



**California Regional Water Quality Control Board
Central Valley Region
Katherine Hart, Chair**



Matthew Rodriguez
*Secretary for
Environmental Protection*

11020 Sun Center Drive, #200, Rancho Cordova, California 95670-6114
(916) 464-3291 • FAX (916) 464-4645
<http://www.waterboards.ca.gov/centralvalley>

Edmund G. Brown Jr.
Governor

15 August 2011

CERTIFIED MAIL

7010 3090 0000 5044 6193

Jim McHargue
Amador County Solid Waste Program
810 Court Street
Jackson, CA 95642

**NOTICE OF ADOPTION
OF
WASTE DISCHARGE REQUIREMENTS
FOR
AMADOR COUNTY
FOR
POST-CLOSURE MAINTENANCE AND CORRECTIVE ACTION
OF BUENA VISTA LANDFILL
AMADOR COUNTY**

Waste Discharge Requirements (WDRs) Order No. R5-2011-0062 for the Buena Vista Landfill was adopted by the California Regional Water Quality Control Board, Central Valley Region, at its 5 August 2011 meeting. This Order prescribes requirements for discharge to the class II surface impoundment; post-closure maintenance of waste management units I, II and III; and the monitoring and maintaining their corrective action systems. A copy of the Order must be maintained at the facility. A copy of this Order should also be placed in the landfills operating record.

Please review your WDRs carefully to ensure you understand all aspects of the discharge requirements. Please note that the Provisions section of the WDRs requires submittal of certain technical reports by the dates provided in the Order. These submittals include the items listed on the following table.

REQUIREMENT	DUE DATE
Revised O&M Plan	1 September 2011
Corrective Action Plan	1 September 2012
Annual Update of Corrective Action Financial Assurance	1 June of each year
Annual Update of Post Closure Maintenance Financial Assurance	1 June of each year
Semi Annual Monitoring Report	31 July of each year

In addition to technical reports required by the WDRs, the WDRs contain a Monitoring and Reporting Program (MRP), which contains specified monitoring requirements that you must implement. Please review the MRP closely so that you may establish the appropriate

sampling schedules and protocols. Please review the MRP closely so that you may establish the appropriate sampling schedules and protocols. In addition to the monthly, quarterly, and annual self-monitoring reports, the MRP requires the technical reports listed in the following table.

REQUIREMENT	DUE DATE
Annual Facility Inspection Report	15 November of each year
5 year sampling event	31 July 2015

Your first semi-annual monitoring report is due by **31 January 2012**, and is to cover the period from 1 July to 31 December.

To conserve paper and reduce mailing costs, a paper copy of the order has been sent only to the Discharger. Interested parties are advised that the full text of this order is available at: http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/. Anyone without access to the Internet who needs a paper copy of the order can obtain one by calling Central Valley Water Board staff.

All compliance and enforcement questions should be directed to Howard Hold. Mr. Hold can be reached at (916) 464-4679 or hhold@waterboards.ca.gov. Additionally, all technical reports and monitoring reports should be submitted to the attention of Mr. Hold.

If you have any questions regarding submitting an updated report of waste discharge, or questions about making any changes to your permitted operations, Ross Atkinson at (916) 464-4614 or me at (916) 464-4645 or at ratkinson@waterboards.ca.gov

VICTOR IZZO
Senior Engineering Geologist

Enclosures - Adopted Waste Discharge Requirements
Standard Provisions and Reporting Requirements

cc on following page

cc w/o enclosures:

Division of Water Quality, State Water Resources Control Board, Sacramento
Patrick Palupa, Office of the Chief Counsel, SWRCB, Sacramento
Michael Wochnick, CalRecycle, Sacramento
Office of Drinking Water, Department of Health Services, Sacramento
Environmental Mgmt. Branch, Department of Health Services, Sacramento
Department of Fish and Game, Region II, Rancho Cordova
Aaron Brusatori, Amador County Public Works Dept., Jackson
Martha Shaver, Amador County Counsel, Jackson
Michael Israel, Amador County Env. Health Division, Jackson
Susan Grijalva, Amador County Planning Dept, Jackson
Tony Maris, Amador County LEA, Jackson
Pat Dunn, Dunn Environmental, El Dorado Hills
Curt Fujii, Fujii Civil Engineering,
Ken Haskell, Golder Associates Inc., Roseville
Amador Ledger Dispatch, Jackson

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2011-0062

WASTE DISCHARGE REQUIREMENTS
FOR
AMADOR COUNTY
FOR
POST-CLOSURE MAINTENANCE AND CORRECTIVE ACTION
OF BUENA VISTA LANDFILL
AMADOR COUNTY

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

1. The County of Amador (hereafter Discharger) owns and operates a former municipal solid waste landfill about three miles south of Lone and one-half mile north of Buena Vista, in Section 7, T5N, R10E, MDB&M, as shown in Attachment A, which is incorporated herein and made part of this Order. The Facility is 262-acres and comprised of Assessor's Parcels Nos. 12-04-040 through 12-04-046 of which 145 acres are on the east side of Buena Vista Road where the closed landfill units are located. The remaining 117 undeveloped acres are on the west side of the road and are not part of the landfill, as shown in Attachment B. The facility was previously regulated by Waste Discharge Requirements (WDRs) Order No. R5-2003-0078 in conformance with California Code of Regulations (CCR) Title 27.
2. These WDRs have been prepared to prescribe post-closure maintenance requirements for the Phases I, II and III Waste Management Units (WMUs) and continued operation of the Class II Surface Impoundment. In addition, these WDRs require the Discharger to continue the corrective action program to remove volatile organic compounds from the vadose zone as well as from the groundwater beneath WMU I.
3. On 16 December 2010, the Discharger submitted an amended Report of Waste Discharge (RWD) as part of the Joint Technical Document (JTD) for the landfill. The information in the RWD/JTD was used to write these WDRs. The RWD contains the applicable information required by CCR Title 27, Chapter 4, Subchapter 3, Article 4 (Title 27).
4. On 9 October 1991, the United States Environmental Protection Agency (USEPA) promulgated federal municipal solid waste regulations under the Resource Conservation and Recovery Act (RCRA), Subtitle D (Title 40, Code of Federal Regulations, Part 258), hereafter referred to as "Subtitle D". These regulations apply to all California Class II and Class III landfills which accept municipal solid waste.
5. The WMUs at the Buena Vista Landfill are described in the following table:

TABLE I
Waste Management Unit Description

Unit	Title 27 Class	Volume	Description of Liner Components	Status
Phase I	Class III	680,000 cu yards	Unlined and no LCRS. The final cover consists of a two-foot foundation layer, overlain by a one-foot 1×10^{-6} cm/sec low hydraulic conductivity layer, and covered by a 6-inch vegetative cover.	Filled and closed. Final cap constructed in 1995
Phase II	Class II	600,000 cu yards	<p>The liner consists of a two-foot thick layer of compacted clay, overlain by a 1-foot thick gravel blanket LCRS with inclusive perforated piping. The LCRS drains to the west-southwest. The eastern edge of the Phase II WMU consists of a near vertical cut slope. This slope is lined with a scrim-reinforced, spray-on 100-mil thick liner. The backslope along the eastern end of the unit is lined with an 80-mil thick high-density polyethylene liner (HDPE) overlain by a geonet, a 10-ounce per square foot geotextile fabric, and a two-foot thick operations layer.</p> <p>The final cover for Phases II/III consists of a minimum 2-feet thick foundation soil layer, 40-mil LLDPE geomembrane, geocomposite drainage layer (side slopes only) and a minimum 2-feet thick vegetative soil layer.</p>	Filled and closed, Final cap constructed in 2009
Phase III	Class II	500,000 cu yards	<p>The liner consists of one-foot of compacted clay, with a permeability of 2.0×10^{-8} cm/sec. Overlain by a 60-mil HDPE geomembrane, a 16 ounce per square yard nonwoven geotextile, and a 1-foot thick gravel drainage layer.</p> <p>The Phase III final cover is described above.</p>	Filled and closed, Final cap constructed in 2009
Surface Impoundment	Class II	1.3 mil. Gallons (measured at 30 inches of freeboard)	The base of the surface impoundment consists of a 2 ft. low permeability soil layer ($K_s 1 \times 10^{-6}$ cm/sec) overlain by the leachate collection and recovery system which is covered by a 45-mil Hypalon 3-Ply, geotextile.	Operating

6. Amador County owns, and ACES Waste Services, Inc. operates, the Western Amador Recycling Facility (WARF) located on the landfill property. The WARF is a solid waste transfer station and recycling facility that operates under a separate Solid Waste Facility Permit. Leachate generated from the WARF is discharged to the Class II Surface Impoundment.

SITE DESCRIPTION

7. This site is situated at the base of the Sierra Nevada Foothills along the eastern margin of the San Joaquin Valley with elevations ranging from 370 to 440 feet above mean sea level (MSL).
8. The hydraulic conductivity of the shallow native soils underlying the site displayed values ranging from 2×10^{-8} and 1.9×10^{-3} cm/sec based on the Clay Borrow Area Evaluation Study that used ASTM Standard D2434 "Permeability of Granular Soils" for the laboratory method.
9. There are no known Holocene faults within 1,000 feet of the facility. The closest fault is the Bear Mountains Fault Zone that is considered part of the Foothills Fault System. The maximum credible peak horizontal acceleration for Buena Vista landfill is 0.43 g generated from a magnitude 6.5 earthquake along the Foothill Fault System.
10. Land within 1,000 feet east of the facility is used for firework manufacturing and testing. The land 1000 feet north and to the west has been mined for clay. Open vegetated space extends along the southern boundary for 1000 feet.
11. The facility receives an average of 21.6 inches of precipitation per year and the mean pan evaporation is 60 inches per year as measured at the Camp Pardee Station (approximately five miles southeast of the site).
12. The 100-year, 24-hour precipitation event is approximately 3.94 inches, and the 1,000-year, 24-hour storm event is 5.97 inches as calculated from the California Department of Water Resources Bulletin No. 195 - Camp Pardee Station.
13. The waste management facility is not within a 100-year floodplain, as determined from the Federal Flood Insurance Map, Community Panel No. 39 and 44.
14. There are nine municipal, domestic, industrial, or agricultural groundwater supply wells within one mile of the site.

WASTE CLASSIFICATION AND UNIT CLASSIFICATION

15. The Phase I unit was classified as a Class III WMU, and the Phase II and III units were classified as Class II WMUs in accordance with Title 27.

16. The Class II surface impoundment accepts designated liquid waste. The following liquids are currently approved for discharge to the impoundment: 1. Leachate generated onsite, including liquids collected in Phase II and III WMU LCRS, the surface impoundment LCRS and leachate from the Western Amador Recycling Facility; 2. Landfill Gas Condensate; 3. Extracted groundwater from the groundwater extraction trench and other onsite corrective actions; and 4. Contact water from the WARF. No liquids generated offsite will be discharged into the impoundment.

SURFACE WATER AND GROUNDWATER CONDITIONS

17. The *Water Quality Control Plan for Sacramento and San Joaquin River Basins, Fourth Edition* (hereafter Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.

18. Surface water drainage flows to two unnamed ephemeral streams. The majority of surface water drainage is diverted to a pond near the southern property boundary. This pond (hereafter runoff holding pond) is unlined and has a total capacity of approximately nine acre-feet (2.93 million gallons). Overflow from the pond drains to Jackson Creek, approximately 3,500 feet south of the property boundary. Jackson Creek is tributary to Dry Creek, thence to the Cosumnes and Mokelumne Rivers in the Herald Hydrologic Area (531.11) of the San Joaquin River Basin.

19. The landfill is on the eastern margin of the northern San Joaquin Valley. The beneficial uses of these surface waters are domestic, municipal, agricultural, and industrial supply, ground water recharge, recreation, aesthetic enjoyment, fresh water replenishment and habitat, spawning, wildlife habitat and the preservation and enhancement of fish, wildlife, and other aquatic resources.

20. The first encountered groundwater is about 24 to 34 feet below the native ground surface. Groundwater elevations range from 383 feet MSL to 335 feet MSL. The groundwater is semi-confined with local perched zones. Groundwater elevations fluctuate seasonally as much as 4 feet.

21. Monitoring data indicate background groundwater quality (as measured at MW-14) has an electrical conductivity (EC) ranging between 59.2 and 76.1 micromhos/cm, with total dissolved solids (TDS) ranging between 80 and 140 mg/l.

22. The direction of groundwater flow is toward the west-southwest. However, a groundwater mound exists beneath the eastern margin of the Phase I WMU. The average groundwater gradient is approximately 0.031 feet per foot. The average groundwater velocity is 0.76 feet per year.

23. The designated beneficial uses of the groundwater, as specified in the Basin Plan, are domestic and municipal water supply, agricultural supply, industrial service supply, and industrial process supply.

GROUNDWATER AND UNSATURATED ZONE MONITORING

24. The following sixteen groundwater-monitoring wells were installed at various times during the development and expansion of the facility. Table 2 provides the geographic coordinates and elevations of the system wells.

TABLE 2
 GEOGRAPHICAL POSITION OF GROUNDWATER MONITORING WELLS

Well ID	Northing	Easting	Top of Casing Elevation*	Top of Screen Elevation*
L-1	N1875165.752	E6873210.032	371.04	341.04
MW1	N1874839.5826	E6874353.3671	423.45	373.45
MW3A	N1875206.4453	E6873132.7367	368.72	349.22
MW3B	N1875218.8535	E6873125.1782	368.97	320.97
MW4A	N1874762.5430	E6873323.1109	377.82	343.82
MW5	N1874336.7608	E6873403.3796	364.38	309.38
MW5S	N1874338.3991	E6873367.7695	365.24	350.24
MW7	N1875148.6379	E6872837.4148	362.70	307.7
MW9	N1875928.1461	E6873534.6547	377.78	322.78
MW10	N1875378.4391	E6873099.3295	373.15	358.15
MW11	N1875523.0318	E6873995.0133	390.11	366.11
MW13	N1874855.1969	E6873997.4618	397.13	364.13
MW14	N1874871.7253	E6874674.2937	430.61	365.61
MW15	N1874239.2513	E6873967.0133	407.67	352.67
MW16	N1874597.6988	E6873342.3824	378.21	338.21
MW20	N1875195.2391	E6874536.5195	434.21	404.21
MW21	N1874362.3691	E6874602.0195	424.36	386.36

* Elevations expressed as feet above mean sea level.

25. The detection monitoring system wells that were installed for the closed Phase I WMU include the following: MW1, MW11, and MW13. Due to the proximity to the waste, and depth of completion, the groundwater extraction trench serves as the point of compliance along the western extent of the WMU.

26. Phase II and Phase III WMUs share a common detection monitoring system. The monitoring wells that meet the intent of a Monitoring Point along the Point of Compliance include monitoring well MW4, MW16, and MW5S.
27. Monitoring well MW21 has been installed adjacent to the Class II Surface Impoundment as a detection monitoring point as required by §20415(b) of Title 27. Additional wells may be required depending on the physical and chemical data collected during the subsequent monitoring events.
28. The Discharger's detection monitoring program for groundwater satisfies the requirements contained in Title 27.
29. Volatile organic compounds (VOCs) have been detected in groundwater. These detections demonstrate that this landfill has had a release. VOCs are the primary waste constituents detected in groundwater. Since VOCs are not naturally occurring, and thus have no background value, they are not amenable to the statistical analysis procedures contained in Title 27 for the determination of a release of wastes from a Unit.
30. Title 27 Sections 20415(e)(8) and (9) provide for the non-statistical evaluation of monitoring data that will provide the best assurance of the earliest possible detection of a release from a Unit in accordance with Title 27 Section 20415(b)(1)(B)2.-4. However, Title 27 does not specify a specific method for non-statistical evaluation of monitoring data.
31. The Regional Water Board may specify a non-statistical data analysis method pursuant to Title 27 Section 20080(a)(1). Section 13360(a)(1) of the California Water Code allows the Regional Water Board to specify requirements to protect underground or surface waters from leakage from a solid waste site, which includes a method to provide the best assurance of determining the earliest possible detection of a release.
32. In order to provide the best assurance of the earliest possible detection of a release of non-naturally occurring waste constituents from a Unit, this Order specifies a non-statistical method for the evaluation of monitoring data.
33. The specified non-statistical method for evaluation of monitoring data provides two criteria (or triggers) for making the determination that there has been a release of non-naturally occurring waste constituents from a Unit. The presence of two non-naturally occurring waste constituents above their respective method detection limit (MDL), or one non-naturally occurring waste constituent detected above its practical quantitation limit (PQL), indicates that a release of waste from a Unit has occurred. Following an indication of a release, verification testing will be conducted to determine whether there has been a release from the Unit, or there is a source of the detected constituents other than the landfill, or the detection was a false detection. Although the detection of one non-naturally

occurring waste constituent above its MDL is sufficient to provide for the earliest possible detection of a release, the detection of two non-naturally occurring waste constituents above the MDL as a trigger is appropriate due to the higher risk of false-positive analytical results and the corresponding increase in sampling and analytical expenses from the use of one non-naturally occurring waste constituent above its MDL as a trigger.

34. The unsaturated zone monitoring system consists of six suction lysimeters installed under the Phase I, II and III WMUs (VZ-1, -4, -5, -9, -10 and -12) and two lysimeters installed under the Class II impoundment (PZ-1 and -2). The lysimeters shall be tested semi-annually to determine if liquid exists, and if liquid can be recovered and sampled.
35. The number and location of gas monitoring points may change as efforts to control landfill gas evolve.
36. The Discharger's current unsaturated zone monitoring system satisfies the Title 27 requirements.

GROUNDWATER DEGRADATION AND CORRECTIVE ACTION

37. The following volatile organic compounds were detected in the extraction trench sump (L-1), groundwater wells downgradient of Phase I Unit (MW-10, -3A, & -3B) and groundwater wells sidegradient to Phase I Unit (MW-1, -11, -13, & -15) in the most recent monitoring event (Fourth Quarter 2010):

WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2011-0062
 AMADOR COUNTY
 POST-CLOSURE MAINTENANCE AND CORRECTIVE ACTION
 OF BUENA VISTA LANDFILL
 AMADOR COUNTY

Constituent	L-1	MW-1	MW-10	MW-11	MW-13	MW-15	MW-3A	MW-3B
1,1-Dichloroethane	0.36	0.28		5.4	0.55			0.12
1,2-Dichloropropane				1.8				
1,2-Dichloropropane				0.27				
1,4-Dichlorobenzene	1.5	0.79		0.28	0.12			
Acetone								
Benzene	0.36	1.2		2.1			0.1	
Chloromethane								
cis-1,2-Dichloroethylene	0.63	0.22		0.78	0.36			0.15
Dichlorodifluoromethane	0.14	19	0.17	18	6.7	0.32	0.72	2.2
Diisopropyl ether				0.68				
Ethylbenzene				0.53				
Methyl tert-butyl ether							0.18	
Methylene chloride		4.1		17	2.7			
Tetrachloroethylene		0.22		1.4	0.48	0.14		0.14
Toluene				0.38				
Trichloroethylene		0.14		1.6	0.3			
Trichlorofluoromethane		0.85		0.43	0.28			
Vinyl chloride				1.2				0.45
Xylene (total)		0.5		0.83				

All concentrations in ug/L

38. Based on the Fourth Quarter 2010 groundwater monitoring report, the VOC plume is directly adjacent to and below Phase I waste cell.

39. To control and reduce the release of VOCs impacts to groundwater, three corrective action measures have been implemented: (a) Leachate and landfill gas extraction from twenty-four dual leachate and landfill gas extraction wells; (b) landfill covers on the three solid waste cells; and (c) a groundwater extraction trench down-gradient from the Phase I waste cell. The groundwater VOC plume is being captured by the groundwater extraction trench.

Groundwater Extraction Trench

40. In March 1987, pursuant to AB 2535, the Discharger submitted its Solid Waste Assessment Test (SWAT) report for the site that indicated that leachate from the closed Phase I WMU had impacted groundwater. In November 1992, the Discharger installed a groundwater extraction trench, downgradient of the Phase I Unit (West of the Unit) and in 2002 the sump was deepened to improve performance. The trench is approximately 350 feet long and was constructed to collect contaminated water from the uppermost water bearing zone. The trench is keyed into low permeable sediments, is two-feet wide with a depth ranging from 17 to 34 feet bgs. A sump was installed approximately 110-feet from the south end of the trench. The trench is filled with $\frac{3}{4}$ -inch washed gravel to a depth of 10-feet bgs. A geotextile layer overlays the gravel. From the geotextile layer to the ground surface, native soil was used for backfill.
41. The extraction trench removes contaminated groundwater down-gradient of the Phase I waste cell and acts as a hydraulic barrier to offsite migration. In 2009 the extraction trench removed over 310,470 gallons of contaminated groundwater. Operation of the extraction trench has created a cone of depression (groundwater sink), drawing groundwater toward the trench. The groundwater monitoring data indicate that the Groundwater Extraction Trench is successful at controlling offsite migration of VOC contaminated water from the Phase I Unit. Figures 9-8, 9-9 and 9-10 in the "*Second Semi-Annual 2010, 2010 Annual Monitoring Report*" demonstrate decreasing VOC concentrations over time at downgradient wells MW-10, -3A and -3B respectively.

Landfill Gas and Leachate Extraction System

42. The Discharger's January 1995 Closure Plan recommends that an active landfill gas extraction system be installed in response to the release of volatile organic vapors documented in the March 1987 SWAT report. In the 5 March 2002 amended report of waste discharge, the Discharger presented the design for a landfill gas extraction system as a corrective action measure associated with the detected release of volatile organic vapors in MW1, MW10 and MW11.
43. Eleven dual leachate/landfill gas extraction wells were put into service on 1 August 2003 within the Phase I Unit. An additional thirteen gas extraction wells were installed in the fall of 2005 at the Phase II/III Units. Extracted gas reports to a flare station for disposal, while leachate and gas condensate reports to the Class II Surface Impoundment. Additional leachate/landfill gas extraction wells may be required in the future as part of the ongoing efforts to control landfill gas. The WDRs requires a report to evaluate the lateral and vertical extent of the gas migration and proposals of additional actions as necessary.

Status of Corrective Actions

44. VOC concentration trends are stable or downward in the extraction trench (L-1) and in monitoring wells downgradient of the extraction trench (MW-10, -3A and -3B). VOC concentration trends are generally upward in monitoring wells side gradient to the Phase I WMU (MW-1, -11 and -13). Those lysimeters that produce sufficient water for analysis (VZ-4, -5, and -10) have elevated VOC concentrations and gas monitoring points often contain methane.
45. The groundwater monitoring data indicates that the extraction trench is successful at controlling offsite migration of impacted groundwater from the Phase I Unit. Total VOC concentrations in monitoring wells downgradient of the extraction trench, MW-3A, -3B and -10 are 1.0 ug/L, 3.06 ug/L and 0.17 ug/L respectively; and total VOCs in monitoring wells MW-11 and -13 directly upgradient of the trench are 52.68 ug/L and 11.49 ug/L respectively.
46. However, efforts to control landfill gas have not been entirely successful. Total VOC concentrations in sidegradient groundwater monitoring wells MW-1, -11 and -13 (27.13 ug/L, 52.66 ug/L and 11.49 ug/L respectively); and total VOC concentrations in soil pore water at VZ-4, -5 and -10 (77.07 ug/L, 123.19 ug/L and 144.47 ug/L respectively) suggest that escaping landfill gas is not completely controlled and impacts groundwater. Efforts to control landfill gas are ongoing.
47. On 11 January 2011, the Discharger notified Water Board staff that after a series of rain storms, a pickup truck got stuck on the saturated Phase II/III WMUs soil cover. Successive efforts to recover the truck caused extensive tire ruts in the cover's vegetative layer to a depth of two feet. The ruts may have damaged the integrity of the HDPE low permeable layer. Actions that damage the cover, including driving on the cover when it is saturated, are a violation of WDRs Order R5-2003-0078 (the Order in force at the time of this violation). The truck will be removed; the low permeable layer tested and repaired if necessary; and vegetation layer repaired when the cover surface is sufficiently dry to allow repairs without further damage to the cover. The WDRs require revision to the Post-Closure Maintenance Plan for this facility to help prevent future damages to the cover as describe above.

CLOSURE, POST-CLOSURE MAINTENANCE, AND FINANCIAL ASSURANCE

48. Active waste disposal at Phases II and III was completed in 2004. However, the Discharger's attempt to close the units in 2006 failed because construction quality assurance requirements were not followed. Time Schedule Order No. R5-2006-0901 was adopted by the Executive Officer on 2 May 2006 requiring completion by specified dates of several tasks necessary for final closure of Landfill Phases II and III.
49. A Corrective Closure Plan was submitted in February 2009, corrective closure construction was completed in October 2009 and the Construction Quality Assurance

Report was submitted in February 2010. The solid waste containment units at Buena Vista Landfill, Phases I, II and III have been closed in compliance with WDRs Order No. R5-2003-0078 and Time Schedule Order No. R5-2006-0901.

50. The RWD/JTD submitted by the Discharger contains a post-closure maintenance plan for the landfill. The post closure maintenance plan includes information required by Title 27 CCR Section 21769(b) and a lump sum estimate of the cost of carrying out all actions necessary for post-closure maintenance and to carry out the first thirty years of post-closure maintenance. The total post-closure maintenance cost estimate is \$6,503,501. The Regional Water Board hereby approves this cost estimate. This Order requires that the Discharger maintain financial assurance with the California Department of Resources Recycling and Recovery (CalRecycle) in at least the amount of this cost estimate.
51. The Discharger has also submitted a cost estimate for corrective action for all known or reasonably foreseeable releases as required by Title 27 Section 22221. The amount of the approved cost estimate is \$576,205. This Order requires that the Discharger maintain financial assurance with the CalRecycle in at least the amount of this cost estimate.

CEQA AND OTHER CONSIDERATIONS

52. The action to revise waste discharge requirements for this existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resource Code Section 21000, et seq., and the CEQA guidelines, in accordance with Title 14 CCR, Section 15301.
53. This order implements:
- a. The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition;
 - b. The prescriptive standards and performance goals of California Code of Regulations Chapters 1 through 7, Subdivision 1, Division 2, Title 27, 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 revised on 21 July 2005.
54. Section 13267(b) of California Water Code provides that: "In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or 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 having discharged or 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 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.”

55. The technical reports required by this Order and the attached "Monitoring and Reporting Program No. R5-2011-0062" are necessary to assure compliance with these waste discharge requirements. The Discharger owns and operates the facility that discharges the waste subject to this Order.

PROCEDURAL REQUIREMENTS

56. 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.
57. 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.
58. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.
59. Any person affected by this action of the Regional Water Board may petition the State Water Resources Control Board to review the action in accordance with Sections 2050 through 2068, Title 23, California Code of Regulations. The petition must be received by the State Water Resources Control Board, Office of Chief Counsel, P.O. Box 100, Sacramento, California 95812, within 30 days of the date of issuance of this Order. Copies of the laws and regulations applicable to the filing of a petition are available on the Internet at http://www.waterboards.ca.gov/water_laws/index.html and will be provided on request.

IT IS HEREBY ORDERED, pursuant to Sections 13263 and 13267 of the California Water Code, Waste Discharge Requirements Order No. R5-2003-0078 is rescinded, and that Amador County, 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. PROHIBITIONS

1. The discharge of any solid waste is prohibited.

2. The discharge of any liquid 'hazardous waste' is prohibited. For the purposes of this Order, the term 'hazardous waste' is as defined in Title 23, California Code of Regulations, Section 2510 et seq.
3. The discharge of liquid designated wastes outside of the Class II Surface Impoundment or portions of the Surface Impoundment specifically designed for their containment is prohibited.
4. The discharge of waste to a closed Unit is prohibited.
5. The discharge of waste constituents to the unsaturated zone or to groundwater is prohibited.
6. The discharge of solid or liquid waste or leachate to surface waters, surface water drainage courses, or groundwater is prohibited.
7. The discharge of waste within 50 feet of surface waters is prohibited.
8. The discharge of waste to a closed Unit is prohibited.
9. The discharge of wastes is prohibited, which have the potential to reduce or impair the integrity of the containment structures or which, if commingled with other wastes in the unit that could produce violent reaction, heat or pressure, fire or explosion, toxic by-products, or reaction products which in turn:
 - a. Require a higher level of containment other than provided by the unit,
 - b. Are "restricted hazardous wastes", or
 - c. Impair the integrity of containment structures is prohibited.

B. DISCHARGE SPECIFICATIONS

1. Wastes shall only be discharged into, and shall be confined to, the WMUs specifically designed for their containment.
2. All wells within 500 feet of the unit shall have sanitary seals or shall be properly abandoned. A record of the sealing and/or abandonment of such wells shall be sent to the Board and to the State Department of Water Resources.

C. FACILITY SPECIFICATIONS

1. The Discharger shall maintain the structural integrity and effectiveness of all containment structures and maintain the final covers as necessary to correct the effects of erosion, grass fires, settlement or other adverse factors.
2. The Discharger shall not operate equipment that likely will damage the landfill cover under existing conditions. For example, vehicles shall not be driven on the cover during muddy conditions since this may create ruts or other depressions that collect and hold storm water and violate post closure maintenance requirements.
3. The Discharger shall maintain and operate the leachate collection and removal systems (LCRS) for the Phase II and III WMUs.
4. The Discharger shall, in a timely manner, remove and relocate any wastes discharged at this facility in violation of this Order. If the Discharger is unable to remove and relocate the waste, the Discharger shall submit a report to the Regional Water Board explaining how the discharge occurred, why the waste cannot be removed, and any updates to the waste acceptance program necessary to prevent re-occurrence.
5. 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 which could impair the integrity of waste or leachate containment facilities or precipitation and drainage control structures.
6. Water used for facility maintenance shall be limited to the minimum amount necessary for dust control and construction.
7. The Discharger shall maintain in good working order any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements.
8. 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, degradation, or the impairment of the beneficial uses of surface water or groundwater due to migration through the unsaturated zone.
9. Surface drainage within the waste management facility shall either be contained on-site or be discharged in accordance with applicable storm water regulations.
10. The Discharger shall maintain a *Storm Water Pollution Prevention Plan and Monitoring Program and Reporting Requirements* in accordance with State Water Resources Control Board Order No. 97-03-DWQ or subsequent order, or retain all storm water on-site.

Corrective Action

11. The Discharger shall maintain and operate the Corrective Action systems including the Phase I, II, and III WMUs covers, the groundwater extraction trench and the landfill gas/leachate collection system as long as necessary to control and remediate VOC releases and comply with applicable regulations.
12. The Discharger shall maintain and operate the groundwater extraction trench to capture and remove impacted groundwater from the Phase I WMU; and to act as a hydraulic barrier.
13. The Discharger shall maintain and operate the dual leachate/landfill gas extraction system to control landfill gas and leachate and prevent VOC impacts to groundwater.
14. The Discharger shall maintain the Phase I, II and III landfill caps to protect the integrity of the caps and to prevent storm water from infiltrating into the WMUs.

Class II Surface Impoundment

15. Only the nonhazardous liquid wastes described in Finding 16 shall be discharged to the Class II Surface Impoundment.
16. For the Class II surface Impoundment and related containment structures shall be maintained to prevent, to the greatest extent possible, inundation, erosion, slope failure, washout, and overtopping under 1,000-year, 24-hour precipitation conditions, and shall be designed to contain the 100-year wet season precipitation without using the required 2 feet of freeboard.
17. Waste shall not be placed in the surface impoundment that would affect the physical and chemical properties of the liner to ensure containment of discharged wastes over the operating life, closure, and post-closure maintenance period of the surface impoundments.
18. Waste shall not be placed in the surface impoundment that would affect the physical and chemical properties of the LCRS to ensure the required transmission of leachate over the life of the WMUs and the post-closure maintenance period.
19. LCRSs shall be maintained to collect twice the anticipated daily volume of leachate generated by each surface impoundment and to prevent the buildup of hydraulic head on the underlying liner at any time. The depth of the fluid in any LCRS sump shall be kept at the minimum needed for safe pump operation.
20. Any direct-line discharge to a surface impoundment shall have fail-safe equipment or operating procedures to prevent overfilling.

21. The surface impoundment shall be maintained to prevent scouring and/or erosion of the liners and other containment features at points of discharge to the impoundments and by wave action at the water line.
22. Leachate removed from a surface impoundment's primary LCRS shall be discharged to the impoundment from which it originated.
23. All collected leachate from Phase II and III WMUs shall be discharged directly to the Class II Surface Impoundment or it can only be returned to the Unit(s) from which it came.
24. Any collected landfill gas condensate shall only be discharged directly to the Class II Surface Impoundment.
25. The Discharger shall maintain the liquid level in the Class II surface impoundment such that from 15 October to 15 April there is no less than 30-inches of freeboard, and from 15 April to 15 October the Class II surface impoundment may maintain no less than 24-inches of freeboard.
26. Leachate generation by a surface impoundment to the primary LCRS shall not exceed design requirements. If leachate generation exceeds this value, then the Discharger shall immediately cease the discharge of waste, excluding leachate, to the impoundment and shall notify the Board in writing within seven days. Notification shall include a timetable for remedial action to repair the upper liner to the impoundment or other action necessary to reduce leachate production.
27. If leachate is detected in the vadose zone monitoring system of the Class II surface impoundment indicating a leak in the containment structures the Discharger shall:
 - a. Immediately cease discharge of waste, excluding leachate and extracted groundwater to the surface impoundment until the leaks can be found and repaired;
 - b. Report to the RWQCB that the containment structures have failed within 72 hours;
 - c. Submit written notification of the release to the RWQCB within seven days, the notification should include a time schedule to repair the containment structures; and
 - d. Discharge of wastes to the surface impoundment will not resume until the RWQCB has determined that repairs to the liners are complete and there is no further threat to water quality.
28. Leachate generation by a waste containment unit LCRS shall not exceed 85% of the design capacity of (a) the LCRS, or (b) the sump pump. If leachate generation

exceeds this value and/or if the depth of the fluid in an LCRS exceeds the minimum needed for safe pump operation, then the Discharger shall immediately cease the discharge of waste, excluding leachate, to the waste management unit and shall notify the Board in writing within **seven days**. Notification shall include a timetable for a remedial action to repair the containment structures or other action necessary to reduce leachate production.

29. Sediment or solids that accumulate in the Class II surface impoundment shall be removed when necessary to maintain the designed storage capacity. Sludge and solids removal shall be accomplished in a manner that ensures the continued integrity of the liner and leachate collection system in accordance with the facility's operations plan. Prior to disposal of these solids, sufficient samples shall be taken for their characterization and classification pursuant to Title 27. Central Valley Water Board staff shall be notified at least 30 days prior to removal of sediment and solids from the Class II surface impoundment.
30. Following sediment/solids removal from the Class II surface impoundment, the liner system shall be inspected for damage within 30 days and any damage shall be repaired within 60 days prior to the discharge of additional wastewater. A report shall be submitted to the Central Valley Water Board within 30 days of completion of the liner inspection or repair.

D. DETECTION MONITORING SPECIFICATIONS

1. The Discharger shall comply with the detection monitoring program provisions of Title 27 for groundwater, surface water, and the unsaturated zone, and in accordance with Monitoring and Reporting Program No. R5-2011-0062.
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, repair, or abandonment of monitoring devices, and a minimum 48 hour notification prior to the collection of samples associated with a detection monitoring program, evaluation monitoring program, or corrective action program.
3. The Discharger shall comply with the Water Quality Protection Standard as specified in this Order, Monitoring and Reporting Program No. R5-2011-0062, and the Standard Provisions and Reporting Requirements, dated April 2000 (attached).
4. The Water Quality Protection Standard for organic compounds which are not naturally occurring and not detected in background groundwater samples shall be taken as the detection limit of the analytical method used (i.e., US-EPA methods 8260 and 8270). The repeated detection of one or more non-naturally occurring organic compounds in

samples above the Water Quality Protection Standard from detection monitoring wells is evidence of a release from the Unit.

5. Intrawell concentration limits for selected inorganic constituents are listed in section B.3. of Monitoring and Reporting Program No. R5-2011-0062. The concentration limit for any organic constituents is non-detect.
6. For each monitoring event, the Discharger shall determine whether the landfill is in compliance with the Water Quality Protection Standard using procedures specified in Monitoring and Reporting Program No. R5-2011-0062 and Title 27 CCR Section 20415(e).
7. The Discharger shall maintain and follow the approved Sample Collection and Analysis Plan. The Sample Collection and Analysis Plan shall at a minimum include:
 - 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;
 - d. Sample quality assurance/quality control (QA/QC) procedures; and
 - e. Chain of Custody control.
8. 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 a longer time period is approved, and shall be taken in a manner that ensures sample independence to the greatest extent feasible. 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 Sample Collection and Analysis Plan.
9. If methods other than USEPA-approved methods or Standard Methods are used, the exact methodology shall be submitted for review and approval prior to use.
10. 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.

11. **"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.
12. **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 lab, 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.
13. 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.
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.
15. Unknown chromatographic peaks shall be reported, flagged, and tracked for potential comparison to subsequent unknown peaks that may be observed in future sampling

events. Identification of unknown chromatographic peaks that recur in subsequent sampling events may be required.

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 Title 27 CCR 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. The Discharger's technical report, pursuant to Title 27 CCR Section 20415(e)(7), shall consider the PQLs listed in Appendix IX to Chapter 14 of Division 4.5 of Title 22, CCR, for guidance when specifying limits of precision and accuracy. For any given constituent monitored at a background or downgradient 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".
17. Background for water samples or soil-pore gas samples shall be represented by the data from all samples taken from applicable background monitoring points during that reporting period (at least one sample from each background monitoring point). The Discharger may propose an alternate statistical method [to the methods listed under Title 27 CCR Section 20415(e)(8)(A-D)] in accordance with Title 27 CCR Section 20415(e)(8)(E), for review and approval.
18. The Discharger may propose an alternate statistical method [to the methods listed under Title 27 CCR Section 20415(e)(8)(A-D)] in accordance with Title 27 CCR Section 20415(e)(8)(E), for review and approval. Upon receiving written approval, alternate statistical procedures may be used for determining the significance of analytical results for common laboratory contaminants (i.e., methylene chloride, acetone, diethylhexyl phthalate, and di-n-octyl phthalate). Nevertheless, analytical results involving detection of these analytes in any background or downgradient sample shall be reported and flagged for easy reference by Regional Water Board staff.
19. The Discharger shall use the following non-statistical method for all analytes that are detected in less than 10% of the background samples. The non-statistical method shall be implemented as follows:
 - a. From the constituent of concern or monitoring parameter list, identify each analyte in the **current** sample that exceeds either its respective MDL or PQL. The

Discharger shall conclude that the exceedance provides a preliminary indication of a release or a change in the nature or extent of the release, at that monitoring point, if **either**:

- 1) The data contains two or more analytes that are detected in less than 10% of background samples that equal or exceed their respective MDLs; or
- 2) The data contains one or more analyte that equals or exceeds its PQL.

b. **Discrete Retest** [Title 27 CCR Section 20415(e)(8)(E)]:

- 1) In the event that the Discharger concludes (pursuant to paragraph 20.a., above) that there is a preliminary indication of a release, then the Discharger shall immediately notify Regional Water Board staff by phone or e-mail and, within 30 days of such indication, shall collect two new (retest) samples from the monitoring point where the release is preliminarily indicated.
- 2) 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**. As soon as the retest data are available, the Discharger shall conclude that there is measurably significant evidence of a release if two or more analytes equal or exceed their respective MDLs or if one or more analyte equals or exceeds its PQL and shall:
 - a) **Immediately** notify the Regional Water Board about any constituent or constituents verified to be present at the monitoring point, and follow up with written notification submitted by certified mail **within seven days** of validation; and
 - b) Comply with ¶20, below if any constituent or constituents were verified to be present.
- 3) Any analyte that is confirmed per this method shall be added to the monitoring parameter list such that it is monitored during each regular monitoring event.

20. If the Discharger determines that there is measurably significant evidence of a release from the Unit at any monitoring point, the Discharger shall **immediately** implement the requirements of **XI. Response To A Release, C. Release Has Been Verified**, contained in the Standard Provisions and Reporting Requirements.

E. PROVISIONS

1. The Discharger shall maintain a copy of this Order at the facility and make it available at all times to facility operating personnel, who shall be familiar with its contents, and to regulatory agency personnel.
2. The Discharger shall comply with all applicable provisions of Title 27 and 40 Code of Federal Regulations Part 258 (Subtitle D) that are not specifically referred to in this Order.
3. The Discharger shall comply with Monitoring and Reporting Program No. R5-2011-0062, which is incorporated into and made part of this Order.
4. The Discharger shall comply with the applicable portions of the Standard Provisions and Reporting Requirements for Waste Discharge Requirements for Nonhazardous Solid Waste Discharges Regulated by Title 27 and/or Subtitle D (Title 27 CCR Section 20005 et seq. and 40 CFR 258 et seq.), dated April 2000, which are hereby incorporated into this Order.
5. 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.
6. 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;
 - 1) The authorization is made in writing by a person described in a, b, or c of this provision;
 - 2) 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

3) 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."

7. 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.
8. An annual water balance shall be developed to maintain and prevent, to the greatest extent possible, inundation, erosion, slope failure, washout, and overtopping under 1,000-year, 24-hour precipitation conditions (See Finding 12), and shall be designed to contain the 100-year wet season precipitation (See Finding 12) without using the required 30-inches of freeboard from 15 October to 15 April or 24-inches of freeboard from 15 April to 15 October.
9. The owner of the waste management facility shall have the continuing responsibility to assure protection of waters of the state from discharged wastes and from gases and leachate generated by discharged waste during the active life, closure, and postclosure maintenance period of the Unit(s) and during subsequent use of the property for other purposes.
10. 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.
11. 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 Provision F.5. 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.

12. The Discharger shall obtain and maintain assurances of financial responsibility for initiating and completing corrective action for all known or reasonably foreseeable releases from the landfill in the amount of the approved cost estimate in Finding 51, adjusted for inflation annually. All reports to CalRecycle regarding financial assurances for closure shall be copied to the Central Valley Water Board by **1 June** of each year.
13. The Discharger shall obtain and maintain assurances of financial responsibility for post-closure maintenance costs in the amount of the approved cost estimates in Finding 50, adjusted for inflation annually. All reports to CalRecycle regarding financial assurances for post-closure maintenance shall be copied to the Central Valley Water Board by **1 June** of each year.
14. The Discharger shall complete the tasks contained in these waste discharge requirements in accordance with the following time schedule:
 - a. By **1 September 2011** submit a revised O&M Plan that establishes cover maintenance protocols for the rainy season, such as what type of equipment will be allowed on the cover and how sampling and maintenance will be done.
 - b. By **1 January 2012** submit a plan to meet the standards in Title 27 Section 20430 to remediate the release from the landfill unit and to meet the water quality protections standards established for this facility at the point of compliance. This plan shall have a date when the Corrective Action measures will complete the remediation and meet the water quality protections standards. The plan at a minimum shall:
 - 1) Evaluate how to prevent leachate from the landfill from entering groundwater. This would include an evaluation whether groundwater is contacting waste, and is there a five-foot separation between waste and groundwater. If either case is true, propose corrective action measures to lower the groundwater table elevation.
 - 2) Evaluate whether soil gas is contained within the landfill units and not contributing to groundwater degradation. If soil gas is causing groundwater impacts, provide the necessary steps to mitigate existing gas impacts and prevent future gas impacts to groundwater (See finding 46).

- 3) Provide a date when Corrective Action Program measures will bring the concentrations of all COCs to levels below their respective concentration limit throughout the entire zone affected by the release and the landfill returns to a Detection Monitoring Program.

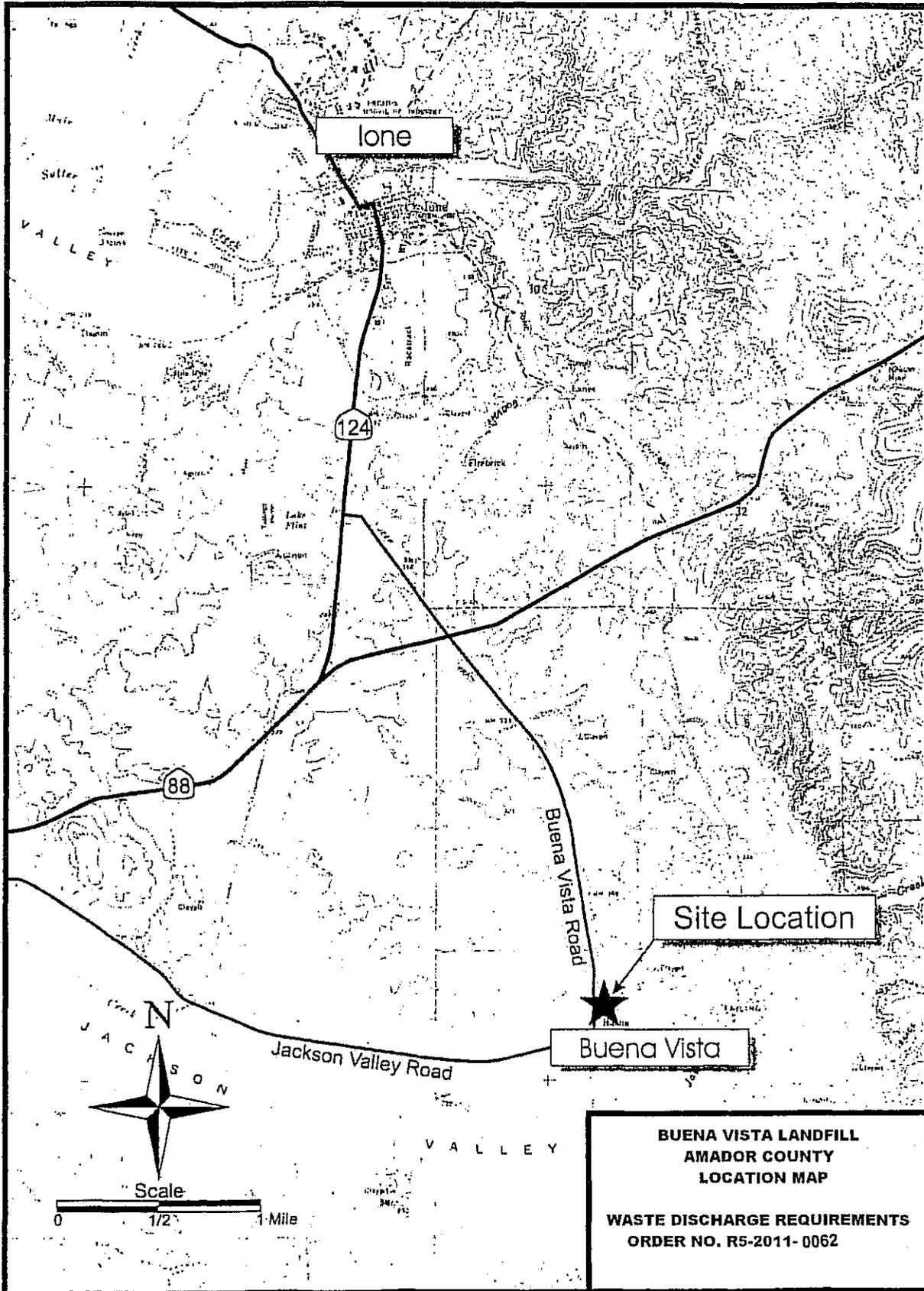
I, PAMELA C. CREEDON, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 5 August 2011.

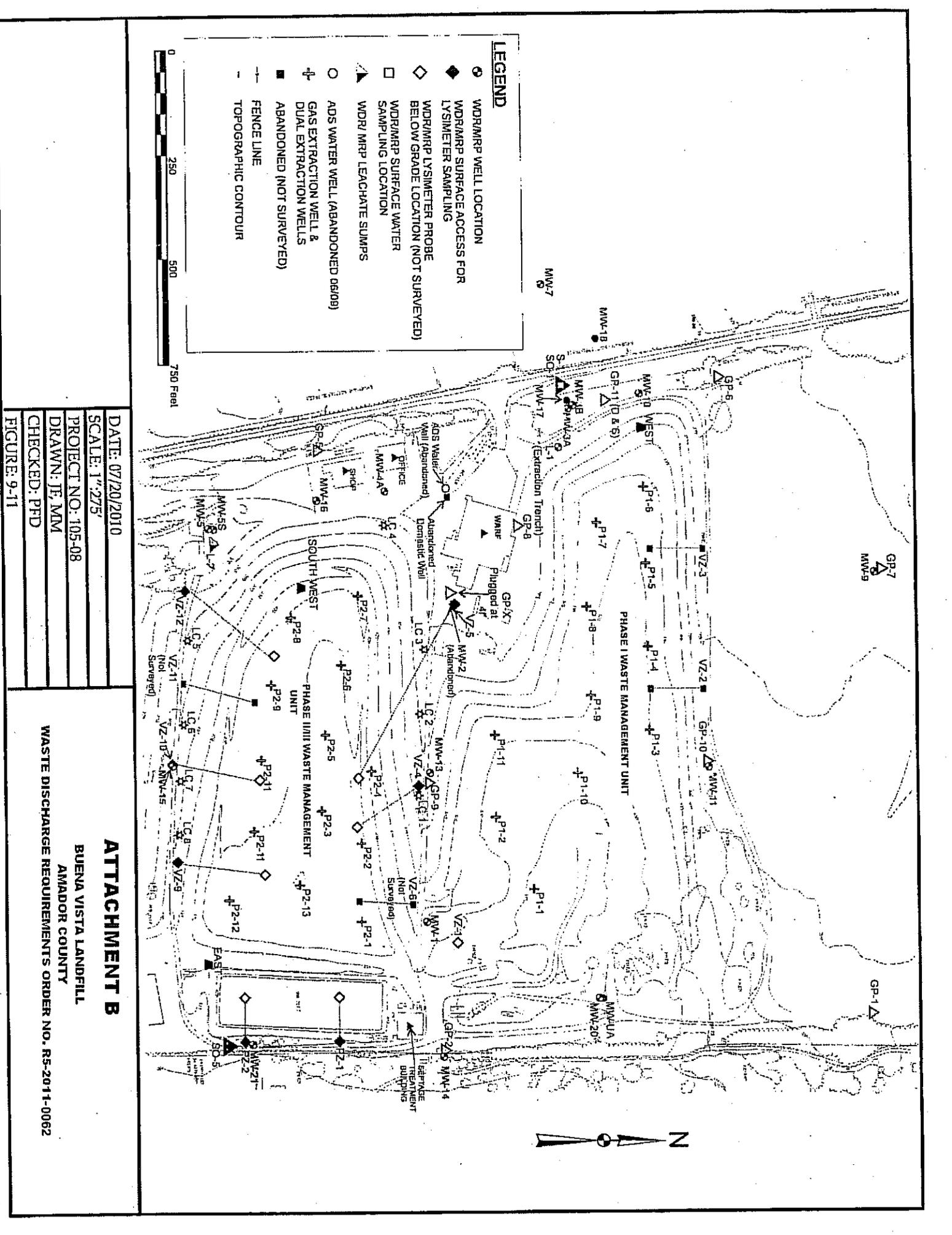
Original signed by

PAMELA C. CREEDON, Executive Officer

RDA: 05/09/2011

ATTACHMENT A





LEGEND

- WDRMRP WELL LOCATION
- ◆ WDRMRP SURFACE ACCESS FOR LYSIMETER SAMPLING
- ◇ WDRMRP LYSIMETER PROBE BELOW GRADE LOCATION (NOT SURVEYED)
- WDRMRP SURFACE WATER SAMPLING LOCATION
- ▲ WDR/ MRP LEACHATE SUMPS
- ADS WATER WELL (ABANDONED 06/09)
- ⊕ GAS EXTRACTION WELLS & DUAL EXTRACTION WELLS
- ABANDONED (NOT SURVEYED)
- - - FENCE LINE
- - - TOPOGRAPHIC CONTOUR



DATE: 07/20/2010
 SCALE: 1"=275'
 PROJECT NO.: 105-08
 DRAWN: JF, MM
 CHECKED: PFD
 FIGURE: 9-11

ATTACHMENT B
 BUENA VISTA LANDFILL
 AMADOR COUNTY
 WASTE DISCHARGE REQUIREMENTS ORDER NO. RS-2011-0062

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2011-0062
FOR
AMADOR COUNTY
FOR
POST-CLOSURE MAINTENANCE AND CORRECTIVE ACTION
OF BUENA VISTA LANDFILL
AMADOR COUNTY

The Discharger shall comply with this Monitoring and Reporting Program, with California Code of Regulations Title 27, Section 20005, et seq. (hereafter Title 27), and with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements for Nonhazardous Solid Waste Discharges Regulated by Title 27 and/or Subtitle D (27 CCR §20005 et seq. and 40 CFR 258)*, dated April 2000, as ordered by Waste Discharge Requirements Order No. R5-2011-0062.

A. REPORTING

The Discharger shall submit **semiannual** monitoring reports with the data and information required in this Monitoring and Reporting Program and required in Order No. R5-2011-0062 and the Standard Provisions and Reporting Requirements. Reports which do not comply with the required format will be **REJECTED** and the Discharger shall be deemed to be in noncompliance with the waste discharge 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. Data shall also be submitted in a digital format acceptable to the Executive Officer.

Each monitoring report shall include a compliance evaluation summary as specified in E. Reporting Requirements, below.

Field and laboratory tests shall be reported in each monitoring report. Semiannual, and annual monitoring reports shall be submitted to the Regional Water Board in accordance with the following schedule. The results of **all monitoring** conducted at the site shall reported to the Regional Water Board in accordance with the reporting schedule below for the calendar period in which samples were taken or observations made.

<u>Sampling Frequency</u>	<u>Reporting Frequency</u>	<u>Reporting Periods End</u>	<u>Report Date Due</u>
Monthly	Semiannually	Last Day of Month	by Semiannual Schedule
Semiannually	Semiannually	30 June 31 December	31 July 31 January
Annually	Annually	31 December	31 January
5-Year	Every 5 years	31 December	31 January

B. WATER QUALITY PROTECTION STANDARD AND COMPLIANCE PERIOD

1. Water Quality Protection Standard Report

For each waste management unit (Unit), the Water Quality Protection Standard shall consist of all constituents of concern, the concentration limit for each constituent of concern, the point of compliance, and all water quality monitoring points for each monitored medium.

The Water Quality Protection Standard for naturally occurring waste constituents consists of the constituents of concern, the concentration limits, and the point of compliance and all monitoring points. The Water Quality Protection Standard, or any modification thereto, shall be submitted in a report for review and approval.

The report shall:

- a. Identify **all distinct bodies of surface and ground water** that could be affected in the event of a release from a Unit or portion of a Unit. This list shall include at least the uppermost aquifer and any permanent or ephemeral zones of perched groundwater underlying the facility.
- b. Include a map showing the monitoring points and background monitoring points for the surface water monitoring program, groundwater monitoring program, and the unsaturated zone monitoring program. The map shall include the point of compliance in accordance with §20405 of Title 27.
- c. Evaluate the perennial direction(s) of groundwater movement within the uppermost groundwater zone(s).

The Water Quality Protection Standard shall be certified by a California-registered civil engineer or geologist as meeting the requirements of Title 27. If subsequent sampling of the background monitoring point(s) indicates significant water quality changes due to either seasonal fluctuations or other reasons unrelated to waste management activities at the site, the Discharger may request modification of the Water Quality Protection Standard.

2. Constituents of Concern

The constituents of concern include all the waste constituents, their reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the Unit. The constituents of concern for all Units at the facility are those listed in Tables I through IV for the specified monitored medium, and Table VI. The Discharger shall monitor all constituents of concern every five years, or more frequently as required in accordance with a Corrective Action Program. Monitoring parameters are a subset of the Constituents of Concern and are monitored semi-annually.

a. Monitoring Parameters

Monitoring parameters are constituents of concern that are the waste constituents, reaction products, hazardous constituents, and physical parameters that provide a reliable indication of a release from a Unit. The monitoring parameters for all Units are those listed in Tables I through V for the specified monitored medium.

3. Concentration Limits

For a naturally occurring constituent of concern, the concentration limit for each constituent of concern shall be determined as follows:

- a. By calculation in accordance with a statistical method pursuant to §20415 of Title 27(e)(8); or
- b. By an alternate statistical method meeting the requirements of §20415(e)(8)(E) of Title 27.

The Discharger is using Shewhart-CUMSUM Control Charts for calculating intrawell concentration limits for inorganic constituents. Both interwell and intrawell analyses are used. The intrawell concentration limits for the WQPS as reported in the “*Second Semi-Annual 2010, 2010 Annual Monitoring Report and Corrective Action Monitoring Update*” were as follows:

Table 1. Intra Well Concentration Limits (All Concentration Limits in mg/L)

Well	Na	K	Cl	NO ₃ /NO ₂ as N	SO ₄	TDS	Ca	Mn	HCO ₃
L-1	113	12	205		85	514	30	144	134
MW-1	33	1	32	3.12	73	621	6	9	
MW-3A	70	7	116		295	615	35	24	196
MW-3B	27	3	70		75	350		9	
MW-4A	65	11	97		228	716	55	19	
MW-5	12	2	21		66	308		5	
MW-5S	230	12	323	0.37	533	1374	69	38	
MW-7	21	3	53		72	561	14	14	75
MW-9	15	2	24		34	236		6	
MW-10	19	2	190		41	740		6	
MW-11	30	2	46		62	1317		7	
MW-13	34	3	33		115	752	17	14	
MW-14	8	5	9	0.52	25	220		6	
MW-15	22	6	34		230	480		13	
MW-16	32	9	49		100	366	58	30	149
MW-20	14	4	22	1.29	15	248	17	7	
MW-21	6	4	11	1.24	43	345	17	5	

The concentration limit for all non-naturally occurring waste constituents including all volatile organic constituents is non-detect.

4. Point of Compliance

The point of compliance for the water standard at each Unit is a vertical surface located at the hydraulically downgradient limit of the Unit that extends through the uppermost aquifer underlying the Unit. The following are points of compliance:

- Closed Phase I Waste Management Unit: Groundwater Extraction Trench and MW-1, -11 and -13;
- Phase II/III Waste Management Units: MW-4A, -5S, -15 and -16; and
- Class II Surface Impoundment: MW-21.

5. Compliance Period

The compliance period for each Unit shall be the number of years equal to the active life of the Unit plus the closure period. The compliance period is the minimum period during which the Discharger shall conduct a water quality monitoring program subsequent to a release from the Unit. The compliance period shall begin anew each time the Discharger initiates an evaluation monitoring program.

D. MONITORING

The Discharger shall comply with the detection monitoring program provisions of Title 27 for groundwater, surface water, and the unsaturated zone, in accordance with Detection Monitoring Specification D.2 and D.4 of Waste Discharge Requirements, Order No. R5-2011-0062. All monitoring shall be conducted in accordance with a Sample Collection and Analysis Plan, which includes quality assurance/quality control standards that shall be submitted for review and approval.

All point of compliance monitoring wells established for the detection monitoring program shall constitute the monitoring points for the groundwater Water Quality Protection Standard. All detection monitoring program groundwater monitoring wells, unsaturated zone monitoring devices, leachate, and surface water monitoring points shall be sampled and analyzed for monitoring parameters and constituents of concern as indicated and listed in Tables I through VI.

Method detection limits and practical quantitation limits shall be reported. All peaks shall be reported, including those which cannot be quantified and/or specifically identified. Metals shall be analyzed in accordance with the methods listed in Table VI.

The Discharger may use alternative analytical test methods, including new USEPA approved methods, provided the methods have method detection limits equal to or lower than the analytical methods specified in this Monitoring and Reporting Program.

1. Groundwater

The Discharger shall operate and maintain a groundwater detection monitoring system that complies with the applicable provisions of §20415 and §20420 of Title 27 in accordance with an approved Detection Monitoring Program. The detection monitoring system shall be certified by a California-licensed professional civil engineer or geologist as meeting the requirements of Title 27. The system currently meets these requirements. The Discharger shall collect, preserve, and transport groundwater samples in accordance with the approved Sample Collection and Analysis Plan.

During each semi-annual monitoring event, the Discharger shall determine the groundwater flow rate and direction in the uppermost aquifer and in any zones of perched water and in any additional zone of saturation monitored pursuant to this Monitoring and Reporting Program, and report the results semiannually, including the times of highest and lowest elevations of the water levels in the wells.

Each annual monitoring report shall include hydrographs of each well showing the elevation of groundwater with respect to the elevations of the top and bottom of the screened interval and the elevation of the pump intake. Hydrographs of each well shall be prepared quarterly and submitted annually.

The groundwater monitoring system consists of: background wells MW-9 and -14; and the groundwater extraction trench and MW-1, -3A, -3B, -4A, -5, -5S, -7, -10, -11, -13, -15, -16, -20, and -21. Groundwater samples shall be collected from the point-of-compliance wells, background wells, and any additional wells added as part of the approved groundwater monitoring system. Samples shall be collected and analyzed for the monitoring parameters in accordance with the methods and frequency specified in Table I.

The monitoring parameters shall also be evaluated each reporting period with regards to the cation/anion balance, and the results shall be graphically presented using a Stiff diagram, a Piper graph, or a Schueller plot. Samples for the constituents of concern specified in Table I shall be collected and analyzed in accordance with the methods listed in Table VI every five years.

2. Unsaturated Zone Monitoring

The Discharger shall operate and maintain an unsaturated zone detection monitoring system that complies with the applicable provisions of §20415 and §20420 of Title 27 in accordance with an approved Detection Monitoring Program. The current system meets these requirements. The Discharger shall collect, preserve, and transport samples in accordance with the quality assurance/quality control standards contained in the approved Sample Collection and Analysis Plan.

The unsaturated zone monitoring system consists of six suction lysimeters (VZ-1, -4, -5, -9, -10 and -12) installed under the Phase I, II and III landfill units and two lysimeters (PZ-1 and -2) installed near the surface impoundment. Unsaturated zone samples shall be collected from the monitoring devices and background monitoring devices of the approved unsaturated zone monitoring system. The collected samples shall be analyzed for the listed constituents in accordance with the methods and frequency specified in Table II. For each semi-annual report, all monitoring parameters shall be graphed so as to show historical trends at each monitoring point. Samples for the constituents of concern specified in Table II shall be collected and analyzed in accordance with the methods listed in Table VI every five years.

Quarterly landfill gas monitoring is required by the California Integrated Waste Management Board. Landfill gas is measured in seven perimeter and four

corrective action landfill gas probes. Methane concentrations shall be measured with a hand held gas meter calibrated for methane. Results shall be reported in the semi-annual monitoring reports.

3. Leachate/Seep Monitoring

The Phases II and III WMUs leachate collection and removal system (LCRS) sump (L-2) and the Class II Surface Impoundment LCRS sump shall be inspected monthly for the presence of leachate. Upon detection of leachate in a previously dry LCRS, leachate shall be sampled **immediately** and analyzed for the constituents listed in Table III. Leachate shall then be sampled and analyzed annually during the fourth quarter thereafter. If previously undetected constituents of concern are detected in the fourth quarter sampling, then a retest is required during the following second quarter. Leachate samples shall be collected and analyzed for the listed constituents in accordance with the methods and frequency specified in Table III. The constituents of concern list shall include all constituents listed in Table VI. The quantity of leachate pumped from each sump shall be measured and reported monthly as Leachate Flow Rate (in gallons).

Upon the observation of leachate seeps from any Unit, the seeps shall be sampled and analyzed for the Monitoring Parameters and Constituents of Concern listed in Table III. The quantity of leachate shall be *estimated* and reported as Leachate Flow Rate (in gallons/day). Also, refer to Section E.4, below.

4. Surface Water Monitoring

The Discharger shall install and operate a surface water detection monitoring system that complies with the applicable provisions of §20415 and §20420 of Title 27 in accordance with an approved Detection Monitoring Program.

Surface water samples are collected at the following locations, flow permitting:

- S-1 Located west of Phase I at east side of the Buena Vista Road culvert
- S-2 Located south of Phase III at the entrance to the runoff pond.
- S-3 Background sample located in the intermittent stream bed in the northeast part of the landfill property.

For all monitoring points and background monitoring points assigned to surface water detection monitoring, samples shall be collected and analyzed for the monitoring parameters in accordance with the methods and frequency specified in Table IV. All surface water monitoring samples shall be collected and

analyzed for the constituents of concern specified in Table IV every five years. For each semi-annual monitoring report, all monitoring parameters shall be graphed so as to show historical trends at each sample location.

5. Class II Surface Impoundment Monitoring

All liquid waste discharged into the class II surface impoundment shall be monitored and reported to the Board with the semi-annual report:

<u>Parameter</u>	<u>Report in Units of</u>	<u>Frequency of Measurement</u>
Volume discharged	Gallons	Weekly
- Leachate		
- Other Liquids		
- Extracted groundwater		
- Gas Condensate		
- Stormwater		
Freeboard	Inches	Weekly
Capacity Remaining	Percent	Weekly
Capacity Remaining	Gallons	Weekly

6. Groundwater Extraction Trench

The following data, described in the operations and maintenance manual for the groundwater extraction trench shall be reported to the Board with the semi-annual report.

<u>Parameter</u>	<u>Report in Units of</u>	<u>Frequency of Measurement</u>
Pump Status	On/Off	Weekly
Pump Operation	Hours of Operation	Weekly
Pump Test	—	Annually

7. Corrective Action Status Report

The Discharger shall report, in writing, in the semi-annual report, the status, and effectiveness of all corrective action programs. More frequent reporting may be required by the Regional Board as necessary to ensure the protection of human health or the environment.

8. Facility Monitoring

a. Facility Inspection

At a minimum final cover areas shall be inspected semi-annually. In addition, major storm events, grass fires or other events that may potentially impacted cover integrity shall trigger additional inspections. Cover inspections shall include the following:

1. Differential settlement and development of low spots;
2. erosion, excessive rilling or cracking of the protective soil layer;
3. holes from burrowing animals;
4. liquid seeps;
5. distressed vegetation areas (potentially caused by venting methane);
6. obstructions of drainage structures; and
7. slope failures.

The second semester facility inspection will take place prior to the anticipated rainy season, but no later than **30 September**. Any necessary construction, maintenance, or repairs shall be completed by **31 October**. **By 15 November**, the Discharger shall submit an Annual Facility Inspection Report describing the inspection results and documenting repair measures implemented. The report shall include photographs of problem areas and before and after photographs of any repairs.

b. Storm Events

The Discharger shall inspect all precipitation, diversion, and drainage facilities for damage **within 7 days** following *major storm events*. Necessary repairs shall be completed **within 30 days** of the inspection. The Discharger shall report any damage and subsequent repairs within 45 days of completion of the repairs, including photographs of the problem and the repairs.

E. 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 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.
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 shall be conducted **monthly** during the wet season (1 October to 30 April) and **quarterly** during the dry season (1 May to 30 September). 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.
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 Table III of this MRP, 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.
5. **By 31 January each year**, the Discharger shall submit an **Annual Monitoring Summary Report** to the Regional Water Board covering monitoring results of the previous year. The Annual Monitoring Summary Report may be combined with the second semi-annual report. The annual report shall contain:
 - 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.

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. The transmittal letter shall contain a statement by the discharger, or the discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate, and complete.

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

Ordered by: _____
PAMELA C. CREEDON, Executive Officer

_____ 5 August 2011
(Date)

RDA

TABLE I
GROUNDWATER DETECTION MONITORING PROGRAM

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Field Parameters		
Groundwater Elevation	Ft. & hundredths, M.S.L.	Quarterly
Temperature	°C	Semiannual
Electrical Conductivity	µmhos/cm	Semiannual
pH	pH units	Semiannual
Turbidity	Turbidity units	Semiannual
Monitoring Parameters		
Total Dissolved Solids (TDS)	mg/L	Semiannual
Chloride	mg/L	Semiannual
Carbonate	mg/L	Semiannual
Bicarbonate	mg/L	Semiannual
Nitrate - Nitrogen	mg/L	Semiannual
Sulfate	mg/L	Semiannual
Calcium	mg/L	Semiannual
Magnesium	mg/L	Semiannual
Potassium	mg/L	Semiannual
Sodium	mg/L	Semiannual
Volatile Organic Compounds (USEPA Method 8260, see Table V)	µg/L	Semiannual
Constituents of Concern (see Table VI)		
Total Organic Carbon	mg/L	5 years
Inorganics (dissolved)	mg/L	5 years
Volatile Organic Compounds (USEPA Method 8260B, extended list)	µg/L	5 years
Semi-Volatile Organic Compounds (USEPA Method 8270C)	µg/L	5 years
Chlorophenoxy Herbicides (USEPA Method 8151A)	µg/L	5 years
Organophosphorus Compounds (USEPA Method 8141A)	µg/L	5 years

TABLE II

UNSATURATED ZONE DETECTION MONITORING PROGRAM

PAN AND SUCTION LYSIMETERS (or other vadose zone monitoring device)

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Field Parameters		
Electrical Conductivity	µmhos/cm	Semiannual
pH	pH units	Semiannual
Monitoring Parameters		
Total Dissolved Solids (TDS)	mg/L	Semiannual
Chloride	mg/L	Semiannual
Carbonate	mg/L	Semiannual
Bicarbonate	mg/L	Semiannual
Nitrate - Nitrogen	mg/L	Semiannual
Sulfate	mg/L	Semiannual
Calcium	mg/L	Semiannual
Magnesium	mg/L	Semiannual
Potassium	mg/L	Semiannual
Sodium	mg/L	Semiannual
Volatile Organic Compounds (USEPA Method 8260B, see Table V)	µg/L	Semiannual
Constituents of Concern (see Table VI)		
Total Organic Carbon	mg/L	5 years
Inorganics (dissolved)	mg/L	5 years
Volatile Organic Compounds (USEPA Method 8260B, extended list)	µg/L	5 years
Semi-Volatile Organic Compounds (USEPA Method 8270C)	µg/L	5 years
Chlorophenoxy Herbicides (USEPA Method 8151A)	µg/L	5 years
Organophosphorus Compounds (USEPA Method 8141A)	µg/L	5 years

TABLE III
LEACHATE DETECTION MONITORING PROGRAM

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Field Parameters		
Total Flow	Gallons	Monthly
Flow Rate	Gallons/Day	Monthly
Electrical Conductivity	µmhos/cm	Monthly
pH	pH units	Monthly
Monitoring Parameters		
Total Dissolved Solids (TDS)	mg/L	Annually
Chloride	mg/L	Annually
Carbonate	mg/L	Annually
Bicarbonate	mg/L	Annually
Nitrate - Nitrogen	mg/L	Annually
Sulfate	mg/L	Annually
Calcium	mg/L	Annually
Magnesium	mg/L	Annually
Potassium	mg/L	Annually
Sodium	mg/L	Annually
Volatile Organic Compounds (USEPA Method 8260B, see Table V)	µg/L	Annually
Constituents of Concern (see Table VI)		
Total Organic Carbon	mg/L	5 years
Inorganics (dissolved)	mg/L	5 years
Volatile Organic Compounds (USEPA Method 8260B, extended list)	µg/L	5 years
Semi-Volatile Organic Compounds (USEPA Method 8270C)	µg/L	5 years
Chlorophenoxy Herbicides (USEPA Method 8151A)	µg/L	5 years
Organophosphorus Compounds (USEPA Method 8141A)	µg/L	5 years

TABLE IV
SURFACE WATER DETECTION MONITORING PROGRAM

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Field Parameters		
Temperature	°C	Semiannual
Electrical Conductivity	µmhos/cm	Semiannual
pH	pH units	Semiannual
Turbidity	Turbidity units	Semiannual
Monitoring Parameters		
Total Dissolved Solids (TDS)	mg/L	Semiannual
Carbonate	mg/L	Semiannual
Bicarbonate	mg/L	Semiannual
Chloride	mg/L	Semiannual
Nitrate - Nitrogen	mg/L	Semiannual
Sulfate	mg/L	Semiannual
Calcium	mg/L	Semiannual
Magnesium	mg/L	Semiannual
Potassium	mg/L	Semiannual
Sodium	mg/L	Semiannual
Volatile Organic Compounds (USEPA Method 8260B, see Table V)	µg/L	Semiannual
Constituents of Concern (see Table VI)		
Total Organic Carbon	mg/L	5 years
Inorganics (dissolved)	mg/L	5 years
Volatile Organic Compounds (USEPA Method 8260B, extended list)	µg/L	5 years
Semi-Volatile Organic Compounds (USEPA Method 8270C)	µg/L	5 years
Chlorophenoxy Herbicides (USEPA Method 8151A)	µg/L	5 years
Organophosphorus Compounds (USEPA Method 8141A)	µg/L	5 years

TABLE V
MONITORING PARAMETERS FOR DETECTION MONITORING

Surrogates for Metallic Constituents:

pH
Total Dissolved Solids
Electrical Conductivity
Chloride
Sulfate
Nitrate nitrogen

Constituents included in VOC:

USEPA Method 8260B

Acetone
Acrylonitrile
Benzene
Bromochloromethane
Bromodichloromethane
Bromoform (Tribromomethane)
Carbon disulfide
Carbon tetrachloride
Chlorobenzene
Chloroethane (Ethyl chloride)
Chloroform (Trichloromethane)
Dibromochloromethane (Chlorodibromomethane)
1,2-Dibromo-3-chloropropane (DBCP)
1,2-Dibromoethane (Ethylene dibromide; EDB)
o-Dichlorobenzene (1,2-Dichlorobenzene)
m-Dichlorobenzene (1,3-Dichlorobenzene)
p-Dichlorobenzene (1,4-Dichlorobenzene)
trans-1,4-Dichloro-2-butene
Dichlorodifluoromethane (CFC-12)
1,1-Dichloroethane (Ethylidene chloride)
1,2-Dichloroethane (Ethylene dichloride)
1,1 -Dichloroethylene (1,1 -Dichloroethene; Vinylidene chloride)
cis- 1,2-Dichloroethylene (cis- 1,2-Dichloroethene)
trans-1,2-Dichloroethylene (trans-1,2-Dichloroethene)
1,2-Dichloropropane (Propylene dichloride)
cis- 1,3-Dichloropropene
trans- 1,3-Dichloropropene
Di-isopropylether (DIPE)
Ethanol
Ethyltertiary butyl ether
Ethylbenzene
2-Hexanone (Methyl butyl ketone)
Hexachlorobutadiene

TABLE V
MONITORING PARAMETERS FOR DETECTION MONITORING
Continued

Hexachloroethane
Methyl bromide (Bromomethene)
Methyl chloride (Chloromethane)
Methylene bromide (Dibromomethane)
Methylene chloride (Dichloromethane)
Methyl ethyl ketone (MEK: 2-Butanone)
Methyl iodide (Iodomethane)
Methyl t-butyl ether
4-Methyl-2-pentanone (Methyl isobutylketone)
Naphthalene
Styrene
Tertiary amyl methyl ether
Tertiary butyl alcohol
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane
Tetrachloroethylene (Tetrachloroethene; Perchloroethylene)
Toluene
1,2,4-Trichlorobenzene
1,1,1-Trichloroethane (Methylchloroform)
1,1,2-Trichloroethane
Trichloroethylene (Trichloroethene)
Trichlorofluoromethane (CFC- 11)
1,2,3-Trichloropropane
Vinyl acetate
Vinyl chloride
Xylenes

TABLE VI
CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS

<u>Inorganics (dissolved):</u>	<u>USEPA Method</u>
Aluminum	6010
Antimony	7041
Barium	6010
Beryllium	6010
Cadmium	7131A
Chromium	6010
Cobalt	6010
Copper	6010
Silver	6010
Tin	6010
Vanadium	6010
Zinc	6010
Iron	6010
Manganese	6010
Arsenic	7062
Lead	7421
Mercury	7470A
Nickel	7521
Selenium	7742
Thallium	7841
Cyanide	9010B
Sulfide	9030B

Volatile Organic Compounds:

USEPA Method 8260

Acetone
Acetonitrile (Methyl cyanide)
Acrolein
Acrylonitrile
Allyl chloride (3-Chloropropene)
Benzene
Bromochloromethane (Chlorobromomethane)
Bromodichloromethane (Dibromochloromethane)
Bromoform (Tribromomethane)
Carbon disulfide
Carbon tetrachloride
Chlorobenzene
Chloroethane (Ethyl chloride)
Chloroform (Trichloromethane)
Chloroprene
Dibromochloromethane (Chlorodibromomethane)

TABLE VI

CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS

Continued

1,2-Dibromo-3-chloropropane (DBCP)
1,2-Dibromoethane (Ethylene dibromide; EDB)
o-Dichlorobenzene (1,2-Dichlorobenzene)
m-Dichlorobenzene (1,3-Dichlorobenzene)
p-Dichlorobenzene (1,4-Dichlorobenzene)
trans- 1,4-Dichloro-2-butene
Dichlorodifluoromethane (CFC 12)
1,1 -Dichloroethane (Ethylidene chloride)
1,2-Dichloroethane (Ethylene dichloride)
1,1 -Dichloroethylene (1, 1-Dichloroethene; Vinylidene chloride)
cis- 1,2-Dichloroethylene (cis- 1,2-Dichloroethene)
trans- 1,2-Dichloroethylene (trans- 1,2-Dichloroethene)
1,2-Dichloropropane (Propylene dichloride)
1,3-Dichloropropane (Trimethylene dichloride)
2,2-Dichloropropane (Isopropylidene chloride)
1,1 -Dichloropropene
cis- 1,3-Dichloropropene
trans- 1,3-Dichloropropene
Di-isopropylether (DIPE)
Ethanol
Ethyltertiary butyl ether
Ethylbenzene
Ethyl methacrylate
Hexachlorobutadiene
Hexachloroethane
2-Hexanone (Methyl butyl ketone)
Isobutyl alcohol
Methacrylonitrile
Methyl bromide (Bromomethane)
Methyl chloride (Chloromethane)
Methyl ethyl ketone (MEK; 2-Butanone)
Methyl iodide (Iodomethane)
Methyl t-butyl ether
Methyl methacrylate
4-Methyl-2-pentanone (Methyl isobutyl ketone)
Methylene bromide (Dibromomethane)
Methylene chloride (Dichloromethane)
Naphthalene
Propionitrile (Ethyl cyanide)
Styrene
Tertiary amyl methyl ether
Tertiary butyl alcohol
1,1,1,2-Tetrachloroethane

TABLE VI

CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS

Continued

1,1,2,2-Tetrachloroethane
Tetrachloroethylene (Tetrachloroethene; Perchloroethylene; PCE)
Toluene
1,2,4-Trichlorobenzene
1,1,1 -Trichloroethane, Methylchloroform
1,1,2-Trichloroethane
Trichloroethylene (Trichloroethene; TCE)
Trichlorofluoromethane (CFC- 11)
1,2,3-Trichloropropane
Vinyl acetate
Vinyl chloride (Chloroethene)
Xylene (total)

Semi-Volatile Organic Compounds:

USEPA Method 8270 - base, neutral, & acid extractables

Acenaphthene
Acenaphthylene
Acetophenone
2-Acetylaminofluorene (2-AAF)
Aldrin
4-Aminobiphenyl
Anthracene
Benzo[a]anthracene (Benzanthracene)
Benzo[b]fluoranthene
Benzo[k]fluoranthene
Benzo[g,h,i]perylene
Benzo[a]pyrene
Benzyl alcohol
Bis(2-ethylhexyl) phthalate
alpha-BHC
beta-BHC
delta-BHC
gamma-BHC (Lindane)
Bis(2-chloroethoxy)methane
Bis(2-chloroethyl) ether (Dichloroethyl ether)
Bis(2-chloro-1-methylethyl) ether (Bis(2-chloroisopropyl) ether; DCIP)
4-Bromophenyl phenyl ether
Butyl benzyl phthalate (Benzyl butyl phthalate)
Chlordane
p-Chloroaniline
Chlorobenzilate
p-Chloro-m-cresol (4-Chloro-3-methylphenol)

TABLE VI

CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS

Continued

2-Chloronaphthalene
2-Chlorophenol
4-Chlorophenyl phenyl ether
Chrysene
o-Cresol (2-methylphenol)
m-Cresol (3-methylphenol)
p-Cresol (4-methylphenol)
4,4'-DDD
4,4'-DDE
4,4'-DDT
Diallate
Dibenz[a,h]anthracene
Dibenzofuran
Di-n-butyl phthalate
3,3'-Dichlorobenzidine
2,4-Dichlorophenol
2,6-Dichlorophenol
Dieldrin
Diethyl phthalate
p-(Dimethylamino)azobenzene
7,12-Dimethylbenz[a]anthracene
3,3'-Dimethylbenzidine
2,4-Dimehtylphenol (m-Xylenol)
Dimethyl phthalate
m-Dinitrobenzene
4,6-Dinitro-o-cresol (4,6-Dinitro-2-methylphenol)
2,4-Dinitrophenol
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Di-n-octyl phthalate
Diphenylamine
Endosulfan I
Endosulfan II
Endosulfan sulfate
Endrin
Endrin aldehyde
Ethyl methanesulfonate
Famphur
Fluoranthene
Fluorene
Heptachlor
Heptachlor epoxide
Hexachlorobenzene

MONITORING AND REPORTING PROGRAM NO. R5-2011-0062
AMADOR COUNTY
POST-CLOSURE MAINTENANCE AND CORRECTIVE ACTION
OF BUENA VISTA LANDFILL
AMADOR COUNTY

Hexachlorocyclopentadiene
Hexachloropropene
Indeno(1,2,3-c,d)pyrene
Isodrin
Isophorone
Isosafrole
Kepone
Methapyrilene
Methoxychlor
3-Methylcholanthrene
Methyl methanesulfonate
2-Methylnaphthalene
1,4-Naphthoquinone
1-Naphthylamine
2-Naphthylamine
o-Nitroaniline (2-Nitroaniline)
m-Nitroaniline (3-Nitroaniline)
p-Nitroaniline (4-Nitroaniline)
Nitrobenzene
o-Nitrophenol (2-Nitrophenol)
p-Nitrophenol (4-Nitrophenol)
N-Nitrosodi-n-butylamine (Di-n-butylnitrosamine)
N-Nitrosodiethylamine (Diethylnitrosamine)
N-Nitrosodimethylamine (Dimethylnitrosamine)
N-Nitrosodiphenylamine (Diphenylnitrosamine)
N-Nitrosodipropylamine (N-Nitroso-N-dipropylamine; Di-n-propylnitrosamine)
N-Nitrosomethylethylamine (Methylethylnitrosamine)
N-Nitrosopiperidine
N-Nitrosopyrrolidine
5-Nitro-o-toluidine
Pentachlorobenzene
Pentachloronitrobenzene (PCNB)
Pentachlorophenol
Phenacetin
Phenanthrene
Phenol
p-Phenylenediamine
Polychlorinated biphenyls (PCBs; Aroclors)
Pronamide
Pyrene
Safrole
1,2,4,5-Tetrachlorobenzene
2,3,4,6-Tetrachlorophenol
o-Toluidine

TABLE VI

CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS

Continued

Toxaphene
2,4,5-Trichlorophenol
0,0,0-Triethyl phosphorothioate

sym-Trinitrobenzene

Chlorophenoxy Herbicides:

USEPA Method 8151A

2,4-D (2,4-Dichlorophenoxyacetic acid)
Dinoseb (DNBP; 2-sec-Butyl-4,6-dinitrophenol)
Silvex (2,4,5-Trichlorophenoxypropionic acid; 2,4,5-TP)
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)

Organophosphorus Compounds:

USEPA Method 8141A

Atrazine
Chlorpyrifos
0,0-Diethyl 0-2-pyrazinyl phosphorothioate (Thionazin)
Diazinon
Dimethoate
Disulfoton
Ethion
Methyl parathion (Parathion methyl)
Parathion
Phorate
Simazine

INFORMATION SHEET

ORDER NO. R5-2011-0062

WASTE DISCHARGE REQUIREMENTS
AMADOR COUNTY
POST-CLOSURE MAINTENANCE AND CORRECTIVE ACTION
OF BUENA VISTA LANDFILL
AMADOR, COUNTY

The County of Amador owns and maintains a closed municipal solid waste landfill, three miles south of Ione. The landfill consists of three closed solid Waste Management Units (WMUs) and one Class II Surface Impoundment. The solid waste WMUs no longer accept waste and the County has completed the final landfill covers in compliance with California Code of Regulations Title 27. The surface impoundment continues to accept liquid waste (mostly leachate) generated onsite.

These Waste Discharge Requirements prescribe post-closure maintenance requirements for the three waste solid WMUs and operational requirements for the Class II Surface Impoundment. They also lay out the corrective action program implemented by the Discharger to remove volatile organic compounds from the vadose zone and groundwater.

RDA: 2 February 2011