



## KERN COUNTY WASTE MANAGEMENT DEPARTMENT

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November 21, 2012

Mr. Dane S. Johnson, P.G.  
Senior Engineering Geologist  
California Regional Water Quality  
Control Board - Central Valley Region  
1685 "E" Street  
Fresno, CA 93706

**RE: Kern Valley Sanitary Landfill; Kern County  
Comments on Tentative Waste Discharge Requirements**

Dear Mr. Johnson:

Thank you for providing Kern County Waste Management Department (KCWMD) the opportunity to provide comments on the Tentative Waste Discharge Requirements (WDRs) dated November 1, 2012, for the Kern Valley Sanitary Landfill. The KCWMD has been in contact with representatives of a group of concerned citizens living near the landfill. To provide the KCWMD time to meet with these citizens to address their concerns, and to provide them time to comment after the meeting, the KCWMD requests that action on these WDRs be postponed until the next meeting (March-April 2013) of the Central Valley Water Board.

KCWMD's comments regarding the Tentative Waste Discharge Requirements are presented below. For ease of Central Valley Water Board review, each section of specific language as stated in the tentative document is displayed in italics followed by KCWMD's comments. While not specifically addressed below, it is still KCWMD's position that the Threat and Complexity ranking for this site should not be included in the WDRs.

### **WASTE DISCHARGE REQUIREMENTS**

#### **FINDINGS:**

1. *The County of Kern maintains the Kern Valley Sanitary Landfill (facility) on land partially owned by the County of Kern and partially leased from the United States Department of the Interior, Bureau of Land Management (BLM). The County of Kern and the BLM are hereafter jointly referred to as Discharger.*

Comment: KCWMD acquired the remaining portion of the facility property from the BLM on December 12, 2003. All references to land leased from the BLM should be deleted. Formal notification of this acquisition will be submitted in a separate document per the Standard Provisions and Reporting Requirements.

2. *The facility is on a 156-acre property off of Sierra Way. The facility contains one closed unlined 36-acre waste management unit (Unit) as shown in Attachment B,*

*which is incorporated herein and made part of this Order by reference. An active landfill gas extraction system with a flare operates at the facility. The facility is comprised of Assessor's Parcel Numbers (APN) 296-07-18 and 296-07-19.*

Comment: The County has acquired additional property since the last WDRs. This section should be revised as follows:

The facility is on a 197.5-acre property off of Sierra Way. The facility contains one closed unlined 36-acre waste management unit (Unit) as shown in Attachment B, which is incorporated herein and made part of this Order by reference. An active landfill gas extraction system with a flare operates at the facility. The facility is comprised of Assessor's Parcel Numbers (APN) 296-07-25 and 296-07-39.

KCWMD proposes an Additional Finding to read as follows:

New finding: In a letter dated October 4, 2012, the Central Valley Water Board concluded the Engineering Feasibility Study, the Evaluation Monitoring Plan, and the Corrective Action Plan adequately address the requirements of CCR Title 27, Section 20005 et seq.

#### **Site Description**

12. *The measured hydraulic conductivity of the native soils underlying the Unit ranges between  $2.6 \times 10^{-4}$  and  $8.9 \times 10^{-4}$  centimeters per second (cm/sec).*

Comment: According to pump tests conducted by EMCON in 1994, the hydraulic conductivity measured in eleven on-site wells ranged from  $3.8 \times 10^{-4}$  to  $8.9 \times 10^{-4}$  cm/sec with a geometric mean of  $2.6 \times 10^{-4}$  cm/sec. This section should be revised as follows:

The measured hydraulic conductivity of the native soils underlying the Unit ranges between  $3.8 \times 10^{-4}$  and  $8.9 \times 10^{-4}$  centimeters per second (cm/sec).

#### **Waste and Unit Classification**

17. *The Discharger previously disposed of municipal solid waste, which are defined in Section 20164 of Title 27. Waste discharge ceased in April 1992.*

Comment: Waste discharge ceased in 1997.

#### **Surface Water and Groundwater Conditions**

23. *Monitoring data indicate background groundwater quality for first encountered groundwater has electrical conductivity (EC) ranging between 425 and 1,300 micromhos/cm, with total dissolved solids (TDS) ranging between 300 and 1,000 milligrams per liter (mg/L).*

Comment: A review of monitoring data from background well KV2-01 indicated that groundwater quality for first encountered groundwater has electrical

conductivity (EC) ranging between 139 and 626 micromhos/cm, with total dissolved solids (TDS) ranging between 240 and 325 milligrams per liter (mg/L).

### **Groundwater and Unsaturated Zone Monitoring**

26. *The existing groundwater monitoring network for the landfill consists of one background monitoring well (KV2-01), four detection monitoring wells (KV1-03 through KV1-06), and eight evaluation monitoring wells (KV1-14, KV3-01 through KV3-03, KV3-13, KV3-16 and KV3-17) as shown on Attachment B.*

Comment: This section should be revised as follows:

The existing groundwater monitoring network for the landfill consists of one background monitoring well (KV2-01), five detection monitoring wells (KV1-02 through KV1-06), and eleven corrective action monitoring wells (KV1-14, KV3-01 through KV3-06, KV3-13, KV3-15, KV3-16 and KV3-17) as shown on Attachment B.

### **Groundwater Degradation and Corrective Action**

35. *Waste constituents consisting of naturally occurring inorganic compounds and organic compounds that are not naturally occurring have been detected in groundwater along the point of compliance. The inorganic compounds consist of chloride and bicarbonate. The VOCs consistently detected in groundwater are tetrachloroethylene (PCE), trichloroethylene (TCE), 1,1-dichloroethane, 1,1-dichloroethene, dichlorodifluoromethane (Freon 12), and trichlorofluoromethane (Freon 11).*

Comment: The constituent cis-1,2-dichloroethene has also been detected in various monitoring wells in the past.

### **Landfill Closure**

40. *Title 27 allows engineered alternative final covers provided the alternative design will provide a correspondingly low flow-through rate throughout the post-closure maintenance period.*

Comment: KCWMD would like to see this finding revised to read:

Title 27 allows for an approved engineered alternative final cover, which provides an alternate design to allow a correspondingly low, moisture flow-through rate throughout the post-closure maintenance period.

41. *During 2002, the discharger constructed the final cover in accordance with the Final Closure and Post-Closure Maintenance Plan.*

Comment: Final closure construction was completed in January 2003. The Construction Quality Assurance Report was approved on January 11, 2007 by the State Water Board.

**Financial Assurances**

45. *Title 27, Section 21840 and Section 22211 requires a cost estimate for landfill post-closure maintenance. The Final Closure and Post-Closure Maintenance Plan includes a cost estimate for landfill post-closure maintenance. The amount of the cost estimate for post-closure maintenance in 2012 dollars is \$5,731,000. This Order requires that the Discharger maintain financial assurance with CalRecycle in at least the amount of the post-closure maintenance cost estimate adjusted annually for inflation.*

Comment: In the 2011 Inflation Factor Report submitted to CalRecycle, KCWMD revised the landfill post-closure maintenance cost estimate per Title 27 Section 22236; and requests that this finding be revised to read:

Title 27, Section 21840 and Section 22211 requires a cost estimate for landfill post-closure maintenance. The Final Closure and Post-Closure Maintenance Plan includes a cost estimate for landfill post-closure maintenance. The amount of the cost estimate for post-closure maintenance in 2012 dollars is \$5,851,273. This Order requires that the Discharger maintain financial assurance with CalRecycle in at least the amount of the post-closure maintenance cost estimate adjusted annually for inflation.

**MONITORING AND REPORTING PROGRAM**

**A. MONITORING**

**1. Groundwater Monitoring**

Comment: The list of wells in the groundwater monitoring network should be revised to reflect the wells listed in the comment for Groundwater and Unsaturated Zone Monitoring, Item #26.

**4. Facility Monitoring**

**d. Standard Observations**

*The discharger shall conduct Standard Observations at the landfill in accordance with this section of the MRP. Standard observations shall be conducted weekly during the wet season (1 October to 30 April) and monthly during the dry season (1 May to 30 September).*

Comment: It is KCWMD's opinion that Standard Observations should be conducted monthly for the following reasons:

- The site is in its ninth year of post closure maintenance
- The site is stable and well-vegetated
- The site is located in dry climate
- Monthly monitoring is considered adequate for a site under these conditions

## **B. REPORTING**

### **Required Reports**

#### **1. Semiannual Monitoring Report**

- d) *Cumulative tabulated monitoring data for all monitoring points and constituents for groundwater, unsaturated zone and leachate.*

Comment: KCWMD believes that this statement needs clarification. Item "d)" should be revised to read as follows:

A table containing monitoring data for all monitoring points and constituents detected during the reporting period for groundwater, unsaturated zone and leachate.

- g) *An evaluation of the effectiveness of the leachate monitoring and control facilities, and of the run-off/run-on control facilities. Include a summary of any instances where leachate depth on an MSW landfill liner system exceeded 30 cm (excluding the leachate sump), and information about the required notification and corrective action in Standard Facility Specification E.13 of the SPRRs.*

Comment: The facility does not have a leachate collection and removal system. The paragraph should be revised to read as follows:

An evaluation of the run-off/run-on control facilities. Include information about the required notification and corrective action in Standard Facility Specification E.13 of the SPRRs.

#### **2. Annual Monitoring Report:**

- c) *All historical monitoring data for which there are detectable results, including data for the previous year, shall be submitted in tabular form in a digital file format such as a computer disk. The Central Valley Water Board regards the submittal of data in hard copy and in digital format as "...the form necessary for..." statistical analysis [Title 27, Section 20420(h)], that facilitates periodic review by the Central Valley Water Board.*

Comment: KCWMD has not included all historical monitoring data in its annual monitoring reports, nor do we believe this is necessary. The annual reports include a tabular presentation of the previous year's monitoring results and a graphical presentation of the previous ten years' monitoring results for detected constituents. In addition, KCWMD semiannually uploads new monitoring reports and analytical laboratory reports to the State Water Resources GeoTracker data system. KCWMD believes this requirement is duplicative and the requested historical data has already been submitted.

KCWMD believes this requirement should read:

- c) All monitoring data with detectable results for the reporting period shall be submitted in tabular form as well as in digital file format...
- f) *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, and include a projection of the year in which each discrete landfill module will be filled.*

Comment: KCWMD requests that this item be deleted entirely from this MRP. The final closure construction was completed in 2003. Filling is no longer occurring at the site.

- h) *The results of the annual testing of leachate collection and removal systems required under Standard Facility Specification E. 14 of the SPRRs.*

Comment: KCWMD requests that this item be deleted entirely from this MRP. The site does not have a leachate collection and removal system.

- i) *Updated concentration limits for each monitoring parameter at each monitoring well based on the new data set.*

Comment: Currently, KCWMD compares values of the monitoring parameters with the concentration limits, and reports upon the results in the Annual Report. KCWMD also prepares periodic WQPS reports proposing revised concentration limits.

KCWMD does not revise concentration limits in our annual monitoring reports, nor do we believe this is necessary. Providing "updated concentration limits for each parameter in each well" in each annual report would be especially cumbersome and wasteful, particularly the added costs for KCWMD to prepare and evaluate the new data. It would also provide another level of review at the Central Valley Water Board, requiring additional resources for review and approval of the limits each year. California Water Code, Section 13267 states that "the burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports." KCWMD does not believe that the cost for this is worth the need.

KCWMD requests that this item be deleted entirely from this MRP.

5. **Major Storm Event Reporting:** *Following major storm events capable of causing damage or significant erosion, the Discharger **immediately** shall notify Central Valley Water Board staff of any damage or significant erosion upon discovery and report subsequent repairs within **14 days** of completion of the repairs, including photographs of the problem and the repairs. Refer to Section A of this MRP, above.*

Comment: The words "any" and "significant" are vague and subjective, and should be defined. Notification of Central Valley Water Board staff of "any damage or significant erosion" would cause an undue burden on KCWMD staff, as well as Central Valley Water Board staff. Currently, "major storm event reporting" is included with each semi-annual monitoring report. KCWMD believes that this current level of reporting is adequate. Please revise Item 5 above to read as follows:

**Major Storm Event Reporting:** Following major storm events capable of causing damage or significant erosion, the Discharger immediately shall notify Central Valley Water Board staff of damage or erosion that could impair the integrity of the waste containment facility. The discharger shall report on the damage or erosion and subsequent repairs in the semi-annual monitoring report covering the period in which the damage occurred.

## **B. WATER QUALITY PROTECTION STANDARD AND COMPLIANCE PERIOD**

### **1. Water Quality Protection Standard Report**

*The Discharger proposed the methods for calculating concentrations limits in the April 2001 Water Quality Protection Standard Report Update.*

Comment: This section should be revised to read as follows:

The Discharger proposed the methods for calculating concentrations limits in the March 2001 *Water Quality Protection Standard Report*.

## **INFORMATION SHEET**

*The County of Kern maintains the Kern Valley Sanitary Landfill (facility) on land owned by the County of Kern and partially leased from the United States Department of the Interior, Bureau of Land Management (BLM). The County of Kern and the BLM are hereafter jointly referred to as Discharger. The facility is located about 4 miles south east of Kernville and approximately one mile east of Lake Isabella. The 156-acre facility contains one closed, unlined 36-acre waste management unit.*

Comment: The County acquired the land owned by BLM and now owns the landfill in its entirety. Please revise this paragraph to read:

The County of Kern (hereafter Discharger) owns and maintains the Kern Valley Sanitary Landfill (facility), located about 4 miles southeast of Kernville and approximately one mile east of Lake Isabella. The 197.5-acre facility contains one closed, unlined 36-acre waste management unit.

Mr. Dane Johnson, P.G.  
Central Valley Water Board

Page 8

November 21, 2012

Comment: Please revise the fourth and fifth paragraph of the Information Sheet to reflect the revised data listed in the previous comments under Surface Water and Groundwater Conditions #23.

Thank you for providing KCWMD the opportunity to comment on the Tentative Waste Discharge Requirements, and Monitoring and Reporting Program dated November 1, 2012 for the Kern Valley Sanitary Landfill.

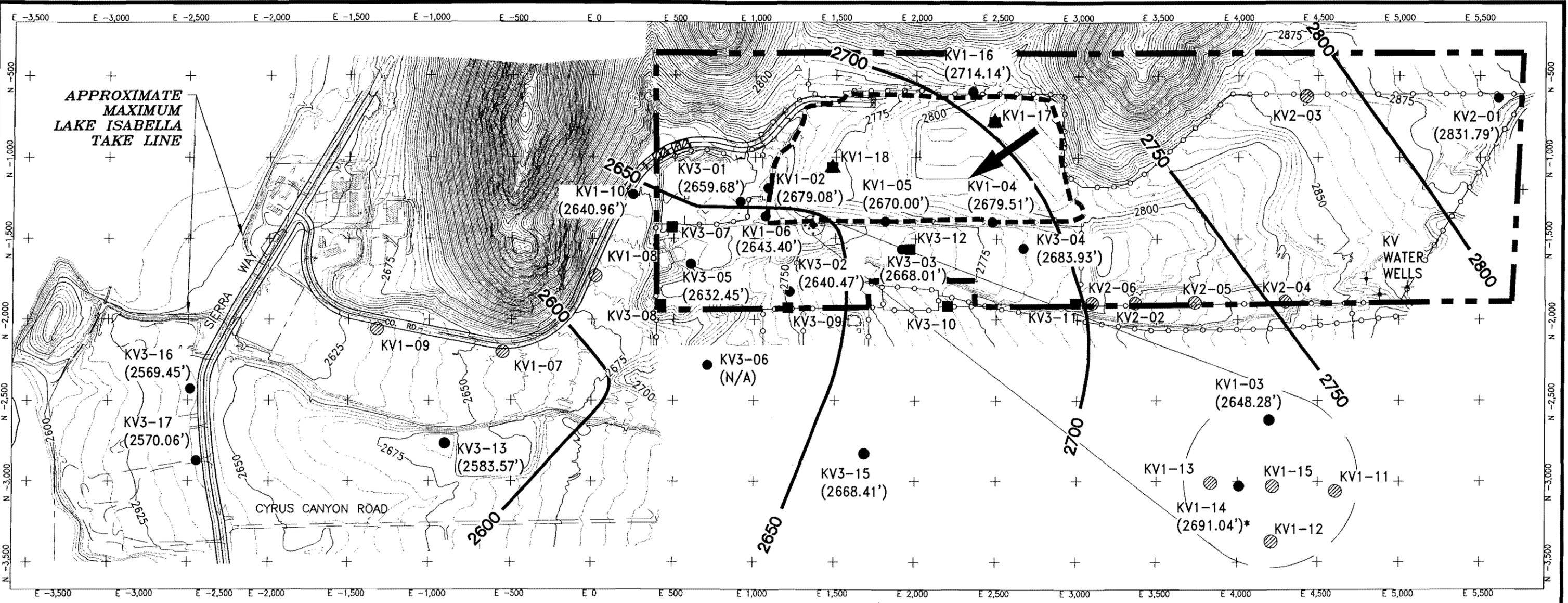
Sincerely,

A handwritten signature in black ink, appearing to read "Michael R. Burston". The signature is stylized and cursive.

Michael R. Burston, P.G.  
Supervising Engineer

I:\CLERICAL\LETTERS\2012\12-144 MRB\_rsl.docx  
Attachment: Site Map  
cc: William O'Rullian, KCEHSD  
KV- L-WQC

FILE: P:\PROJECTS\12\12KVGMQ1.DWG CTB: 12KVGMQ1.DWG PLOTTED: 7/12/12 BY: JESSICA GONZALEZ



**LEGEND**

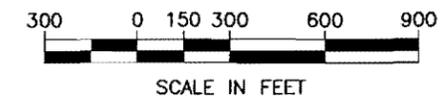
- GROUNDWATER MONITORING WELL
- LANDFILL GAS MONITORING WELL
- ▲ MOISTURE BLOCK
- ⊗ DESTROYED GROUNDWATER MONITORING WELL
- ( ) GROUNDWATER ELEVATION—FEET
- 2600— LINE OF EQUAL GROUNDWATER ELEVATION (DASHED WHERE APPROXIMATE)
- - - - - APPROXIMATE LIMIT OF REFUSE
- — — — — PROPERTY BOUNDARY
- ← GENERALIZED GROUNDWATER FLOW DIRECTION

MARCH 19–21, 2012

GENERALIZED FLOW DIRECTION: SW

GENERALIZED GRADIENT: .041 FT./FT.

CONTOUR INTERVAL: 50 FT.



\* KV1-14 IS SCREENED IN A DEEPER INTERVAL (130' TO 145' BELOW GRADE LEVEL) AND THEREFORE THE DATA IS NOT CONSIDERED IN DETERMINING GROUNDWATER ELEVATION CONTOURS

**FOR ILLUSTRATION PURPOSES ONLY**

TOPO DATE: 2012

LAST PLOTTED	7/12/2012
LAST REVISED BY	GONZALEZJE
PROJECT ENGINEER	ERIC GREENWOOD
PROJECT TECH.	ERIK LEHMAN

COUNTY OF KERN  
**WASTE MANAGEMENT  
 DEPARTMENT**  
 BAKERSFIELD, CALIFORNIA

SCALE:	1"=800'
APPROVED BY:	E.G.
DRAWN BY:	EL/CO
PLOTTED:	7/12/2012
FILE No.:	12KVGMQ1.DWG

KERN VALLEY SANITARY LANDFILL

GROUNDWATER ELEVATION MAP

FIGURE

1