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MONITORING & REPORTING PROGRAM R5-2021-0060



ORDER INFORMATION

| | |
|-------------------------|-----------------------------------------------------------------------------------|
| Order Type(s): | Monitoring & Reporting Program (MRP) |
| Status: | ADOPTED |
| Program: | Title 27 Discharges to Land |
| Region 5 Office: | Sacramento (Rancho Cordova) |
| Discharger(s): | Stanislaus County, Dept. of Environmental Resources |
| Facility: | Fink Road Landfill |
| Address: | 4000 Fink Road, Crows Landing, California 95313 |
| County: | Stanislaus County |
| Parcel Nos.: | 027-017-040-000 |
| GeoTracker ID: | 224472 |
| Prior Order(s): | 73-108, 88-038, 90-269, 94-257, 98-184, 5-01-207, R5 2004-0158, & R5-2008-0144 |

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 15 October 2021.

PATRICK PULUPA,
Executive Officer

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GLOSSARY

| | |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| AMR | Annual Monitoring Report |
| CalRecycle | California Department of Resources Recycling and Recovery |
| CAMP | Corrective Action Monitoring Program |
| CAO | Cleanup and Abatement Order |
| C.F.R. | Code of Federal Regulations |
| CIWQS | California Integrated Water Quality System Project |
| COCs | Constituents of Concern |
| DMP | Detection Monitoring Program |
| DWR | California Department of Water Resources |
| EC | Electrical Conductivity |
| ELAP | State Water Board's Environmental Laboratory Accreditation Program (formerly administered by California Department of Public Health) |
| EMP | Evaluation Monitoring Program |
| EW | Extraction Well |
| Five-Year COCs | Five-Year Constituents of Concern |
| GeoTracker | State Water Board's Data Management System for Sites with Potential Groundwater Impact |
| GP | Gas Probe |
| LCRS | Leachate Collection and Removal System |
| LF | Landfill |
| LFG | Landfill Gas |

| | |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| MDL | Method Detection Limit |
| Method TO-15 VOCs | Volatile Organic Compounds associated with USEPA Method TO-15 |
| MRP | Monitoring and Reporting Program |
| MSW | Municipal Solid Waste |
| MSWLF | Municipal Solid Waste Landfill |
| N/A | Not Applicable |
| PID | Photo Ionization Detector |
| POC | Point of Compliance for Water Quality Protection Standard |
| QA/QC | Quality Assurance/Quality Control |
| Qualified Professional | Professional Civil Engineer, Certified Engineering Geologist, or Professional Geologist licensed by the State of California |
| RCRA | Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq. |
| RL | Reporting Limit |
| ROWD / JTD | Report of Waste Discharge / Joint Technical Document |
| SAP | Sampling and Analysis Plan |
| SPG | Soil Pore Gas |
| SPL | Soil Pore Liquid |
| SI | Surface Impoundment |
| SMR | Self 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

USEPA United States Environmental Protection Agency

VOCs Volatile Organic Compounds

WDRs Waste Discharge Requirements

WMU Waste Management Unit

WQPS Water Quality Protection Standard

UNITS

ft³ / min Cubic Feet per Minute

°F Degrees Fahrenheit

Gallons/Day Gallons per Day

mg/L Milligrams per Liter

ng/L Nanograms per Liter

µg/L Micrograms per Liter

µmhos/cm Microsiemens per Centimeter

µg/cm³ Micrograms per Cubic Centimeter

NTUs Nephelometric Turbidity Units

% 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 Stanislaus County Department of Environmental Resources (Discharger) which owns and operates the Fink Road Landfill (Facility) in Stanislaus County. Additional information regarding the Facility is set forth in the enumerated findings of Waste Discharge Requirements Order R5-2021-00XX (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 AND 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

For landfill Units 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 (2015 SPRRs or 2015 Standard Provisions), which are incorporated herein. See, e.g., SPRRs section I (Standard Monitoring Specifications) and section J (Response to Release). For surface impoundment Units the Discharger shall comply with all relevant provisions of the Standard Provisions and Reporting Requirements for Industrial Facilities Regulated by Title 27 April 2016 Edition (2016 SPRRs or 2016 Standard Provisions), which are incorporated herein. See, e.g., SPRRs section I (Standard Monitoring Specifications) and section J (Response to Release).

2. Monitoring Provisions in WDRs Order

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

3. Compliance with Title 27

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

4. Sampling and Analysis Plan (SAP)

All samples shall be collected, preserved and transported in accordance with the approved Sampling and Analysis Plan (SAP) and the Quality Assurance/Quality Control (QA/QC) standards specified therein. The Discharger may use alternative analytical test methods (including new USEPA-approved methods), provided that the alternative methods have method detection limits and practical quantitation levels (MDLs) equal to or lower than the analytical methods specified in this MRP and are identified in the approved SAP. The SAP shall include provisions to ensure groundwater monitoring points and/or monitoring devices are Per- and polyfluoroalkyl substances (PFAS) free to the maximum extent

possible. Installation of any new monitoring point and/or monitoring device shall be Per- and polyfluoroalkyl substances (PFAS) free unless the Discharger submits documentation as to why it is unable to install a PFAS free monitoring point or device and receives a waiver of the requirement in writing from Central Valley Water Board staff.

R5-2021-00XX, this MRP Order is separately enforceable, and may be separately revised by the Executive Officer under authority delegated pursuant to Water Code section 13223. Except as otherwise provided below in this MRP Order, each of the Findings set forth in the WDRs Order are incorporated herein.

B. Monitoring Requirements

The Discharger shall comply with the detection monitoring program (DMP) and corrective action monitoring program (CMP) provisions of Title 27, as applicable, for groundwater, surface water, and the unsaturated zone, as specified herein, in accordance with the Monitoring Specifications in Section G of the WDRs and Standard Monitoring Specifications in Section I of both the Landfill SPRRs and Industrial SPRRs. All detection and corrective action monitoring systems, including background monitoring, shall be designed and constructed consistent with the monitoring specifications of this Order and certified by a California-licensed professional civil engineer or geologist (Qualified Professional) as meeting the requirements of Title 27.

1. Groundwater Detection Monitoring

The Discharger shall implement and maintain a groundwater DMP at all units for which a release to groundwater has not been confirmed, as described in WDR Finding 52-56 (i.e., LF-2, LF-3, SI-1 and SI-2). Groundwater DMP monitoring points shall be located and maintained along the Point of Compliance and in other water bearing zones and locations necessary to meet Title 27 performance standards for detection monitoring (i.e., provide the earliest possible detection of a release from the unit).

The Discharger shall also install and maintain a sufficient number of piezometers and/or groundwater water monitoring wells to provide the groundwater elevation monitoring data necessary to accurately plot the groundwater elevation contours and adequately define the direction(s) of groundwater flow and corresponding flow gradient(s) in the shallow and deep zones beneath the Facility. See Standard Monitoring Specification I.19, Landfill SPRRs.

a. Landfill Monitoring Points

The groundwater detection monitoring points for the landfill units at the site shall (at a minimum) include those listed in Table 1 below.

Table 1—Groundwater Detection Monitoring Points – Landfill Units

| Landfill Unit | Program | Wells | Direction | Location |
|-----------------------------|------------|--------------------------------------|---------------|---------------------------|
| LF-1 | Detection | MW-12 | Upgradient | West of LF-1 |
| LF-2 | Background | --- | Upgradient | West of LF-2, Cell 7 |
| LF-1 & LF-2 (contiguous) | Background | BG-1, BG-2 | Upgradient | Western perimeter of LF-1 |
| LF-2 | Detection | MWs-13, 14, 25, 26, 27S, 27D & 29 | Downgradient | NE Perimeter of LF-2 |
| LF-3 | Detection | MW-23, 23P & MW-30 | Downgradient | Western perimeter of LF-3 |
| LF-3 | Background | BG-3, BG-4 | Upgradient | Offsite to west |
| LF-3 | Detection | MW-24, MW-31, MW-32 | Side gradient | South of LF-3 |
| LF-3 | Detection | --- | Downgradient | Eastern perimeter of LF-3 |

Table 1 Notes: Additional monitoring well required at specified location where “---” entry in Wells column per WDRs Monitoring Specification G.9.

b. Surface Impoundment Monitoring Points

The groundwater detection monitoring points for the surface impoundment units at the site shall (at a minimum) include those listed in 2 below.

Table 2—Groundwater Detection Monitoring Points – Surface Impoundments

| WMU | Program | Wells | Direction | Location |
|------|------------|-------|------------|---------------------|
| SI-1 | Background | MW-22 | Upgradient | Between LF-1 & LF-2 |

| WMU | Program | Wells | Direction | Location |
|------|------------|-------|---------------|------------------------|
| SI-1 | Detection | MW-19 | Downgradient | SE site perimeter |
| SI-2 | Background | --- | Upgradient | Between LF-2 & SI-2 |
| SI-2 | Detection | MW-18 | Side gradient | Eastern site perimeter |
| SI-2 | Detection | --- | Downgradient | North of SI-1 |

Table 2 Notes: Additional monitoring well required at specified location where “---” entry in Wells column. See WDRs Monitoring Specification G.9.

Any monitoring wells or piezometers installed after the adoption of this Order shall become groundwater detection monitoring points subject to monitoring under this section, unless otherwise approved by Water Board staff. Any existing or future monitoring wells (or piezometers) properly abandoned or replaced as approved by Water Board staff may be removed as groundwater monitoring points subject to monitoring under this section. See Standard Monitoring Specification I.23, SPRR.

c. Groundwater Detection Monitoring Schedule

Ground water samples shall be collected from each well in Table 1 and Table 2 above and analyzed for the Field Parameters and Monitoring Parameters listed in Table 3 and the Five-Year COCs referenced in Table 4 and listed in Attachment MRP B of this MRP. Sampling shall be conducted in accordance with the frequencies listed in Table 3 for each parameter/constituent group.

Table 3—Groundwater Detection Monitoring Schedule – Monitoring Parameters

| Parameter (See Attachment I) | Units | Sampling Frequency |
|----------------------------------------|-----------------------|--------------------|
| Field Parameters—Groundwater Elevation | Feet & 100ths, M.S.L. | Quarterly |
| Field Parameters—Other | See Attachment III | Semiannually |
| General Parameters | mg/L | Semiannually |
| General Minerals—Major Anions | mg/L | Annually |
| General Minerals—Major Cations | mg/L | Annually |
| VOCs, Short List | µg/L | Semiannually |
| Dissolved Metals, Short List | µg/L | Semiannually |

Table 4—Groundwater Detection Monitoring Schedule –COCs

| COC Group (See Attachment II) | Units | Sampling Frequency |
|------------------------------------------|--------------|---------------------------|
| Dissolved Inorganics, Extended List | µg/L | Every 5 Years |
| VOCs, Extended List | µg/L | Every 5 Years |
| Semi-Volatile Organic Compounds | µg/L | Every 5 Years |
| Chlorophenoxy Herbicides | µg/L | Every 5 Years |
| Organophosphorus Compounds | µg/L | Every 5 Years |

Piezometer monitoring may be limited to groundwater elevation (unconfined zones) or hydraulic head (confined/semi-confined zones), as applicable at a given monitoring point.

Detection Monitoring Data Analysis - Using groundwater elevation data from monitoring, the Discharger shall determine (calculate or estimate) the ground water flow rate and direction in the uppermost aquifer and, to the extent feasible, in any zones of perched water or other saturated zones monitored pursuant to Title 27, section 20415, subdivision (b)(1). Detection monitoring data collected above shall be analyzed in accordance with the detection monitoring data analysis methods described in the currently approved Monitoring Data Analysis Methods Report or Water Quality Protection Standard Report.

2. Groundwater Corrective Action Monitoring

The Discharger shall implement and maintain a groundwater corrective action monitoring program (CMP) at all units for which a release to groundwater has been confirmed under the DMP, as described in WDR Finding 52 (i.e., LF-1) or as otherwise determined under this MRP. Groundwater CMP monitoring points shall be located and maintained along the Point of Compliance and in other water bearing zones and locations necessary to meet Title 27 performance standards for corrective action monitoring (i.e., define the nature and extent of the release and monitor the effectiveness of corrective action measures).

a. Groundwater Corrective Action Monitoring Points

The groundwater corrective action monitoring points for the landfill units at the site shall (at a minimum) include those listed in Table 5 below.

Table 5—Groundwater Corrective Action Monitoring Points

| Landfill Unit | Program | Wells | Location | Notes |
|--------------------------|-------------------|-----------------------------------|--------------|--------------------------------|
| LF-1 | Corrective Action | MWs-9B, -12, -30 & ---1 | Downgradient | Between LF-1 & LF-2 |
| LF-1 & LF-2 (contiguous) | Corrective Action | MWs-13, -14, -25, -26, -27S & -29 | Downgradient | NE Perimeter of LF-2 |
| LF-2 & LF-3 | Corrective Action | MWs -18, -19, -22 | Downgradient | East of LF-2 and North of LF-3 |
| LF-3 | Corrective Action | MWs-16,-16A,-17,-20,-21 | Downgradient | South Perimeter of LF-3 |

Table 5 Notes: Additional monitoring well required at specified location where “---” entry in Wells column per WDRs Monitoring Specification G.9.

Any monitoring wells installed upgradient, side-gradient or down gradient of LF-1, or downgradient of LF-2, after the adoption of this Order shall become groundwater corrective action monitoring points for LF-1 subject to monitoring under this section, unless otherwise approved by Water Board staff. Any existing or future monitoring wells (or piezometers) properly abandoned or replaced as approved by Water Board staff may be removed as groundwater monitoring points subject to monitoring under this section. See Standard Monitoring Specification I.23, SPRR.

b. Groundwater Corrective Action Monitoring Schedule

The groundwater corrective action monitoring schedule shall be the same as for groundwater detection monitoring. See **Table 3** and **Table 4**.

Data analysis methods for corrective action monitoring shall include applicable detection and evaluation monitoring protocols, such as verification testing and notification of any new or previously unconfirmed constituents of the release to meet corrective action objectives.¹ (See SPRRs, §§ I.45-I.47.)

¹ Incorporation of detection and evaluation monitoring protocols into the CMP may alternatively be viewed as running concurrent detection, evaluation, and correction action monitoring on a constituent-by-constituent basis. A DMP may also be run independent of the CMP at any wells that have successfully completed a Title 27 proof period per WDR Monitoring Specification G.11.

Groundwater chemistry shall be evaluated **annually** for cation/anion balance, and the results graphically presented using an appropriate method (e.g., Stiff diagram, Piper diagram, and/or Schoeller plot).

3. Unsaturated Zone Monitoring

The Discharger shall monitor soil pore gas and soil pore liquid at the lined and unlined units at the site consistent with Title 27 performance standards, as indicated below.

a. Soil Pore Gas

i. Monitoring Points

The Discharger shall conduct soil pore gas monitoring to monitor gas migration in the unsaturated zone, the effectiveness of LFG extraction as a corrective action measure at LF-1, and to detect a release of LFG from LF-2 and LF-3 in the event it occurs. The soil pore gas detection and corrective action monitoring points shall be the gas probes listed in Table 6 and shown in WDRs Attachment D.

Table 6—Soil Pore Gas Monitoring Points

| Nearest WMU | Gas Wells | Completion Type | Screened Intervals | Location Relative to Unit |
|--------------------|------------------|------------------------|---------------------------|----------------------------------|
| LF-1 | GPs 2 & 4 | Triple | S, M, D | West of LF-1 |
| LF-1 | GP-1R | Dual | S, M | North of LF-1 |
| LF-1 | GP-3 | Triple | S, M, D | South of LF-1 |
| LF-2 | GP-11 | Triple | S, M, D | East of Cell 2 |
| LF-2 | GP-12 | Triple | S, M, D | East of Cells 3 & 4 |
| LF-2 | GP-14 | Single | S | North of Cell 6 |
| LF-2 | GP-15 | Dual | S, D | SW of Cells 2 & 3 |
| LF-3 | GPs 7 & 8 | Triple | S, M, D | South of Cells 4 & 1 |
| LF-3 | GP-9 | Triple | S, M, D | East of Cells 1 & 2 |
| LF-3 | GP-10 | Triple | S, M, D | North of Cells 1 & 2 |
| LF-3 | GPs 16 & 17 | Dual | S, D | SW of Cell 5 |
| Offsite | GPs 5 & 6 | Triple | S, M, D | SW & South of WTE Plant |

ii Soil Pore Gas Monitoring Schedule

Soil pore gas shall be monitored for LFG parameters in per Table 7.

Table 7—Soil Pore Gas Monitoring Schedule

| Parameters | Units | Monitoring Frequency |
|------------------------------------------------------------------------|-------------------------|----------------------|
| Atmospheric Pressure | Inches Hg | Semiannually |
| Atmospheric Temperature | °F | Semiannually |
| Gas Temperature | °F | Semiannually |
| Gas Pressure | Inches H ₂ O | Semiannually |
| Field Gases (methane, oxygen, CO ₂ , and miscellaneous gas) | % | Semiannually |
| Organic Vapors | ppmv | Semiannually |
| VOCs | µg/cm ³ | Semiannually |

Table 7 Notes: All gas monitoring shall be conducted using appropriate field meter(s). VOC sampling shall be required in all probes in which methane detected above 1% by volume and/or total organic vapors detected above 1 ppmv during monitoring event. VOC analysis shall be conducted using USEPA Method TO-15.

b. Soil Pore Liquid

i. Monitoring Points

The soil pore liquid monitoring points for the lined landfill units and the surface impoundments shall be as listed in Table 8 and Table 9 (below).

Table 8—Soil Pore Water Monitoring Points – Landfill Units

| WMU | Cell(s) | Program | Lysimeter |
|------|---------|------------|--------------------|
| LF-1 | --- | --- | --- |
| LF-2 | 1 | Detection | DLs-20A, 21A & 22A |
| LF-2 | 2 | Detection | DLs-26 & 27 |
| LF-2 | 1 & 2 | Detection | N/A – see notes |
| LF-2 | 3 - 6 | Background | BL-1 |
| LF-2 | 3 - 6 | Detection | PLs 3 to 6 |

| WMU | Cell(s) | Program | Lysimeter |
|------|------------|-----------|---------------|
| LF-2 | 7 (future) | Detection | PL-7 (future) |
| LF-3 | 1 & 2 | Detection | DLs 1 to 13 |
| LF-3 | 1 & 2 | Detection | DL-28 to 30 |
| LF-3 | 3 & 4 | Detection | PLs 3 & 4 |
| LF-3 | 5 (future) | Detection | PL-5 (future) |

Table 8 Notes: LF-2 Cells 1 & 2 not installed with pan lysimeters given the units were not constructed with LCRS sumps (leachate from cells drains by pipe directly to SI-2). See WDRs Attachment F- Surface Impoundment, Unsaturated Zone (Soil Pore Water), & Leachate Monitoring.

Table 9—Soil Pore Water Monitoring Points – Surface Impoundments

| WMU | Program | Lysimeter |
|------|------------|--------------|
| SI-1 | Background | BL-5 |
| SI-1 | Detection | Subdrain |
| SI-2 | Background | BL-2 |
| SI-2 | Detection | DLs-23 to 25 |

ii. Soil Pore Liquid Monitoring Schedule

The soil pore liquid monitoring schedule shall be the same as that for leachate monitoring in **Table 10**. Monitoring results for the unsaturated zone shall be included in monitoring reports and shall include an evaluation of potential impacts of the Facility on the unsaturated zone and compliance with the Water Quality Protection Standard.

4. Leachate Monitoring

Leachate monitoring shall be conducted to detect physical evidence of a release from the landfill units (i.e., seeps) per Standard Monitoring Specification I.48, SPRR, the concentrations and volumes/rates of landfill leachate produced, and any leakage from the primary containment system of a surface impoundment.

a. Leachate Seeps

i. Monitoring Points

The monitoring points for leachate seep monitoring shall include the landfill cover deck, slopes and perimeter.

ii. Monitoring Schedule

Leachate seep monitoring shall be conducted according to the schedule set forth in **Table 10**.

Detection of Leachate—If leachate is observed emanating from the landfill, the Discharger shall: (i) within seven days, verbally notify Central Valley Water Board staff; and (ii) immediately, sample and test leachate in accordance with the Field Parameters and Monitoring Parameters specified in **Table 10**. **LCRS Sumps**

b. LCRS Sumps

i. Monitoring Points

All landfill and surface impoundment LCRS sumps. See WDRs Attachment F and Table 8 notes.

ii. Monitoring Schedule

All Unit landfill LCRS sumps/vaults and surface impoundment leak detection sumps shall be inspected monthly for the presence of leachate. Upon detection of leachate in a previously dry sump or vault, leachate shall be sampled immediately and analyzed for the constituents listed in **Table 10** below. Annual sampling per Table 10 shall also be conducted at each sump/vault containing leachate.

Table 10—Leachate Monitoring Schedule

| Parameter | Units | GeoTracker Code | Sampling Freq. |
|----------------------------------------|-------------------|------------------------|-----------------------------|
| Leachate Depth | Feet & inches | --- | Each Occurrence & Monthly |
| Leachate Elevation | Feet & tenths MSL | ELEV | Each Occurrence & Monthly |
| Total Flow (estimate or meter reading) | Gallons | --- | Each Occurrence/ Continuous |

| Parameter | Units | GeoTracker Code | Sampling Freq. |
|-----------------------|-------------|-----------------|---------------------------------|
| Flow Rate (estimate) | Gallons/Day | FLOW | Each Occurrence & Quarterly |
| Specific Conductance | µmhos/cm | SC | Each Occurrence & Quarterly |
| pH | pH units | PH | Each Occurrence & Quarterly |
| Monitoring Parameters | See Table 3 | --- | Each Occurrence & Semi-annually |
| Five-Year COCs | See Table 4 | --- | Each Occurrence & Annually |

The Discharger shall also monitor leachate flows and totals to the Class II surface impoundments (SI-1 and SI-2) on a daily or continuous basis (i.e., by meter). LCRS Sump and leak detection sampling shall be conducted in accordance with the currently approved Sample Collection and Analysis Plan. Leachate monitoring shall be incorporated into all future expansions at the landfill.

iii. LCRS Testing

All LCRSs shall be tested annually to demonstrate operation in conformance with waste discharge requirements. The results of these tests shall be reported to the Board and shall include comparison with earlier tests made under comparable conditions. All visible portions of synthetic liners shall be inspected on a quarterly basis and their condition reported in the Annual Report.

5. Surface Water Monitoring

Surface water monitoring shall be conducted to detect evidence of a release from the landfill units, evidence of landfill cover and WMU side slope erosion, and to monitor the effectiveness of precipitation and drainage controls at the site. Runoff from the units at the Facility shall be collected from each monitoring point listed in **Table 11** below when there is sufficient liquid at each monitoring point to collect a representative sample of the liquid at that point. Each sample shall be analyzed in accordance with the methods and frequency specified in **Table 12**.

Table 11—Surface Water Monitoring Points

| WMUs | Monitoring Program | Direction | Monitoring Point(s) | Location |
|-------------|--------------------|--------------------------------------|---------------------|--------------------------------------------|
| All | Background | Upstream of units | --- | Representative point upstream of all units |
| LF-1 | Detection | Downstream of toe | S-1 & --- | Perimeter drain |
| LF-2 | Detection | Downstream of commonly drained cells | S-2 & --- | Representative monitoring point |
| LF-3 | Detection | Downstream of commonly drained cells | --- | Representative monitoring point |
| SI-1 & SI-2 | Detection | Downstream | --- | Sedimentation Basin |

Table 11 Notes: Additional monitoring points required at appropriate location where “---” entry in “Monitoring Points” column per WDRs Monitoring Specification G.12.

Table 12—Surface Water Monitoring Schedule

| Parameter (See Attachment A) | GeoTracker Code | Units | Sampling Frequency |
|-------------------------------------------------------|-----------------|-----------|--------------------------------|
| Specific Conductance | SC | µmhos/cm | Semiannually |
| pH | PH | pH units | Semiannually |
| Turbidity | TURB | NTU | Semiannually |
| General Parameters | (various) | mg/L | Semiannually |
| General Minerals - Major Anions - Major Cations | (various) | mg/L | Annually |
| VOCs, Short List | (various) | µg/L | Annually |
| Dissolved Inorganics, Short List | (various) | µg/L | Annually |
| Five-Year COCs (See Attachment B) | (various) | (various) | Every Five Years (Due in 2022) |

6. Solid Waste Monitoring

The Discharger shall monitor all wastes discharged to the Class II and III landfill units as follows and report to the Board:

Table 13—Solid Waste Monitoring

| Parameter | Units | Monitoring Frequency |
|--------------------------------|-------------|----------------------|
| Quantity discharged | Cubic yards | Monthly |
| Type of material discharged | – | Monthly |
| Source of material | – | Monthly |
| Minimum elevation of discharge | Feet (MSL) | Monthly |
| Remaining Capacity of Cell | % | Quarterly |

Table 13 Notes: The above information shall be calculated, and the results reported in the semiannual monitoring reports required under MRP Section B.1.i.

The Discharger provide PDF copies of the waste profiling of material placed into the landfill (LF-2) or the Ash Monofill (LF-3), if requested by the Regional Board staff.

7. Facility Monitoring

The Discharger shall monitor all wastes discharged to the Class II and III landfill units on a monthly basis and report to the Board as follows:

a. Regular Visual Inspections

The Discharger shall perform regular visual inspections listed in Table 14 in accordance with the schedule specified in Table 15. Results of these regular visual inspections shall be included in Semiannual Self-Monitoring Reports (Semiannual SMRs) per Section D.1 of this MRP Order.

Table 14—Regular Visual Inspections

| Category | Observations |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 refuse. |

| Category | Observations |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Unit Perimeter | <ul style="list-style-type: none"> • Evidence of leachate seep, estimated size of affected area and flow rate (record affected areas on map). • Evidence of erosion and/or of day-lighted refuse. |
| Receiving Waters ² | <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.) |
|--------------------------|------------------------------------|-----------------------------------|
| Inactive or Closed Units | Monthly | Quarterly |
| Active Units | Weekly | Monthly |

b. 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.

² Surface waters from the northern quarter of the Facility drains to the South Fork of the Little Salado Creek, a tributary of the San Joaquin River and is monitored at surface water monitoring point S-1. The remaining three-quarters of the Facility drains to a sedimentation basin which when full overflows to Crow Creek, a tributary of the San Joaquin River and is monitored at surface water monitoring point S-2.

Annual facility inspection reporting shall be submitted as required in Section C.4 of this MRP.

c. 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. Notification and reporting requirements for major storm events shall be conducted as required in Section C.5 of this MRP.

d. Five-Year Iso-Settlement Surveys for Closed Landfills

The Discharger shall conduct a five-year iso-settlement survey of each closed and partially-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, subds. (e)(1)-(2).) The most recent five-year iso-settlement survey was conducted in 2017 and the next is due to be conducted in 2022. See Section C.6 for iso-settlement survey reporting requirements.

8. Additional Corrective Action Monitoring

In addition to groundwater corrective action monitoring conducted in Section B.1 above, the Discharger shall monitor the LFG extraction system at LF-1 and LF-2 to demonstrate the effectiveness of LFG extraction as a corrective action measure at LF-1 and as an LFG (i.e., operational) control measure at LF 2 in accordance with Title 27, section 20430 and this MRP.

a. LFG Extraction System (Excluding Flare)

The Discharger shall operate and maintain the landfill gas (LFG) extraction system for each unit (or for the units combined as the system is currently configured), to remove LFG from the landfill units and prevent, to the extent possible, migration into the unsaturated zone beneath the landfill units.

i. Monitoring Points

LFG extraction and monitoring shall be conducted at the LFG extraction wells shown in WDRs Attachment D.2. Additionally, LFG monitoring shall also be conducted at any new or replacement LFG extraction wells installed after

adoption of this Order; a representative sampling port along LF-1 header; the connection between LF-1 and LF-2 header pipes; and a representative sampling port along LF-2 header.

ii. Monitoring Schedule

LFG monitoring shall be conducted in accordance with **Table 16**. Field monitoring shall be conducted with appropriate measuring devices for each parameter.

Table 16—Landfill Gas Extraction Monitoring Schedule

| Parameter | Units | Sampling Frequency |
|---------------------------|------------------------------------------|--------------------|
| LFG Well Status | Open and Operating or Shutoff and Closed | Monthly |
| Flow rate | cu ft/min | Monthly |
| Vacuum | Inches of H ₂ O | Monthly |
| LFG Temperature | °F | Monthly |
| Field Gases | % | Monthly |
| VOCs (USEPA Method TO-15) | µg/cm ³ | Semiannually |

Table 16 Notes: Flow rate monitoring required only if well flow control valve is metered. See Table 7 for list of field gases. All gas monitoring shall be conducted using appropriate field meter(s). VOC sampling shall be required in all monitoring points in which methane detected above 1% by volume and/or total organic vapors detected above 1 ppmv during monitoring event. VOC analysis shall be conducted using USEPA Method TO-15.

b. Landfill Gas Flare Station

i. Monitoring Points

The inlet to the Landfill Gas Flare Station shall be monitored in accordance with Table 17.

Table 17—Landfill Gas Flare Monitoring Schedule

| Parameter | Units | Sampling Frequency |
|-----------------------------|------------------------------------------|---------------------------|
| Flare Operational Up-Time | % Time per Month Flare is Operational | Continuous |
| Atmospheric Temperature | oF | Monthly |
| Atmospheric Pressure | PSIG | Monthly |
| Temperature into LFG Plant | oF | Monthly |
| Pressure into the LFG plant | Inches of H2O vacuum | Monthly |
| Totalized flow | Cubic feet | Monthly |
| Flow rate | CFM | Monthly |
| Total VOCs | µg/cm ³ | Monthly |
| Field Gases | % by volume | Monthly |
| VOCs USEPA Method TO-15) | µg/cm ³ | Semiannually |

See Table 7 for list of field gases.

In the event of a shutdown of the landfill gas extraction system and/or flare for one week or longer, the Discharger shall notify Central Valley Water Board staff via e-mail, fax, or telephone within 24 hours of knowledge and shall provide weekly status updates. This requirement excludes shutdown events where the landfill gas system restarts itself or whether the system is restarted manually within 24 hours. All shutdowns, regardless of the type of restart, shall be summarized in the semiannual reports. See WDRs Facility Specification C.7,

Evaluation of the effectiveness of the LFG extraction system shall include whether separate LFG controls, including blower and flare station, are needed for each unit to achieve corrective action goals per Title 27, section 20430. See WDRs Facility Specification C.5.a.

The Discharger shall report all recorded data and conduct a comprehensive evaluation of the effectiveness of the CAP in the Annual Monitoring Report required in Section C.2 of this MRP.

All gas monitoring shall be conducted using appropriate field meter(s). VOC sampling shall be required in all monitoring points in which methane detected above 1% by volume and/or total organic vapors detected above 1 ppmv during monitoring event. VOC analysis shall be conducted using USEPA Method TO-15.

C. Reporting Requirements

The results of monitoring required at least semiannually (i.e., semiannually or more frequently) under this Order shall be reported semiannually, while the reporting frequency for monitoring required less frequently than semiannually (e.g., annually or every five years) shall be the same as the monitoring frequency. The following monitoring reports containing the results of monitoring required under this Order shall be submitted by the specified due dates.

Table 18—Summary of Required Reporting

| Report | End of Reporting Period | Due Date |
|------------------------------------------|--------------------------------|--------------------------------------------------------------------------|
| First Semiannual Monitoring Report | 30 June | 1 Aug. |
| Second Semiannual Monitoring Report | 31 Dec. | 1 Feb. |
| Annual Monitoring Report | 31 Dec. | 1 Feb. |
| Seep Reporting | (continuous) | Immediate Notification (Written Notice within 7 Days) |
| Annual Facility Inspection Report | 31 Oct. | 15 Nov. |
| Major Storm Event Report | (continuous) | 7 Days after Discovery of Damage and 14 days after completion of repairs |
| Iso-Settlement Survey and Mapping Report | Every 5 Years | 31 October 2022 and every 5 years thereafter |

1. Semiannual Self-Monitoring Reports (Semiannual SMRs)

By 1 August and 1 February of each year, the Discharger shall submit a Semiannual SMR in accordance with the provisions below.

- a. For each groundwater monitoring point addressed by the report, a description of:
 - i. The time of water level measurement;
 - ii. The type of pump (or other device) used for purging and the elevation of the pump intake relative to the elevation of the screened interval;
 - iii. The method of purging used to stabilize water in the well bore before the sample is taken including the pumping rate; the equipment and methods used to monitor field pH, temperature, and conductivity during purging; results of pH, temperature, conductivity, and turbidity testing; and the method of disposing of the purge water;
 - iv. The type of pump (or other device) used for sampling, if different than the pump or device used for purging; and
 - v. A statement that the sampling procedure was conducted in accordance with the approved Sample Collection and Analysis Plan.
- b. A map or aerial photograph showing the locations of observation stations, monitoring points, and background monitoring points.
- c. An estimated quarterly groundwater flow rate and direction in: (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. (See Title 27, § 20415, subd. (e)(15).)
- d. Times of expected highest and lowest elevations of the water levels in the wells. (See Title 27, § 20415, subd. (e)(15).)
- e. Estimated minimum groundwater separation at LF-1, LF-2, and LF 3 based on groundwater elevation monitoring data and the maximum depth of waste at each unit, including LCRS sump, as applicable.

- f. Cumulative tabulated monitoring data for all monitoring points and constituents for groundwater, unsaturated zone, leachate, and surface water.
 - i. Concentrations below the laboratory reporting limit shall not be reported as “ND” unless the reporting limit is also given in the table. Otherwise they shall be reported “<” the reporting limit (e.g., <0.10).
 - ii. Units shall be as required in the appropriate Tables in Section B unless specific justification is given to report in other units. Refer to the SPRRs Section I “Standard Monitoring Specifications” for requirements regarding MDLs and PQLs.
- g. Laboratory statements of results of all analyses evaluating compliance with requirements.
- h. An evaluation of the concentration of each monitoring parameter (or 5-year COC when five-year COC sampling is conducted) as compared to the current concentration limits, and the results of any required verification testing for constituents exceeding a concentration limit. Report any actions taken under Section J: Response to a Release for verified exceedances of a concentration limit for wells/constituents not already in corrective action monitoring.
- i. The results of solid waste monitoring required under Section B.6 above.
- j. An evaluation of the effectiveness of the leachate monitoring and control facilities, and of the landfill precipitation and drainage control facilities. The evaluation shall include the results of monitoring required in Section B.4 above.
- k. A summary of all Facility Monitoring for the reporting period required in Section 7 of this MRP.
- l. A summary of inspection, leak search, and repair of final covers on any closed landfill units in accordance with an approved final post-closure maintenance plan as required by Standard Closure and post-Closure Maintenance Specifications G.26 through G.29 of the SPRRs.
- m. A comprehensive discussion of the Corrective Action Monitoring Program required by this MRP under Sections B.2 and B.8.

2. Annual Monitoring Reports (AMRs)

On 1 February of each year, the Discharger shall submit Annual Monitoring Reports (AMRs) containing each of the following components.

- a. Graphs showing historical trends for monitoring parameters at each background and compliance monitoring point for each monitoring program i.e., groundwater, unsaturated zone, and surface water monitoring programs.
 - i. All monitoring parameters shall be graphed to show historical trends at each monitoring point and background monitoring point, for all samples taken within at least the previous five calendar years.
 - ii. If a 5-year COC event was performed during any monitoring period of the subject year of the Annual Report, then these parameters shall also be graphically presented.
 - iii. Each such graph shall plot the concentration of one or more constituents for the period of record for a given monitoring point or background monitoring point, at a scale appropriate to show trends or variations in water quality.
 - iv. The graphs shall plot each datum, rather than plotting mean values.
 - v. Graphical analysis of monitoring data may be used to provide significant evidence of a release.
- b. An evaluation of the monitoring parameters with regards to the cation/anion balance, and a graphical presentation using a Stiff diagram, a Piper graph, or a Schoeller plot.
- 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 format such as a computer disk. The Central Valley Water Board regards the submittal of data in hard copy and in digital format as "...the form necessary for..." statistical analysis [Title 27, section 20420(h)], that facilitates periodic review by the Central Valley Water Board.
- d. Hydrographs of each well showing the elevation of groundwater with respect to the elevations of the top and bottom of the screened interval and the elevation of the pump intake. Hydrographs of each well shall be prepared quarterly and submitted annually.

- e. A comprehensive discussion of the compliance record, and the result of any corrective actions taken or planned which may be needed to bring the Discharger into full compliance with the waste discharge requirements.
- f. A written summary of the monitoring results, indicating any changes made or observed since the previous Annual Monitoring Report.
- g. Updated concentration limits for each monitoring parameter at each monitoring well based on the new data set.
- h. The results of the annual LCRS testing required in Section B.4.b.iii. The Discharger shall quantify the amount of LCRS clogging that has occurred over time since the LCRS was first tested and shall estimate the effects of the clogging as it relates to increased leachate head buildup on the underlying geomembrane liner.

3. Seep Reporting

Upon discovery of seepage from any disposal area within the Facility, the Discharger shall immediately report such seepage to 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 (e.g., all pertinent observations and analyses), and extent of the discharge including whether the leachate left the boundaries of the waste unit and how far the seep travelled;
- d. Verification that samples have been submitted for analyses of the Field Parameters and Monitoring Parameters listed in Table III of this MRP, 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 Reports

By 15 November of each year, the Discharger shall submit a report describing the results of the inspection and the repair measures implemented, preparations for winter, and include photographs of any problem areas and the repairs. Refer to Section B.7.b of this MRP, above.

5. Major Storm Event Reports

Following major storm events capable of causing damage or significant erosion, the Discharger shall immediately notify Central Valley Water Board staff of any damage or significant erosion upon discovery and submit a preliminary written report within 7 days after discovery describing the extent of the damage and the proposed repairs that will be made to remedy the damage. The Discharger shall submit a final report of subsequent repairs within 14 days of completion of the repairs, including photographs of the problem and the repairs. See Section B.7.c.

6. Survey and Iso-Settlement Map (closed & partially closed landfills)

The Discharger shall submit all iso-settlement maps prepared in accordance with Section B.7.d of this MRP. (See Title 27, § 21090, subd. (e).) The next five-year iso-settlement survey report for the landfill is due by 31 October 2022 and every five years thereafter.

7. Financial Assurance Report

By 1 June of each year, the Discharger shall submit a copy of the annual financial assurances report due to CalRecycle that updates the financial assurances for closure, post-closure maintenance, and corrective action. See Financial Assurance Specifications F.2 and F.7 of the WDRs. The Discharger shall report the financial assurances documents associated with the Facility's two Class II surface impoundments separately.

D. Water Quality Protection Standard

For each waste management unit, the WQPS shall consist of all COCs, the concentration limit for each COC, the verification retesting procedure to confirm measurably significant evidence of a release, the point of compliance, and all water quality monitoring points for each monitored medium.

1. WQPS Report

The WQPS for each WMU at the Facility shall be described in a WQPS Report approved by the Central Valley Water Board. Any proposed changes to the WQPS, other than annual update of the concentration limits, shall be submitted in a revised WQPS Report for review and approval. The WQPS report shall:

- a. Identify all distinct bodies of surface water and groundwater that could be affected in the event of a release from a waste management unit or portion of a unit. This list shall include at least the uppermost aquifer and any permanent or ephemeral zones of perched groundwater underlying the Facility.

- b. Include a map showing the monitoring points and background monitoring points for the surface water monitoring program, groundwater monitoring program, and the unsaturated zone monitoring program. The map shall include the point of compliance in accordance with Title 27, section 20405.
- c. Evaluate the perennial direction(s) of groundwater movement within the uppermost groundwater zone(s).
- d. Include a proposed statistical method for calculating concentration limits for monitoring parameters and constituents of concern that are detected in 10% or greater of the background data (naturally-occurring constituents) using a statistical procedure from Title 27, section 20415(e)(8)(A-D)] or section 20415(e)(8)(E).
- e. Include a retesting procedure to confirm or deny measurably significant evidence of a release (See Title 27, §§ 20415, subd. (e)(8)(E), 20420, subds. (j)(1)-(3).
- f. Be updated annually for each monitoring well using new and historical monitoring data.
- g. Be certified by a California-registered civil engineer or geologist as meeting the requirements of Title 27.

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

The monitoring parameters are listed in Table 3 (groundwater), Table 7 (unsaturated zone) and Table 12 (surface water).

The surface and groundwater COCs for both landfill units at the Facility are listed in Attachment B. The Discharger shall monitor all COCs **every five years**, or more frequently as required in accordance with a Corrective Action Program. The last 5-year COC event was conducted in the Third Quarter 2015. The five-year COCs are therefore due to be monitored again in the Second Semester 2020.

2. Concentration Limits

Proposed concentration limits for all monitored water bearing media (i.e., surface water and groundwater) shall be included in the revised/updated WQPS Report required under WDR Monitoring Specification G.7. For a naturally occurring constituent of concern, the concentration limit for each constituent of concern shall be determined by calculation in accordance

with a statistical method pursuant to Title 27, section 20415(e)(8); or by an alternate statistical method meeting the requirements of Title 27, section 20415(e)(8)(E).

a. Detection Monitoring

- i. Non-Naturally Occurring COCs—The concentration limits for non-naturally occurring constituents of concern, including organic compounds (e.g., VOCs and dissolved metals not detectable in background), shall be the laboratory detection limit.
- ii. Naturally Occurring COCs—The Discharger shall use interwell statistics for naturally occurring constituents. Each unit shall be separately monitored absent an approved demonstration per WDR Monitoring Specification G.5. The data analysis method for calculating concentration limits for naturally occurring COCs under this Order shall be the interwell Tolerance Limit Method at 95% confidence and 95% coverage based on background data or as otherwise proposed in the currently approved WQPS Report or separate technical report reference therein. Concentration limits for naturally occurring COCs shall be updated annually and included in the Annual Monitoring Report submitted under this MRP.

The landfill concentration limits for detection monitoring listed in MRP Attachment C are temporarily approved pending submission of the next updated WQPS Report per Section D.2.c below.

b. Corrective Action Monitoring

For wells in the corrective action program, the concentration limits represent cleanup levels to achieve background concentrations. The concentration limits for corrective action monitoring shall be the same as those for detection monitoring absent approval of a proposal for concentration limits greater than background (CLGBs) under Title 27 Section 20400(c) and revision of the WDRs. Time series plots and/or an intrawell statistical procedure (e.g., Mann-Kendall test) shall be used for trend analysis to monitor corrective action progress.

As noted in WDR Finding 51, the JTD included an August 2019 revised WQPS Report describing data analysis methods used for groundwater monitoring, including calculation of concentration limits

using the Interwell Tolerance Method referenced above. Interwell inorganic concentration limits would then be calculated and annually updated for each group using the Interwell Tolerance Method (using the mean parameter value plus three standard deviations for normally distributed parameters and using non-parametric tolerance limits for non-normally distributed parameters). According to the Discharger, this method produced the least amount of false-positive results, while at the same time identifying inorganic exceedances in site wells with recorded VOCs detections.

The concentration limits listed in MRP Attachment C are also temporarily approved for corrective action monitoring pending submission of the next updated WQPS Report per Section D.2.c below.

c. Updated WQPS Report

These WDRs require that, **beginning 1 January 2023 and annually thereafter for two years**, the Discharger submit a revised/updated WQPS Report to reflect the requirements of this Order, including, but not limited to, the need for further evaluation of grouping of background wells for pooling of background data and for separate detection/corrective action monitoring of LF-1 and LF-2 units until such time as expansion of LF-2 renders it infeasible to separately monitor the units.³ The revised/updated WQPS report shall also include concentration limits for the two surface impoundments at the site.

3. Retesting Procedures to Confirm Release

If monitoring results indicate measurably significant evidence of a release per Section I.45 of the SPRRs, the Discharger shall:

- a. For analytes that are detected in less than 10% of the background samples (such as non-naturally occurring constituents), the Discharger shall use the non-statistical retesting procedure required in Standard Monitoring Specification I.46 of the SPRRs.
- b. For analytes that are detected in 10% or greater of the background samples (naturally occurring constituents), the Discharger shall use

³ The Discharger shall use currently approved Concentration Limits for general minerals and inorganic constituents pending approval of the revised/updated WQPS Report submitted each year under this Order, and once approved, those under the revised/updated WQPS.

one of the statistical retesting procedures as required in Standard Monitoring Specification I.47 of the SPRRs.

4. Point of Compliance (POC)

For purposes of the WQPS, the POC of each WMU shall be the vertical surface located at the hydraulically down-gradient limit of the Unit that extends through the uppermost aquifer underlying the unit. Title 27 alternatively also allows for the Discharger to demonstrate that the Point of Compliance be located along the downgradient perimeter of contiguous units (or contiguous portions thereof) provided the requisite demonstration is made. It is anticipated that such demonstration will be made after expansion of LF-2 renders monitoring along the downgradient perimeter of LF-1 infeasible.

The following are the current landfill and surface impoundment points of compliance:

- LF-1: MWs-9, -10, and -11.
- LF-2, Cell 1: DL-20A, -21A, and -22A; MWs-18, and -19.
- LF-2, Cell 2: DL-26, and -27; MW-14, and -18.
- LF-2, Cell 3: Pan lysimeter beneath Cell 3; MWs-14, and -18.
- LF-2, Cell 4: Pan lysimeter beneath Cell 4; MWs-14, and -18
- LF-2, Cell 5: Pan lysimeter beneath Cell 5; MWs-13, and -25
- LF-2, Cell 6: Pan lysimeter beneath Cell 6; MWs-26, 27S & 29
- LF-3, Cell 1: DL-1 through DL-13 inclusive, and MW-16.
- LF-3, Cell 2: DL-28, -29, and -30; MW-16.
- LF-3, Cell 3: Pan lysimeter beneath Cell 3; MWs-16, and -19.
- LF-3, Cell 4: Pan lysimeter beneath Cell 4; MWs-16, and -19.
- SI-1: Subdrain system beneath SI-1; and MW-19.
- SI-2: DL-23, -24, and -25; and MW-18.

The points of compliance for future LF-2, Cell 7 and LF-3, Cell 5 will be the cell pan lysimeter and their closest downgradient monitor wells. See WDR Attachments E and F.

5. Monitoring Points

A monitoring point is a well, device, or location specified in the waste discharge requirements, which monitoring is conducted and at which the water quality protection standard applies. The monitoring points for each monitored medium are listed in Section B of this MRP.

a. Groundwater

The groundwater monitoring points for the landfill units shall be as listed in Table 1 and for the surface impoundments as listed in Table 2 herein.

b. Unsaturated Zone

The unsaturated zone monitoring points for the landfill and surface impoundment units shall be their lysimeters.

c. Surface Water

See Table 11 and Table 12.

6. Compliance Period

The compliance period for each WMU shall be the number of years equal to the active life of the unit plus the closure period. The compliance period is the minimum period during which the Discharger shall conduct a water quality monitoring program subsequent to a release from the WMU. The compliance period shall restart each time the Discharger initiates an evaluation monitoring program. (See Title 27, § 20410.)

ENFORCEMENT

If, in the opinion of the Executive Officer, the Discharger fails 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. The State Water Board must receive the petition by 5:00 p.m. 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 p.m. on the next business day. Copies of the [law and regulations](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) (http://www.waterboards.ca.gov/public_notices/petitions/water_quality) applicable to filing petitions are available on the Internet (at the address below) and will be provided upon request.

ATTACHMENTS

ATTACHMENT MRP-A—DETECT & CORRECTIVE ACTION
MONITORING PARAMETERS
ATTACHMENT MRP-B—FIVE-YEAR CONSTITUENTS OF CONCERN (COCS)
ATTACHMENT MRP-C—LANDFILL CONCENTRATION LIMITS

**ATTACHMENT MRP-A—DETECT & CORRECTIVE ACTION
MONITORING PARAMETERS**

Field Parameters

| Parameter | GeoTracker Code |
|------------------------------------|------------------------|
| Dissolved Oxygen | DO |
| Flow to Waters of U.S. | FLOW |
| Groundwater Elevation..... | GWELEV |
| Oxidation-Reduction Potential..... | REDOX |
| pH..... | PH |
| Specific Conductance..... | SC |
| Temperature..... | TEMP |
| Turbidity | TURB |

General Parameters

| Parameter / Analytical Method | GeoTracker Code |
|------------------------------------------------|------------------------|
| Chemical Oxygen Demand Method E410.4 | COD |
| Total Alkalinity Method SW2320B | ALKH |
| Total Dissolved Solids Method SM2540C | TDS |
| Total Hardness Method E130.2 | HARD |
| Total Organic Carbon Method SM5310B | TOC |

General Minerals—Major Anions

| Constituent / Analytical Method | GeoTracker Code |
|-----------------------------------------|------------------------|
| Bicarbonate Alkalinity Method E310.1 | BICACO3 |
| Chloride Method E300.0 | CL |
| Nitrate – Nitrogen Method E300.0 | NO3 |
| Sulfate Method E300.0 | SO4 |

General Minerals—Major Cations

| Constituent / Analytical Method | GeoTracker Code |
|----------------------------------------|------------------------|
| Calcium Method E200.7 | CA |
| Magnesium Method E200.7 | MG |
| Potassium Method E200.7 | K |
| Sodium Method E200.7 | NA |

Dissolved Inorganics—Short List

| Constituent / Analytical Method | GeoTracker Code |
|----------------------------------------|------------------------|
| Arsenic Method E200.8 | AS |
| Barium Method SW6010B | BA |
| Iron Method SW6010B | FE |
| Manganese Method SW6010B | MN |

Volatile Organic Compounds—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-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 (1,1 -Dichloroethene; Vinylidene chloride)..... | DCE11 |
| cis- 1,2-Dichloroethylene (cis- 1,2-Dichloroethene)..... | DCE12C |
| trans-1,2-Dichloroethylene (trans-1,2-Dichloroethene)..... | DCE12T |
| 1,2-Dichloropropane (Propylene dichloride) | DCPA12 |
| cis- 1,3-Dichloropropene | DCP13C |
| trans- 1,3-Dichloropropene..... | DCP13T |
| Di-isopropylether (DIPE) | DIPE |

| | |
|------------------------------------------------------------------|---------|
| Ethanol | ETHANOL |
| Ethyltertiary butyl ether..... | ETBE |
| Ethylbenzene | EBZ |
| 2-Hexanone (Methyl butyl ketone) | HXO2 |
| Hexachlorobutadiene | HCBU |
| Methyl bromide (Bromomethene)..... | BRME |
| Methyl chloride (Chloromethane) | CLME |
| Methylene bromide (Dibromomethane)..... | DBMA |
| Methylene chloride (Dichloromethane)..... | DCMA |
| Methyl ethyl ketone (MEK: 2-Butanone)..... | MEK |
| Methyl iodide (Iodomethane)..... | IME |
| Methyl t-butyl ether..... | MTBE |
| 4-Methyl-2-pentanone (Methyl isobutylketone) | MIBK |
| 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 MRP-B—FIVE-YEAR CONSTITUENTS OF CONCERN (COCS)

Dissolved Inorganics/Metals

| Parameter / Analytical Method | GeoTracker Code |
|--------------------------------------|------------------------|
| Aluminum (Method 6010) | AL |
| Antimony (Method 7041) | SB |
| Arsenic (Method E200.8) | AS |
| Barium (Method 6010) | BA |
| Beryllium (Method 6010) | BE |
| Cadmium (Method 7131A) | CD |
| Chromium, Hexavalent (Method 218.6) | CR6 |
| Chromium, Total (Method 6010) | CR |
| Cobalt (Method 6010) | CO |
| Copper (Method 6010) | CU |
| Cyanide (Method 9010C) | CN |
| Iron (Method 6010) | FE |
| Lead (Method 7421) | PB |
| Manganese (Method 6010) | MN |
| Mercury (Method 7470A) | HG |
| Nickel (Method 7521) | NI |
| Selenium (Method 7742) | SE |
| Silver (Method 6010) | AG |
| Sulfide (Method 9030B) | S |
| Thallium (Method 7841) | TL |
| Tin (Method 6010) | SN |
| Vanadium (Method 6010) | V |
| Zinc (Method 6010) | ZN |

Volatile Organic Compounds—USEPA Method 8260, Extended List

| Constituent | GeoTracker Code |
|------------------------------------------------------------------|------------------------|
| Acetone | ACE |
| Acetonitrile (Methyl cyanide) | ACCN |
| Acrolein | ACRL |
| Acrylonitrile | ACRAMD |
| Allyl chloride (3-Chloropropene) | CLPE3 |
| Benzene | BZ |
| Bromochloromethane (Chlorobromomethane) | BRCLME |
| Bromodichloromethane (Dibromochloromethane) | DBCME |
| Bromoform (Tribromomethane) | TBME |
| Carbon disulfide | CDS |
| Carbon tetrachloride | CTCL |
| Chlorobenzene | CLBZ |
| Chloroethane (Ethyl chloride) | CLEA |
| Chloroform (Trichloromethane) | TCLME |
| Chloroprene | CHLOROPRENE |
| Dibromochloromethane (Chlorodibromomethane) | DBCME |
| 1,2-Dibromo-3-chloropropane (DBCP) | DBCP |
| 1,2-Dibromoethane (Ethylene dibromide; EDB) | EDB |
| o-Dichlorobenzene (1,2-Dichlorobenzene) | DCBZ12 |
| m-Dichlorobenzene(1,3-Dichlorobenzene) | DCBZ13 |
| p-Dichlorobenzene (1,4-Dichlorobenzene) | DCBZ14 |
| trans- 1,4-Dichloro-2-butene | DCBE14T |
| Dichlorodifluoromethane (CFC 12) | FC12 |
| 1,1 -Dichloroethane (Ethylidene chloride) | DCA11 |
| 1,2-Dichloroethane (Ethylene dichloride) | DCA12 |
| 1,1 -Dichloroethylene (1, I-Dichloroethene; Vinylidene chloride) | DCE11 |
| cis- I ,2-Dichloroethylene (cis- 1,2-Dichloroethene) | DCE12C |
| trans- I ,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..... | DGP11 |
| cis- 1,3-Dichloropropene | DGP13C |
| trans- 1,3-Dichloropropene..... | DGP13T |
| Di-isopropylether (DIPE) | DIPE |
| Ethanol..... | ETHANOL |
| Ethyltertiary butyl ether..... | ETBE |
| Ethylbenzene | EBZ |
| Ethyl methacrylate..... | EMETHACRY |
| Hexachlorobutadiene | HCBU |
| 2-Hexanone (Methyl butyl ketone) | HXO2 |
| Isobutyl alcohol | ISOBTOH |
| Methacrylonitrile | METHACRN |
| Methyl bromide (Bromomethane)..... | BRME |
| Methyl chloride (Chloromethane) | CLME |
| Methyl ethyl ketone (MEK; 2-Butanone)..... | MEK |
| Methyl iodide (Iodomethane)..... | IME |
| Methyl t-butyl ether..... | MTBE |
| Methyl methacrylate | MMTHACRY |
| 4-Methyl-2-pentanone (Methyl isobutyl ketone) | MIBK |
| Methylene bromide (Dibromomethane)..... | DBMA |
| Methylene chloride (Dichloromethane)..... | DCMA |
| Naphthalene..... | NAPH |
| Propionitrile (Ethyl cyanide)..... | PACN |
| Styrene..... | STY |
| Tertiary amyl methyl ether | TAME |
| Tertiary butyl alcohol | TBA |
| 1,1,1,2-Tetrachloroethane | TC1112 |

| | |
|-----------------------------------------------------------------------|---------|
| 1,1,2,2-Tetrachloroethane | PCA |
| Tetrachloroethylene (Tetrachloroethene; Perchloroethylene; PCE) | PCE |
| Toluene | BZME |
| 1,2,4-Trichlorobenzene | TCB124 |
| 1,1,1 -Trichloroethane (Methylchloroform) | TCA111 |
| 1,1,2-Trichloroethane | TCA112 |
| Trichloroethylene (Trichloroethene; TCE) | TCE |
| Trichlorofluoromethane (CFC-11) | FC11 |
| 1,2,3-Trichloropropane | TCPR123 |
| Vinyl acetate..... | VA |
| Vinyl chloride (Chloroethene)..... | VC |
| Xylene (total)..... | XYLENES |

**Semi-Volatile Organic Compounds—USEPA Methods 8270C or 8270D
 (Base, Neutral & Acid Extractables)**

| Constituent | GeoTracker Code |
|------------------------------------------|------------------------|
| Acenaphthene | ACNP |
| Acenaphthylene | ACNPY |
| Acetophenone | ACPHN |
| 2 Acetylaminofluorene (2 AAF) | ACAMFL2 |
| Aldrin | ALDRIN |
| 4 Aminobiphenyl..... | AMINOBP4 |
| Anthracene..... | ANTH |
| Benzo[a]anthracene (Benzanthracene)..... | BZAA |
| Benzo[b]fluoranthene | BZBF |
| Benzo[k]fluoranthene | BZKF |
| Benzo[g,h,i]perylene..... | BZGHIP |
| Benzo[a]pyrene | BZAP |
| Benzyl alcohol | BZLAL |
| Bis(2 ethylhexyl) phthalate | BIS2EHP |
| alpha BHC..... | BHCALPHA |

| | |
|------------------------------------------------------------------------|-----------|
| beta BHC..... | BHCBETA |
| delta BHC..... | BHCDELTA |
| gamma BHC (Lindane)..... | BHCGAMMA |
| Bis(2 chloroethoxy) methane..... | BECEM |
| Bis(2 chloroethyl) ether (Dichloroethyl ether) | BIS2CEE |
| Bis(2 chloro 1 methylethyl) ether (Bis(2 chloroisopropyl) ether) | BIS2CIE |
| 4 Bromophenyl phenyl ether | BPPE4 |
| Butyl benzyl phthalate (Benzyl butyl phthalate)..... | BBP |
| Chlordane..... | CHLORDANE |
| p Chloroaniline | CLANIL4 |
| Chlorobenzilate | CLBZLATE |
| p Chloro m cresol (4 Chloro 3 methylphenol)..... | C4M3PH |
| 2 Chloronaphthalene..... | CNPH2 |
| 2 Chlorophenol..... | CLPH2 |
| 4 Chlorophenyl phenyl ether | CPPE4 |
| Chrysene..... | CHRYSENE |
| o Cresol (2 methylphenol) | MEPH2 |
| m Cresol (3 methylphenol) | MEPH3 |
| p Cresol (4 methylphenol) | MEPH4 |
| 4,4' DDD..... | DDD44 |
| 4,4' DDE..... | DDE44 |
| 4,4' DDT | DDT44 |
| Diallate | DIALLATE |
| Dibenz[a,h]anthracene | DBAHA |
| Dibenzofuran..... | DBF |
| Di n butyl phthalate | DNBP |
| 3,3' Dichlorobenzidine | DBZD33 |
| 2,4 Dichlorophenol | DCP24 |
| 2,6 Dichlorophenol | DCP26 |
| Dieldrin..... | DIELDRIN |

| | |
|---------------------------------------------------------|-------------|
| Diethyl phthalate | DEPH |
| p (Dimethylamino) azobenzene..... | PDMAABZ |
| 7,12 Dimethylbenz[a]anthracene..... | DMBZA712 |
| 3,3' Dimethylbenzidine | DMBZD33 |
| 2,4 Dimehtylphenol (m Xylenol) | DMP24 |
| Dimethyl phthalate..... | DMPH |
| m Dinitrobenzene | DNB13 |
| 4,6 Dinitro o cresol (4,6 Dinitro 2 methylphenol) | DN46M |
| 2,4 Dinitrophenol | DNP24 |
| 2,4 Dinitrotoluene | DNT24 |
| 2,6 Dinitrotoluene | DNT26 |
| Di n octyl phthalate..... | DNOP |
| Diphenylamine | DPA |
| Endosulfan I | ENDOSULFANA |
| Endosulfan II | ENDOSULFANB |
| Endosulfan sulfate..... | ENDOSULFANS |
| Endrin..... | ENDRIN |
| Endrin aldehyde | ENDRINALD |
| Ethyl methanesulfonate..... | EMSULFN |
| Famphur..... | FAMPHUR |
| Fluoranthene | FLA |
| Fluorene | FL |
| Heptachlor..... | HEPTACHLOR |
| Heptachlor epoxide | HEPT-EPOX |
| Hexachlorobenzene | HCLBZ |
| Hexachlorocyclopentadiene | HCCP |
| Hexachloroethane | HCLEA |
| Hexachloropropene | HCPR |
| Indeno(1,2,3 c,d) pyrene | INP123 |
| Isodrin | ISODRIN |

| | |
|----------------------------------------------------------------------------------|------------|
| Isophorone | ISOP |
| Isosafrole..... | ISOSAFR |
| Kepone..... | KEP |
| Methapyrilene..... | MTPYRLN |
| Methoxychlor..... | MTXYCL |
| 3 Methylcholanthrene | MECHLAN3 |
| Methyl methanesulfonate | MMSULFN |
| 2 Methylnaphthalene | MTNPH2 |
| 1,4 Naphthoquinone | NAPHQ14 |
| 1 Naphthylamine | AMINONAPH1 |
| 2 Naphthylamine | AMINONAPH2 |
| o Nitroaniline (2 Nitroaniline)..... | NO2ANIL2 |
| m Nitroaniline (3 Nitroaniline)..... | NO2ANIL3 |
| p Nitroaniline (4 Nitroaniline)..... | NO2ANIL4 |
| Nitrobenzene..... | NO2BZ |
| o Nitrophenol (2 Nitrophenol)..... | NTPH2 |
| p Nitrophenol (4 Nitrophenol)..... | NTPH4 |
| N Nitrosodi n butylamine (Di n butylNitrosamine) | NNSBU |
| N Nitrosodiethylamine (DiethylNitrosamine) | NNSE |
| N Nitrosodimethylamine (DimethylNitrosamine) | NNSM |
| N Nitrosodiphenylamine (DiphenylNitrosamine) | NNSPH |
| N Nitrosodipropylamine (N Nitroso N dipropylamine; Di n propylNitrosamine) | NNSPR |
| N Nitrosomethylethylamine (MethylethylNitrosamine)..... | NNSME |
| N Nitrosopiperidine..... | NNSPPRD |
| N Nitrosospyrrolidine | NNSPYRL |
| 5 Nitro o toluidine | TLDNONT5 |
| Pentachlorobenzene | PECLBZ |
| Pentachloronitrobenzene (PCNB)..... | PECLNO2BZ |
| Pentachlorophenol | PCP |
| Phenacetin | PHNACTN |

| | |
|-------------------------------------------------|----------|
| Phenanthrene..... | PHAN |
| Phenol..... | PHENOL |
| p Phenylenediamine..... | ANLNAM4 |
| Polychlorinated biphenyls (PCBs; Aroclors)..... | PCBS |
| Pronamide..... | PRONAMD |
| Pyrene..... | PYR |
| Safrole..... | SAFROLE |
| 1,2,4,5 Tetrachlorobenzene..... | C4BZ1245 |
| 2,3,4,6 Tetrachlorophenol..... | TCP2346 |
| o Toluidine..... | TLDNO |
| Toxaphene..... | TOXAP |
| 2,4,5 Trichlorophenol..... | TCP245 |
| 0,0,0 Triethyl phosphorothioate..... | TEPTH |
| sym Trinitrobenzene..... | TNB135 |

Chlorophenoxy Herbicides, USEPA Method 8151A

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

Organophosphorus Compounds, USEPA Method 8141B

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

ATTACHMENT MRP-C—LANDFILL CONCENTRATION LIMITS

| Constituent Group | Constituent | Units | Landfill WMU | Landfill WMU | Landfill WMU |
|---------------------------|-------------------------------------|----------------------|-------------------|--------------|--------------|
| | | | LF-1, LF-1 & 2 | LF-2 | LF-3 |
| Field Parameters | Dissolved Oxygen | | -- | -- | -- |
| | Flow to Waters of U.S. | Yes or No | n/a | n/a | n/a |
| | Groundwater Elevation | Ft. & 100ths, M.S.L. | n/a | n/a | n/a |
| | Oxidation-Reduction Potential (ORP) | mV | -- | -- | -- |
| | pH | pH Units | [6.57-8.18] | -- | [6.55-8.47] |
| | Specific Conductance (SC) | µmhos/cm | 2634 | -- | 2016 |
| | Temperature | °F | n/a | n/a | n/a |
| | Turbidity | Turbidity Units | -- | -- | -- |
| General Parameters | Alkalinity, Total | mg/L | -- | -- | -- |
| | Carbonate | mg/L | 5.3 | -- | 5.1 |
| | Total Dissolved Solids (TDS) | mg/L | 1100 | -- | 920 |
| | Total Organic Carbon (TOC) | mg/L | 2.1 | -- | 1.1 |

| Constituent Group | Constituent | Units | Landfill WMU | Landfill WMU | Landfill WMU |
|--------------------------------------------|--------------------|-------|-------------------|--------------|--------------|
| | | | LF-1, LF-1 & 2 | LF-2 | LF-3 |
| General Minerals- Major Anions | Bicarbonate | mg/L | 410 | -- | 390 |
| | Chloride | mg/L | 170 | -- | 190 |
| | Nitrate - Nitrogen | mg/L | -- | -- | -- |
| | Sulfate | mg/L | 190 | -- | 71 |
| General Minerals- Major Cations | Calcium | mg/L | 57/43 | -- | 57/43 |
| | Magnesium | mg/L | 38/37 | -- | 38/37 |
| | Potassium | mg/L | 17/21 | -- | 17/21 |
| | Sodium | mg/L | 220/260 | -- | 220/260 |
| Dissolved Inorganics/ Metals | Aluminum | µg/L | PQL (50) | PQL (50) | PQL (50) |
| | Antimony | µg/L | PQL (2.0) | PQL (2.0) | PQL (2.0) |
| | Arsenic | µg/L | 7.9 | -- | 9 |
| | Barium | µg/L | 150 | -- | 420 |
| | Beryllium | µg/L | PQL (10) | PQL (10) | PQL (10) |
| | Cadmium | µg/L | PQL (1.0) | PQL (1.0) | PQL (1.0) |
| | Chromium | µg/L | PQL (10) | PQL (10) | PQL (10) |
| | Chromium VI+ | µg/L | -- | -- | -- |
| | Cobalt | µg/L | PQL (50) | PQL (50) | PQL (50) |
| | Copper | µg/L | PQL (10) | PQL (10) | PQL (10) |
| | Iron | µg/L | 120 | -- | 66 |
| | Lead | µg/L | PQL (1.0) | PQL (1.0) | PQL (1.0) |
| | Manganese | µg/L | PQL (10) | PQL (10) | PQL (10) |
| | Mercury | µg/L | PQL (0.2) | PQL (0.2) | PQL (0.2) |
| | Nickel | µg/L | PQL (2.0) | PQL (2.0) | 3.7 |
| Selenium | µg/L | 4.9 | -- | 8.6 | |

| Constituent Group | Constituent | Units | Landfill WMU | Landfill WMU | Landfill WMU |
|-------------------|-------------|-------|-------------------|--------------|--------------|
| | | | LF-1, LF-1 & 2 | LF-2 | LF-3 |
| | Silver | µg/L | PQL (10) | PQL (10) | PQL (10) |
| | Sulfide | µg/L | PQL (0.1) | PQL (0.1) | PQL (0.1) |
| | Thallium | µg/L | PQL (1.0) | PQL (1.0) | PQL (1.0) |
| | Tin | µg/L | PQL (50) | PQL (50) | PQL (50) |

Attachment C Notes:

1. The CLs separate monitoring of LF-1 and contiguous monitoring of LF-1 and LF-2. 1 and LF-2 should be the same.
2. Separate CLs required for LF-2 absent approved demonstration of infeasibility per WDR Monitoring Specification G.5. CLs for contiguous monitoring of LF-1 & LF-2 required before and after this demonstration.
3. CLs required for entries shown as “---”.
4. CLs not required for entries shown as “n/a” (not applicable).
5. CLs also required for both Class II surface impoundments.