CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. _____

WASTE DISCHARGE REQUIREMENTS
FOR
COUNTY OF TULARE
FOR
CLOSURE AND POSTCLOSURE MAINTENANCE
OROSI SOLID WASTE LANDFILL
TULARE COUNTY

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

1. The County of Tulare (hereafter referred to as Discharger) owns an inactive landfill at the intersection of State Highway 63 (Road 128) and Avenue 428 about one mile north of Orosi in Section 5, T16S, R25E, MDB&M, as shown on Attachment A, which is incorporated herein and made part of this Order by reference.

2. The existing 40-acre waste management facility (facility) contains one existing unlined waste management unit (Unit) covering approximately nine acres as shown in Attachment B, which is incorporated herein and made part of this Order by reference. The facility is on Assessor's Parcel Number (APN) 025-020-022. The Unit received nonhazardous solid wastes and inert solid wastes from the mid-1940s until 1973. From 1973 until 1987, inert solid wastes were discharged to the Unit.

3. On 27 April 2001, the Central Valley Water Board adopted Waste Discharge Requirements Order 5-01-097 (Order 5-01-097), for the closure and postclosure maintenance of the Unit, which was classified as a Class III facility that accepted a variety of nonhazardous solid wastes including garbage, cans, tires, demolition materials, lumber, tree stumps and trimmings, household wastes, and ash from on-site burn dump operations and inert solid wastes in accordance with Title 27, California Code of Regulations (CCR), §20005 et seq. (Title 27). The discharge of wastes ceased in 1987. Order 5-01-097 prohibited the discharge of wastes to the Unit.

4. This Order will supercede and rescind Order 5-01-097, and is for the proposed closure and postclosure maintenance of the facility.

5. The Discharger submitted a final closure and postclosure maintenance plan (closure plan) on 15 November 2007. A revised closure plan, submitted on 20 August 2008, was reviewed and found to be technically adequate in a letter and memorandum dated 24 September 2008. Information in the revised closure plan was used in writing this Order.

SITE DESCRIPTION

6. The Unit was constructed on a relatively topographically flat region of the San Joaquin Valley. The native ground surface elevation ranges from 375 feet above mean sea level (MSL) to 396 feet above MSL depending on location. The native ground surface slopes approximately 15 feet per mile toward the southwest. The facility overlies Quaternary-age alluvial deposits from Sand Creek which consist of moderately to highly permeable, interbedded clay, silt, silty-sand, sand, and gravel. Information is not available about the type of basement rocks directly underlying the facility. Granite, gabbro, metagabbro, and metasedimentary rock outcrop within two to five miles of the facility. The alluvium underlying the facility may be derived in part, from the weathering and erosion of some or all of the aforementioned igneous and metamorphic rocks.

7. The estimated hydraulic conductivity of the native soils underlying the Unit ranges between 1×10^{-3} and 1×10^{-6} centimeters per second (cm/sec).

8. The facility is not within a fault hazard zone. The closest known Holocene faults are approximately 42 miles to the southeast near Lake Success. Recorded magnitudes of seismic events along these faults range between 4.5 and 4.9. The Owens Valley Fault, used to calculate the peak ground acceleration for design of the Unit's containment structures, is approximately 60 miles east of the facility. The 300-year recurrence interval earthquake for the Owens Valley Fault has a recorded magnitude of 8.25 and is considered to be the maximum probable earthquake associated with the facility. The maximum acceleration associated with the maximum probable earthquake is estimated to be 0.03 g.

9. Land within 1,000 feet of the facility is used mainly for agriculture and rural residential.

10. The facility receives an average of 10.67 inches of precipitation per year as measured at the Visalia Station. The mean pan evaporation is 70.7 inches per year as measured at the Tulare Station.

11. The 100-year, 24-hour precipitation event is estimated to be 3.70 inches, based on measurements from the Visalia Station.

12. The facility is within a 100-year flood plain (Zone A) based on the Federal Insurance Administration (FIA) flood map, Community-Panel Number 285 of 1375.

13. Based on available documentation, there are 17 domestic, 19 agricultural, and one industrial groundwater supply wells within one mile of the site. No surface springs or other sources of groundwater supply have been observed. A domestic well (well I.D. is not available) is about 500 feet from the southwest corner of the facility. Groundwater beneath the facility is recharged, in part, by surface water from a portion of Sand Creek

that is immediately upgradient of the facility and within the Orange Cove Irrigation District, and from irrigation water from adjacent upgradient fields.

WASTE AND SITE CLASSIFICATION

14. Available information indicates that the Unit received nonhazardous solid wastes and inert solid wastes from the mid-1940s until 1973. From 1973 until 1987, only inert solid wastes were discharged to the Unit. Section 20220(a) of Title 27 defines nonhazardous solid waste as all putrescible and nonputrescible solid, semi-solid, and liquid wastes that do not contain wastes that must be managed as hazardous wastes, or wastes which contain soluble pollutants in concentrations which exceed applicable water quality objectives, or could cause degradation of waters of the state. Section 20230(a) of Title 27 defines inert waste as a subset of solid waste that does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives and does not contain significant quantities of decomposable waste.

15. The site characteristics where the Unit is located [including depth to groundwater (see Finding No. 21) and the estimated hydraulic conductivity of the native soils underlying the Unit (see Finding No. 7)] do not meet the siting criteria for a 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 as described in Finding No.14, without the construction of additional waste containment features in accordance with State Water Resources Control Board Resolution 93-62.

SURFACE AND GROUND WATER CONDITIONS

16. 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 Tulare Lake Basin.

17. The facility is on the floor of the southern San Joaquin Valley with surface drainage toward the St. Johns River and Cross Creek in the Alta Hydrologic Area (551.60) of the Tulare Lake Basin.

18. The St. Johns River and Cottonwood Creek are categorized as “Valley Floor Water” in the Basin Plan. The designated beneficial uses of the St. Johns River and Cottonwood Creek, 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.

19. The closest surface water body to the facility is Sand Creek (intermittent), which flows from north to south along the eastern boundary of the facility (see Attachment B).

20. The latest available monitoring data indicate that the background surface water of Sand Creek has an electrical conductivity (EC) of approximately 420 micromhos per centimeter (µmhos/cm) and total dissolved solids (TDS) of approximately 330 milligrams per liter (mg/l).

21. The first encountered groundwater ranges from approximately 42 to 52 feet below the native ground surface and is unconfined. The groundwater elevations range from 345 to 349 feet MSL depending on location. Available information indicates that groundwater has been as high as 10 to 15 feet below the native ground surface and has risen within five feet of the base of the wastes (363 feet MSL) in previous years in violation of §20240(c) of Title 27. The depth to groundwater fluctuates seasonally from approximately 5 to 10 feet depending on location and has fluctuated up to 45 feet since 1991.

22. The latest available monitoring data indicate that background groundwater has an EC ranging between approximately 500 and 550 µmhos/cm and TDS ranging between approximately 370 and 430 mg/l.

23. The general direction of groundwater flow beneath the Unit is toward the southwest (see Attachment B). Groundwater flows to the west immediately south of the Unit. The direction of groundwater flow varies seasonally with periodic flow directions from S25ºW to S65ºW. The average groundwater gradient is approximately 0.005 feet per foot.

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

GROUNDWATER AND SURFACE WATER MONITORING

25. Four groundwater monitoring wells have been installed around the perimeter of the Unit (see Attachment B). Prior to 2009, the groundwater monitoring system consisted of downgradient wells ORM-2, ORM-3, and ORM-4, and background monitoring well ORM-1. Monitoring well ORM-2 is scheduled to be abandoned during closure of the Unit and replaced with a new groundwater monitoring well, ORM-5, in the same general vicinity.

26. Surface water is sampled from Sand Creek when water is present. The background surface water sampling point, ORSW-1, is immediately south of Avenue 428 and the downgradient surface water sampling point, ORSW-2, is immediately south of the facility (see Attachment B).

27. Unsaturated zone detection monitoring is not being conducted and, due to the high groundwater levels, is not practicable.

28. The Discharger's detection monitoring program (DMP) for groundwater and surface water at this Unit requires modification to adequately satisfy the requirements contained in Title 27 (see Finding No. 34).

GROUNDWATER AND SURFACE WATER DEGRADATION

29. The 1991 Solid Waste Water Quality Assessment Test (SWAT) detected the volatile organic compound (VOC) heptachlor in upgradient monitoring well ORM-1 at a low concentration of 0.05 micrograms per liter. Heptachlor was not detected in a follow-up sampling. No other VOCs were detected. The detection of heptachlor in upgradient monitoring well ORM-1 indicates that heptachlor may have a source other than the landfill. The nondetection of VOCs other than heptachlor in groundwater during the SWAT investigation may be due to the fact that the Discharger used the practical quantitation limit (PQL) and not the method detection limit (MDL) to report VOC concentrations in groundwater. This Order requires the Discharger to analyze groundwater samples using both the MDL and the PQL to report VOC concentrations. The inorganic waste constituents TDS; EC; nitrogen (as nitrate); sulfate; and sodium; were detected at concentrations that appeared to exceed their respective background levels.

30. Inorganic waste constituents calcium; magnesium; barium; TDS; potassium; sodium; and sulfate have been consistently detected in point of compliance groundwater monitoring wells at concentrations exceeding their respective water quality protection standard (WQPS) since 2005. Other inorganic waste constituents including: EC; manganese; vanadium; chloride; chromium; copper; and nickel have also been detected in point of compliance wells at concentrations exceeding their respective WQPS on fewer occasions since 2005.

31. Central Valley Water Board staff (Staff) sent the Discharger a letter and memorandum on 17 March 2008 stating that a review of the first semiannual monitoring report for 2007 determined that several inorganic waste constituents exceeded the WQPS during the first semiannual monitoring period of 2007 and represent a tentative release from the Unit. The Discharger was requested to submit either: 1) a notice of intent (NOI) if it intended to make a demonstration that a source other than the Unit caused the evidence of a

measurably significant release to groundwater; or 2) an amended report of waste discharge (RWD) to establish an evaluation monitoring program (EMP).

32. The Discharger submitted an NOI on 1 August 2008, stating it intended to demonstrate that a source other than the Unit caused the evidence of a measurably significant release to groundwater.

33. The Discharger submitted a report (demonstration report) on 4 November 2008 to demonstrate that a source other than the Unit caused the evidence of a measurably significant release to groundwater.

34. Staff reviewed the demonstration report and determined that several modifications are needed to the DMP to demonstrate that inorganic waste constituents exceeding their respective WQPS in previous semiannual monitoring reports were the result of sources other than the Unit. The Discharger was requested in a 13 January 2009 letter to submit a report describing the modifications made to the DMP to eliminate potential erroneous WQPS exceedences. The Discharger was informed that after the DMP is modified, future semiannual monitoring data need to be evaluated to determine whether a statistically measurable inorganic waste constituent release from the Unit has occurred.

35. If statistical analyses of groundwater monitoring data determine that there is measurably significant evidence of a release from the Unit, the Discharger will be required to implement an EMP in accordance with §20385(a)(2) and (3), §20415(b)(1)(C), §20415(c)(C), and §20425(a) – (i) of Title 27.

36. Surface water detection monitoring data indicates that the facility has not impacted surface water within Sand Creek.

CONSTRUCTION AND ENGINEERED ALTERNATIVE

37. Section 21090 of Title 27 requires that closed Units be provided with a cover system that consists of a minimum of two feet of appropriate materials as a foundation layer that will be compacted to 90 percent of the maximum dry density obtainable; a barrier layer which consists of no less than one foot of soil on top of the foundation layer, which is compacted to attain a hydraulic conductivity of 1×10^{-6} cm/sec or less; and a soil cover not less than one foot thick on top of the barrier layer.

38. Section 13360(a)(1) of the California Water Code (CWC) allows the Central Valley Water Board to specify the design, type of construction, and/or particular manner in which compliance must be met in waste discharge requirements or orders for the discharge of waste at solid waste disposal facilities.

39. A closure plan, which included a slope stability analysis, was submitted by the Discharger on 20 August 2008.

40. Staff reviewed the closure plan and in a 24 September 2008 letter and memorandum determined that the closure plan was adequate.

41. The Discharger proposed an engineered alternative final cover system in the final closure plan. The engineered final cover system consists of the following in ascending order: 1) a two-foot thick foundation layer; 2) a low hydraulic conductivity layer consisting of a reinforced (needle-punched), geotextile-backed geosynthetic clay liner (GCL); and 3) a one-foot thick vegetative layer capable of sustaining native or other suitable plant growth.

42. The Discharger proposes to excavate incorporated wastes from the northwestern portion of the Unit and place the excavated wastes within the footprint of the remainder of the Unit. The excavation will be filled with clean soils. The wastes excavated from the northwestern portion of the Unit will be relocated since groundwater has risen to within five feet of the base of the wastes at that location in previous years in violation of §20240(c) of Title 27.

43. Section 20080(b) of Title 27 allows the Central Valley Water Board to consider the approval of an engineered alternative to the prescriptive standard. To approve an engineered alternative in accordance with §20080(c)(1) and (2) of Title 27, the Discharger must demonstrate that the prescriptive design is unreasonably and unnecessarily burdensome and will cost substantially more than an alternative which will meet the criteria contained in §20080(b) of Title 27, or would be impractical and would not promote attainment of applicable performance standards**.** The Discharger has demonstrated that the proposed engineered alternative cover system is consistent with the performance goal addressed by the particular prescriptive standard, and provides protection against water quality impairment equivalent to the prescriptive standard in accordance with §20080(b)(2) of Title 27.

44. Construction of the final cover will proceed only after all applicable construction quality assurance (CQA) plans have been approved by Executive Officer.

45. The Discharger's projected closure date of the Unit is 9 October 2010.

CEQA AND OTHER CONSIDERATIONS

46. Since the facility began operations in the mid-1940s and since no expansion of operations beyond the original waste footprint has occurred or is proposed, the facility is categorized as an "existing facility" and the action to revise Order 5-01-097 for closure and postclosure

maintenance of the facility is categorically exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resources Code, §21000, et seq., and the CEQA Guidelines, in accordance with §15301 of Title 14, CCR.

47. On 9 October 1991, the United States Environmental Protection Agency (USEPA) promulgated regulations (Title 40, Code of Federal Regulations, Parts 257 and 258, "federal municipal solid waste [MSW] regulations" or "Subtitle D") that apply, in California, to dischargers who own or operate Class II or Class III landfill units at which municipal solid waste is discharged. Section 258.1(c) of Subtitle D states that Subtitle D regulations do not apply to municipal solid waste landfills that do not receive waste after 9 October 1991. The facility ceased discharge in 1987. Therefore, the provisions of Subtitle D do not apply to this Unit.

48. Since the Unit: is unlined (see Finding No. 2) and does not meet the siting criteria for a Class III landfill (see Finding No. 15); has been inactive for 22 years (see Finding No. 3); and may have released inorganic waste constituents to groundwater (see Finding Nos. 30 and 31), the discharge of waste to the unlined and unclosed Unit is not in the public's interest. Therefore, this Order requires the Discharger to close the facility by a specified date.

49. This Order implements:

    a. The Basin Plan; and

    b. The prescriptive standards and performance goals of Chapters 1 through 7, Subdivision 1, Division 2 of Title 27, effective 18 July 1997 and subsequent revisions.

50. This Order requires that the materials used to construct the final cover system have appropriate physical and chemical properties to ensure containment of discharged wastes over the closure and postclosure maintenance period of the Unit. Further antidegradation analysis is not needed.

51. Section 13267(b) of the CWC provides that: "In conducting an investigation specified in subdivision (a), the regional water board may require that any person who has discharged, discharges, or is suspected of 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 water board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports."

52. The technical reports required by this Order and the attached "Monitoring and Reporting Program No. ____" are necessary to assure compliance with this Order. The Discharger owns and operated the facility where waste discharges occurred and is subject to this Order.

PROCEDURAL REQUIREMENTS

53. All local agencies with jurisdiction to regulate land use, solid waste discharge, air pollution, and to protect public health have approved the use of this site for the discharges of waste to land stated herein.

54. The Central Valley Water Board notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for closure and postclosure maintenance of the Unit, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

55. The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.

56. Any person affected by this action of the Central Valley Water Board may petition the State Water Resources Control Board to review the action in accordance with Sections 2050 through 2068, Title 23, CCR. 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, that Order 5-01-097 is rescinded, and that the County of Tulare, 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 additional waste at this facility is prohibited.

B. FACILITY SPECIFICATIONS

1. The Discharger shall immediately notify the Central Valley 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 containment facilities or precipitation and drainage control structures in accordance with Provision E.6.

2. Water used for facility maintenance shall be limited to the minimum amount necessary for dust control and construction.

3. The Discharger shall maintain in good working order any control system or monitoring device installed to achieve compliance with this Order.

4. The Unit and its respective containment structures shall be maintained to limit, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, and overtopping.

5. 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 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, until closure of the landfill is complete and approved.

9. Annually, prior to the anticipated rainy season, but **no later than 1 October**, any necessary erosion control measures shall be implemented, and any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or flooding of the facility and to prevent surface drainage from contacting or percolating through wastes.

10. 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.

11. 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.

12. 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.

C. CONSTRUCTION SPECIFICATIONS

1. **By 9 October 2010**, all closure construction activities shall be completed.

2. The Discharger shall submit for review and approval by the Executive Officer **at least 120 days prior to** construction, design plans and specifications for the cover system that include the following:

   a. A CQA plan meeting the requirements of §20324 of Title 27; and

   b. A geotechnical evaluation of the area soils, evaluating their use as the foundation layer.

3. The engineered alternative cover system shall be comprised, in ascending order, of the following:

   a. A two-foot thick engineered foundation layer comprised of soils compacted to a minimum relative compaction of 90%;

   b. A reinforced (needle-punched), geotextile-backed, geosynthetic clay liner that exhibits appropriate strength characteristics to accommodate stresses associated with the specific cover design parameters; and

   c. A minimum one-foot thick vegetative cover layer that meets the Title 27 closure regulations.

4. Materials used to construct the cover system shall have appropriate physical and chemical properties to ensure containment of discharged wastes over the closure and postclosure maintenance period of the Unit.

5. The Discharger may propose changes to the cover system design prior to the construction, provided that approved components are not eliminated, the engineering properties of the components are not substantially reduced, and the proposed cover system results in the protection of water quality equal to or greater than the design prescribed by Title 27 and this Order. The proposed changes may be made following approval by the Executive Officer. Substantive changes to the design require reevaluation as an engineered alternative and approval by the Central Valley Water Board.

6. The soil layer underlying the GCL shall be prepared in an appropriate manner using accepted engineering and construction methods so as to provide a smooth surface that is free from rocks, sticks, or other debris that could damage or otherwise limit the performance of the GCL.

7. **By 9 January 2011**, following the completion of construction of the cover system, a construction report shall be submitted for Executive Officer review and approval. The report shall be certified by a California registered civil engineer or certified engineering geologist. It shall contain sufficient information and test results to verify that construction was in accordance with the design plans and specifications, and with the prescriptive standards and performance goals of Title 27. The cover construction report shall include as a minimum, but not be limited to, the following:

   a. Test results on the chemical and geotechnical properties of materials used in the cover system, as specified in these waste discharge requirements;

   b. Test results on the hydraulic conductivity of the cover system; and

   c. Construction quality assurance and quality control procedures and results for all aspects of cover system construction.

8. Construction shall proceed only after all applicable CQA plans for the engineered alternative final cover system and a geotechnical evaluation of the area soils, evaluating their use as the foundation layer, described in Construction Specifications C.2.a. and b., have been approved by the Executive Officer.

9. The CQA program shall be supervised by a California registered civil engineer or certified engineering geologist who shall be designated the CQA officer. The CQA

officer and personnel performing monitoring and testing shall be independent of the construction contractor and the Discharger.

D. DETECTION MONITORING SPECIFICATIONS

1. **By 9 February 2010**, the Discharger shall submit for review and approval, a report describing the modifications made to the DMP (revised DMP) to eliminate potential erroneous WQPS exceedences (see Finding No. 34).

2. The Discharger shall comply with the DMP provisions of Title 27 for groundwater and surface water, and in accordance with Monitoring and Reporting Program No. ____.

3. The Discharger shall provide Staff a minimum of **one week** notification prior to commencing any field activities related to the installation, repair, or abandonment of monitoring devices.

4. The Discharger shall comply with the WQPS as specified in this Order, Monitoring and Reporting Program No. ____, and the *Standard Provisions and Reporting Requirements*, dated April 2000.

5. The WQPS for organic compounds that 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., USEPA methods 8260B and 8270C). The presence of non-naturally occurring organic compounds in samples above the WQPS from detection monitoring wells is evidence of a release from the Unit unless the Discharger can demonstrate that the Unit is not the cause pursuant to §20420(k)(7) of Title 27.

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.____.

7. For each monitoring event, the Discharger shall determine whether the facility is in compliance with the WQPS using procedures specified in Monitoring and Reporting Program No.____ and §2041(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 versions 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 that 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. Method detection limits 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 quality assurance/quality control (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 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, 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."

18. The Discharger may propose an alternate statistical method [to the methods listed under §20415(e)(8)(A-D) of Title 27] 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 Staff.

19. The Discharger shall use the nonstatistical method specified in Detection Monitoring Specification D.20 for all constituents which are not amenable to the statistical tests

described above (i.e., less than 10% of the data from background samples that equal or exceed their respective MDL). This includes all constituents in the monitoring parameters and for all constituents of concern (COC) found in groundwater and unsaturated zone (in soil-pore liquid or gas). Each constituent at a monitoring point shall be determined to meet this criterion based on either:

a. The results from a single sample for that constituent, taken during that reporting period from that monitoring point; or

b. If more than one sample has been taken during a reporting period from a monitoring point, the results from the sample which contains the largest number of qualifying constituents shall be used.

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

20. The nonstatistical method (for non-naturally occurring waste constituents) shall be implemented as follows:

    a. For every compliance well, regardless of the monitoring program, the Discharger shall use this data analysis method, jointly, for all monitoring parameters and COCs that are detected in fewer than 10% of background samples. Any COC that triggers a discrete retest per this method shall be added to the monitoring parameter list.

       Triggers — From the monitoring parameters and COC list, identify each constituent in the current sample that exceeds either its respective MDL or PQL. The Discharger shall conclude that the exceedance provides a preliminary indication [or, for a retest, provide a measurably significant indication] of a change in the nature or extent of the release, at that well, if either:

       1) The data contain two or more qualifying monitoring parameters and/or COCs that are detected in fewer than 10% of background samples that equal or exceed their respective MDLs; or

       2) The data contain one qualifying monitoring parameter and/or COC that equals or exceeds its PQL.

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

1) In the event that the Discharger concludes (pursuant to paragraph 20.a., above) there is a preliminary indication of a release, the Discharger shall immediately notify Central Valley Water Board staff by phone or e-mail and, within 30 days of such indication, shall collect two new (retest) samples from the indicating compliance well.

2) For any given compliance well retest sample, the Discharger shall include, in the retest analysis, only the laboratory analytical results for those constituents indicated in that well's original test. As soon as the retest data are available, the Discharger shall apply the same test [under 20.a.], to separately analyze each of the two suites of retest data at that compliance well.

3) If either (or both) of the retest samples meets either (or both) of the triggers under 20.a., the Discharger shall conclude that there is a measurably significant increase at that well for the constituent(s) indicated in the validating retest sample(s).

21. If the Executive Officer determines, after reviewing the submitted report, that the detected constituent(s) most likely originated from the Unit, 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. 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 Central Valley Water Board staff 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 maintain a copy of this Order at the offices of the Tulare County Resource Management Agency and make it available during working hours to facility maintenance personnel, who shall be familiar with its contents, and to regulatory agency personnel.

3. The Discharger shall comply with Monitoring and Reporting Program No. _____, 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 Central Valley 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."

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 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 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, a succeeding owner or operator must apply in writing to the Central Valley 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 Central Valley Water Board, and a statement. The statement shall comply with the signatory requirements contained in Provision E.6 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 CWC. Transfer of this Order shall be approved or disapproved by the Central Valley Water Board.

10. The Discharger shall maintain assurances of financial responsibility for initiating and completing corrective action for all known or reasonably foreseeable releases from the landfill in an amount approved by the Executive Officer, and shall submit the financial assurance mechanism to the Financial Assurances Section of the California Integrated Waste Management Board. The Discharger shall conduct an annual review of the estimates and submit a report for Executive Officer review and approval **by 1 October of each year**. 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 mechanisms for closure and postclosure maintenance costs as specified in Chapter 6 of Title 27. The Discharger is required to submit the financial assurance mechanism to the Financial Assurances Section of the California Integrated Waste Management Board, which determines if the mechanism meets the requirements of Chapter 6, Title 27, and if the amount of coverage is adequate. The Discharger shall conduct an annual review of the estimates and submit a report for Executive Officer review and approval **by 1 October of each year**. 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 this Order in accordance with the following time schedule:

Task	Compliance Date
A. Detection Monitoring Plans	
Submit for review and approval, a revised DMP report (Detection Monitoring Specifications D.1)	By 9 February 2010
B. Construction Plans	
Submit construction and design plans and specifications for review and approval. (see Construction Specification C.2)	120 days prior to construction
C. Completion of Closure Activities (Constructions Specifications C.1)	9 October 2010
D. Construction Report	
Submit a construction report for review and approval upon completion demonstrating construction was in accordance with approved construction plans. (see Construction Specification C.7)	9 January 2011
E. Financial Assurance Review	
1. Annual Review of Financial Assurance for initiating and completing corrective action (see Provision E.10)	1 October of each year
2. Annual Review of Financial Assurance for closure and postclosure maintenance (see Provision E.11)	1 October of each year

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 _____.

_____
PAMELA C. CREEDON, Executive Officer

VSM: 9/08/2009