

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2015-XXXX
FOR
RECOLOGY YUBA-SUTTER, AND FEATHER RIVER ORGANICS
RECOLOGY YUBA-SUTTER LANDFILL
CLASS III LANDFILL AND COMPOSTING FACILITY
OPERATION, POST-CLOSURE MAINTENANCE, AND CORRECTIVE ACTION
YUBA COUNTY

This Monitoring and Reporting Program (MRP) are issued jointly to Recology Yuba-Sutter (RYS) and Feather River Organics (FRO) for the Class III landfill facility and composting facility. Recology Yuba Sutter is the owner/operator of the closed municipal solid waste Class III landfill. RYS is the operator of the closed municipal solid waste Class III landfill, a material recycling facility (MRF), an administration office, and an equipment maintenance area. FRO is the operator of the composting facility and green waste processing area on the cover of RYS unlined landfill waste management unit (WMU) LF -1. RYS and FRO are hereinafter referred to jointly as the "Discharger" as defined in California Code of Regulations, title 27 (Title 27), section 20164 and are jointly responsible for compliance with this MRP.

This MRP is issued pursuant to California Water Code section 13267 and incorporates requirements for groundwater, surface water, and unsaturated zone monitoring and reporting; facility monitoring, maintenance, and reporting; and financial assurances reporting contained in California Code of Regulations, title 27, section 20005, et seq. (hereafter Title 27), Waste Discharge Requirements (WDRs) Order R5-2015-XXXX, and the Standard Provisions and Reporting Requirements (SPRRs) dated January 2012. Compliance with this MRP is ordered by the WDRs and the Discharger shall not implement any changes to this MRP unless a revised MRP is issued by the Central Valley Water Board or the Executive Officer.

A. MONITORING

The Discharger shall comply with the monitoring program provisions of Title 27 for groundwater, surface water, and the unsaturated zone in accordance with Standard Monitoring Specifications in Section I of the SPRRs and the Monitoring Specifications in Section G of the WDRs. All monitoring shall be conducted in accordance with the most current approved *Sample Collection and Analysis Plan (SAP)*, which includes quality assurance/quality control standards. The most current SAP was submitted in November 2013. WDRs Order R5-2015-XXXX in Provisions H.7 requires the Discharger to submit a revised SAP.

All compliance monitoring wells established for the monitoring program shall constitute the monitoring points for the groundwater Water Quality Protection Standard. All monitoring program groundwater monitoring wells, unsaturated zone monitoring devices, leachate, and surface water monitoring points shall be sampled and analyzed for monitoring parameters and constituents of concern (COCs) as indicated and listed in Tables I through XI.

The Discharger may use alternative analytical test methods, including new or updated USEPA approved methods, provided the methods have method detection limits equal to or lower than the analytical methods specified in this Monitoring and Reporting Program, and are identified in the approved Sample Collection and Analysis Plan.

The monitoring program of this MRP includes:

<u>Section</u>	<u>Monitoring Program</u>
A.1	Groundwater Monitoring
A.2	Unsaturated Zone Monitoring
A.3	Leachate Monitoring, Seep Monitoring, and LCRS Testing
A.4	Surface Water Monitoring
A.5	Facility Monitoring
A.6	Compost Operations Monitoring
A.7	Corrective Action Monitoring

1. Groundwater Monitoring

The Discharger shall operate and maintain a groundwater monitoring system that complies with the applicable provisions of Title 27, Subchapter 3 “Water Monitoring”. The monitoring system shall be certified by a California-licensed professional civil engineer or geologist as meeting the requirements of Title 27. The current groundwater monitoring system **does not meet** the applicable requirements of Title 27 regarding providing sufficient number of monitoring points and background monitoring points installed at appropriate locations and depths to provide the best assurance of the earliest possible detection of a release from a WMU. These deficiencies are being addressed in Provisions Section H of WDRs R5-2015-XXXX,

The current groundwater monitoring network shall consist of the following:

<u>Well</u>	<u>Status</u>	<u>Units Being Monitored</u>
MW-1R	Corrective Action	LF-1
MW-2R	Corrective Action	LF-1
MW-3	Corrective Action	LF-2
MW-4	Corrective Action	LF-2
MW-5	Background	LF-1, LF-2, LF-3
MW-6	Background	LF-1, LF-2, LF-3
MW-7	Background	LF-1, LF-2, LF-3
MW-8	Corrective Action	LF-3
MW-9	Detection	LF-3
MW-10	Corrective Action	LF-1
MW-11	Corrective Action	LF-3
MW-12	Corrective Action	LF-3
MW-13	Detection	LF-3

<u>Well</u>	<u>Status</u>	<u>Units Being Monitored</u>
PZ-14	Piezometer	Groundwater elevation
MW-15	Corrective Action	LF-1

Groundwater samples shall be collected from the background wells, detection monitoring wells, corrective action monitoring wells, and any additional wells added as part of the approved groundwater monitoring system. The collected samples shall be analyzed for the parameters and constituents listed in Table I in accordance with the specified methods and frequencies. The Discharger shall collect, preserve, and transport groundwater samples in accordance with the approved Sample Collection and Analysis Plan.

Four times per year, the Discharger shall measure the groundwater elevation in each well, determine groundwater flow direction, and estimate groundwater flow rates in the uppermost aquifer and in any zones of perched water and in any additional portions of the zone of saturation monitored. The results shall be reported semiannually, including the times of expected highest and lowest elevations of the water levels in the wells, pursuant to Title 27, section 20415(e)(15). All groundwater monitoring points shall be used in determining groundwater flow direction. All groundwater elevations shall be reported using only one common datum e.g. NGVD29 or NAVD88 for the entire network.

Samples collected for the COC monitoring specified in Table I shall be collected and analyzed in accordance with the methods listed in Table VI every five years. Five-year COCs were last monitored in December 2011 and shall be monitored again in **May 2016**. The results shall be reported in the Annual Monitoring Report for the year in which the samples were collected.

2. Unsaturated Zone Monitoring

The Discharger shall operate and maintain an unsaturated zone monitoring system that complies with the applicable provisions of Title 27, Subchapter 3 “Water Monitoring”. The current unsaturated zone monitoring system **does not meet** the applicable requirements of Title 27. As described in the findings in WDRs R5-2015-XXXX the Discharger does not currently monitor the unsaturated zone below LF-1, LF-2, and LF-3 for releases of leachate or landfill gas. The Discharger operates perimeter LFG probes adjacent to the WMUs as required by CalRecycle which currently act as a proxy for the unsaturated zone detection system.

The perimeter LFG probes currently operating as an unsaturated zone monitoring network consists of:

<u>Mon Pt.</u>	<u>Status</u>	<u>Units Being Monitored</u>
GP-1	Detection, Soil-Pore Gas	LF-3
GP-2	Detection, Soil-Pore Gas	LF-3
GP-3	Detection, Soil-Pore Gas	LF-3
GP-4	Detection, Soil-Pore Gas	LF-3

<u>Mon Pt.</u>	<u>Status</u>	<u>Units Being Monitored</u>
GP-5	Detection, Soil-Pore Gas	Not Applicable
GP-6	Corrective Action, Soil-Pore Gas	LF-1
GP-7	Corrective Action, Soil-Pore Gas	LF-1
GP-8	Corrective Action, Soil-Pore Gas	LF-1
GP-9	Detection, Soil-Pore Gas	Not Applicable
GP-10	Detection, Soil-Pore Gas	LF-3
GP-11	Detection, Soil-Pore Gas	LF-3
GP-12	Detection, Soil-Pore Gas	LF-2
GP-13	Corrective Action, Soil-Pore Gas	LF-2
GP-14	Corrective Action, Soil-Pore Gas	LF-1
GP-15	Corrective Action, Soil-Pore Gas	LF-1

Unsaturated zone samples shall be collected from the monitoring network listed above and shall be analyzed for the parameters and constituents listed in Table II in accordance with the specified methods and frequencies.

The Discharger shall collect, preserve, and transport samples in accordance with the quality assurance/quality control standards contained in the most current approved Sample Collection and Analysis Plan.

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.

3. Leachate Monitoring, Seep Monitoring, and Annual LCRS Testing

Leachate Monitoring: The Discharger shall operate and maintain leachate collection and removal system (LCRS) sumps, conduct monitoring of any detected leachate seeps, and conduct annual testing of each LCRS in accordance with Title 27 and this monitoring program.

The current LCRS leachate sump monitoring points are:

<u>Mon Pt.</u>	<u>Unit Where Sump is Located</u>
S-1	LF-2
S-2	LF-3
S-3	LF-3
S-4	LF-3
S-5	LF-3

All LCRS sumps shall be inspected monthly for the presence of leachate, and flow shall be recorded in accordance with Table III. If leachate is detected in a previously dry sump, the Discharger shall verbally notify Central Valley Water Board staff within **seven days** and shall immediately sample and test the leachate for Field and Monitoring Parameters listed in Table III. Leachate in the LCRS sump shall then be sampled for all parameters and constituents in accordance with the frequencies listed in Table III whenever liquid are present. All LCRS sump samples shall be analyzed for the 5-year COCs specified in Table III every five years, beginning again in **May 2016**.

Seep Monitoring: Leachate that seeps to the surface from a landfill unit shall be sampled and analyzed for the Field and Monitoring Parameters listed in Table III upon detection. The quantity of leachate shall be estimated and reported as Leachate Flow Rate (in gallons/day). Reporting for leachate seeps shall be conducted as required in Section B.3 of this MRP, below.

Annual LCRS Testing: All LCRSs (e.g. LCRS in LF-2 and LF-3) shall be tested annually pursuant to Title 27, section 20340(d) to demonstrate proper operation. The results of these tests shall be reported to the Central Valley Water Board in the Annual Monitoring Report and shall include comparisons with earlier tests made under comparable conditions.

4. Surface Water Monitoring

The Discharger shall operate a surface water detection monitoring system for any landfill facility where runoff from landfill areas flows or could flow to waters of the United States. The monitoring system shall comply with the applicable provisions of Title 27, Subchapter 3 "Water Monitoring". At the Recology Yuba-Sutter Landfill, runoff from landfill areas flows to a drainage course that discharges to the Yuba River. The current surface water detection monitoring system **meets** the applicable requirements of Title 27.

The current surface water monitoring points for the landfill are:

<u>Mon Pt.</u>	<u>Status</u>
SW-5	Background or Upstream
SW-4	Downstream of LF-3
SW-3	Downstream of LF-2 and LF-3 before entering storm water detention ponds
SW-2	Downstream of LF-1, LF-2, and LF-3

For surface water detection monitoring, a sample shall be collected at each monitoring point location and analyzed for the monitoring parameters and constituents in accordance with the methods and frequency specified in Table IV. All surface water monitoring samples shall be collected and analyzed for the 5-year COCs specified in Table IV every five years, beginning again in **2016**. The Discharger shall report the Global Positioning System (GPS) location where each surface water monitoring point

was sampled for each sampling event in the semiannual monitoring report section B.1. The location of surface water sampling during each sampling event shall be in close proximity to the previous sampling event.

5. Facility Monitoring

a. Annual Facility Inspection

Annually, prior to the anticipated rainy season, but no later than **30 September**, the Discharger shall conduct an inspection of the facility. The inspection shall assess repair and maintenance needed for drainage control systems, cover systems, and groundwater monitoring wells; and shall assess preparedness for winter conditions (including but not limited to erosion and sedimentation control). All drainage facilities located beneath the ground surface of LF-1 shall be inspected with a video survey. The Discharger shall take photos of any problems areas before and after repairs. Any necessary construction, maintenance, or repairs shall be completed by **15 October**. The Discharger shall perform Operations and Maintenance of the Southern Area of WMU LF-1 in accordance with the most recent approved Southern Area O&M Plan currently dated January 2014. Annual facility inspection reporting shall be submitted as required in Section B.4 of this MRP.

b. Major Storm Events

The Discharger shall inspect all precipitation, diversion, and drainage facilities and all landfill side slopes for damage **within 7 days** following major storm events capable of causing damage or significant erosion. The Discharger shall take photos of any problems areas before and after repairs. Necessary repairs shall be completed **within 30 days** of the inspection. If it is not feasible for the Discharger to complete final repairs within 30 days, the Discharger shall complete temporary repairs to control the damage and limit additional damage and erosion until the final repairs are completed. Additionally, the Discharger shall submit a report documenting the temporary repairs and providing a schedule for completion of the final repairs **within 30 days** of the inspection. The Discharger shall report any damage and subsequent repairs **within 45 days** of completion of the repairs, including photographs of the problem and the repairs. Notification and reporting requirements for major storm events shall be conducted as required in Section B.5 of this MRP.

c. Five-Year Iso-Settlement Survey for Closed Units

For all closed landfill units, the Discharger shall conduct a five-year iso-settlement survey 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, section 21090(e)(1 & 2)]. Reporting shall be in accordance with Section B.6 of this MRP. The next iso-settlement survey shall be conducted in **May 2017**.

d. Biennial Leak Test of Closure Covers

For closed landfill units, the Discharger shall conduct a survey and submit a leak test for each closed area of the landfill every 2-years pursuant to Title 27, section 21090(a)(4)(A). For each portion of the landfill, the Discharger shall provide a map showing the result of the leak test e.g. where any leaks were discovered, the extent to the leak, and the corrective action with a time schedule when the repair will be completed. Reporting shall be in accordance with Section B.7 of this MRP. The next leak test shall be conducted in **May 2016**.

e. Standard Observations

The Discharger shall conduct Standard observations at the landfill in accordance with this section of the MRP. Standard observations shall be conducted in accordance with the following schedule:

<u>Landfill Unit Type</u>	<u>Frequency</u>	<u>Season</u>
Inactive/Closed	Monthly	Wet: 15 October to 15 May
Inactive/Closed	Quarterly	Dry: 16 May to 14 October

The Standard Observations shall include:

- 1) For the landfill units:
 - a) Evidence of ponded water at any point on the landfill outside of any contact storm water diversions structures on the active face (show affected area on map); and
 - b) Evidence of erosion and/or of day-lighted refuse.
- 2) Along the perimeter of the landfill units:
 - a) Evidence of leachate seeps, estimated size of affected area, and flow rate (show affected area on map); and
- 3) Evidence of erosion and/or of day-lighted refuse.
- 4) For Southern Area of LF-1:
 - a) Paved and Unpaved Areas shall be inspected quarterly in accordance with the Southern Area of LF-1 O&M Plan currently dated January 2014 and repaired by 1 October according to the approved Southern Area of LF-1 O&M Plan currently dated January 2014; and
 - b) Subsurface pipelines video survey shall be inspected annually in accordance with the Southern Area of LF-1 O&M Plan currently dated January 2014 and repaired by 1 October according to the approved

Southern Area of LF-1 O&M Plan currently dated January 2014. The subsurface pipeline video survey shall also include all subsurface pipelines that convey storm water from building rooftops;

- c) Catch Basins shall be inspected monthly between 15 October and 15 May and during inclement (rainy) weather as well as once by 31 July in accordance with the Southern Area of LF-1 O&M Plan currently dated January 2014 and cleaned/repared immediately during the first available dry weather period according to the approved Southern Area of LF-1 O&M Plan currently dated January 2014;
 - d) All pressurized water supply lines installed within the cover over LF-1 shall be inspected and maintained annually to ensure no leakage of liquids is occurring; and
 - e) All air conditioning units and swamp cooler's discharges of condensate shall be inspected monthly to determine if the discharge is contacting the closure cover. The discharge from air conditioning units and swamp coolers to the closure cover of LF-1 is prohibited.
- 5) For receiving waters:
- a) Floating and suspended materials of waste origin - presence or absence, source, and size of affected area; and
 - b) Discoloration and turbidity - description of color, source, and size of affected area.

Results of Standard Observations shall be submitted in the semiannual monitoring reports required in Section B.1 of this MRP.

6. Compost Operations Monitoring

The compost operations monitoring of this MRP includes:

<u>Section</u>	<u>Monitoring Program</u>
a.	Compost Pad Thickness and Drainage Controls Monitoring
b.	Compost Tank and Sump Monitoring
c.	Compost Wastewater Discharge Monitoring
d.	Compost Facilities Monitoring
e.	Compost Wastewater Characterization Monitoring
f.	Response to a Release

Compost wastewater is liquids such as storm water or liquids used in the composting process that that comes in contact with the compost material to produce a leachate.

a. Compost Pad Thickness and Drainage Controls

The Discharger shall include in the Compost Facility Annual Monitoring and Maintenance Report as required in Section B.8 of this MRP a description of any exposed compost pad thickness control monuments or drainage control failures and repairs required to make the drainage controls functional. The Discharger shall report the volume of material placed back onto the pad to restore grade and prepare an isopach map showing the thickness of remaining material as well as areas that need repair. The Discharger shall complete repairs within 30 days of discovery of any exposed compost pad thickness monuments.

The Discharger shall monitor the compost pad thickness at each control monument according to the schedule in **Table VII**. Currently there are 24 monuments located on the compost pad as shown on Attachment E.

b. Storage Tank and Sump Monitoring

The storage tanks and sumps shall be monitored monthly during dry weather conditions and daily during rainfall events. The Discharger shall monitor the remaining capacity of the storage tanks and compost wastewater sumps (measured in **percent remaining**), and monitor for freeboard (measured in **0.5 feet**) in open-ended containment systems.

The Discharger shall inspect the facility on a daily basis during rain events to determine whether pumps are operational and appropriately sized, discharge lines are properly connected and not leaking, and that excess sediment has been removed from sumps. The results of each inspection shall be submitted with the Compost Facility Annual Monitoring and Maintenance Report as required in Section B.8 of this MRP. Storage tanks and sumps shall be placed on a Facility Site Map and properly numbered for reference. Tank and sump monitoring shall be conducted monthly during dry weather conditions and daily during rainfall events, and reported semiannually, in accordance with **Table VIII**.

c. Compost Wastewater Discharge Monitoring

The Discharger must monitor flows throughout the system. The Discharger shall install and monitor flow meters on the effluent discharge lines of the storage tanks including the discharge pipe upstream of the on-site POTW discharge point. Other discharge points requiring flow monitoring, include the two J-Stands located north and south of the compost area. If compost wastewater is trucked off-site, then the trucks must be filled from the J-Stands. All flow meters shall be calibrated annually, properly numbered, and referenced on the Facility Site Map.

Monitoring shall be conducted monthly during dry weather conditions and daily during rainfall events, and reported semiannually, in accordance with **Table IX**. The monitoring results shall be submitted with the Compost Facility Annual Monitoring and Maintenance Report as required in Section B.8 of this MRP.

d. Compost Facilities Monitoring

1) Quarterly Compost Operations Inspection

Perform quarterly inspections of the working surfaces, berms, ditches, facility perimeter, erosion controls, and any other operational surfaces identified in this Order. The Discharger shall include the following observations in the Compost Facility Annual Monitoring and Maintenance Report as required in Section B.8 of this MRP:

- a) Date and time of inspections, along with the name of the inspector;
- b) Evidence of areas of deficiency such as cracking or subsidence in the working surfaces;
- c) Evidence of ponding over the working surfaces and within ditches (show affected area on a map);
- d) Effectiveness of erosion controls;
- e) Maintenance activities associated with, but not limited to, the working surfaces, berms, ditches, and erosion controls;
- f) Evidence of any compost wastewater leaving the compost facility, estimated size of affected area, and estimated flow rate (show affected area on a map);
- g) Integrity of drainage systems during the wet season (15 October through 15 May); and
- h) Photographs of observed and corrected deficiencies.

2) Quarterly Compost Wastewater Management System Inspection

Perform quarterly inspections of the compost wastewater management system and submit the following observations and records in the Compost Facility Annual Monitoring and Maintenance Report as required in Section B.8 of this MRP:

- a) Date and time of inspections along with name of inspector;
- b) The overall condition of the compost wastewater management system (i.e. sumps, wastewater conveyance pipes/hoses, storage tank construction, municipal wastewater connection points);

- c) The available capacity within storage systems and the current volume of compost wastewater (gallons) or solids (cubic yards) contained;
- d) Presence of odors from the compost wastewater management system – characterization, source, and distance from source;
- e) Volume of compost wastewater reused on-site; and
- f) Volume of compost wastewater disposed at an off-site treatment system and name and location of the wastewater treatment facility.

3) Annual Compost Facility Inspection

Perform annual inspection of the facility to confirm that all containment structures are prepared for the pending wet season. The Discharger shall conduct an annual inspection prior to the anticipated wet season, but no later than 15 August and complete any necessary construction, maintenance, or repairs by **30 September**. The Discharger shall include the following in the Compost Facility Annual Monitoring and Maintenance Report as required in Section B.8 of this MRP:

- a) The observation date and time of the inspection, along with the name of the inspector
- b) The type of deficiency/non-compliance observed;
- c) The cause for the deficiency/noncompliance;
- d) Map showing the area of deficiency/noncompliance;
- e) The corrective actions undertaken, or planned to resolve the deficiency/non-compliance, including the date and time of repairs;
- f) The measures undertaken by the Discharger to prevent the recurrence of the observed deficiency/noncompliance; and
- g) Photographs of the observed deficiencies/noncompliance with corresponding location on the map

4) Annual Compost Pad Inspection

Annually, prior to the anticipated rainy season, but no later than **15 August**, the Discharger shall conduct an inspection of the compost pad for the following items: verify that operations are conducted within the compost pad, verify the thickness of the compost pad is a minimum of six inches as determined by the monuments, verify the compost pad is free of significant cracks and has a 3% slope to maintain positive drainage, verify all perimeter low permeable berms are intact and no breaches have developed, verify inlets to drainage pipes and header pipes are clear and free of obstructions, and that discharge pumps, float switches, and discharge lines are operational. The inspection shall assess capacity of storage tanks and

sumps and identify any maintenance needed for the compost pad including the underlying final cover of LF-1. The Discharger shall take photos of any problems areas before and after repairs. Any necessary construction, maintenance, or repairs shall be completed by **30 September**. Annual facility inspection reporting shall be submitted as required in the Compost Facility Annual Monitoring and Maintenance Report as required in Section B.8 of this MRP.

5) Soil Moisture Monitoring

The Discharger shall monitor soil moisture conditions beneath the low permeable compost pad to determine if liquids from the compost pad are percolating through the cover of LF-1. The Discharger shall collect soil moisture measurements using soil moisture probes installed to comply with this MRP. Each soil moisture instrument cluster shall be properly identified on the Facility Site Map. Currently there are 5 soil moisture probes (SM-1 through SM-5) installed around the perimeter of the compost pad as shown on Attachment E.

Readings from the instrument clusters shall be collected monthly. Data collected shall be presented in a graph with volumetric water content as a percent on the Y-axis and date on the X-axis. Precipitation in inches or other hydrologic factors which may be interpreted as an influence to percolation rates shall be assessed and graphed against volumetric water content. These graphs shall be submitted with the Compost Facility Annual Monitoring and Maintenance Report as required in Section B.8 of this MRP.

6) Rainfall Monitoring

The Discharger shall monitor an onsite weather station, located within the boundary of LF-1, for the following values shown below. The location of the weather station shall be shown on the Facility Site Map. The rainfall monitoring results shall be submitted with the Compost Facility Annual Monitoring and Maintenance Report as required in Section B.8 of this MRP.

Parameter	Units	Monitoring Frequency	Reporting Frequency
Rainfall Intensity	Inches/hour	Daily	Monthly
Rainfall Total in 24 hour period (12:00 am to 11:59 pm)	Inches/24 hour interval	Daily	Monthly

7) Site Photo logs

During the first week of each month, the Discharger shall take photographs of all flow meters (showing the volume reading), berms, above ground tank connections, conveyance lines, pipe joints, pipe aprons, sumps, perimeter ditches, compost pad, and any other compost wastewater) controls. Photo documentation of the above controls shall be included as part of the Compost Facility Annual Monitoring and Maintenance Report as required in Section B.8 of this MRP.

8) Calibration Logs

On an annual basis, or more frequently if recommended by the manufacturer, the Discharger shall maintain and calibrate all flow meters. Routine maintenance and calibration shall be recorded on the compost pad field inspection form included with the Operations and Maintenance Manual dated 28 October 2013. Calibration logs shall be included as part of the Compost Facility Annual Monitoring and Maintenance Report as required in Section B.8 of this MRP.

e. Compost Wastewater Characterization Monitoring

The Discharger shall conduct monitoring of the compost wastewater characteristics through collection of an undiluted representative sample at the single outflow point at the site's POTW connection when there is sufficient water and analyze the sample for the parameters listed Table X. The current compost wastewater collection and storage system consists of a series of pipes, 2 sumps, 2 vaults, and 39 tanks as shown on Attachment F. The results shall be reported in the Annual Monitoring Report for the year in which the samples were collected.

The leak detection monitoring device (i.e. pan or suction lysimeter) shall be checked monthly during the wet season for liquid. The existing lysimeters include L-A and L-B one located below each set of storage tanks as shown on Attachment E. Upon detection of liquid in a previously dry monitoring device Discharger shall notify the Board within **48 hours**; collect a sample and analyze the liquid for the constituents listed in Table X; remove the liquid from the device; and continue to monitor weekly. If liquid reappears, another sample must be collected and analyzed for the constituents in Table X. If the liquid is confirmed to be compost wastewater, the Discharger must submit a Response Action Plan within 30 days for review and approval by the Board.

f. Response to a Release

The Discharger shall report by telephone any discharge of compost wastewater outside the compost wastewater management system other than that discharged for exportation immediately after it is discovered. A

written report shall be filed with the Central Valley Water Board within seven days, containing at least the following information:

- a. A map showing the location(s) of the discharge;
- b. An estimate of the flow rate;
- 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 Field Parameters and Monitoring Parameters listed in Table X 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.

7. Corrective Action Monitoring

The Discharger shall conduct corrective action monitoring to demonstrate the effectiveness of corrective action in accordance with Title 27, section 20430 and this MRP.

The corrective action monitoring of this MRP includes:

<u>Section</u>	<u>Monitoring Program</u>
a.	Groundwater Corrective Action Monitoring
b.	Unsaturated Zone Corrective Action Monitoring
c.	Compost Facility Corrective Action Monitoring

a. Groundwater Corrective Action Monitoring

Groundwater monitoring wells and unsaturated zone monitoring points that are in a corrective action monitoring program shall be monitored and reported in accordance with the groundwater and unsaturated zone monitoring requirements in parts A.1 and A.2 of this MRP, except as modified in this part of the MRP for any additional constituents or modified monitored frequencies.

The Discharger shall monitor the following corrective action monitoring wells as required in part A.1 and Table I of this MRP, with the following increased sampling frequency for all Field and Monitoring Parameters listed in Table I:

<u>Well</u>	<u>Sampling Frequency</u>
MW-1R	Quarterly
MW-2R	Quarterly
MW-3	Quarterly
MW-4	Quarterly
MW-8	Quarterly
MW-10	Quarterly
MW-11	Quarterly
MW-12	Quarterly
MW-15	Quarterly
Any added well	Quarterly unless otherwise specified

b. Unsaturated Zone Corrective Action Monitoring

In addition to monitoring the unsaturated zone monitoring points as required in part A.2 and Table II of this MRP, as part of the Unsaturated Zone Corrective Action Monitoring requirements, the Discharger shall also monitor additional Corrective Action monitoring points, constituents, and frequency as required in Table XIV.

The Discharger shall record the hours of operation for any corrective action system and report them in the Annual Monitoring Report required in Section B.2 of this MRP. The Discharger shall estimate the following annually for each WMU in corrective action due to LFG related exceedances at WMU compliance points to assess the progress of groundwater corrective action and reported in the Annual Monitoring Report (including method of calculations) in the format below:

<u>WMU</u>	Mass of Total VOCs (lbs.)	
	Amount Removed <u>D</u> uring Year	Cumulative Amount <u>Remov</u> ed
LF-1		
LF-2		

c. Compost Facility Corrective Action Monitoring

Compost facility monitoring required as corrective action shall be monitored in accordance with the compost operations monitoring requirements in parts A.6 of the MRP, except as modified in this part of the MRP for any additional constituents or modified frequencies.

1) Compost Pad Thickness and Drainage Controls

The Discharger shall include in the **monthly** report a description of any exposed compost pad thickness control monuments or drainage control failures and repairs required to make the drainage controls functional. **Monthly**, the Discharger shall report volume of material placed back onto the pad to restore grade and prepare an isopach map showing the thickness of remaining material as well as areas that need repair. The Discharger shall complete repairs within 30 days of discovery of any exposed compost pad thickness monuments.

The Discharger shall monitor the compost pad thickness at each control monument according to the schedule in **Table XI**.

2) Storage Tank and Sump Monitoring

The storage tanks and sumps shall be monitored daily between 15 October and 15 May of each year, and **hourly** during rainfall events. The Discharger shall monitor the remaining capacity of the storage tanks and compost wastewater sumps (in **percent remaining**), and monitor for freeboard (measured in **tenths of feet**) in open-ended containment systems.

Between 15 October and 15 May, the Discharger shall inspect the facility on a daily basis during rain events to determine whether pumps are operational and appropriately sized, discharge lines are properly connected and not leaking, and that excess sediment has been removed from sumps. The results of each inspection shall be submitted with the monthly report. Storage tanks and sumps shall be placed on a Facility Site Map and properly numbered for reference. Tank and sump monitoring shall be conducted at the frequency outlined in **Table XII**.

3) Compost Wastewater Discharge Monitoring

The Discharger must monitor flows throughout the system. The Discharger shall install and monitor flow meters on the effluent discharge lines of the storage tanks including the discharge pipe upstream of the on-site POTW discharge point. Other discharge points requiring flow monitoring, include the two J-Stands located north and south of the compost area. If compost wastewater is trucked off-site, then the trucks must be filled from the J-Stands. All flow meters shall be calibrated annually, properly numbered, and referenced on the Facility Site Map.

Monitoring shall be conducted daily between 15 October and 15 May of each year, and daily during rainfall events for the remainder of the year, in accordance with **Table XIII**.

4) Site Photo logs

During the first week of each month, the Discharger shall take photographs of all flow meters (showing the volume reading), berms, above ground tank connections, conveyance lines, pipe joints, pipe aprons, sumps, perimeter ditches, compost pad, and any other leachate controls. Monthly reports shall include photo documentation of the above controls.

B. REPORTING

The Discharger shall submit the following reports in accordance with the required schedule:

Reporting Schedule

<u>Section</u>	<u>Report</u>	<u>End of Reporting Period</u>	<u>Due Date</u>
B.1	Semiannual Monitoring Report	30 June, 31 December	1 August, 1 February
B.2	Annual Monitoring Report	31 December	1 February
B.3	Seep Reporting	Continuous	Immediately & 7 Days
B.4	Annual Facility Inspection Report	15 August	31 October
B.5	Major Storm Event Reporting	Continuous	7 days from damage discovery
B.6	Survey and Iso-Settlement Map for Closed Landfills	Every Five Years	At Closure Completion and Every Five Years
B.7	Final Closure Covers Leak Test Report	Every Two Years	1 February
B.8	Compost Facility Annual Monitoring and Maintenance Report	31 December	1 April
B.9	Financial Assurances Report	31 December	1 June
B.10	Corrective Action Reporting	See Section B.10	See Section B.10

Reporting Requirements

The Discharger shall submit monitoring reports **semiannually** with the data and information as required in this Monitoring and Reporting Program and as required in WDRs Order R5-2015-XXXX and the Standard Provisions and Reporting Requirements

(particularly Section I: "Standard Monitoring Specifications" and Section J: "Response to a Release"). In reporting the monitoring data required by this program, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. The data shall be summarized in such a manner so as to illustrate clearly the compliance with waste discharge requirements or the lack thereof. Data shall also be submitted in a digital format, such as a computer disk.

Field and laboratory tests shall be reported in each monitoring report. Semiannual and annual monitoring reports shall be submitted to the Central Valley Water Board in accordance with the above schedule for the calendar period in which samples were taken or observations made. In addition, the Discharger shall enter all monitoring data and monitoring reports (all field measurements and water quality monitoring parameters) into the online Geotracker database as required by Division 3 of Title 27 and Chapter 30, Division 3 of Title 23. The Discharger shall use the Geotracker codes shown in Tables I through IX for the field and laboratory results when entering monitoring data into the Geotracker database. The Discharger shall notify Central Valley Water Board staff immediately of any monitoring data results for which Geotracker codes are not shown in the MRP or for which a Geotracker code does not currently exist.

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.

The Discharger shall retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings of continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order. Records shall be maintained throughout the life of the facility including the post-closure period. Such records shall be legible and shall show the following for each sample:

- a. 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;
- b. Training logs and records;
- c. Date, time, and manner of sampling;
- d. Date and time that analyses were started and completed, and the name of the personnel and laboratory performing each analysis;
- e. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used;
- f. Calculation of results;
- g. Results of analyses, and the MDL and PQL for each analysis. All peaks shall be reported;

- h. Laboratory quality assurance results (e.g., percent recovery, response factor, etc.); and
- i. Chain of Custody forms.

Required Reports

1. **Semiannual Monitoring Report:** Monitoring reports shall be submitted semiannually and are due on **1 August** and **1 February**. Each semiannual monitoring report shall contain at least the following:
 - a. For each groundwater monitoring point addressed by the report, a description of:
 - 1) The time of water level measurement;
 - 2) 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;
 - 3) 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;
 - 4) The type of pump - or other device - used for sampling, if different than the pump or device used for purging; and
 - 5) 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. The estimated quarterly downgradient direction of groundwater in the uppermost aquifer, in any zones of perched water, and in any additional zone of saturation which have been monitored based upon water level elevations taken prior to the collection of the water quality data submitted in the report [Title 27, section 20415(e)(15)]. All groundwater monitoring points shall be used to plot hydraulic gradients.
 - d. Cumulative tabulated monitoring data for all monitoring points and constituents for groundwater, unsaturated zone, leachate, and surface water. The tabulated surface water monitoring data shall include the GPS location for each surface water monitoring point where the sample was taken. Concentrations below the reporting limit shall not be reported as non-detect "ND" unless the concentration is below the method detection limit (MDL) and the method detection limit is also given in the table. Laboratory results indicating trace values of COCs between the MDL and PQL (Reporting Limit or RL) shall be reported as estimated values (flagged and estimated value reported). Laboratory results of COCs at or above the PQL shall be reported and indicated clearly as exceeding the PQL relative to laboratory

results reported below the PQL. Laboratory results shall clearly distinguish on time series graphs data that is reported as non-detect versus data that was reported at or above MDL (trace) levels. Units shall be monitored as required in Tables I through XI 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.

- e. Laboratory statements of results of all analyses evaluating compliance with requirements.
 - f. 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.
 - g. An evaluation of the effectiveness of the leachate monitoring and control facilities, and of the run-off/run-on control facilities. Include a summary of any instances where leachate depth on an MSW landfill liner system exceeded 30 cm (excluding the leachate sump), and information about the required notification and corrective action in Standard Facility Specification E.13 of the SPRRs.
 - h. A summary of all Standard Observations for the reporting period required in Section A.5.e of this MRP.
 - i. 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.
 - j. A summary of any discharges from the compost wastewater management system as described in section A.6.f.
- 2. Annual Monitoring Report:** The Discharger shall submit an Annual Monitoring Report to the Central Valley Water Board by **1 February** covering the reporting period of the previous monitoring year. If desired, the Annual Monitoring Report may be combined with the second semiannual report, but if so, shall clearly state that it is both a semi-annual and annual monitoring report in its title. Each Annual Monitoring Report shall contain the following information:
- a. 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. If a 5-year COC event was performed, than these parameters shall also be graphically presented. 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. The graphs shall plot each datum, rather than

plotting mean values. 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 map showing the area and elevations in comparison to final closure design contours.
 - g. A written summary of the monitoring results, indicating any changes made or observed since the previous Annual Monitoring Report.
 - h. The results of the annual testing of leachate collection and removal systems required under Standard Facility Specification E.14 of the SPRRs.
 - i. Updated concentration limits for each monitoring parameter at each monitoring well based on the new data set.
 - j. A comprehensive discussion of any Corrective Action Program required by this MRP under Section A.7.
- 3. Seep Reporting:** The Discharger shall report by telephone any seepage from the former disposal area **immediately** after it is discovered. A written report shall be filed with the Central Valley Water Board **within seven days**, containing at least the following information:
- a. A map showing the location(s) of seepage;
 - b. An estimate of the flow rate;
 - 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 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 Reporting:** By **31 October** 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 A.5.a. of this MRP, above.
 - 5. Major Storm Event Reporting:** Following major storm events capable of causing damage or significant erosion, the Discharger **immediately** shall notify Central Valley Water Board staff of any damage or significant erosion upon discovery and report subsequent repairs within **14 days** of completion of the repairs, including photographs of the problem and the repairs. Refer to Section A.5.b of this MRP, above.
 - 6. Survey and Iso-Settlement Map for Closed Landfills:** The Discharger shall conduct a survey and submit an iso-settlement map for each closed area of the landfill every five years pursuant to Title 27, section 21090(e). Refer to Section A.5.c of this MRP, above. The next report is due by **1 August 2017**.
 - 7. Final Closure Covers Leak Test Report (Title 27 section 21090(a)(4)(A)):** The Discharger shall conduct a survey and submit a report for each closed area of the landfill every 2-years pursuant to Title 27, section 21090(a)(4)(A). Refer to Section A.5.d of this MRP, above. The next report is due by **1 August 2016**.
 - 8. Compost Facility Annual Monitoring and Maintenance Report:** By **1 April** of each year, the Discharger shall submit a report describing and containing the results of the compost operations monitoring required by Section A.6 of this MRP and summarizing all monitoring and maintenance activities performed and adverse conditions noted since the prior reporting period with respect to all berms, ditches, working surfaces, sumps, and monitoring systems. As part of the Annual Monitoring and Maintenance Report, the Discharger must certify that the composting operation complies with the requirements of WDRs Order R5-2015-XXXX and this MRP. The report must also include the following:
 - a. A map or aerial photograph showing the locations of observation stations and monitoring points;
 - b. Tabular and graphical summaries of all water quality data collected during the year, including storm water monitoring if applicable; and
 - c. All historical monitoring data collected during the previous 5 years, and for which there are detectable results, including data for the previous year, shall be submitted in tabular form and in a digital file format.

- d. Monitoring information must include at a minimum:
- 1) The date, identity of sample, monitoring point from which the sample was collected, and time of sampling or measurement;
 - 2) The name of the individual(s) who performed the sampling or measurements;
 - 3) Date and time that analyses were started and completed;
 - 4) The analytical techniques or method used, including method of preserving the sample and the identity and volume of reagents used; and
 - 5) Field instrument calibration logs.
- e. Copy of the complete laboratory analytical report(s), signed by the laboratory director or project manager, and at a minimum contain:
- 1) Complete sample analytical reports;
 - 2) Complete laboratory QA/QC reports;
 - 3) A discussion of the sample and QA/QC data;
 - 4) A properly completed "chain of custody" from the analyzed samples; and a transmittal letter stating whether or not all of the analytical work was supervised by the director of the laboratory, and contain the following statement:
"All analyses were conducted at a laboratory certified for such analyses by the State Water Board's Environmental Laboratory Accreditation Program in accordance with current USEPA procedures."
- f. Results and discussion from the annual compost facility inspection;
- g. A summary and certification of completion of inspections and maintenance of the working surfaces, berms, ditches, erosion controls or other containment structures;
- h. An evaluation and certification of completion of inspections and maintenance on the effectiveness of the wastewater handling facilities including results of the annual testing of wastewater, capacity issues, nuisance conditions, and system problems;
- i. 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 WDRs Order R5-2015-XXXX; and
- j. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.

9. Financial Assurances 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. Refer to Financial Assurances Specifications F.1 through F.3 of the WDRs.

10. Corrective Action Reporting:

a. Groundwater Corrective Action Monitoring Report

The groundwater monitoring report for groundwater monitoring wells in corrective action shall be monitored in accordance with section A.7.a. The Corrective Action Report shall be submitted semiannually in accordance with Section B.1 and annually in accordance with Section B.2 of this MRP and shall include an assessment whether the corrective action proposed by the Discharger is effective and whether additional corrective action measures are necessary to bring the monitoring well into compliance.

b. Unsaturated Zone Corrective Action Monitoring Report

The unsaturated zone monitoring report for LFG extraction wells, the flare, and perimeter gas probes shall be monitored in accordance with section A.7.b. The Corrective Action Monitoring Report shall be submitted semiannually in accordance with Section B.1 and annually in accordance with Section B.2 of this MRP and shall include an assessment whether the corrective action proposed by the Discharger is effective and whether additional corrective action measures are necessary to prevent exceedances of the concentration limits for VOCs and bicarbonate alkalinity.

c. Compost Facility Monthly Monitoring Reports

Monthly monitoring reports shall be submitted the 15th day of the following month in which sampling occurred and include all data collected from hourly, daily, and weekly measurements, photographs of the compost area and drainage controls, and an estimate (in percent) of area covered with compost in accordance with section A.7.c. The monthly report shall include a description of any drainage control failures and repairs required to make the drainage controls functional. These items include diversion berms, drainage flow paths, drain inlets free, ponding on pad, piping, and freeboard of storage tanks and sumps.

C. WATER QUALITY PROTECTION STANDARD AND COMPLIANCE PERIOD

1. Water Quality Protection Standard Report

For each waste management unit, the Water Quality Protection Standard shall consist of all monitoring parameters, COCs, the concentration limit for each applicable monitoring parameter, constituent of concern, the verification retesting procedure to determine measurably significant evidence of a release, the point of compliance, and all water quality monitoring points for each monitored medium.

The Water Quality Protection Standard for naturally occurring waste constituents consists of the COCs, the concentration limits, and the point of compliance and all monitoring points. Any proposed changes to the Water Quality Protection Standard

other than annual update of the concentration limits shall be submitted in a report for review and approval.

The report shall:

- a. Identify all distinct bodies of surface and ground water 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 pursuant to Title 27, section 20415(e)(8)(E) and section 20420(j)(1-3).

The Water Quality Protection Standard shall 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 Water Quality Protection Standard.

The Discharger proposed the methods for calculating concentration limits in the approved *Water Quality Protection Standard Report*. The limits are calculated using Interwell tolerance limits at 95% confidence and 95% coverage based on background data from background monitoring wells MW-5, MW-6, and MW-7.

The Water Quality Protection Standard shall be reviewed annually for each monitoring well using new and historical monitoring data. Any proposed changes to the Water Quality Protection Standard must receive approval by the Central Valley Water Board Executive Officer prior to implementation of the new Water Quality Protection Standard.

2. Monitoring Parameters

Monitoring parameters are a select group of constituents that are monitored during each monitoring event that are the waste constituents, reaction products, hazardous constituents, and physical parameters that provide a reliable indication of a release from a waste management unit. The monitoring parameters for all waste management units are those listed in Tables I through XIII for the specified monitored medium.

3. Constituents of Concern (COCs)

The COCs include a larger group of waste constituents, their reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the waste management unit, and are required to be monitored every five years [Title 27, sections 20395 and 20420(g)]. The COCs for all waste management units at the facility are those listed in Tables I through XIII for the specified monitored medium. 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 report was submitted to the Central Valley Water Board in the 2011 *Annual Monitoring Report*, and 5-year COCs are due to be monitored again in **May 2016**.

4. Concentration Limits

For a naturally occurring constituent of concern, the concentration limit for each constituent of concern shall be determined as follows:

- a. By calculation in accordance with a statistical method pursuant to Title 27, section 20415(e)(8); or
- b. By an alternate statistical method meeting the requirements of Title 27, section 20415(e)(8)(E).

The methods for calculating concentration limits were included in the *Water Quality Protection Standard Report*. The approved method uses Interwell tolerance limits at 95% confidence and 95% coverage based on pooled background data from background monitoring wells MW-5, MW-6, and MW-7.

The Water Quality Protection Standards shall not be calculated using data identified as outliers using the EPA 1989 Outlier Test or an equivalent approved outlier test. The most recent concentration limits calculated using the outlier and upward trend exclusion criteria stated above for select parameters are as follows:

Naturally Occurring COCs	Concentration Limits⁴
pH (Units)	6.37 to 7.99
EC ¹ (umhos/cm)	520
TDS ² (mg/L)	380
Chloride (mg/L) ³	19
Nitrate as N (mg/L)	1.8
Nitrite as N (mg/L)	1.0
Sulfate (mg/L)	63
Carbonate Alkalinity as CaCO ₃	TBD
Bicarbonate Alkalinity as CaCO ₃	200
Non-Naturally Occurring COCs	Concentration Limits
VOCs	Non Detect
Chlorophenoxy Herbicides	Non Detect
Organophosphorus Compounds	Non Detect

¹Electrical Conductivity

²Total Dissolved Solids

³Milligrams per liter

⁴Concentration limits provided by the Discharger in the 2014 Second Semiannual and Annual Monitoring Report.

5. Retesting Procedures for Confirming Evidence of a Release

If monitoring results indicate measurably significant evidence of a release, as described in Standard Monitoring Specification I.45 of the SPRRs, then:

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

6. Point of Compliance

The point of compliance for the water standard at each waste management unit is a vertical surface located at the hydraulically downgradient limit of the Unit that extends through the uppermost aquifer underlying the unit. The following are monitoring locations at the point of compliance:

<u>Cell or Module</u>	<u>Point of Compliance Monitoring Wells</u>
LF-1	MW-1R, MW-2R, MW-10, MW-15
LF-2	MW-3, MW-4
LF-3	MW-8, MW-11, MW-12, MW-13

7. Compliance Period

The compliance period for each waste management unit 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 waste management unit. The compliance period shall begin anew each time the Discharger initiates an evaluation monitoring program [Title 27, section 20410].

8. 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 A of this MRP.

D. TRANSMITTAL LETTER FOR ALL REPORTS

A transmittal letter explaining the essential points shall accompany each report. At a minimum, the transmittal letter shall identify any violations found since the last report was submitted, and if the violations were corrected. If no violations have occurred since the last submittal, this shall be stated in the transmittal letter. The transmittal letter shall also state that a discussion of any violations found since the last report was submitted, and a description of the actions taken or planned for correcting those violations, including any references to previously submitted time schedules, is contained in the accompanying report. The transmittal letter shall contain a statement by the Discharger that it has performed data analysis and whether in accordance with Title 27 section 20420(i) it has determined whether there is "measurably significant" evidence of a release from any WMU. The transmittal letter shall contain a statement by the discharger, or the discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate, and complete.

The Discharger shall implement the above monitoring program on the effective date of this Program.

Ordered by: _____
PAMELA C. CREEDON, Executive Officer

(Date)

**TABLE I
 GROUNDWATER DETECTION MONITORING PROGRAM**

Field Parameters

Parameter	Geotracker Code	Units	Sampling Frequency	Reporting Frequency
Groundwater Elevation	GWELEV	Ft. & 100ths, M.S.L.	Quarterly ¹	Semiannual
Temperature	TEMP	°C	Semiannual	Semiannual
Specific Conductance	SC	umhos/cm	Semiannual	Semiannual
pH	PH	pH units	Semiannual	Semiannual
Turbidity	TURB	NTU Turbidity units	Semiannual	Semiannual

Monitoring Parameters

Parameter	Geotracker Code	Units	Sampling Frequency	Reporting Frequency
Total Dissolved Solids	TDS	mg/L ²	Semiannual	Semiannual
Chloride	CL	mg/L	Semiannual	Semiannual
Carbonate as CaCO ₃	CaCO ₃	mg/L	Semiannual	Semiannual
Bicarbonate as CaCO ₃	BICACO ₃	mg/L	Semiannual	Semiannual
Nitrogen, Kjeldahl, Total	KN	mg/L	Semiannual	Semiannual
Nitrogen, Nitrate (as N)	NO ₃ N	mg/L	Semiannual	Semiannual
Nitrogen, Nitrite (as N)	NO ₂ N	mg/L	Semiannual	Semiannual
Sulfate	SO ₄	mg/L	Semiannual	Semiannual
Calcium	CA	mg/L	Semiannual	Semiannual
Magnesium	MG	mg/L	Semiannual	Semiannual
Potassium	K	mg/L	Semiannual	Semiannual
Sodium	NA	mg/L	Semiannual	Semiannual
Volatile Organic Compounds (See Table V)	(See Table V)	ug/L ³	Semiannual	Semiannual

5-Year Constituents of Concern (see Table VI)

Parameter	Geotracker Code	Units	Sampling Frequency	Reporting Frequency
Total Organic Carbon (TOC)	TOC	mg/L	5 years	May 2016
Inorganics (dissolved)	See Table VI	ug/L	5 years	and every
Volatile Organic Compounds	See Table VI	ug/L	5 years	5 years
Semi-Volatile Organic Compounds	See Table VI	ug/L	5 years	thereafter
Chlorophenoxy Herbicides	See Table VI	ug/L	5 years	
Organophosphorus Compounds	See Table VI	ug/L	5 years	

¹ The Discharger shall monitor groundwater elevation quarterly at appropriate times representative of seasonal maximum and minimum groundwater elevation. Groundwater elevation for all groundwater monitoring points shall be reported using a common datum e.g. NGVD29 or NAVD88.

² Milligrams per liter

³ Micrograms per liter

TABLE II
UNSATURATED ZONE DETECTION MONITORING PROGRAM

SOIL-PORE GAS

Monitoring Parameters

Parameter	Geotracker Code	Units	Sampling Frequency	Reporting Frequency
Volatile Organic Compounds ¹ (Use USEPA Method TO-15)	(See Table V)	ug/cm ³	Annual	Annual
Methane	CH ₄	%	Semiannual	Annual
Carbon Dioxide	CO ₂	%	Semiannual	Annual
Oxygen	OXYGEN	%	Semiannual	Annual

¹ Particularly those VOCs historically detected in LCRS sumps S-1 through S-5 and in groundwater monitoring wells

**TABLE IV
 SURFACE WATER DETECTION MONITORING PROGRAM**

Field Parameters

Parameter	Geotracker Code	Units	Sampling Frequency ¹	Reporting Frequency
Specific Conductance	SC	umhos/cm	Semiannual	Semiannual
pH	PH	pH units	Semiannual	Semiannual
Dissolved Oxygen	DOSAT	% Saturation	Semiannual	Semiannual
Turbidity	TURB	Turbidity units	Semiannual	Semiannual
Temperature	TEMP	°C	Semiannual	Semiannual
Flow to Waters of U.S.		Yes or No	Semiannual	Semiannual

Monitoring Parameters

Parameter	Geotracker Code	Units	Sampling Frequency	Reporting Frequency
Biologic Oxygen Demand	BOD	mg/L	Semiannual	Semiannual
Total Dissolved Solids	TDS	mg/L	Semiannual	Semiannual
Chloride	CL	mg/L	Semiannual	Semiannual
Carbonate as CaCO ₃	CaCO ₃	mg/L	Semiannual	Semiannual
Bicarbonate as CaCO ₃	BICaCO ₃	mg/L	Semiannual	Semiannual
Ammonia (un-ionized)	NH ₃	mg/L	Semiannual	Semiannual
Nitrogen, Nitrate (as N)	NO ₃ N	mg/L	Semiannual	Semiannual
Sulfate	SO ₄	mg/L	Semiannual	Semiannual
Calcium	CA	mg/L	Semiannual	Semiannual
Magnesium	MG	mg/L	Semiannual	Semiannual
Potassium	K	mg/L	Semiannual	Semiannual
Sodium	NA	mg/L	Semiannual	Semiannual
Total Organic Carbon (TOC)	TOC	mg/L	Semiannual	Semiannual
Total Suspended Solids	TSS	mg/L	Semiannual	Semiannual
Volatile Organic Compounds (See Table V)	(See Table V)	ug/L	Semiannual	Semiannual

5-Year Constituents of Concern (see Table VI)

Parameter	Geotracker Code	Units	Sampling Frequency	Reporting Frequency
Chemical Oxygen Demand	COD	mg/L	5 years	May 2016 and every
Inorganics (dissolved)	See Table VI	ug/L	5 years	5 years
Volatile Organic Compounds	See Table VI	ug/L	5 years	thereafter
Semi-Volatile Organic Compounds	See Table VI	ug/L	5 years	
Chlorophenoxy Herbicides	See Table VI	ug/L	5 years	
Organophosphorus Compounds	See Table VI	ug/L	5 years	

¹ Semiannual surface water monitoring is required twice per year when there is water present at all the designated surface water monitoring points at the beginning and the end of the wet season (15 October through 15 May). Reporting shall include whether there was flow from the facility to waters of the U.S. when the samples were collected.

TABLE V

MONITORING PARAMETERS FOR DETECTION MONITORING

Surrogates for Metallic Constituents:

<u>Analyte Description</u>	<u>Geotracker Code</u>
pH	PH
Total Dissolved Solids	TDS
Specific Conductance	SC
Chloride	CL
Sulfate	SO4
Nitrogen, Nitrate (as N)	NO3N

Volatile Organic Compounds, short list (USEPA Method 8260B):

<u>Analyte Description</u>	<u>Geotracker Code</u>
Acetone	ACE
Acrylonitrile	ACRAMD
Benzene	BZ
Bromochloromethane	BRCLME
Bromodichloromethane	BDCME
Bromoform	TBME
Carbon disulfide	CDS
Carbon tetrachloride	CTCL
Chlorobenzene	CLBZ
Chloroethane	CLEA
Chloroform	TCLME
Dibromochloromethane	DBCME
1,2-Dibromo-3-chloropropane	DBCP
1,2-Dibromoethane	EDB
1,2-Dichlorobenzene	DCBZ12
1,3-Dichlorobenzene	DCBZ13
1,4-Dichlorobenzene	DCBZ14
trans-1,4-Dichloro-2-butene	DCBE14T
Dichlorodifluoromethane	FC12
1,1-Dichloroethane	DCA11
1,2-Dichloroethane	DCA12
1,1-Dichloroethene	DCE11
cis-1,2-Dichloroethene	DCE12C
trans-1,2-Dichloroethene	DCE12T
1,2-Dichloropropane	DCPA12
cis-1,3-Dichloropropene	DCP13C
trans-1,3-Dichloropropene	DCP13T
Di-isopropyl ether (DIPE)	DIPE
Ethanol (EtOH)	ETHANOL
Ethyl tert-butyl ether (ETBE)	ETBE
Ethylbenzene	EBZ
2-Hexanone	HXO2

TABLE V (Continued)

Volatile Organic Compounds, short list (continued)

<u>Analyte Description</u>	<u>Geotracker Code</u>
Hexachlorobutadiene	HCBU
Bromomethane	BRME
Chloromethane	CLME
Dibromomethane	DBMA
Dichloromethane	DCMA
2-Butanone	MEK
Methyl iodide	IME
Methyl-tert-butyl ether (MTBE)	MTBE
4-Methyl-2-pentanone	MIBK
Naphthalene	NAPH
Styrene	STY
tert-Amyl methyl ether (TAME)	TAME
tert-Butyl alcohol (TBA)	TBA
1,1,1,2-Tetrachloroethane	TC1112
1,1,2,2-Tetrachloroethane	PCA
Tetrachloroethene (PCE)	PCE
Toluene	BZME
1,2,4-Trichlorobenzene	TCB124
1,1,1-Trichloroethane	TCA111
1,1,2-Trichloroethane	TCA112
Trichloroethene (TCE)	TCE
Trichlorofluoromethane	FC11
1,2,3-Trichloropropane	TCPR123
Vinyl acetate	VA
Vinyl chloride	VC
Xylenes	XYLENES

TABLE VI
5-YEAR COCs & APPROVED USEPA ANALYTICAL METHODS

<u>Inorganics (dissolved):</u>	<u>USEPA Method</u>	<u>Geotracker Code</u>
Aluminum	6010	AL
Antimony	7041	SB
Barium	6010	BA
Beryllium	7131A	BE
Cadmium	6010	CD
Chromium	6010	CR
Cobalt	6010	CO
Copper	6010	CU
Silver	6010	AG
Tin	6010	SN
Vanadium	6010	V
Zinc	6010	ZN
Iron	6010	FE
Manganese	7062	MN
Arsenic	7421	AS
Lead	7470A	PB
Mercury	7521	HG
Nickel	7742	NI
Selenium	7841	SE
Thallium	9010C	TL
Cyanide, Total	9030B	CN
Sulfide	6010	S

Volatile Organic Compounds, extended list (USEPA Method 8260B):

<u>COC Description</u>	<u>Geotracker Code</u>
Acetone	ACE
Acetonitrile	ACCN
Acrolein	ACRL
Acrylonitrile	ACRAMD
Allyl chloride	CLPE3
Benzene	BZ
Bromochloromethane	BRCLME
Dibromochloromethane	DBCME
Bromoform	TBME
Carbon disulfide	CDS
Carbon tetrachloride	CTCL
Chlorobenzene	CLBZ
Chloroethane	CLEA
Chloroform	TCLME
2-Chloro-1,3-butadiene (Chloroprene)	CHLOROPRENE
Dibromochloromethane	DBCME
1,2-Dibromo-3-chloropropane	DBCP
1,2-Dibromoethane	EDB

TABLE VI (Continued)

Volatile Organic Compounds, extended list (continued)

<u>COC Description</u>	<u>Geotracker Code</u>
1,2-Dichlorobenzene	DCBZ12
1,3-Dichlorobenzene	DCBZ13
1,4-Dichlorobenzene	DCBZ14
trans-1,4-Dichloro-2-butene	DCBE14T
Dichlorodifluoromethane	FC12
1,1-Dichloroethane	DCA11
1,2-Dichloroethane	DCA12
1,1-Dichloroethene	DCE11
cis-1,2-Dichloroethene	DCE12C
trans-1,2-Dichloroethene	DCE12T
1,2-Dichloropropane	DCPA12
1,3-Dichloropropane	DCPA13
2,2-Dichloropropane	DCPA22
1,1-Dichloropropene	DCP11
cis-1,3-Dichloropropene	DCP13C
trans-1,3-Dichloropropene	DCP13T
Di-isopropyl ether (DIPE)	DIPE
Ethanol (EtOH)	ETHANOL
Ethyl tert-butyl ether (ETBE)	ETBE
Ethylbenzene	EBZ
Ethyl methacrylate	EMETHACRY
Hexachlorobutadiene	HCBU
2-Hexanone	HXO2
Isobutanol	ISOBTOH
Methacrylonitrile	METHACRN
Bromomethane	BRME
Chloromethane	CLME
2-Butanone	MEK
Methyl iodide	IME
Methyl-tert-butyl ether (MTBE)	MTBE
Methylmethacrylate	MMETHACRY
4-Methyl-2-pentanone	MIBK
Dibromomethane	DBMA
Dichloromethane	DCMA
Naphthalene	NAPH
Propionitrile	PACN
Styrene	STY
tert-Amyl methyl ether (TAME)	TAME
tert-Butyl alcohol (TBA)	TBA
1,1,1,2-Tetrachloroethane	TC1112
1,1,2,2-Tetrachloroethane	PCA

TABLE VI (Continued)

Volatile Organic Compounds, extended list (continued)

<u>COC Description</u>	<u>Geotracker Code</u>
Tetrachloroethene (PCE)	PCE
Toluene	BZME
1,2,4-Trichlorobenzene	TCB124
1,1,1-Trichloroethane	TCA111
1,1,2-Trichloroethane	TCA112
Trichloroethene (TCE)	TCE
Trichlorofluoromethane	FC11
1,2,3-Trichloropropane	TCPR123
Vinyl acetate	VA
Vinyl chloride	VC
Xylenes	XYLENES

Semi-Volatile Organic Compounds (USEPA Method 8270C or D - base, neutral, & acid extractables):

<u>COC Description</u>	<u>Geotracker Code</u>
Acenaphthene	ACNP
Acenaphthylene	ACNPY
Acetophenone	ACPHN
2-Acetylaminofluorene	ACAMFL2
Aldrin	ALDRIN
4-Aminobiphenyl	AMINOBP4
Anthracene	ANTH
Benzo(a)anthracene	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	BIS2CEE
Bis(2-chloroisopropyl)ether	BIS2CIE
4-Bromophenyl phenyl ether	BPPE4
Benzyl butyl phthalate	BBP
Chlordane	CHLORDANE
4-Chloroaniline	CLANIL4
Chlorobenzilate	CLBZLATE

TABLE VI (Continued)

Semi-Volatile Organic Compounds (continued)

<u>COC Description</u>	<u>Geotracker Code</u>
4-Chloro-3-methylphenol	C4M3PH
2-Chloronaphthalene	CNPH2
2-Chlorophenol	CLPH2
4-Chlorophenyl phenyl ether	CPPE4
Chrysene	CHRYSENE
2-Methylphenol (o-Cresol)	MEPH2
3-methylphenol	MEPH3
4-Methylphenol (p-Cresol)	MEPH4
4,4'-DDD	DDD44
4,4'-DDE	DDE44
4,4'-DDT	DDT44
Diallate (cis- or trans-)	DIALLATE
Dibenzo(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
azobenzene	AZOBENZENE
7,12-Dimethylbenz(a)anthracene	DMBZA712
3,3'-Dimethylbenzidine	DMBZD33
2,4-Dimethylphenol	DMP24
Dimethyl phthalate	DMPH
1,3-Dinitrobenzene	DNB13
2-Methyl-4,6-dinitrophenol	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

TABLE VI (Continued)

Semi-Volatile Organic Compounds (continued)

<u>COC Description</u>	<u>Geotracker Code</u>
Heptachlor	HEPTACHLOR
Heptachlor epoxide	HEPT-EPOX
Hexachlorobenzene	HCLBZ
Hexachlorocyclopentadiene	HCCP
Hexachloroethane	HCLEA
Hexachloropropene	HCPR
Indeno(1,2,3-cd)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
2-Nitroaniline	NO2ANIL2
3-Nitroaniline	NO2ANIL3
4-Nitroaniline	NO2ANIL4
Nitrobenzene	NO2BZ
2-Nitrophenol	NTPH2
4-Nitrophenol	NTPH4
n-Nitroso-di-n-butylamine	NNSBU
N-Nitrosodiethylamine	NNSE
N-Nitrosodimethylamine	NNSM
N-Nitrosodiphenylamine	NNSPH
n-Nitrosodi-n-propylamine	NNSPR
N-Nitrosomethylethylamine	NNSME
N-Nitrosopiperidine	NNSPPRD
N-Nitrosopyrrolidine	NNSPYRL
5-Nitro-o-toluidine	TLDNONT5
Pentachlorobenzene	PECLBZ
Pentachloronitrobenzene	PECLNO2BZ
Pentachlorophenol	PCP
Phenacetin	PHNACTN
Phenanthrene	PHAN
Phenol	PHENOL
1,4-Phenylenediamine	ANLNAM4
Polychlorinated biphenyls (PCBs)	PCBS

TABLE VI (Continued)

Semi-Volatile Organic Compounds (continued)

<u>COC Description</u>	<u>Geotracker Code</u>
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
o,o,o-Triethyl phosphorothioate	TEPTH
1,3,5-Trinitrobenzene	TNB135

Chlorophenoxy Herbicides (USEPA Method 8151A):

<u>COC Description</u>	<u>Geotracker Code</u>
2,4-D	24D
Dinoseb	DINOSEB
2,4,5-TP (Silvex)	SILVEX
2,4,5-T	245T

Organophosphorus Compounds (USEPA Method 8141B):

<u>COC Description</u>	<u>Geotracker Code</u>
Atrazine	ATRAZINE
Chlorpyrifos	CLPYRIFOS
Thionazine	ZINOPHOS
Diazinon	DIAZ
Dimethoate	DIMETHAT
Disulfoton	DISUL
Parathion methyl	PARAM
Parathion ethyl	PARAE
Phorate	PHORATE
Simazine	SIMAZINE

TABLE VII
COMPOST PAD THICKNESS AND DRAINAGE CONTROLS

Inspection Type	Monitoring Frequency	Reporting Frequency
Operations Containment (verify compost operations are conducted within compost pad, perimeter berms intact) ¹	Weekly	Annually
Compost Pad Thickness Field Verification (each monument exposed must be reported and plotted on map)	Monthly	Annually
Compost Pad Grading and corresponding isopach map (volume of material needed to restore grade)	As required by Compost Pad Thickness Field Verification	Annually
Compost Pad Topographic Survey (maintain 3% grade) ²	Annually	Annually
Compost Pad Drainage Controls ³	Monthly/Daily	Annually

1. Inspections must include photographs as described in Compost Facilities Monitoring, A.6(d)(4)
2. Prepare map of survey results and report in the Annual Monitoring Report.
3. During rain events Discharger is required to inspect drainage controls on a daily basis.

TABLE VIII
COMPOST OPERATIONS STORAGE TANK AND SUMP MONITORING

Inspection Type	Parameter, units	Inspection Frequency¹	Reporting Frequency
Each storage tank	Freeboard ³ (0.5 feet)	Monthly/ Daily	Semiannual
Each sump	Freeboard ³ (0.5 feet)	Monthly/ Daily	Semiannual
Each storage tank	Remaining capacity at end of each day (%)	Monthly/ Daily	Semiannual
Each sump	Remaining capacity at end of each day (%)	Monthly/ Daily	Semiannual
Overflow from tanks and sumps ²	Yes/No	Monthly/ Daily	Semiannual

1. During rain events Discharger is required to inspect compost operations storage tanks, sump, and associated facilities on a daily basis.
2. Inspect and document whether or not there has been any overflow from the storage tanks or sumps. If tanks or sumps overflow, Discharger shall immediately contact Board staff by phone or email.
3. Measuring and reporting freeboard only required for open-ended containment systems where potential overtopping could occur due to wind conditions.

TABLE IX

COMPOST OPERATIONS COMPOST WASTEWATER DISCHARGE MONITORING

Metered Location	Parameter	Units	Monitoring Frequency¹	Reporting Frequency
Each Sump	Volume pumped/sump	Gallons	Monthly/ Daily	Semiannual
Volume hauled off-site ²	Volume hauled	Gallons	Monthly/ Daily	Semiannual
Tanks to POTW	Volume pumped to POTW/day	Gallons	Monthly/ Daily	Semiannual
Each J-Stand	Volume pumped and applied to compost piles	Gallons	Monthly/ Daily	Semiannual

1. During rain events Discharger is required to inspect compost operations compost wastewater discharge facilities on a daily basis.
2. The Discharger shall report the volume hauled and location hauled to, and shall include hauling receipts with the annual reports.

TABLE X
COMPOST WASTEWATER CHARACTERIZATION MONITORING PROGRAM

Field Parameters

Parameter	Geotracker Code	Units	Sampling Frequency	Reporting Frequency
Specific Conductance	SC	umhos/cm	Quarterly	Annually
Dissolved Oxygen	DO	mg/L ¹	Quarterly	Annually
pH	PH	pH units	Quarterly	Annually

Monitoring Parameters

Parameter	Geotracker Code	Units	Sampling Frequency	Reporting Frequency
Total Dissolved Solids	TDS	mg/L	Quarterly	Annually
Fixed Dissolved Solids	TFS	mg/L	Quarterly	Annually
Total Nitrogen	TOTN	mg/L	Quarterly	Annually
Biologic Oxygen Demand	BOD	mg/L	Quarterly	Annually
Phosphorus, Total as P	P	mg/L	Quarterly	Annually
Aluminum	AL	mg/L	Quarterly	Annually
Iron	FE	mg/L	Quarterly	Annually
Total Organic Carbon	TOC	mg/L	Quarterly	Annually
Ammonia, (un-ionized)	NH3	mg/L	Quarterly	Annually
Nitrogen, Nitrate-Nitrite	NO3NO2N	Mg/L	Quarterly	Annually
Specific Conductance	SC	umhos/cm	Quarterly	Annually
Total Coliform	COLIFORM	MPN/100mL	Quarterly	Annually
Fecal Coliform	FCOLIFORM	MPN/100mL	Quarterly	Annually

¹ Milligrams per liter

TABLE XI
COMPOST PAD THICKNESS AND DRAINAGE CONTROLS
FOR CORRECTIVE ACTION

Inspection Type	Monitoring Frequency	Reporting Frequency
Operations Containment (verify compost operations are conducted within compost pad, perimeter berms intact) ¹	Weekly	Monthly
Compost Pad Thickness Field Verification (each monument exposed must be reported and plotted on map)	Monthly	Monthly
Compost Pad Grading and corresponding isopach map (volume of material needed to restore grade)	As required by Compost Pad Thickness Field Verification	Monthly
Compost Pad Topographic Survey (maintain 3% grade) ²	Monthly	Monthly
Compost Pad Drainage Controls	Daily between 15 October and 15 May, and daily during rainfall events for the remainder of the year	Monthly

1. Inspections must include photographs as described in Compost Facilities Monitoring, A.6 (d)(4)
2. Prepare map of survey results and report monthly in the Corrective Action Monthly Report B.10.c.

TABLE XII
COMPOST OPERATIONS STORAGE TANK AND SUMP MONITORING
FOR CORRECTIVE ACTION

Inspection Type	Parameter, units	Inspection Frequency¹	Reporting Frequency
Each storage tank	Freeboard ³ (0.1 feet)	Daily	Monthly
Each sump	Freeboard ³ (0.1 feet)	Daily	Monthly
Each storage tank	Remaining capacity at end of each day (%)	Daily	Monthly
Each sump	Remaining capacity at end of each day (%)	Daily	Monthly
Overflow from tanks and sumps ²	Yes/No	Daily	Monthly

1. During rain events Discharger is required to inspect all facilities on an **hourly** basis as inspector safety permits.
2. Inspect and document whether or not there has been any overflow from the storage tanks or sumps. If tanks or sumps overflow, Discharger shall immediately contact Board staff by phone and follow-up with an email within 24 hours.
3. Measuring and reporting freeboard is only required for open-ended containment systems where potential overtopping could occur due to wind conditions.

TABLE XIII
COMPOST OPERATIONS COMPOST WASTEWATER DISCHARGE MONITORING
FOR CORRECTIVE ACTION

Metered Location	Parameter	Units	Monitoring Frequency	Reporting Frequency
Each Sump	Volume pumped/sump	Gallons	Daily	Monthly
Volume hauled off-site ¹	Volume hauled	Gallons	Daily	Monthly
Tanks to POTW	Volume pumped to POTW/day	Gallons	Daily	Monthly
Each J-Stand	Volume pumped and applied to compost piles	Gallons	Daily	Monthly

1. The Discharger shall report the volume hauled and location hauled to, and shall include hauling receipts in with the monthly reports.

**TABLE XIV
 LANDFILL GAS (LFG) CORRECTIVE ACTION MONITORING PROGRAM**

Parameter	Units	Sampling Frequency	Reporting Frequency
LFG Extraction Well Field (Only extraction well fields for WMUs in corrective action due to LFG related exceedances at WMU compliance points are required to be monitored)			
Gas concentrations at each well			
Methane	% by volume	Monthly	Semiannually
Carbon Dioxide	% by volume	Monthly	Semiannually
Oxygen	% by volume	Monthly	Semiannually
Remainder gas	% by volume	Monthly	Semiannually
Gas Temperature at each well	°F	Monthly	Semiannually
Gas Flow rate	CFM	Monthly	Semiannually
Gas Pressure at each well			
Initial static pressure in wellhead	inches H ₂ O	Monthly	Semiannually
Adjusted static pressure in wellhead	inches H ₂ O	Monthly	Semiannually
Flare Station			
Pressure into the LFG Flare	inches H ₂ O	Monthly	Semiannually
LFG Flow rate into the Flare	CFM	Monthly	Semiannually
VOCs ² by USEPA Method TO-15	µg/cm ³	Semiannually	Semiannually
Operating Hours	Hours	Continuous	Semiannually
Perimeter LFG Migration Monitoring Probes GP-1 through GP-15,			
Gas Concentration			
Methane	% by volume	Quarterly	Semiannually
Carbon Dioxide	% by volume	Quarterly	Semiannually
Oxygen	% by volume	Quarterly	Semiannually
Remainder gas	% by volume	Quarterly	Semiannually
Probe Pressure/Vacuum	inches H ₂ O	Quarterly	Semiannually
All Landfill Gas Corrective Action Monitoring Points in LF-1, LF-2, and LF-3:			
Gas Concentration			
Methane	% by volume	Monthly	Semiannually
Carbon Dioxide	% by volume	Monthly	Semiannually
Oxygen	% by volume	Monthly	Semiannually
Remainder gas	% by volume	Monthly	Semiannually
Probe Pressure/Vacuum	inches H ₂ O	Monthly	Semiannually
VOCs ² by USEPA Method TO-15	µg/cm ³	Semiannually	Semiannually

² Particularly those VOCs historically detected in LCRS sumps S-1 through S-5 and/or in groundwater monitoring wells.