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MONITORING & REPORTING PROGRAM (MRP) R5-2022-0060



ORDER INFORMATION

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Discharger(s):	Sierra Pacific Industries
Facility:	Sierra Pacific Industries- Martell Division Facility
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County:	Amador County
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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 14 October 2022.

PATRICK PULUPA,
Executive Officer

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GLOSSARY

ADAL.....	Ash Disposal Area Landfill
AMR	Annual Monitoring Report
CalRecycle	California Department of Resources Recycling and Recovery
CAMP.....	Corrective Action Monitoring Program
C.F.R.....	Code of Federal Regulations
CIWQS.....	California Integrated Water Quality System
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
LB.....	Leachate Basin
LCRS.....	Leachate Collection and Removal System
LF	Landfill

LFG	Landfill Gas
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 or 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
SCAP	Sample Collection and Analysis Plan
SGP.....	Soil Pore Gas
SI.....	Surface Impoundment
SMR	Semiannual Monitoring Report

SPRRs / Standard Provisions	Standard Provisions and Reporting Requirements Industrial Facilities Regulated by Title 27, April 2016 Edition
TBD	To Be Determined
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
WWL	Wood Waste Landfill

UNITS

ft ³ / min	Cubic Feet per Minute
°F	Degrees Fahrenheit
Gallons/Day.....	Gallons per Day
mg/L	Milligrams per Liter
µg/L	Micrograms per Liter
µmhos/cm.....	Microsiemens per Centimeter
µg/cm ³	Micrograms per Cubic Centimeter
NTUs	Nephelometric Turbidity Units
% Vol.....	Percent by Volume
Inches Hg	Inches of Mercury (Barometric Pressure)

MM Hg VacuumMillimeters 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 Sierra Pacific Industries (Discharger), which owns and operates the Sierra Pacific Industries- Martell Division Facility (Facility) in Amador County. Additional information regarding the Facility is set forth in the enumerated findings of Waste Discharge Requirements Order R5-2022-0060 (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 Industrial Facilities Regulated by Title 27, April 2016 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. Sample Collection and Analysis Plan (SCAP)

All samples shall be collected, preserved and transported in accordance with the approved Sample Collection and Analysis Plan (SCAP) 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 (MDLs) equal to or lower than the analytical methods specified in this MRP and are identified in the approved SCAP. Groundwater samples must be collected from the existing wells and any additional wells or piezometers that may be installed at the facility in the future. Any groundwater sample obtained for monitoring must have a

turbidity of less than 10 NTUs. Samples must be collected and analyzed for the Constituents of Concern in accordance with the methods and frequency specified in the tables of this MRP. Organic Constituents of Concern must be analyzed for "total" concentrations. Filtering of organic samples is prohibited.

5. Industrial Stormwater Permit

The Discharger shall be enrolled in and maintain a Storm Water Pollution Prevention Plan and Monitoring Program and Reporting Requirements in accordance with State Water Board Order No. 2014-0057-DWQ (or most recent general industrial storm water permit and/or amendments), and must submit monitoring data according to the General Permit (NPDES NO. CAS000001), or retain all storm water on-site

6. Installation of any New Monitoring Points

Whenever any new wells (including groundwater, gas, soil vapor, piezometers, and similar) are proposed, the Discharger must submit a monitoring well installation work plan that must include the information required by the Regional Water Board. **60-days after installation**, the Discharger must submit a monitoring well installation report that includes the analytical results from an initially sampling event and well construction details. Initial sampling events must include all 5-year COCs. The monitoring well installation report must include the information required by the Regional Water Board. Whenever any new wells are installed, such wells must be incorporated into this MRP beginning with the quarter in which such wells are installed.

7. Qualified Professionals

All technical reports submitted under this Order shall be prepared by, or under the direct supervision of, a California-licensed civil engineer or appropriate California-licensed engineering geologist for the work performed. For the purposes of this section, a "technical report" is a report incorporating the application of scientific or engineering principles.

In accordance with the California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain

workplans, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall contain the professional's signature and stamp of the seal.

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 (if required in the future) in accordance with the provisions of Title 27, particularly sections 20415 and 20420. Groundwater, unsaturated zone and surface water¹ detection monitoring networks shall be revised (as needed) with the construction of each new landfill cell or module. If the Discharger demonstrates that monitoring in accordance with the operative MRP has conclusively determined that certain constituents of concern are not present in receiving waters (surface waters and/or groundwaters) the Discharger may formally request that the operative MRP be revised to either modify the number of wells sampled for those individual constituents of concern and/or the frequency of sampling for those individual constituents of concern.

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).)

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).

Table 1—Groundwater Monitoring Network

Well	Program	Monitored Unit	Point of Compliance (WQPS)	Zone	Status
B-1	Corrective Action	WWL & LB	Upgradient	Shallow	Operational
B-2	Detection, Corrective Action	WWL & LB	Yes	Shallow	Operational
B-3	Corrective Action	WWL & LB	Yes	Shallow	Operational
B-5	Detection	ADAL	Yes	Shallow	Operational
B-6R	Corrective Action	WWL & LB	Sentry	Shallow	Operational
B-8	Detection	ADAL	Crossgradient	Shallow	Operational
B-9	Corrective Action	WWL & LB	Background	Shallow	Operational
B-10	Corrective Action	WWL & LB	Crossgradient	Shallow	Operational
B-11	Detection, Corrective Action	WWL & LB	Yes	Shallow	Operational
B-12	Corrective Action	WWL & LB	Sentry	Shallow	Operational
B-13	Corrective Action	WWL & LB	Sentry	Shallow	Operational
B-14	Detection, Corrective Action	WWL & LB	Yes	Shallow	Operational
B-15	Detection	ADAL	Yes	Shallow	Operational

Well	Program	Monitored Unit	Point of Compliance (WQPS)	Zone	Status
B-16	Background	ADAL	Upgradient	Shallow	Operational
B-17	Corrective Action	WWL & LB	Sentry	Shallow	Operational
LD-2A	Corrective Action	WWL & LB	Sentry	Deep	Operational
PZ-A	GW Separation	ADAL	Yes	Shallow	Operational
PZ-B	GW Separation	ADAL	Yes	Shallow	Operational
PZ-C	GW Separation	ADAL	Yes	Shallow	Operational
PZ-D	GW Separation	ADAL	Yes	Shallow	Operational
PZ-E	GW Separation	ADAL	Yes	Shallow	Operational

See Glossary for definitions of terms and abbreviations in table.

b. Sample Collection and Analysis

Groundwater samples shall be collected from each well excluding piezometers (PZ-X designation) 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, subs. (e)-(f).)

Table 2—Groundwater Detection Monitoring, Physical Parameters

Physical Parameter ¹	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Temperature	TEMP	°C	Semiannually	Semiannually

Physical Parameter ¹	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Electrical Conductivity	SC	µmhos/cm	Semiannually	Semiannually
pH	PH	pH Units	Semiannually	Semiannually
Turbidity	TURB	NTUs	Semiannually	Semiannually

See Glossary for definitions of terms and abbreviations in table.

¹Measured using calibrated field instrument.

Table 3—Groundwater Detection Monitoring, Constituent Parameters

Constituent Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
General Chemistry and General Minerals (See Attachment A)	Varies	Varies	Semiannually	Semiannually
Dissolved Inorganics (See Attachment B)	Varies	mg/L	Semiannually	Semiannually
Polynuclear Aromatic Hydrocarbons (See Attachment C)	Varies	µg/L	Annually	Annually
Dioxins and Furans (See Attachment D)	Varies	pg/L	Annually	Annually

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 will begin monitoring in 2022 if applicable, and shall be analyzed again in 2027. (Title 27, § 20420, subd. (g).)

Table 4—Groundwater Detection Monitoring, Five-Year COCs

Five-Year Constituent	GeoTracker Code	Units	Sampling & Reporting Freq.
None at this time	Varies	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 E.1.**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
Flow Rate	(none)	Quarterly	Semiannually

The elevation of groundwater in monitoring wells and piezometers shall be reported with an accuracy of 0.01 feet mean sea level.

Once per quarter, the Discharger must determine the groundwater flow rate and direction in the uppermost aquifer, in any zones of perched water, and in any additional zone of saturation monitored pursuant to this MRP. The Discharger states that groundwater monitoring well LD-2A is the only well at this site considered to be in an aquifer deeper than the uppermost aquifer; therefore, the groundwater flow rate and direction are not required for LD-2A.

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).)

2. Unsaturated Zone (Not currently required)

3. Surface Water

Title 27 defines leachate as any liquid formed by the drainage of liquids from waste or by the percolation or flow of liquid through waste. It includes any constituents extracted from the waste and dissolved or suspended in the fluid. At this site, leachate is formed when rainwater contacts the open face of the Wood Waste Landfill. This leachate may contain soluble constituents extracted from the wood waste, including concentrations of iron, manganese, calcium, total dissolved solids, and tannins and lignins. The leachate generated at the Wood Waste Landfill traverses down an unlined surface water drainage course and into an unlined leachate collection basin.

Surface water samples must be obtained during the wet season, which is defined as 1 October—30 April. Each surface water location must be sampled for two events during the first hour of discharge during regular business hours from:

- (1) The first storm event of the wet season, and
- (2) At least one other storm event in the wet season.

If no rain event occurred during a monitoring period, this must be so stated in the monitoring report. Samples must be obtained during the first storm event, and once thereafter, provided storm events occur that produce discharge into the drainage course with sufficient volume to obtain a sample. If insufficient rainfall prevents a sample from being collected within a month, then the monitoring report shall include this information.

a. Required Network

The Facility's surface water monitoring network consists of the monitoring points listed in **Table 6**. As of the date of this Order, the network meets the requirements of Title 27. (See § 20415, subd. (c).)

Table 6—Surface Water Detection Monitoring Network

Monitoring Point	Program or Function	Monitored Unit	Location / Notes	GPS Location ⁴ (Latitude, Longitude)
SW-1	Detection	WWL	South of WWL	TBD
SW-2	Detection	LB and WWL	South of LB and WWL	TBD
Leachate	Detection	WWL	Upstream before inlet of LB	TBD
Leachate Basin	Detection	LB	Within LB	TBD

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 6** at any point during the monitoring period, samples shall be collected from each monitoring point and analyzed for the Monitoring Parameters in **Table 7** (Physical Parameters) and **Table 8** (Constituent Parameters), 1 accordance with the specified schedule. (Title 27, § 20420, subds. (e)-(f).)

Table 7—Surface Water Detection Monitoring, Physical Parameters

Physical Parameter ¹	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Temperature	TEMP	°C	Wet Season	Semiannually

⁴ The approximate locations of the surface water monitoring points on shown on Attachment D of WDRs R5-2022-0060. The Discharger shall report the GPS location of its surface water monitoring points as part of its annual monitoring and reporting program, The Discharger shall not change the monitoring location without prior notification and written approval by Central Valley Water Board staff.

Physical Parameter ¹	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Electrical Conductivity	SC	µmhos/cm	Wet Season	Semiannually
pH	PH	pH Units	Wet Season	Semiannually
Turbidity ⁴	TURB	NTUs	Wet Season	Semiannually
Oxidation-Reduction Potential (ORP)	REDOX	mV	Wet Season	Semiannually
Rainfall ²	RAINFALL	0.01 inches	All Storm Events	Annually
Presence of Oil & Grease	(none)	Yes / No	Wet Season	Semiannually
Flow to Surface Waters at Time of Sampling	(none)	Yes/No	Wet Season	Semiannually
Leachate Basin Freeboard ³	(none)	0.1 Feet	Weekly	Semiannually

See Glossary for definitions of terms and abbreviations in table.

¹Measured using calibrated field instrument.

²Rainfall shall be monitored and documented daily using an on-site rain gauge; the Sutter Hill Ranger Station can be used as a secondary rain gauge if necessary.

³The leachate basin freeboard must be recorded weekly during the wet season (1 October—30 April) and monthly during the dry season (1 May—30 September). Whenever the leachate basin is dry, this must be reported in lieu of the freeboard. The leachate basin when water is present shall be monitored monthly for electrical conductivity, total dissolved solids, pH, and ORP.

⁴The leachate basin does not have to be monitored for turbidity and TSS since the leachate basin does not discharge to surface waters.

Table 8—Surface Water Detection Monitoring, Constituent Parameters

Constituent Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Dissolved Oxygen	DO	mg/L	Wet Season	Semiannually
TSS ⁴	TSS	mg/L	Wet Season	Semiannually
General Chemistry and General Minerals (See Attachment A)	Varies	Varies	Wet Season	Semiannually
Total Inorganics (See Attachment B)	Varies	mg/L	Wet Season	Semiannually
Polynuclear Aromatic Hydrocarbons (See Attachment C)	Varies	µg/L	Wet Season	Annually
Dioxins and Furans (See Attachment D)	Varies	pg/L	Wet Season	Annually

See Glossary for definitions of terms and abbreviations in table.

c. Five-Year COCs

The Discharger shall analyze surface water samples for the Five-Year COCs listed in **Table 9** Five-Year COCs beginning in 2022, and shall be analyzed again in 2027. (Title 27, § 20420, subd. (g).)

Table 9—Surface Water Detection Monitoring, Five-Year COCs

Five-Year Constituent	GeoTracker Code	Units	Sampling & Reporting Freq.
None at this time	(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 B** (Detection Monitoring Program)—specifically **Table 1** (Groundwater), and **Table 6** (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 7** and **Table 8**; and
- ii. For **Groundwater**, those in **Table 2** and **Table 3**.

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 will be submitted to the Central Valley Water Board as part of the 2022 Annual Monitoring Report and are due again in 2027. For the purposes of this MRP, the Five-Year COCs are listed in:

- i. **Attachment C** (*None at this time*);
- ii. Any other COCs listed in **Table 9** (*Surface Water*), and **Table 4** (*Groundwater*).

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 20415.⁵ (Title 27, § 20400,

⁵ 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.

subds. (a), (b).) Methods for calculating Concentration Limits were proposed in the 2014 WQPS Report. The Concentration limit for this site is based on semi-annual groundwater sampling of monitoring well B-9, conducted from January 2008 to July 2012 using the following equation:

$$\text{Upper Tolerance Limit} = \text{mean} + \text{KS}$$

This equation is based on a normal distribution of the groundwater data and is calculated using the mean and standard deviation (S) of the population and the one-sided normal tolerance factor (K) with a probability level of 95% that 95% of the observations should fall below the calculated tolerance limit.

Concentration Limits shall be proposed and/or updated by the Discharger every two years, in the Annual Monitoring Report submitted per **Section E.2** here. As of the date of this Order, Concentration Limits were last specified in 2014, and shall be updated again as part of the 2022 Annual Monitoring Report, and again every two years thereafter.

Unless expressly rejected by the Executive Officer in writing, these Concentration Limits shall be incorporated as part of this Order. Several notable Concentration Limits, as set forth in the 2020 Annual Report, are set forth below in **Table 10a, Table 10b, and Table 11.**⁶

If the Discharger fails to submit periodically updated concentration limits, as provided in this MRP, the existing concentration limits shall remain operative, provided that, where appropriate, the Executive Officer may revert to lower concentrations where warranted based on existing monitoring data.

⁶ The Concentration Limits set forth in **Table 10 and 11** are only a partial list of values that are provided for general informational purposes only. These limits shall be superseded once updated values are submitted.

**Table 10a—Notable Concentration Limits, 2020 Annual Report
 (WQPS)**

Well	Analysis*	TDS (mg/L)	Iron (mg/L)	Manganese (mg/L)	Tannins and Lignins* (mg/L)
Wood Waste Landfill					
B-1	Interwell	696	0.663	.050	0.694
B-2	Interwell	696	0.663	.050	7.4
B-3	Interwell	696	0.663	.050	1.7
B-9	Interwell	696	0.663	.050	0.694
B-10	Interwell	696	0.663	.050	0.694
B-11	Interwell	696	0.663	.050	2.5
B-14	Interwell	696	0.663	.050	3.2
Former Ash Disposal Area Landfill					
B-5	Interwell	696	0.663	.050	N/A
B-8	Interwell	696	0.663	.050	N/A
B-15	Interwell	696	0.663	.050	N/A
B-16	Interwell	696	0.663	.050	N/A
Sentry Wells					
B-6R	Intrawell	780	0.48	0.0684	0.95
B-12	Intrawell	280	0.14	0.00961	0.050
B-13	Intrawell	660	0.35	0.00656	0.64
B-17	Intrawell	970	0.11	0.0374	0.66
LD-2A	Intrawell	270	0.058	0.0432	0.35

Table 10b— Notable Concentration Limits, 2020 Annual Report (WQPS)

Monitoring Point	Monitoring Parameter	Concentration Limit
All Wells	Polynuclear Aromatic Hydrocarbons (See Attachment C)	Method Detection Limit (µg/L)
All Wells	Dioxins and Furans (See Attachment D)	Method Detection Limit (pg/L)

See Glossary for definitions of terms and abbreviations in table.

*Tannins and Lignins concentration limits were determined individually at point of compliance wells in a *Tannins and Lignins Point of Compliance Report*, (Amec Foster Wheeler, January 14, 2015). Concentration limits were developed for the sentry wells in a *Water Quality Limits Report-WQLR*, (AMEC Environment and Infrastructure, May 9, 2014).

Table 11— Notable Surface Water Concentration Limits at Monitoring Points SW-1 and SW-2, 2020 Annual Report (WQPS)

Monitoring Parameter	Concentration Limit (mg/L)*
Chemical Oxygen Demand	708
Total Dissolved Solids	878
Bicarbonate as CaCO ₃	68
Tannins	11
Iron	12.5
Manganese	0.188
Magnesium	11

Monitoring Parameter	Concentration Limit (mg/L)*
Calcium	26
Polynuclear Aromatic Hydrocarbons (See Attachment C)	Method Detection Limit (µg/L)
Dioxins and Furans (See Attachment D)	Method Detection Limit (pg/L)

See Glossary for definitions of terms and abbreviations in table.

* Surface water concentration limits from the *2009 AMEC Geomatrix Water Quality Protection Standard* developed for SW-1 and SW-2.

h. Retesting Procedures

If monitoring results indicate measurably significant evidence of a release, as described in Section I.43 of the SPRRs (Standard Monitoring Specifications), the Discharger shall apply the following:

- iii. **Non-Statistical Retesting Procedures (SPRRs, § I.44)** for analytes detected in less than 10 percent of background samples (e.g., non-naturally occurring COCs); and
- iv. **Statistical Retesting Procedures (SPRRs, § I.45)** 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. Wood Waste Landfill, Ash Disposal Area Landfill, and Leachate Basin Clean Closure.

In order to show progress towards clean closure of the Wood Waste Landfill, Ash Disposal Area Landfill, and associated Leachate Basin the Discharger shall:

- a. Provide tabulated data showing the annual historical volume of material extracted and excavated out of any waste management unit (i.e., the

Wood Waste Landfill, Ash Disposal Area Landfill, and Leachate Basin) and transported off-site;

- b. Provided tabulated data for the current calendar year showing the monthly and cumulative total quantity of any extracted material that has been transported off-site;
- c. Provide a graphical display showing the time schedule for clean closure specified in WDRs Order R5-2022-0060, The proposed rate and amount of material to be removed during the time schedule, and the actual rate and amount of material removed to date; and
- d. If there is any deviation between the proposed rate and amount of material to be removed and the actual rate and amount of material removed (i) how the Discharger will rectify the deviation, (ii) and the timeframe needed to bring the clean closure of the Wood Waste Landfill, Ash Disposal Area Landfill, and leachate basin back on schedule.

2. Unsaturated Zone Corrective Action (Not currently required)

3. Groundwater Extraction Well System (Not currently required)

4. Landfill Gas Corrective Action (Not currently required)

D. Additional Facility Monitoring

1. Leachate Collection & Removal System (LCRS) (Not Required)

2. Leachate Seepage

Leachate that seeps to the surface from the Wood Waste Landfill, the Leachate Basin, or the Ash Disposal Area Landfill shall, immediately upon detection, be sampled and analyzed for the Monitoring Parameters in **Table 12** (Physical Parameters) and **Table 13** (Constituent Parameters). See **Section E.3** 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 12—Leachate Seep Monitoring, Physical Parameters

Physical Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Total Flow	(none)	Gallons	Upon Detection	See MRP, § E.3
Flow Rate	FLOW	Gallons/Day	(same)	(same)
Temperature	TEMP	°C	(same)	(same)
Electrical Conductivity	SC	µmhos/cm	(same)	(same)
pH	PH	pH Units	(same)	(same)

See Glossary for definitions of terms and abbreviations in table.

Table 13—Leachate Seep Monitoring, Constituent Parameters

Constituent Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
General Chemistry and General Minerals (See Attachment A)	Varies	Varies	Upon Detection	See MRP, § E.3
Total Inorganics (See Attachment B)	Varies	mg/L	Upon Detection	See MRP, § E.3
Polynuclear Aromatic Hydrocarbons (See Attachment C)	Varies	µg/L	Upon Detection	See MRP, § E.3
Dioxins and Furans (See Attachment D)	Varies	pg/L	Upon Detection	See MRP, § E.3

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 14** (Criteria) and **Table 15** (Schedule). Results of these regular visual inspections shall be included in Semiannual Monitoring Reports per **Section E.1**.

Table 14—Criteria for Regular Visual Inspections

Category	Criteria
Within Unit	<ul style="list-style-type: none"> 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 waste.
Unit Perimeter	<ul style="list-style-type: none"> Evidence of leachate seep. Estimated size of affected area (record on map) and flow rate. Evidence of erosion and/or of day-lighted refuse.
Receiving Waters	<ul style="list-style-type: none"> 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 15—Regular Visual Inspection Schedule

Category	Wet Season (1 Oct. to 30 April)	Dry Season (1 May to 30 Sept.)
Active/Inactive Units ⁷	Weekly	Monthly
Closed Units	Monthly	Semiannually

4. Annual Facility Inspections

Prior to 30 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

⁷ Active Units include waste management units that are actively being clean closed.

control). 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 31 October. See **Section E.4** for Reporting Requirements.

5. Major Storm Events

Within seven days of any storm event capable of 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 E.5** for Reporting Requirements.

6. Five-Year Iso-Settlement Surveys (Closed Landfills)

Every five years, 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. (Title 27, § 21090, subd. (e)(1)-(2).) See **Section E.6** for Reporting Requirements.

E. Reporting Requirements

Table 16—Summary of Required Reports

Section	Report	Deadline
§ E.1	Semiannual Monitoring Reports (SMRs)	1 August (1 January to 30 June)
		1 February (1 July to 31 December)
§ E.2	Annual Monitoring Reports (AMRs)	1 February

Section	Report	Deadline
§ E.3	Leachate Seep Reporting	Immediately upon Discovery of Seepage <i>(staff notification)</i> Within 7 Days <i>(written report)</i>
§ E.4	Annual Facility Inspection Reports	15 November
§ E.5	Major Storm Reporting	Immediately after Damage Discovery <i>(staff notification)</i> Within 14 Days of Completing Repairs <i>(written report, photos)</i>
§ E.6	Survey and Iso-Settlement Mapping	Every Five Years
§ E.7	Financial Assurances Reports	1 June
§ E.8	Water Quality Protection Standard Reports	Proposed Revisions (excluding Concentration Limits)
§ E.9	General Reporting Provisions	As required

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 § A.4).
- 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 E.9.b** for additional requirements.). In reporting the monitoring data, the Discharger must arrange the laboratory-reported data in tables so that the date, the constituents, the concentrations, units, qualifiers, and compliance or lack thereof is readily discernible. Showing readily discernible compliance or lack thereof must include shading a cell with gray fill or using bold, italics, and underlined font. The data must be summarized in such a manner so as to illustrate clearly the compliance with the WDRs or lack thereof. All historical and current groundwater, leachate, seep, and surface water analytical results must be tabulated and submitted.
- 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 the elevation of the 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 and the elevation of the pump intake or other sampling device where the sample was taken.
- 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 B.4.h**.
- 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.7 of the SPRRs (*Standard Facility Specifications*).
- i. Summaries of all Regular Visual Inspections conducted per **Section D.3** 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.11-12 (*Standard Closure and Post-Closure Maintenance Specifications*).
- k. Laboratory statements of results of all analyses evaluating compliance with the WDRs.
- l. Surface water monitoring results must be reported in the semiannual reports. If no surface water was present during the monitoring period, then this must be stated in the report.
- m. For the Wood Waste Landfill and Ash Disposal Area Landfill, each monitoring report must have a tabulated summary of the monthly total quantity of wood waste and ash hauled off site during the reporting period, the annual quantity of wood waste and ash hauled off-site for each year beginning with 1997, and the total cumulative quantity since the start of this Discharger's clean closure in 1997.
- n. The Discharger must include a site map showing the facility features, existing and historical monitoring wells, direction of groundwater flow, and stormwater and surface water monitoring locations.
- o. The Discharger must include electronic copies of all analytical reports as signed by the laboratory's responsible personnel. Alternatively, the discharger may submit a CD with the analytical reports, provided that a summary table is provided that shows the sample location number with each analyte cross-referenced to its laboratory report number, and page number(s) in the laboratory report.

- p. The Discharger must include the monitoring well data sheets, including the date and time, sampling mechanism or type of pump, purging and sampling method, and water disposal method.
- q. The Discharger must provide a description of the sampling procedure (number and description of the samples, field blanks, travel blanks, and duplicate samples taken, the type of containers and preservatives used, the date and time of sampling, the name, and any other observations).
- r. Each monitoring report must include a compliance evaluation summary. The summary must contain at minimum:
 - i. Laboratory statements of results of all analyses evaluating compliance with requirements.
 - ii. A technical evaluation of the effectiveness of the leachate monitoring and control facilities.
 - iii. A technical evaluation of the effectiveness of the run off/run on control facilities.
 - iv. The quantity and types of wastes discharged into the Wood Waste Landfill, and the locations in the Wood Waste Landfill where waste has been placed since submittal of the last such report.
 - v. A summary and certification of completion of all Standard Observations for the Wood Waste Landfill and ash disposal area, for the perimeter of the Wood Waste Landfill and ash disposal area, and for the receiving waters. Standard observations must be conducted weekly during the wet season (1 October to 30 April) and monthly during the dry season (1 May to 30 September). The Standard Observations must include:
 - (A) For the Wood Waste Landfill, ash disposal area, and associated perimeters:
 - (B) Evidence of ponded water at any point on the facility (show affected area on map);
 - (C) Evidence of odors - presence or absence, characterization, source, and distance of travel from source;

- (D) Evidence of erosion and/or of day-lighted refuse; and
 - (E) Evidence of seeps and/or liquid leaving or entering the Wood Waste Landfill and ash disposal area, estimated size of affected area, estimated flow rate, and color of liquids (show affected area on map).
- s. For polynuclear aromatic hydrocarbons, the Discharger must conclude that a release is tentatively indicated if the data for any Monitoring Point contains either:
- i. Two or more qualifying constituents that equal or exceed their respective MDLs, or
 - ii. One qualifying constituent which exceeds its PQL

For dioxins & furans: the Discharger must conclude that a release is tentatively indicated if two or more dioxin or furan constituents are present above their respective minimum levels as described in EPA Method 1613B.

For tannins and lignins: the Discharger use concentration limits (intra-well comparisons) at the points of compliance monitoring wells for the Wood Waste Landfill. The Discharger must conclude that a release is tentatively indicated if the tannin and lignin data for any Point of Compliance Monitoring Point exceeds the concentration limit for that Monitoring Point.

Based on the above, if the Discharger determines that there is measurably significant evidence of a release from the Wood Waste Landfill, leachate basin, or ash disposal area at any monitoring point, the Discharger must **immediately** implement the requirements of the **Standard Provisions' Response to a Release**.

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 E.9.b** 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.
- 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 monitoring 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. Also, the discussion must include a timeline showing the corrective actions taken/to be taken and when the Discharger estimates when it will achieve full compliance with the WDRs.

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.

- g. For the Wood Waste Landfill and Ash Disposal Area, a topographic map showing the areas and elevations of where excavation of wood waste has occurred during the previous calendar year; comparison to final clean closure design contours; and projected years in which Wood Waste Landfill and Ash Disposal Area is expected to be clean closed. A topographic map, shall include an estimate of the current remaining volume of waste expressed in cubic yards, must be submitted. Thereafter, a revised topographic map is necessary, which includes the current remaining volume of waste expressed in cubic yards.
- h. A discussion and evaluation of any statistically increasing/decreasing trends in constituent concentrations at any monitoring well must be provided.
- i. In tabular format all groundwater monitoring wells (both historical and existing), depth of boring, the horizontal survey coordinate, the vertical survey coordinate, the surveying reference datum (e.g., NAD 83, NVD 88, etc), the date installed, and the date decommissioned.
- j. The Discharger must include all information required to be reported by the Standard Provisions, this MRP, and the Waste Discharge Requirements.
- k. A summary of the monitoring results, indicating any changes made or observed since the previous AMR.
- l. When required per **Section B.4.g** of this Order, periodic updates to the Concentration Limits for all Monitoring Parameters and WQPS Monitoring Points.

3. Leachate Seep Reporting

Upon discovery of seepage from any disposal area within the Facility, the Discharger shall immediately 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 12** (*Physical Parameters*) and **Table 13** (*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 15 November, the Discharger shall submit a report with results of the Annual Facility Inspection per **Section B.4.g**. 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 D.5**, 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 D.6**. (Title 27, § 21090, subd. (e).)

7. Financial Assurances Report

By 1 June of each year, the Discharger shall submit a copy of the annual financial assurances report submitted to the Central Valley Water Board and 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 changes¹⁰ to the Water Quality Protection Standard (WQPS) components (§ B.4), other than periodic update of the Concentration Limits (§ B.4.g), shall be submitted in a WQPS Report for review and approval. The report shall be certified by a “Qualified Professional” (§ A.7), 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 and any permanent or ephemeral zones of perched groundwater underlying the Facility);
- b. *Map of Monitoring Points*—A map of all groundwater, surface water¹¹ 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 § B.4.g) 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)).

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.

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

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

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) (<https://geotracker.waterboards.ca.gov>). After uploading a report, 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:	[Number]
Facility Name:	SPI- Martell Division Facility
County:	Amador County
CIWQS Place ID:	239635

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

Unless the reporting limits (RL) are specified in the same table, non-detections and sub-RL concentrations shall be reported as "< [limit]" (e.g., "< 5 µg/L").

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 [§ E.1], AMRs [§ E.2]) 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—General Chemistry and General Minerals
Attachment B—Inorganics
Attachment C—Constituents of Concern
Attachment D—Dioxins and Furans

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) (http://www.waterboards.ca.gov/public_notices/petitions/water_quality). Copies will also be provided upon request.

ATTACHMENT A—GENERAL CHEMISTRY AND GENERAL MINERALS

Constituent¹	Analytical Method¹	Geotracker Code
Specific conductance	USEPA Method 120.1	SC
Tannin & Lignin	SM5550B	TAL
Chemical Oxygen Demand	USEPA Method 410.4	COD
Total Dissolved Solids	SM2540C	TDS
Chloride, total	USEPA Method 300	CL
Sulfate, total	USEPA Method 300	SO4
Carbonate, total	SM2320B	CACO3
Bicarbonate, total	SM2320B	BICACO3
Calcium ²	USEPA Method 6020	CA
Magnesium ²	USEPA Method 6020	MG
Sodium ²	USEPA Method 6020	NA
Potassium ²	USEPA Method 6020	K

¹Constituents of Concern must be prepared and analyzed for "total" concentrations unless otherwise approved by the Regional Water Board.

²Dissolved metals are to be obtained with a >10 micron filter as required under this Monitoring and Reporting Program. Calcium, magnesium, sodium, and potassium may be field-filtered with a >10 micron filter as required under this Monitoring and Reporting Program.

ATTACHMENT B—INORGANICS

Inorganics List

Constituent	Analytical Method	Geotracker Code
Arsenic	USEPA Method 6020	AS
Iron	USEPA Method 6010	FE
Manganese	USEPA Method 6020	MN

Groundwater samples collected for metals analyses listed in Attachment B may be filtered, provided that samples are obtained under anoxic conditions, that the dissolved metals samples are obtained prior to samples for other constituents, are immediately preserved and stored, and that a >10 micron polycarbonate membrane-type filter with uniform and sharp size cutoff is used. The monitoring report must document that the above conditions were met for each sample, and that pre-washing or conditioning of filters was routinely performed.

ATTACHMENT C—CONSTITUENTS OF CONCERN

Constituent	Analytical Method	Geotracker Code
Polynuclear Aromatic Hydrocarbons, Selective Ion Monitoring (SIM)		
Naphthalene	USEPA Method 8270C	NAPH
Pyrene	USEPA Method 8270C	PYR
Acenaphthene	USEPA Method 8270C	ACNP
Acenaphthylene	USEPA Method 8270C	ACNPY
Fluorene	USEPA Method 8270C	FL
Phenanthrene	USEPA Method 8270C	PHAN
Anthracene	USEPA Method 8270C	ANTH
Fluoranthene	USEPA Method 8270C	FLA
Benzo(a)anthracene	USEPA Method 8270C	BZAA
Chrysene	USEPA Method 8270C	CHRYSENE
Benzo(b)fluoranthene	USEPA Method 8270C	BZBF
Benzo(k)fluoranthene	USEPA Method 8270C	BZKF
Benzo(a)pyrene	USEPA Method 8270C	BZAP
Indeno(1,2,3-c,d)pyrene	USEPA Method 8270C	INP123
Dibenzo(a,h)anthracene	USEPA Method 8270C	DBAHA
Benzo(g,h,i)perylene	USEPA Method 8270C	BZGHIP

ATTACHMENT D—DIOXINS AND FURANS

USEPA Method 1613

**Tetra- through Octa-Chlorinated Dibenzodioxins and Dibenzofurans
 (dioxins/furans), Total Concentrations**

Constituent	Geotracker Code
2,3,7,8-Tetrachlorodibenzo-p-dioxin	TCDD2378
Total Tetrachlorodibenzo-p-dioxins (TCDD)	TCDD
2,3,7,8-Tetrachlorodibenzofuran	TCDF2378
Total Tetrachlorodibenzofurans (TCDF)	TCDF
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	PECDD12378
Total Pentachlorodibenzo-p-dioxin (PeCDD)	PECDD
1,2,3,7,8-Pentachlorodibenzofuran	PECDF12378
2,3,4,7,8-Pentachlorodibenzofuran	PECDF23478
Total Pentachlorodibenzofurans (PeCDF)	PECDF
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	HXCDD123478
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	HXCDD123678
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	HXCDD123789
Total Hexachlorodibenzo-p-dioxins (HxCDD)	HxCDD
1,2,3,4,7,8-Hexachlorodibenzofuran	HXCDF123478
1,2,3,6,7,8-Hexachlorodibenzofuran	HXCDF123678
1,2,3,7,8,9-Hexachlorodibenzofuran	HXCDF123789
2,3,4,6,7,8-Hexachlorodibenzofuran	HXCDF234678

Constituent	Geotracker Code
Total Hexachlorodibenzofurans (HxCDF)	HXCDF
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	HPCDD1234678
Total Heptachlorodibenzo-p-dioxins (HpCDD)	HPCDD
1,2,3,4,6,7,8-Heptachlorodibenzofuran	HPCDF1234678
1,2,3,4,7,8,9-Heptachlorodibenzofuran	HPCDF1234678
Total Heptachlorodibenzofurans (HpCDF)	HPCDF
Octachlorodibenzo-p-dioxin	OCDD
Octachlorodibenzofuran	OCDF