

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION**

MONITORING AND REPORTING PROGRAM NO. R3-2007-0023
Waste Discharger Identification No. 3400307001

FOR

**CLOSED LOS OSOS CLASS III LANDFILL
SAN LUIS OBISPO COUNTY**

PART I: MONITORING AND OBSERVATION SCHEDULE

A. SITE INSPECTIONS

The Discharger shall inspect the Los Osos Closed Class III Landfill (Landfill), according to the following schedule, recording, at a minimum, the following Standard Observations.

1. Site Inspection Schedule:
 - a. At least monthly during the wet season (**October 1 through April 30**), and following each storm event producing a minimum of 1-inch of rain within a 24-hour period.
 - b. During the dry season a minimum of one inspection every three months.
2. Standard Observations:
 - a. **For Receiving Waters:**
 - 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 travel 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. **Along the perimeter of the Landfill:**
 - i. Evidence of liquid leaving or entering the Landfill, estimated size of affected area, and estimated flow rate (show affected area on map).
 - ii. Evidence of odors; presence or absence, characterization, source, and distance of travel from source.
 - iii. Evidence of erosion or of exposed waste.
 - iv. Inspection of all storm water discharge locations for evidence of non-storm water discharges during dry seasons, and integrity during wet seasons.
 - c. **For the Landfill:**
 - i. Evidence of ponded water at any point on the Landfill site (show affected area on map).

- ii. Evidence of odors; presence or absence, characterization, source, and distance of travel from source.
- iii. Evidence of erosion or of daylighted waste.
- iv. Compliance with Storm Water Pollution Prevention Plan, insuring that the terms of the general permit is properly complied with.

B. DRAINAGE SYSTEMS INSPECTIONS

The Discharger shall inspect drainage control systems following each storm event that results in rainfall runoff and at least monthly, and record the following information:

1. Condition of facilities and liners, whether storm water storage basins and drainage ditches contain liquids;
2. Any apparent seepage from storage basins or the Landfill site;
3. Steps taken to correct any problems found during inspection and date(s) when taken; and
4. Maintain a photo log of corrections made to the drainage control systems.

C. RAINFALL DATA

The Discharger shall record the following information:

1. Total precipitation (in inches) during each three-month period.
2. Number of storms (≥ 1 -inch in 24-hours) received during the three-month period.
3. Return interval of most intense 24-hour storm (e.g. 25 year, 100 year, and so on).

E. LANDFILL GAS EXTRACTION SYSTEM INSPECTIONS

The Discharger shall inspect the landfill gas extraction system and record the following information as appropriate:

1. Monthly - inspect entire landfill gas extraction system for system integrity. Include monthly inspection, maintenance and testing demonstrations in semiannual monitoring reports;
2. Monthly - Record volume of landfill gas extracted. Report monthly volume and annual sub-totals. Indicate how volume measurement is made;
3. Monthly - Record volume of landfill gas condensate. Report monthly, semiannual and annual sub-totals in semiannual reports and report disposal method utilized. When more than one disposal method is used, be volume specific for each method;
4. Annually - Submit an annual operational summary for the landfill gas extraction system;
5. Annually - Sample landfill gas in the collection header and analyze for volatile organic compounds (VOCs).
6. Annually - Sample landfill gas condensate and analyze for VOCs; and
7. Semiannually - Using most recent landfill gas and condensate contaminant concentration data and collection volume, compute contaminant mass removed on a semiannual basis.
8. Perform routine preventive maintenance with focus on keeping the system at design operation. Summarize and report annually all scheduled and unscheduled maintenance.

F. GROUNDWATER MONITORING

Unless otherwise authorized by the Executive Officer, the Discharger shall incorporate all new groundwater monitoring wells into this monitoring and reporting program, and shall sample the new wells on a quarterly basis for a minimum of four consecutive quarters. The Discharger may make changes to the monitoring frequency, Monitoring Parameters or Constituents of Concern upon receiving prior written approval from the Executive Officer.

Table 1 below, summarizes all of the Groundwater Monitoring Points that the Discharger must monitor. Attachment 1 shows the locations of the Monitoring Points. For each monitored water-

bearing zone, the Discharger shall measure the water level in each well during each sampling event. Horizontal and vertical gradients, groundwater flow rate, and direction of groundwater flow for each water-bearing zone shall also be determined. Groundwater elevations for all wells in a given water-bearing zone shall 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. The Discharger shall compare the observed groundwater characteristics with those of previous determinations, noting the appearance of any trends, and of any indications that a change in the hydrogeologic conditions beneath the site has occurred. The Discharger will report this information in the semiannual monitoring reports.

G. STORM WATER MONITORING

Unless required more frequently due to an indication of a release, the storm water discharge point(s) shall be monitored in accordance with the facility's State Water Resources Control Board Water Quality Order No. 97-03-DWQ National Pollutant Discharge Elimination System General Permit No. CAS000001 Waste Discharge Requirements for Discharge of Storm Water Associated with Industrial Activities Excluding Construction (General Permit). The Discharger must sample storm water at the detention basin drainage outlet, which is the last accessible point before the storm water is discharged offsite. The Discharger must collect a sample for one storm event per year, and within the first hour of discharge. Analytical analysis of the storm water samples includes pH, total suspended solids, specific conductance, oil and grease, and iron. Therefore, the Discharger shall monitor storm water discharge point(s) in accordance with the facility's General Permit and any Executive Officer approved variations of the General Permit.

H. SURFACE WATER MONITORING

The Discharger shall inspect surface water locations S-1, S-2, and S-3 (as shown on Attachment 1) semiannually and note whether surface water is present and what the flowing conditions are.

I. LANDFILL GAS MONITORING

The Discharger shall monitor soil gas monitoring probes GP-1, GP-2A, GP-2B, GP-3, and gas extraction system monitoring ports MP-1 through MP-6 (as shown on Attachment 1) on a quarterly basis.

J. ANALYTICAL MONITORING

The Discharger shall monitor the Landfill monitoring points in accordance with the following schedule(s). Attachment 1 shows the monitoring locations and includes groundwater monitoring wells, gas collection headers, and surface water locations. The Discharger shall sample for Monitoring Parameters shown in **Table 2**, and Constituents of Concern shown in **Table 3**.

- 1. Groundwater and Surface Water Monitoring Parameters:** The Discharger shall analyze samples from each Monitoring Point semiannually for the Monitoring Parameters listed in **Table 2**. Attachment 1 shows the groundwater and surface water monitoring point locations.
- 2. Landfill Gas Migration Monitoring:** The Discharger shall monitor gas probes and landfill gas extraction system monitoring ports quarterly for the Monitoring Parameters in **Table 4** with the exception of VOCs. Monitoring results shall be submitted to the Central Coast Water Board in the semiannual reports and include information specified in Title 27, Section 20934.
- 3. Constituents of Concern:** The Constituents of Concern include constituents listed in **Table 3**, below. Monitoring for Constituents of Concern shall encompass only those Constituents

of Concern that do not also serve as Monitoring Parameters. The Discharger shall analyze for Constituents of Concern **once every five years**, at each of the Landfill's groundwater and surface water Monitoring Points, unless required more frequently due to an indication of a release. The Discharger shall sample and analyze groundwater samples from wells not previously sampled for Constituents of Concern, for all Constituents of Concern within three months of this program becoming effective.

4. **Sample Procurement Limitation:** For any given monitored medium, the samples taken from Monitoring Points to satisfy the data analysis requirements for a given Monitoring Period shall be taken within a span not exceeding 30 days, and shall be taken in a manner that ensures sample independence to the greatest extent feasible [CCR Title 27, Section 20415(e)(12)(B)]. Sampling for successive monitoring periods shall occur at least 30 days apart.

**TABLE 1
MONITORING POINTS**

Monitoring Point	Geology	Table 1	Table 2	Table 3	Frequency
BW-1 ⁽¹⁾	Paso Robles Formation (Shallow or Deep Zone)	X		Table 2 Table 3	Annually
BW-2 ⁽¹⁾	Paso Robles Formation (Shallow Zone)	X		Table 2 Table 3	Annually
MW-1	Franciscan Bedrock	X		Table 2 Table 3	Semiannually
MW-2	Paso Robles Formation Shallow Zone		X	Table 2 Table 3	Semiannually
MW-3	Paso Robles Formation Shallow Zone		X	Table 2 Table 3	Semiannually
MW-4	Alluvium Shallow Zone	X		Table 2 Table 3	Semiannually
MW-5	Alluvium Shallow Zone		X	Table 2 Table 3	Semiannually
MW-6	Paso Robles Formation Shallow Zone		X	Table 2 Table 3	Semiannually
MW-7	Alluvium Shallow Zone	X		Table 2 Table 3	Semiannually
MW-8	Alluvium Shallow Zone	X		Table 2 Table 3	Semiannually
MW-9	Alluvium Shallow Zone	X		Table 2 Table 3	Semiannually
MW-10	Paso Robles Formation Deep Zone		X	Table 2 Table 3	Semiannually
MW-11	Paso Robles Formation Deep Zone	X		Table 2 Table 3	Semiannually
MW-12	Paso Robles Formation Deep Zone		X	Table 2 Table 3	Semiannually
MW-13	Paso Robles Formation Deep Zone	X		Table 2 Table 3	Semiannually

Well ID	Monitoring Point (See Appendix B)	Monitoring Parameter	Monitoring Frequency
MW-14	Paso Robles Formation Deep Zone	X	Table 2 Table 3 Semiannually
S-1	Surface Water Upstream	X	Table 2 Table 3 Semiannually
S-2	Surface Water Midstream	X	Table 2 Table 3 Semiannually
S-3	Surface Water Downstream	X	Table 2 Table 3 Semiannually
Gas Probes	Gas Migration		Table 4 (w/o VOCs) Quarterly
Gas Collection Header	Collection System		Table 4 Annually
Gas Condensate	Collection System/Sump		VOCs Annually

⁽¹⁾ Designated background monitoring points.

⁽²⁾ Sample once every five years for full suite of analytes listed in Table 3. Next sampling event is in October 2007.

⁽³⁾ Semiannual monitoring shall be performed each April and October and includes water levels for all wells.

**TABLE 2
MONITORING PARAMETERS**

Ground Water Monitoring Well Water Elevation and Depth ⁽¹⁾	Sounder	0.01 feet
Electrical Conductivity	Field	µmhos/cm
pH	Field	pH Units
ORP	Field	milliVolts
Temperature	Field	°F/°C
Turbidity	Field	NTU
Dissolved Oxygen	Field	Varies
Chemical Oxygen Demand ⁽²⁾	5220B	mg/L
Chloride ⁽²⁾	300.0/9253	mg/L
Total Dissolved Solids (TDS) ⁽²⁾	160.1	mg/L
Manganese (dissolved) ⁽²⁾	200.8/3015/6020A/6010B	mg/L
Sodium (dissolved) ⁽²⁾	200.7/3015/6010B	mg/L
Sulfate (as SO ₄) ⁽²⁾	300.0	mg/L
Nitrate (as NO ₃) ⁽²⁾	300.0/353.2	mg/L
VOCs ⁽³⁾	8260B	µg/L
<p>⁽¹⁾ Water elevation shall be recorded from all monitoring wells and piezometers semiannually and in which measurements are readily accessible</p> <p>⁽²⁾ Chloride, manganese (dissolved), sodium (dissolved), nitrate, sulfate, and TDS will be subjected to the statistical evaluation method described in Part II.D. of the Sample and Collection and Analysis Section, herein.</p> <p>⁽³⁾ The VOCs include all Volatile Organic Compounds (VOCs) detectable using USEPA Method 8260B including at a minimum all 47 VOCs listed in Appendix I to 40 CFR 258, and all unidentified peaks. VOCs will be subjected to the non-statistical evaluation method described in Part II.E. of the Sample Collection and Analysis Section, herein.</p> <p>⁽⁴⁾ Or most recently approved EPA method that provides the lowest practicable detection limits.</p> <p>Note: mg/L = milligrams per liter; °F/°C = degrees Fahrenheit and Celsius; NTU = natural turbidity units; µmhos/cm = micro-mhos per centimeter; and µg/L = micrograms per liter.</p>		

**TABLE 3
CONSTITUENTS OF CONCERN**

Antimony	6010B	mg/L
Arsenic	7060A	mg/L
Barium	6010B	mg/L
Beryllium	6010B	mg/L
Cadmium	6010B	mg/L
Chromium	6010B/7196A	mg/L
Cobalt	6010B	mg/L
Copper	6010B	mg/L
Cyanide	9010 or 335.2	mg/L
Lead	7421	mg/L
Magnesium	6010B	mg/L
Mercury	7470A	mg/L
Nickel	6010B	mg/L
Selenium	7740	mg/L
Silver	6010B	mg/L
Sulfide	9030B or 376.1	mg/L
Thallium	7841	mg/L
Tin	6010B	mg/L
Vanadium	6010B	mg/L
Zinc	6010B	mg/L
Chlorophenoxy Herbicides	8151A	µg/L
Organochlorine Pesticides	8081A	µg/L
PCBs	8082	µg/L
Phthalate Esters	8060	µg/L
Phenols	8040	µg/L
Nonhalogenated Volatiles	8015M	µg/L
Semi-Volatile Organic Compounds	8270C	µg/L
VOCs, Appendix II ⁽³⁾ (including oxygenates)	8260B	µg/L

⁽¹⁾ The Discharger shall analyze for all parameters using the USEPA analytical methods indicated above (or updated method), including all constituents listed in Appendix II to 40 CFR, Part 258. Wells that are normally monitored for Constituents of Concern (COC) in Table 2 do not need to be re-sampled for the same constituents in Table 3, during Constituents of Concern sampling events. The semiannual, and Constituents of Concern monitoring event shall be conducted simultaneously.

⁽²⁾ Or most recently approved EPA method that provides the lowest practicable detection limits.

⁽³⁾ Oxygenates include methyl tertiary-butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl tertiary-butyl ether (ETBE), tertiary-amyl methyl ether (TAME), and tertiary-butyl alcohol (TBA).

**TABLE 4
LANDFILL GAS MONITORING PARAMETERS**

Methane	Field	ppm
Carbon Dioxide	Field	ppm
Oxygen	Field	ppm
VOCs	TO-14	

PART II: SAMPLE COLLECTION AND ANALYSIS

A. SAMPLING AND ANALYTICAL METHODS

The Discharger shall perform sample collection, storage, and analysis specified in this monitoring and reporting program according to the most recent version of Standard USEPA Methods (USEPA publication SW-846), and in accordance with an Executive Officer approved Sampling and Analysis Plan (SAP). A laboratory certified for these analyses by the State Department of Health Services shall perform the analyses. The Discharger must identify the specific methods of analysis used. If methods other than USEPA-approved methods or Standard Methods are used, the Discharger must submit the exact methodology for review and approval by the Executive Officer prior to use. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Central Coast Water Board. Field staff shall properly calibrate and maintain all monitoring instruments and equipment to ensure accuracy of measurements. The Discharger shall keep all calibration and maintenance records and make them available upon request by the Central Coast Water Board. Sampling shall occur at a date that allows timely submittal of monitoring reports according to the schedule required by this monitoring and reporting program. In addition, the Discharger is responsible for providing analytical results for all Monitoring Points that meet 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% non-numerical determinations (i.e., "trace") in historical data for that medium, the SW-846 analytical method having the lowest Method Detection Limit (MDL) shall be selected from among those methods that would provide valid results in light of any Matrix Effects involved.
2. **Trace Results:** The Discharger shall report results falling between the MDL and the Practical Quantitation Limit (PQL) as "trace", and the result shall be accompanied by both the (nominal or estimated) MDL and PQL values for that analytical run.
3. **Nominal or Estimated MDL and PQL:** The laboratory shall derive the nominal MDL and PQL for each analytical procedure in accordance with the 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 lab. If the lab 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 MDL/PQL values, the laboratory will flag the result accordingly and provide an estimate of the detection limit and/or quantitation limit actually achieved shall be included.
4. **Quality Assurance/Quality Control (QA/QC) Data:** The Discharger shall report all QA/QC data along with the sample results to which it applies. The Discharger shall report the sample results unadjusted for blank results or spike recovery. The QA/QC data submittal shall include the following information:
 - a. Method, equipment, and analytical detection limits.
 - b. Recovery rates and an explanation for any recovery rate that is outside the USEPA-specified recovery rate.
 - c. Results of 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 analysis.

5. **Common Laboratory Contaminant:** Upon receiving written approval from the Executive Officer, the Discharger can use a statistical or non-statistical procedure for determining the significance of analytical results for a constituent that is a common laboratory contaminant during any given Monitoring Period in which QA/QC samples show evidence of laboratory contamination for that constituent. Examples of common laboratory contaminants are methylene chloride, acetone, 2-butanone, diethylhexyl phthalate, and di-n-octyl phthalate. However, the Discharger shall report and flag analytical results involving detection of these analytes in any background or downgradient sample for easy reference by Water Board staff.
6. **Unknowns:** The laboratory shall identify, quantify, and report unknown chromatographic peaks to a reasonable extent. When the laboratory encounters an unknown peak, the laboratory may perform a second column or second method confirmation procedure to attempt to identify and more accurately quantify the unknown analyte.
7. In cases where contaminants are detected in QA/QC samples (i.e., field, trip, or lab blanks), the accompanying sample results shall be appropriately flagged for easy reference.

B. CONCENTRATION LIMITS

1. The concentration limit for Monitoring Parameters and Constituents of Concern shall be determined as follows:
 - a. In cases where the constituent's MDL is exceeded in less than ten percent of the historical samples, the MDL is the Concentration Limit.
 - b. In cases where the constituent's MDL is exceeded in ten percent or more of the historical sample, a statistically based Concentration Limit must be defined and regularly updated as follows:
 - i. Statistically analyze existing monitoring data, and propose, to the Executive Officer, statistically derived Concentration Limits for each Constituent of Concern and each Monitoring Parameter at each Monitoring Point for which sufficient data exists.
 - ii. In cases where sufficient data for statistically determining Concentration Limits does not exist, the Discharger shall collect samples and analyze for Constituent(s) of Concern and Monitoring Parameter(s) that require additional data. Once the Discharger obtains sufficient data, the Discharger shall submit proposed Concentration Limit(s) to the Executive Officer for approval. This procedure shall take no longer than two calendar years.
 - iii. Sample and analyze new Monitoring Points, including any added by this monitoring and reporting program, until sufficient data is available to establish a proposed Concentration Limit for all Constituents of Concern and Monitoring Parameters. Once the Discharger has obtained sufficient data, the Discharger shall submit the proposed Concentration Limit(s) to the Executive Officer for approval. This procedure shall take no longer than two calendar years.
2. The Discharger shall review Concentration Limits annually. The Discharger shall review the past years data for application to revision of Concentration Limits. When appropriate, the Discharger shall propose new Concentration Limits along with technical rationale for proposing the change.

C. RECORDS TO BE MAINTAINED

The Discharger shall maintain water quality records for no less than a 30-year period. The period of retention shall be extended during the course of any unresolved litigation or when requested by the Executive Officer. Such records shall show the following for each sample:

1. Identity of a sample and the actual monitoring point designation from which the sample was collected, 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 the personnel performing each analysis.
4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used.
5. Chromatographs and calculation of results.
6. A complete chain of custody logs.
7. Results of analyses, and the MDL and PQL for each analysis.

D. STATISTICAL ANALYSIS

For Detection Monitoring during a Constituents of Concern event, the Discharger shall use statistical methods to analyze Constituents of Concern that exhibit concentrations that equal or exceed their respective MDL in at least ten percent of applicable historical samples. For routine (i.e., semiannual) detection monitoring, the Discharger shall apply statistical methods for those Detection Monitoring Parameters defined in **Table 2** of Part I.J. The Discharger may propose and use any statistical method that meets the requirements of California Code of Regulations, Title 27, Section 20414(e)(7). All statistical methods and programs proposed by the Discharger are subject to Executive Officer approval.

E. NON-STATISTICAL METHOD

The Discharger shall use the following non-statistical method for analyzing constituents that are detected in less than ten percent of applicable historical samples. This non-statistical method involves a two-step process:

1. The Discharger shall compile a specific list of constituents that exceed their respective MDL. The non-statistical method must apply to all the constituents in the list. The Discharger shall compile the list based on either data from a single sample or from the largest number of constituents in cases of multiple independent samples.
2. Evaluate whether the listed constituents meet either of two possible triggering conditions. Either, the list from a single well contains two or more constituents, or contains one constituent that equals or exceeds its PQL. If either condition is met, the Discharger shall conclude that a release is tentatively indicated and shall immediately implement the appropriate re-test procedure as described in Section F. below.

F. RE-TEST PROCEDURE

1. In the event the Discharger concludes that a release has been tentatively indicated, the Discharger shall carry out the appropriate reporting requirements and, within 30 days of receipt of analytical results, collect two new suites of samples for the indicated Constituents of Concern or Monitoring Parameter(s) at each indicating Monitoring Point. The Discharger shall collect at least as many samples per Monitoring Point as were used for the initial test.

2. The Discharger shall 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 shall conclude that a release has been discovered and shall carry out the appropriate requirements.
3. The Discharger shall conduct 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. When a VOC analyte is re-tested the results of the entire VOC test method analyzed shall be reported.

PART III: REPORTING

A. MONITORING AND REPORTING SCHEDULE

A written Monitoring Report shall be submitted **semiannually** by **January 31st** and **July 31st** of each year. The report shall address all facets of the Landfill's monitoring. Reports shall include, at a minimum, the following:

1. **Letter of Transmittal**

A letter transmitting a summary of the essential points shall accompany each report. The Discharger will include a discussion of violations that occurred since the last report in the transmittal letter. If there are no new violations to report since the last submittal, than this will be stated in the transmittal letter. A division manager or duly authorized representative shall sign both the Monitoring Report and the transmittal letter. Upon Central Coast Water Board Executive Officer approval, the cited signature can be by a California Registered Civil Engineer or Certified Engineering Geologist who has been given signing authority by the cited signatories. The transmittal letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

2. **Compliance Summary**

The Monitoring Report shall contain at least:

- a. Discussion of compliance with Concentration Limits. Release indications and actions taken.
- b. For each monitored groundwater body, calculate groundwater velocity and, based upon water level elevations taken during the Monitoring Period, graphically present groundwater flow direction under and around the Unit.

3. **Graphical Presentation of Analytical Data**

For each Monitoring Point in each medium, submit, in graphical format, the complete history of laboratory analytical data. Graphs shall effectively illustrate trends and/or variations in the laboratory analytical data (e.g., proper scale). Each graph shall 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 shall be graphed along with constituent concentrations where applicable. When multiple samples are taken, graphs shall plot each datum, rather than plotting mean values.

4. Corrective Action Summary

Discuss significant aspects of any corrective action measures conducted during the Monitoring Period. Calculate pollutant load removed from the sites impacted media by mass (water, gas, leachate) removal system(s). The Discharger shall base mass removal calculations on actual analytical data as required by Part I.E. The Discharger must include a discussion and indications, relating mass removal data to the violation the corrective action is addressing.

5. Laboratory Results

The Discharger shall summarize and report laboratory results and statements demonstrating compliance with Part II (Sample Collection and Analysis) and results of analyses performed at the Landfill, outside the requirements of this MRP.

6. Sampling Summary

- a. For each Monitoring Point addressed by the report, a description of: 1) the method and time of water level measurement; 2) the method of purging and purge rate and well recovery time; and 3) field parameter readings.
- b. 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, travel blanks, and duplicate samples taken; the date and time of sampling; the name and qualification of the person actually taking the samples; description of any anomalies).

7. Standard Observations

A summary of Standard Observations made during the Monitoring Period as described in Part I.A.2.

8. Map(s)

A map or an aerial photograph showing Monitoring Points, relative physical features, and groundwater contours overlaid on the map or the aerial photograph to the greatest degree of accuracy possible.

B. ANNUAL SUMMARY REPORT

The Discharger shall submit an annual report to the Central Coast Water Board covering the previous monitoring year. The annual Monitoring Period ends on December 31st each year. This report may be combined with the second semiannual Monitoring Report of the year and shall be submitted no later than **January 31st** each year. The annual report must include the information outlined in Part III.A., above, and the following:

1. Discussion

Include a comprehensive discussion of the compliance record, 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. Statistical Limit Review

The Discharger shall review annually and revise as necessary, the statistically derived Concentration Limits. The Discharger shall discuss all the data collected during the past year and consider for inclusion in, and determination of, proposed limits for the coming year. If the Discharger changes statistical limits from the previous year, include a comprehensive discussion of the proposed limit for Executive Officer review and consideration.

3. Analytical Data

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

Graphical Presentation of Data

All monitoring analytical data obtained during the previous year, presented in tabular and graphical form as well as on compact disk in Microsoft Excel™ format or in another file format acceptable to the Executive Officer.

4. Map(s)

A map, or set of maps, that indicate(s) the type of cover material added to the final cover.

C. CONTINGENCY RESPONSE

1. **Leachate Seep:** The Discharger shall, within 24 hours, report by telephone or electronic mail the discovery of any previously unreported seepage from the Landfill disposal area. A written report shall be filed with the Central Coast Water Board within **seven 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.
- c. **Description** - a description of the nature of the discharge (e.g., all pertinent observations and analysis).
- d. **Location** - Location of sample(s) collected for laboratory analysis, as appropriate.
- e. **Corrective measures** - A summary of corrective measures both taken and proposed.

2. **Physical Evidence of a Release:** If either the Discharger or the Central Coast Water Board Executive Officer determines that there is significant physical evidence of a release pursuant to Title 27, Section 20385(a)(3), the Discharger shall conclude that a release has been discovered and shall:

- a. Within seven days notify the Central Coast Water Board of this fact by certified mail (or acknowledge the Central Coast Water Board's determination).
- b. Carry out the appropriate Release Discovery Response for all potentially-affected monitored media.
- c. Carry out any additional investigations stipulated in writing by the Central Coast Water Board Executive Officer for the purpose of identifying the cause of the indication.

3. **Responses to an Initial Indication of a Release**

Should the initial statistical or non-statistical comparison (under Part II.D.) indicate that a new release is tentatively identified, the Discharger shall:

- a. Within 24 hours, notify the Central Coast Water Board verbally or via electronic mail as to the Monitoring Point(s) and constituent(s) or parameter(s) involved;
- b. Provide written notification by certified mail within seven days of such determination; and,
- c. Either of the following:
 - i. Shall carry out a discrete re-test in accordance with Part II.F. If the re-test confirms the existence of a release or the Discharger fails to perform the re-test, the Discharger shall carry out the requirements of Part III.C.4. In any case, the Discharger shall inform the Central Coast Water 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;

- ii Make a determination, in accordance with Title 27, Section 20420(k)(7), that a source other than the waste management unit 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.
- 4. Release Discovery Response**
- If the Discharger concludes that a new release has been discovered the following steps shall be carried out:
- a. If this conclusion is not based upon monitoring for Constituents of Concern, the Discharger shall sample for Constituents of Concern at Monitoring Points in the affected medium. Within 14 days of receiving the laboratory analytical results, the Discharger shall notify the Executive Officer, by certified mail, of the concentration of Constituents of Concern at each Monitoring Point. This notification shall include a synopsis showing, for each Monitoring Point, those constituents that exhibit an unusually high concentration;
 - b. The Discharger shall, 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 Title 27, Sections 20420 and 20425; and
 - ii. satisfies the requirements of 40 CFR Section 258.55(g)(1)(ii) by committing to install at least one monitoring well directly downgradient of the center of the release;
 - c. The Discharger shall, within 180 days of discovering the release, submit to the Executive Officer a preliminary engineering feasibility study meeting the requirements of Title 27, Section 20420; and
 - d. The Discharger shall 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 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 Unit has migrated beyond the facility boundary, the Discharger shall so notify persons who either own or reside upon the land that directly overlies any part of the plume (Affected Persons).
- a. The Discharger shall accomplish the initial notification to Affected Persons 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 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 a. or b. above), the Discharger shall, within seven days of sending such notification, provide the Executive Officer with both a copy of the notification and a current mailing list of Affected Persons.

PART IV: DEFINITION OF TERMS

A. AFFECTED PERSONS

Individuals who either own or reside upon the land which directly overlies any part of that portion of a gas or liquid phase release that may have migrated beyond the facility boundary.

B. CONCENTRATION LIMITS

The Concentration Limit for any given Constituents of Concern or Monitoring Parameter in a given monitored medium shall be either:

1. The constituent's statistically determined background value or interval limit, established using an Executive Officer approved method (Parts II.D. and II.E.); or
2. In cases where the constituent's MDL is exceeded in less than 10% of historical samples, the MDL is the concentration limit defined in Part II.A.1.

C. CONSTITUENTS OF CONCERN (COC)

A broad list of constituents, which are likely to be present in a typical municipal solid waste landfill. The Constituents of Concern parameters include all constituents listed in the Code of Federal Regulations, Title 40, Part 258, Appendix II. The Constituents of Concern for this Landfill are listed in **Table 3**.

D. MATRIX EFFECT

Any increase in the MDL or PQL for a given constituent as a result of the presence of other constituents, either of natural origin or introduced through a release, that are present in the sample being analyzed.

E. MAXIMUM CONTAMINANT LEVEL (MCL)

A contaminant level for drinking water, established by the California Department of Health Services, Division of Drinking Water and Environmental Management, or by the U.S. Environmental Protection Agency.

F. METHOD DETECTION LIMIT (MDL)

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 shall reflect the detection capabilities of the specific analytical procedure and equipment used by the laboratory.

G. MONITORED MEDIUM

Those media that are monitored pursuant to this MRP (groundwater, surface water, leachate, landfill gas condensate, and other as specified).

H. MONITORING PARAMETERS

A short list of constituents and parameters used for the majority of monitoring activities. The Monitoring Parameters for this Landfill are listed in **Table 2** of this MRP.

I. MONITORING PERIOD (frequency)

The duration of time during which a sampling event must occur. The Monitoring Period for the various media and programs is specified in Part J. and in **Table 1**. The due date for any given report will be 30 days after the end of its Monitoring Period, unless otherwise stated.

J. MONITORING POINT

For any given monitored medium (surface water, ground water, or the unsaturated zone), the Monitoring Point means a location, including any installed access device (e.g., well or lysimeter), that is named in the Monitoring and Reporting Program as a place where the Discharger monitors that medium.

K. POINT OF COMPLIANCE (POC)

The Point of Compliance is as defined in CCR Title 27. For the purposes of this Landfill, the POC follows the edge of the Landfill's "Subtitle D Footprint", and extends vertically down through the uppermost water-bearing zone.

L. PRACTICAL QUANTITATION LIMIT (PQL)

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 shall reflect the quantitation capabilities of the specific analytical procedure and equipment used by the laboratory. The PQLs reported by the laboratory shall not simply be restated from USEPA analytical method manuals. Laboratory derived PQLs are expected to closely agree with published USEPA estimated quantitation limits (EQL).

M. RECEIVING WATERS

Any surface water, which actually or potentially receives surface or groundwater, which pass over, through, or under waste materials or contaminated soils.

N. VOLATILE ORGANIC COMPOUND (VOC) COMPOSITE MONITORING PARAMETER (VOC composite)

VOC composite is a composite parameter that encompasses a variety of VOCs. The constituents addressed by the VOC composite Monitoring Parameter include all VOCs detectable using USEPA Methods 8260B (water) and TO-14 (gas).

All reports required in this MRP are required pursuant to California Water Code Section 13267. Any person affected by this action of the Central Coast Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with section 13320 of the California Water Code and Title 23, California Code of Regulations, Section 2050. The petition must be received by the State Water Board within 30 days of the date of this Order. State Water Board staff will provide copies of the law and regulations applicable to filing petitions upon request.

ORDERED BY:


Executive Officer

DATE:

5-16-07

- EXPLANATION**
- APPROXIMATE LIMITS OF WASTE
 - - - LFG PIPING, HOPE (TYP), EXISTING
 - - - ENCASED ROAD CROSSING, EXISTING
 - - - LFG EXTRACTION WELL, EXISTING
 - ⊙ GW-20 EXISTING LFG SAMPLING WELL INCORPORATED INTO LFG CONTROL SYSTEM
 - ⊙ GP-3 GAS PROBE LOCATION
 - ⊙ MP6 GAS EXTRACTION SYSTEM MONITORING POINT
 - MW-9 SHALLOW GROUNDWATER MONITORING WELL
 - MW-13 DEEP GROUNDWATER MONITORING WELL
 - ▲ S-3 SURFACE WATER SAMPLING LOCATION

- 17
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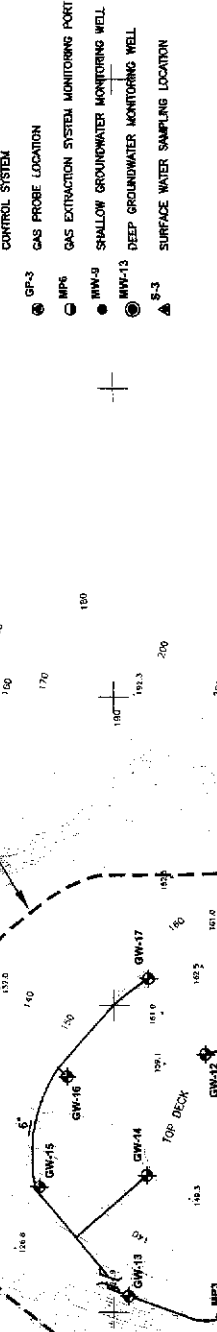
APPROXIMATE LIMIT OF REFUSE

APPROXIMATE LIMIT OF WASTE

APPROXIMATE LIMIT OF REFUSE

APPROXIMATE LIMIT OF WASTE

APPROXIMATE LIMIT OF REFUSE



NOTES:

1. EXISTING CONTOUR MAP PROVIDED BY GOLDEN STATE AERIAL SURVEY, INC., SAN LUIS OBISPO, CALIFORNIA.
2. LFG EXTRACTION WELLS, LATERAL AND HEADER PIPING, ENCASED ROAD CROSSINGS, AND FLARE FACILITY ARE INSTALLED. LOCATION OF LFG FLARE FACILITY COMPONENTS TO BE DETERMINED BY ENGINEER AND MAY BE ADJUSTED BASED ON FUTURE FIELD CONDITIONS.

DRAWING REFERENCE: DMOON

DATE:	7/25/05
DWN:	KMM
APP:	TLV
REV:	0
PROJECT NO.:	053-7465

MRP R3-2007-0023
Attachment 1
May 11, 2007



Topographic base map from Golden State Aerial Surveys, 3/2/02.

0:\053-7563\FIGURES\GW-GAS BASE.DWG 7/25/05

Drawn by: T. Linder; Plotted by: T. Linder; Scale: 1" = 400'