CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SANTA ANA REGION

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MONITORING & REPORTING PROGRAM R8-2022-0006

ORDER INFORMATION

Order Type(s): Status: Program: Discharger(s):	Monitoring & Reporting Program (MRP) ADOPTED Title 27 Discharges to Land County of San Bernardino, Division of Solid Waste Management
Facility:	San Timoteo Sanitary Landfill [aka San Timoteo Canyon Landfill]
Address:	31 Refuse Road, Redlands, California 92373
County: GeoTracker ID:	San Bernardino County L10001343360

CERTIFICATION

I, JAYNE JOY, Executive Officer, hereby certify that the following is a full, true, and correct copy of the order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on March 18, 2022.



JAYNE JOY Executive Officer

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PREFACE

Adopted by the California Regional Water Quality Control Board, Santa Ana Region (Santa Ana Water Board) pursuant to Water Code section 13267, subdivision (b)(1), this Order establishes a Monitoring and Reporting Program (MRP) for San Bernardino County, Division of Solid Waste Management (Discharger), which owns and operates the San Timoteo Sanitary Landfill (Facility). Additional information regarding the Facility is set forth in the enumerated findings of Waste Discharge Requirements Order R8-2022-0006 (WDRs Order). Except as otherwise provided in the following MRP, these findings are incorporated herein.

The MRP also contains supplemental findings related to monitoring and reporting activities, and/or Facility conditions. For the purposes of California Code of Regulations, Title 27 (Title 27) (e.g., §§ 21720, 20380-20435), the findings and provisions of this Order are conversely incorporated as part of the WDRs Order as well.

Although adopted with the WDRs Order, this is a separate order subject to subsequent revision by the Executive Officer in accordance with delegated authority per Water Code section 13223. For the purposes of Title 27, such revisions shall be automatically incorporated as part of the WDRs Order.

REQUIREMENTS

IT IS HEREBY ORDERED, pursuant to Water Code section 13267, that the Discharger shall comply with the following.

A. General

1. Compliance

The Discharger shall comply with all the monitoring programs required under this Monitoring and Reporting Program (MRP).

2. Revision

This MRP may be revised and approved by the Santa Ana Water Board's Executive Officer as necessary to reflect changes in the required water quality programs.

3. Written Request for Modification

At any time, the Discharger may file a written request, including appropriate supporting documents, with the Executive Officer of the Santa

> Ana Regional Water Quality Control Board (Santa Ana Water Board), proposing modifications to the MRP. The Discharger shall implement any changes in the revised MRP approved by the Santa Ana Water Board's Executive Officer upon receipt of a signed copy of the revised MRP.

B. Water Quality Protection Standard

1. Components

In accordance with Title 27, §§20390-20405, the Water Quality Protection Standard (WQPS) for STSL shall consist of a list of Constituents of Concern (COCs), Concentration Limits for each COC, and a Point of Compliance and all designated Monitoring Points. These components of the WQPS shall be established in accordance with the procedures described in this section.

2. Constituents of Concern (COCs)

As of the date of this MRP, the COCs for STSL shall consist of those constituents listed in Appendix II of 40 C.F.R. section 258.

3. Concentration Limits

The concentration limits for the COCs and any given constituent in a given monitored medium (e.g., the uppermost aquifer) are either the natural background level, the laboratory RL or the PQL for the constituent as follows:

- a. If the constituent naturally exists in the monitored medium (e.g., total dissolved solids [TDS]), or has been demonstrated to have originated off-site, the limit shall be the value determined using a valid and appropriate statistical procedure based on a minimum of eight background data points (Title 27, §20415, subdivision (e)(10).)
- b. If the constituent does not naturally exist in the monitored medium (e.g., a volatile organic compound [VOC]), the laboratory RL/PQL shall be the limit.

4. **Point of Compliance Wells**

In accordance with Title 27, §20405, the Points of Compliance (POC) where the WQPS applies shall be a vertical surface, located at the hydraulically downgradient limit of each WMU, that extends through the

uppermost aquifer underlying the WMU at the landfill site or an alternate location approved by the EO of the Santa Ana Water Board. Due to the nature of the hydrogeology at the site, for STSL, the POC shall include all of the monitoring wells listed in **TABLE 1** and indicated on **Figure 1** – Site Map of this MRP.

5. **Duration of Application**

The WQPS shall apply during the active life of the landfill, the closure period, the post-closure maintenance period, and during any other compliance period. (Title 27, §20410.)

6. **Performance of Monitoring Activities**

Unless the Discharger proposes, and the Executive Officer of the Santa Ana Water Board approves, an alternative WQPS, the Discharger shall perform the monitoring activities in compliance with the WQPS specified in this MRP.

C. Water Quality Monitoring Program

1. Groundwater Quality Monitoring

The Discharger shall conduct the following groundwater monitoring activities at the Landfill:

- a. **Monitoring Points** Monitoring shall be conducted on a semiannual basis at all groundwater monitoring wells, piezometers (see **TABLE 1** and **Figure 1**), and subdrains.
- b. Semi-Annual Monitoring—On a semi-annual basis, water samples shall be collected from these monitoring points (and any additional monitoring points subsequently installed at the site) and analyzed for the constituents listed in Table 3 herein and any additional constituents in the Table of Detected Constituents (see §G.3.d.) not otherwise specified in Table 3. Analytical monitoring data generated from these monitoring activities shall be evaluated in accordance with Section D of this MRP (Data Analysis Methodology).
- c. **Five-Year Evaluation**—Every 5 years, continuing in 2025, alternately in the Summer (by Sept. 30) and Winter (by March 31), the Discharger shall collect water samples from all ground water monitoring wells, seeps, and subdrains and analyze these samples

for those constituents listed in **Tables 3-5** herein. Analytical monitoring data generated from these monitoring activities shall be evaluated in accordance with **Section D** (Data Analysis Methodology).

2. Vadose Zone Monitoring

Monitoring shall be conducted on a semi-annual basis at all soil-pore and landfill gas probes (See **Table 1** and **Figure 1**). Samples shall be collected semi-annually from these monitoring points (and any additional monitoring points subsequently installed at the site) and analyzed for all of the volatile organic compounds listed in **Table 3** herein, as well as methane, oxygen, carbon dioxide, and nitrogen. Analytical monitoring data generated from these monitoring activities shall be evaluated in accordance with **Section D** (Data Analysis Methodology). If there are any newly detected constituents at levels above the reporting limit in samples collected from one or more of these monitoring points, the subject monitoring points must be re-sampled and retested. Results from this retest must be evaluated in relation to the initial results for the purpose of verification.

3. Leachate and Gas Condensate Monitoring

Monitoring shall be conducted on an annual basis at all landfill leachate and gas condensate monitoring points. Samples shall be collected annually from these monitoring points and analyzed for all constituents listed in **Tables 3-5** herein. Analytical monitoring data generated from these monitoring activities shall be evaluated in accordance with **Section D** (Data Analysis Methodology). If there are any newly detected constituents at levels above the reporting limit in samples collected from one or more of these monitoring points, the subject monitoring points must be re-sampled and retested. Results from this retest must be evaluated in relation to the initial results for the purpose of verification.

4. Additional Monitoring Constituents

Based upon analysis of monitoring results, the Santa Ana Water Board's Executive Officer may require that additional constituents be regularly monitored in addition to the constituents identified above and that monitoring samples must be analyzed for these constituents on a regular basis.

5. USEPA SW-846

Sample collection, storage, and analysis shall be performed in accordance with the most recent version of standard U.S. Environmental Protection Agency (USEPA) Methods (USEPA Publication "SW-846"), and in accordance with a sampling and analysis plan acceptable to the Executive Officer of the Santa Ana Water Board.

6. State-Approved Laboratory

Laboratory water quality analyses must be performed by a State of California-approved laboratory and specific analytical methods must be identified. In addition, the Discharger is responsible for ensuring that laboratory analyses of samples from all monitoring points are performed in accordance with the following requirements:

- a. **Appropriate Analytical Methods and Detection Limits**—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 percent non-numerical determinations (i.e., Trace or ND determinations) in historical data for that medium, the SW-846 analytical method having the lowest Method Detection Limit (MDL) shall be selected.
- b. **Derivation of MDL and PQL**—MDL and PQL shall be derived by the laboratory for each analytical procedure, according to State of California laboratory accreditation procedures. Both limits shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the laboratory. If the laboratory suspects that, due to a change in matrix or other effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived values, the results shall be flagged accordingly, and an estimate of the limit actually achieved shall be included.
- c. **Reporting of Trace Results**—Trace results (results falling between the MDL and the Practical Quantitation Limit [PQL]) for organic compounds shall be reported as such.
- d. **Identify and List MDL and PQL**—For each constituent monitored during a given reporting period, the Discharger shall include in the monitoring report the prevailing MDL and PQL for each constituent.

The Discharger shall require the analytical laboratory to report censored data (trace level and non-detect determinations).

- e. **Report QA/QC Data**—Quality assurance and quality control (QA/QC) data shall be reported along with the sample results to which it applies. Sample results shall be reported unadjusted for blank results or spike recovery. The QA/QC data submittal shall include:
 - i. The method, equipment, and analytical detection limits.
 - ii. The recovery rates, including an explanation for any recovery rate that is outside the USEPA-specified recovery rate.
 - iii. The results of equipment and method blanks.
 - iv. The results of spiked and surrogate samples.
 - v. The frequency of quality control analysis.
 - vi. The name and qualifications of the person(s) performing the analyses.
- f. **Indicate Detection of Laboratory Contaminants**—QA/QC analytical results involving detection of common laboratory contaminants in any sample shall be reported and flagged for easy reference.

7. Groundwater Level, Elevation, and Flow Direction

The Discharger shall measure the water level and determine the groundwater elevation in each groundwater monitoring well and piezometer semi-annually and determine the presence and character of horizontal and vertical gradients (if applicable), and groundwater flow rate and direction for the respective groundwater body.

D. Data Analysis Methodology

1. Background Wells, Compliance Wells, Piezometers, and Soil-Pore and Landfill Gas Probes

Analytical monitoring data generated from analysis of groundwater samples from Background Wells, Compliance Wells, Piezometers, and Soil-Pore and Landfill Gas Probes shall be evaluated as follows:

- a. Monitoring data for **Table 3** organic constituents shall be evaluated using non-statistical data analysis methods, including time-series concentration plots to determine whether there is measurably significant evidence of a release from STSL. These analyses shall include a minimum of ten years of data.
- b. Monitoring data for **Table 3** inorganic constituents shall be evaluated using statistical data analysis methods and/or appropriate non-statistical data analysis methods as specified in Title 27, §20415(e)(8) to determine whether there is measurably significant evidence of a release from STSL.
- c. Monitoring data for constituents listed on **Table 3** Field Parameters, General Chemistry, and Dissolved Metals shall be evaluated as needed to provide water quality characterization regarding hydrogeochemical conditions and to assist in making determinations regarding measurably significant evidence of a release from STSL or other changes in site conditions.
- d. On an annual basis, all **Table 3** constituents that have been detected in a groundwater sample three or more times during the previous five years shall be evaluated using time-series concentration plots, which shall include all historical data for the detected constituents.
- e. Monitoring data for **Table 4** Organic Constituents, which includes Chlorinated Herbicides, Organochlorine Pesticides, and Semi-Volatile Organic Compounds, generated as part of a 5-Year Evaluation Event pursuant to Section C.1.b. above shall be evaluated using non-statistical data analysis methods to determine whether there is measurably significant evidence of a release from STSL.
- f. Monitoring data for **Table 4** inorganic constituents, including but not limited to metals, cyanide, and sulfide, which are generated as part of a 5-Year Evaluation Event pursuant to Section C.1.b. above shall be evaluated using statistical data analysis methods and/or nonstatistical data analysis methods as specified in Title 27, §20415(e)(8) to determine whether there is measurably significant evidence of a release from STSL.
- g. In evaluating the results of a 5-Year Evaluation Event (Event), all
 Table 4 constituents that have been detected during an Event shall be evaluated using appropriate data analysis methods, which shall

include all historical data for the detected constituents as appropriate.

2. Subdrains

Analytical monitoring data generated from analysis of samples from subdrains (if present) shall be evaluated as follows:

- a. Monitoring data for **Table 3** organic constituents shall be evaluated based on statistical and/or non-statistical, if appropriate, determination of increasing or decreasing trends.
- b. Monitoring data for **Table 3** inorganic constituents shall be evaluated based on statistical and/or non-statistical, if appropriate, determination of trends and hydrogeochemical relationships and responses.
- c. Monitoring data for constituents listed on **Table 3** Field Parameters, General Chemistry, and Dissolved Metals shall be evaluated as needed to provide water quality characterization in relation to hydrogeochemical conditions, to indications of a release, or to changes in other site conditions.
- d. On an annual basis, all **Table 3** constituents that have been detected in a seep or subdrain sample three or more times during the previous five years shall be evaluated using time-series concentration plots, which shall include all historical data for the detected constituents.
- e. Monitoring data for **Table 4** organic constituents generated as part of a Five-Year Evaluation Event pursuant to Section C.1.b. above shall be evaluated using non-statistical data analysis methods to determine whether there is measurably significant evidence of a release from ESL.
- f. Monitoring data for **Table 4** inorganic constituents, including but not limited to metals, cyanide, and sulfide, which are generated as part of a Five-Year Evaluation Event pursuant to Section C.1.b. above shall be evaluated using statistical data trend analysis methods and/or non-statistical data analysis methods as specified in Title 27, §20415(e)(8) to characterize water quality conditions.

g. In evaluating the results of a 5-Year Evaluation Event (Event), all Table 4 constituents that have been detected during an Event shall be evaluated using time-series concentration plots, which shall include all historical data for the detected constituents.

3. Leachate and Landfill Gas Condensate

Analytical monitoring data generated from analysis of leachate and landfill gas condensate samples shall be evaluated as follows:

- a. Monitoring data for all organic constituents shall be evaluated for presence or absence in samples and for comparison with constituents listed on the **Table of Detected Constituents** (see §G.3.d.).
- b. If any previously undetected constituents are detected at or above PQLs in leachate and gas condensate at any sampling point, the Discharger shall resample the leachate or condensate at that sampling point during the following April and analyze the sample for those newly detected constituents. If any such constituent is confirmed in the leachate or gas condensate, the Discharger shall add the constituent to the current **Table of Detected Constituents** (see §G.3.d) and report this to Regional Water Board staff within two weeks of the confirmation. During all subsequent monitoring events, the Discharger shall analyze all water samples for any newly detected VOCs detected at or above PQLs and confirmed by a retest.
- c. Monitoring data for all inorganic constituents shall be evaluated for comparison with groundwater monitoring data and shall also be evaluated using statistical data analysis methods and/or non-statistical data analysis methods approved by the Executive Officer to evaluate trends and to determine whether there is increasing concentrations of inorganic constituents.
- d. Monitoring data for all constituents on **TABLE 3** Field Parameters, General Chemistry, and Dissolved Metals shall be evaluated to provide water quality characterization in relation to hydrogeological conditions, to indications of a release, or to changes in other site conditions.

4. Measurably Significant Evidence of Release of TABLE 3 and TABLE 4 Organic Constituents at Groundwater Monitoring Wells and Piezometers

Measurably significant evidence of release of an organic constituent to groundwater at a Groundwater Monitoring Well or Piezometer will be tentatively determined to have occurred if analysis of groundwater samples from any well indicates that, pursuant to the applicable data analysis method (including its corresponding trigger), there has been a significant change in Monitoring Point data relative to the reference background value (or other approved reference value or distribution).

5. Measurably Significant Evidence of Release of TABLE 3 and TABLE 4 Inorganic Constituents at Groundwater Monitoring Wells and Piezometers

Measurably significant evidence of release of inorganic constituents to groundwater at a Groundwater Monitoring Well or Piezometer will be tentatively determined to have occurred when the concentration of any inorganic constituent in a groundwater sample collected from a Background Well, Compliance Well, or Piezometer is determined to be significantly above a statistically calculated limit such as, but not limited to, an intra-well prediction limit. In assessing a tentative release, analytical data should also be evaluated using trend analyses, historical constituent concentration ranges, and background concentrations in the determination process.

E. Contingency Responses

1. Retest for Measurably Significant Evidence of a Release

If previously undetected measurably significant evidence of release is indicated in a groundwater monitoring well or piezometer per Section D above, the Discharger shall immediately notify the Water Board and shall collect additional groundwater samples from the subject well within 30 days of the notification (unless laboratory contamination is suspected). The additional groundwater samples shall be tested in a laboratory only for the constituent(s) detected in the previous sample that indicated measurably significant evidence of a release. If analysis of the monitoring data for the additional sample also indicates measurably significant evidence of a release, these results shall serve as verification that such a release has occurred.

2. **Optional Demonstration**

If measurably significant evidence of a release is verified per Section E.1. above, but is believed to be derived from off-site sources or due to natural changes in water chemistry, the discharger may propose to demonstrate that the landfill is not the cause of the release in accordance with Title 27, §20420, subdivision (k)(7).

3. **Response to Verified Evidence of a Release**

If measurably significant evidence of a release is verified per Section E.1. above, and it is determined that the landfill is the cause of the release, then the discharger shall:

- a. Implement those response actions described in Title 27, §20420, subdivisions (k)(1)-(6), and
- b. Implement an Evaluation Monitoring Program (EMP) pursuant to Title 27, §20425.

4. Implementation of Corrective Action Program

If the Water Board determines that the Discharger has satisfactorily implemented and completed the EMP release response actions described above, the Discharger shall implement a Corrective Action Program (CAP) pursuant to Title 27, §20430, based upon results of the EMP and other monitoring activities.

5. **Table of Detected Constituents**

Any previously undetected constituent that is detected in samples collected from a groundwater monitoring well, piezometer, leachate, or gas condensate sampling point and confirmed per the requirements of Section E.1 above, shall be automatically and immediately added to the Table of Detected Constituents (§G.3.d) for STSL. The newly updated Table of Detected Constituents (indicating the newly added constituent[s]) shall be submitted by the Discharger to the Water Board within 14 days following the addition of any new constituent to the Table. This constitutes the means by which the Discharger shall meet the requirements of 40 Code of Federal Regulations §258.55(d)(1).

6. Physical Evidence of a Release

If either the Discharger or the Water Board determines that there is significant physical evidence of a release pursuant to Title 27, 20385, subdivision (a)(3) and Section F.1. herein, the Discharger shall conclude that a release has been discovered and shall:

- a. Within 7 days notify Santa Ana Water Board staff of this fact by email (or acknowledge the Santa Ana Water Board's determination);
- b. Carry out the requirements of release discovery response in Section E.3., above, for all potentially affected monitored media.
- c. Carry out any additional investigations stipulated in writing by Water Board staff for the purpose of identifying the cause of the indication.

7. Release Beyond Facility Boundary

Any time the Discharger concludes that a release from the landfill has proceeded beyond the facility boundary, the Discharger shall so notify all persons who either own or reside upon the land that directly overlies any part of the plume (Affected Persons) as follows:

- a. Initial notification to Affected Persons shall be accomplished within 14 days of making this conclusion and shall include a description of the Discharger's current knowledge of the nature and extent of the release.
- b. Subsequent to initial notification, the Discharger shall provide updates to all Affected Persons, including any persons newly affected by a change in the boundary of the release, within 14 days of concluding there has been any material change in the nature or extent of the release.
- c. Each time the Discharger sends a notification to Affected Persons (under Section E.7.a or Section E.7.b above), it shall, within 7 days of sending such notification, provide Santa Ana Water Board staff with, and add into the Facility's operating record, both a copy of the notification and a current mailing list of Affected Persons.

8. Liquid Waste Spill

The Discharger shall notify Water Board staff by telephone or electronic mail within 24 hours (or one business day) of the discovery of any liquid waste spill in the WMU area. A written report shall be filed with Water Board staff within 7 days, containing at least the following information:

- a. **Map –** A map showing the location(s) of the discharge.
- b. **Flow Rate –** An estimate of the flow rate of the discharge.
- c. **Description –** A description of the nature and extent of the discharge (e.g., all pertinent observations and analysis).
- d. **Sampling –** A description of any sample(s) collected for laboratory analysis and a copy of the analytical results of the sample.
- e. **Corrective Measures –** A description of the corrective measure(s) implemented, and any proposed mitigation measures for approval by Water Board staff.

9. Facility Failure

The Discharger shall notify Santa Ana Water Board staff by telephone and/or email within 48 hours (or two business days) of any slope failure or failure of facilities necessary to maintain compliance with the requirements in this Order. Within 7 days, the notification shall be submitted in writing to Santa Ana Water Board staff. Any failure that threatens the integrity of the waste containment features or the landfill shall be promptly corrected after a remediation workplan and schedule have been approved by Santa Ana Water Board staff, unless it poses an immediate threat to the environment or landfill containment structures. Then it will be corrected as soon as possible.

10. Leachate Seep

The Discharger shall immediately notify Santa Ana Water Board staff by telephone and/or email within 48 hours (or two business days) following the discovery of any seepage from, or soil staining, at the site. If feasible, a sample of the leachate shall be collected for analysis. A written report shall be filed with Santa Ana Water Board staff within 7 days, containing at least the following information:

- a. **Map –** A map showing the location(s) of seepage;
- b. **Flow rate –** An estimate of the flow rate or volume;
- c. **Description –** A description of the location, size, and nature of the discharge (e.g., all pertinent observations and analyses);
- d. **Corrective Measures –** Measures proposed to address any seep(s) for approval by Santa Ana Water Board staff;
- e. **Photographs –** Photographs representing the location, extent, and detailed nature of the discharge; and,
- f. **Analytical Results –** A copy of the laboratory analytical results of the seep sample shall be submitted to Santa Ana Water Board staff within 60 days after filing the written report.

F. General Site Monitoring

1. Facility and Systems Monitoring

The Discharger shall regularly inspect and evaluate STSL facility and associated systems to determine their condition and effectiveness, and to ascertain whether significant physical evidence of a release has occurred. Significant physical evidence of a release includes unexplained stress in biological communities, unexplained changes in soil characteristics, visible signs of leachate migration, and unexplained water table mounding beneath or adjacent to the site and any other change to the environment that could reasonably be expected to be the result of a release from the facility and associated systems. These regular inspections and evaluations shall include the following:

a. Monthly, the Discharger shall inspect all waste management units and shall evaluate their condition and effectiveness in achieving compliance with Discharge Specifications and Prohibitions in the WDRs. All areas of slope failure, differential settlement, fissuring, erosion, ponding, leachate staining, and seepage into or from the landfill shall be identified, field-marked, and documented. All such field conditions and events shall be photographed for the record. In the event seepage is discovered, the Discharger shall implement the response actions described in Section E.10 above.

- b. At a minimum, all systems such as landfill gas condensate collection, leachate containment, groundwater extraction, and subdrain systems shall be inspected and evaluated on a monthly basis for their condition and effectiveness. All deficiencies identified and the dates and types of corrective action taken shall be recorded in a permanent log. All deficiencies shall be documented for the record. The volume of liquids collected in the containment structures shall be recorded monthly. Liquid samples, such as landfill gas condensate and leachate, shall be collected in accordance with the monitoring frequency in **Table 2**, and analyzed in accordance with Section C herein.
- c. All run-on and runoff drainage control structures shall be inspected and evaluated quarterly, at a minimum, for their condition and effectiveness in achieving compliance with Drainage and Erosion Control specifications D.1 and D.2 of the WDRs. During dry weather conditions, the condition and effectiveness of the drainage control system shall be evaluated on the basis of its conformance to the as-built drawings, or revised drawings, for the system. All deficiencies shall be identified, repaired, and recorded.

2. Annual Aerial or Ground Survey

To ensure adequate drainage and erosion control at STSL in accordance with Drainage and Erosion Control specifications D.1 and D.2 of the WDRs, an aerial or ground survey of the landfill facility shall be performed annually by October 1 in accordance with the schedule in **Table 2** of this MRP. The Discharger shall notify Santa Ana Water Board staff if performance of the aerial photogrammetric survey cannot be achieved by the October 1 deadline due to bad weather conditions or bad visibility.

3. Surface Water Monitoring

Surface water monitoring at the site shall be conducted as required under the State NPDES General Industrial Stormwater Permit.

4. Contaminated Soil Monitoring for the Waste Acceptance Program

Contaminated soil acceptance and discharge information shall be compiled and submitted in the Subtitle D Reports. For each quarterly and annual reporting period, the Discharger shall tabulate and report the quantities of contaminated soil accepted, managed, and discharged at STSL for each month, quarter, and year of the respective reporting period.

5. Waste-Derived Materials Monitoring

Information regarding acceptance and re-use of waste-derived materials (as defined in the WDRs) at STSL shall be compiled and submitted in the Subtitle D Reports. For each quarterly reporting period, the Discharger shall tabulate and report upon instances where waste-derived materials are re-used for purposes other than disposal at STSL during the quarterly and annual reporting periods. For each instance, the Discharger shall indicate the type and amount of waste-derived materials re-used, as well as the specific method and location of re-use.

6. Treated Wood Waste

If treated wood waste (TWW) (as defined in the WDRs) is accepted for disposal at STSL, information regarding such acceptance and disposal at STSL shall be compiled, tabulated, summarized, described, and submitted in the Subtitle D Reports. Such information shall include, at a minimum, description of acceptance and disposal activities, tabulations of monthly, quarterly, and annual quantities of TWW accepted, dates, and WMU locations of disposal.

G. Reporting

1. Quarterly and Annual Subtitle D Reports

The Discharger shall submit quarterly monitoring reports to the Santa Ana Water Board summarizing results and findings of facility and systems monitoring, and facility activities for the previous monitoring period. The quarterly summary reports are due to the Water Board within 30 days following the end of the monitoring period. In addition, the quarterly report for the fourth quarter of each year shall serve as an annual report and in addition to quarterly totals, shall include yearly total quantities for each of the respective wastes and materials included below. At a minimum, the following information shall be included in quarterly and annual reports as appropriate:

- a. **Field Inspection Records**—Monthly field inspection records for Waste Management Units and statements describing the condition and performance of these units.
- b. Landfill Gas Condensate and Leachate Containment Systems, Subdrains, and Seeps—A summary of the results of inspecting and evaluating the landfill leachate and gas condensate monitoring, collection, and control facilities as required in Section F.1.b herein.

In addition, the reports shall include monthly field inspection records and monitoring data for the systems listed above and statements describing the condition and performance of these systems.

- c. **Drainage and Erosion Control Systems**—Quarterly field inspection records and monitoring data for these systems and statements describing the condition and performance of these systems
- d. **Management of Liquids**—A summary of the total volumes, on a monthly, quarterly, and annual basis, of landfill leachate and gas condensate collected at the site, and how these liquids are managed.
- e. **Waste Type and Placement**—The monthly, quarterly, and annual quantities and types of wastes discharged and a map indicating the locations in the landfill where waste has been placed since submittal of the last such report; and
- f. **Daily Cover**—If alternative daily cover (ADC) is used at the site that meets the requirements of Title 27, §20705, subdivision (e), and has been approved by Santa Ana Water Board staff, the type, amount (including, if applicable, average thickness), method of placement, and any problems or deficiencies encountered must be noted in the report.
- g. **Waste Allocation Map**—A map showing the area, if any, in which filling has been completed during the previous calendar year;
- h. **Contaminated Soil**—In accordance with Section F.4 herein, quarterly and annual reports shall include a section that contains a summary description of contaminated soil acceptance, discharge, and monitoring activities for the monitoring period. In addition, Subtitle D Reports shall include a tabular summary stating the quantities of contaminated soils that were accepted each month, quarter, and as an annual total during the reporting period.
- i. **Waste-Derived Materials**—Information pertaining to acceptance and re-use of waste-derived materials at STSL in accordance with Section F.5 herein. In addition, Subtitle D Reports shall include a tabular summary stating the quantities of waste-derived materials that were accepted each month, quarter, and as an annual total during the reporting period.

j. **Treated Wood Waste**—Information pertaining to acceptance and disposal of TWW at STSL in accordance with Section F.6 herein. In addition, Subtitle D Reports shall include a tabular summary stating the quantities of treated wood waste that were accepted each month, quarter, and as an annual total during the reporting period.

2. Semi-Annual Monitoring Reports

The Discharger shall submit semi-annual monitoring reports to the Santa Ana Water Board summarizing groundwater monitoring activities for the previous monitoring period. The semi-annual summary reports are due to the Water Board within 30 days following the end of the monitoring period. The semi-annual report for the Fall/Winter monitoring period may be combined with the annual water quality monitoring report (per §G.3). Semi-annual monitoring reports shall include the following:

- a. **Well Information**—For each monitoring well and piezometer addressed by the report, a description of the method and time of water level measurement, and a description of the method of purging used to remove stagnant water in the well before sampling, pursuant to Title 27, §20415, subdivision (e)(12)(B);
- b. **Subdrains and Seeps, and Soil-Pore and Landfill Gas Probes** The report shall include a description of other monitoring activities that occurred during the monitoring period including monitoring of subdrains and seeps, and soil-pore and landfill gas probes. A tabulated summary of analytical results from these activities shall also be included in the report;
- c. **Groundwater Elevations and Contours**—For each monitoring point addressed by the report, a tabular summary and graphical presentation of all measured groundwater elevation data, and a groundwater elevation contour map, showing the direction of groundwater flow under/around STSL based upon water level elevations measured for the monitoring period;
- d. **Sampling Information**—For each monitoring point addressed by the report, field sampling records showing the type of pump or other device used and its vertical placement for sampling, and a detailed description of the sampling procedures (number and description of the samples, field blanks, travel blanks, and duplicate samples taken, the type of containers and preservatives used, the date and time of sampling, the name(s) and qualifications of the person(s) taking the samples, and any other observations);

- e. **Analytical Data and Results**—The report shall include a summary of all analytical monitoring results. Data shall be summarized and presented in a tabular format. Statistical and non-statistical analyses of the analytical data shall be presented. An evaluation and interpretation of the data analyses shall be also be included. A copy of the laboratory analytical results shall be included.
- f. **QA/QC Summary and Evaluation**—The report shall include a summary describing laboratory and field QA/QC activities performed as part of monitoring activities. The summary shall include a discussion of any water sampling and monitoring activities that deviated from the sampling and quality assurance plans.
- g. **Compliance Record Discussion**—A comprehensive discussion of the compliance record, and of any corrective actions taken or planned which may be needed to bring the Discharger into full compliance with the landfill's waste discharge requirements relating to water quality issues;
- h. **Tabulation of Monitoring Data**—All analytical monitoring data obtained during the two previous semi-annual reporting periods shall be presented in tabular form in each semi-annual summary report.
- i. **Uploading Data to GeoTracker**—All analytical monitoring data obtained during each semi-annual monitoring period shall be uploaded electronically onto the State's database (GeoTracker) within one month following the submittal of each semi-annual monitoring report to the Santa Ana Water Board.
- j. **Conclusions**—Each report shall include a summary of any relevant conclusions regarding the findings and results of monitoring activities that were conducted during the monitoring period.

3. Annual Summary Monitoring Report

The Discharger shall submit an annual report to the Santa Ana Water Board covering the previous monitoring year (April 1 of the previous year through March 31 of the following year). Annual summary monitoring reports are due on April 30. This report may be combined with the semiannual monitoring report for the period ending March 31, and shall include, but not be limited to, the following:

- a. **Monitoring Activities**—A summary of monitoring activities that were completed during the monitoring period shall be included in the Annual Summary Monitoring Report. This summary shall include a description of all monitoring activities, identification of all monitoring dates and monitoring points, and description(s) of any unusual or anomalous occurrences related to monitoring activities.
- b. **Compliance Record Discussion**—A comprehensive discussion of the compliance record, and of any corrective actions taken or planned which may be needed to bring the Discharger into full compliance with the landfill's waste discharge requirements relating to water quality issues;
- c. **Summary of Changes**—A written summary of monitoring results and monitoring and control systems, indicating any changes made or observed since the previous annual report;
- d. **Table of Detected Constituents**—Each Annual Summary Report shall include an updated table containing any constituent that is or has been detected in samples collected from a groundwater monitoring well, piezometer, leachate, or gas condensate sampling point at the site, and confirmed per the requirements of Section E.1 herein. Annually, the Discharger shall update the constituents contained on the Table of Detected Constituents in accordance with Section E.5 herein;
- e. **Table of Concentration Limits**—In each Annual Report, the Discharger shall include a table containing the concentration limits for each constituent on the COC list (see §B.2.) in accordance with Section B.3 herein. Biannually, the Discharger shall update this Table of Concentration Limits in accordance with Section B.3;
- f. **Graphical Presentation**—Graphical presentation of Groundwater Analytical Data shall be completed pursuant to Title 27, §20415, subdivision(e)(14) and shall include as necessary time-series concentration plots as described in Section D herein;
- g. **Conclusions**—Each report shall include a summary of any relevant conclusions regarding the findings and results of monitoring activities that were conducted during the monitoring period.

4. Storm Event Report

In the event of a major storm event at the facility (defined as any storm that results in the site receiving more than 0.5 inch of precipitation within a 24-hour period), the Discharger shall submit a brief storm event report to the Santa Ana Water Board within 48 hours of the cessation of precipitation. This report shall include a brief description of facility systems performance during the storm event, a tabulation of the amount of precipitation at the site, pertinent photographs, the identification of any deficiencies, and the date and type of corrective action that has, or will be, taken to correct these deficiencies if necessary.

5. Annual Drainage Control System Maintenance Report

Annually, by December 31, a Site Drainage Control and Maintenance Report shall be submitted. The drainage control system maintenance report shall include, but not be limited to, the following information:

- a. **Adequacy and Effectiveness**—For the previous 12 months, a summary of the adequacy and effectiveness of the drainage control system to collect and divert the calculated volume of precipitation and peak flows resulting from a 100-year, 24-hour storm.
- b. **Field Records and Inspections**—Field records and results of drainage and erosion control system inspections performed in accordance with Section F.1.c herein
- c. **Tabular Summary**—A tabular summary of the new and existing drainage control structures including the types and completion dates of maintenance activities performed for each of these structures;
- d. **Site Map**—An 11"x17" site map indicating the locations of the elements listed in Section G.4.c herein, and the flow direction of all site drainage.
- e. **Annual Survey Map**—A map depicting the results of the annual aerial or ground survey performed in accordance with Provision C.23 of the WDRs and Section F.2. herein.

6. Five-Year Evaluation Monitoring Report

As described in Section C.1.b, every 5 years, the Discharger shall collect and analyze water samples from all groundwater monitoring wells, seeps,

and subdrains for all constituents listed on **TABLE 3**, **TABLE 4** and **TABLE 5**, and submit a report to the Santa Ana Water Board containing the results of these activities. The results of the 5-Year Evaluation monitoring activities must be reported to the Santa Ana Water Board within one month following the end of the Reporting Period. The last 5-Year evaluation was performed in 2020. Future 5-Year Monitoring Reports are due every 5 years subsequent to submittal of the previous Five-Year Monitoring Report submittal (i.e., 2025, 2030, 2035, etc.). This report may be combined with a Semi-Annual or Annual water quality monitoring report as appropriate, and shall include, but not be limited to, the following:

- a. **Well Information**—For each monitoring well addressed by the report, a description of the method and time of water level measurement, and a description of the method of purging used to remove stagnant water in the well before sampling, pursuant to Title 27, §20415, subdivision (e)(12)(B);
- b. **Other Monitored Media**—The report shall include a description of other monitoring activities that occurred during the monitoring period including monitoring of surface waters, subdrains, seeps, and soil-pore and landfill gas probes. A tabulated summary of analytical results from these monitoring activities shall also be included in the report.
- c. **Groundwater Elevations and Contours**—For each monitoring point addressed by the report, a tabular summary and graphical presentation of all measured groundwater elevation data, and a groundwater elevation contour map, showing the direction of groundwater flow under/around STSL based upon water level elevations taken for the monitoring period;
- d. **Sampling Information**—For each monitoring point addressed by the report, field sampling records showing the type of pump or other device used and its vertical placement for sampling, and a detailed description of the sampling procedures (number and description of the samples, field blanks, travel blanks, and duplicate samples taken, the type of containers and preservatives used, the date and time of sampling, the name(s) and qualifications of the person(s) taking the samples, and any other observations); and
- e. **Analytical Data and Results**—The report shall include a summary of all analytical monitoring results. Data shall be summarized and presented in a tabular format. Statistical and non-statistical analyses of the analytical data shall be presented. An evaluation

and interpretation of the data analyses shall be also be included. A copy of the laboratory analytical results shall be included.

- f. **QA/QC Summary and Evaluation**—The report shall include a summary describing laboratory and field QA/QC activities performed as part of monitoring activities. The summary shall include a discussion of any water sampling and monitoring activities that deviated from the sampling and quality assurance plans.
- g. **Compliance Record Discussion**—A comprehensive discussion of the compliance record, and of any corrective actions taken or planned which may be needed to bring the Discharger into full compliance with the landfill's waste discharge requirements relating to water quality issues;
- h. **Summary of Changes**—A written summary of monitoring results and monitoring and control systems, indicating any changes made or observed since the previous 5-Year Evaluation Monitoring Event;
- i. **Graphical Presentation**—Graphical presentation of Groundwater Analytical Data shall be completed in accordance with Title 27, §20415, subdivision (e)(14) and shall include as necessary timeseries concentration plots as described in Section D; and
- j. **Conclusions**—Each report shall include a summary of any relevant conclusions regarding the findings and results of monitoring activities that were conducted during the monitoring period.

7. Reporting Schedule

The Discharger shall submit the reports and documents in accordance with the deadlines specified in **TABLE 2** (Monitoring and Reporting Schedule).

8. Signature

All reports shall be signed by a responsible officer or a duly authorized representative of the Discharger and shall be submitted under penalty of perjury.

ATTACHMENTS

Attachment A – Tables

TABLE 1: MONITORING LOCATIONS

TABLE 2: MONITORING AND REPORTING SCHEDULE

TABLE 3: MONITORING CONSTITUENTS

TABLE 4: MONITORING CONSTITUENTS

TABLE 5: GENERAL PARAMETERS

Attachment B – Site Map

ENFORCEMENT

If, in the opinion of the Executive Officer, the Dischargers fail to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to \$10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including §§13268, 13350 and 13385. The Santa Ana Water Board reserves its right to take any enforcement actions authorized by law.

ADMINISTRATIVE REVIEW

Any person aggrieved by this Santa Ana Water Board action may petition the State Water Board for review in accordance with Water Code §13320 and California Code of Regulations, Title 23, §2050 et seq. To be timely, the petition must be received by the State Water Board by 5:00 pm on the 30th day after the date of this Order; if the 30th day falls on a Saturday, Sunday or state holiday, the petition must be received by the State Water Board by 5:00 pm on the next business day. The law and regulations applicable to filing petitions are available on the <u>State Water Board website</u> (<u>http://www.waterboards.ca.gov/public_notices/petitions/water_quality</u>). Copies will also be provided upon request.

ATTACHMENT A – TABLES

	TABLE	1: MONITORING LOCATIONS
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WELL ID NUMBER	LOCATION CLASSIFICATION
ST-2	Point of Compliance Well
ST-5C	Point of Compliance Well
ST-7A	Point of Compliance Well
ST-12	Point of Compliance Well
ST-13	Point of Compliance Well
ST-8	Background Monitoring Well
ST-10	Background Monitoring Well
ST-3	Piezometer (sampled and gauged)
ST-6	Piezometer (gauged only)
STPG-1	Soil-Pore Gas Probe
STPG-2	Soil-Pore Gas Probe
STPG-3	Soil-Pore Gas Probe
STPG-4	Soil-Pore Gas Probe
Subdrain	Subdrain
LCRS	Leachate Collection and Recovery System
GC	Gas Condensate

TASK DESCRIPTION	MONITORING PERIOD	REPORT DUE DATE (annually unless otherwise specified)
Quarterly Subtitle D Report	October 1 – December 31 January 1 – March 31 April 1 – June 30 July 1 – September 30	January 31 of each year April 30 of each year July 31 of each year October 31 of each year
Semi-Annual Water Quality Report	October 1 – March 31 April – September 30	April 30 of each year October 31 of each year
Landfill Leachate and Gas Condensate Monitoring	October 1 – October 31	April 30 of following year
April Retesting for Leachate and Gas Condensate	April 1 – April 30 If required	October 31 of each year If required
Drainage Control System Maintenance Report	By October 1 of each year	December 31 of each year
Aerial or Ground Survey and Topographic Map	By October 1 of each year	December 31 of each year
Annual Summary and General Site Monitoring	April 1 of previous year to March 31 of current year	April 30 of each year
5-Year Monitoring Event (Table A, Table B, and Table C Constituents)	July 1 – Sept. 30, 2021 Jan. 1 – March 31, 2026	October 31, 2021 April 30, 2026

TABLE 2: MONITORING AND REPORTING SCHEDULE

CATEGORY	CONSTITUENTS	
Field Parameters	Dissolved Oxygen Oxidation Reduction Potential Specific Conductance	Temperature Turbidity pH (field)
General Chemistry	Total Dissolved Solids (TDS)SulfateBicarbonate AlkalinityChlorideNitrate (as N)	
Dissolved Metals	Calcium Magnesium	Potassium Sodium
Volatile Organic Compounds		

TABLE 3: MONITORING CONSTITUENTS

CATEGORY	CONSTITUENTS		
Inorganic Constituents	Arsenic Barium Beryllium	Nickel Lead Antimony	Thallium Tin Mercury
	Cadmium Cobalt Chromium Copper	Vanadium Zinc Silver Selenium	Cyanide Sulfide
Organic Constituents	PCBs (40 CFR 258; Appendix II Aroclors)	TCDD (Dioxin)	(For 5-Year Evaluation Events, groundwater samples do not need to be analyzed for TCDD unless it has been detected and confirmed in landfill -leachate or gas condensate samples)
Organic Constituents: <i>Chlorinated</i> <i>Herbicides</i>	2,4-Dichloro- phenoxyacetic acid	Silvex; 2,4,5-TP	2,4,5-Trichloro- phenoxyacetic acid
Organic Constituents: <i>Organochlorine Pesticides</i>	Aldrin alpha-BHC beta-BHC delta-BHC gamma-BHC; Lindane 4,4-DDD 4,4-DDE	4,4-DDT Dieldrin Endosulfan I Endosulfan II Endosulfan sulfate Endrin Chlordane	Endrin aldehyde Heptachlor Heptachlor epoxide Kepone Methoxychlor Toxaphene

TABLE 4: MONITORING CONSTITUENTS

CATEGORY	CONSTITUENTS		
Organic Constituents: Semi-Volatile Organic Compounds	Acenaphthene Acetophenone 2-Acetylaminofluorene 4-Aminobiphenyl Anthracene Benzo[a)anthracene Benzo[b) fluoranthene Benzo[b) fluoranthene Benzo[d] pyrene Benzo[a] pyrene Benzo[a] pyrene Benzyl alcohol Bis(2-chloroethoxy) methane Bis(2-chloroethoxy) methane Bis(2-chloroethyl) ether 2,2-oxybis(1-chloropropane) Bis(2-ethylhexyl) phthalate 4-Bromophenyl phenyl ether Butyl benzyl phthalate 4-Chloroaniline Chlorobenzilate 4-Chloroaphthalene 2-Chlorophenol 4-Chlorophenol 4-Chlorophenol 3-methylphenol 3-methylphenol Diallate Dibenz [a,h] anthracene Dibenzofuran Di-n-butyl phthalate 3,3-Dichlorophenol 2,6-Dichlorophenol Diethyl phthalate Thionazin	Dimethoate 4-Dimethylaminoazobenzene 7,12- Dimethylbenz[a]anthracene 3,3-Dimethylbenzidine; tolidine 2,4-Dimethylphenol Dimethyl phthalate 1,3-Dinitrobenzene 4,6-Dinitro-2-methylphenol 2,4-Dinitrobluene 2,6-Dinitrotoluene Dinoseb Di-n-octyl phthalate Diphenylamine Disulfoton Ethyl methanesulfonate Famphur Fluoranthene Fluorene Hexachlorobenzene Hexachlorobutadiene Hexachlorotutadiene Hexachlorotutadiene Hexachlorothane Indeno (1,2,3-cd) pyrene Isosafrole Methapyrilene 3-Methylcholanthrene Methyl methanesulfonate 2-Methylamine 2-Napthylamine	2-Nitroaniline 3-Nitroaniline 4-Nitroaniline Nitrobenzene 2-Nitrophenol 4-Nitrosodi-n-butylamine N-Nitrosodiethylamine N-Nitrosodiethylamine N-Nitrosodiethylamine N-Nitrosodiethylamine N-Nitrosodiphenylamine N-Nitrosodiphenylamine N-Nitrosopiperidine N-Nitrosopiperidine N-Nitrosopiperidine N-Nitrosopyrrolidine 5-Nitro-o-toluidine Parathion Pentachlorobenzene Pentachlorobenzene Pentachlorophenol Phenacetin Phenactin Phenacten Phorate Pronamide Pyrene Safrole 1,2,4,5-Tetrachlorobenzene 2,3,4,6-Tetrachlorophenol o-Toluidine 1,2,4-Trichlorobenzene 2,4,6-Trichlorophenol 2,4,6-Trichlorophenol 0,0,0-Triethyl phosphorothioate 1,3,5-Trinitrobenzene

PARAMETER	USEPA METHOD
Total Cations	1
Total Anions	1
Hydroxide (OH)	2
Specific Conductance (Electrical Conductivity)	120.1
Total Hardness	130
рН	150.1
Total Dissolved Solids	160.1
Calcium (Ca)	200.7 / 215
Iron (Fe)	200.7 / 236.1
Magnesium (Mg)	200.7 / 242.1
Manganese (Mn)	200.7 / 243.1
Potassium (K)	200.7 / 258.1
Sodium (Na)	200.7 / 273.1
Zinc (Zn)	200.7 / 289.1
Boron (B)	212.3 / 200.7
Carbonate (CaCO ₃)	310.2
Bicarbonate (HCO ₃)	310.2
Total Alkalinity	310.1
Chloride (Cl)	325
Fluoride (F)	340

TABLE 5: GENERAL PARAMETERS

PARAMETER	USEPA METHOD
Nitrate (NO ₃)	353.2
Phosphate (PO ₄)	365.2
Total Phosphorus	365.1/365.2
Sulfate (SO ₄)	375
Chemical Oxygen Demand	410
Total Organic Carbon	415
Phenols	420.1
Total Organic Halogens	450.1

ATTACHMENT B – SITE MAP

(see next page)

