

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2002-0199

WASTE DISCHARGE REQUIREMENTS
FOR
COUNTY OF FRESNO
AND
RIVER RANCH, L.L.C.
FOR
CLEAN CLOSURE
MENDOTA SOLID WASTE DISPOSAL SITE
FRESNO COUNTY

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

1. The County of Fresno maintains an inactive municipal solid waste landfill on land covering two parcels. One parcel is owned by the County of Fresno with a smaller parcel owned by River Ranch, L.L.C. (River Ranch), a California limited liability company. The County of Fresno and River Ranch are hereafter jointly referred to as Discharger. The landfill is about 1.5 miles northeast of the City of Mendota, in Section 29, T13S, R15E, MDB&M, as shown in Attachment A, which is incorporated herein and made part of this Order.
2. The facility consists of one existing unlined waste management unit (Unit) covering approximately 21 acres of the 22-acre site, as shown in Attachment B, which is incorporated herein and made part of this Order. The facility is comprised of Assessor's Parcel Numbers (APN) 013-050-29T and 013-050-46ST.
3. On 22 November 1991, the Regional Board issued Order No. 91-225, in which the facility was classified as a Class III waste disposal site that had received municipal and inert solid wastes in accordance with the regulations in effect when the order was issued. This Order classifies the Unit as a Class III landfill that accepted municipal solid waste in accordance with Title 27, California Code of Regulations, §20005, et seq. (Title 27).
4. The facility ceased accepting waste in April of 1981. An inactive transfer station is located at the facility. The transfer station was closed in 1983.

SITE DESCRIPTION

5. The measured hydraulic conductivity of the native soils underlying the Unit ranges between 4×10^{-4} and 8×10^{-5} cm/sec.
6. The closest Holocene fault is a blind thrust underlying the Coalinga Nose approximately

35 miles to the south. The largest recorded seismic event along this fault is a Richter Magnitude 6.7 earthquake. The maximum credible acceleration for the site has not been calculated.

7. Land uses within 1,000 feet of the facility are agriculture, wastewater treatment and disposal, and recreation. The landfill is about one mile southeast of the Mendota Dam, which creates a pool along the Fresno Slough. The landfill is immediately south and west of this pool. The City of Mendota owns and operates a wastewater treatment facility located approximately 1,500 feet west of the landfill. A series of associated wastewater disposal ponds are located to the west, within 1,000 feet of the landfill.
8. The facility receives an average of 6.59 inches of precipitation per year as measured at the Mendota Murietta Farms Station. The mean pan evaporation is 79.21 inches per year as measured at the Mendota 1 NNW Station.
9. The 100-year, 24-hour precipitation event is estimated to be 1.75 inches, as calculated by Pearson type III distribution.
10. The waste management facility is within a 100-year flood plain based on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map, Community-Panel Number 065029 0820 B.
11. There are 21 municipal, domestic, industrial, or agricultural groundwater supply wells within one-mile of the site. No surface springs or other sources of groundwater supply have been observed.

WASTE AND SITE CLASSIFICATION

12. The Discharger previously disposed of municipal solid wastes, which are defined in §20164 of Title 27. Waste discharge ceased in April of 1981.
13. The waste are covered with soil that is variable in thickness and averages approximately 0.5 feet thick.
14. The site characteristics where the Unit is located (see Finding No. 5) do not meet the siting criteria for a new Class III landfill contained in §20260(a) and (b)(1) of Title 27. As such, the site is not suitable for operating new Units or lateral expansions of existing Units for the discharge and containment of Class III wastes, without the construction of additional waste

containment features in accordance with §20260(b)(2) of Title 27 and State Water

Resources Control Board Resolution No. 93-62.

SURFACE AND GROUND WATER CONDITIONS

15. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition* (hereafter Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.
16. Surface drainage is to the north and east towards the Fresno Slough in the Raisin Hydrologic Area (551.20) of the Tulare Lake Basin.
17. The landfill is on the floor of the southern San Joaquin Valley. The designated beneficial uses of the Valley Floor Waters, as specified in the Basin Plan, are agricultural supply, industrial service and process supply, water contact and non-contact water recreation, warm fresh water habitat, preservation of rare, threatened and endangered species, and groundwater recharge.
18. The first encountered groundwater is about five to twenty feet below the native ground surface. Groundwater elevations range from about 150 feet MSL to 130 feet MSL. The groundwater is unconfined. The depth to groundwater fluctuates seasonally as much as fifteen feet.
19. The Fresno Slough, upgradient of the landfill, restricts the placement of a background groundwater monitoring well. The groundwater in upgradient monitoring well MW-1A has total dissolved solids (TDS) concentrations ranging from approximately 360 to 520 milligrams/L, and electrical conductivity (EC) ranging from 560 to 610 micromhos/cm. However, background water quality is subject to variability due to recharge of the slough and influences by agriculture. A domestic well approximately 0.6 miles northwest of the Unit has an electrical conductivity (EC) of approximately 800 micromhos/cm. Surface water quality from the Fresno Slough also has an electrical conductivity of approximately 800 micromhos/cm. The secondary maximum contaminant level (MCL) for TDS is 500 mg/L.
20. The direction of groundwater flow is toward the southwest, and varies seasonally and periodically flows toward the south. Local factors affecting groundwater flow beneath the site are principally groundwater pumpage and recharge from the Fresno Slough and the Mendota Pool. The average groundwater gradient is approximately 0.004 feet per foot. The average groundwater velocity is approximately one foot per year.
21. The designated beneficial uses of the groundwater, as specified in the Basin Plan, are

domestic and municipal, agricultural, and industrial supply.

GROUNDWATER AND VADOSE ZONE MONITORING

22. Four groundwater monitoring wells installed in 1999 (MW-1A, MW-2A, MW-3A, and MW-5A) and one preexisting monitoring well (MW-4) constructed in 1990, constitute the current monitoring network. The wells are sampled on a quarterly basis. The 1999 replacement wells were necessitated due to declining groundwater levels, which caused several preexisting monitoring wells (MW-1, MW-2, MW-3 and MW-5) to become dry, or have insufficient water for sampling. Due to agricultural pumping between the adjacent slough and the Unit, monitoring wells may periodically become dry. The pumping is beyond the control of the Discharger.
23. The Unit does not have a vadose zone monitoring system. Section 20415(d)(5) of Title 27 allows a discharger to be exempted from vadose zone monitoring if a discharger demonstrates that there is no vadose zone monitoring device or method designed to operate under the subsurface conditions existent at the Unit. The Discharger submitted information demonstrating vadose zone monitoring is not feasible at the Unit due to a shallow, fluctuating groundwater table.
24. The Discharger's detection monitoring program for groundwater at this Unit does not satisfy the requirements contained in Title 27 because the site does not have a monitoring well suitable to establish background groundwater quality and a water quality protection standard has not been established. This Order establishes a time schedule for the installation of an adequate detection monitoring system in compliance with Title 27, the proposal of a water quality protection standard, and a determination of whether groundwater has been degraded by a release of waste constituents from the Unit.
25. Volatile organic compounds (VOCs) are often detected in a release from a landfill, and are the primary waste constituents detected in groundwater beneath a municipal solid waste landfill (see Finding No. 30). Since volatile organic compounds 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.
26. Sections 20415(e)(8) and (9) of Title 27 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 §20415(b)(1)(B)2.-4. of Title 27. However, Title 27 does not specify a specific method for non-statistical evaluation of monitoring data.
27. The Regional Board may specify a non-statistical data analysis method pursuant to Section 20080(a)(1) of Title 27. Section 13360(a)(1) of the California Water Code allows the

Regional 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.

28. 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.
29. 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.

GROUNDWATER DEGRADATION

30. Detection monitoring sporadically detected non-naturally occurring waste constituents downgradient of the landfill in monitoring well MW-2, until the well became dry in 1997. The non-naturally occurring waste constituents detected include: dichlorodifluoromethane; toluene; vinyl chloride; benzene; chlorobenzene; 1,4-dichlorobenzene; and methylene chloride. When detected, the concentrations of these waste constituents were below any applicable Primary Maximum Contaminant Levels (MCL), with the exception of vinyl chloride, which was detected at a concentration 1 µg/l, exceeding the California Department of Health Services Primary MCL of 0.5 µg/l for that constituent on one occasion. Analytical samples from replacement monitoring well MW-2A located adjacent to MW-2 has been sampled quarterly since 1999, and has had no detections of these or other non-naturally occurring waste constituents.
31. The infrequent nature of the detections of non-naturally occurring waste constituents is problematic for determining whether groundwater has been degraded by non-naturally occurring waste constituents released from the Unit.

32. Because a water quality protection standard has not been established, it is not known if groundwater has been degraded by naturally occurring waste constituents due to a release from the Unit.
33. A water quality protection standard is needed in order to evaluate monitoring data to determine whether the Unit has caused a release to groundwater, and to demonstrate compliance with clean-closure requirements contained in §21090(f) of Title 27 (see Finding No. 37).

CLEAN-CLOSURE

34. In a letter to Regional Board staff dated 26 September 2001, the Discharger proposed clean-closure of the Mendota Landfill by excavating all material and transporting it to a composite lined waste module at the American Avenue Disposal Site. Subsequently, in a letter to Regional Board staff dated 28 February 2002, the Discharger proposed a timeline to complete clean-closure, and for the submission of a Final Closure Report.
35. Section 21090(f) of Title 27 allows a discharger to propose clean-closure of the landfill. In doing so, a discharger shall submit a clean-closure plan meeting the requirements of §21090(f) of Title 27 (*note: see also California Integrated Waste Management Board's additional landfill clean-closure requirements under §21810 of Title 27*).
36. Pursuant to §21090(f) of Title 27, the purpose of clean-closure is to render the landfill (including all surrounding environs contaminated by waste released from the landfill) no longer capable of posing a threat to water quality. Upon the Regional Board's finding that a discharger has successfully completed clean-closure under the requirements of §21090(f) of Title 27, the landfill shall no longer be subject to the requirements of Title 27.
37. In accordance with §21090(f) of Title 27, a discharger shall have successfully clean-closed a landfill only if: 1) all waste materials, contaminated components of the containment system, and affected or polluted geologic materials (soils, rock, groundwater) beneath and surrounding the Unit, and caused by a release from the Unit, are either removed and discharged to an appropriate Unit or treated to the extent that the Regional Board finds they no longer pose a threat to water quality; and 2) all remaining containment features are inspected for contamination and, if contaminated, discharged in accordance with §21090(f)(1) of Title 27.
38. Pursuant to §21090(f) of Title 27, if the Regional Board finds that a discharger's attempt to clean-close the landfill does not meet the requirements of §21090(f) of Title 27, the discharger shall close the landfill and carry out postclosure maintenance in the same manner as though the discharger had not attempted clean-closure.

39. This Order establishes a time schedule for the submission of a clean-closure plan meeting the requirements of §21090(f) of Title 27, a date by which clean-closure activities at the landfill shall be completed, and a date for the submission of a final closure report acceptable to the Executive Officer.

CEQA AND OTHER CONSIDERATIONS

40. 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 §21000, et seq., and the CEQA guidelines, in accordance with Title 14, CCR, §15301.
41. This order implements:
- a. The *Water Quality Control Plan for the Tulare Lake Basin, Second Edition*;
 - b. The prescriptive standards and performance goals of Chapters 1 through 7, Subdivision 1, Division 2, Title 27, of the California Code of Regulations, effective 18 July 1997, and subsequent revisions;

PROCEDURAL REQUIREMENTS

42. 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.
43. The Regional 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.
44. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.
45. Any person affected by this action of the Regional 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.swrcb.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, that Order No. 91-225 is rescinded, and that the County of Fresno and River Ranch, L.L.C., their 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 additional waste at this facility is prohibited.
2. The discharged wastes shall not cause the release of pollutants, or waste constituents in a manner which could cause a condition of nuisance, degradation, contamination, or pollution of groundwater to occur, as indicated by the most appropriate statistical or nonstatistical data analysis method and retest method listed in this Order, the Monitoring and Reporting Program, or the Standard Provisions and Reporting Requirements.
3. The discharge of solid waste, liquid waste, leachate, or waste constituents shall neither cause nor contribute to any degradation, contamination, pollution, or nuisance to surface waters, ponded water, or surface water drainage courses.
4. The discharge shall not cause any increase in the concentration of waste constituents in soil-pore gas, soil-pore liquid, soil, or other geologic materials outside of the Unit if such waste constituents could migrate to waters of the State — in either the liquid or the gaseous phase — and cause a condition of nuisance, degradation, contamination, or pollution.

B. FACILITY SPECIFICATIONS

1. The Discharger shall, in a timely manner, remove and relocate any wastes discharged at this facility in violation of this Order.
2. The Discharger shall immediately notify the Regional Board of any flooding, unpermitted discharge of waste originating from the Unit 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.
3. Water used for facility maintenance shall be limited to the minimum amount necessary for dust control, and construction.

4. The Discharger shall maintain in good working order any facility, control system, or monitoring device installed to achieve compliance with these waste discharge requirements.
5. A minimum separation of five feet shall be maintained between the base of refuse and groundwater, including the capillary fringe. Data documenting the separation between the base of refuse and groundwater shall be included in the annual report.
6. Methane and other landfill gases shall be adequately vented, removed from the Unit, or otherwise controlled to prevent the danger of adverse health effects, nuisance conditions, or the impairment of the beneficial uses of surface water or groundwater due to migration through the unsaturated zone.
7. Surface drainage within the waste management facility shall either be contained on-site or be discharged in accordance with applicable storm water regulations.
8. 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 retain all storm water on-site.

C. CLEAN-CLOSURE SPECIFICATIONS

1. **By 31 December 2003**, the Discharger shall submit for Executive Officer review and approval, a clean-closure plan meeting the requirements of §21090(f) of Title 27. Pursuant to §21090(f) of Title 27, the clean-closure plan needs to include a series of actions, including an accurate estimate of the cost of each such action that will meet the clean-closure requirements of Title 27.
2. **By 30 October 2005**, clean-closure activities at the landfill shall be completed in accordance with the clean-closure requirements of Title 27 (see Finding No. 37) and the clean-closure plan approved by the Executive Officer
3. **By 30 December 2005**, following the completion of clean-closure activities, a final closure report shall be submitted to the Executive Officer for review and approval. The report shall be certified by a registered civil engineer or a certified engineering geologist. It shall contain sufficient information and test results to verify that clean-closure was completed in accordance with the approved clean-closure plan (see Clean-Closure Specification C.1.) and Title 27.

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. R5-2002-0199. **By 31 March 2003**, the Discharger shall submit for Executive Officer review and approval an adequate workplan for installation of a detection monitoring system in accordance with Title 27.
2. **By 31 December 2003**, the Discharger shall have installed an adequate detection monitoring system in accordance with Title 27 and Monitoring and Reporting Program No. R5-2002-0199.
3. The Discharger shall provide Regional 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.
4. The Discharger shall comply with the Water Quality Protection Standard which is specified in Monitoring and Reporting Program No. R5-2002-0199 and the Standard Provisions and Reporting Requirements, dated April 2000. **By 31 December 2004**, the Discharger shall submit for Executive Officer review and approval an adequate Water Quality Protection Standard.
5. 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 presence of 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.
6. The concentrations of the constituents of concern in waters passing the Point of Compliance shall not exceed the concentration limits established pursuant to Monitoring and Reporting Program No. R5-2002-0199. **By 31 August 2005**, the Discharger shall submit a report determining whether groundwater has been degraded by waste constituents at the point of compliance.
7. 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. R5-2002-0199 and §20415(e) of Title 27.

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 the Executive Officer approves a longer time period, and shall be taken in a manner that ensures sample independence to the greatest extent feasible.
9. 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.
10. If methods other than USEPA-approved methods or Standard Methods are used, the exact methodology shall be submitted for review and approval by the Executive Officer prior to use.
11. 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.
12. **“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.
13. **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.
14. 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.

15. 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.
16. **Unknown chromatographic** peaks shall be reported, along with an estimate of the concentration of the unknown analyte. When unknown peaks are encountered, second column or second method confirmation procedures shall be performed to attempt to identify and more accurately quantify the unknown analyte.
17. 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 §20415(e)(7) of Title 27 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 §20415(e)(7) of Title 27, shall consider the PQLs listed in Appendix IX to Chapter 14 of Division 4.5 of Title 22, California Code of Regulations, for guidance when specifying limits of precision and accuracy. For any given constituent monitored at a background or 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".

18. The Discharger may propose an alternate statistical method [to the methods listed under 27 CCR §20415(e)(8)(A-D)] in accordance with §20415(e)(8)(E) of Title 27, for review and approval by the Executive Officer. Upon receiving written approval from the Executive Officer, 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 Board staff.
19. The Discharger shall use the following nonstatistical method for the VOC_{water} Monitoring Parameters and for all Constituents of Concern which are not amenable to the statistical tests above (i.e., less than 10% of the data from background samples equal or exceed their respective MDL). Each qualifying constituent at a monitoring point shall be determined based on either:
 - a. The data from a single sample for that constituent, taken during that reporting period from that monitoring point; or
 - b. The data from the sample which contains the largest number of qualifying constituents, where several independent samples have been analyzed for that constituent at a given monitoring point.

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 27 CCR §20415(e)(8)(A-D)] in accordance with §20415(e)(8)(E) of Title 27, for review and approval by the Executive Officer.

20. The method shall be implemented as follows:
 - a. *For the Volatile Organic Compounds Monitoring Parameter For Water Samples [VOC_{water}]*: For any given monitoring point, the VOC_{water} Monitoring Parameter is a composite parameter addressing all “qualifying VOCs” (in this case, VOCs that are detected in less than 10% of background samples).

The Discharger shall conduct verification testing (see Detection Monitoring Specifications D.21. and D.23 below, as appropriate) to determine whether a

release of VOC_{water} Monitoring Parameter has occurred if the data for any monitoring point meets either of the following triggering conditions:

- 1) the data contains two or more qualifying VOCs that equal or exceed their respective MDLs; or
 - 2) the data contains one qualifying VOC that equals or exceeds its PQL.
- b. *For Constituents of Concern:* For five-yearly testing of all Constituents of Concern (COCs), the “qualifying constituents” consist of COCs that are detected in less than 10% of applicable background samples.

The Discharger shall conduct verification testing (see Detection Monitoring Specifications D.21. and D.23. below, as appropriate) to determine whether a release of COCs has occurred if the data for any monitoring point meets either of the following triggering conditions:

- 1) the data contains two or more qualifying constituents that equal or exceed their respective MDLs; or
- 2) the data contains one qualifying constituent that equals or exceeds its PQL.

21. **Non-Statistical Method Retest.** A non-statistical test method may be used by the Discharger to analyze the monitoring data for which it is impractical to conduct a statistical analysis. A non-statistical test method shall include a procedure to verify that there is “measurably significant” evidence of a release from the Unit. For the VOC_{water}, and nonstatistical COC test, the Discharger shall use a discrete retest consisting of two new samples from each indicating monitoring point. The Discharger shall conduct the retest for the standard nonstatistical method as follows:

- a. **For VOC_{water}.** Because the VOC composite Monitoring Parameter (for water or soil pore gas) is a single parameter which addresses an entire family of constituents likely to be present in any landfill release, **the scope of the laboratory analysis for each of the two retest samples shall include all VOCs detectable in that retest sample.** Therefore, a confirming retest, in accordance with Detection Monitoring Specification D.20.a. and b., above, for either triggering condition in either of the two retest samples, shall have validated the original indication even if the detected constituents in the confirming retest sample(s) differs from those detected in the sample which initiated the retest.

- b. **For Constituents of Concern.** Because all Constituents of Concern that are jointly addressed in the non-statistical test above, remain as individual Constituents of Concern, **the scope of the laboratory analysis for the non-statistical retest of Constituents of Concern shall address only those constituents detected in the sample which initiated the retest.** Therefore, the list of “qualifying constituents” for use in the retest, under Detection Monitoring Specification D.20.c., shall consist of those constituents which provided the original indication at that monitoring point. If the retest meets either triggering condition in either of the two retest samples, the retest shall have validated the original indication.
22. **Response to Detection in Background of VOCs** (or any other constituent which is not naturally in the background and thus is not amenable to statistical analysis):
- a. Any time the laboratory analysis of a sample from a background monitoring point, sampled for VOCs, shows either:
- 1) two or more VOCs at or above their respective MDL; or
 - 2) one VOC at or above its respective PQL.
- Then the Discharger shall:
- a) **immediately** notify the Regional Board by phone;
 - b) follow up with written notification by certified mail **within seven days**;
 - c) obtain **two** new independent VOC samples from that background monitoring point; and
 - d) send such samples for laboratory analysis of all detectable VOCs **within thirty days**.
- b. If either or both the new samples validates the presence of VOC(s), using the above criteria, the Discharger shall:
- 1) **immediately** notify the Regional Board about the VOC(s) verified to be present at that background monitoring point, and follow up with written

notification submitted by certified mail **within seven days** of validation;
and

- 2) if the Discharger believes that the VOC(s) in background is from a source other than the Unit, then:
 - a) **within seven days** of determining “measurably significant” evidence of a release, submit to the Regional Board by certified mail a Notification of Intent to make such a demonstration pursuant to §20420(k)(7) of Title 27; and
 - b) **within 90 days** of determining “measurably significant” evidence of a release, submit a report to the Regional Board that demonstrates that a source other than the Unit caused the evidence, or that the evidence resulted from error in sampling, analysis or evaluation, or from natural variation in groundwater, surface water, or the unsaturated zone.
 - c. If the Executive Officer determines, after reviewing the submitted report(s), that the VOC(s) detected originated from a source other than the Unit(s), the Executive Officer will make appropriate changes to the monitoring program.

23. The Executive Officer determines, after reviewing the submitted report, that the detected VOC(s) most likely originated from the Unit(s), 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. REPORTING REQUIREMENTS

1. 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 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.
2. 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 for a minimum of five years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Executive Officer.

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.
3. 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.
4. 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. The Standard Observations shall include:
 - 1) For the Unit:
 - a) Evidence of ponded water at any point on the facility (show affected area on map);
 - b) Evidence of odors - presence or absence, characterization, source, and distance of travel from source; and

- c) Evidence of erosion and/or of day-lighted refuse.
 - 2) Along the perimeter of the Unit:
 - a) Evidence of liquid leaving or entering the Unit, estimated size of affected area, and flow rate (show affected area on map);
 - b) Evidence of odors - presence or absence, characterization, source, and distance of travel from source; and
 - c) Evidence of erosion and/or of day-lighted refuse.
 - 3) For receiving waters:
 - a) Floating and suspended materials of waste origin - presence or absence, source, and size of affected area;
 - b) Discoloration and turbidity - description of color, source, and size of affected area;
 - c) Evidence of odors - presence or absence, characterization, source, and distance of travel from source;
 - d) Evidence of water uses - presence of water-associated wildlife;
 - e) Flow rate; and
 - f) Weather conditions - wind direction and estimated velocity, total precipitation during recent days and on the day of observation.
 - g. The quantity and types of wastes discharged and the locations in the Unit where waste has been placed since submittal of the last such report.
- 5. 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 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 Constituents of Concern and Monitoring Parameters, and an estimated date that the results will be submitted to the Regional Board; and
 - e. Corrective measures underway or proposed, and corresponding time schedule.
6. The Discharger shall submit an **Annual Monitoring Summary Report** to the Regional Board covering the reporting period of the previous monitoring year. This 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. Unless otherwise exempted by the Executive Officer, all monitoring analytical data obtained during the previous two six-month reporting periods, shall be presented in tabular form as well as on 3.50" computer diskettes or CD-ROM, either in MS-Access/ASCII format or in another file format acceptable to the Executive Officer. Data sets too large to fit on a single diskette may be submitted on disk in a commonly available compressed format (e.g. PKZIP). The Regional Board regards the submittal of data in hard copy and in digital format as "...the form necessary for..." statistical analysis [§20420(h)], in that this facilitates periodic review by the Regional 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.

F. PROVISIONS

1. The Discharger shall maintain a copy of this Order at the appropriate County of Fresno office, 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. R5-2002-0199, 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 (27 CCR §20005 et seq. and 40 CFR 258 et seq.)*, dated April 2000, which are hereby incorporated into this Order.
5. 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 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.”
6. 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.
 7. 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.
 8. 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.
 9. To assume ownership or operation under this Order, the succeeding owner or operator must apply in writing to the Regional 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 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 Board.

10. The Discharger shall maintain financial assurance for corrective action as required by Title 27 California Code of Regulations, Division 2, Chapter 6. The Discharger shall conduct an annual review of the financial assurance for initiating and completing corrective action, and submit a report for Executive Officer review and approval. The assurances of financial responsibility shall name the Regional Board as beneficiary and shall provide that funds for corrective action shall be available to the Regional Board upon the issuance of any order under California Water Code, Division 7, Chapter 5. The Discharger shall adjust the cost annually to account for inflation and any changes in facility design, construction, or operation.
11. The Discharger shall maintain financial assurance for closure and post-closure maintenance as required by Title 27 California Code of Regulations, Division 2, Chapter 6. The Discharger shall conduct an annual review of the financial assurance for closure and post-closure maintenance, and submit a report for Executive Officer review and approval. The assurances of financial responsibility shall provide that funds for closure and post-closure maintenance shall name the Regional Board as beneficiary and shall be available to the Regional Board upon the issuance of any order under California Water Code, Division 7, Chapter 5. The Discharger shall adjust the cost annually to account for inflation and any changes in facility design, construction, or operation.
12. The Discharger shall complete the tasks contained in these waste discharge requirements in accordance with the following time schedule:

<u>Task</u>	<u>Compliance Date</u>
a. Detection Monitoring System Work Plan	
Submit a work plan for a detection monitoring program in compliance with Title 27 for review and approval by the Executive Officer (see Detection Monitoring Specification D.1.).	31 March 2003
b. Detection Monitoring System Installation	
Install an adequate detection monitoring system	31 December 2003

(see Detection Monitoring Specification D.2.).

c. Water Quality Protection Standard

Submit a Water Quality Protection Standard for Executive Officer review and approval (see Detection Monitoring Specification D.4.).

31 December 2004

d. Groundwater Degradation Report

Submit a determination whether groundwater has been degraded by waste constituents at the Point of Compliance (see Detection Monitoring Specification D.6.).

31 August 2005

e. Clean-Closure Plan

Submit clean-closure plan for Executive Officer review and approval (see Clean-Closure Specification C.1.).

31 December 2003

f. Compete Clean-Closure

Complete clean-closure activities in accordance with approved clean-closure plan (see Clean-Closure Specification C.2.).

30 October 2005

g. Final Closure Report

Submit a final closure report for Executive Officer review and approval, demonstrating clean-closure in accordance with the approved clean-closure plan and Title 27 (see Clean-Closure Specification C.3.).

30 December 2005

h. Financial Assurance Review

1) Annual Review of Financial Assurance for

30 April each year

WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2002-0199
COUNTY OF FRESNO AND
RIVER RANCH, L.L.C.
FOR CLEAN CLOSURE
MENDOTA SOLID WASTE DISPOSAL SITE
FRESNO COUNTY

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initiating and completing corrective action
(see Provision F.10.).

- 2) Annual Review of Financial Assurance for closure and post-closure maintenance (see Provision F.11.). **30 April each year**

I, THOMAS R. PINKOS, Acting 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 18 October 2002.

THOMAS R. PINKOS, Acting Executive Officer

PAO:pao/rac