

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

ORDER NO.  
WASTE DISCHARGE REQUIREMENTS  
FOR  
POSTCLOSURE MAINTENANCE AND CORRECTIVE ACTION  
SAN JOAQUIN COUNTY DEPARTMENT OF PUBLIC WORKS  
HARNEY LANE LANDFILL  
CLASS III LANDFILL  
SAN JOAQUIN COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Regional Water Board) finds that:

1. The San Joaquin County Department of Public Works (hereafter referred to as "Discharger") owns and formerly operated the Harney Lane Landfill, a closed Class III landfill. The landfill is on East Harney Lane near North Jack Tone Road, approximately six miles east of Lodi, as shown in Attachment A, which is incorporated herein and made part of this Order. The landfill is on a 127-acre site in the northeast 1/4 of Section 19, T3N, R8E, MDB&M, corresponding to Assessor Parcel Numbers 065-03-03, 065-03-06, 065-03-08, and 065-03-09.
2. These revised Waste Discharge Requirements (WDRs) include updated findings and requirements for landfill monitoring and corrective action in accordance with California Code of Regulations (CCR), title 27, division 2 (Title 27) regulations. Previous WDRs Order 96-139, which this Order replaces, were issued prior to adoption of Title 27, do not reflect postclosure monitoring results, and no longer adequately describe the facility.
3. The landfill operated from 1948 until November 1991, accepting primarily household wastes. The facility includes two landfill units (Landfills 1 and 2), including precipitation and drainage controls, landfill gas (LFG) controls, monitoring wells, access roads, and other facilities. Landfill 1 (LF-1), also referred to as the primary fill area, includes 97 acres of the eastern part of the site. Landfill 2 (LF-2), also referred to as the secondary fill area, includes 15 acres and is immediately southwest of Landfill 1. Both landfills were filled concurrently. The landfills are shown in Attachment B, which is incorporated herein and made part of this Order.
4. In 1994, both landfill units were closed (i.e., graded and clay capped) in accordance with land disposal regulations formerly in CCR, title 23, chapter 15, division 3 and now in Title 27 (see Findings 36 through 39). In 1996, an LFG extraction system was also installed at the site, as described in Finding 43 and shown in Attachment C, which is incorporated herein and made part of this Order.
5. Since closure of the landfill units in 1994, the Discharger has been performing landfill postclosure monitoring and maintenance in accordance with previous waste discharge requirements (Order Nos. 93-093 and 96-139).

6. The facility is subject to federal municipal solid waste (MSW) landfill regulations (Title 40, Code of Federal Regulations, Part 258, or "Subtitle D") because it accepted MSW after the applicable federal deadline (9 October 1991) under those regulations and did not qualify for any exemptions. For example, the facility did not qualify for the limited exemption applicable to sites that stopped accepting wastes before, and closed within six months after, the applicable federal deadline (9 October 1993), because it did not close until November 1994 (see 40 CFR 258.1(d)). The facility also did not qualify for the small landfill exemption (see 40 CFR 258 (f)(1)) due to its size and evidence of groundwater impacts from the landfill.

### **WASTES AND UNIT CLASSIFICATION**

7. The landfill accepted wastes defined as "inert" and "nonhazardous" under Title 27, sections 20230 and 20220, respectively. Septage and other liquid wastes were not accepted at this facility.
8. Approximately 350 tons per day (125,000 tons per year) of waste, including household waste, commercial refuse, construction debris, and agricultural waste, was discharged to the landfill prior to its closure. Waste disposal was by the trench fill method. Approximately 7 million cubic yards of waste are estimated to be in place at the facility. The maximum thicknesses of waste in the landfill units are estimated to be at least 80 feet in LF-1 and 50 feet in LF-2, respectively.
9. Waste was discharged to a series of trenches excavated in an east-west direction. The lowest elevation of waste is unknown, but is estimated to be about 58 feet mean sea level (MSL) based on boring logs for groundwater monitoring wells installed at the site. This elevation corresponds to a depth of about 40 feet below ground surface (bgs). See Finding 23.
10. Both landfill units are existing, reclassified units under Title 27, section 20080(d), since they operated prior to, and closed after, 27 November 1984. Previous WDRs reclassified the landfill to Class III from a previous Subchapter 15 designation.
11. Both landfill units are unlined and neither has a leachate collection system.

### **SITE DESCRIPTION**

12. The site is in the Central Valley alluvial plain near the edge of the Sierra Nevada Foothills. The surrounding terrain is relatively flat with an average grade of about one half percent toward the west. Surface elevations within one half mile of the site range from about 95 feet MSL to the east to about 70 feet MSL to the west.
13. Land uses within the landfill vicinity include agriculture, dairies, industrial, and low-density residential development. Other uses in the area include water conveyance, roads, utility easements, and (immediately north of Landfill 2) a migrant labor camp on state-owned land operated by the San Joaquin County Housing Authority. The migrant labor camp includes unlined ponds used for the treatment and disposal of domestic wastewater from the camp and for the detention of storm water runoff from the camp. Discharges to these ponds are regulated under separate, non-Chapter 15

WDRs Order No. 95-176. (Two groundwater monitoring wells, as shown in Attachment B, were installed at the camp in the 1980s to monitor these ponds, but Order No. 95-176 did not include a groundwater monitoring program and the condition of these wells is unknown).

14. A March 2007 Department of Water Resources (DWR) well survey identified 55 supply wells within a one-mile radius of the site, including 47 domestic, 6 agricultural, and 2 combined domestic/agricultural wells. Additional parcels were identified that did not have well records, but likely have supply wells, including 229 parcels with private residences and 47 parcels designated as irrigated agriculture. One onsite industrial supply well was also identified. The results are summarized below.

**Wells Within one Mile Radius of Landfill**

<u>Well Type</u>	<u>DWR Survey</u>	<u>On Other Parcels<sup>1</sup></u>		<u>Total</u>
		<u>Beyond 1,000 Feet</u>	<u>Within 1,000 Ft.</u>	
Domestic	47	214	15	276
Agricultural	6	41	6	53
Combined	2	0	0	2
Industrial	0	0	1	1

1. Known or estimated based on parcel type and land use.

The wells ranged from about 130 to 500 feet deep, averaging about 225 feet deep.

15. The site is not within a 100-year floodplain.

**SURFACE AND STORM WATER**

16. Surface drainage in the area is to South Paddy Creek immediately south of the site, thence to Paddy Creek about 1.3 miles west of the site, Bear Creek, and Disappointment Slough, which is tributary to the San Joaquin River.
17. The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference, plans and policies adopted by the State Water Resources Control Board.
18. The beneficial uses of the San Joaquin River (between Sack Dam and the mouth of the Merced River) are municipal and domestic supply; agricultural supply; industrial process supply; water contact recreation; non-contact water recreation; warm freshwater habitat; migration of aquatic organisms; spawning, reproduction and/or early development; and wildlife habitat.

19. The site receives an average of 16.5 inches per year of precipitation as determined from Rainfall Depth Duration Frequency data provided by the State Department of Water Resources for the Linn Ranch Station about three miles northeast of the site. The 100-year, 24-hour precipitation event for this station is 3.3 inches. The estimated mean Class A pan evaporation rate is about 65 inches per year.

### **GEOLOGY**

20. There are no known Holocene faults within 1000 feet of the facility. The closest active fault is the Bear Mountains fault zone within the Foothills Fault system 19 miles east of the site in the Sierra foothills. Recorded magnitudes of seismic events along this fault zone range up to 5.8 on the Richter scale (1975 Oroville event). The Foothills Fault system has been characterized as producing a maximum credible earthquake of 6.5 to 7.0 on the Richter scale and a peak bedrock acceleration of 3.5g to 4.5g (1977 Butte County General Plan).
21. The regional geology in the site area represents a transition area between Cretaceous to Recent Age alluvial deposits of the Great Valley flood plain and Jurassic Age metamorphic rocks of the Sierra Nevada foothills. The valley deposits thin out within a few miles east of the site where the surface geology is primarily foothill terrain dominated by dissected alluvial uplands and exposed, uplifted bedrock.
22. Monitoring well boring logs indicate that the site is underlain by the Victor formation to about 100 feet bgs, and then by Laguna formation. The Victor formation consists of alluvial deposits, generally as follows, from top to bottom:
  - Silty sand and/or sandy silt (10 to 40 feet thick),
  - Fine to coarse grained sand (20 to 45 feet thick);
  - Clay or clayey sand (20 to 30 feet thick);
  - Gravelly sand and/or sandy gravel (to interface with Laguna)

Similar alluvial deposits are found in the underlying Laguna formation, except that it also contains volcanic and/or metamorphic rock fragments.

### **UNSATURATED ZONE**

23. The minimum separation from waste to groundwater at the site is about 83 feet (see Finding 28).
24. In 1991, the Discharger installed an LFG monitoring system along the site perimeter in accordance with Chapter 15 (now Title 27) regulations. The system consisted of 12 LFG monitoring wells with nested probes screened in the upper, middle, and lower portions of the unsaturated zone, as shown in Attachment C.
25. Subsequent perimeter monitoring of LFG in the unsaturated zone showed high concentrations of methane (up to 60 percent by volume) and the presence of several volatile organic compounds (VOCs), including tetrachloroethene (PCE), which has also been detected in groundwater at the site (see Finding 30). Since initiation of

LFG extraction in 1996, methane concentrations detected along the site perimeter have been greatly reduced (see Findings 43 and 44).

**GROUNDWATER**

- 26. The beneficial uses of the ground water are municipal and domestic supply, agricultural supply, industrial process supply, and industrial process supply.
- 27. The upper water-bearing zone (UWBZ) occurs in alluvial deposits of the Victor formation, which consist of laterally discontinuous layers of gravel, sand, silt and clay. The overall permeability of these deposits is estimated to be about  $1 \times 10^{-2}$  cm/sec based on onsite boring log information and slug testing of a well screened in similar deposits at the North County Landfill (approximately 1.5 miles east of the site).
- 28. The depth to groundwater ranges from about 131 feet bgs (-30 feet MSL) on the upgradient perimeter of the landfill to about 124 feet bgs (-35.5 feet MSL) on the downgradient perimeter. Up to eight (+/-4) feet of seasonal variation in the water table has been observed along the downgradient perimeter, possibly due to the influence of the nearby detention basin. Historical groundwater elevation monitoring data indicate that the groundwater table has been declining over time due to regional and local pumping. The monitoring data indicate that the average ground water gradient at the site is about 0.003 foot/foot to the south-southwest.
- 29. Four groundwater monitoring wells, including one upgradient (MW-1), two cross-gradient (MWs-2 and 4), and one downgradient (MW-3), were installed at the site in 1987. No other groundwater monitoring wells have since been installed at the site.
- 30. A 1987 groundwater investigation (see 20 June 1991 *Solid Waste Water Quality Assessment Test for Harney Lane Sanitary Landfill*, prepared by Kleinfelder, Inc.) found low to trace concentrations of volatile organic compounds (VOCs) in the UWBZ, primarily in cross-gradient well MW-2. The Discharger subsequently confirmed a landfill release and in 1994 implemented an Evaluation Monitoring Program (EMP) to investigate the nature and extent of impacts. Ground water monitoring results for VOCs detected at the site may be summarized as follows:

VOC	Average Concentration, $\mu\text{g/L}$		
	1995 <sup>1</sup>	2005 <sup>1</sup>	2008
Benzene	n/a <sup>3</sup>	<0.2 <sup>2</sup>	0.6
Dichlorodifluoromethane (Freon 12)	<0.4 <sup>2</sup>	2.0	<0.7 <sup>2</sup>
1,2-Dichloropropane	<0.4 <sup>2</sup>	0.6	<0.4 <sup>2</sup>
Tetrachloroethene (PCE)	0.5	1.1	0.5
Toluene	n/a <sup>3</sup>	<0.2 <sup>2</sup>	0.9
Total Xylenes	n/a <sup>3</sup>	<0.4 <sup>2</sup>	<1.1 <sup>2</sup>

1. Four-quarter average using non-detects at detection limit.  
 2. Constituent not detected.  
 3. Constituent not analyzed.

Other VOCs have also been sporadically detected in groundwater at trace concentrations, including carbon tetrachloride; chlorobenzene; 1,2-dichlorobenzene; 1,4-dichlorobenzene; dichloromethane; trichloroethane; and trichlorofluoromethane (Freon 11). No VOCs have generally been detected in the other three wells at the site, except for a few sporadically detected in upgradient well MW-1 and reported as probable false positive results.

31. Historical monitoring data for the site generally indicates declining concentrations of VOCs coincident with improvements to the LFG extraction system. Since 2007, the primary VOCs historically detected in groundwater at the site (e.g., PCE, Freon 12, and 1,2-Dichloropropane) have been detected at trace or non-detect levels.
32. Elevated concentrations of general minerals have also been historically detected in groundwater at the site, primarily in downgradient well MW-4, as follows:

<b>Constituent</b>	<b>Concentration</b> (mg/L, except where noted)		
	<u>Upgradient</u> (MW-1)	<u>Downgradient/</u> (MW-4)	
	Average <sup>1</sup>	1995 <sup>2</sup>	2008 <sup>3</sup>
Chloride	11	123	120
Bicarbonate Alkalinity	160	310	97
Total Dissolved Solids (TDS)	237	573	510
Specific Conductance, $\mu$ mhos/cm	315	870	619

1. Historical average since 1995.
2. Annual average of quarterly results.
3. Second Quarter 2008 monitoring data.

Lower concentrations of chloride, but possible elevated concentrations of bicarbonate alkalinity, have been detected in the other downgradient wells at the site, and in upgradient well MW-1. Time series plots of the monitoring data from MW-4 show declining trends for bicarbonate alkalinity, TDS, and specific conductance since 1995, but no significant change for chloride.

33. The Discharger has attributed elevated concentrations of chloride detected in the UWBZ at MW-4 to an upgradient source (claimed percolation from the nearby migrant labor camp's sewage treatment ponds), but has not provided any upgradient monitoring data to substantiate this claim. Chloride is a common constituent of landfill leachate that can migrate to groundwater from an unlined landfill. To resolve this issue and establish background concentrations for chloride, Provision G.5 of these WDRs requires that the Discharger establish a background monitoring well immediately upgradient of Landfill 2, but downgradient of the labor camp's ponds (i.e., either by installation of a new well or by utilization of an existing monitoring well of suitable construction).

34. Carbon dioxide in LFG can cause elevated bicarbonate in groundwater. Also, since LFG can migrate in all directions, including vertically and upgradient, it can affect upgradient wells close to the landfill. Given the possibly elevated concentrations of bicarbonate alkalinity detected in MW-1 and the well's close proximity to the landfill, it cannot be assumed that this well has not been impacted by LFG. MW-1 may therefore not be suitable as a background monitoring well for monitoring parameters that can be affected by LFG, such as alkalinity, TDS and specific conductance. To resolve this issue, Provision G.5 of these WDRs requires that the Discharger establish a background monitoring well a sufficient distance from the landfill to be outside of the influence of LFG and any potential landfill leachate impacts (i.e., either by installation of a new well or by utilization of an existing monitoring well of suitable construction).
35. The following groundwater water quality criteria for constituents of concern (COCs) have been exceeded at this site:

Constituent	WQ Objective	Concentration	
		WQ Limit	Detected
<i>VOCs (µg/L):</i>			
Benzene	Chemical Constituents	1.0 <sup>1</sup>	1.3
	Toxicity	0.15 <sup>2</sup>	
1,2-Dichloropropane	Toxicity	0.50 <sup>2</sup>	0.7
PCE	Toxicity	0.06 <sup>2</sup>	1.4
<i>General Minerals (mg/L):</i>			
Chloride	Chemical Constituents	106 <sup>3</sup>	120
TDS	Chemical Constituents	450 <sup>3</sup>	510
		500 <sup>4</sup>	
	Taste & Odor	500 <sup>4</sup>	

1. California Primary MCL
2. California Public Health Goal
3. Agricultural Goal
4. California Secondary MCL

**CLOSURE AND CORRECTIVE ACTION**

36. Previous WDRs Order No. 93-093 required that the Discharger close the landfill in accordance with Chapter 15 regulations and an approved Final Closure Plan (FCP). Landfill closure was also required as a corrective action measure to address groundwater impacts from the landfill (see Finding 30). The FCP included the following documents (all prepared by George S. Nolte and Associates):
- May 1986 *Closure Plan, Harney Lane Landfill, San Joaquin County Department of Public Works*
  - January 1992 *Harney Lane Sanitary Landfill Final Closure Plan*

- April 1994 *Harney Lane Sanitary Landfill Final Closure Construction Plans*

37. The approved final cover constructed for closure is :

- a. Foundation Layer – Two feet of compacted soil
- b. Low Hydraulic Conductivity (LHC) Layer – one foot of compacted clay ( $k \leq 1 \times 10^{-6}$  cm/sec)
- c. Erosion Resistant Layer – One foot of clean vegetative cover soil
- d. Vegetative Cover – native grass mix

The foundation layer was compacted to a minimum of 90 percent of relative maximum dry density using onsite borrow soil and excavated soil from the detention basin. The LHC layer was constructed using a mixture of imported lone clay and onsite borrow, and was compacted to a maximum permeability of  $1 \times 10^{-6}$  cm/sec. Field and laboratory permeabilities were correlated by double-ring infiltrometer tests. To achieve permeability specifications with lower relative compaction (90 percent), a higher percentage of lone clay was used along the sideslopes.

38. The Discharger completed landfill closure in March 1994 and submitted the closure certification report for the project (April 1994 *Final Documentation Report for Final Cover Foundation and Vegetation Layers, Harney Lane Sanitary Landfill, San Joaquin Public Works*). Regional Water Board staff approved the closure certification report in January 1995.

### **Grading**

39. The final cover was constructed over both landfill units with an elongated (north-south oriented) central crest. On Landfill 1, the cover deck was graded from the crest (146 feet MSL) to the side slopes (126 feet MSL) at a minimum slope of 3 percent. The side slopes were graded from the rim deck to the landfill perimeter (104 feet MSL) at about 2.5H:1V, except for the northern side slope (i.e., the landfill toe), which was graded at about 15H:1V.

The Landfill 2 cover deck was also graded from the crest (132 feet MSL) to the side slopes (128 feet MSL) at a minimum slope of 3 percent. The side slopes were graded to about 2.5H:1V, except at the NE corner of the unit, where the side slope was graded to about 3.5H:1V.

40. A technical report demonstrating the stability of the cover slopes per Title 27, section 21750(f)(5) was not required for the facility because the Discharger closed the units prior to 18 July 1997 (See Title 27 sections 21090(a) and 20310(g)). A 1991 slope stability report prepared under previous Chapter 15 regulations showed factors of safety greater than 1.5 along the steepest landfill side slopes, which is what is typically required of landfills now undergoing closure.

### **Drainage**

41. Sheet flow runoff from the top decks of each landfill unit is directed via perimeter swales to 12-inch diameter, corrugated metal pipe overside drains. Unlined ditches

(with “V” shape or trapezoidal profiles) along the perimeter of each landfill capture and carry discharges from the overside drains and side slope runoff through a common culvert to the detention basin in the southwest corner of the site. The detention basin is equipped with a float-controlled automatic pump that regulates the water level in the basin by pumping to South Paddy Creek immediately south of the site. The detention basin also includes a weir that allows overflows from South Paddy Creek to enter the basin during severe storm events. The basin’s pump does not operate during such periods.

42. All landfill drainage facilities, including cover swales, overside drains, perimeter ditches, culverts, and the storm water detention basin were designed to have sufficient capacity to accommodate a 24-hour, 100-year storm event.

**Landfill Gas Controls**

43. To control LFG migration and mitigate LFG as a likely source of VOCs in groundwater (see Finding 30), the Discharger installed a landfill gas extraction system at the site in 1996. The system has been improved over time and presently includes 82 vertical extraction wells at Landfill 1 and 14 vertical extraction wells at Landfill 2, as follows:

<u>Landfill</u>	<u>Wells</u>	<u>Coverage</u>	<u>Depth Range, ft bgs</u>	<u>Screen Length, ft</u>
LF-1	A1 - A10	NE	50 - 65	25 - 33
LF-1	B1 - B8	Central eastern	65 - 85	33 - 40
LF-1	C1 - C13	SE	60 - 85	30 - 40
LF-1	D1 – D9	NW	60 - 65	30 - 33
LF-1	E1 – E13	Central western	60 - 80	30 - 40
LF-1	F1 - F11	SW	65 - 85	33 - 40
LF-1	G1 - G4	SW	65 - 70	33 - 35
LF-2	H1 - H14	Entire	42	17

1. Dual extraction well installed in 2005 to improve gas extraction

Each LFG extraction well was installed with a sampling port and a valve to control the LFG collection rate. The LFG extraction system facilities also include associated piping, condensate sumps, blowers, controls, and a flare station. Once extracted, the LFG is piped to the flare station where it is flared along with any condensate pumped from the condensate sumps. See Attachment C.

### **Postclosure**

44. Quarterly monitoring of LFG probes conducted per LEA requirements indicates that since 1995, the maximum concentration of methane detected along the site perimeter has been reduced to less than five percent by volume and is less than one percent by volume in most probes. Carbon dioxide, another component of LFG (and possible contributor to elevated bicarbonate in groundwater, as noted in Finding 34), has been detected up to 16 percent in several of the probes.
45. The Discharger has been conducting postclosure maintenance and monitoring of the landfill since 1995 in accordance with a 1994 Revised Postclosure Maintenance Plan, PCMP. Provision G.6 of these WDRs requires that the Discharger submit an updated PCMP to reflect current operations and requirements under this Order.
46. Based on a 2004 aerial survey, the Discharger estimates that the landfill cover (including LHC layer) has settled up to four feet since closure in 1994. The steepest landfill side slopes have flattened to about 3H:1V.

### **COST ESTIMATES AND FINANCIAL ASSURANCES**

47. The Discharger is required to demonstrate financial assurances for postclosure maintenance to the California Integrated Waste Management Board (CIWMB) pursuant to Title 27 section 22210(b), since the landfill operated after January 1, 1988. The Discharger has estimated the cost of landfill postclosure maintenance and monitoring in 2008 dollars to be \$98,750 per year. In 1993, the CIWMB approved a Pledge of Revenue agreement provided by the Discharger to cover the estimated annual cost of landfill postclosure maintenance and monitoring. This agreement is still in effect. Provision G.6.a requires that the Discharger provide updated cost estimates, as necessary under these WDRs, for postclosure maintenance and monitoring, while Provision G.7.a requires that the Discharger provide and maintain updated financial assurances to the CIWMB in the amount of such updated cost estimates, as approved by the Regional Water Board.
48. The Discharger is required to demonstrate financial assurances for corrective action to the CIWMB pursuant to Title 27 section 22220(b), since the landfill operated after July 1, 1991. Title 27 section 22221(a) requires that such corrective action funding be sufficient to address a known or reasonably foreseeable release, as approved by the Regional Water Board. In October 2008, Regional Water Board staff approved an estimate of approximately \$1,471,000 (in 2008 dollars) submitted by the Discharger for corrective action financial assurances, based on costs necessary to address VOC impacts to groundwater from an additional (i.e., reasonably foreseeable) release of LFG from the landfill. In January 2009, the CIWMB approved the corrective action financial assurances mechanism (a Pledge of Revenue) provided by the Discharger in the amount of the estimated cost estimate (\$49,034 per year over 30 years). Provision G.6.b requires that the Discharger provide updated an cost estimate, as necessary under these WDRs, for corrective action, while Provision G.7.b requires that the Discharger provide and maintain updated financial assurances to the CIWMB in the amount of the updated cost estimate, as approved by the Regional Water Board.

### **CEQA AND OTHER CONSIDERATIONS**

49. The action to revise the WDRs is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, et seq.), in accordance with Title 14, CCR Section 15301 for existing facilities.
50. Section 13267(b) of California Water Code provides that: "In conducting an investigation specified in subdivision (a), the Regional Water Board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposed to discharge within its region, or any citizen or domiciliary, or political agency or entity of this state who had discharged, discharges, or is suspected of discharging, or who proposed to discharge waste outside of its region that could affect the quality of the waters of the state within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the Regional Water Board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports." The monitoring and reporting program (MRP) required by this Order (MRP \_\_\_\_\_, attached) is necessary to assure compliance with these waste discharge requirements. The Discharger operates the facility that discharges the waste subject to this Order.
51. On 17 June 1993 (and as amended 21 July 2005), the State Water Resources Control Board adopted Resolution No. 93-62 implementing a State Policy for the construction, monitoring, and operation of MSW landfills that is consistent with the federal MSW regulations promulgated under Title 40, Code of Federal Regulations, Part 258 (Subtitle D). Title 27 incorporates *State Water Resources Control Board (SWRCB) Resolution No. 93-62*.
52. This order implements:
  - a. *The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition*;
  - b. Chapters 1 through 7, Subdivision 1, Division 2, Title 27, of the California Code of Regulations, effective 18 July 1997, and subsequent revisions;
  - c. The prescriptive standards and performance criteria of RCRA Subtitle D, Part 258; and
  - d. State Water Resources Control Board Resolution No. 93-62, *Policy for Regulation of Discharges of Municipal Solid Waste*, adopted 17 June 1993 and amended 21 July 2005.

### **PROCEDURAL REQUIREMENTS**

53. All local agencies with jurisdiction to regulate land use, solid waste disposal, air pollution, and to protect public health have approved the use of this site for the discharges of waste to land stated herein.
54. The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge, and

has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

55. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.
56. Any person aggrieved by this action of the Regional Water Board may petition the State Water Board to review the action in accordance with CWC section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of the Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

[http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality)

or will be provided upon request.

**IT IS HEREBY ORDERED**, pursuant to Sections 13263 and 13267 of the California Water Code, that Order No. 96-139 is rescinded, and that the San Joaquin County Public Works Department, its agents, successors, and assigns, in order to meet the provisions of Division 7 of the California Water Code and the regulations adopted thereunder, shall comply with the following:

**A. DISCHARGE PROHIBITIONS**

1. The discharge of new or additional waste to the facility, including Landfills 1 and 2, is prohibited.
2. The discharge of solid or liquid waste or leachate to surface waters, surface water drainage courses or basins, or groundwater is prohibited.
3. The discharge of treated or untreated wastewater or groundwater to any surface water or any surface water drainage course is prohibited without a National Pollutant Discharge Elimination System (NPDES) permit authorizing the discharge.
4. The landfill shall not cause pollution or a nuisance, as defined by the California Water Code, Section 13050, and shall not cause degradation of any water supply.
5. The discharge shall not cause any increase in the concentration of waste constituents in soil-pore gas, soil-pore liquid, soil, or other geologic materials outside of the Unit if such waste constituents could migrate to waters of the State — in either the liquid or the gaseous phase — and cause a condition of nuisance, degradation, contamination, or pollution.

6. The waste discharge prohibitions herein shall supercede any conflicting or contradictory provisions in the April 2000 Standard Provisions and Reporting Requirements (SPRR) applicable to waste discharge to an active or closed landfill. See also SPRR section I.E.

## **B. DISCHARGE SPECIFICATIONS**

1. The discharge shall remain within the designated disposal area at all times.
2. The Discharger shall, in a timely manner, remove and relocate any wastes discharged at this facility in violation of this Order.
3. Storm water runoff from the facility shall be monitored in accordance with MRP \_\_\_ and applicable storm water regulations.
4. A minimum separation of five feet shall be maintained between wastes or leachate and the highest anticipated elevation of underlying groundwater per Title 27 section 20240(c). See also Discharge Specification VI.B, SPRR.
5. The owners of the waste management facility shall have the continuing responsibility to assure protection of usable waters from discharged wastes and from gases and leachate generated by discharged wastes during the closure and postclosure maintenance period of the landfill and during subsequent use of the property for other purposes.

## **C. POST-CLOSURE SPECIFICATIONS**

1. All final cover slopes shall be capable of withstanding a maximum probable earthquake. See also SPRR Construction Specification VIII.E.
2. The final cover shall be graded and maintained to prevent ponding, promote lateral runoff, and prevent soil erosion due to high run-off velocities. See also SPRR Storm Water Provision VII.J.
3. Areas with slopes greater than ten percent, surface drainage courses, and areas subject to erosion by wind or water shall be maintained to prevent such erosion. See also Closure and Postclosure Specification IX.G.6.
4. The erosion-resistant layer shall be maintained with native or other vegetation capable of providing effective erosion resistance.
5. Precipitation and drainage control systems shall be designed, constructed, operated and maintained to convey peak flows from a 100-year, 24-hour storm event. (Note: This specification is more stringent than SPRR Storm Water Provision XII.D)

6. The closed landfills shall be maintained to prevent, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, and washout. See also SPRR Storm Water Provision XII.E.
7. Annually, prior to the anticipated rainy season but no later than **31 October**, any necessary erosion control measures shall be implemented and any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent storm water flows from:
  - a. Contacting or percolating through wastes,
  - b. Causing erosion or inundation of the landfill cover or other areas of the site, or
  - c. Causing sedimentation and clogging of the storm drains.
8. The Discharger shall continue to monitor all required media per MRP \_\_\_\_ throughout the postclosure maintenance period.
9. The postclosure maintenance period shall continue until the Regional Water Board verifies that remaining waste in the landfill will not threaten water quality. See also Closure and Postclosure Specification IX.J.

#### **D. FACILITY SPECIFICATIONS**

1. The Discharger shall immediately notify the Regional Water Board of any flooding, unpermitted discharge of waste off-site, equipment failure, slope failure, or other change in site conditions that could impair the integrity of waste or leachate containment facilities or precipitation and drainage control structures.
2. The Discharger shall maintain the landfill final cover, precipitation and drainage controls, monitoring wells, gas extraction system, and all other associated landfill facilities, as necessary, in order to comply with this Order.
3. The Discharger shall maintain in good working order any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements. All storm water controls, including drainage facilities, shall be maintained so that they function effectively during precipitation events.
4. Methane and other landfill gases shall be adequately vented, removed from the Unit, or otherwise controlled to prevent the danger of adverse health effects, nuisance conditions, or the impairment of the beneficial uses of surface water or groundwater due to migration through the unsaturated zone.
5. All wells within 500 feet of the waste management units shall have sanitary seals that meet the requirements of the San Joaquin County Environmental Health Department or shall be properly abandoned. A record of the sealing and/or abandonment of such wells shall be sent to the Regional Water Board and to the State Department of Water Resources.

6. The Discharger shall maintain a copy of this Order and make it available at all times to facility operating personnel, who shall be familiar with its contents, and to regulatory agency personnel.

#### **E. MONITORING SPECIFICATIONS**

1. The Discharger shall conduct background and corrective action groundwater monitoring, as specified in MRP \_\_\_\_\_. Background monitoring shall be conducted for the purpose of establishing and updating concentration limits as part of the Water Quality Protection Standard per Title 27 section 20400(a). Corrective action monitoring shall be conducted for the purpose of assessing the nature and extent of the release, designing corrective action measures, and for assessing the progress of corrective action in returning to compliance with the WQPS (Title 27 Section 20430(d)).
2. The Discharger shall provide Regional Water Board staff a minimum of one week notification prior to commencing any field activities related to the installation, non-routine repair, or abandonment of monitoring devices. The Discharger shall also provide Regional Water Board staff with a sampling schedule at least 48 hours prior to initiation of each detection, evaluation, or corrective action monitoring event conducted pursuant to MRP \_\_\_\_\_.
3. The Discharger shall comply with the Water Quality Protection Standard as specified in MRP \_\_\_\_\_ and the SPRR.
4. The concentrations of the COCs in waters passing the Point of Compliance shall not exceed concentration limits established in accordance with MRP \_\_\_\_\_.
5. The Discharger shall maintain and implement a Sample Collection and Analysis Plan that includes the following elements:
  - a. Sample collection procedures describing purging techniques, sampling equipment, and decontamination of sampling equipment;
  - b. Sample preservation information and shipment procedures;
  - c. Sample analytical methods and procedures; Sample quality assurance/quality control (QA/QC) procedures; and
  - d. Chain of custody control.
6. For any given monitored medium, the samples taken from all monitoring points and background monitoring points to satisfy the data analysis requirements for a given reporting period shall all be taken **within a span not to exceed 30 days**, unless the Executive Officer approves a longer time period, and shall be taken in a manner that ensures sample independence to the greatest extent feasible.
7. Specific methods of collection and analysis must be identified. Sample collection, storage, and analysis shall be performed according to the most recent version of USEPA Methods, such as the latest editions, as applicable, of: (1) *Methods for*

*the Analysis of Organics in Water and Wastewater (USEPA 600 Series), (2) Test Methods for Evaluating Solid Waste (SW-846, latest edition), and (3) Methods for Chemical Analysis of Water and Wastes (USEPA 600/4-79-020), and in accordance with the approved sampling plan.*

8. If methods other than USEPA-approved methods or Standard Methods are used, the exact methodology shall be submitted for review and approval by the Executive Officer prior to use.
9. The **methods of analysis and the detection limits** used must be appropriate for the expected concentrations. For the monitoring of any constituent or parameter that is found in concentrations which produce more than 90% non-numerical determinations (i.e., "trace" or "ND") in data from background monitoring points for that medium, the analytical method having the lowest method detection limit (MDL) shall be selected from among those methods which would provide valid results in light of any matrix effects or interferences.
10. **"Trace" results** - results falling between the MDL and the practical quantitation limit (PQL) - shall be reported as such, and shall be accompanied both by the estimated MDL and PQL values for that analytical run.
11. **MDLs and PQLs** shall be derived by the laboratory for each analytical procedure, according to State of California laboratory accreditation procedures. These MDLs and PQLs shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the laboratory, rather than simply being quoted from USEPA analytical method manuals. In relatively interference-free water, laboratory-derived MDLs and PQLs are expected to closely agree with published USEPA MDLs and PQLs.
12. 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 MDL/PQL values, the results shall be flagged accordingly, along with estimates of the detection limit and quantitation limit actually achieved. The **MDL shall always be calculated such that it represents the lowest achievable concentration associated with a 99% reliability of a nonzero result.** The PQL shall always be calculated such that it represents the lowest constituent concentration at which a numerical value can be assigned with reasonable certainty that it represents the constituent's actual concentration in the sample. Normally, PQLs should be set equal to the concentration of the lowest standard used to calibrate the analytical procedure.
13. **Unknown chromatographic peaks** shall be reported, along with an estimate of the concentration of the unknown analyte. When unknown peaks are encountered, second column or second method confirmation procedures shall be performed to attempt to identify and more accurately quantify the unknown analyte.

14. All **QA/QC data** shall be reported, along with the sample results to which they apply, including the method, equipment, analytical detection and quantitation limits, the percent recovery, an explanation for any recovery that falls outside the QC limits, the results of equipment and method blanks, the results of spiked and surrogate samples, the frequency of quality control analysis, and the name and qualifications of the person(s) performing the analyses. Sample results shall be reported unadjusted for blank results or spike recoveries. 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.

#### **MONITORING DATA ANALYSIS**

15. All monitoring data analysis methods shall be consistent with the performance standards specified in Section 20415(e)(9) and sampling standards specified in Section 20415(e)(12).
16. The statistical method shall account for data below the practical quantitation limit (PQL) with one or more statistical procedures that are protective of human health and the environment. Any PQL validated pursuant to Section 20415(e)(7) that is used in the statistical method shall be the lowest concentration (or value) that can be reliably achieved within limits of precision and accuracy specified in the WDRs for routine laboratory operating conditions that are available to the facility. Any Section 20415(e)(7) technical report submitted by the Discharger shall consider the PQLs listed in Appendix IX to Chapter 14 of Division 4.5 of Title 22, California Code of Regulations, for guidance when specifying limits of precision and accuracy. For any given constituent monitored at a background or down gradient monitoring point, an indication that falls between the MDL and the PQL for that constituent (hereinafter called a "trace" detection) shall be identified and used in appropriate statistical or nonstatistical tests. Nevertheless, for a statistical method that is compatible with the proportion of censored data (trace and ND indications) in the data set, the Discharger can use the laboratory's concentration estimates in the trace range (if available) for statistical analysis, in order to increase the statistical power by decreasing the number of "ties".

#### **Concentration Limits**

17. Concentration limits (CLs) for corrective action monitoring shall be developed consistent with Monitoring Specifications E.18 through E.20 below.
18. For inorganic COCs for which at least 10% of the data from background samples equal or exceed their respective MDL (i.e., naturally occurring COCs), the Discharger shall use one of the following **statistical** data analysis methods for determination of CLs and detection of a release:
  - a. Tolerance or Prediction Interval statistical method;
  - b. Analysis of Variance (ANOVA) statistical method; and/or
  - c. An alternative statistical method authorized under Section 20415(e)(8) and approved by the Executive Officer under Section 20415(e)(7)).

Background monitoring data shall be screened for trends prior to calculating CLs to ensure that the data represents a single statistical population (i.e., one that does not show appreciable variation per Section 20415(e)(10)). CLs shall be periodically updated, as necessary, to reflect current background conditions. If a significant trend is identified that reflects changes in background conditions, data prior to development of the trend shall not be included in updating s. Otherwise CLs shall include prior historical data. Statistical CLs shall also take into account any seasonality in the data.

Any analyte that exceeds its statistical CL shall provide a preliminary indication [or, for a retest, measurably significant evidence] of a release at that monitoring point.

19. For inorganic COCs for which less than 10% of the data from background samples equal or exceed their respective MDL (including inorganic COCs not detected in background), the CL shall be the MDL. Any analyte that exceeds its MDL shall provide a preliminary indication [or, for a retest, measurably significant evidence] of a release at that monitoring point.
20. For VOCs and all other organic COCs, the CL shall be the MDL, and the trigger for detection of a release shall be as follows:
  - a. From the COC or monitoring parameter list, identify each analyte in the current sample that exceeds its respective MDL. The Discharger shall conclude that the exceedance provides a preliminary indication [or, for a retest, provides measurably significant evidence] of a release (existing or new) at that monitoring point, if either:
    - i. The data contain two or more analytes that equal or exceed their respective MDLs; or
    - ii. The data contain one analyte that equals or exceeds its PQL.
21. If the above statistical or non-statistical trigger procedures used for monitoring data analysis for a given media provide a preliminary indication of a release (i.e., new release or a previously unconfirmed constituent of the existing release) at a given monitoring point, the Discharger shall immediately notify Regional Water Board staff by phone or e-mail of a preliminary indication of a release, and, within 30 days of such indication, conduct confirmation (retest) sampling.
  - a. Exceedances for constituents that have been previously confirmed as part of the release at a given monitoring point, including regularly-detected and sporadically detected (e.g., as a result of seasonal or lateral fluctuations in the plume) COCs, shall be considered confirmed without notification and retest.
  - b. Exceedances for any other constituent for which the Discharger fails to conduct a retest will be considered confirmed without retest unless and until the Discharger demonstrates its absence through subsequent monitoring.

Discrete Retest

22. Confirmation sampling shall consist of taking two new (retest) samples from the monitoring point where the release is preliminarily indicated. For any given retest sample, the Discharger shall include in the retest analysis only the laboratory analytical results for those analytes detected in the original sample.
  - a. As soon as the retest data are available, the Discharger shall apply the same tests [i.e., E.18 for statistical constituents, E.19 or E.20 for non-statistical constituents], to separately analyze each of the two suites of retest data at the monitoring point where the release is preliminarily indicated.
  - b. If either (or both) of the retest samples trips the applicable trigger above, then the Discharger shall conclude that there is measurably significant evidence of a release at that monitoring point for the analyte(s) indicated in the validating retest sample(s) and shall:
    - i. Immediately notify the Regional Water Board about the constituent verified to be present at the monitoring point, and follow up with written notification submitted by certified mail within seven days of validation; and
    - ii. Proceed in accordance with E.23 and/or E.24, below, as applicable.
23. Exceedances that the Discharger demonstrates per Section 20420(k)(7) are the result of sample corruption, laboratory interferences, error, natural variation in the water quality, statistical evaluation, or other cause not associated with a release from the unit shall not provide a preliminary indication of a release, or, in the case of a discrete retest, confirm a release. Retesting may be necessary, however, to make such demonstration or, such as in the case of error or laboratory interferences, to obtain valid monitoring data.
24. Any COC confirmed by retest as part of an existing release shall be added to the monitoring parameter list such that it is monitored during each regular monitoring event. If the Discharger determines that there is measurably significant evidence of a new release from the Unit at any monitoring point, the Discharger shall immediately implement the requirements for *Response To A Release* contained in Section XI of the SPRR.

#### Corrective Action Progress

25. The data analysis methods shall also include trend analysis using time series plots and an evaluation of the water chemistry to monitor the effectiveness of corrective action measures in accordance with Section \_\_\_ of the MRP. The trigger requirement for performing trend analysis shall be at least 4 historical data points above the PQL. The water quality chemistry analysis shall, at a minimum, include ion balance and an appropriate graphical method (e.g., Piper diagram, trilinear plot, stiff diagram, Scheuler plot).
26. Prior to termination of corrective action measures required under Section 20430(c), the discharger shall demonstrate, pursuant to Section 20430(f), that the constituents of the release have been reduced to levels below concentration

limits throughout the entire zone affected by the release. During this “proof period”, the Discharger shall demonstrate that:

- a. The concentration of each constituent in each sample from each monitoring point remained at or below its concentration limit for at least one year, beginning immediately after the suspension of corrective action measures; and
  - b. The individual sampling events for each monitoring point must have been evenly distributed throughout the proof period and have consisted of at least eight sampling events per year per monitoring point.
27. Any proposal for concentration limits greater than background (CLGBs) shall be accompanied by the requisite demonstration under Section 20400(c) (i.e., that it is technologically or economically infeasible to achieve the background value for that constituent and that the constituent will not pose a substantial present or potential hazard to human health or the environment). Approval of CLGBs shall require approval of revised WDRs by the Regional Water Board.

#### **F. REPORTING REQUIREMENTS**

1. The Discharger shall comply with the reporting requirements specified in this Order, in MRP Order No. \_\_\_\_ and in the SPRR.
2. The Discharger shall immediately notify the Regional Water Board of any flooding, unpermitted discharge of waste off-site, equipment failure, slope failure, or other change in site conditions that could impair the integrity of waste or leachate containment facilities or precipitation and drainage control structures.
3. In the event the Discharger does not comply or will be unable to comply with any prohibition or limitation of this Order for any reason, the Discharger shall notify the appropriate Regional Water Board office by telephone **as soon** as it or its agents have knowledge of such noncompliance or potential for noncompliance, and shall confirm this notification in writing **within two weeks**. The written notification shall state the nature, time, and cause of noncompliance, and shall describe the measures being taken to prevent recurrences and shall include a timetable for corrective actions.
4. 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 postclosure 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.
5. 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.
6. 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:
    - i. The time of water level measurement;
    - ii. 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;
    - iii. 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;
    - iv. The type of pump - or other device - used for sampling, if different than the pump or device used for purging; and
    - v. 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. The Standard Observations shall include:
  - i. For the Unit:
    - 1) Evidence of ponded water at any point on the facility (show affected area on map);
    - 2) Evidence of odors - presence or absence, characterization, source, and distance of travel from source; and
    - 3) Evidence of erosion and/or of day-lighted refuse.
  - ii. Along the perimeter of the Unit:
    - 1) Evidence of liquid leaving or entering the Unit, estimated size of affected area, and flow rate (show affected area on map);
    - 2) Evidence of odors - presence or absence, characterization, source, and distance of travel from source; and
    - 3) Evidence of erosion and/or of day-lighted refuse.
  - iii. For receiving waters:
    - 1) Floating and suspended materials of waste origin - presence or absence, source, and size of affected area;
    - 2) Discoloration and turbidity - description of color, source, and size of affected area;
    - 3) Evidence of odors - presence or absence, characterization, source, and distance of travel from source;
    - 4) Evidence of water uses - presence of water-associated wildlife;
    - 5) Flow rate; and
    - 6) Weather conditions - wind direction and estimated velocity, total precipitation during recent days and on the day of observation.
7. 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 COCs and Monitoring Parameters, 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.
8. The Discharger shall submit an **Annual Monitoring Summary Report** to the Regional Water Board covering the reporting period of the previous monitoring year. This report shall contain:
- a. All monitoring parameters and COCs shall be graphed to show historical trends at each monitoring point and background monitoring point, for all samples taken within at least the previous five calendar years. 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 down gradient data. Graphical analysis of monitoring data may be used to provide significant evidence of a release.
  - b. Unless otherwise exempted by the Executive Officer, all monitoring analytical data obtained during the reporting periods for the year shall be submitted in tabular form as well as in a digital file format acceptable to the Executive Officer. The Regional Water Board regards the submittal of data in hard copy and in digital format as "...the form necessary for..." statistical analysis [§20420(h)], in that this facilitates periodic review by the Regional Water Board. See Section G.2.f, MRP \_\_\_\_.
  - 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 written summary of the monitoring results, indicating any changes made or observed since the previous annual report.
  - e. An evaluation of the effectiveness of the leachate monitoring/control facilities.

9. All reports and transmittal letters shall be signed by persons identified below:
  - a. For a corporation: by a principal executive officer of at least the level of senior vice-president.
  - b. For a partnership or sole proprietorship: by a general partner or the proprietor.
  - c. For a municipality, state, federal or other public agency: by either a principal executive officer or ranking elected or appointed official.
  - d. A duly authorized representative of a person designated in a, b or c above if;
    - i. The authorization is made in writing by a person described in a, b, or c of this provision;
    - ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a Unit, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
    - iii. The written authorization is submitted to the Regional Water Board.
  - e. Any person signing a document under this Section shall make the following certification:

*“I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”*
10. The Discharger shall notify the Regional Water Board in writing of any proposed change in ownership or responsibility for construction or operation of the landfill. To assume ownership or operation under this Order, the succeeding owner or operator must apply in writing to the Regional Water Board requesting transfer of the Order within 14 days of assuming ownership or operation of this facility. The request must contain the requesting entity’s full legal name, the State of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Regional Water Board, and a statement. The statement shall comply with the signatory requirements contained in Reporting Requirement 9 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the

California Water Code. Transfer of this Order shall be approved or disapproved by the Regional Water Board.

11. The discharger shall mail a copy of each monitoring report and any other reports required by this Order to:

California Regional Water Quality Control Board  
Central Valley Region  
11020 Sun Center Drive, Suite 200  
Rancho Cordova, CA 95670

(or the current address if the office relocates)

12. The Discharger or persons employed by the Discharger shall comply with all notice and reporting requirements of the State Department of Water Resources with regard to construction, alteration, destruction, or abandonment of all monitoring wells used for compliance with this Order or with MRP \_\_\_\_, as required by California Water Code sections 13750 through 13755 of the California Water Code.

#### **G. PROVISIONS**

1. The Discharger shall comply with the MRP \_\_\_\_, which is attached to and made part of this order. A violation of the MRP is a violation of these waste discharge requirements.
2. The Discharger shall comply with the Standard Provisions and Reporting Requirements (SPRR), dated April 2000, which are hereby incorporated into this Order. The SPRR contain important provisions and requirements with which the Discharger must comply. A violation of any of the SPRR is a violation of these waste discharge requirements.
3. The Discharger shall submit semiannual corrective action progress reports in accordance with MRP \_\_\_\_ and Section 20430 of Title 27. Each progress report shall address the following issues:
  - a. The source of the impact.
  - b. The nature and extent of the release.
  - c. Whether the size of the plume and concentrations of constituents within have increased, decreased or have not changed.
  - d. The ongoing effectiveness of landfill closure as a corrective action.
  - e. The ongoing effectiveness of LFG extraction as a corrective action.
  - f. The need for additional corrective action measures and/or monitoring wells.

The reports shall include plans for the installation any additional monitoring wells necessary to define the extent of the release and/or monitor the progress of corrective action.

4. If the Discharger or Regional Water Board determines that the corrective action program is not adequate (i.e., does not satisfy the provisions of Section 20430), the Discharger shall, within 90 days of making the determination, or of receiving written notification from the Regional Water Board of such determination, submit an amended report of waste discharge (RWD) to make appropriate changes to the program. The amended RWD shall include the following:
  - a. A discussion as to why existing corrective action measures have been ineffective or insufficient.
  - b. A revised evaluation monitoring plan if necessary to further assess the nature and extent of the release
  - c. A discussion of corrective action needs and options.
  - d. Proposed additional corrective action measures, as necessary, for:
    - i. Source control,
    - ii. Adequate separation from groundwater,
    - iii. Groundwater cleanup, and/or
    - iv. Landfill gas control
  - e. A plan to monitor the progress of corrective action measures consistent with the MRP.
  - f. Cost estimates for implementing additional corrective action, including monitoring.
  - g. An implementation schedule.
5. **By 15 June 2009**, the Discharger shall submit for approval a work plan and schedule for the establishment of background monitoring wells (i.e., either by installation of a new well or by utilization of an existing monitoring well of suitable construction) for Landfills 1 and 2, as described in Findings 33 and 34, and as specified under Section E.2 of MRP \_\_\_\_\_. The Water Quality Protection Standard Report shall be amended to include and consider information obtained from this well once it is installed.
6. **By 30 July 2009**, the Discharger shall submit for approval an updated Postclosure Maintenance Plan (PCMP) to reflect current operations and requirements under these WDRs, including MRP \_\_\_\_\_. The PCMP shall meet the requirements of Title 27 section 21769(c) applicable to a closed landfill. The updated plan shall include updated cost estimates, as necessary, as follows:
  - a. Annual and 30-year cost estimates for

- i. Landfill postclosure maintenance (e.g., cover, drainage controls, monitoring systems, LFG extraction system) per Title 27 section 22210(b); and
  - ii. Postclosure corrective action monitoring
- b. A lump sum cost estimate for corrective action measures to address a known or reasonably foreseeable release per Title 27 section 22220(b).

Copies of the updated PCMP shall also be provided to the Local Enforcement Agency and the CIWMB.

7. The Discharger shall obtain and maintain assurances of financial responsibility for the following:
  - a. Landfill postclosure maintenance and monitoring in the amount of the approved cost estimates under Provision G.6.a, and
  - b. Corrective action in the amount of the approved cost estimate under Provision G.6.b.

The Discharger shall obtain and maintain Financial Assurance Instruments (Instruments), which comply with CCR Title 27 (Sections 22212 [Post-Closure Fund], and 22220 et seq. [Corrective Action Fund]) and 40 CFR parts 257 and 258. The Discharger shall evaluate the cost of Financial Assurance to cover the estimated costs of the worst case known or reasonably foreseeable release. The Discharger shall submit a report on financial assurance for corrective action for the Regional Water Board Executive Officer's review and approval. **Every five years** after submittal of the initial financial assurance report, or earlier if requested by the Executive Officer, the Discharger shall submit a report that either validates the Instruments' ongoing viability or proposes and substantiates any needed changes. The Discharger may combine the two components (Post Closure, Corrective Action) of the Instruments into one report to comply with this requirement. The Discharger shall also submit evidence (e.g., an acceptance letter from the CIWMB—Financial Assurance Division) to the Regional Board's Executive Officer that a financial assurance instrument(s) is in place for post-closure and corrective action **within 120 days** of adoptions of these WDRs. The most recent acceptance letter shall also be included in the Landfill's Annual Report required to be submitted to the Executive Officer under Section G.2 of MRP \_\_\_\_.

8. The Discharger shall take all reasonable steps to minimize any adverse impact to the waters of the State resulting from noncompliance with this Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature, extent, and impact of the noncompliance.

9. The fact that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with this Order shall not be regarded as a defense for the Discharger's violations of the Order.
10. The Discharger shall also notify the Regional Water Board of any proposed land use or closure plan changes. This notification shall be given 90 days prior to the effective date of the change and shall be accompanied by an amended Report of Waste Discharge and any technical documents that are needed to demonstrate continued compliance with these waste discharge requirements.
11. The Regional Water Board will review this Order periodically and will revise these requirements when necessary.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on \_\_\_\_\_.

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PAMELA C. CREEDON, Executive Officer

JDM: 16 March 2009