

**MONITORING AND REPORTING PROGRAM NO. R1-2022-0010  
SUPERSEDING ORDER NO. R1-2015-0006  
For  
SONOMA COUNTY CENTRAL DISPOSAL SITE  
LANDFILL 1, LANDFILL 2 PHASES I-V, AND ROCK EXTRACTION AREA  
CLASS III LANDFILLS  
and  
CLASS II SURFACE IMPOUNDMENTS  
COUNTY OF SONOMA and REPUBLIC SERVICES OF SONOMA COUNTY, INC.**

The County of Sonoma and Keller Canyon Landfill, a subsidiary of Republic Services of Sonoma County, Inc. (hereafter "Discharger") owns and/or operates the Sonoma County Central Disposal Site. This Monitoring and Reporting Program (MRP) is issued pursuant to California Water Code (Water Code) section 13267 which authorizes the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. The technical and monitoring reports required by this Order are necessary to ensure compliance with the Waste Discharge Requirements (WDRs) Order No. R1-2022-0010 and to protect human health and waters of the state. The costs of the technical or monitoring reports required by this Order bear a reasonable relationship to the need for these reports and the benefit to be gained by these reports.

This MRP establishes monitoring and reporting requirements, which are necessary to assure the discharges of waste that could impact water quality complies with waste discharge requirements and water quality objectives. This MRP may be modified, as necessary by the Regional Water Board Executive Officer. Additionally, the Discharger shall maintain water quality monitoring systems that are appropriate for detection monitoring and corrective action, and that comply with Subchapter 3, Chapter 3, Subdivision 1, Division 2, Title 27, California Code of Regulations (CCR), and any other applicable provisions therein. Pursuant to Water Code section 13268, failure to submit the report(s) as described by this Order is a misdemeanor and may subject the Discharger to an administrative civil liability if the reports are not received by the deadline.

**I. MONITORING AND OBSERVATION SCHEDULE**

**A. SITE INSPECTIONS**

The Discharger must inspect the landfill facility in accordance with the following schedule, and record (including photographs, when appropriate), at a minimum, the observations listed below.

1. Inspection Schedule

At least monthly and during or within 24 hours of each storm event that produces stormwater runoff and/or a storm event that produces a minimum of 1-inch of rain within a 24-hour period.

Standard Observations

- a. At the waste management units (WMU) and along the perimeter of the WMUs:

- i. Evidence of ponded water at any point in WMU disposal areas.
- ii. Evidence of erosion and/or exposed refuse within WMU disposal areas.
- iii. Evidence of waste in the drainage system (e.g., drainage channels, stormwater sediment retention basins).
- iv. Evidence of damage to all drainage and containment systems.
  - b. At waste transport/processing/diversion/recycling areas:
    - i. Evidence of ponded water contacting waste or diverted/recycled materials.
    - ii. Evidence of run-on into processing/diversion/recycling areas.
    - iii. Evidence of impacted stormwater runoff or waste or diverted/recycled materials in the drainage system.
  - c. Along the landfill facility perimeter:
    - i. Evidence of liquid offsite discharge or onsite run-on, from/to WMUs and waste processing/diversion/recycling areas of the landfill, estimated size of affected area and flow rate. Affected areas shall be shown on a map.
    - ii. Evidence of odors – characterization, source, and distance odor detected from the source.
    - iii. Evidence of trespass/illegal access and damage to the cover system, structures, monitoring points, or any other onsite equipment.
  - d. For receiving waters (i.e., any surface water body that may receive surface or groundwater containing landfill wastes including stormwater runoff and/or leachate):
    - i. Floating and suspended materials of waste origin – presence or absence, source, and size of affected area.
    - ii. Discoloration and turbidity – description of color, source, and size of affected area.
    - iii. Evidence of odors – presence or absence, characterization, source, and distance of odor detected from source
    - iv. Evidence of beneficial use – presence of water-associated wildlife.
    - v. Estimated flow rate to the receiving water.
    - vi. Weather conditions – wind direction and estimated velocity, total precipitation during the previous five days and on the day of observation.

## **B. DRAINAGE SYSTEM INSPECTIONS**

The Discharger must inspect all drainage control systems following each onsite runoff-producing storm event and record the following:

1. General conditions (e.g., evidence of excessive sediment or vegetation requiring cleanout, poor drainage, erosion, or ponding due to settlement, structural integrity requiring maintenance/repair).
2. Whether stormwater sediment retention basins (if applicable) and drainage ditches contain liquids and if basins are discharging.
3. Whether best management practices to prevent impacts to stormwater (e.g., erosion control, sediment control, waste containment, stormwater diversion) are implemented and performing as specified in the landfill's Wet Weather Preparedness Plan and Storm Water Pollution Prevention Plan (SWPPP) required by the Statewide General Permit for Storm Water Discharges Associated with Industrial Activities Order No. WQ 2014-0057 as amended<sup>1</sup> (Industrial General Permit).
4. Steps taken to correct any problems found during inspections and date(s) when corrective action was taken (include photographic documentation).

#### **C. RAINFALL DATA**

The Discharger must record the following information:

1. Total daily precipitation, in inches, each month.
2. Precipitation, in inches, and return rating (25-year, 100-year, etc.) of the most intense 24-hour rainfall event occurring each month.
3. Number and date of storms (greater than or equal to one inch in 24 hours) received each month.

#### **D. INTAKE MONITORING**

The Discharger must maintain a daily record of the waste stream. The intake daily records shall be maintained at the Discharger's offices in accordance with Part II.C of this MRP and are to be made available to North Coast Regional Water Board staff upon request to review and/or copy. The record must include the following:

1. Weight (in tons) of waste received.
2. Running totals of tons received, tons remaining for waste placement, and remaining site life expectancy (in years).
3. Current fill area (in acres).
4. Waste type and diversion quantities.
5. Log of random load checking program. The log must contain a record of all load checks; for refused loads, the Discharger must record the following

---

<sup>1</sup> Industrial General Permit Order 2014-0057-DWQ is superseded by the Industrial General Permit Order 2014-0057-DWQ as amended in 2015 and 2018 as of July 1, 2020.

information including the date, type of waste refused, and the name, address, and phone number of the party attempting to dispose of the waste.

6. Log of all loads that require special handling or special characterization prior to discharge to comply with waste discharge requirements (e.g., contaminated soils, semi-liquid loads, sewage sludge or biosolids, brines, asbestos loads, and other). The log must document volume or weight of waste, characterization testing results, and disposal location (e.g., latitude, longitude, and elevation).

## **E. CONTROL SYSTEMS**

The Discharger must inspect the leachate collection and removal systems (LCRS), any leak detection and removal system (LDRS) or groundwater subdrains, and landfill gas collection and removal system (if applicable), and record the following information:

1. LCRS, LDRS, and Groundwater Subdrains
  - a. Weekly – System integrity and general operational status, volume of leachate and groundwater collected (gallons with monthly, semiannual, and annual volume subtotals), and disposal method, if more than one disposal method is used, record volume specific for each method. Documentation of scheduled and unscheduled maintenance.
  - b. Annually – LCRS testing and demonstration, per CCR Title 27 section 20340(d) or Executive Officer approved engineered alternative pursuant to CCR Title 27 section 20380(e). Report results as part of the Annual Summary Report required by this MRP. The Discharger must develop results of annual testing in a manner that makes one year's test comparable to previous and subsequent tests.
  - c. All lined WMUs will have the location of their respective liners surveyed and markers placed at readily observable locations observable by landfill operations staff discharging leachate back to lined modules, and by state inspectors.
2. Landfill Gas Collection and Removal System
  - a. Monthly – System integrity and general operational status, and volume of landfill gas extracted with semiannual and annual volume sub-totals. Document how volume measurement is made. Documentation of scheduled and unscheduled maintenance.
  - b. Annually – Analytical results of landfill gas monitoring (if applicable).

## **F. MONITORING PERIODS, LOCATIONS, AND REQUIREMENTS**

### 1. Monitoring Periods

- a. Quarterly – The 1st through 4th quarter monitoring periods are January 1 – March 31, April 1 – June 30, July 1 – September 30, and October 1 – December 31, respectively.
- b. Semiannually – The 1st and 2nd semiannual monitoring periods are January 1 – June 30, and July 1 – December 31, respectively.
- c. Annually – The annual monitoring period is from January 1 – December 31.

### 2. Monitoring Points

- a. Monitoring points are identified in Attachments: Table A-1 (Elevations) Table A-2 (Surface Water), Table A-3 (Leachate), Table A-4 (Groundwater), and as shown in R1-2022-2010, Attachment J .
- b. Monitoring Tables Provisions
  - i. For all new Groundwater Monitoring Points, the Discharger shall conduct quarterly monitoring for four consecutive quarters. The first quarterly sample shall include the constituents of concern (COCs) identified in the tables.<sup>2</sup> Detection or corrective action monitoring parameters shall be collected for the subsequent three quarterly monitoring rounds. After completing the initial quarterly samples, the frequency is as specified in Table A-4, except as provided under Part III D.
  - ii. The Discharger shall sample and analyze for COCs as specified in Part I F.4 except as provided under Part III D.
  - iii. The Discharger shall collect and analyze landfill gas samples (if applicable) as specified in Part I F.6 of this MRP.
  - iv. The Discharger shall collect and analyze stormwater samples as specified in Part I F.5 of this MRP.
  - v. In the event of a leachate seep or spill the Discharger shall monitor the seep or spill as specified in Part IV D.1 of this MRP.

---

<sup>2</sup> Pursuant to CCR Title 27 Constituents of Concern means any waste constituent(s), reaction product(s), and hazardous constituent(s) that is reasonably expected to be in or derived from waste contained in a waste management unit. COCs include compounds that could reasonably be expected to have been disposed in a waste management unit but is not indicative that these compounds have been disposed or detected in groundwater.

### 3. Monitoring Parameters and Constituents of Concern

- a. Monitoring Parameters and COCs are identified in attached Tables A-2 (Surface Water), A-3 (Leachate) A-4 (Groundwater) and MRP Attachment A-1-D-5.
- i. For any given monitored medium, the Discharger must collect samples from monitoring points with a span not exceeding 30 days within a given monitoring period and collect samples in a manner that ensures sample independence to the greatest extent feasible CCR, Title 27, section 2550.7(e)(12)(B).
- ii. Laboratory analytical methods include any approved United States Environmental Protection Agency (US EPA) method that provides the lowest practicable detection limit or as specified in an Executive Officer approved Sampling and Analysis Plan in accordance to Part II A of this MRP.
- iii. Laboratory-derived indicator parameters/constituents must be evaluated using statistical, non-statistical, and graphical assessment methods, as required by Part III.
- iv. For groundwater samples, all metals must be field filtered prior to laboratory analysis unless otherwise specified or approved in accordance with Part II A of this MRP.
- v. Units are defined as follows:  $\mu\text{mhos/cm}$  – micromhos per centimeter;  $\text{mg/L}$  – milligrams per liter;  $^{\circ}\text{F}/^{\circ}\text{C}$  – degrees Fahrenheit/Celsius; NTU – nephelometric turbidity units;  $\mu\text{g/L}$  – micrograms per liter; RPD – relative percent difference
- vi. Volatile Organic Compounds (VOCs) include all VOCs detectable using US EPA Method 8260B, including at least all 47 organic constituents listed in Appendix I to Code of Federal Regulations Title 40 Part 258 (40 C.F.R. Part 258 or “Subtitle D”), oxygenates (MTBE, TAME, DIPE, EDB, and 1,2 DCA), and all unidentified peaks whenever practical, as specified in Part II.A.6 of this MRP.
- vii. The Discharger must collect and analyze samples for COCs once every five years at each of the landfill’s surface water, leachate, and groundwater monitoring points. Groundwater wells that have not previously been sampled for COCs must be sampled and analyzed for all COCs within six months of this MRP becoming effective. Additionally, approximately six months after installing a new groundwater monitoring point, the Discharger must collect and analyze samples for COCs.

4. Stormwater Monitoring

- a. Stormwater monitoring shall be performed in accordance with the Industrial General Permit (IGP) Order No. 2014-0057-DWQ, or subsequent IGP Order revisions.
- b. Facility stormwater monitoring shall follow the protocols, procedures, and methods included in the most recent version of the SWPPP prepared in accordance with the Industrial General Permit.
- c. Stormwater monitoring data and documentation shall be maintained onsite and uploaded to the Stormwater Multiple Application Report Tracking System (SMARTS) as required by the Industrial General Permit.
- d. Evidence of stormwater-related seepage or damage to facility containment systems shall be noticed, documented, monitored, and mitigated as described in Section IV.D (Contingency Response) of this MRP.

5. Groundwater Flow Rate and Direction

- a. Groundwater and leachate elevation monitoring points are identified in Table A-1 and shown in Figure A-1.
- b. For each monitored groundwater body, the Discharger must measure the water elevation in each well or piezometer, at least quarterly, including the times of expected highest and lowest elevations of the water level, and determine the presence of vertical gradients, and groundwater flow rate and direction for the respective groundwater body.<sup>3</sup>
- c. Groundwater elevations for all wells in each groundwater body must be measured within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater flow rate and direction (40 C.F.R part 258.53(d)).
- d. The Discharger must compare observed groundwater characteristics with those from previous determinations, noting the appearance of any trends and of any indications that a change in the hydrogeologic conditions. The Discharger must evaluate groundwater separation from WMU using critical groundwater cross sections.

**II. SAMPLE COLLECTION AND ANALYSIS**

The Discharger must collect and analyze samples in a manner that assures the quality of the monitoring data. Unless otherwise indicated, the Discharger must report all sampling and analysis as outlined in Section IV.

---

<sup>3</sup> The groundwater elevation monitoring frequency may be decreased to semiannually if the Discharger provides sufficient site-specific justification (e.g., stable groundwater, groundwater separation, groundwater receptors).

## A. SAMPLING AND ANALYTICAL METHODS

The Discharger must perform sample collection, storage, and analysis according to the most recent version of Standard (US EPA) methods (US EPA publication “SW-846”), and in accordance with a Sampling and Analysis Plan approved by the Regional Water Board’s Executive Officer. Laboratories analyzing monitoring samples shall be certified by the State of California Environmental Laboratory Accreditation Program (ELAP), in accordance with Water Code section 13176, and must include quality assurance/quality control data with their reports. The director of the laboratory whose name appears in the certification must supervise all analytical work in his/her laboratory and must sign reports of such work submitted to the Regional Water Board. In addition, the Discharger is responsible for seeing that the laboratory analysis of samples from all Monitoring points meets the following restrictions:

### 1. Method Selection

The methods of analysis and the detection limits used must be appropriate for the expected concentrations. For detection monitoring of any constituent or parameter that is found in concentrations which produce more than 90% nonnumerical determinations (i.e., trace) in historical data for that medium, the analytical method having the lowest method detection limit (MDL)<sup>4</sup> must be selected from among those methods which would provide valid results considering any matrix effects<sup>5</sup> involved.

### 2. Trace Results

The Discharger must report trace results [i.e., results falling between the MDL and the practical quantitation limit (PQL)]<sup>6</sup> and the result must be

---

<sup>4</sup> The MDL is the lowest concentration at which a given laboratory, using a given analytical method to detect a given constituent, can differentiate with 99% reliability, between a sample which contains the constituent and one which does not. The MDL must reflect the detection capabilities of the specific analytical procedure and equipment used by the laboratory.

<sup>5</sup> Matrix effect refers to any increase in the MDL or PQL for a given constituent because of the presence of other constituents, either of natural origin or introduced through a release, that are present in the sample being analyzed.

<sup>6</sup> The lowest acceptable calibration standard (acceptable as defined for a linear response or by actual curve fitting) times the sample extract dilution factor times any additional factors to account for matrix effect. The PQL must reflect the quantitation capabilities of the specific analytical procedure and equipment used by the laboratory. PQLs reported by the laboratory must not simply be restated from US EPA analytical method manuals. Laboratory derived PQLs are expected to be consistent with published US EPA estimated quantitation limits (EQL).



accompanied by both the (nominal or estimated) MDL and PQL values for that analytical run.

3. Nominal or Estimated MDL and PQL

The laboratory must derive MDLs and PQLs for each analytical procedure, according to State of California laboratory accreditation procedures. Both limits must reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the laboratory, rather than simply being quoted from US EPA analytical method manuals. If the laboratory suspects that, due to a change in matrix or their effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived MDL/PQL values, the laboratory must flag the results accordingly and the laboratory must include an estimate of the MDL/PQL achieved.

4. Quality Assurance/Quality Control (QA/QC) Data

The Discharger and laboratory must report QA/QC data along with the sample results to which it applies. The laboratory must report sample results unadjusted for blank results or spike recovery. The QA/QC data submittal must include:

- a. Method, equipment, and analytical detection limits.
- b. Recovery rates, an explanation for any recovery rate that is outside the USEPA specified recovery rate.
- c. Results of field, trip, equipment, and method blanks.
- d. Results of spiked and surrogate samples.
- e. Frequency of quality control analysis.
- f. Chain of custody logs.
- g. Name and qualifications of the person(s) performing the analyses.

5. Common Laboratory Contaminants

Upon receiving written approval from the Executive Officer, the Discharger can use an alternative statistical or non-statistical procedure for determining the significance of analytical results for a constituent that is a common laboratory contaminant [i.e., methylene chloride, acetone, 2-butanone, diethylhexyl phthalate, di-n-octyl phthalate, disulfide, and bis (2-ethylhexyl)phthalate] during any given monitoring period in which QA/QC samples show evidence of laboratory contamination for that constituent. The Discharger must report and flag analytical results involving detection of these analytes for easy reference by Regional Water Board staff.

6. Unknowns

For unidentified chromatographic peaks, the Discharger must request the laboratory report Tentatively Identified Compounds (TICs), along with an estimate of the concentration of the unknown analyte. When unidentified chromatographic peaks are encountered, the laboratory must perform second column or second method confirmation procedures to attempt to identify and more accurately quantify the unknown analyte(s). The Discharger must report the TIC results as estimated (i.e., J flag or qualifier code).

7. Contaminants in QA/QC Samples

In cases where contaminants are detected in QA/QC samples (i.e., field, trip, equipment, method blanks), the Discharger must appropriately flag the accompanying sample results.

**B. CONCENTRATION LIMIT DETERMINATION**

The Discharger must propose concentration limits for each COC and monitoring parameter in accordance with CCR Title 27 20400 and as outlined in Section IV.

1. To establish concentration limits for COC and monitoring parameters detected in greater than 10 percent of a medium's samples the Discharger must:
  - a. Statistically analyze existing monitoring data (Section III), and propose, to the Executive Officer, statistically derived concentration limits for each monitoring parameter at each monitoring point for which sufficient data exists.
  - b. In cases where sufficient data for statistically determining concentration limits do not exist, the Discharger must collect samples and analyze for monitoring parameter(s), which require additional data. Once sufficient data are obtained the Discharger must submit proposed concentration limit(s) to the Executive Officer for approval. This procedure must take no longer than two calendar years.
  - c. Sample and analyze new monitoring points, including any added by this Order, until sufficient data are available to establish a proposed concentration limit for all COCs and monitoring parameters. Once sufficient data are obtained the Discharger must submit the proposed concentration limit(s) to the Executive Officer for approval. This procedure must take no longer than two calendar years.
2. In cases where the monitoring parameter's MDL is exceeded in less than 10 percent of historical samples, the MDL is the concentration limit.
3. Once established, the Discharger must review concentration limits at least annually and propose new concentration limits, when appropriate.

### **C. RECORDS TO BE MAINTAINED**

The Discharger or laboratory must maintain records in accordance with CCR Title 27 section 21720(f) and 40 C.F.R. 258.29, and retain them for a minimum of five years. The Discharger must extend the period of retention during any unresolved litigation or when requested by the Executive Officer. Such records must show the following for each sample:

1. Identification of sample and monitoring point from which the sample was taken, along with the identity of the individual who obtained the sample.
2. Date and time of sampling.
3. Date and time that analyses were started and completed, and the name of personnel performing each analysis.
4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used.
5. Results of analyses, and MDL and PQL for each analysis.
6. A complete chain of custody log.

### **III. DATA ANALYSIS**

Unless otherwise indicated, the Discharger must report all data analysis as outlined in Section IV.

#### **A. STATISTICAL ANALYSIS**

For detection monitoring, the Discharger must use statistical methods to analyze indicator monitoring parameters that exhibit concentrations that equal or exceed their respective MDL in at least 10 percent of applicable historical samples. The Discharger may propose and use any statistical method that meets the requirements of CCR Title 27, section 20415(e)(7). The discharger may also propose an alternative analysis method for constituents that occur naturally in groundwater and that are not clearly associated with landfill leachate or landfill gas. All statistical methods and programs proposed by the Discharger are subject to Executive Officer approval.

#### **B. NON-STATISTICAL ANALYSIS**

For detection monitoring, the Discharger must use the following non-statistical method for analyzing constituents which are detected in less than 10 percent of applicable historical samples. This method involves a two-step process:

1. For constituents to which this non-statistical method applies, compile a specific list of constituents that exceed their respective MDL. The Discharger must compile the list based on either data from the single sample or in cases

of multiple independent samples, from the sample that contains the largest number of constituents.

2. Evaluate whether the listed constituents meet either of two possible triggering conditions. Either the list from a single sampling location contains two or more constituents or contains one constituent that equals or exceeds its PQL. If either condition is met, the Discharger must conclude that a release is tentatively indicated and must immediately implement the appropriate re-test procedure under Section III.D.

### **C. GRAPHICAL ANALYSIS**

For detection monitoring, the Discharger must graphically evaluate the complete history of laboratory analytical data as outlined in Section IV.B.3.

1. The Discharger must evaluate long-term trends and variations in the laboratory analytical data.
2. For major cation/anions (calcium, magnesium, sodium, potassium, bicarbonate, chloride, sulfate), the Discharger must evaluate leachate, leak detection systems, groundwater subdrains, and groundwater monitoring wells using Piper and Stiff diagrams.
3. If graphical methods indicate a tentative release, the Discharger must carry out the requirements of Section IV.D.4.

### **D. RE-TEST PROCEDURE**

1. If the Discharger concludes that a release has been tentatively indicated, the Discharger must carry out the reporting requirements of Section IV.D.2 and, within 30 days of receipt of analytical results, collect two new suites of samples for the indicated COC or monitoring parameter(s) at each indicating monitoring point, collecting at least as many samples per monitoring point as were used for the initial test.
2. Analyze each of the two suites of re-test analytical results using the same statistical method (or non-statistical comparison) that provided the tentative indication of a release. If the test results of either (or both) of the re-tested data suites confirm the original indication, the Discharger must conclude that a release has been discovered and must carry out the requirements of Section IV.D.4.
3. The Discharger must carry out re-tests only for the monitoring point(s) for which a release is tentatively indicated, and only for the COC or monitoring parameter(s) which triggered the indication.

## IV. REPORTING

### A. ELECTRONIC SUBMITTAL

Dischargers must transmit correspondence and other information electronically in Portable Data Format (PDF). Electronic documents can be submitted to [northcoast@waterboards.ca.gov](mailto:northcoast@waterboards.ca.gov) attention: Land Disposal Program, and will be distributed to the appropriate staff person. Informal written correspondence (i.e., email) can be sent directly to the appropriate staff person.

Pursuant to CCR Title 23 Division 3 Chapter 30 and Title 27 Division 3 and in accordance with the reporting requirements of this MRP, all technical reports including the monitoring site information, data, and reports required below, must be submitted electronically to the State Water Resources Control Board's internet-accessible database system (GeoTracker) including:

1. Boring logs as a GEO\_BORE PDF file. Boring logs must be prepared by an appropriate registered professional and include monitoring well screen depth and interval.
2. Groundwater monitoring well horizontal sampling location longitude (X) and latitude (Y), and top-of-casing elevation (Z) as a GEO\_XY text file and GEO\_Z text file, respectively. Collection of information related to the exact location of groundwater wells, required by CCR Title 12 section 2729-2729.1, constitutes "land surveying," as the term is defined in section 8726 of the Business and Profession Code and the collection of data is restricted to those who are licensed to practice land surveying in California.
3. Site map as a GEO\_MAP file. The acceptable format for the GEO\_MAP file is PDF (preferred), GIF, TIFF (TIF), or JPEG (JPG). The landfill site map includes landfill facility information (e.g., property line, waste footprint, waste management units, leachate tanks, buildings, waste processing/diversion/recycling areas, surface waters, ponds, stormwater discharge points) and all current and historical monitoring locations including groundwater monitoring wells, boreholes, transient sampling points (i.e. direct push subsurface or surface sampling points), landfill gas probes, or any other field points utilized for leachate, landfill gas, soil, groundwater, surface water, or stormwater sampling.
4. Groundwater well measurement information for each sampling event as a GEO\_WELL file. Measurement must be completed from the top of the well casing to the groundwater surface to the nearest +/-0.01-foot accuracy.
5. Analytical sampling results for each sampling event as an Electronic Deliverable Format (EDF) file.
6. Complete monitoring report for regulatory review as a GEO\_REPORT PDF file. The monitoring report should include the signed transmittal sheet, text,

graphs, diagrams, tables, maps, figures, and appendices that would have been included in a hard copy paper report.

## **B. MONITORING REPORT**

The Discharger must submit a Monitoring Report semiannually by January 31 and July 31 of each year. Submit the Monitoring Reports in an electronic format, with transmittal letter, text, tables, figures, laboratory analytical data, and appendices in a single PDF for the entire report. The Monitoring Report must address the landfill's monitoring program and must include, but should not be limited to the following:

### **1. Letter of Transmittal**

A letter transmitting the essential points must accompany each Monitoring Report. The letter must include a discussion of violations that occurred since the last such report was submitted. If the Discharger has not discovered new violations since the last submittal, the Discharger must state this in the transmittal letter. The Discharger must sign the transmittal letter and include the following statement:

"I certify under penalty of perjury I have personally examined and am familiar with the information submitted in this document and all attachments and, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of a fine and imprisonment."

### **2. Compliance Summary**

The summary must discuss compliance with WDR Order No. R1-2022-0010 concentration limits, release indications, and any corrective actions taken.

### **3. Graphical Presentation of Data**

For each monitoring point in each medium, submit, in graphical format, the complete history of laboratory analytical data. Graphs must effectively illustrate trends and/or variations in the laboratory analytical data. Each graph must plot a single constituent concentration over time at one (for intra- well comparison) or more (for inter-well comparisons) monitoring points in a single medium. Maximum contaminant levels (MCL) and/or concentration limits must be graphed along with constituent concentrations where applicable. When multiple samples are taken, graphs must plot each datum, rather than plotting mean values.

For leachate, leak detection systems, groundwater subdrains, and groundwater monitoring wells, evaluate cation/anion balance using Piper and/or Stiff diagrams.

Determine horizontal and vertical gradients, groundwater flow rate, and flow direction for each respective groundwater body. This data must be presented on a figure that depicts groundwater contours, flow directions, and gradient. Include one figure for each groundwater level monitoring event in the semiannual monitoring report. If appropriate, include figures for critical groundwater/WMU cross sections to evaluate groundwater separation from WMUs.

4. Map(s)

The landfill base map for the Monitoring Report must consist of a current aerial photograph or include relative topographical features, along with monitoring points and features of the landfill facility (e.g., surface waters, drainage facilities, stormwater discharge points, WMU disposal areas, scale house, buildings, waste processing/diversion/recycling areas).

5. Corrective Action Summary

Discuss significant aspects of any corrective action measures conducted during the monitoring period and the status of any ongoing corrective action efforts, including constituent trend analysis.

6. Laboratory Results

A tabular report and summary discussion of laboratory results and statements demonstrating compliance with Section II including the current monitoring periods laboratory data sheets. Also provide results of analyses performed at the landfill that are outside of the requirements of this MRP and are water quality related.

7. Sampling Summary

For each monitoring point addressed by the report, describe and summarize:

- a. The method and time of water level measurement.
- b. The method of purging and purge rate and well recovery time.
- c. The field parameter readings. For each monitoring point addressed by the report, a description of the type of sampling device used, its placement for sampling, and a description of the sampling procedure (number of samples, field blanks, trip blanks, and duplicate samples taken; the date and time of sampling; the name and qualification of the person taking the samples; and description of any anomalies).

8. Pollution Control Systems

A summary of the total volume of leachate or water collected each month and disposal method(s) since the previous Monitoring Report for pollution control systems (e.g., LCRS, LDRS, groundwater subdrain, gas condensate). Also include fluid level measurements in LCRS and LDRS, along with transducer

calibration records, and whether liquid was observed/removed from the groundwater subdrain.

9. General Discussion

A summary of site inspections, drainage system inspections, and rainfall data for the landfill recorded during the monitoring period (Section I).

**C. ANNUAL SUMMARY REPORT**

The Discharger must submit an annual report to the Regional Water Board covering the previous monitoring year. The annual monitoring period ends on December 31 each year. Submit this Annual Summary Report no later than February 15 of each year. The Discharger may combine the Annual Summary Report with the second semiannual Monitoring Report of the year. The Annual Report must include the information outlined in Section IV.B above and the following:

1. Discussion

Include a comprehensive discussion of the compliance record as it relates to Waste Discharge Requirements Order No. R1-2022-0010, a review of the past year's significant monitoring system and operational changes, a summary of corrective action results and milestones, and a review of construction projects, with water quality significance, completed or commenced in the past year or planned for the upcoming year.

2. Concentration Limit Review

Proposed concentration limits for all COC and monitoring parameters. The Discharger must review concentration limits a minimum of annually and revise them as necessary. The Discharger must discuss data collected during the past year and consider for inclusion in, and determination of, proposed concentration limits for the coming year. For statistical concentration limits that are changed from the previous year, include a comprehensive discussion of the proposed concentration limit for Executive Officer review and consideration.

3. Analytical Data

Complete historical analytical data record presented in a tabular form in Excel™ format or in another file format acceptable to the Executive Officer.

4. Pollution Control Systems

Results of the annual pollution control systems testing, as required by Section I.E. The Discharger must verify that disposal methods for leachate or impacted groundwater are appropriate based on annual sampling results.

5. Final Cover



Most recent final cover survey as required by the Waste Discharge Requirements Order No. R1-2022-0010 and a summary of final cover repairs. The Discharger must maintain records of cumulative waste subsidence or settlement in final cover areas based on the most recent and historical final cover surveys. The Discharger must document final cover repairs (e.g., adding vegetative soils to restore grading and/or prevent ponding) with sufficient detail to facilitate future evaluations of final cover differential settlement.

6. Map(s)

A map, or set of maps, that indicates the type of cover material in place (final, long-term intermediate, or intermediate) over inactive and completed areas.

**D. CONTINGENCY RESPONSE**

1. Leachate Seep/Spill

The Discharger must, within 24 hours, report by telephone concerning the discovery of previously unreported seepage from the WMU. The Discharger must submit a written report within seven days, containing at least the following information:

- a. A map showing the location(s) of seepage along with photographic documentation.
- b. An estimate of the flow rate and duration of seep.
- c. Location of sample(s) collected for laboratory analyses. Unless otherwise directed by North Coast Water Board staff, the Discharger must sample all leachate seeps and spills, and applicable downgradient surface water or stormwater monitoring locations for the monitoring parameters in Table A-2. In the event multiple seeps occur in a similar localized area (slope or bench), the Discharger may use professional judgment to reduce the number of leachate seep samples provided the Discharger collects a representative sample. The Discharger must photo document sample location, all observed seeps/spills, and document the sample location(s) on a map or diagram. The Discharger is also required to sample stormwater in accordance with Section I.F.5.
- d. A description of the nature of the discharge (e.g., pertinent observations and analysis).
- e. A summary of corrective measures both taken and proposed.

2. Initial Release Indication Response

Should the initial statistical or non-statistical comparison (under Section III.A or B) indicate that a new release is tentatively identified, the Discharger must:

- a. Within 24 hours, notify the North Coast Water Board verbally or by email of the monitoring point(s) and constituent(s) or parameter(s) involved.
- b. Provide written notification by certified mail within seven days of such determination.
- c. Either of the following:
  - i. Carry out a discrete re-test in accordance with Section III.D. If the re-test confirms the existence of a release or the Discharger fails to perform the re-test, the Discharger must carry out the requirements of Section IV;
  - ii. D.4. In any case, the Discharger must inform the North Coast Regional Water Quality Control Board of the re-test outcome within 24 hours of results becoming available, following up with written results submitted by certified mail within seven days; or
  - iii. Make a determination, in accordance with CCR Title 27, section 20420(k)(7), that a source other than the WMU(s) caused the release or that the evidence is an artifact caused by an error in sampling, analysis, or statistical evaluation or by natural variation in the groundwater, surface water, or the unsaturated zone.

### 3. Physical Evidence of a Release

If either the Discharger or the Executive Officer determines that there is significant physical evidence of a new release pursuant to CCR Title 27, section 20385(a)(3), the Discharger must conclude that a release has been discovered and must:

- a. Within seven days notify the Executive Officer of this fact by certified mail (or acknowledge the Executive Officer's determination).
- b. Carry out the requirements of Section IV.D.4. for potentially affected medium.
- c. Carry out any additional investigations stipulated in writing by the Executive Officer for the purpose of identifying the cause of the indication.

### 4. Release Discovery Response

If the Discharger concludes that a new release has been discovered the following steps must be carried out:

- a. If this conclusion is not based upon monitoring for COC, the Discharger must sample for COC at monitoring points in the affected medium. Within seven days of receiving the laboratory analytical results, the Discharger must notify the Executive Officer, by certified mail, of the concentration of COC at each Monitoring Point. This notification must include a synopsis

showing, for each monitoring point, those constituents that exhibit an exceedance.

- b. The Discharger must, within 90 days of discovering the release, submit to the Executive Officer a Revised Report of Waste Discharge proposing an Evaluation Monitoring and Reporting Program that:
  - i. Meets the requirements of CCR Title 27, section 20420 and section 20425; and
  - ii. Satisfies the requirements of 40 C.F.R. section 258.55(g)(1)(ii) by committing to install at least one monitoring well directly down-gradient of the center of the release.
- c. The Discharger must, within 180 days of discovering the release, submit to the Executive Officer a preliminary engineering feasibility study meeting the requirements of CCR Title 27, section 20420.
- d. The Discharger must immediately begin delineating the nature and extent of the release by installing and monitoring assessment wells as necessary to assure that the Discharger can meet the requirements of CCR Title 27, section 20425 to submit a delineation report within 90 days of when the Executive Officer directs the Discharger to begin the Evaluation Monitoring Program.

#### 5. Release Beyond Facility Boundary

Any time the Discharger or the Executive Officer concludes that a release from the WMU has proceeded beyond the landfill facility boundary, the Discharger must notify Affected Persons who either own or reside upon the land that directly overlies any part of the plume.

### **E. COMPLIANCE PERIOD**

The compliance period is the number of years equal to the active life of the solid waste management unit plus the closure period. Each time the WQPS is exceeded (i.e., a release is discovered), the SWDS begins a compliance period on the date the Regional Water Board directs the Discharger to begin an evaluation monitoring program. If the Discharger's corrective action program has not achieved compliance with the WQPS by the scheduled end of the compliance period, the compliance period is automatically extended until the SWDS has been in continuous compliance for at least three consecutive years.

Any person aggrieved by this action of the North Coast Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date that this Order becomes final, except that if the thirtieth day following the date that this Order becomes final falls on a Saturday, Sunday, or

state holiday (including mandatory furlough days), 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 applicable to filing petitions may be found on the Internet at: [https://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality/](https://www.waterboards.ca.gov/public_notices/petitions/water_quality/) or will be provided upon request.

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

Ordered by: \_\_\_\_\_  
Matthias St. John  
Executive Officer

Attachments: Tables A1-A4  
MRP-Attachment A-1–D-5, Constituents of Concern and Approved  
EPA Analytical Methods

**ATTACHMENTS**

**Table A-1 LEACHATE AND GROUNDWATER ELEVATION MONITORING PROGRAM Central Disposal Sites**

<b>WELL ID</b>	<b>GEOLOGIC UNIT</b>	<b>MONITORING FREQUENCY</b>	<b>VERTICAL GRADIENT WELL PAIRS</b>
Leachate			
P-02	LF 1 Leachate	Quarterly	
P-04	LF 1 Leachate	Quarterly	
P-10R	LF 1 Leachate	Quarterly	
P-11	LF 1 Leachate	Quarterly	
P-12	LF 1 Leachate	Quarterly	
LF2 Well/Sump	LF 2 Leachate	Quarterly	
Groundwater			
A-1R	Alluvium	Quarterly	A-1R/F-11
A-4	Alluvium	Quarterly	A-4/A-5
A-7	Alluvium	Quarterly	
A-8	Alluvium	Quarterly	
LP-1	Alluvium	Quarterly	
MW-3A	Alluvium	Quarterly	MW-3A/MW-3R
A-5	Alluvium-Franciscan	Quarterly	A-4/A-5
HA-1	Alluvium-Franciscan	Quarterly	
MW-3R	Alluvium-Franciscan	Quarterly	MW-3A/MW-3R
F-37	Colluvium-Franciscan	Quarterly	F-37/F-32
PZ-3A	Colluvium-Franciscan	Quarterly	PZ-3A/PZ-3
DW-1R	Franciscan	Quarterly	
DW-3A	Franciscan	Quarterly	DW-3A/DW-3B
DW-3B	Franciscan	Quarterly	DW-3A/DW-3B

<b>WELL ID</b>	<b>GEOLOGIC UNIT</b>	<b>MONITORING FREQUENCY</b>	<b>VERTICAL GRADIENT WELL PAIRS</b>
DW-4B	Franciscan	Quarterly	
F-10	Franciscan	Quarterly	
F-11	Franciscan	Quarterly	A-1R/F-11
F-12	Franciscan	Quarterly	
F-16	Franciscan	Quarterly	
F-17	Franciscan	Quarterly	
F-18	Franciscan	Quarterly	
F-19	Franciscan	Quarterly	
F-20	Franciscan	Quarterly	
F-21	Franciscan	Quarterly	
F-24	Franciscan	Quarterly	
F-29R	Franciscan	Quarterly	
F-2N	Franciscan	Quarterly	
F-3*	Franciscan	Quarterly	
F-30*	Franciscan	Quarterly	
F-32	Franciscan	Quarterly	F-37/F-32
F-35	Franciscan	Quarterly	
F-36	Franciscan	Quarterly	
F-5	Franciscan	Quarterly	
F-8*	Franciscan	Quarterly	
MW-1R	Franciscan	Quarterly	
PZ-3	Franciscan	Quarterly	PZ-3A/PZ-3
ST1W-1	Franciscan	Quarterly	
ST1W-2	Franciscan	Quarterly	
ST1W-3	Franciscan	Quarterly	
WV-3/F-39	Franciscan	Quarterly	
F-23	Wilson Grove	Quarterly	
HA-2	Wilson Grove	Quarterly	
LP-2	Wilson Grove	Quarterly	

Table Notes: \* To be abandoned during LF2 Phases III and IV construction.

**Table A-2 SURFACE MONITORING PROGRAM\Central Disposal Site.  
 Monitoring Locations SW-1, SW-5, and SW-7**

<b>MONITORING PARAMETERS</b>	<b>FREQUENCY</b>
Dissolved Oxygen (Field)	Semiannual
Specific Conductance (Field)	Semiannual
pH (Field)	Semiannual
Temperature (Field)	Semiannual
Turbidity (Field)	Semiannual
Total Dissolved Solids	Semiannual
Total Settable Solids	Semiannual
Total Suspended Solids	Semiannual
Ammonia	Semiannual
Un-ionized Ammonia (Calculate)	Semiannual
Nitrate	Semiannual
Nitrite	Semiannual
TKN	Semiannual
Bicarbonate	Semiannual
Carbonate	Semiannual
Chloride	Semiannual
Sulfate	Semiannual
Sodium	Semiannual
Magnesium	Semiannual
Calcium	Semiannual
Potassium	Semiannual
CAM 17 Metals (Total)	Annual
Chemical Oxygen Demand (COD)	Annual
Total Organic Carbon (TOC)	Annual
Biochemical Oxygen Demand (BOD)	Annual
<b>CONSTITUENTS OF CONCERN</b>	
VOCs (Method 8260)	5 Years
SVOCs (Method 8270)	5 Years
OC Pesticides and PCBs (Method 8080)	5 Years
CP Herbicides (Method 8150)	5 Years
OP Compounds (Method 8141)	5 Years
CAM Metals (Dissolved)	5 Years

**Table A-3 LEACHATE MONITORING PROGRAM**  
**Central Disposal Site for Monitoring Locations Cell C-1 LCRS Sumps, REA LCRS Discharge/REA LDS, LF1 LCRS, LF2 LCRS, Leachate Pond 1, Leachate Pond 2 (if Fluid is Present).**

<b>MONITORING PARAMETERS</b>	<b>FREQUENCY</b>
Dissolved Oxygen (Field)	Annually
Specific Conductance (Field)	Annually
pH (Field)	Annually
Temperature (Field)	Annually
Turbidity (Field)	Annually
VOCs (Method 8260B)	Annually
Bicarbonate	Annually
Carbonate	Annually
Chloride	Annually
Sulfate	Annually
Sodium	Annually
Magnesium	Annually
Calcium	Annually
Potassium	Annually
Total Dissolved Solids	Annually
Nitrate	Annually
CAM 17 Metals (Total)	Annually
VOCs (Method 8260B)	Annually
Bicarbonate	Annually
Carbonate	Annually
Chloride	Annually
<b>CONSTITUENTS OF CONCERN</b>	
SVOCs (Method 8270)	5 Years
OC Pesticides and PCBs (Method 8080)	5 Years
CP Herbicides (Method 8150)	5 Years
OP Compounds (Method 8141)	5 Years
CAM Metals (Dissolved)	5 Years
Nitrite	5 Years
Sulfide	5 Years



**Table A-4 GROUNDWATER MONITORING PROGRAM  
 Central Disposal Site**

<b>MONITORING LOCATION</b>	<b>MONITORING STATUS</b>
DW-3B	Detection Monitoring
DW-4B	Detection Monitoring
F-12	Detection Monitoring
F-16	Detection Monitoring
F-3*	Corrective Action Monitoring
F-8*	Corrective Action Monitoring
F-30*	Corrective Action Monitoring
F-11	Detection Monitoring
HA-1	Detection Monitoring
HA-2	Detection Monitoring
MW-1R	Detection Monitoring
ST1W-1	Detection Monitoring
ST1W-2	Detection Monitoring
ST1W-3	Detection Monitoring
A-1R	Detection Monitoring
A-7	Detection Monitoring
A-8	Detection Monitoring
F-17	Detection Monitoring
F-36	Detection Monitoring
F-2N	Detection Monitoring
F-20	Detection Monitoring
F-39/WV-3	Detection Monitoring
F-10	Corrective Action Monitoring
F-35	Corrective Action Monitoring
MW-3A	Corrective Action Monitoring
MW-3R	Corrective Action Monitoring
Trench Riser*	Corrective Action Monitoring
REA Underdrain	Detection Monitoring
LF2 Underdrain	Corrective Action Monitoring

**Table A-4 (continued)**  
**GROUNDWATER MONITORING PROGRAM**  
**Central Disposal Site**

<b>MONITORING PARAMETERS</b>	<b>FREQUENCY</b>
pH (Field)	Semiannual
Temperature (Field)	Semiannual
Turbidity (Field)	Semiannual
Specific Conductance (Field)	Semiannual
Dissolved Oxygen (Field)	Semiannual
VOCs (Method 8260B)	Semiannual
Bicarbonate	Semiannual
Carbonate	Semiannual
Chloride	Semiannual
Sulfate	Semiannual
Sodium	Semiannual
Magnesium	Semiannual
Calcium	Semiannual
Potassium	Semiannual
Total Dissolved Solids	Semiannual
Nitrate	Semiannual
<b>CONSTITUENTS OF CONCERN</b>	
SVOCs (Method 8270)	5 Years
OC Pesticides and PCBs (Method 8080)	5 Years
CP Herbicides (Method 8150)	5 Years
OP Compounds (Method 8141)	5 Years
CAM Metals (Dissolved)	5 Years
Nitrite	5 Years
Sulfide	5 Years