

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2007-____
FOR
COUNTY OF YOLO
PLANNING AND PUBLIC WORKS DEPARTMENT
YOLO COUNTY CENTRAL LANDFILL
CLASS III LANDFILLS & CLASS II SURFACE IMPOUNDMENTS
CONSTRUCTION, OPERATION, CLOSURE, POST-CLOSURE MAINTENANCE,
AND CORRECTIVE ACTION
YOLO COUNTY

The Discharger shall maintain water quality monitoring systems that are appropriate for detection monitoring and corrective action, and that comply with Subchapter 3, Chapter 3, Subdivision 1, Division 2, Title 27, CCR, and any other applicable provisions therein.

Compliance with this Monitoring and Reporting Program, and with the companion Standard Provisions and Reporting Requirements dated April 2000, is ordered by Waste Discharge Requirements (WDRs) Order No. R5-2007-____. Failure to comply with this Program, or with the Standard Provisions and Reporting Requirements, constitutes non-compliance with the WDRs and with Division 7 of the Water Code, which can result in the imposition of civil monetary liability.

This MRP contains the following sections:

- I. MONITORING PROGRAMS
- II. DETECTION MONITORING
- III. CORRECTIVE ACTION MONITORING
- IV. WATER QUALITY PROTECTION STANDARD
- V. REPORTING
- VI. NOTIFICATION AND RESPONSE TO A RELEASE

I. MONITORING PROGRAMS

A. SOLID WASTE MONITORING

The Discharger shall monitor and report all wastes discharged to each WMU on a monthly basis as follows:

Nonhazardous Solid Waste Monitoring

<u>Parameter</u>	<u>Units</u>	<u>Reporting Frequency</u>
Source(s) of material discharged		Semi-annually
Maximum discharge elevation	MSL feet & tenths	Semi-annually
Results of Load Checking Program	---	Semi-annually
Quantity discharged	Cubic yards or tons	Semi-annually

<u>Parameter</u>	<u>Units</u>	<u>Reporting Frequency</u>
Type of material discharged	---	Semi-annually
Capacity of landfill/module remaining	Percent	Annually

Liquid and Semi-solid Waste Monitoring

The Discharger shall monitor all wastes discharged to the Class II surface impoundments on a daily basis and report to the Regional Board as follows:

<u>Parameter</u>	<u>Units</u>	<u>Reporting Frequency</u>
Quantity discharged	gallons, cubic yards or tons	Semi-annually
Type of liquid discharged	---	Semi-annually
Capacity remaining	Percent/gallons	Semi-annually
Source of material discharged	---	Semi-annually
Minimum freeboard	Feet & tenths	Semi-annually

B. CONSTITUENTS OF CONCERN

Except as otherwise indicated in this Order, the Discharger shall monitor each media of each new and existing landfill module for applicable Constituents of Concern (per Subtitle D/State Water Resources Control Board Resolution 93-62). The monitoring locations, analytical methods, and frequency of analysis are as follows:

1. Monitoring Locations

- a. Leachate – As specified in Section I.C.1 of this MRP.
- b. Unsaturated zone
 - i) pore fluid - lysimeters for monitoring each WMU, as identified in Section II.B.1 of this MRP.
- c. Groundwater - all monitoring wells screened in each location as follows:
 - i) each aquifer zone (shallow and deep) down gradient of each WMU or contiguous landfill WMUs
 - ii) upgradient background wells for each WMU or WMU group

2. Monitoring Schedule

CONSTITUENTS OF CONCERN MONITORING

<u>Constituents of Concern</u> ¹	<u>Units</u>	<u>Frequency</u>
Carbonate	mg/l	Every 5 years ²
Inorganics (dissolved)	mg/l	Every 5 years ²
Volatile Organic Compounds (EPA Method 8260B)	µg/l	Every 5 years ²
Semi-Volatile Organic Compounds (EPA Method 8270B)	µg/l	Every 5 years ²
Organochlorine Pesticides (EPA Method 8081A)	µg/l	Every 5 years ²
PCBs (EPA Method 8082)	µg/l	Every 5 years ²
Chlorophenoxy Herbicides (EPA Method 8151)	µg/l	Every 5 years ²
Organophosphorus Pesticides (EPA Method 8141A)	µg/l	Every 5 years ²

1. The constituent-by-constituent listings for each of the above groups are included in Attachment F which accompanies this Order.
2. Except for leachate which shall be monitored for COCs annually (see Section I.C.2 of this MRP).

C. LEACHATE MONITORING

1. Monitoring Locations

The leachate monitoring locations shall be as follows:

LEACHATE MONITORING LOCATIONS			
WMU	Module	Impoundment	Monitoring Location
1, 2, 3, 4, 5	---	---	LPS1
6	A, B, C	---	LPS2
6	B	---	LPS2, CEC-SC ¹
6	D (Phase 1)	---	6D1-E-LS, 6D1-W-LS
6	D (Phase 2)	---	6D2-E-LS, 6D2-W-LS
6	D - bioreactors		Pressure transducers ²
G	---	G	G-LD
H	---	H1, H2, H3	H1-LD, H2-LD, H3-E-LD, H3-W-LD

1. "CEC-SC was formerly called "CEC-LYS", and as described in the *In the Amended Report of Waste Discharge Proposing a Corrective Action Program for WMU 6B, 6C, and G submitted to the RWQCB on March 26, 2004*, this was an incorrect naming of this monitoring point since it does not actually monitor the vadose zone under WMU 6B, but is a secondary containment for the CEC Enhanced Control Cell.
2. Includes pressure transducers in LCRS trenches and on geocomposite drainage layer.

2. Monitoring Schedule

Leachate monitoring shall be conducted as follows:

LEACHATE AND UNSATURATED ZONE MONITORING PROGRAM

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
<i>Field Parameters</i>		
Flow Rate ¹	Gallons/day	Monthly
Volume	Gallons	Monthly
Specific Conductance	µmhos/cm	Monthly
pH	pH units	Monthly
Hydraulic head ²	ft	continuously
<i>Monitoring Parameters</i> ³		
Ammonia as N	mg/l	Semi-annually
Bicarbonate	mg/l	Semi-annually
Chloride	mg/l	Semi-annually
Nitrate	mg/l	Semi-annually
Sulfates	mg/l	Semi-annually
Total Alkalinity	mg/l	Semi-annually
Total Kjeldahl Nitrogen	mg/l	Semi-annually
Total Dissolved Solids (TDS)	mg/l	Semi-annually
Inorganics (dissolved)	mg/l	Annually
Volatile Organic Compounds	µg/l	Semi-annually
<i>Constituents of Concern</i>		
Section I.B.2 constituents ^{1, 4}	Varies, see Section I.B.2 of this MRP	Annually

1. Leachate monitoring only.

2. Module D bioreactors only.

3. The constituent-by-constituent listing for Monitoring Parameters is included in Attachment E, which accompanies this Order.

4. The constituent-by-constituent listing for Constituents of Concern is included in Attachment F, which accompanies this Order.

Upon detection of leachate in a previously dry sump or pump station, the leachate shall be sampled in accordance with the above schedule and the results included in the monitoring report.

All visible portions of synthetic liners shall be inspected on a monthly basis. If, during the active life of the impoundment, the wastes are removed and the impoundment is cleaned down to the liner, an inspection shall be made of the bottom liner prior to refilling of the impoundment.

Each landfill and surface impoundment LCRS shall be hydraulically tested annually to demonstrate that it is still operating in conformance with the WDRs (i.e., no clogging,

collapse, or reduced drainage capacity). The results shall be reported to the Regional Board in the annual report and include comparison with earlier tests made under comparable conditions.

D. GROUNDWATER ELEVATION MONITORING

The ground water surface elevation (in feet and hundredths, MSL) in all wells and piezometers shall be measured on a quarterly basis and used to determine the gradient and direction of ground water flow. Groundwater elevations taken prior to purging the well and sampling for Monitoring Parameters may be used to fulfill this requirement. Groundwater elevations for all up-gradient and down-gradient wells for a given groundwater body shall be measured within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater gradient and direction. This information shall be included in the semi-annual monitoring reports. The results of ground water elevation monitoring shall be displayed on a water table contour map and/or ground water flow net for the site and submitted with the semi-annual monitoring reports.

II. DETECTION MONITORING

A. GENERAL

The Discharger shall perform Detection Monitoring on all media potentially affected by a release, including surface water, groundwater, and the unsaturated zone. For any given monitored medium, a sufficient number of samples shall be taken from all Monitoring Points and Background Monitoring Points to satisfy the data analysis requirements for a given Reporting Period, and shall be taken in a manner that ensures sample independence to the greatest extent feasible.

The Discharger shall use a Regional Board-approved statistical (or non-statistical) procedure to determine whether there has been a measurably significant increase in a constituent over the water quality protection standard, as set forth in Section 20415(e)(7) of Title 27.

B. UNSATURATED ZONE

Unsaturated zone monitoring devices shall be checked monthly for fluid and monitoring shall include the volume of fluid recovered. The monitoring locations shall be as follows:

1. Monitoring Locations

WMUs 1 through 6A were constructed before 1992 and do not have unsaturated zone monitoring. Further, WMUs 1 through 5 are in corrective action. The unsaturated zone monitoring for the remaining WMUs consists of pan and vacuum lysimeters placed in the subgrade of each landfill unit and surface impoundment. The unsaturated zone monitoring points shall be as listed below (and as shown in

Attachment C):

<u>WMU</u>	<u>Lysimeter</u>
6A	---
6B ¹	6B-N-LYS, 6B-S-LYS
6C ²	6C-N-LYS, 6C-S-LYS
6D ³	6D1-E-LYS, 6D1-W-LYS (Phase 1) 6D2-E-LYS, 6D2-W-LYS (Phase 2)
G ⁴	G-LYS-1, G-LYS-2, and G-LYS-3
H1 ⁴	H1-LYS
H2 ⁴	H2-LYS
H3 ⁴	H3-E-LYS and H3-W-LYS

1. Module B has strip drains consisting of geomembrane, geonet and geotextile from bottom to top, underneath the northern and southern LCRS trenches (which connect directly to the trunk line on the eastern perimeter of the module). The strip drains direct flow to separate pan lysimeter manholes on the eastern side of the module (north and south half). The northern pan lysimeter manhole also services the strip drains under the two LCRS trenches for the pilot bioreactor cells.
2. Module C has vacuum lysimeters above the capillary break on the northern and southern half. The vacuum lysimeters are accessed by riser pipe which extends up the slope of the perimeter berm. Lysimeter 6C-S-LYS has been moved from detection monitoring to corrective action monitoring due to the confirmed presence of VOCs in this lysimeter as stated in the WDRs.
3. Module D, phase 1 capillary fringe break covers the entire unit, but has strip drains consisting of geonet covered with geotextile under the LCRS trenches and in several locations in "dendritic" format draining towards the low points of the liner, which are under the LCRS trenches and drain north to south. Module D, phase 2 capillary fringe break covers the entire cell and has a blanket geocomposite over the entire unit draining towards the low points in the liner, which are under the LCRS trenches and drain north to south. Both Module D, phase 1 and phase 2 have pan lysimeters located at the southern perimeter of unit, which are part of the capillary fringe break liner, and into which the strip drains and blanket geocomposite (respectively) drain.
4. Vacuum lysimeters were installed underneath the sumps of each surface impoundment and are accessed by riser pipe which extends up the slope of the perimeter berms.

If liquid is detected in a lysimeter that has always been dry, a sample shall be collected immediately and analyzed for the monitoring parameters listed in Section I.C.2 of this MRP. Lysimeters shall constitute the "points of compliance" with respect to soil-pore liquid.

2. Monitoring Schedule

The monitoring schedule for unsaturated zone monitoring shall be the same as that for leachate monitoring in Section I.C.2 of this MRP.

C. GROUNDWATER

1. Monitoring Locations

WMUs 1 through 5 and G are in corrective action. The groundwater detection

monitoring points for WMUs 6 and H, shown in Attachment D, are as follows:

Ground Water Detection Monitoring Locations

<u>WMU</u>	<u>Aquifer</u>	<u>Monitoring Method</u> ⁴	<u>Background</u>	<u>Detection</u> ¹
6 A ²	shallow	Intrawell	OW10, LTPZA,	EW10, EW16 ³
B	shallow	Intrawell	LTPZB, OW10	EW10, EW16 ³
C	shallow	Intrawell	LTPZC, OW15	EW10, EW16 ³
D	shallow	Intrawell	LTPZD, OW14, OW23	EW10, EW16 ³
H	shallow	Intrawell	SIMW5, OW14, OW17	OW23, SIMW4

1. Gradient created by line of extraction wells used for detection monitoring
2. All four modules (A, B, C, and D) are contiguous
3. Wells used for de-watering only (not part of corrective action system).
4. Intrawell analysis was approved by Regional Board staff following a demonstration made by the Discharger in the First Semester 2003 Monitoring Report.

The natural gradient cannot be used as the reference gradient for detection monitoring purposes because the WMUs are within the influence of the extraction system. The gradient created by the extraction system, which runs from southeast to northwest, is therefore used instead.

2. Monitoring Schedule - The analytes and frequency of groundwater monitoring is as follows:

GROUNDWATER MONITORING PROGRAM¹

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
<i>Field Parameters</i>		
Temperature	°C	Semi-annually
Groundwater Elevation	Feet & hundreths, MSL	Semi-annually
Turbidity	Turbidity units	Semi-annually
Specific Conductance	µmhos/cm	Semi-annually
pH	pH units	Semi-annually
<i>Monitoring Parameters¹</i>		
Ammonia, as N	mg/l	Semi-annually
Bicarbonate	mg/l	Semi-annually
Chlorides	mg/l	Semi-annually
Nitrate	mg/l	Semi-annually
Sulfates	mg/l	Semi-annually
Total Alkalinity	mg/l	Semi-annually
Total Kjeldahl Nitrogen	mg/l	Semi-annually
TDS	mg/l	Semi-annually
Inorganics (dissolved)	mg/l	Annually
VOCs	µg/l	Semi-annually
<i>Constituents of Concern²</i>		
Section I.B.2 constituents	µg/l	Every 5 years

1. The constituent-by-constituent listing for Monitoring Parameters is included in Attachment E, which

- accompanies this Order.
2. The constituent-by-constituent listing for Constituents of Concern is included in Attachment F, which accompanies this Order.

D. SURFACE WATER

1. Monitoring Locations

The Discharger shall monitor surface water at the locations where surface water flows offsite from the landfill facility designated as SWP1, SWP2, SWP3, and SWP4, as shown on Attachment D.

2. Monitoring Schedule

The monitoring schedule for surface water shall be the same as for groundwater as specified in Section II.2.C of this MRP, with the exception of “Groundwater Elevation” which does not apply.

III. CORRECTIVE ACTION

A. GROUNDWATER EXTRACTION

Groundwater extraction is conducted for the purpose of both corrective action and de-watering to maintain separation from the base of the modules. The extraction well network, shown in Attachment D, is as follows:

GROUNDWATER EXTRACTION WELLS			
<u>WMU</u>	<u>Aquifer</u>	<u>Purpose</u>	<u>Extraction Wells</u>
1	Shallow	corrective action	EWs 1 through 8
2	Shallow	corrective action	EWs 1 through 8
3	Shallow	corrective action	EWs 1 through 8
4	Shallow	corrective action	EWs 1 through 8
5	Shallow	corrective action and de-watering	EWs 1 through 8
6	Shallow	de-watering	EWs 9 through 16

B. CORRECTIVE ACTION MONITORING

1. Monitoring Locations

The corrective action monitoring points, shown in Attachment D, are as follows:

Corrective Action Monitoring Locations					
<u>Source Area</u>	<u>Monitoring Method</u>	<u>Background Wells</u>	<u>Shallow Wells</u>	<u>Deep Wells</u>	<u>Lysimeter</u>
WMU 1, 2	Intrawell ¹	OW1, OW4, OW5	OW17, OW18, OW21	PZ1, DW1, DW2	N/A
WMU 3	Intrawell	OW5, OW6	OW26, OW27	DW6	N/A
WMU 4, 5	Intrawell	OW7, OW24	EW2, EW7	DW7	N/A
WMU 6C	N/A	N/A	N/A	N/A	6C-S-LYS
WMU G ²	Intrawell	SIMW1	OW18, SIMW4	DW2	N/A

1. Each well functions as its own background well.
2. The pond which WMU G replaced was unlined and may have impacted the vadose zone.

As of the Second Semester 2003, the following wells have confirmed detections of VOCs: OW18, OW27, EW2, EW7, DW1, and DW2. The other wells in the corrective action program have had sporadic detections of VOCs but are not considered impacted at this time.

2. Monitoring Schedule

The monitoring schedule for the corrective action wells shall be the same as for detection monitoring (see Section II.C.2).

IV. WATER QUALITY PROTECTION STANDARD

The Water Quality Protection Standard (Standard) consists of the following elements:

- A. Constituents of Concern;
- B. Concentration Limits;
- C. Monitoring Points;
- D. Points of Compliance; and
- E. Compliance Period.

Each of these is described as follows:

A. Constituents of Concern

The 'COC list' (list of Constituents of Concern required under Title 27 shall include all constituents listed in Attachment F. The Discharger shall monitor all COCs every five years, or more frequently as required.

B. Concentration Limits

Concentration limits for all monitoring parameters and constituents-of-concern shall be calculated anew using data collected during each monitoring event and including all available historical background data. Any data point that tests as an outlier shall not be used in the data set.

Inorganic Data Evaluation:

Concentration limits for inorganic constituents shall be calculated using either an interwell or intrawell tolerance limit as required in Section II.C.1 and Section III.B.1, above. Parameters not requiring concentration limits include temperature, oxygen reduction potential, turbidity, and dissolved oxygen. The upper tolerance limit shall be used for all constituents and parameters except for pH for which both upper and lower limits shall be calculated.

A **parametric tolerance limit** shall be calculated if the background data set passes a normality test using the Coefficient of Variation Test, and if less than 50 percent of the data is non-detect. If the data tests as normally distributed and greater than 15 percent but less than 50 percent of the background data is non-detect, the mean and standard deviation of the data set shall be adjusted using the Aichison's Method and a tolerance limit shall be calculated using the adjusted values.

A **nonparametric tolerance limit** shall be calculated when the background data set contains greater than 50 percent non-detects (except when normally distributed and greater than 15 percent of the data is non-detect), and/or the data distribution is not normal or transformed normal. A concentration limit shall only be calculated using this method when the data set contains enough points to achieve a false positive rate of 5 percent or less.

Organic Data Evaluation:

The concentration limit for non-naturally occurring organic constituents shall be the method detection limit.

C. Monitoring Points

The groundwater monitoring points for detection monitoring shall be the monitoring locations listed in Section II.C.1. The unsaturated zone monitoring points shall consist of those lysimeters installed beneath waste management units as listed in Section II.B.1 of this MRP. All detection monitoring points are shown on Attachments C and D.

D. Points of Compliance

The point(s) of compliance at each groundwater monitoring point is the vertical surface located at the downgradient limit of the WMU that extends through the uppermost aquifer underlying the WMU. Since the WMUs are contiguous, these points correspond the corrective action and de-water wells on the northern boundary of the site as listed in Section II.C.1 and Section III.B.1.

E. Compliance Period

The Compliance Period is the number of years equal to the active life of the waste management unit plus the closure period. Each time the Water Quality Protection

Standard is exceeded (i.e., a release is discovered), the landfill begins a Compliance Period on the date the Regional Board directs the Discharger to begin an Evaluation Monitoring Program. If the Discharger's Corrective Action Program (CAP) has not achieved compliance with the Standard by the scheduled end of the Compliance Period, the Compliance Period is automatically extended until the landfill has been in continuous compliance for at least three consecutive years.

V. REPORTING

The Discharger shall report monitoring data and information as required in this Monitoring and Reporting Program and as required in the Standard Provisions and Reporting Requirements. Reports that do not comply with the required format will be rejected and the Discharger shall be deemed to be in noncompliance with the WDRs.

A narrative discussion of the monitoring results, including notations of any water quality violations shall precede tabular summaries of the water quality data. Further, each monitoring report shall include a summary and certification of completion of all Standard Observations for the waste management unit (WMU), for the perimeter of the WMU, and for the receiving waters. The standard observations shall be performed on a weekly basis and shall include those elements as defined in the Standard Provisions and Reporting Requirements.

In reporting the monitoring data required by this program, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. The data shall be summarized in such a manner so as to illustrate clearly the compliance with waste discharge requirements or the lack thereof. Historical and current monitoring data shall be graphed at least once annually. Graphs for the same constituent shall be plotted at the same scale to facilitate visual comparison of monitoring data. Method detection limits and practical quantitation limits shall be reported. All peaks shall be reported, including those that cannot be quantified and/or specifically identified. Metals shall be analyzed according to the method listed in Attachments E and F.

The results of any monitoring done more frequently than required at the locations specified herein shall be reported to the Regional Board in the monitoring report(s) for that period.

A. MONITORING REPORTS

1. Detection Monitoring Reports

Detection Monitoring Reports (DMRs) shall be prepared and submitted to the Board semi-annually by **31 July** and **31 January** following the end of each calendar semester. The semi-annual report due by 31 January may be included as part of the Annual Report specified in Section V.A.2, below. The reports shall include the results of all monitoring programs listed herein, and include the information required in Section V.B "Reporting Requirements" and Section VI "Notification and Response to a Release", below.

2. Annual Report

An Annual Report, which summarizes the monitoring results for the prior year, shall be submitted to the Regional Board by **31 January** each year. The report shall contain both tabular and graphical summaries of the detection and corrective action monitoring data and a discussion of the progress toward re-establishment of compliance with WDRs and the Water Quality Protection Standard (WQPS). In reporting the progress of corrective action, the report shall include contaminant contour maps for representative volatile organic compounds and inorganic constituents and compare the current plumes with those prior to the start of corrective action. The Annual Report shall be jointly submitted with the second semester Detection Monitoring Report, and shall contain the following:

- a. All monitoring parameters and constituents of concern shall be graphed so as to show historical trends at each monitoring point and background monitoring point, for all samples taken within at least the previous five calendar years. Each such graph shall plot the concentration of one or more constituents for the period of record for a given monitoring point or background monitoring point, at a scale appropriate to show trends or variations in water quality. The graphs shall plot each datum, rather than plotting mean values. For any given constituent or parameter, the scale for background plots shall be the same as that used to plot downgradient data. Graphical analysis of monitoring data may be used to provide significant evidence of a release.
- b. All historical monitoring data, including data for the previous year, shall be submitted in tabular form as well as in a digital file format. The Regional Water Board regards the submittal of data in hard copy and in digital format as "...the form necessary for..." statistical analysis [Title 27 CCR Section 20420(h)], in that this facilitates periodic review by the Regional Water Board.
- c. A comprehensive discussion of the compliance record, and the result of any corrective actions taken or planned which may be needed to bring the Discharger into full compliance with the waste discharge requirements.
- d. A map showing the area and elevations in which filling has been completed during the previous calendar year and a comparison to final closure design contours.
- e. A written summary of the monitoring results, indicating any changes made or observed since the previous annual report.
- f. An evaluation of the effectiveness of the leachate monitoring/control facilities including the results of the annual testing of leachate collection and removal systems required under VIII.P of the Standard Provisions and Reporting Requirements.

- g. A comprehensive discussion about the bioreactors operating under Research, Development, and Demonstration Permits including a summary of all monitoring and testing data and an assessment as to whether and to what extent the site is progressing in attaining project goals. This report may be submitted separately or included in the regular annual report.
- h. Any changes to the water quality protection standard.

3. Constituents-of-Concern (COC) Report

The Discharger shall submit reports of the results of ground water monitoring for the Constituents of Concern (COC) every 5 years, or more frequently if required. The ground water monitoring for COC Report shall alternate between the Fall and Spring seasons. The results of COC monitoring shall be submitted with, or reported in, the Annual Report for that year.

B. REPORTING REQUIREMENTS

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

Such legible records shall show the following for each sample:

- a. Sample identification and the monitoring point or background monitoring point from which it was taken, along with the identity of the individual who obtained the sample;
 - b. Date, time, and manner of sampling;
 - c. Date and time that analyses were started and completed, and the name of the personnel and laboratory performing each analysis;
 - d. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used;
 - e. Calculation of results; and
 - f. Results of analyses, and the MDL and PQL for each analysis.
2. A transmittal letter explaining the essential points shall accompany each report. At a minimum, the transmittal letter shall identify any violations found since the last report was submitted, and if the violations were corrected. If no violations have occurred since the last submittal, this shall be stated in the transmittal letter. The transmittal letter shall also state that a discussion of any violations found since the

last report was submitted, and a description of the actions taken or planned for correcting those violations, including any references to previously submitted time schedules, is contained in the accompanying report.

3. Each monitoring report shall include a compliance evaluation summary. The summary shall contain at least:
 - a. For each monitoring point and background monitoring point addressed by the report, a description of:
 - 1) The time of water level measurement;
 - 2) The type of pump - or other device - used for purging and the elevation of the pump intake relative to the elevation of the screened interval;
 - 3) The method of purging (the pumping rate; the equipment and methods used to monitor field pH, temperature, and conductivity during purging; the calibration of the field equipment; results of the pH, temperature, conductivity, and turbidity testing; and the method of disposing of the purge water) to remove all portions of the water that was in the well bore while the sample was being taken;
 - 4) The type of pump - or other device - used for sampling, if different than the pump or device used for purging; and
 - 5) A statement that the sampling procedure was conducted in accordance with the approved Sampling and Analysis Plan.
 - b. A map or aerial photograph showing the locations of observation stations, monitoring points, and background monitoring points.
 - c. For each groundwater body, a description and graphical presentation of the gradient and direction of groundwater flow under/around the Unit, and the groundwater flow rate, based upon water level elevations taken prior to the collection of the water quality data submitted in the report.
 - d. Laboratory statements of results of all analyses evaluating compliance with requirements.
 - e. An evaluation of the effectiveness of the leachate monitoring and control facilities, and of the run-off/run-on control facilities.
 - f. A summary and certification of completion of all **Standard Observations** for the Unit(s), for the perimeter of the Unit, and for the receiving waters. Standard observations for ACTIVE landfill units shall be conducted **weekly** during the wet season (1 October to 30 April) and **monthly** during the dry season (1 May to 30 September). Standard observations for INACTIVE or CLOSED landfill units

shall be conducted **monthly** during the wet season (1 October to 30 April) and **quarterly** during the dry season (1 May to 30 September). Standard The Standard Observations shall include:

- 1) For the Unit:
 - a) Evidence of ponded water at any point on the facility (show affected area on map);
 - b) Evidence of odors - presence or absence, characterization, source, and distance of travel from source; and
 - c) Evidence of erosion and/or of day-lighted refuse.
- 2) Along the perimeter of the Unit:
 - a) Evidence of liquid leaving or entering the Unit, estimated size of affected area, and flow rate (show affected area on map);
 - b) Evidence of odors - presence or absence, characterization, source, and distance of travel from source; and
 - c) Evidence of erosion and/or of day-lighted refuse.
- 3) For receiving waters:
 - a) Floating and suspended materials of waste origin - presence or absence, source, and size of affected area;
 - b) Discoloration and turbidity - description of color, source, and size of affected area;
 - c) Evidence of odors - presence or absence, characterization, source, and distance of travel from source;
 - d) Evidence of water uses - presence of water-associated wildlife;
 - e) Flow rate; and
 - f) Weather conditions - wind direction and estimated velocity, total precipitation during recent days and on the day of observation.
 - g) The quantity and types of wastes discharged and the locations in the Unit where waste has been placed since submittal of the last such report.
4. The Discharger shall report by telephone any seepage from the disposal area **immediately** after it is discovered. A written report shall be filed with the Regional Water Board **within seven days**, containing at least the following information:

- a. A map showing the location(s) of seepage;
- b. An estimate of the flow rate;
- c. A description of the nature of the discharge (e.g., all pertinent observations and analyses);
- d. Verification that samples have been submitted for analyses of the Monitoring Parameters and Constituents of Concern listed in Section I.C.2, and an estimated date that the results will be submitted to the Regional Water Board; and
- e. Corrective measures underway or proposed, and corresponding time schedule.

VI. NOTIFICATION AND RESPONSE TO A RELEASE

A. Notification of Release and Re-test

For any WMU, if the results of a detection monitoring program (DMP) shows that there is a measurably significant increase in an indicator parameter or waste constituents over the WQPS at or beyond the points of compliance (i.e., measurably significant evidence of an exceedance or release), the Discharger shall:

1. immediately notify the Regional Board by telephone, email or fax of the exceedance,
2. within seven days of the initial findings, follow up with written notification by certified mail (or acknowledgment of the Regional Board's finding),
3. within 30 days of the initial finding, re-sample for the constituent(s) or parameter(s) at the point where the standard was exceeded, and
4. within 60 days of the initial finding, submit the results of the re-sampling and statistical analysis, indicating whether or not an exceedance or release was confirmed by the re-test.

B. Existing Release

Within 30 days upon confirmation of an exceedance outside of an existing release, the Discharger shall submit for Regional Board staff approval an amendment to the Corrective Action Program, describing measures planned or taken to contain the release and further corrective action. The Discharger shall also note any necessary changes to the DMP and Corrective Action Monitoring Program monitoring locations as a result of the exceedance (see Section III.B herein).

C. Responding to a Release Discovery

Upon verifying a measurably significant evidence of a release from a WMU according to Section 20420(j) of Title 27 and Section VI.A of this MRP, above, shall **immediately** implement the requirements of **XI. Response To A Release, C. Release Has Been Verified**, contained in the Standard Provisions and Reporting Requirements.

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

Ordered by: _____
PAMELA C. CREEDON, Executive Officer

(Date)

WLB: 11/5/2007