of the study will be documented in a technical memorandum.

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Todd Groundwater. September 28, 2021. Pure Water Monterey Groundwater Replenishment Reuse Project, Added Tracer Work Plan. Technical memorandum

submitted to Aide Ortiz, California State Water Resources Control Board, Division of Drinking Water.

Monterey One Water
Providing Cooperative Water Solutions

Appendix H. Technical Memorandum: Dr. Scott Fendorf, Projected Arsenic Fate Post-Injection within Pure Water Monterey One Water Replenishment System. July 2022

July 8, 2022

Projected Arsenic Fate Post-Injection within Pure Water
Monterey One Water Replenishment System

Scott Fendorf, Ph.D.

Controlling Geochemistry of Arsenic

Arsenic is a common, rock-derived element present within aquifers globally. Arsenic is liberated from sediments into groundwater through a combination of biogeochemical processes (linked to hydrologic factors) that can broadly be grouped into four categories: (1) ion displacement (principally induced by phosphate), (2) pH promoted desorption of As(V) from Fe(III) and other minerals at pH values > 8.5, (3) reductive dissolution of As(V) and Fe(III) (typically from As(V) adsorbed on Fe(III) minerals) under anaerobic conditions, and (4) oxidative dissolution of As-bearing (iron) sulfide minerals. The latter process (sulfide oxidation) typically leads to an ephemeral pulse of dissolved arsenic that is ultimately quenched by As(V) adsorption onto sediments, and in particularly Fe(III) oxides and hydroxides formed by Fe sulfide oxidation; thereafter, the dissolved concentrations of As are controlled by factors promoting (or limiting) adsorption (mostly pH).

Retention of arsenic onto soil solids is foremost dependent on its oxidation state, and two oxidation states of arsenic, As(V) and As(III), predominate in surface and near-surface environments. In general, As(V) binds extensively and strongly to most mineral constituents of soils and sediments, while As(III) retention is weaker and leads to both greater dissolved concentrations and migration. As a result of the strong partitioning of As(V) on Fe(III) oxides and hydroxides (along with other metal oxides and clay minerals) within oxygenated (aerated) soils and sediments, total As levels often correlate with Fe content (Smedley and Kinniburgh, 2002).

Within oxygen-limited environments where sulfide is present, As(III) can adsorb on or precipitate with sulfide minerals. In fact, As(III) concentrations are often controlled by sulfide precipitates in regions where sulfidogenesis (biological production of sulfide) occurs, limiting As(III) concentrations (Moore et al., 1988). Under hydrothermal conditions with high Fe^{2+}, sulfides may coprecipitate with Fe and As as arsenopyrite (FeAsS) or arsenic-rich (arsenian) pyrite [$Fe(S,As)_2$]; at lower levels of ferrous-iron, orpiment (As_2S_3) or realgar (AsS) may form. Iron

sulfide minerals are, in fact, often the host of arsenic within aquifer sediments of marine origin when deposited under anoxic conditions.

Processes of Leading to Arsenic Release

Processes that reverse or limit arsenic retention result in groundwater arsenic contamination. The most common, albeit not exclusive, process leading to high arsenic levels in waters occurs under (non-sulfidic) anaerobic conditions whereby As(V) and Fe(III)-minerals undergo reductive dissolution. Organic matter in the water or sediments leads to O_2 consumption by aerobic microorganisms; when consumption exceeds supply rates, the prevailing anoxic conditions lead to anaerobic metabolisms. The consequence of anaerobic conditions is the production of Fe(II) and As(III) with a concomitant increase in dissolved As concentrations. The second most common conditions leading to arsenic release occurs under oxygenated conditions when the pH values exceed 8.5. Such pH values occur most commonly in arid environments with low calcium concentrations (limiting formation of $CaCO_3$ that buffers the pH around 8.2) such as the highlands of the Andes. However, advanced treatment of recycled water followed by a sodium hydroxide and calcium chloride polishing step can yield pH values exceeding 8.5 as well. The third possible release mechanism is when and anion of comparative binding strength displaces As(V) from mineral surfaces; phosphate is of particular concern in this regard (Manning and Goldberg, 1996; Dixit and Hering, 2003), and regions where fertilizer or pesticide runoff and leaching occurs are specifically at risk for this mobilization pathway (Peryea and Kammerack, 1997). Both dissolved silicate and organic acids can also competitively limit arsenic adsorption or promote desorption (Grafe et al., 2002). Other anions, such as Cl^-, SO_4^{2-}, and NO_3^-, have minimal direct impact on arsenic retention. As noted above, arsenic may also reside in (or on) sulfide minerals, particularly in marine deposits, that can be dissolved (destroyed) by oxidative reaction with oxygen or nitrate. The oxidation process, however, also creates Fe(III) oxides and hydroxides that then serve as scavengers of As(V)—also formed during oxidation—and the consequential decrease in dissolved arsenic concentrations. Thereafter, if the Fe(III) oxides are not reduced, pH values remain below 8.5, and phosphate is not introduced, dissolved arsenic concentrations will typically reside below drinking water standards.

Evaluation of Monterey One Water Geochemical Conditions

The drill logs, known lithology for the Salinas Valley, and studies associated with the ASR project offer insights into the potential origins and thus threats of arsenic. However, it is important to note that to gain the most accurate assessment of arsenic, direct measurement of arsenic concentrations in sediments (of each strata) and, ideally, its chemical state and controlling mineralogy-geochemistry would be required. Nevertheless, the color, particle size, and known deposition, and general mineralogical analysis of the Santa Margarita Aquifer provide important insights into the geochemistry of the sediments. The combination of alluvial sediments mixed with marine deposits give rise to variations in mineralogy and geochemistry. Light (including yellow) colored to orange-red tinted sediments largely signal oxidizing conditions, with yellows-oranges-reds indicative of Fe(III) oxides and hydroxides. An example is noted in the well logs for ASR-1 that denote reddish brown, moderately well sorted fine-medium sands at *ca.* 40-50 ft below ground surface. If arsenic is present in sediments with these colorings, it would likely be in the form of As(V) and associated with iron minerals. Gray, dark-gray and green(ish)-blue(ish) sediments generally signify a chemically reduced state that resulted from anaerobic conditions. Examples are the olive-green clayey sands at ca. 700-750 ft in ASR-3 and the Monterey shale/formation noted in ASR-1, MW-1AD, and MW-2AD. If sulfidic conditions persisted within these strata, such as in marine or estuarian deposits, and arsenic is present, it will commonly be associated with sulfide minerals such as pyrite. The abundant phases noted by X-ray diffraction analysis do not reveal pyritic or arsenic-bearing phases (Murphy, 2007), but trace pyrite was postulated from inverse geochemical modeling of the Santa Margarita Aquifer for the ASR project (wells SMTIW#2, aka ASR-2, and SMTIW#1, aka ASR-1) (Short, 2008)

Considering the potential arsenic sources within the sediments, it is next important to cover the geochemical conditions that high-purity water injections create in the subsurface, and then to place these in relation to how they will affect arsenic—specifically whether dissolution/desorption is likely to transpire. The injection water is high purity, oxygenated water. The translation is that it should neither induce competitive ions that displace arsenic nor the onset of low-oxygen conditions that could result in the reductive dissolution of arsenic from iron oxides. On the latter point, the water has very low dissolved organic carbon and is oxygenated, leading to oxidizing and not reducing conditions. Thus, two of the possible release mechanisms (reductive dissolution and competitive displacement) are unlikely upon delivery of the aerated, high-purity water.

The next possibility we need to consider is the pH of the injection water. Within oxidized sediments, if arsenic is present it will typically exist as As(V), and dissolved concentrations will be controlled by its adsorption on mineral surfaces, with iron oxides playing a particularly strong role. For conditions where As(V) adsorption controls arsenic partitioning, if the pH of the system increases above pH 8.5, As(V) will undergo progressive desorption, leading to concomitant increases in groundwater concentrations. Examining the (laboratory) measured pH of AWPF effluent, the pH exceeded pH 8.5 only upon the onset of injection (February 2020); thereafter, the pH decreased for the next 4 months, reaching a low around 6.5, and then increased to 8 in September 2020. It is possible that the short period of high pH in February (2020) release arsenic from sediments, but re-adsorption as the pH decreased should be rapid and limit dissolved concentrations in the subsequent periods. The rapid response of dissolved arsenic to changes in pH (causing arsenic to desorb or adsorb) within managed aquifers is well illustrated for the mid-basin injection system of Orange County Water District (Fahkreddine et al., 2020).

The last possibility is the oxidation of arsenic-bearing sulfides. While we do not have chemical and mineralogical data that will allow definitive assessment of arsenic-bearing sulfides, the color and known depositional history along with inverse modeling of the ASR geochemistry can provide insight into the possible form of arsenic if it is present. Shales of the Monterey Formation, for example, would likely have arsenic within arsenian pyrite (again, if arsenic is present). In general, the olive-green to dark gray sediments have optical properties consistent with reduced conditions that could include sulfidic arsenic forms. Accordingly, upon receiving oxygenated water, Fe(II)-sulfides will undergo oxidative dissolution, releasing other elements in co-association. Again, if arsenic is present, it will thus be released to solution. However, the dual oxidation of arsenic to As(V) and formation of Fe(III) hydroxides and oxide minerals will lead to the repartitioning of arsenic back to the solid phase.

Observed Impacts of Injection on Water Chemistry

A small arsenic pulse within the groundwater is noted for well MW-2D (Figure 1). Importantly, the water chemistry thus indicates that there is a source of arsenic within the alluvial-marine sediments. Further, the pulse itself tells us that there are two possible pathways of arsenic release. The first possibility is that the temporary change in pH above the critical value of 8.5 induced by the initial injection water resulted in desorption from minerals within the aquifer; the

change in pH of lower values (less than 8) then led to the re-adsorption of arsenic back onto the aquifer sediments. The pH-displacement is a possible source of arsenic, but in comparing the pH to dissolved arsenic concentrations, the lack of correlation coupled with the known rapid geochemical response (adsorption and desorption) to pH leads me to suspect that pH was not a major contributor to dissolved arsenic. In a similar aquifer system associated with OCWD, dissolved arsenic concentrations rapidly changed with pH (Fahkreddine et al., 2020). Thus, we should look to a second geochemical alternative that would explain the pulse of arsenic. The alternative explanation is that injection of oxygenated water induced the displacement or

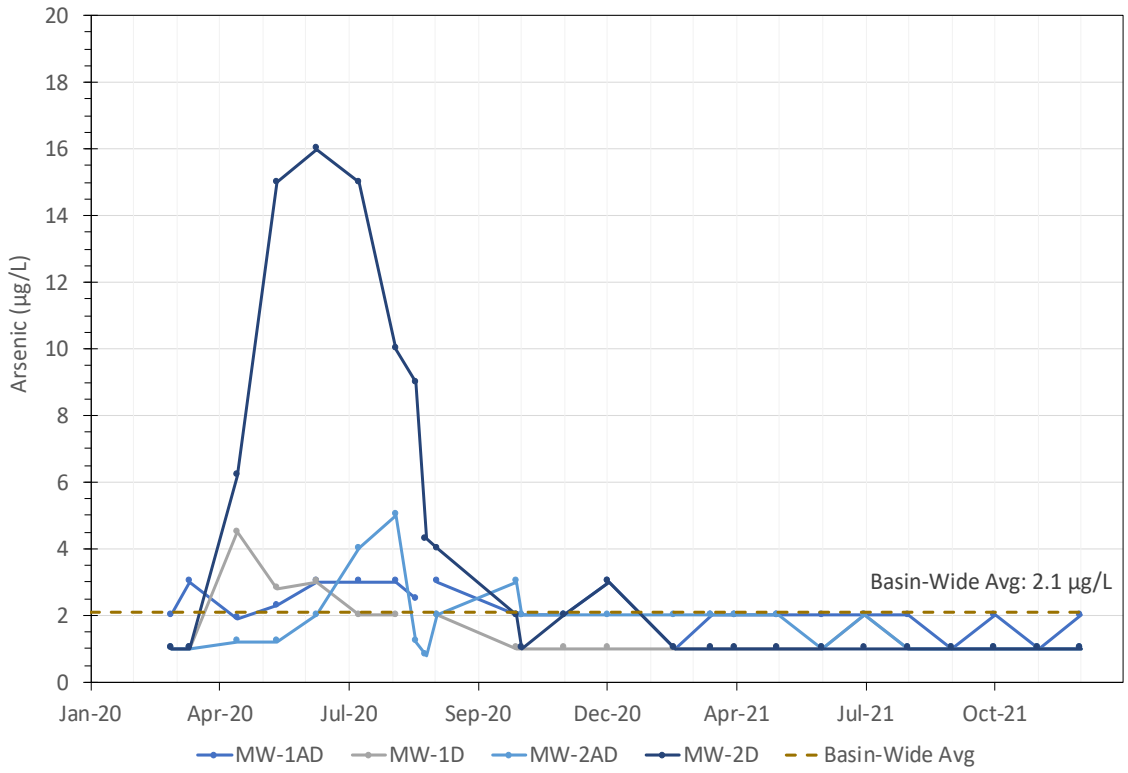


Figure 1. Dissolved arsenic concentrations within AWPF effluent and monitoring wells post injection.

dissolution of a finite quantity of arsenic likely via oxidative dissolution of arsenic-bearing sulfide minerals (such as arsenian pyrite). Arsenic dissolution was then followed by the formation of secondary iron hydroxide minerals that re-adsorbed arsenic. The combination of arsenic release followed by re-adsorption and flushing is consistent with a small quantity of As-bearing sulfides undergoing oxidative dissolution and explains the approximately 5-month period of elevated arsenic within MW-2D. The small pulse is also consistent with only trace quantities of pyrite. X-ray diffraction analysis of Santa Margarita Sandstones failed to detect pyrite or other mineral

sulfide (Murphy, 2007), and total sulfur analysis shows the possibility for trace levels (Tanner and Short, 2019), with inverse geochemical modeling inferring small quantities of pyrite in the Santa Margarita ASR aquifer (Short, 2008). Further, the observations here are similar to those observed for OCWD's injection of high purity water into aquifers containing arsenian pyrite (Fahkreddine et al., 2020). In the case of OCWD, after oxidative dissolution, the fate of arsenic was controlled by the pH of the injection water and advective displacement/dilution of arsenic. At pH values less than 8.5, arsenic released during oxidative dissolution was subsequently readsorbed on newly formed iron hydroxides, limiting dissolved concentrations (Fahkreddine et al., 2020). There is also the possibility of a small, finite quantity of arsenic adsorbed on clay minerals through weak electrostatic forces that is displaced by the injectate, as was seen for spreading basins within OCWD (Fahkreddine et al., 2015). In the case of the OCWD spreading basins, arsenate anions were bound to negatively charged clay mineral through Ca^{2+} or Mg^{2+} bridging ions (meaning that the divalent cations bind to the mineral surface and the arsenate anion binds to the extra positive charge of the cation) that are easily displaced. Arguing against this possibility, however, is a highly localized (single well) signature of elevated dissolved arsenic.

Recommendations and Future Assessment

On the basis of existing data (inclusive of monitoring well water chemistry, well logs, known depositional strata and ASR well data), arsenic is likely partitioned as As(V) onto aquifer solids. In the case of the aquifer strata upstream of MW-2D, arsenic was likely released from arsenic-bearing mineral sulfides and subsequently partially repartitioned onto newly formed Fe(III) minerals.

Recommendation 1

With As(V) adsorption now controlling the dissolved concentrations in the Pure Water Monterey aquifer system, maintaining a pH less than 8.5 for the injection water will prevent (pH-induced) desorption of As(V) from minerals within the sediments.

Recommendation 2

Prolonging injection of aerated water into aquifer will limit the potential rebound of arsenic noted in MW2D during the initial period of injection—the longer the period of injection, the smaller and less likely a rebound will occur.

Explanation of Recommendation 2 and Projections

Within the upstream sediments of MW2D, and only in this specific zone, a small quantity of arsenic appears to have been mobilized by oxidative dissolution of arsenic-bearing sulfides and either repartitioned onto newly formed Fe(III) minerals upon receiving oxygenated water or flushed from the aquifer—or a combination of both processes. While the phase is likely an arsenian pyrite (i.e., pyrite with trace quantities of arsenic substituting for sulfur, $FeS_{2-x}As_x$), I use arsenopyrite to illustrate the reactions controlling arsenic upon oxygenation.

$$FeAsS + 3\frac{1}{2}O_2 + 4H_2O \Rightarrow Fe(OH)_3 + SO_4^{2-} + H_2AsO_4^{2-} + 3H^+$$

Generation of $Fe(OH)_3$ then should adsorb the As(V) (existing as $H_2AsO_4^-$ or $HAsO_4^{2-}$), leading to its repartitioning to the solid phase (i.e., removal from the groundwater). Here, the reaction shows

$$\boldsymbol{Fe(OH)_3 \equiv OH} + H_2AsO_4^- \Rightarrow \boldsymbol{Fe(OH)_3 \equiv H_2AsO_4} + OH^-$$

the solid phase (bold, left side) having a hydroxyl ion displaced by the As(V) molecule, leading to the adsorbed complex (bold, right side). The strong complexation of As(V) then limits its dissolved concentration provide the pH is maintaining below ~8.5.

However, it is possible that the strata originally hosting the sulfide minerals may contain organic matter that could result in oxygen being depleted and arsenic release through reductive dissolution or As(V)-bearing Fe(III) minerals. Under oxygen-limiting conditions, microorganisms have the capacity to use alternate electron acceptors (to oxygen) in respiration. The general sequence of electron acceptors is O_2 followed by nitrate, manganese dioxides, iron hydroxides, sulfate, and then methanogenesis (Kocar and Fendorf, 2009). Nitrate and manganese dioxide minerals thus help to buffer against microbial utilization of Fe(III) and As(V). Yet, once both are utilized, microbial reduction of As(V) and Fe(III) (as AsV-$Fe(OH)_3$), will transpire. Thus, microbially driven oxidation of organic carbon coupled to the dissimilatory reductive dissolution of As-bearing Fe oxides causes the transfer of arsenic from sediment solids to groundwater (Fendorf et al., 2010), as shown below:

$$CH_2O + 4\mathbf{FeOOH\text{-}(H_2AsO_4)_x} + (7+3x)H^+ \Leftrightarrow 4Fe^{2+} + HCO_3^- + (6+x)H_2O + xH_3AsO_3$$

where CH_2O generically represents organic carbon within the sediments and may include other fermentation products such as $H_{2(aq)}$, As(V) (as arsenate) is bound to Fe oxide (goethite as written in reaction 1) and x is the stoichiometric coefficient of As content associated with the Fe oxides. Dissimilatory As(V)/Fe(III) reduction requires anaerobic conditions with low sulfate supply and microbially available organic carbon, and the rate is further dependent on the reactivity (toward microbial reduction) of the As-Fe solid phase complex.

The aquifer appears sulfur limited (for reformation of As-bearing iron sulfides), and thus the extent and rate of microbial reductive dissolution of arsenic will depend primarily on the available organic carbon within the sediments. Stimulating microbial oxidation of organic carbon thus helps to mitigate future reduction by promoting the aerobic consumption of organic carbon, again represented here as the simplified sugar CH_2O.

$$CH_2O + O_{2\,(aq)} \rightarrow HCO_3^- + H^+$$

With aerobic microbial respiration being both faster and more complete (meaning a greater set of compounds can be decomposed) than anaerobic conditions, continued injection will help deplete the microbially available carbon. The projected outcome, while only verifiable through experimentation, is that at a minimum the rate of arsenic released due to a reductive dissolution rebound will decrease proportionally to the period of injection. In Figure 2, I illustrate the dissolved concentration of arsenic that would result for a similar zone of interaction that resulted during the oxidative release of 2020 noted in MW2D. For the sake of the illustration, I show results for a flow rate in the absence of injection being half that during the injection—slower flow rates will yield higher concentrations; the same concentration curve would result, however, if the release rate were one-fifth the rate in 2020 but the flow rate decreased to one-fifth that occurring during injection. The primary purpose of the figure is to illustrate how a decrease in organic matter over the period of injection due to aerobic microbial respiration will lead to progressively slower release rates of arsenic upon termination of injection.

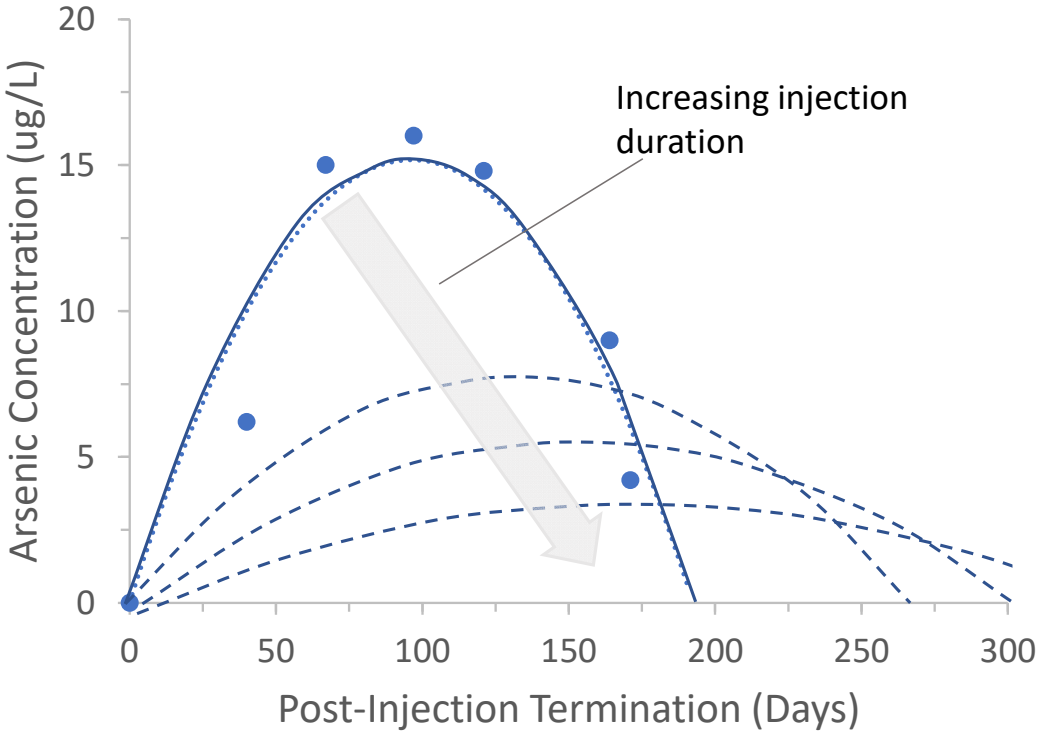


Figure 2. Projected aquifer (dissolved) arsenic concentrations after the termination of Pure Monterey One injection in the vicinity of MW2D (assuming a similar zone of interaction). The solid line represents the concentration projected for a reductive dissolution rate half the observed (2020) oxidative release rate but with half the flow rate; the same result would occur if the reaction rate decreased to one-fifth the 2020 value but the flow rate is one-fifth of that occurring during injection. Importantly, successively decreasing rates of release resulting from increased duration of inject due to the burnout of organic carbon, illustrated by dashed lines.

It is also worth noting that arsenic concentrations are unlikely to exceed the drinking water standards given expected reaction rates, and, most importantly, become less likely to do so with increasing duration of injection.

To reiterate the primary point of the second recommendation, continuing to run the Pure Water Monterey injection will lead to decreasing risk of arsenic within the aquifer that could result from a reductive dissolution rebound.

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From:	Bishop, James@Waterboards
To:	Alison Imamura
Cc:	Epp, Jennifer@Waterboards; Joanne Le; Jose Guzman; Tamsen McNarie; Robert Marks; Jonathan Lear; Conners Denise; Mike McCullough; Packard, Harvey@Waterboards
Subject:	RE: Dr. Scott Fendorf Report about Pure Water Monterey
Date:	Tuesday, August 23, 2022 4:12:30 PM
Attachments:	image001.png

Hi Alison,

I've finished reviewing the report from Dr. Fendorf and I don't have any comments other than to say that the report is thorough and addresses the Regional Board's concerns. I appreciate that the report addressed the potential for arsenic rebound and included some recommendations for minimizing the potential for future arsenic dissolution. Thanks to you and the rest the team at Monterey One Water for working with Dr. Fendorf to produce this report.

Thanks,
James

James Bishop
Engineering Geologist, PG
Central Coast Regional Water Quality Control Board
Waste Discharge Requirement (WDR) Program
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San Luis Obispo, CA 93401

From: Bishop, James@Waterboards
Sent: Thursday, August 11, 2022 11:36 AM
To: Alison Imamura <Alison@my1water.org>
Cc: Epp, Jennifer@Waterboards <jennifer.epp@waterboards.ca.gov>; Joanne Le <joanne@my1water.org>; Jose Guzman <joseg@my1water.org>; Tamsen McNarie <tamsen@my1water.org>; Robert Marks <rmarks@pueblo-water.com>; Jonathan Lear <jlear@mpwmd.net>; Conners Denise <denisec@lwa.com>; Mike McCullough <MikeM@my1water.org>
Subject: RE: Dr. Scott Fendorf Report about Pure Water Monterey

Great, thank you! I look forward to reviewing and will let you know if I have any questions/comments.

Thanks,
James

James Bishop
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Central Coast Regional Water Quality Control Board
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From: Alison Imamura <Alison@my1water.org>
Sent: Wednesday, August 10, 2022 4:42 PM
To: Bishop, James@Waterboards <James.Bishop@Waterboards.ca.gov>
Cc: Epp, Jennifer@Waterboards <Jennifer.Epp@waterboards.ca.gov>; Joanne Le <joanne@my1water.org>; Jose Guzman <joseg@my1water.org>; Tamsen McNarie <tamsen@my1water.org>; Robert Marks <rmarks@pueblo-water.com>; Jonathan Lear <jlear@mpwmd.net>; Conners Denise <denisec@lwa.com>; Mike McCullough <MikeM@my1water.org>
Subject: Dr. Scott Fendorf Report about Pure Water Monterey

EXTERNAL:

Dear James,
I thought I had sent the attached already, but I just realized that I had forgotten to send it. See attached Report from Scott Fendorf for your review.

Thanks for your patience.

Alison Imamura, PE, AICP
Principal Engineer

5 Harris Court, Building D
Monterey, CA 93940
Mobile: (831)915-6630

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Appendix I. 2022 MCWD Blackhorse Reservoir Inspection & Backflow Testing Records

Blackhorse Reservoir Tank Inspections

Reporting year: 2022

The Blackhorse Reservoir is a two-million-gallon storage tank owned and operated by the Marina Coast Water District. This reservoir is used to store the District's recycled water for approved use only. Reservoir tank inspections occur at a minimum of a quarterly frequency. The date of inspections along with any deficiencies are listed below. Copies of the quarterly inspection reports are also included in this report.

Inspections

Quarterly tank inspections consist of checking the following: foundation, leaks, cathodic protection, voltage, current, potential, exterior corrosion, tank ladder and door access, roof and other areas. Inspections will also note any other issues not previously listed. Copies of the inspection reports are included in this section.

		Date	Time	Summary of Findings
Exterior	Q1	3/2/2022	10:41 AM	No issues or concerns found
	Q2	6/22/2022	3:24 PM	No issues or concerns found
	Q3	9/13/2022	1:29 PM	No issues or concerns found
	Q4	12/2/2022	10:50 AM	No issues or concerns found
Interior	-	9/30/2021	1:00 PM	No issues or concerns found

Summary

No deficiencies were discovered during the date and time of the inspections.

Comments

The Blackhorse Reservoir was inspected and cleaned on 9/30/2021. No deficiencies were found.

MCWD 2022 Quarterly Reservoir Inspection

INSPECTION

INSPECTION ID NO.	22071
LOCATION	Black Horse Reservoir - 4699 Parker Flats Road
INSPECTION DATE	03/02/2022
INSPECTED BY	RODRIGUEZ, JOSE
STATUS	COMPLETED
RESOLUTION	

COMMENTS

OBSERVATION	
REPAIRS MADE	
RECOMMENDATION	
CONDITION SCORE	0.00

OBSERVATIONS

date	3/2/2022
Tank Foundation	In good condition no attention needed
Leaks	no
Cathodic Protection	System is on and functioning properly
Voltage	2.1
Current	0.04
Potential	-903
Exterior Corrosion	exterior coating is in good condition
Tank ladder & door access	ladder & door access is locked and secure
Roof inspection (overflows & vents)	overflows & vents in good condition free of any damage
Any Other Issues	Some rust on overflow screen vent

MCWD 2022 Quarterly Reservoir Inspection

INSPECTION

INSPECTION ID NO.	23875
LOCATION	Black Horse Reservoir D - 4699 Parker Flats Road
INSPECTION DATE	06/22/2022
INSPECTED BY	RODRIGUEZ, JOSE
STATUS	COMPLETED
RESOLUTION	

COMMENTS

OBSERVATION	
REPAIRS MADE	
RECOMMENDATION	
CONDITION SCORE	0.00

OBSERVATIONS

date	6/22/2022
Tank Foundation	In good condition no attention needed
Leaks	no
Cathodic Protection	System is on and functioning properly
Voltage	2.2
Current	0.07
Potential	-902
Exterior Corrosion	exterior coating is in good condition
Tank ladder & door access	ladder & door access is locked and secure
Roof inspection (overflows & vents)	overflows & vents in good condition free of any damage
Any Other Issues	No issues only little rust nothing big

MCWD 2022 Quarterly Reservoir Inspection

INSPECTION

INSPECTION ID NO.	25155
LOCATION	Black Horse Reservoir D - 4699 Parker Flats Road
INSPECTION DATE	09/13/2022
INSPECTED BY	BECK, GARRETT
STATUS	COMPLETED
RESOLUTION	

COMMENTS

OBSERVATION	
REPAIRS MADE	
RECOMMENDATION	
CONDITION SCORE	0.00

OBSERVATIONS

date	9/13/2022
Tank Foundation	In good condition no attention needed
Leaks	no
Cathodic Protection	System is on and functioning properly
Voltage	2.2
Current	0.1
Potential	903
Exterior Corrosion	exterior coating is in good condition
Tank ladder & door access	ladder & door access is locked and secure
Roof inspection (overflows & vents)	overflows & vents in good condition free of any damage
Any Other Issues	No.

MCWD 2022 Quarterly Reservoir Inspection

INSPECTION

INSPECTION ID NO.	26413
LOCATION	Black Horse Reservoir D - 4699 Parker Flats Road
INSPECTION DATE	12/02/2022
INSPECTED BY	RODRIGUEZ, JOSE
STATUS	COMPLETED
RESOLUTION	

COMMENTS

OBSERVATION	
REPAIRS MADE	
RECOMMENDATION	
CONDITION SCORE	0.00

OBSERVATIONS

date	12/2/2022
Tank Foundation	In good condition no attention needed
Leaks	no
Cathodic Protection	System is on and functioning properly
Voltage	2.4
Current	0.1
Potential	-903
Exterior Corrosion	exterior coating is in good condition
Tank ladder & door access	ladder & door access is locked and secure
Roof inspection (overflows & vents)	overflows & vents in good condition free of any damage
Any Other Issues	No issues found at this time

Backflow Testing

Backflow Testing Summary

Reporting Year: 2022

The following is information on the backflow device testing, which is an annual requirement.

Backflow Devices

	Serial Number	Type	Size	Make	Model	Date of last test	Result
Potable	W045824	RP	1.5 inch	Wilkins	975XL	4/15/2022	Pass
	513686	RP	1 inch	Wilkins	975	4/15/2022	Pass
	2907995	RP	2 inch	Wilkins	975XL	4/15/2022	Pass

	Serial Number	Type	Size	Make	Model	Date of last test	Result
Non- Potable	80261	RP	8 inch	Apollo	RPLF4A	10/19/2022	Pass
	79768	RP	8 inch	Apollo	RPLF4A	10/19/2022	Pass

Comments

No deficiencies or failures were found.