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MONITORING & REPORTING PROGRAM R5-2020-0059

ORDER INFORMATION

Order Type(s):	Monitoring & Reporting Program (MRP)
Status:	ADOPTED
Program:	Title 27
Region 5 Office:	Sacramento (Rancho Cordova)
Discharger(s):	Aerojet Rocketdyne, Inc.
Facility:	White Rock North Dump and Aerojet Waste Consolidation Unit Landfill
Address:	12353 White Rock Road
County:	Sacramento County
Parcel Nos.:	072-0100-020
WDID:	5A34NC00106
Prior Order(s):	CAO 96-150

CERTIFICATION

I, PATRICK PULUPA, Executive Officer, hereby certify that the following is a full, true, and correct copy of the order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 10 December 2020.

Date: 2020.12.22 12:11:49 -08'00'

PATRICK PULUPA,
Executive Officer

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TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE INDEX

GLOSSARY

AMR .....Annual Monitoring Report

AWCU .....Aerojet Waste Consolidation Unit

CalRecycle .....California Department of Resources Recycling and Recovery

CAMP.....Corrective Action Monitoring Program

CAO .....Cleanup and Abatement Order

C.F.R......Code of Federal Regulations

CIWQS .....California Integrated Water Quality System Project

COCs .....Constituents of Concern

DMP .....Detection Monitoring Program

DWR.....California Department of Water Resources

EC .....Electrical Conductivity

ELAP.....State Water Board's Environmental Laboratory Accreditation Program (formerly administered by California Department of Public Health)

EMP .....Evaluation Monitoring Program

EW .....Extraction Well

Five-Year COCs .....Five-Year Constituents of Concern

GeoTracker .....State Water Board's Data Management System for Sites with Potential Groundwater Impact

GP.....Gas Probe

LCRS .....Leachate Collection and Removal System

LF.....Landfill

LFG.....Landfill Gas

GLOSSARY

MDL .....Method Detection Limit

Method TO-15 VOCs.....Volatile Organic Compounds associated with USEPA Method TO-15

MRP .....Monitoring and Reporting Program

MSW .....Municipal Solid Waste

MSWLF .....Municipal Solid Waste Landfill

N/A .....Not Applicable

PID .....Photo Ionization Detector

POC .....Point of Compliance for Water Quality Protection Standard

QA/QC .....Quality Assurance/Quality Control

Qualified Professional .....Professional Civil Engineer, Certified Engineering Geologist, or Professional Geologist licensed by the State of California

RCRA.....Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq.

RL .....Reporting Limit

ROWD / JTD .....Report of Waste Discharge / Joint Technical Document

SAP.....Sampling and Analysis Plan

SPG.....Soil Pore Gas

SPL .....Soil Pore Liquid

SI.....Surface Impoundment

SMR .....Semiannual Monitoring Report

GLOSSARY

SPRRs / Standard Provisions ...*Standard Provisions and Reporting Requirements for Nonhazardous Solid Waste Discharges Regulated by Subtitle D and/or Title 27 Municipal Solid Waste Facilities*, December 2015 Edition

TDS.....Total Dissolved Solids

Title 27.....California Code of Regulations, Title 27

USEPA.....United States Environmental Protection Agency

VOCs .....Volatile Organic Compounds

WDRs.....Waste Discharge Requirements

WMU .....Waste Management Unit

WQPS .....Water Quality Protection Standard

WRND .....White Rock North Dump

UNITS

ft^3 / min .....Cubic Feet per Minute

°F .....Degrees Fahrenheit

Gallons/Day .....Gallons per Day

mg/L.....Milligrams per Liter

ng/L.....Nanograms per Liter

µg/L.....Micrograms per Liter

µmhos/cm .....Microsiemens per Centimeter

$\mu g/cm^3$ .....Micrograms per Cubic Centimeter

NTUs.....Nephelometric Turbidity Units

% Vol. .....Percent by Volume

GLOSSARY

Inches Hg .....Inches of Mercury (Barometric Pressure)

MM Hg Vacuum .....Millimeters of Mercury (Barometric Pressure)

PREFACE

Adopted by the California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) pursuant to Water Code section 13267, subdivision (b)(1), this Order establishes a Monitoring and Reporting Program (MRP) for Aerojet Rocketdyne, Inc.(Discharger), which owns and operates the White Rock North Dump and Aerojet Waste Consolidation Unit Landfill (Facility) in Sacramento County. Additional information regarding the Facility is set forth in the enumerated findings of Waste Discharge Requirements Order R5-2020-0059 (WDRs Order). Except as otherwise provided in the following MRP, these findings are incorporated herein.

The MRP also contains supplemental findings related to monitoring and reporting activities, and/or Facility conditions. For the purposes of California Code of Regulations, title 27 (Title 27) (e.g., §§ 21720, 20380-20435), the findings and provisions of this Order are conversely incorporated as part of the WDRs Order as well.

Although adopted with the WDRs Order, this is a separate order subject to subsequent revision by the Executive Officer in accordance with delegated authority per Water Code section 13223. For the purposes of Title 27, such revisions shall be automatically incorporated as part of the WDRs Order.

MONITORING & REPORTING PROGRAM

IT IS HEREBY ORDERED, pursuant to Water Code section 13267: that all previously issued Monitoring and Reporting Program(s) for the discharge of solid waste at the Facility are rescinded (except for enforcement purposes); and that the Discharger, their agents, employees and successors shall comply with the following Monitoring and Reporting Program (MRP). The Discharger shall not implement any changes until a revised MRP is issued by the Central Valley Water Board or its Executive Officer.

A. General Provisions

1. **Incorporation of Standard Provisions**—The Discharger shall comply with all relevant provisions of the *Standard Provisions and Reporting Requirements for Nonhazardous Solid Waste Discharges Regulated by Subtitle D and/or Title 27 Municipal Solid Waste Facilities, December 2015 Edition* (SPRRs or Standard Provisions), which are incorporated herein. See, e.g., SPRRs section I (*Standard Monitoring Specifications*) and section J (*Response to Release*).

2. **Monitoring Provisions in WDRs Order**—The Discharger shall comply with all "Monitoring Provisions" in the Facility's operative Title 27 WDRs Order, which are also incorporated herein.

3. **Compliance with Title 27**—The Discharger shall comply with all of Title 27 provisions as they pertain to activities described in this MRP (including SPRRs).

4. **Sampling and Analysis Plan (SAP)**—All samples shall be collected, preserved and transported in accordance with the approved Sampling and Analysis Plan (SAP) and the Quality Assurance/Quality Control (QA/QC) standards specified therein. The Discharger may use alternative analytical test methods (including new USEPA-approved methods), provided that the alternative methods have method detection limits and practical quantitation levels (MDLs) equal to or lower than the analytical methods specified in this MRP and are identified in the approved SAP. The SAP shall include provisions to ensure groundwater monitoring points and/or monitoring devices are Per- and polyfluoroalkyl substances (PFAS) free to the maximum extent possible. Installation of any new monitoring point and/or monitoring device shall be Per- and polyfluoroalkyl substances (PFAS) free unless the Discharger submits documentation as to why it is unable to install a PFAS free monitoring point or device and receives a waiver of the requirement in writing from Central Valley Water Board staff.

B. Detection Monitoring Program (DMP)—To detect a release at the earliest possible time (see Title 27, § 20420, subd. (b)), the Discharger shall implement a Detection Monitoring Program (DMP) for groundwater, surface water and the unsaturated zone in accordance with the provisions of Title 27, particularly sections 20415 and 20420. Groundwater, unsaturated zone and surface water[1] detection monitoring networks shall be revised (as needed) with the construction of each new landfill cell or module.

1. Groundwater

a. Required Network—The Facility's groundwater monitoring well network consists of the wells listed in **Table 1**.[2] As of the date of this Order, the network meets the requirements of Title 27. (Title 27, § 20415, subd. (b).)

Table 1—Groundwater Monitoring Network

Well	Program	Monitored Unit	Zone/ Layer	Status	Point of Compliance (WQPS)
MW-1	Background, Detection	AWCU 1A	A	Planned	Yes
MW-2	Background, Detection	AWCU 1A	A	Planned	Yes
MW-3	Background, Detection	AWCU 1A	A	Planned	Yes
MW-4	Background, Detection	AWCU 1A	A	Planned	Yes
MW-5	Background, Detection	AWCU 1A	A	Planned	Yes

[1] I.e., to the extent that surface water detection monitoring is required under this Order.

[2] Non-background monitoring wells at the Point of Compliance constitute "Monitoring Points" for purposes of the Water Quality Protection Standard (WQPS).

Well	Program	Monitored Unit	Zone/ Layer	Status	Point of Compliance (WQPS)
MW-6	Background, Detection	AWCU 1A	A	Planned	Yes
MW-7	Background, Detection	AWCU 1A	A	Planned	Yes
MW-8	Background, Detection	AWCU 1A	A	Planned	Yes
MW-9	Background, Detection	AWCU 1A	A	Planned	Yes
MW-10	Background, Detection	AWCU 1A	A	Planned	Yes
MW-11 to MW-XX	Background, Detection	AWCU 1B-1F	A	Planned	Yes

See Glossary for definitions of terms and abbreviations in table.

Note: The Discharger plans to construct AWCU phases 1B through 1F depending on how much transfer material is disposed of from the AWCU Service Area. As the Discharger constructs AWCU phases 1B through 1F the Discharger shall install sufficient number of point of compliance groundwater monitoring points MW-XX to provide earliest detection of a release of waste to groundwater in the uppermost aquifer for each phase of construction.

The Discharger has identified four distinct water bearing zones, Layers A through D beneath the Facility with Layer A being the uppermost aquifer as described in WDRs Order R5-2020-. Layers A through D are concurrently regulated for a release from the Facility of trichloroethene (TCE) and an off-property release of perchlorate and N-Nitroso-dimethylamine (NDMA) under Central Valley Water Board Cleanup and Abatement Order (CAO) 96-150 or any subsequent amendments/revisions thereof.

b. **Sample Collection and Analysis**—Groundwater samples shall be collected from each well and analyzed for Monitoring Parameters listed in **Table 2** (*Physical Parameters*) and **Table 3** (*Constituent Parameters*), in accordance with the specified schedule for each parameter. (Title 27, § 20420, subds. (e)-(f).)

Table 2—Groundwater Detection Monitoring, Physical Parameters

Physical Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Temperature	TEMP	°F	Quarterly	Semiannually
Electrical Conductivity	SC	µmhos/cm	Quarterly	Semiannually
pH	PH	pH Units	Quarterly	Semiannually
Turbidity	TURB	NTUs	Quarterly	Semiannually

See Glossary for definitions of terms and abbreviations in table.

Table 3—Groundwater Detection Monitoring, Constituent Parameters

Constituent Parameter	GeoTracker Code	Units	AWCU Sampling Freq.	Reporting Freq.
Bicarbonate	BICACO3	mg/L	Quarterly	Semiannually
Calcium	CA	mg/L	Quarterly	Semiannually
Carbonate	CACO3	mg/L	Quarterly	Semiannually
Chloride	CL	mg/L	Quarterly	Semiannually
Iron	FE	mg/L	Quarterly	Semiannually
Magnesium	MG	mg/L	Quarterly	Semiannually
Manganese	MN	mg/L	Quarterly	Semiannually
Nitrate (as Nitrogen)	NO3N	mg/L	Quarterly	Semiannually
Potassium	K	mg/L	Quarterly	Semiannually
Sodium	NA	mg/L	Quarterly	Semiannually
Sulfate	SO4	mg/L	Quarterly	Semiannually
TDS	TDS	mg/L	Quarterly	Semiannually

Constituent Parameter	GeoTracker Code	Units	AWCU Sampling Freq.	Reporting Freq.
Short List VOCs (Attachment A)	(*various*)	µg/L	Quarterly	Semiannually
Perchlorate	PCATE	ug/L	Quarterly	Semiannually
N-Nitrosodimethylamine (NDMA)	NNSM	ng/L	Quarterly	Semiannually

See Glossary for definitions of terms and abbreviations in table.

c. **Five-Year COCs**—The Discharger shall analyze for groundwater samples from each well for the Five-Year Constituents of Concern (Five-Year COCs) listed in **Table 4**. Five-Year COCs were last monitored in 2020, and shall be analyzed again in 2025, and every five years after.
(Title 27, § 20420, subd. (g).)

Table 4—Groundwater Detection Monitoring, Five-Year COCs

Five-Year Constituent	GeoTracker Code	Units	Sampling & Reporting Freq.
Total Organic Carbon	TOC	mg/L	Every 5 Years
Dissolved Inorganics (Attachment B)	(*various*)	µg/L	Every 5 Years
Extended List VOCs (Attachment C)	(*various*)	µg/L	Every 5 Years
Semi-Volatile Organic Compounds (Attachment D)	(*various*)	µg/L	Every 5 Years
Chlorophenoxy Herbicides (Attachment E)	(*various*)	µg/L	Every 5 Years
Organophosphorus Compounds (Attachment F)	(*various*)	µg/L	Every 5 Years

See Glossary for definitions of terms and abbreviations in table.

d. Groundwater Conditions—Each quarter, the Discharger shall monitor the Groundwater Conditions specified in **Table 5**, with the result of such monitoring being reported semiannually per **Section 0**.[3] (Title 27, § 20415, subd. (b)(1).)

Table 5—Groundwater Detection Monitoring, Groundwater Conditions

Groundwater Condition	GeoTracker Code	Monitoring Freq.	Reporting Freq.
Elevation (Well-Specific)	ELEV	Quarterly	Semiannually
Gradient	(*none*)	Quarterly	Semiannually
Hydraulic Conductivity	(*none*)	Quarterly	Semiannually

2. Unsaturated Zone

a. Required Network—The Facility's unsaturated zone monitoring network consists of lysimeters, and landfill gas monitoring points specified in **Table 6**. As of the date of this Order, the network meets the requirements of Title 27. (Title 27, § 20415, subd. (d).)

Table 6—Unsaturated Zone Monitoring Network

Monitoring Point	Device Type	Program	Monitored Unit	Status
LYS-1A	Pan Lysimeter	Detection	AWCU Phase 1A	Planned
LYS-1B	Pan Lysimeter	Detection	AWCU Phase 1B	Planned
LYS-1C	Pan Lysimeter	Detection	AWCU Phase 1C	Planned
LYS-1D	Pan Lysimeter	Detection	AWCU Phase 1D	Planned

[3] To the extent feasible, this information shall be determined separately for: (1) the uppermost aquifer; (2) any zones of perched water; and (3) any additional zone of saturation monitored based upon water level elevations taken prior to the collection of the water quality data submitted in the report. (Title 27, § 20415, subd. (e)(15).)

Monitoring Point	Device Type	Program	Monitored Unit	Status
LYS-1E	Pan Lysimeter	Detection	AWCU Phase 1E	Planned
LYS-1F	Pan Lysimeter	Detection	AWCU Phase 1F	Planned
LFGP-1	Gas Probe	Detection	WRND	Planned
LFGP-2	Gas Probe	Detection	WRND	Planned
LFGP-3	Gas Probe	Detection	WRND	Planned
LFGP-4	Gas Probe	Detection	WRND	Planned
LFGP-5	Gas Probe	Detection	WRND	Planned
LFGP-6	Gas Probe	Detection	WRND	Planned
LFGP-7	Gas Probe	Detection	WRND	Planned
LFGP-8	Gas Probe	Detection	WRND	Planned
LFGP-9	Gas Probe	Detection	WRND	Planned
LFGP-10	Gas Probe	Detection	WRND	Planned
LFGP-11	Gas Probe	Detection	WRND	Planned
LFGP-12	Gas Probe	Detection	WRND	Planned
GCL-1A	Gas Probe	Detection	AWCU Phase 1A Underlying Gas Collection Layer	Planned
GCL-1B	Gas Probe	Detection	AWCU Phase 1B Underlying Gas Collection Layer	Planned
GCL-1C	Gas Probe	Detection	AWCU Phase 1C Underlying Gas Collection Layer	Planned

Monitoring Point	Device Type	Program	Monitored Unit	Status
GCL-1D	Gas Probe	Detection	AWCU Phase 1D Underlying Gas Collection Layer	Planned
GCL-1E	Gas Probe	Detection	AWCU Phase 1E Underlying Gas Collection Layer	Planned
GCL-1F	Gas Probe	Detection	AWCU Phase 1F Underlying Gas Collection Layer	Planned

See Glossary for definitions of terms and abbreviations in table.

b. Soil Pore Gas (SPG) Monitoring—Soil Pore Gas (SPG) at the gas probes shall be monitored for Methane and Method TO-15 VOCs[4] in accordance with **Table 7**, provided that samples may be prescreened to determine if such analyses will be required.[5] (Title 27, § 20420, subds. (e)-(f).)

Table 7—Unsaturated Zone Detection Monitoring (Soil Pore Gas), Constituent Parameters

Constituent Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Method TO-15 VOCs	(*various*)	µg/cm^3	Quarterly	Semiannually
Methane	CH4	%	Quarterly	Semiannually

See Glossary for definitions of terms and abbreviations in table.

[4] Volatile Organic Compounds associated with USEPA Method TO-15.

[5] A gas analyzer for methane concentrations or a Photo Ionization Detector (PID) for total VOCs concentrations may be used. If methane concentrations exceed 1 percent by volume OR organic vapors (total VOCs) exceed 1 ppm, a gas sample shall be obtained and analyzed for VOCs using Method TO-15. Both the screening results and lab analysis results shall be reported. Otherwise, the methane or total VOC screening results shall be reported, and no further lab analysis will be required.

Note: Pan Lysimeters LYS-1B through LYS-1F may be combined depending on whether the AWCU phases share common LCRS sumps. Each installed LCRS sump shall have an unsaturated zone monitoring device in the form of a pan lysimeter installed directly below each LCRS sump and shall monitor the entire unsaturated zone below the LCRS sump. Gas probes GCL-1B through GCL-1F may be combined depending on whether the AWCU phases share common LCRS sumps.

c. **Monthly Lysimeter Inspection**—Pan lysimeters shall be inspected **monthly** for the presence of liquid, which shall then be analyzed for the Monitoring Parameters in **Table 8** (*Physical Parameters*) and **Table 9** (*Constituent Parameters*). (Title 27, § 20420, subds. (e)-(f).) If liquid is detected in a *previously dry* pan lysimeter, the Discharger shall notify Central Valley Water Board staff **within seven days** of the detection. Any constituent in the Transfer Material verified to be present in a pan lysimeter shall be added to the monitoring parameters listed in Table 3 for groundwater detection and corrective action monitoring purposes.

Table 8—Unsaturated Zone Detection Monitoring (Lysimeters), Physical Parameters

Physical Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Electrical Conductivity	SC	µmhos/cm	Monthly	Semiannually
pH	PH	pH Units	Monthly	Semiannually
Volume of Removed Liquid	(*none*)	Gallons	Monthly	Semiannually

See Glossary for definitions of terms and abbreviations in table.

Table 9—Unsaturated Zone Detection Monitoring (Lysimeters), Constituent Parameters

Constituent Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Bicarbonate	BICACO3	mg/L	Quarterly	Semiannually
Calcium	CA	mg/L	Quarterly	Semiannually
Carbonate	CACO3	mg/L	Quarterly	Semiannually

Constituent Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Chloride	CL	mg/L	Quarterly	Semiannually
Iron	FE	mg/L	Quarterly	Semiannually
Magnesium	MG	mg/L	Quarterly	Semiannually
Manganese	MN	mg/L	Quarterly	Semiannually
Nitrate (as Nitrogen)	NO3N	mg/L	Quarterly	Semiannually
Potassium	K	mg/L	Quarterly	Semiannually
Sodium	NA	mg/L	Quarterly	Semiannually
Sulfate	SO4	mg/L	Quarterly	Semiannually
TDS	TDS	mg/L	Quarterly	Semiannually
Short List VOCs (Attachment A)	(*various*)	µg/L	Quarterly	Semiannually
Transfer Material Compounds (Attachment G)	*(various)*	*(various)*	Quarterly	Semiannually

See Glossary for definitions of terms and abbreviations in table.

d. **Five-Year COCs**—Every five years, liquid from each pan lysimeter shall be analyzed for the Five-Year COCs listed below in **Table 10**. Five-Year COCs monitoring will begin when liquid is found in a lysimeter, and shall be analyzed every 5-years thereafter. (Title 27, § 20420, subd. (g).). Any five-year COC verified to be present in a lysimeter shall be added to the monitoring parameters listed in Table 3 for groundwater detection and corrective action monitoring purposes.

Table 10—Unsaturated Zone Detection Monitoring (Lysimeters), Five-Year COCs

Five-Year Constituent	GeoTracker Code	Units	Sampling & Reporting Freq.
Total Organic Carbon	TOC	mg/L	Every 5 Years

Five-Year Constituent	GeoTracker Code	Units	Sampling & Reporting Freq.
Dissolved Inorganics (Attachment B)	(*various*)	µg/L	Every 5 Years
Extended List VOCs (Attachment C)	(*various*)	µg/L	Every 5 Years
Semi-Volatile Organic Compounds (Attachment D)	(*various*)	µg/L	Every 5 Years
Chlorophenoxy Herbicides (Attachment E)	(*various*)	µg/L	Every 5 Years
Organophosphorus Compounds (Attachment F)	(*various*)	µg/L	Every 5 Years

See Glossary for definitions of terms and abbreviations in table.

3. **Surface Water**— Surface water drainage from the north of the Facility where the AWCU is located does not leave the Discharger's property but is captured in unlined inundation areas and either percolates to groundwater or evaporates. Surface water runoff from the AWCU that has come in contact with waste may percolate into groundwater which may be affected by a release (See Title 27, § 20415, subd. (c)(1).) Surface water drainage to the unlined inundation areas is monitored at monitoring points SW-3 through SW-5. Surface water from the south of the Facility originating from the WRND drains to an unnamed ditch and eventually to Morrison Creek, a tributary to the Sacramento River. Surface water drainage originating from the WRND from the north of the Facility may drain to an unnamed ditch and eventually to Buffalo Creek, a tributary to American River. Surface water monitoring for the WRND shall occur under Central Valley Water Board Cleanup and Abatement Order (CAO) 96-150 or any subsequent amendments/revisions/replacement thereto.

a. **Required Network**—The Facility's surface water monitoring network consists of the monitoring points listed in **Table 11**. As of the date of this Order, the network meets the requirements of Title 27. (See § 20415, subd. (c).)

Table 11—Surface Water Detection Monitoring Network

Monitoring Point	Location	Program or Function	Monitored Unit	Status
SW-3	Drainage Ditch, Northern Boundary	Detection	AWCU	Planned
SW-4	Drainage Ditch, Northern Boundary	Detection	AWCU Phase 1A	Planned
SW-5	Drainage Ditch, Northern Boundary	Detection	AWCU Phase 1A	Planned

See Glossary for definitions of terms and abbreviations in table.

b. **Sample Collection and Analysis**—When surface water is present at monitoring points in Table 11 at any point during the monitoring period between 1 September and 31 May, samples shall be collected from each monitoring point and analyzed for the Monitoring Parameters in **Table 12** (*Physical Parameters*) and **Table 13** (*Constituent Parameters*), in accordance with the specified schedule. (Title 27, § 20420, subds. (e)-(f).)

Table 12—Surface Water Detection Monitoring, Physical Parameters

Physical Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Electrical Conductivity	SC	µmhos/cm	Biweekly	Semiannually
pH	PH	Std. Units	Biweekly	Semiannually
Turbidity	TURB	NTUs	Biweekly	Semiannually
Hardness	HARD	mg / L	Biweekly	Semiannually
Presence of Oil & Grease	(none)	Yes / No	Biweekly	Semiannually
Flow to Surface Waters at Time of Sampling	(none)	Yes/No	Biweekly	Semiannually

See Glossary for definitions of terms and abbreviations in table.

Table 13—Surface Water Detection Monitoring, Constituent Parameters

Constituent Parameter	GeoTracker Code	Units	Sampling Freq. (See Note Below)	Reporting Freq.
Bicarbonate	BICACO3	mg/L	Varies	Semiannually
Calcium	CA	mg/L	Varies	Semiannually
Carbonate	CACO3	mg/L	Varies	Semiannually
Chloride	CL	mg/L	Varies	Semiannually
Iron	FE	mg/L	Varies	Semiannually
Magnesium	MG	mg/L	Varies	Semiannually
Manganese	MN	mg/L	Varies	Semiannually
Nitrate (as Nitrogen)	NO3N	mg/L	Varies	Semiannually
Potassium	K	mg/L	Varies	Semiannually
Sodium	NA	mg/L	Varies	Semiannually
Sulfate	SO4	mg/L	Varies	Semiannually
TDS	TDS	mg/L	Varies	Semiannually
TSS	TSS	mg/L	Varies	Semiannually
Short List VOCs (Attachment A)	*(various)*	µg/L	Varies	Semiannually
Transfer Material Compounds (Attachment G)	*(various)*	*(various)*	Varies	Semiannually

See Glossary for definitions of terms and abbreviations in table.

Note: The Discharger during the pre/post Wet Season (May, September, and October) shall monitor for the constituents listed in **Table 13** whenever there exists any portion of the AWCU which has not received a final closure cover and there is a surface water discharge from the AWCU outside of the AWCU waste containment system where there also exists liquid at monitoring points SW-3 through SW-5. During the **Wet Season (1 November - 30 April)** the Discharger shall monitor for the constituents listed in

Table 13 on a monthly basis whenever there exists any portion of the AWCU which has not received a final closure cover and there is a surface water discharge from the AWCU outside the AWCU waste containment system where there also exists liquid at monitoring points SW-3 through SW-5. All other monitoring points listed in **Table 11** shall be monitored for constituents listed in **Table 13** at least thrice during the wet season, when water is present at the monitoring points and spaced at least two months apart. Once the AWCU receives its final closure cover the Discharger shall monitor all monitoring points listed in **Table 11** for constituents in **Table 13** on a quarterly basis with a minimum of two samples taken per wet season.

c. Five-Year COCs—The Discharger shall analyze surface water samples for the Five-Year COCs listed in **Table 14**. Five-Year COCs upon initiation of disposal operations in AWCU and the presence of surface water at monitoring points, and shall be analyzed again every five years thereafter. (Title 27, § 20420, subd. (g).)

Table 14—Surface Water Detection Monitoring, Five-Year COCs

Five-Year Constituent	GeoTracker Code	Units	Sampling & Reporting Freq.
Total Organic Carbon	TOC	mg/L	Every 5 Years
Dissolved Inorganics (Attachment B)	(*various*)	µg/L	Every 5 Years
Extended List VOCs (Attachment C)	(*various*)	µg/L	Every 5 Years
Semi-Volatile Organic Compounds (Attachment D)	(*various*)	µg/L	Every 5 Years
Chlorophenoxy Herbicides (Attachment E)	(*various*)	µg/L	Every 5 Years
Organophosphorus Compounds (Attachment F)	(*various*)	µg/L	Every 5 Years

See Glossary for definitions of terms and abbreviations in table.

4. Summary of Water Quality Protection Standard (WQPS) Components—The Water Quality Protection Standard (WQPS) is the Title 27 analytical framework through which an individual WMU is monitored for releases and impacts to water quality, i.e., the Detection Monitoring Program (DMP). (See Title 27, § 20390, subd. (a).) As explained in further detail below, for

the duration of the *Compliance Period*, the *Monitoring Points* situated at a WMU's *Point of Compliance* are sampled and analyzed for *Monitoring Parameters* indicative of a release. If concentrations of *Constituents of Concern* exceed *Concentration Limits*, the results are confirmed through *Retesting Procedures*.

a. **Compliance Period**—The "compliance period" is the minimum time for which a water quality monitoring will be required—i.e., equal to the sum of active years and the closure period. (Title 27, § 20410.) The period restarts each time an Evaluation Monitoring Program (EMP) is initiated for a given WMU. (*Id*., §§ 20410(a), 20415, 20425.) If a WMU is in corrective action, the period continues until it is demonstrated that the WMU has been in continuous compliance with its WQPS for at least three years. (*Id*., § 20410, subd. (c).)

b. **Monitoring Points**—For WQPS purposes, a "monitoring point" is any well, device, or location where monitoring is conducted, and is specified in the Facility's WDRs and subject to the WQPS. (Title 27, § 20164.) Monitoring Points are listed in **Section 0** (*Detection Monitoring Program*)—specifically **Table 1** (*Groundwater*), **Table 6** (*Unsaturated Zone*) and **Table 11** (*Surface Water*).

c. **Point of Compliance (POC)**—The Point of Compliance (POC) is a vertical plane at the WMU's hydraulically downgradient limit, extending through the uppermost underlying aquifer. (Title 27, §§ 10164, 20405(a).) The Facility's POC monitoring wells are listed below in **Table 1**.

d. **Constituents of Concern (COCs)**—Constituents of Concern (COCs) are waste constituents, reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in a WMU. (Title 27, §§ 20164, 20395.)

e. **Monitoring Parameters**—Monitoring Parameters are a predetermined set of COCs and measurable physical characteristics (e.g., temp., electrical conductivity, pH), which serve as reliable indicators of a WMU release, and for which samples will therefore be routinely analyzed. (Title 27, §§ 20164, 20395(a), 20420(e)-(f).) For the purposes of this MRP, the Monitoring Parameters are:

i. For **Surface Water**, those in Table 12 and Table 13;

ii. For **Groundwater**, those in Table 2 and Table 3; and

iii. For the **Unsaturated Zone**, those in Table 7, Table 8 and Table 9.

f. **Five-Year COCs**—In addition to the Monitoring Parameters described above, this Order requires the *quinquennial analysis* of samples for a larger range of constituents that are reasonably expected to be found in, or derived from, the waste contained within each unit at the Facility. (Title 27, §§ 20395, 20420(g).) Analytical results for Five-Year COCs for WRND were last submitted to the Central Valley Water Board as part of the 2020 Annual Monitoring Report and are due again in 2025. Analytical results for Five-Year COCs for AWCU shall be submitted as part of its WQPS which shall be established prior to discharge of waste to the AWCU and every 5-years thereafter. For the purposes of this MRP, the Five-Year COCs are listed in:

i. **Attachment B** (*Dissolved Inorganics*);

ii. **Attachment C** (*Extended List VOCs*);

iii. **Attachment D** (*Semi-Volatile Organic Compounds*);

iv. **Attachment E** (*Chlorophenoxy Herbicides*);

v. **Attachment F** (*Organophosphorus Compounds*); and

vi. Any other COCs listed in **Table 14** (*Surface Water*), **Table 4** (*Groundwater*) and **Table 10** (*Unsaturated Zone*)

g. **Concentration Limits**—The Concentration Limit for each COC is the "background concentration," as determined by the statistical methods outlined in subdivision (e)(8) of Title 27, section 20415.[6] (Title 27, § 20400, subds. (a), (b).) Methods for calculating Concentration Limits were proposed in the Discharger's ROWD/JTD. The Discharger proposes to use either inter-well or intra-well monitoring for detection of a release from the AWCU, based on the initial monitoring results. The Discharger is prohibited from disposal of Transfer Material in the AWCU unless the

[6] Concentration Limits are initially proposed by the discharger, then reviewed and approved by the Central Valley Water Board (subject to any necessary revisions). The limits specified herein are approved and incorporated as part of the Facility's WDRs.

Discharger has established an approved WQPS including concentration limits for the AWCU.

Concentration Limits shall be proposed and/or updated by the Discharger every two years, in the Annual Monitoring Report submitted per **Section 0** here.

Unless expressly rejected by the Executive Officer in writing, these Concentration Limits shall be incorporated as part of this Order.

h. **Retesting Procedures**—If monitoring results indicate measurably significant evidence of a release, as described in Section I.45 of the SPRRs (*Standard Monitoring Specifications*), the Discharger shall apply the following:

i. **Non-Statistical Retesting Procedures (SPRRs, § I.46)** for analytes detected in less than 10 percent of background samples (e.g., non-naturally occurring COCs); and

ii. **Statistical Retesting Procedures (SPRRs, § I.46)** for analytes detected in at least 10 percent of background samples (e.g., naturally occurring COCs).

C. **Corrective Action Monitoring Program (CAMP)**—To demonstrate the effectiveness of ongoing correction action at the Facility, the Discharger shall perform the following additional monitoring in accordance with of subdivision (d) of Title 27, section 20430.

1. **WRND Corrective Action**— The WRND is currently under corrective action for an existing release and is being monitored under CAO 96-150 or any subsequent amendments/revisions/replacement thereof. The CAO requires the Discharger to monitor COCs in four distinct water bearing zones, Layers A through D beneath the Facility. The Discharger shall report the results of the efforts to address the existing release from WRND in **Section E.2**, *Annual Monitoring Reports*.

D. **Additional Facility Monitoring**

1. **Leachate Collection & Removal System (LCRS) and Leak Detection System (LDS)**—The Discharger shall operate and maintain LCRS and LDS sump(s) and, and conduct monitoring of any detected leachate seeps in accordance with Title 27 and the following provisions.

a. **Annual LCRS Testing**—All Leachate Collection and Removal Systems (LCRS) shall be tested annually to demonstrate proper operation,

with the results of each test being compared to the results of prior testing. (See Title 27, § 20340, subd. (d).)

b. **Monthly Sump Inspection**—All LCRS and LDS sumps shall be inspected monthly for the presence of leachate. As provided in **Table 15**, the total monthly flow and flow rate for leachate in each sump shall be recorded after each inspection and reported semiannually per **Section 0**.

Table 15—LCRS and LDS Sump Monitoring, Monthly Inspection Parameters

Physical Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Total Monthly Flow	(none)	Gallons	Monthly	Semiannually
Flow Rate	FLOW	Gallons/Day	Monthly	Semiannually

See Glossary for definitions of terms and abbreviations in table.

c. **LCRS and LDS Leachate Monitoring**—Upon detecting leachate in a previously dry LCRS or LDS sump, the Discharger shall notify Central Valley Water Board staff **within seven days**, and immediately sample and analyze leachate for the parameters in **Table 16**.[7] Thereafter, whenever leachate is present in the same LCRS or LDS sump, the leachate shall be sampled and analyzed for the same parameters, and in accordance with the specified sampling and reporting schedule in **Table 16**.

Table 16—LCRS and LDS Sump Monitoring, Constituent Parameters

Constituent Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Bicarbonate	BICACO3	mg/L	Quarterly	Semiannually

[7] The sampling and reporting schedules in Table 16 are applicable for subsequent monitoring only. When notifying Central Valley Water Board staff of the first detection of leachate, the Discharger shall indicate when laboratory results are expected to be available.

Constituent Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Calcium	CA	mg/L	Quarterly	Semiannually
Carbonate	CACO3	mg/L	Quarterly	Semiannually
Chloride	CL	mg/L	Quarterly	Semiannually
Iron	FE	mg/L	Quarterly	Semiannually
Magnesium	MG	mg/L	Quarterly	Semiannually
Manganese	MN	mg/L	Quarterly	Semiannually
Nitrate (as Nitrogen)	NO3N	mg/L	Quarterly	Semiannually
Potassium	K	mg/L	Quarterly	Semiannually
Sodium	NA	mg/L	Quarterly	Semiannually
Sulfate	SO4	mg/L	Quarterly	Semiannually
TDS	TDS	mg/L	Quarterly	Semiannually
Short List VOCs (Attachment A)	*(various)*	µg/L	Quarterly	Semiannually
Transfer Material Compounds (Attachment G)	*(various)*	*(various)*	Quarterly	Semiannually

See Glossary for definitions of terms and abbreviations in table.

d. **Five-Year COCs**—At least once every five years, the Discharger shall sample and analyze any leachate present in all LCRS and LDS sumps for the Five-Year COCs listed in **Table 17**. Five-Year COCs shall be initially analyzed for when leachate production begins in a newly constructed WMU and is collected in any LCRS or LDS sump, and then shall be analyzed for five-year COCs on a five year schedule for each LCRS and LDS sump thereafter.

Table 17—LCRS and LDS Sump Monitoring, Five-Year COCs

Parameter	GeoTracker Code	Units	Sampling & Reporting Freq.
Total Organic Carbon	TOC	mg/L	Every 5 Years
Dissolved Inorganics (Attachment B)	(*various*)	µg/L	Every 5 Years
Extended List VOCs (Attachment C)	(*various*)	µg/L	Every 5 Years
Semi-Volatile Organic Compounds (Attachment D)	(*various*)	µg/L	Every 5 Years
Chlorophenoxy Herbicides (Attachment E)	(*various*)	µg/L	Every 5 Years
Organophosphorus Compounds (Attachment F)	(*various*)	µg/L	Every 5 Years

See Glossary for definitions of terms and abbreviations in table.

2. **Leachate Seepage**—Leachate that seeps to the surface from any landfill WMU shall, immediately upon detection, be sampled and analyzed for the Monitoring Parameters in **Table 18** (*Physical Parameters*) and **Table 19** (*Constituent Parameters*). See **Section 0** for Reporting Requirements.) In the event of a reported leachate seep, Central Valley Water Board staff may direct additional sampling and analysis pursuant to Water Code section 13267, subdivision (b)(1).

Table 18—Leachate Seep Monitoring, Physical Parameters

Physical Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Total Flow	(none)	Gallons	Upon Detection	See MRP, § 0
Flow Rate	FLOW	Gallons/Day	(*same*)	(*same*)

Physical Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Electrical Conductivity	SC	µmhos/cm	(*same*)	(*same*)
pH	PH	pH Units	(*same*)	(*same*)

See Glossary for definitions of terms and abbreviations in table.

Table 19—Leachate Seep Monitoring, Constituent Parameters

Constituent Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Bicarbonate	BICACO3	mg/L	Upon Detection	See MRP, § 0
Calcium	CA	mg/L	(*same*)	(*same*)
Carbonate	CACO3	mg/L	(*same*)	(*same*)
Chloride	CL	mg/L	(*same*)	(*same*)
Iron	FE	mg/L	(*same*)	(*same*)
Magnesium	MG	mg/L	(*same*)	(*same*)
Manganese	MN	mg/L	(*same*)	(*same*)
Nitrate (as Nitrogen)	NO3N	mg/L	(*same*)	(*same*)
Potassium	K	mg/L	(*same*)	(*same*)
Sodium	NA	mg/L	(*same*)	(*same*)
Sulfate	SO4	mg/L	(*same*)	(*same*)
TDS	TDS	mg/L	(*same*)	(*same*)
Short List VOCs (Attachment A)	(various)	µg/L	(*same*)	(*same*)
Transfer Material Compounds (Attachment G)	*(various)*	*(various)*	(*same*)	(*same*)

See Glossary for definitions of terms and abbreviations in table.

3. **Regular Visual Inspection**—The Discharger shall perform regular visual inspections at the Facility in accordance with **Table 20** (*Criteria*) and **Table 21** (*Schedule*). Results of these regular visual inspections shall be included in Semiannual Monitoring Reports per **Section 0**.

Table 20—Criteria for Regular Visual Inspections

Category	Criteria
Within Unit	• Evidence of ponded water at any point on unit outside of any contact storm water/leachate diversions structures on the active face of unit (record affected areas on map). • Evidence of erosion and/or of day-lighted refuse.
Unit Perimeter	• Evidence of leachate seep. • Estimated size of affected area (record on map) and flow rate. • Evidence of erosion and/or of day-lighted refuse. • Evidence of discharge of contact stormwater outside of the AWCU liner containment perimeter. The Discharger shall i**mmediately notify** the Central Valley Water Board via telephone or email; and **within seven days**, submit a written report with the information required in **Section E.3**.
Nearby Surface Waters	• Floating and suspended materials of waste origin—presence or absence, source and size of affected areas. • Discoloration and turbidity—description of color, source and size of affected areas.

Table 21—Regular Visual Inspection Schedule

Category	Pre/Post Wet Season (May, Sept., Oct)	Wet Season (1 Nov. to 30 April)	Dry Season (1 June to 31 Aug.)
Active Units	Following Rain Event	Weekly	Monthly

Category	**Pre/Post Wet Season (May, Sept., Oct)**	**Wet Season** (1 Nov. to 30 April)	**Dry Season** (1 June to 31 Aug.)
Inactive or Closed Units	Monthly	Monthly	Quarterly

4. **Annual Facility Inspections**—Prior to **1 September** of each year, the Discharger shall inspect the Facility to assess repair and maintenance needs for drainage control systems, cover systems and groundwater monitoring wells; and preparedness for winter conditions (e.g., erosion and sedimentation control). The Discharger shall ensure that not more than 2.5 acres of Transfer Material is exposed to the environment during the months of September and October prior to the Wet Season. Furthermore, in the month of May, prior to the Dry Season the Discharger shall ensure that not more than 2.5 acres of Transfer Material is exposed to the environment where stormwater can produce wastewater runoff. The Discharger shall use tarps or other means to ensure that excessive contact stormwater is not produced which may exceed the Discharger's ability to collect, store, and dispose of such wastewater. A discharge of wastewater i.e., leachate outside of the AWCU's leachate management system is a violation of the Discharger's WDR Order R5-2020-0059. If repairs are made as result of the annual inspection, problem areas shall be photographed before and after repairs. Any necessary construction, maintenance, or repairs shall be completed by **1 October**. See **Section 0** for Reporting Requirements.

5. **Major Storm Events**—Within **seven days** of any storm event capable of discharging waste outside of the AWCU liner boundary, causing damage or significant erosion (Major Storm Event), the Discharger shall inspect the Facility for damage to any precipitation, diversion and drainage facilities, and all landfill side slopes. Necessary repairs shall be completed within 30 days of the inspection. The Discharger shall take photos of any problem areas before and after repairs. See **Section 0** for Reporting Requirements.

6. **Iso-Settlement Surveys (Closed Landfills)**—The Discharger shall conduct an iso-settlement survey of each closed landfill unit and produce an iso-settlement map accurately depicting the estimated total change in elevation of each portion of the final cover's low-hydraulic-conductivity layer. For each portion of the landfill, this map shall show the total lowering of the surface elevation of the final cover, relative to the baseline topographic map. The Discharger shall conduct the iso-settlement survey initially upon final closure of each portion of a landfill unit to establish baseline conditions, biennially for the following ten years, and then every five years thereafter. (Title 27, § 21090, subd. (e)(1)-(2); see **Section 0** for Reporting Requirements.)

E. Reporting Requirements

Table 22—Summary of Required Reports

Section	Report	Deadline
§ 0	*Semiannual Monitoring Reports (SMRs)*	**1 August** (1 January to 30 June) **1 February** (1 July to 31 December)
§ 0	*Annual Monitoring Reports (AMRs)*	**1 February**
§ 0	*Leachate Seep Reporting*	**Immediately upon Discovery of Seepage** (*staff notification*) **Within 7 Days** (*written report*)
§ 0	*Annual Facility Inspection Reports*	**1 October**
§ 0	*Major Storm Reporting*	**Immediately after Damage Discovery** (*staff notification*) **Within 14 Days of Completing Repairs** (*written report, photos*)
§ 0	*Survey and Iso-Settlement Mapping*	**Every Five Years** (Next Due in XXXX)
§ 0	*Financial Assurances Reports*	**1 June**
§ 0	*Water Quality Protection Standard Reports*	**Proposed Revisions** (excluding Concentration Limits)

1. **Semiannual Monitoring Reports (SMRs)**—The Discharger shall submit Semiannual Monitoring Reports (SMRs) on **1 August** (1 Jan. to 30 June) and **1 February** (1 July to 31 Dec.). SMRs shall contain the following materials and information:

    a. A statement affirming that all sampling activities referenced in the report were conducted in accordance with the approved SCAP (see § 0).

    b. Map(s)/aerial photograph(s) depicting locations of all observation stations, monitoring points referenced in the report.

    c. In tabulated format, all monitoring data required to be reported on a semiannual basis, including Groundwater Conditions and Monitoring Parameters. (See Section 0 for additional requirements.)

    d. For each groundwater monitoring point referenced in the SMR:

        i. The times each water level measurement was taken;

        ii. The type of pump or other device used to purge and elevate pump intake level relative to screening interval;

        iii. The purging methods used to stabilize water in the well bore before sampling (including pumping rate);

        iv. The equipment and methods used for monitoring pH, temperature and electrical conductivity (EC) during purging activity, and the results of such monitoring;

        v. Methods for disposing of purged water; and

        vi. The type of device used for sampling, if different than the one used for purging.

    e. Evaluation of concentrations for all Constituent Parameters and Five-Year COCs (when analyzed), comparison to current Concentration Limits, and results of any Retesting Procedures per Section 0.

    f. In the event of a verified exceedance of Concentration Limit(s), any actions taken per Section J of the SPRRs (*Response to Release*) for wells and/or constituents not already specifically addressed in Corrective Action Monitoring under this MRP.

g. Evaluation as to effectiveness of existing leachate monitoring and control facilities, and runoff/run-on control facilities.

h. For lined landfill units, a summary of any instances where leachate on the landfill liner system exceeded a depth of 30 cm (excluding the leachate sump), and information about the required notification and corrective action in Section E.13 of the SPRRs (*Standard Facility Specifications*).

i. Summaries of all Regular Visual Inspections conducted per Section 0 during the reporting period.

j. For closed landfills, summaries of inspections, leak searches and final cover repairs conducted in accordance with an approved Post-Closure Maintenance Plan per Standard Provisions G.26-29 (*Standard Closure and Post-Closure Maintenance Specifications*).

k. Laboratory statements of results of all analyses evaluating compliance with the WDRs.

2. Annual Monitoring Reports (AMRs)—On **1 February** of each year,[8] the Discharger shall submit an Annual Monitoring Report (AMR), containing following materials and information:

a. In tabulated format, all monitoring data for which annual reporting is required under this MRP. (See Section 0 for additional requirements for monitoring reports.)

b. Graphs of historical trends for all Monitoring Parameters and Five-Year COCs (if such analyses were performed) with respect to each monitoring point over the five prior calendar years.[9]

c. An evaluation of Monitoring Parameters with regard to the cation/anion balance, and graphical presentation of same in a Stiff diagram, Piper graph or Schoeller plot.

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[8] The Annual Monitoring Report may be combined with the Semiannual Monitoring Report for 1 July through 31 December of the same year, provided that the combination is clearly indicated in the title.

[9] Each graph shall contain individual data points (not mean values) and be appropriately scaled to accurately depict statistically significant trends or variations in water quality.

d. All historical monitoring data for which there are detectable results, including data for the previous year, shall be submitted in tabular form in a digital file.

e. For each groundwater well, quarterly hydrographs showing the elevation of groundwater with respect to the top and bottom of the screened interval, and the elevation of the pump intake,

f. A comprehensive discussion of the Facility's compliance record, and the result of any corrective actions taken or planned which may be needed to attain full compliance with the WDRs.

g. For landfill units, a map showing the areas and elevations of each unit where filling was completed during the previous calendar year; comparison to final closure design contours; and projected years in which each discrete module are expected to be filled.

h. A summary of the monitoring results, indicating any changes made or observed since the previous AMR.

i. A discussion on the results of Annual LCRS Testing conducted in accordance with Section 0.

j. When required per Section 0 of this Order, periodic updates to the Concentration Limits for all Monitoring Parameters and WQPS Monitoring Points.

k. To assess the progress of ongoing Corrective Action at the Facility for a release from WRND under CAO 96-150, the Discharger shall submit the following information summarizing the corrective action efforts:

    i. Corrective action measures taken during the calendar year;

    ii. Iso-concentration maps showing concentrations of COC plumes that are being monitored under and around WRND;

    iii. The quantity of groundwater extracted and treated per month by the Groundwater Extraction and Treatment System (GETS) associated with the WRND;

    iv. Estimated pounds of COCs removed per month by the GETS from wells associated with WRND;

v. An evaluation of the effectiveness of the corrective action to restore all beneficial uses currently impacted by a release from the WRND;

vi. An estimate on the amount of time it will take using current corrective action measures to restore all beneficial uses to receiving water currently impacted by a release from the WRND; and

vii. Any additional corrective action measures proposed during the upcoming year to accelerate the time required to restore all beneficial uses to receiving water currently impacted by a release from the WRND.

l. The following monthly and annual information with respect to leachate generated by the AWCU:

i. Total volume of leachate generated;

ii. Volume applied (returned) to AWCU for dust-control purposes,

iii. Volume exported offsite for treatment and/or disposal; and

iv. Identification of all offsite facilities receiving leachate.

3. **Leachate Seep Reporting**—Upon discovery of seepage from any disposal area within the Facility, the Discharger shall i**mmediately notify** the Central Valley Water Board via telephone or email; and **within seven days**, submit a written report with the following information:

a. Map(s) depicting the location(s) of seepage;

b. Estimated flow rate(s);

c. A description of the nature of the discharge (e.g., all pertinent observations and analyses);

d. Verification that samples have been submitted for analyses of the Monitoring Parameters in Table 18 (*Physical Parameters*) and Table 19 (*Constituent Parameters*), and an estimated date that the results will be submitted to the Central Valley Water Board; and

e. Corrective measures underway or proposed, and corresponding time schedule.

4. **Annual Facility Inspection Report**—By **1 October**, the Discharger shall submit a report with results of the Annual Facility Inspection per **Section 0**. The report shall discuss any repair measures implemented, any preparations for winter, and include photographs of any problem areas and repairs.

5. **Major Storm Event Reports**—Immediately following each post-storm inspection described in **Section 0**, the Discharger shall notify Central Valley Water Board staff of any damage or significant erosion (upon discovery). Subsequent repairs shall be reported to the Central Valley Water Board (together with before and after photos of the repaired areas) **within 14 days** of completion.

6. **Survey and Iso-Settlement Map (Closed Landfill Units)**—The Discharger shall submit all iso settlement maps prepared in accordance with **Section 0**. (Title 27, § 21090, subd. (e).) The next maps are due initially upon final closure of any portion of a landfill waste management unit, biennially for the following ten years, and then every five years thereafter.

7. **Financial Assurances Report**—By **1 June** of each year, the Discharger shall submit a copy of the annual financial assurances report due to the California Department of Resources Recycling and Recovery (CalRecycle) that updates the financial assurances for closure, post-closure maintenance, and corrective action. (See WDRs Order.)

8. **Water Quality Protection Standard Report**—Any proposed changes[10] to the Water Quality Protection Standard (WQPS) components (§ 0), other than periodic update of the Concentration Limits (§ 0), shall be submitted in a WQPS Report for review and approval. The report shall be certified by a "Qualified Professional" (§ 0), and contain the following:

a. *Potentially Affected Waterbodies*—An identification of all distinct bodies of surface water and groundwater potentially affected by a WMU release (including, but not limited to, the uppermost aquifer

[10] If subsequent sampling of the background monitoring point(s) indicates significant water quality changes due to either seasonal fluctuations or other reasons unrelated to onsite waste management activities, the Discharger may request modification of the WQPS.

and any permanent or ephemeral zones of perched groundwater underlying the Facility);

b. *Map of Monitoring Points*—A map of all groundwater, surface water[11] and unsaturated zone monitoring points (including all background/upgradient and Point of Compliance monitoring points);

c. *Groundwater Movement*—An evaluation of perennial direction(s) of groundwater movement within the uppermost zone(s);

d. *Statistical Method for Concentration Limits*—A proposed statistical method for calculating Concentration Limits for Monitoring Parameters and Five-Year COCs (see § 0) detected in at least 10 percent of the background data (naturally-occurring constituents) using a statistical procedure from subdivisions (e)(8)(A)-(D) or (e)(8)(E) of Title 27, section 20415; and

e. *Retesting Procedure*—A retesting procedure to confirm or deny measurably significant evidence of a release (Title 27, §§ 20415(e)(8)(E), 20420(j)(1)-(3)).

9. General Reporting Provisions

a. Transmittal Letters—Each report submitted under this MRP shall be accompanied by a Transmittal Letter providing a brief overview of the enclosed report, as well as the following:

i. Any violations found since the last report was submitted, a description of all actions undertaken to correct the violation (referencing any previously submitted time schedules for compliance), and whether the violations were corrected; and

ii. A statement from the submitting party, or its authorized agent, signed under penalty of perjury, certifying that, to the best of the signer's knowledge, the contents of the enclosed report are true, accurate and complete.

b. Monitoring Data and Reports

[11] To the extent that surface water monitoring is included in the Detection Monitoring Program.

i. **Electronic Submission via GeoTracker**—All reports with monitoring data (e.g., SMRs and AMRs) shall be submitted electronically via the State Water Board's Geotracker Database (https://geotracker.waterboards.ca.gov) including the laboratory analysis results in electronic data format (EDF). After uploading a report, and laboratory analysis results in EDF format the Discharger shall notify Central Valley Water Board staff via email at CentralVallySacramento@WaterBoards.ca.gov. The following information shall be included in the body of the email:

Attention:	Title 27 Compliance & Enforcement Unit
Report Title:	[Title of Report]
GeoTracker Upload ID:	[Identification Number]
Facility Name:	White Rock North Dump and Aerojet Waste Consolidation Unit Landfill
County:	Sacramento County
CIWQS Place ID:	5A34NC00106

ii. **Data Presentation and Formatting**—In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. Additionally, data shall be summarized in a manner that clearly illustrates compliance/noncompliance with WDRs.

iii. **Non-Detections / Reporting Limits**— Any analytical result equal to or greater than the MDL but less than the RL shall be reported and flagged as an estimated value. Only analytical results below the MDL shall be reported as non-detections.

iv. **Units**—Absent specific justification, all monitoring data shall be reported in the units specified herein.

c. **Compliance with SPRRs**—All reports submitted under this MRP shall comply with applicable provisions of the SPRRs, including those in Section I (*Standard Monitoring Specifications*) and Section J (*Response to Release*).

d. **Additional Requirements for Monitoring Reports**—Every monitoring report submitted under this MRP (e.g., SMRs [§ 0], AMRs [§ 0]) shall include a discussion of relevant field and laboratory tests, and the results of all monitoring conducted at the site shall be reported to the

Central Valley Water Board in accordance with the reporting schedule above for the calendar period in which samples were taken or observations made.

F. Record Retention Requirements—The Discharger shall maintain permanent records of all monitoring information, including without limitation: calibration and maintenance records; original strip chart recordings of continuous monitoring instrumentation; copies of all reports required by this MRP; and records of all data used to complete the application for WDRs. Such records shall be legible, and show the following for each sample:

1. Sample identification and the monitoring point or background monitoring point from which it was taken, along with the identity of the individual who obtained the sample;

2. Date, time and manner of sampling;

3. Date and time that analyses were started and completed, and the name of the personnel and laboratory performing each analysis;

4. A complete list of procedures used (including method of preserving the sample, and the identity and volumes of reagents used);

5. A calculation of results; and

6. The results of all analyses, as well as the MDL and PQL for each analysis (all peaks shall be reported).

LIST OF ATTACHMENTS

Attachment A—Volatile Organic Compounds, Short-List
Attachment B—Dissolved Inorganics (Five-Year COCs)
Attachment C—Volatile Organic Compounds, Extended List (Five-Year COCs)
Attachment D—Semi-Volatile Organic Compounds (Five-Year COCs)
Attachment E—Chlorophenoxy Herbicides (Five-Year COCs)
Attachment F—OrganoPhosphorous Compounds (Five-Year COCs)
Attachment G—Transfer Material Compounds

ENFORCEMENT

If, in the opinion of the Executive Officer, the Discharger fail to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to $10,000 per violation, per day,

depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

ADMINISTRATIVE REVIEW

Any person aggrieved by this Central Valley Water Board action may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. To be timely, the petition must be received by the State Water Board by 5:00 pm on the 30th day after the date of this Order; if the 30th day falls on a Saturday, Sunday or state holiday, the petition must be received by the State Water Board by 5:00 pm on the next business day. The law and regulations applicable to filing petitions are available on the State Water Board website (http://www.waterboards.ca.gov/public_notices/petitions/water_quality). Copies will also be provided upon request.

ATTACHMENT A—VOLATILE ORGANIC COMPOUNDS, SHORT-LIST

USEPA Method 8260B (Unless stated otherwise)

Constituent	GeoTracker Code
Acetone	ACE
Acrylonitrile	ACRAMD
Benzene	BZ
Bromochloromethane	BRCLME
Bromodichloromethane	BDCME
Bromoform (Tribromomethane)	TBME
Carbon disulfide	CDS
Carbon tetrachloride	CTCL
Chlorobenzene	CLBZ
Chloroethane (Ethyl chloride)	CLEA
Chloroform (Trichloromethane)	TCLME
Dibromochloromethane (Chlorodibromomethane)	DBCME
1,2 Dibromo 3 chloropropane (DBCP)	DBCP
1,2 Dibromoethane (Ethylene dibromide; EDB)	EDB
o Dichlorobenzene (1,2 Dichlorobenzene)	DCBZ12
m Dichlorobenzene (1,3 Dichlorobenzene)	DCBZ13
p Dichlorobenzene (1,4 Dichlorobenzene)	DCBZ14
trans l ,4 Dichloro 2 butene	DCBE14T
Dichlorodifluoromethane (CFC-12)	FC12
1,1 Dichloroethane (Ethylidene chloride)	DCA11
1,2 Dichloroethane (Ethylene dichloride)	DCA12
1,1 Dichloroethylene (1,1 Dichloroethene; Vinylidene chloride)	DCE11
cis 1,2 Dichloroethylene (cis 1,2 Dichloroethene)	DCE12C
trans 1,2 Dichloroethylene (trans 1,2 Dichloroethene)	DCE12T
1,2 Dichloropropane (Propylene dichloride)	DCPA12
cis 1,3 Dichloropropene	DCP13C
trans 1,3 Dichloropropene	DCP13T

Di-isopropylether (DIPE) ..... DIPE
Ethanol ..... ETHANOL
Ethyltertiary butyl ether ..... ETBE
Ethylbenzene ..... EBZ
2 Hexanone (Methyl butyl ketone) HXO2
Hexachlorobutadiene ..... HCBU
Methyl bromide (Bromomethene) ..... BRME
Methyl chloride (Chloromethane) ..... CLME
Methylene bromide (Dibromomethane) ..... DBMA
Methylene chloride (Dichloromethane) ..... DCMA
Methyl ethyl ketone (MEK: 2 Butanone) ..... MEK
Methyl iodide (Iodomethane) ..... IME
Methyl t-butyl ether ..... MTBE
4-Methyl 2 pentanone (Methyl isobutylketone) ..... MIBK
Styrene ..... STY
Tertiary amyl methyl ether ..... TAME
Tertiary butyl alcohol ..... TBA
1,1,1,2 Tetrachloroethane TC1112
1,1.2,2 Tetrachloroethane ..... PCA
Tetrachloroethylene (Tetrachloroethene; Perchloroethylene) ..... PCE
Toluene ..... BZME
1,1,1 Trichloroethane (Methylchloroform) TCA111
1,1,2 Trichloroethane TCA112
Trichloroethylene (Trichloroethene) ..... TCE
Trichlorofluoromethane (CFC 11) FC11
1,2,3 Trichloropropane per Method SRL-524M-TCP TCPR123
Vinyl acetate ..... VA
Vinyl chloride VC
Xylenes ..... XYLENES

ATTACHMENT B—DISSOLVED INORGANICS (FIVE-YEAR COCS)

Constituent /
Analytical MethodGeoTracker Code

Aluminum,
USEPA Method 6010 ..... AL

Antimony,
USEPA Method 7041 ..... SB

Barium,
USEPA Method 6010 ..... BA

Beryllium,
USEPA Method 6010 ..... BE

Cadmium,
USEPA Method 7131A..... CD

Chromium,
USEPA Method 6010 ..... CR

Cobalt,
USEPA Method 6010 ..... CO

Copper,
USEPA Method 6010 ..... CU

Silver,
USEPA Method 6010 ..... AG

Tin,
USEPA Method 6010 ..... SN

Vanadium,
USEPA Method 6010 V

Zinc,
USEPA Method 6010 ..... ZN

Iron,
USEPA Method 6010 ..... FE

Manganese,
USEPA Method 6010 ..... MN

Arsenic,
USEPA Method 7062 ..... AS

Lead,
USEPA Method 7421 ..... PB

Mercury,
USEPA Method 7470A..... HG

Nickel,
USEPA Method 7521 ..... NI

Selenium,
USEPA Method 7742 ..... SE

Thallium,
USEPA Method 7841 ..... TL

Cyanide,
USEPA Method 9010C..... CN

Sulfide,
USEPA Method 9030Bx ..... S

ATTACHMENT C—VOLATILE ORGANIC COMPOUNDS, EXTENDED LIST (FIVE-YEAR COCS)

USEPA Method 8260, Extended List

Constituent	GeoTracker Code
Acetone	ACE
Acetonitrile (Methyl cyanide)	ACCN
Acrolein	ACRL
Acrylonitrile	ACRAMD
Allyl chloride (3 Chloropropene)	CLPE3
Benzene	BZ
Bromochloromethane (Chlorobromomethane)	BRCLME
Bromodichloromethane (Dibromochloromethane)	DBCME
Bromoform (Tribromomethane)	TBME
Carbon disulfide	CDS
Carbon tetrachloride	CTCL
Chlorobenzene	CLBZ
Chloroethane (Ethyl chloride)	CLEA
Chloroform (Trichloromethane)	TCLME
Chloroprene	CHLOROPRENE
Dibromochloromethane (Chlorodibromomethane)	DBCME
1,2 Dibromo 3 chloropropane (DBCP)	DBCP
1,2 Dibromoethane (Ethylene dibromide; EDB)	EDB
o Dichlorobenzene (1,2 Dichlorobenzene)	DCBZ12
m Dichlorobenzene(1,3 Dichlorobenzene)	DCBZ13
p Dichlorobenzene (1,4 Dichlorobenzene)	DCBZ14
trans 1,4 Dichloro 2 butene	DCBE14T
Dichlorodifluoromethane (CFC 12)	FC12
1,1 Dichloroethane (Ethylidene chloride)	DCA11

ATTACHMENT C—VOLATILE ORGANIC COMPOUNDS, EXTENDED LIST (FIVE-YEAR COCS)

1,2 Dichloroethane (Ethylene dichloride).....DCA12
1,1 Dichloroethylene (1, l Dichloroethene; Vinylidene chloride) DCE11
cis l ,2 Dichloroethylene (cis 1,2 Dichloroethene).....DCE12C
trans l ,2 Dichloroethylene (trans 1,2 Dichloroethene).....DCE12T
1,2 Dichloropropane (Propylene dichloride) DCPA12
1,3 Dichloropropane (Trimethylene dichloride)..... DCPA13
2,2 Dichloropropane (Isopropylidene chloride)..... DCPA22
1,1 Dichloropropene.....DCP11
cis 1,3 Dichloropropene.....DCP13C
trans l ,3 Dichloropropene DCP13T
Di-isopropylether (DIPE) .....DIPE
Ethanol..... ETHANOL
Ethyltertiary butyl ether.....ETBE
Ethylbenzene ..... EBZ
Ethyl methacrylate.....EMETHACRY
Hexachlorobutadiene .....HCBU
2 Hexanone (Methyl butyl ketone).....HXO2
Isobutyl alcohol .....ISOBTOH
Methacrylonitrile .....METHACRN
Methyl bromide (Bromomethane).....BRME
Methyl chloride (Chloromethane) ..... CLME
Methyl ethyl ketone (MEK; 2 Butanone)..... MEK
Methyl iodide (Iodomethane).....IME
Methyl t-butyl ether..... MTBE
Methyl methacrylate .....MMTHACRY
4 Methyl 2 pentanone (Methyl isobutyl ketone) ..... MIBK
Methylene bromide (Dibromomethane).....DBMA
Methylene chloride (Dichloromethane).....DCMA
Naphthalene..... NAPH
Propionitrile (Ethyl cyanide)..... PACN

Styrene ..... STY
Tertiary amyl methyl ether ..... TAME
Tertiary butyl alcohol ..... TBA
1,1,1,2 Tetrachloroethane TC1112
1,1,2,2 Tetrachloroethane ..... PCA
Tetrachloroethylene (Tetrachloroethene; Perchloroethylene; PCE) ..... PCE
Toluene ..... BZME
1,2,4 Trichlorobenzene TCB124
1,1,1 Trichloroethane (Methylchloroform) TCA111
1,1,2 Trichloroethane TCA112
Trichloroethylene (Trichloroethene; TCE) ..... TCE
Trichlorofluoromethane (CFC 11) FC11
1,2,3 Trichloropropane TCPR123
Vinyl acetate ..... VA
Vinyl chloride (Chloroethene) VC
Xylene (total) ..... XYLENES

ATTACHMENT D—SEMI-VOLATILE ORGANIC COMPOUNDS (FIVE-YEAR COCS)

USEPA Methods 8270C or 8270D
(Base, Neutral & Acid Extractables)

Constituent	GeoTracker Code
Acenaphthene	ACNP
Acenaphthylene	ACNPY
Acetophenone	ACPHN
2 Acetylaminofluorene (2 AAF)	ACAMFL2
Aldrin	ALDRIN
4 Aminobiphenyl	AMINOBPH4
Anthracene	ANTH
Benzo[a]anthracene (Benzanthracene)	BZAA
Benzo[b]fluoranthene	BZBF
Benzo[k]fluoranthene	BZKF
Benzo[g,h,i]perylene	BZGHIP
Benzo[a]pyrene	BZAP
Benzyl alcohol	BZLAL
Bis(2 ethylhexyl) phthalate	BIS2EHP
alpha BHC	BHCALPHA
beta BHC	BHCBETA
delta BHC	BHCDELTA
gamma BHC (Lindane)	BHCGAMMA
Bis(2 chloroethoxy) methane	BECEM
Bis(2 chloroethyl) ether (Dichloroethyl ether)	BIS2CEE
Bis(2 chloro 1 methyethyl) ether (Bis(2 chloroisopropyl) ether; DCIP)	BIS2CIE
4 Bromophenyl phenyl ether	BPPE4
Butyl benzyl phthalate (Benzyl butyl phthalate)	BBP
Chlordane	CHLORDANE
p Chloroaniline	CLANIL4
Chlorobenzilate	CLBZLATE

p Chloro m cresol (4 Chloro 3 methylphenol) C4M3PH
2 Chloronaphthalene CNPH2
2 Chlorophenol CLPH2
4 Chlorophenyl phenyl ether CPPE4
Chrysene ..... CHRYSENE
o Cresol (2 methylphenol) MEPH2
m Cresol (3 methylphenol) MEPH3
p Cresol (4 methylphenol) MEPH4
4,4' DDD DDD44
4,4' DDE DDE44
4,4' DDT DDT44
Diallate ..... DIALLATE
Dibenz[a,h]anthracene ..... DBAHA
Dibenzofuran ..... DBF
Di n butyl phthalate ..... DNBP
3,3' Dichlorobenzidine DBZD33
2,4 Dichlorophenol DCP24
2,6 Dichlorophenol DCP26
Dieldrin ..... DIELDRIN
Diethyl phthalate ..... DEPH
p (Dimethylamino) azobenzene ..... PDMAABZ
7,12 Dimethylbenz[a]anthracene DMBZA712
3,3' Dimethylbenzidine DMBZD33
2,4 Dimehtylphenol (m Xylenol) DMP24
Dimethyl phthalate ..... DMPH
m Dinitrobenzene DNB13
4,6 Dinitro o cresol (4,6 Dinitro 2 methylphenol) DN46M
2,4 Dinitrophenol DNP24
2,4 Dinitrotoluene DNT24
2,6 Dinitrotoluene DNT26

Di n octyl phthalate ..... DNOP
Diphenylamine ..... DPA
Endosulfan I ..... ENDOSULFANA
Endosulfan II ..... ENDOSULFANB
Endosulfan sulfate ..... ENDOSULFANS
Endrin ..... ENDRIN
Endrin aldehyde ..... ENDRINALD
Ethyl methanesulfonate ..... EMSULFN
Famphur ..... FAMPHUR
Fluoranthene ..... FLA
Fluorene ..... FL
Heptachlor ..... HEPTACHLOR
Heptachlor epoxide ..... HEPT-EPOX
Hexachlorobenzene ..... HCLBZ
Hexachlorocyclopentadiene ..... HCCP
Hexachloroethane ..... HCLEA
Hexachloropropene ..... HCPR
Indeno(1,2,3 c,d) pyrene INP123
Isodrin ..... ISODRIN
Isophorone ..... ISOP
Isosafrole ..... ISOSAFR
Kepone ..... KEP
Methapyrilene ..... MTPYRLN
Methoxychlor ..... MTXYCL
3 Methylcholanthrene MECHLAN3
Methyl methanesulfonate ..... MMSULFN
2 Methylnaphthalene MTNPH2
1,4 Naphthoquinone NAPHQ14
1 Naphthylamine AMINONAPH1
2 Naphthylamine AMINONAPH2

o Nitroaniline (2 Nitroaniline) NO2ANIL2
m Nitroaniline (3 Nitroaniline) NO2ANIL3
p Nitroaniline (4 Nitroaniline) NO2ANIL4
Nitrobenzene NO2BZ
o Nitrophenol (2 Nitrophenol) NTPH2
p Nitrophenol (4 Nitrophenol) NTPH4
N Nitrosodi n butylamine (Di n butylnitrosamine) ..... NNSBU
N Nitrosodiethylamine (Diethylnitrosamine) ..... NNSE
N Nitrosodimethylamine (Dimethylnitrosamine) ..... NNSM
N Nitrosodiphenylamine (Diphenylnitrosamine) ..... NNSPH
N Nitrosodipropylamine (N Nitroso N dipropylamine; Di n propylnitrosamine) ..... NNSPR
N Nitrosomethylethylamine (Methylethylnitrosamine) ..... NNSME
N Nitrosopiperidine ..... NNSPPRD
N Nitrosospyrrolidine ..... NNSPYRL
5 Nitro o toluidine TLDNONT5
Pentachlorobenzene ..... PECLBZ
Pentachloronitrobenzene (PCNB) PECLNO2BZ
Pentachlorophenol ..... PCP
Phenacetin ..... PHNACTN
Phenanthrene ..... PHAN
Phenol ..... PHENOL
p Phenylenediamine ANLNAM4
Polychlorinated biphenyls (PCBs; Aroclors) ..... PCBS
Pronamide ..... PRONAMD
Pyrene ..... PYR
Safrole ..... SAFROLE
1,2,4,5 Tetrachlorobenzene C4BZ1245
2,3,4,6 Tetrachlorophenol TCP2346
o Toluidine ..... TLDNO
Toxaphene ..... TOXAP

2,4,5 Trichlorophenol..... TCP245

0,0,0 Triethyl phosphorothioate.....TEPTH

sym Trinitrobenzene..... TNB135

ATTACHMENT E—CHLOROPHENOXY HERBICIDES (FIVE-YEAR COCS)

USEPA Method 8151A

Constituent	**GeoTracker Code**
2,4 D (2,4 Dichlorophenoxyacetic acid)	24D
Dinoseb (DNBP; 2 sec Butyl 4,6 dinitrophenol)	DINOSEB
Silvex (2,4,5 Trichlorophenoxypropionic acid; 2,4,5 TP)	SILVEX
2,4,5 T (2,4,5 Trichlorophenoxyacetic acid)	245T

ATTACHMENT F—ORGANOPHOSPHOROUS COMPOUNDS (FIVE-YEAR COCS)

USEPA Method 8141B

Constituent	GeoTracker Code
Atrazine	ATRAZINE
Chlorpyrifos	CLPYRIFOS
0,0 Diethyl 0 2 pyrazinyl phosphorothioate (Thionazin)	ZINOPHOS
Diazinon	DIAZ
Dimethoate	DIMETHAT
Disulfoton	DISUL
Methyl parathion (Parathion methyl)	PARAM
Parathion	PARAE
Phorate	PHORATE
Simazine	SIMAZINE

ATTACHMENT G—TRANSFER MATERIAL COMPOUNDS

Constituent Name	Units	Geotracker Code	Test Method
Anions			
Cyanide	µg/L	CN	USEPA 90114
Fluoride	mg/L	F	USEPA 300.0
Nitrite as N	mg/L	NO2	USEPA 300.0
Perchlorate	µg/L	PCATE	USEPA 314.0
Dioxins			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	pg/L	OCDD	USEPA 8290
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	HPCDD1234678	USEPA 8290
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	HXCDD123478	USEPA 8290
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	HXCDD123678	USEPA 8290
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	HXCDD123789	USEPA 8290
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	PECDD12378	USEPA 8290
2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/L	TCDD2378	USEPA 8290
Total heptachlorodibenzo-p-dioxin (HpCDD)	pg/L	HPCDD	USEPA 8290
Total hexachlorodibenzo-p-dioxin (HxCDD)	pg/L	HXCDD	USEPA 8290
Total pentachlorodibenzo-p-dioxin (PeCDD)	pg/L	PECDD	USEPA 8290
Total tetrachlorodibenzo-p-dioxin (TCDD)	pg/L	TCDD	USEPA 8290
Explosives			
Nitroguanidine	µg/L	NGURADIN	USEPA 8330
Furans			USEPA 8290
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	pg/L	OCDF	USEPA 8290
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	pg/L	HPCDF1234678	USEPA 8290
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	pg/L	HPCDF1234789	USEPA 8290

Constituent Name	Units	Geotracker Code	Test Method
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	HXCDF123478	USEPA 8290
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	HXCDF123678	USEPA 8290
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	pg/L	HXCDF123789	USEPA 8290
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	PECDF12378	USEPA 8290
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	pg/L	HXCDF234678	USEPA 8290
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	pg/L	PECDF23478	USEPA 8290
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	pg/L	TCDF2378	USEPA 8290
Total heptachlorodibenzofuran (HpCDF)	pg/L	HPCDF	USEPA 8290
Total hexachlorodibenzofuran (HxCDF)	pg/L	HXCDF	USEPA 8290
Total pentachlorodibenzofuran (PeCDF)	pg/L	PECDF	USEPA 8290
Total tetrachlorodibenzofuran (TCDF)	pg/L	TCDF	USEPA 8290
Metals			
Aluminum	µg/L	AL	USEPA 6010
Antimony	µg/L	SB	USEPA 7041
Arsenic	µg/L	AS	USEPA 7062
Barium	µg/L	BA	USEPA 6010
Beryllium	µg/L	BE	USEPA 6010
Boron	µg/L	B	USEPA 200.7
Cadmium	µg/L	CD	USEPA 7131A
Chromium	µg/L	CR	USEPA 6010
Chromium III (trivalent)	µg/L	CR3	USEPA 6010 or 6020
Chromium VI (hexavalent)	µg/L	CR6	USEPA 7196A or 7199
Cobalt	µg/L	CO	USEPA 6010
Copper	µg/L	CU	USEPA 6010
Iron	µg/L	FE	USEPA 6010
Lead	µg/L	PB	USEPA 7421
Lithium	µg/L	LI	USEPA 200.7

Constituent Name	Units	Geotracker Code	Test Method
Manganese	µg/L	MN	USEPA 6010
Mercury	µg/L	HG	USEPA 7470A
Molybdenum	µg/L	MO	USEPA 200.7
Nickel	µg/L	NI	USEPA 7521
Selenium	µg/L	SE	USEPA 7742
Silver	µg/L	AG	USEPA 6010
Strontium	µg/L	SR	USEPA 6010 or 6020
Thallium	µg/L	TL	USEPA 7841
Tin	µg/L	SN	USEPA 6010
Titanium	µg/L	TI	USEPA 6010 or 6020
Vanadium	µg/L	V	USEPA 6010
Zinc	µg/L	ZN	USEPA 6010
PCBs			
2,2',3,3',6,6'-Hexachlorobiphenyl (PCB 136)	µg/L	PCB136	USEPA 1668
2,3,3',4,6-Pentachlorobiphenyl (PCB 109)	µg/L	PCB109	USEPA 1668
Aroclor 1248	µg/L	PCB1248	USEPA 8082
Aroclor 1254	µg/L	PCB1254	USEPA 8082
Aroclor 1260	µg/L	PCB1260	USEPA 8082
Total PCBs	µg/L	TOTPCB	USEPA 8082
Pesticides			
4,4'-DDD	µg/L	DDD44	USEPA 8270C or 8270D
4,4'-DDE	µg/L	DDE44	USEPA 8270C or 8270D
4,4'-DDT	µg/L	DDT44	USEPA 8270C or 8270D
Aldrin	µg/L	ALDRIN	USEPA 8270C or 8270D
alpha-BHC/HCH	µg/L	BHCALPHA	USEPA 8270C or 8270D
alpha-Chlordane	µg/L	CHLORDANEA	USEPA 8081A
beta-BHC/HCH	µg/L	BHCBETA	USEPA 8270C or 8270D

Constituent Name	Units	Geotracker Code	Test Method
delta-BHC/HCH	µg/L	BHCDELTA	USEPA 8270C or 8270D
Dieldrin	µg/L	DIELDRIN	USEPA 8270C or 8270D
Endosulfan I (Alpha)	µg/L	ENDOSULFANA	USEPA 8270C or 8270D
Endosulfan II (Beta)	µg/L	ENDOSULFANB	USEPA 8270C or 8270D
Endrin	µg/L	ENDRIN	USEPA 8270C or 8270D
gamma-BHC/HCH (Lindane)	µg/L	BHCGAMMA	USEPA 8270C or 8270D
gamma-Chlordane	µg/L	CHLORDANEG	USEPA 8081A
Heptachlor	µg/L	HEPTACHLOR	USEPA 8270C or 8270D
Heptachlor epoxide	µg/L	HEPT-EPOX	USEPA 8270C or 8270D
Pendimethalin	µg/L	PENOXALIN	USEPA 8081A
SVOCs			
1,2-Diphenylhydrazine	µg/L	DPHY12	USEPA 8270C
10-10'-Oxybis-10H-phenoxarsine	µg/L	1010OXYRSIN	HPLC
2,3',4,4',5,5'-Hexachlorobiphenyl (PCB 167)	µg/L	PCB167	USEPA 1668
2-Methylnaphthalene	µg/L	MTNPH2	USEPA 8270C or 8270D
3,3',4,4',5,5'-Hexachlorobiphenyl (PCB 169)	µg/L	PCB169	USEPA 1668
Anthracene	µg/L	ANTH	USEPA 8270C or 8270D
Benzo(a)anthracene	µg/L	BZAA	USEPA 8270C or 8270D
Benzo(a)pyrene	µg/L	BZAP	USEPA 8270C or 8270D
Benzo(b)fluoranthene	µg/L	BZBF	USEPA 8270C or 8270D
Benzo(b)fluoranthene/Benzo(k)fluoranthene	µg/L	BZBFBZKF	USEPA 8270C

Constituent Name	Units	Geotracker Code	Test Method
Benzo(g,h,i)perylene	µg/L	BZGHIP	USEPA 8270C or 8270D
Benzo(k)fluoranthene	µg/L	BZKF	USEPA 8270C or 8270D
Bis(2-ethylhexyl)phthalate	µg/L	BIS2EHP	USEPA 8270C or 8270D
Chrysene	µg/L	CHRYSENE	USEPA 8270C or 8270D
Dibutyl phthalate	µg/L	DNBP	USEPA 8270C or 8270D
Dioctyl ester hexanedioic acid A	µg/L	**See Note Below**	USEPA 8270C (TIC)
Fluoranthene	µg/L	FLA	USEPA 8270C or 8270D
Fluorene	µg/L	FL	USEPA 8270C or 8270D
Hexadecanoic acid	µg/L	PALMA	USEPA 8270C (TIC)
Indeno(1,2,3-cd)pyrene	µg/L	INP123	USEPA 8270C or 8270D
Naphthalene	µg/L	NAPH	USEPA 8260B
n-Nitrosodimethylamine	µg/L	NNSM	USEPA 8270C or 8270D
Phenanthrene	µg/L	PHAN	USEPA 8270C or 8270D
Phenol	µg/L	PHENOL	USEPA 8270C or 8270D
Pyrene	µg/L	PYR	USEPA 8270C or 8270D
Total Petroleum Hydrocarbons (TPH)			
Diesel fuel	mg/L	PHCD	USEPA 8015
Diesel Range Organics (C10-C24)	mg/L	DROC10C24	USEPA 8015
Extractable Petroleum Hydrocarbons (C10-C30)	mg/L	TPHC10C30	USEPA 8015
Kerosene	mg/L	KEROSENE	USEPA 8015
Oil and grease	mg/L	OILGREASE	Visual
Total Petroleum Hydrocarbons	mg/L	PHC	USEPA 8015

Constituent Name	Units	Geotracker Code	Test Method
Total Petroleum Hydrocarbons (C16-C36) Motor Oil	mg/L	MOILC16C36	USEPA 8015
Total Petroleum Hydrocarbons (C24-C36) Motor Oil	mg/L	MOILC24C36	USEPA 8015
Total Recoverable Petroleum Hydrocarbons	mg/L	TRPH	USEPA 8015
VOCs			
1,2-Dichloroethene (total)	µg/L	DCE12TOT	USEPA 8260B
Bromodichloromethane	µg/L	BDCME	USEPA 8260B
Freon	µg/L	**See Note Below**	USEPA 8260B
Freon 113	µg/L	FC113	USEPA 8260B
Methylene chloride	µg/L	MTLNCL	USEPA 8260B
Octadecanoic acid	µg/L	OCDNA	USEPA 8260B

Note: Geotracker Electronic Data Submittal currently does not have a Geotracker Code assigned to Dioctyl ester hexanedioic acid A and Freon. The Discharger shall apply for and receive Geotracker codes for these two compounds prior to performing background water quality sampling for the AWCU.