CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

Fresno Office
1685 "E" Street
Fresno, CA 93706-2007

Sacramento Office (Main)
11020 Sun Center Drive #200
Rancho Cordova, CA 95670-6114

Redding Office
364 Knollcrest Drive #205
Redding, CA 96002

Regional Board Website (https://www.waterboards.ca.gov/centralvalley)

[TENTATIVE] MONITORING & REPORTING PROGRAM (MRP) R5-2024-XXXX

ORDER INFORMATION

Order Type(s):	Monitoring & Reporting Program (MRP)
Status:	TENTATIVE
Program:	Title 27 Discharges to Land
Region 5 Office:	Sacramento (Rancho Cordova)
Discharger(s):	Ma-Ru Holding Company, Inc. and Bonzi Sanitation Landfill, General Partnership
Facility:	Bonzi Sanitation Landfill
Address:	2650 West Hatch Road, Modesto
County:	Stanislaus County
Parcel Nos.:	017-041-036, 017-041-042
WDID:	5C500300001
Prior Order(s):	R5-2007-0148, 98-093, 92-155, 89-043, 78-180

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 _____ August 2024.

_____

PATRICK PULUPA,
Executive Officer

REGIONAL BOARD INFORMATION

Sacramento Office (Main)
Rancho Cordova, CA 95670-6114
11020 Sun Center Drive #200
Telephone: (916) 464-3291

Fresno Office
1685 "E" Street
Fresno, CA 93706-2007
Telephone: (559) 445-5116

Redding Office
364 Knollcrest Drive #205
Redding, CA 96002
Telephone: (530) 224-4845

Regional Board Website
https://www.waterboards.ca.gov/centralvalley

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GLOSSARY

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
INTERWELL	Method of determining concentration limits in downgradient monitoring points based on upgradient background monitoring points
LAA	Land Application Area
LCRS	Leachate Collection and Removal System

GLOSSARY

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
SPG	Soil Pore Gas
SI	Surface Impoundment

GLOSSARY

SMR .....Semiannual Monitoring Report

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

TSRB.....Treatment System Retention Basin

USEPA .....United States Environmental Protection Agency

VOCs.....Volatile Organic Compounds

WDRs.....Waste Discharge Requirements

WMU .....Waste Management Unit

WQPS .....Water Quality Protection Standard

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

GLOSSARY

% Vol. .....Percent by Volume

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 Ma-Ru Holding Company, Inc. and Bonzi Sanitation Landfill, General Partnership (hereafter collectively as Discharger), which owns and operates the Bonzi Sanitation Landfill (Facility) in Stanislaus County. Additional information regarding the Facility is set forth in the enumerated findings of Waste Discharge Requirements Order R5-2024-XXXX (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. 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.

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.

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	Point of Compliance (WQPS)	Monitoring Frequency	Status
06-10	Background	N/A	No	Annually	Operational
86-9[a]	Background	N/A	No	Annually	Operational
07-01	Background	N/A	No	Annually	Operational
P-1	Detection	IV	Yes	Semiannually	Operational
85-4	Detection	I	Yes	Semiannually	Operational
85-4A	Detection	I	Yes	Semiannually	Operational

[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	Point of Compliance (WQPS)	Monitoring Frequency	Status
85-10[a]	Detection	III	Yes	Semiannually	Operational
86-1	Detection	I	Yes	Semiannually	Operational
06-03[a]	Detection	I	Yes	Semiannually	Operational
06-09	Detection	III	No	Semiannually	Operational
84-13R[a]	Detection	III	No	Semiannually	Operational
06-04	Detection	IV	Yes	Semiannually	Operational
06-06[a]	Detection	I	Yes	Semiannually	Operational
06-07	Detection	TSRB	Yes	Semiannually	Operational
MW-6R[a]	Detection	I	Yes	Semiannually	Operational
90-1[a]	Detection	II	No	Annually	Operational
90-2[a]	Detection	II	No	Annually	Operational
06-05	Detection	II	No	Annually	Operational
06-08	Detection	II	No	Annually	Operational
84-24	Detection/Corrective Action	I	No	Semiannually	Operational
85-7	Detection/Corrective Action	I	No	Semiannually	Operational
85-25[a]	Detection/Corrective Action	I	No	Semiannually	Operational
86-3	Detection/Corrective Action	I	No	Semiannually	Operational

Well	Program	Monitored Unit	Point of Compliance (WQPS)	Monitoring Frequency	Status
86-4	Detection/Corrective Action	I	No	Semiannually	Operational
86-5A[a]	Detection/Corrective Action	I	No	Semiannually	Operational
86-5B[a]	Detection/Corrective Action	I	No	Semiannually	Operational
86-6A	Detection/Corrective Action	I	No	Semiannually	Operational
86-6B	Detection/Corrective Action	I	No	Semiannually	Operational
88-1[a]	Detection/Corrective Action	I	No	Semiannually	Operational
06-1A[a]	Detection/Corrective Action	I	No	Semiannually	Operational
06-1B[a]	Detection/Corrective Action	I	No	Semiannually	Operational
06-02	Detection/Corrective Action	IV	No	Semiannually	Operational
86-7A	Detection/Corrective Action	I	No	Semiannually	Operational
86-7B	Detection/Corrective Action	I	No	Semiannually	Operational
86-8	Detection/Corrective Action	I	No	Semiannually	Operational
ACE	Corrective Action	I	No	Semiannually	Operational
Riverdale	Corrective Action	I	No	Semiannually	Operational

Well	Program	Monitored Unit	Point of Compliance (WQPS)	Monitoring Frequency	Status
VFW	Corrective Action	I	No	Semiannually	Operational
Helmer	Corrective Action	I	No	Annually	Operational
WM Inc.	Corrective Action	I	No	Semiannually	Operational

See Glossary for definitions of terms and abbreviations in table.

[a]Wells used in Section B.1.d Groundwater Conditions for groundwater elevations.

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	Varies[1]	Semiannually
Electrical Conductivity	SC	µmhos/cm	Varies[1]	Semiannually
pH	PH	pH Units	Varies[1]	Semiannually
Turbidity	TURB	NTUs	Varies[1]	Semiannually

See Glossary for definitions of terms and abbreviations in table.

[1]See **Table 1** for monitoring frequency or Section C.1 **Table 13** for accelerated corrective action monitoring frequency.

Table 3—Groundwater Detection Monitoring, Constituent Parameters

Constituent Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
TDS	TDS	mg/L	Varies[1]	Semiannually
Chloride	CL	mg/L	Varies[1]	Semiannually
Bicarbonate	BICACO3	mg/L	Varies[1]	Semiannually
Sulfate	SO4	mg/L	Varies[1]	Semiannually
Nitrate as N	NO3	mg/L	Varies[1]	Semiannually
Short List VOCs (Attachment A)	(various)	µg/L	Varies[1]	Semiannually
Dissolved Inorganics (Attachment B)	(various)	µg/L	Varies[1]	Semiannually

See Glossary for definitions of terms and abbreviations in table.

[1]See **Table 1** for monitoring frequency or Section C.1 **Table 13** for accelerated corrective action monitoring frequency.

c. Five-Year COCs

The Discharger shall analyze for groundwater samples from each well in **Table 1** for the Five-Year Constituents of Concern (Five-Year COCs) listed in **Table 4**. Five-Year COCs were last monitored in 2022, 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.
Extended List VOCs (Attachment C)	(various)	µg/L	Every 5 Years

Five-Year Constituent	GeoTracker Code	Units	Sampling & Reporting Freq.
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 E.1**.[3] (Title 27, § 20415, subd. (b)(1).)

Table 5—Groundwater Detection Monitoring, Groundwater Conditions

Groundwater Condition[1]	GeoTracker Code	Monitoring Freq.	Reporting Freq.
Elevation (Well-Specific)	ELEV	Quarterly	Semiannually
Gradient	(none)	Quarterly	Semiannually
Flow Rate	(none)	Quarterly	Semiannually

[1]For any groundwater well listed in **Table 1** where the initial groundwater elevation was recorded as part of the well purging process in accordance with the Discharger's

[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).)

Sample Collection and Analysis Program to obtain a representative sample of groundwater quality the Discharger shall report the initial groundwater elevation as part of the well's reporting requirement in its self-monitoring report.

2. Unsaturated Zone

a. Required Network

The Facility's unsaturated zone monitoring network consists of the landfill gas (LFG) 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[1]	Program	Monitored Unit	Monitoring Frequency[2]
1W(a),(b)	Detection	Landfill Perimeter	Monthly
2W(a),(b)	Detection	Landfill Perimeter	Quarterly
3W(a),(b)	Detection	Landfill Perimeter	Quarterly
4W(a),(b)	Detection	Landfill Perimeter	Quarterly
5W(a)	Detection	Landfill Perimeter	Monthly
6W(a)	Detection	Landfill Perimeter	Quarterly
7W(a)	Detection	Landfill Perimeter	Quarterly
8WR	Detection	Landfill Perimeter	Monthly
9W(a)	Detection	Landfill Perimeter	Monthly
10W(a)	Detection	Landfill Perimeter	Quarterly
46W(a),(b),(c)	Detection	Landfill Perimeter	Quarterly
47W(a),(b),(c)	Detection	Landfill Perimeter	Quarterly
48S(a),(b),(c)	Detection	Landfill Perimeter	Quarterly

Monitoring Point[1]	Program	Monitored Unit	Monitoring Frequency[2]
49S(a),(b),(c)	Detection	Landfill Perimeter	Quarterly
50S(a),(b),(c)	Detection	Landfill Perimeter	Quarterly
20S(a),(b),(c)	Detection	Landfill Perimeter	Quarterly
21S(a),(b),(c)	Detection	Landfill Perimeter	Monthly
22S(a),(b)	Detection	Landfill Perimeter	Quarterly
23E(a),(b),(c)	Detection	Landfill Perimeter	Monthly
24E(a),(b)	Detection	Landfill Perimeter	Quarterly
25E(a),(b)	Detection	Landfill Perimeter	Quarterly
26E	Detection	Landfill Perimeter	Monthly
27E(a),(b),(c)	Detection	Landfill Perimeter	Quarterly
29N(a),(b)	Detection	Landfill Perimeter	Monthly
30N(a),(b)	Detection	Landfill Perimeter	Quarterly
31N(a),(b)	Detection	Landfill Perimeter	Quarterly
32N(a),(b)	Detection	Landfill Perimeter	Monthly
33N(a),(b)	Detection	Landfill Perimeter	Quarterly
35N(a),(b)	Detection	Landfill Perimeter	Quarterly
36N(a),(b)	Detection	Landfill Perimeter	Monthly
37N(a),(b)	Detection	Landfill Perimeter	Quarterly
38N(a),(b)	Detection	Landfill Perimeter	Monthly
39N(a)	Detection	Landfill Perimeter	Quarterly
40N(a)	Detection	Landfill Perimeter	Quarterly

Monitoring Point[1]	Program	Monitored Unit	Monitoring Frequency[2]
41N(a)	Detection	Landfill Perimeter	Monthly
42N(a)	Detection	Landfill Perimeter	Quarterly
43N(a)	Detection	Landfill Perimeter	Monthly
44N(a)	Detection	Landfill Perimeter	Monthly
45N(a)	Detection	Landfill Perimeter	Monthly
51N	Detection	Landfill Perimeter	Monthly

[1]Monitoring well designation: (a) represents shallow depth, (b) represents intermediate depth, and (c) represents deep depth.

[2]Monitoring Points with a monitoring frequency of quarterly are those monitoring points which may be monitored at this frequency or another frequency due to other agency requirements. At a minimum they shall be monitored quarterly to determine whether a release of waste has occurred to the unsaturated zone below the WMUs. The results of the monitoring required by other agencies if it is more frequently than quarterly shall be reported in the Discharger's semiannual monitoring reports.

b. Soil Pore Gas (SPG) Monitoring

Soil Pore Gas (SPG) shall be monitored for landfill gas constituents and 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).)

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[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

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

Constituent Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Method TO-15 VOCs[5]	(various)	µg/cm^3	See Note 5	Semiannually
Methane	CH4	%	See Table 6	Semiannually
Carbon Dioxide	CO2	% by Vol.	See Table 6	Semiannually
Oxygen	O2	% by Vol.	See Table 6	Semiannually
Nitrogen	N2	% by Vol.	See Table 6	Semiannually
Gas Temperature at Each Well	T	°F	See Table 6	Semiannually
Initial Static Pressure in Wellhead	P	Inches Hg	See Table 6	Semiannually
Adjusted Static Pressure in Wellhead	P2	Inches Hg	See Table 6	Semiannually

See Glossary for definitions of terms and abbreviations in table.

3. Surface Water

Runoff from the Facility is collected in one or more sedimentation basins, which may under severe circumstances flow indirectly to the Tuolumne River, which may be affected by a release. (See Title 27, § 20415,

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analysis results shall be reported. Otherwise, the methane or total VOC screening results shall be reported, and no further lab analysis will be required.

subd. (c)(1).) The Discharger as a provision of WDRs Order R5-2024-XXXX is required to demonstrate that under all circumstances the Facility can contain stormwater onsite or otherwise seek coverage under the State Water Board's operative General Permit for Storm Water Discharges Associated with Industrial Activities, NPDES Permit No. CAS000001 (Industrial General Permit). If the Discharger is not able to demonstrate non-applicability of the Industrial General Permit the Discharger is required to establish stormwater discharge points per the Industrial General Permit and include them as part of **Table 8**, below. Currently surface water monitoring is only required for liquids in the groundwater treatment system retention basin (TSRB).

a. Required Network

The Facility's surface water monitoring network consists of the monitoring points listed in **Table 8**. As of the date of this Order, the network meets the requirements of Title 27. (See § 20415, subd. (c).)

Table 8—Surface Water Detection Monitoring Network

Monitoring Point	Program or Function	Monitored Unit	Location / Notes
TSRB-1	Water Quality	Groundwater Treatment System Retention Basin	Detention Basin for water used on Land Application Area

See Glossary for definitions of terms and abbreviations in table.

b. Sample Collection and Analysis

When surface water is present or discharged at monitoring points in **Table 8** at any point during the monitoring period, samples shall be collected from each monitoring point and analyzed for the Monitoring Parameters in **Table 9** (Physical Parameters) and **Table 10** (Constituent Parameters), in accordance with the specified schedule. (Title 27, § 20420, subds. (e)-(f).)

Table 9—Surface Water Detection Monitoring, Physical Parameters

Physical Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Electrical Conductivity	SC	µmhos/cm	Quarterly	Semiannual
pH	PH	Std. Units	Quarterly	Semiannual
Dissolved Oxygen	DO	mg/L	Monthly	Semiannual
Freeboard	-	0.1 Feet	Varies[1]	Semiannual
Volume Discharged to LAA	-	Gallons	Per incident	Semiannual

See Glossary for definitions of terms and abbreviations in table.

[1]Freeboard shall be monitored in the Groundwater Treatment System Retention Basin on a quarterly basis during the months of May through September. During the months of October thru April freeboard shall be monitored on a biweekly basis and more frequently following a storm event where precipitation exceeds 0.5 inches in a 24-hour period. The Discharger must always maintain a minimum of 2-feet of freeboard.

Table 10—Surface Water Detection Monitoring, Constituent Parameters

Constituent Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Nitrate as Nitrogen	NO3N	mg/L	Monthly	Semiannual
Total Dissolved Solids	TDS	mg/L	Monthly	Semiannual
Chloride	CL	mg/L	Quarterly	Semiannual
Sulfate	SO4	mg/L	Quarterly	Semiannual
Manganese	Mn	µg/L	Quarterly	Semiannual
Iron	Fe	µg/L	Quarterly	Semiannual
Short List VOCs (Attachment A)	(various)	µg/L	Quarterly	Monthly

Constituent Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Dissolved Inorganics (only analyze for Arsenic and Chromium (Attachment B)	(various)	µg/L	Quarterly	Monthly

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 11**. Five-Year COCs were last monitored in 2022, and shall be analyzed again in 2027. (Title 27, § 20420, subd. (g).)

Table 11—Surface Water Detection Monitoring, Five-Year COCs

Five-Year Constituent	GeoTracker Code	Units	Sampling & Reporting Freq.
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. Treated Groundwater Discharge to Land Application Area

The Discharger shall record the date and quantity of water removed from the Groundwater Treatment System Retention Basin and discharged to the approved Land Application Area and shall tabulate the collected data in monthly increments and report the information on a semiannual basis.

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), **Table 6** (Unsaturated Zone) and **Table 8** (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 9** and **Table 10**; and

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 were last 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** (*Extended List VOCs*);

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

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

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

v. Any other COCs listed in **Table 13** (*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.[6] (Title 27, § 20400, subds. (a), (b).) Methods for calculating Concentration Limits were proposed in the 2013 WQPS Report. The approved method uses the interwell method based on upgradient background concentrations of naturally occurring parameters in groundwater. The approved methods for calculating concentration limits for downgradient wells at the point of compliance uses statistical methods for determining confidence limits for normally distributed data and non-statistical methods for determining concentration limits for non-normally distributed data.

Concentration Limits shall be proposed and/or updated by the Discharger as needed to reflect either degrading background water quality due to a demonstrated upgradient release or due a historical trend of improved background water quality, in the Annual Monitoring Report submitted per **Section E.2** here. As of the date of this Order, Concentration Limits were last specified in 2013, and shall be updated again as part of the 2023 Annual Monitoring Report.

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 reported in the Discharger's 2021 Self-Monitoring Annual Report, are set forth below in **Table 12**.[7]

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[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.

[7] The Concentration Limits set forth in **Table 12** are current as of adoption of this Order. These limits shall be superseded once updated values are submitted.

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.

Table 12—Notable Concentration Limits, 2021 Annual Report (WQPS)

Well	Analysis	Chloride (mg/L)	Nitrate as N (mg/L)	TDS (mg/L)	Barium (ug/L	VOCs (ug/L)
See Table 1 for POC Wells	Interwell	166	34.4	980	189	Non-Detect

See Glossary for definitions of terms and abbreviations in table.

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:

vi. **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

vii. **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. Groundwater Corrective Action

In addition to parameters in **Table 2** (Field Parameters) and **Table 3** (Monitoring Parameters), corrective action monitoring wells shall be

sampled for additional constituents listed or at a higher frequency as specified in **Table 13** so long as the groundwater monitoring well(s) remain in corrective action. If the Discharger demonstrates that the monitoring well(s) are no longer in corrective action the Discharger may reduce monitoring frequency for those specified detection monitoring well(s) in **Table 1** of Section B.1.a.

Table 13—Groundwater Corrective Action Monitoring, Additional Constituent Parameters

Well	Additional Constituents	Sampling Freq.
See **Table 1** for wells in Corrective Action[1]	None	Quarterly

See Glossary for definitions of terms and abbreviations in table.

[1]Except corrective action wells 86-8, 86-7A, and 86-7B which shall remain monitored on a semiannual basis.

2. Unsaturated Zone Corrective Action (Not Applicable)

3. Groundwater Extraction Well System

The Facility's current network of groundwater extraction wells is summarized in **Table 14**. The hours of operation for this system shall be recorded and reported as part of the Semiannual Monitoring Report (SMR). The Discharger shall sample for field parameters listed in **Table 2** and for VOCs listed in **Attachment A** for the sampling frequency in **Table 14** and shall report the analytical results accordingly as shown in **Table 14**. The Discharger shall analyze from groundwater samples from each well in **Table 14** for the Five-Year Constituents of Concern (Five-Year COCs) listed in **Table 4**. Five-Year COCs were last monitored in 2022, and shall be analyzed again in 2027. (Title 27, § 20420, subd. (g).)

Table 14—Groundwater Corrective Action, Extraction Well Network

Well	Monitored Units	Sampling Freq.	Reporting Freq.
EW-1	I	Quarterly	Semiannually
EW-2	I	Quarterly	Semiannually
EW-3	I	Quarterly	Semiannually

4. Landfill Gas Corrective Action

The Facility's landfill gas (LFG) corrective action system currently consists of a control system, an extraction well field and soil gas probes. The Discharger shall log all system shutdowns (including causes and stop/start dates), monthly downtime and monthly runtime. All shutdowns, regardless of the type of restart, shall be recorded. This information shall be reported semiannually per **Section E.1**. Additionally, system performance shall be monitored in accordance with **Table 15**.

Table 15—Landfill Gas Corrective Action Monitoring, Control System Performance

Parameter	Units	Sampling Freq.	Reporting Freq.
Control System Runtime	Hours	N/A	Semiannually
Control System Downtime	%	N/A	Semiannually
Temperature into Plant	°F	Daily	Semiannually
Flare Combustion Temperature	°F	Daily	Semiannually
System Vacuum	Inches of water column	Daily	Semiannually
Totalized Flow into Plant	ft^3	Daily	Semiannually
Totalized Flow Rate into Plant	ft^3 / min	Daily	Semiannually

Parameter	Units	Sampling Freq.	Reporting Freq.
VOCs per USEPA Method TO-15 in Influent	µg / cm	Quarterly	Semiannually
Methane in Influent	%	Bimonthly	Semiannually

See Glossary for definitions of terms and abbreviations in table.

a. Extraction Well Field

The Facility's network of LFG extraction wells, installed to address a release of LFG to the unsaturated zone and/or groundwater, is set forth in **Table 16**.

LFG samples shall be collected only from the appropriate LFG extraction wells in **Table 16** identified in the Discharger's approved corrective action plan and analyzed for the Monitoring Parameters specified in **Table 17.** The extraction wells identified in the Discharger's corrective action plan are those used to perform corrective action to address any exceedance at groundwater monitoring well and/or any LFG perimeter probe(s) listed in **Table 6** where methane gas concentrations at any of the facility's perimeter LFG probes exceed 5% methane by volume OR organic vapors (total VOCs) exceed 1 ppm. LFG wells not associated with an exceedance at an LFG probe at the facility boundary or groundwater monitoring well shall be monitored quarterly and reported semiannually. Once the exceedance at the LFG probe is eliminated and the Discharger demonstrates that the LFG extraction system is functioning properly to prevent an exceedance of concentration limits at a point of compliance monitoring well or perimeter gas probe from occurring in the future the Discharger may cease daily monitoring the LFG extraction wells used as corrective action and return to quarterly monitoring of said LFG extraction wells used to address a release from a WMU.

Table 16—Landfill Gas Corrective Action, Extraction Well Network

LFG Extraction Wells	Description
EW-1 through EW-53	WMU Boundary Perimeter Vertical Wells

LFG Extraction Wells	Description
EW-54-EW-59	Vertical Wells installed within WMU
R3, R4, R5, R9, R10, R11, R12, R13, R13A, R14, R14A, R15	Horizontal Collector Trenches

Table 17—Landfill Gas Corrective Action, Extraction Well Network Monitoring Parameters

Monitoring Parameter	Units	Sampling Freq.	Reporting Freq.
Atmospheric Temperature	°F	Daily	Monthly
Atmospheric Pressure	Inches of water column	Daily	Monthly
Methane	% by Vol.	Daily	Monthly
Carbon Dioxide	% by Vol.	Daily	Monthly
Oxygen	% by Vol.	Daily	Monthly
Nitrogen	% by Vol.	Daily	Monthly
Gas Temperature at Each Well	°F	Daily	Monthly
Initial Static Pressure in Wellhead	Inches Hg	Daily	Monthly
Adjusted Static Pressure in Wellhead	Inches Hg	Daily	Monthly

See Glossary for definitions of terms and abbreviations in table.

b. LFG Probe Network

The Facility's perimeter network of LFG probes, installed to address a release of landfill gas outside the facility boundary, is set forth in **Table 6**. If methane gas concentrations at any of the facility's perimeter LFG probes exceed 5% methane by volume OR organic vapors (total VOCs) exceed 1 ppm, the probe in which the exceedance occurred shall be monitored in accordance with the

Monitoring Parameters and frequency in **Table 18** until implementation of corrective action measures lower the concentrations in the probe(s) below the specified limits above.

Table 18—Landfill Gas Corrective Action, Probe Network Monitoring Parameters

Parameter	Units	Sampling Freq.	Reporting Freq.
Atmospheric Temperature		Weekly	Monthly
Atmospheric Pressure		Weekly	Monthly
Methane		Weekly	Monthly
Carbon Dioxide		Weekly	Monthly
Oxygen		Weekly	Monthly
Nitrogen		Weekly	Monthly
Probe Pressure / Vacuum		Weekly	Monthly
Volatile Organic Compounds per USEPA Method TO-15[8]		Monthly	Monthly

See Glossary for definitions of terms and abbreviations in table.

5. Groundwater Treatment System

[8] A gas analyzer for methane concentrations or a Photo Ionization Detector (PID) for total VOCs concentrations may be used. If methane concentrations exceed 5 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.

The Facility's current groundwater treatment system monitoring points are summarized in **Table 19**. The Discharger shall sample for field parameters listed in **Table 2** and for VOCs listed in **Attachment A** for the sampling frequency in **Table 19** and shall report the analytical results accordingly as shown in **Table 19**. The Discharger shall analyze from the monitoring points in **Table 19** for the Five-Year Constituents of Concern (Five-Year COCs) listed in **Table 4**. Five-Year COCs were last monitored in 2022, and shall be analyzed again in 2027. (Title 27, § 20420, subd. (g).)

Table 19—Groundwater Treatment Monitoring Points

Monitoring Point	Sampling Freq.	Reporting Freq.
EFF-GAC1	Quarterly[1]	Semiannually
EFF-GAC2	Quarterly[1]	Semiannually

[1]VOCs in Attachment A shall be sampled and analyzed monthly during the first quarter of the year (three times during the first quarter).

D. Additional Facility Monitoring

1. Leachate Well Monitoring

The Discharger shall operate and maintain leachate wells **92-A1L** and **92-C1L**, and conduct monitoring of any detected leachate seeps in accordance with Title 27 and the following provisions in accordance with **Tables 20** through **Table 21.**

Table 20—Leachate Well Monitoring, Parameters for Subsequent Monitoring

Constituent Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
Groundwater Elevation	ELEV	0.01 Feet	Quarterly	Annually
Electrical Conductivity	SC	µmhos/cm	Annually	Annually

Constituent Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
pH	PH	pH Units	Annually	Annually
Temperature	TEMP	°F	Annually	Annually
Turbidity	TURB	NTUs	Annually	Annually
TDS	TDS	mg/L	Annually	Annually
Chloride	CL	mg/L	Annually	Annually
Bicarbonate	BICACO3	mg/L	Annually	Annually
Nitrate (as Nitrogen)	NO3N	mg/L	Annually	Annually
Sulfate	SO4	mg/L	Annually	Annually
Short List VOCs (Attachment A)	(various)	µg/L	Annually	Annually
Dissolved Inorganics (Attachment B)	(various)	µg/L	Annually	Annually
Total Monthly Leachate Removed	-	gallons	Monthly	Semiannually

See Glossary for definitions of terms and abbreviations in table.

a. Five-Year COCs

At least once every five years, the Discharger shall sample and analyze the leachate wells **92-A1L** and **92-C1L** for the Five-Year COCs listed in **Table 21**. Five-Year COCs were last monitored in 2022, and shall be analyzed again in 2027.

Table 21—Leachate Well Monitoring, Five-Year COCs

Parameter	GeoTracker Code	Units	Sampling & Reporting Freq.
Extended List VOCs (Attachment C)	(various)	µg/L	Every 5 Years

Parameter	GeoTracker Code	Units	Sampling & Reporting Freq.
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 22** (Physical Parameters) and **Table 23** (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 22—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)
Electrical Conductivity	SC	µmhos/cm	(same)	(same)
pH	PH	pH Units	(same)	(same)

See Glossary for definitions of terms and abbreviations in table.

Table 23—Leachate Seep Monitoring, Constituent Parameters

Constituent Parameter	GeoTracker Code	Units	Sampling Freq.	Reporting Freq.
TDS	TDS	mg/L	Upon Detection	See MRP, § E.3
Chloride	CL	mg/L	(same)	(same)
Bicarbonate	BICACO3	mg/L	(same)	(same)
Nitrate as N	NO3N	mg/L	(same)	(same)
Sulfate	SO4	mg/L	(same)	(same)
Short List VOCs (Attachment A)	(various)	µg/L	(same)	(same)
Dissolved Inorganics (Attachment B)	(various)	µg/L	(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 24** (Criteria) and **Table 25** (Schedule). Results of these regular visual inspections shall be included in Semiannual Monitoring Reports per **Section E.1**.

Table 24—Criteria for Regular Visual Inspections

Category	Criteria
Upon Closed Unit	• Evidence of ponded water at any point on unit outside of any contact storm water/leachate diversions structures on the closed unit (record affected areas on map). • Evidence of erosion and/or of day-lighted refuse.

Category	Criteria
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.
Receiving 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 25—Regular Visual Inspection Schedule

Category	Wet Season (1 Oct. to 30 April)	Dry Season (1 May to 30 Sept.)
Closed Units	Monthly[1]	Quarterly

[1]During the months of **October thru April** the facility shall be monitored on a monthly basis and more frequently following a storm event where precipitation exceeds 0.5 inches in a 24-hour period. The Discharger must maintain a minimum of 2-feet of freeboard in the Groundwater Treatment System Retention Basin at all times and ensure that ponding does not occur on the landfill unit final closure covers (please see Section D.5. below for additional information regarding major storm events).

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 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 26—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**
§ E.3	Leachate Seep Reporting	Immediately upon Discovery of Seepage (*staff notification*) **Within 7 Days** (*written report*)
§ E.4	Annual Facility Inspection Reports	**15 November**

Section	Report	Deadline
§ E.5	Major Storm Reporting	Immediately after Damage Discovery (*staff notification*) Within 14 Days of Completing Repairs (*written report, photos*)
§ E.6	Survey and Iso-Settlement Mapping	**Every Five Years** (Next Due in 2023)
§ E.7	Financial Assurances Reports	**1 June**
§ E.8	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 § 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.)

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 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. Summaries of all Regular Visual Inspections conducted per **Section D3** during the reporting period.

i. 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*).

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

k. For any Corrective Action systems at the Facility, tabulated summaries of:

i. Operating hours;

ii. Monthly runtimes and downtimes; and

iii. Shutdowns, including start/stop dates and causes.

2. Annual Monitoring Reports (AMRs)

On 1 February of each year,[9] 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.[10]

c. 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.

d. 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,

e. 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.

f. 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.

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

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[9] 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.

[10] 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.

h. A discussion on the results of Annual LCRS Testing conducted in accordance with **Section D.1.a**.

i. When required per **Section B.4.g** of this Order, periodic updates to the Concentration Limits for all Monitoring Parameters and WQPS Monitoring Points.

j. To assess the progress of ongoing Corrective Action at the Facility, the Discharger shall report the following information regarding the effectiveness of the groundwater extraction and treatment system:

i. Operating hours;

ii. Monthly runtimes and downtimes;

iii. Shutdowns, including start/stop dates and causes;

iv. Total amount of groundwater extracted on a monthly basis;

v. Estimated mass of VOCs removed by the groundwater treatment system on a monthly basis; and

vi. An evaluation of the performance of the groundwater extraction and treatment system and what recommendations/changes if any need to be made to the system in order to improve its effectiveness.

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 22** (*Physical Parameters*) and

Table 23 (*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 D.4**. 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).) The next maps are due on 1 February 2024 with the annual report covering the previous year.

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[11] 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" (§ B), 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 water[12] 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 § f) 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)).

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[11] 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.

[12] 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). 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:	[Identification Number]
Facility Name:	Bonzi Sanitation Landfill
County:	Stanislaus County
CIWQS Place ID:	210037

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).

SIGNATURE

This Order is effective as of the date set forth below.

ORDERED BY:

PATRICK PULUPA,
Executive Officer

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)

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, Short List

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

ATTACHMENT A—VOLATILE ORGANIC COMPOUNDS, SHORT LIST

Constituent	Geotracker Code
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

ATTACHMENT A—VOLATILE ORGANIC COMPOUNDS, SHORT LIST

Constituent	Geotracker Code
Methyl t-butyl ether	MTBE
4-Methyl 2 pentanone (Methyl isobutylketone)	MIBK
Naphthalene	NAPH
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
1,2,4-Trichlorobenzene	TCB124
1,1,1 Trichloroethane (Methylchloroform)	TCA111
1,1,2 Trichloroethane	TCA112
Trichloroethylene (Trichloroethene)	TCE
Trichlorofluoromethane (CFC 11)	FC11
1,2,3 Trichloropropane	TCPR123
Vinyl acetate	VA
Vinyl chloride	VC
Xylenes	XYLENES

ATTACHMENT B—DISSOLVED INORGANICS

Dissolved Inorganics List

Constituent	Analytical Method	Geotracker Code
Arsenic	USEPA Method 6020	AS
Barium	USEPA Method 6020	BA
Chromium	USEPA Method 6020	CR
Cobalt	USEPA Method 6020	CO
Copper	USEPA Method 6020	CU
Lead	USEPA Method 6020	PB
Molybdenum	USEPA Method 6020	MO
Manganese	USEPA Method 6020	MN
Nickel	USEPA Method 6020	NI
Vanadium	USEPA Method 6020	V
Zinc	USEPA Method 6020	ZN

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

USEPA Method 8260,
Extended List

Volatile Organic Compound	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

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

Volatile Organic Compound	Geotracker Code
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
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

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

Volatile Organic Compound	Geotracker Code
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

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

Volatile Organic Compound	**Geotracker Code**
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 & Acids Extractables List

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

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

Constituent	Geotracker Code
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

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

Constituent	Geotracker Code
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

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

Constituent	Geotracker Code
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

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

Constituent	Geotracker Code
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

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

Constituent	Geotracker Code
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)

USPEA Method 8151A List

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 List

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	SIMAZIN