

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2005-0027

WASTE DISCHARGE REQUIREMENTS
FOR
OROVILLE LANDFILL PROPERTIES LP, OROVILLE LANDFILL PROPERTIES INC,
JACK M. STEEBLES LLC,
CAROL ANN SEIDENGLANZ LLC, AND STEVEN CONN SEIDENGLANZ LLC
FOR
CLOSURE OF
OROVILLE LANDFILL PROPERTIES CLASS III WOOD WASTE LANDFILL
BUTTE COUNTY

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

1. Oroville Landfill Properties LP, Oroville Landfill Properties Inc, Jack M. Steebles LLC, Carol Ann Seidenglanz LLC, and Steven Conn Seidenglanz LLC (hereafter Discharger) own a Class III wood waste landfill located about three miles south of Oroville, in the southwest $\frac{1}{4}$ of Section 29 and the southeast $\frac{1}{4}$ of Section 30, T19N, R4E, MDB&M, as shown in Attachment A, which is incorporated herein and made part of this Order.
2. The 115 acre facility consists of three existing unlined waste management units (Unit) covering approximately 34 acres, 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) 036-270-053, 036-490-012, 036-200-046, and 036-200-047. APN 036-270-053 is 50 percent owned by Oroville Landfill Properties LP, 25 percent owned by Jack M. Steebles LLC, 12.5 percent owned by Carol Ann Seidenglanz LLC, and 12.5 percent owned by Steven Conn Seidenglanz LLC. APN 036-490-012 is 50 percent owned by Oroville Landfill Properties LP, 25 percent owned by Jack M. Steebles LLC, 12.5 percent owned by Carol Ann Seidenglanz LLC, and 12.5 percent owned by Steven Conn Seidenglanz LLC. APN 036-200-046 is 50 percent owned by Oroville Landfill Properties LP, 25 percent owned by Jack M. Steebles LLC, 12.5 percent owned by Carol Ann Seidenglanz LLC, and 12.5 percent owned by Steven Conn Seidenglanz LLC. APN 036-200-047 is 50 percent owned by Oroville Landfill Properties LP, 25 percent owned by Jack M. Steebles LLC, 12.5 percent owned by Carol Ann Seidenglanz LLC, and 12.5 percent owned by Steven Conn Seidenglanz LLC. The general partner of Oroville Landfill Properties LP is Oroville Landfill Properties Inc, a California Corporation.
3. On 28 September 1990, the Regional Board issued Order No. 90-266, in which the facility was classified as a Class III waste disposal site for the discharge of wood wastes and ash in accordance with the regulations in effect when the Order was issued. This Order is being revised to be consistent with Title 27 California Code of Regulations (Title 27 CCR) and prescribes a schedule for completing site closure.

SITE DESCRIPTION

4. The landfill is located along the eastern margin of the Sacramento Valley approximately one mile east of the Feather River. The area is characterized by rolling foothills grading eastward into the steeper flanks of the Sierra Nevada Mountains and westward toward the flat expanse of the valley floor.
5. Existing vegetation adjacent to the landfill consists of scrub oak and chaparral brush. The previous site owner planted eucalyptus trees on the southeast side of the landfill property.
6. Four major geologic units have been identified beneath the site. The units that have been identified from the top of the meta-volcanic bedrock to the ground surface are the Ione Formation, the Merhten Formation, the Nomlaki Tuff, and the Laguna Formation. With the exception of the volcanic Nomlaki Tuff, the units are composed of Cenozoic flood deposits from the current and ancestral Feather River System. The Laguna and Merhten Formations contain water bearing sands and gravels that are commonly separated by interbedded clayey aquitards.
7. The closest Holocene fault is the Cleveland Hill Fault located approximately seven miles southeast of the facility. The maximum credible earthquake is estimated to be a $M_L = 6$. The peak horizontal acceleration at the site, considering the maximum credible earthquake, is approximately 0.3g.
8. Land uses within 1,000 feet of the facility are zoned industrial.
9. The climate in the Oroville area is dry with hot summers and mild winters. The facility receives a mean annual rainfall of 29 inches with nearly 90 percent occurring between November and April. The average annual evaporation is approximately 68 inches. Based upon these data, the net annual evaporation is approximately 39 inches.
10. The 100-year, 24-hour precipitation event is estimated to be 5.51 inches, based on Department of Water Resources' Bulletin No. 195 entitled *Rainfall Analysis for Drainage Design Volume II Long-Duration Precipitation Frequency Data*, dated October 1976.
11. The waste management facility is not within a 100-year flood plain.

WASTE AND SITE CLASSIFICATION

12. The Discharger purchased the site in September 2002. The previous owner, Louisiana-Pacific Corporation, discharged wood wastes to Units 1 and 2, and ash from a wood-fired cogeneration facility to Unit 4. Unit 3 was sited, but never received waste. Unit 1 stopped receiving wastes in 1988 and Unit 2 stopped receiving wastes in 2001.

13. Chemical constituents found in the wood waste at the facility that have the potential to affect the quality of waters of the State include pentachlorophenol (PCP), formaldehyde, polynuclear aromatic hydrocarbons (PAHs), tannins, and lignins. The PCP probably originated from contaminated water discharged from the Koppers wood-treating facility that was located adjacent to the former Louisiana-Pacific Corporation sawmill and used to sprinkle the facility's log decks. Formaldehyde in the waste originated from the Louisiana-Pacific Corporation hardboard facility, which used a urea-formaldehyde glue. PAH compounds encountered in the waste may be from water flowing from the adjacent Koppers wood-treating facility or associated with ash that was previously disposed in the landfill. Tannins and lignins are normal decomposition products of wood waste. None of the above constituents have been detected in groundwater beneath the site in concentrations that affect beneficial uses.

SURFACE AND GROUND WATER CONDITIONS

14. The *Water Quality Control Plan for the Sacramento River and San Joaquin Basins, Fourth Edition* (hereafter Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.
15. Surface drainage is to intermittent drainage courses north and west of the facility, which are tributary to the Feather River in the Lower Feather River Hydrologic Area (515.40) of the Sacramento Hydrologic Basin. The Feather River is located approximately one mile west of the site.
16. The designated beneficial uses of the Feather River, as specified in the Basin Plan, are municipal and agricultural supply, water contact and non-water contact recreation, warm and cold fresh water habitat, warm and cold freshwater fish migration, warm and cold freshwater fish spawning habitat, wildlife habitat, and groundwater recharge.
17. The first encountered groundwater is about 75 to 140 feet below the native ground surface. Groundwater elevations range from 126 feet MSL to 177 feet MSL.
18. Monitoring data indicates background groundwater quality has an electrical conductivity (EC) ranging between 325 and 525 micromhos/cm and a total dissolved solids (TDS) concentration ranging between 163 and 300 mg/l.
19. The direction of groundwater flow is toward the southwest. The groundwater gradient measured during first quarter 2004 was 0.01 feet per foot.
20. The designated beneficial uses of the groundwater, as specified in the Basin Plan, are domestic and municipal supply, agricultural supply, industrial service supply, and industrial process supply.

SURFACE AND GROUND WATER MONITORING

21. The current groundwater monitoring system includes four monitoring wells, LF-1A, LF-2, LF-4, and LF-5. Three additional monitoring wells (LF-1, LF-3, and W-2) have previously been included in the groundwater monitoring network. However, these wells are no longer used in the current monitoring system. Monitoring well LF-1 was replaced by monitoring well LF-1A in August 2000 due to an improper screen interval and low groundwater yield. This Order requires monitoring well LF-1 to be properly abandoned/destroyed under permit from Butte County. It has been reported that monitoring well LF-3 was abandoned after Unit 1 ceased accepting wastes. However, there is no data to demonstrate proper destruction of this well, and this Order requires the Discharger to provide proof of the abandonment of monitoring well LF-3. Monitoring well W-2 was installed in June 1988 by the United States Environmental Protection Agency as part of the soil and groundwater investigation at the Koppers Superfund Site located adjacent to the former Louisiana-Pacific Corporation mill. It has been reported that monitoring well W-2 was abandoned after the site investigation was completed, but data demonstrating proper destruction of the well has not been provided. This Order requires the Discharger to provide proof of the abandonment of monitoring well W-2.
22. Monitoring well LF-1A was installed in August 2000 and is located north and hydraulically up gradient of Unit 1. The total depth of well LF-1A is 138 feet with a screened interval between 115 and 135 feet below ground surface (bgs). Monitoring well LF-2 was installed in June 1987 and is located near the southwest corner and hydraulically downgradient of Unit 2. The total depth of well LF-2 is 162 feet with a screened interval between 138 and 158 feet bgs. Monitoring well LF-4 was installed in June 1987 and is located just south and hydraulically down or cross gradient of Unit 1. The total depth of well LF-4 is 160 feet with a screened interval between 129 and 159 feet bgs. Monitoring well LF-5 was installed in June 1987 and is located just south and hydraulically downgradient of Unit 2. The total depth of well LF-5 is 169 feet with a screened interval between 138 and 168 feet bgs.
23. Groundwater at the site flows to the southwest away from the Units. Unit 1 does not have a monitoring well along its hydraulically downgradient western edge. Recent leachate seeps at the northwest corner of Unit 1 drain toward an unlined storm water detention pond. The Discharger's groundwater detection monitoring program at this Unit currently does not satisfy the requirements contained in Title 27 CCR because no well exists on the western hydraulically downgradient edge of the Unit. This Order will require the Discharger to install an additional groundwater monitoring well along the hydraulically downgradient western edge of Unit 1 in order to satisfy the requirements for a groundwater detection monitoring program found in Title 27 CCR, unless the Discharger clean closes the site in accordance with provisions of Title 27 CCR.

24. Three unlined storm water detention basins exist at the site. Pond 1 is located at the northwest corner of Unit 1, Pond 5 is located at the western edge of Unit 2, and Pond 7 is located at the southeast corner of the facility. Surface drainage from the site and Units drains toward these three ponds. Once the storm water level in the ponds reaches a specific point, water discharges off site to surface drainage courses and toward the Feather River. A leachate seep has recurred over the last three winters at the northwest corner of Unit 1, just above Pond 1. Surface water quality monitoring is required pursuant to this Order and the Surface Water Detection Monitoring Program satisfies the requirements of Title 27.
25. Volatile organic compounds (VOCs) are often detected in a release from a landfill. 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 CCR for the determination of a release of wastes from a Unit.
26. Title 27 CCR Sections 20415(e)(8) and (9) provide for the non-statistical evaluation of monitoring data that will provide the best assurance of the earliest possible detection of a release from a Unit in accordance with Title 27 CCR Section 20415(b)(1)(B)2.-4. However, Title 27 CCR 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 Title 27 CCR Section 20080(a)(1). 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.

LANDFILL CLOSURE

30. This landfill is not yet closed. The current Discharger has never disposed wastes at the site. The last receipt of waste at the site was to Unit 2 during second quarter of 2001. Several leachate seeps at the northwest corner of Unit 1 have recurred annually during the wet weather season for at least the last three years. Low concentrations of pentachlorophenol and formaldehyde were detected in storm water ponds at the site, including Pond 1 located below the leachate seep locations, during 2003 and 2004.
31. In accordance with Title 27 CCR Section 20950(a)(2)(A)(1), the goal of closure Performance Standards includes, but is not limited to, installation of a final cover to minimize water infiltration into the waste, thereby minimizing the production of leachate and gas.
32. In accordance with Title 27 CCR Section 20950(a)(2)(B), the goal of closure Performance Standards for Units that are clean-closed is to physically remove all waste and contaminated materials from the Unit and from its underlying and surrounding environs, such that the waste in the Unit no longer poses a threat to water quality. Successful completion of clean-closure eliminates the need for any postclosure maintenance period.
33. The Discharger has proposed a pilot study to determine whether clean-closure of the site is a feasible alternative to capping the wastes in place with an engineered cover and associated postclosure maintenance. The pilot study proposal includes characterization of buried wastes from each Unit and evaluation of excavation and processing techniques used during material recovery activities. A Final Pilot Study Report regarding the feasibility of clean-closure is due **by 1 April 2005**.
34. This Order allows the Discharger to proceed with clean-closure actions in accordance with Section 21090(f) of Title 27 CCR or final site closure, including capping buried wastes in place with an engineered cover and associated postclosure maintenance, in accordance with applicable closure provisions of Title 27 CCR.
35. Construction may proceed only after all applicable Clean-Closure Plans and/or Final Closure and Postclosure Maintenance Plans, Construction Quality Assurance Plans, design plans, and specifications have been approved by Executive Officer.

CONSTRUCTION AND ENGINEERED ALTERNATIVE

36. Title 27 CCR Section 20080(b) allows the Regional Board to consider the approval of an engineered alternative to prescriptive standards. In order to approve an engineered alternative in accordance with Title 27 CCR Sections 20080(c)(1) and (2), 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 Title 27 CCR Section 20080(b), or would be impractical and would not promote attainment of applicable performance standards. The Discharger must also demonstrate that any proposed engineered alternative liner system(s) is/are 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 Title 27 CCR Section 20080(b)(2).
37. Section 13360(a)(1) of the California Water Code allows the Regional 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.

CEQA AND OTHER CONSIDERATIONS

38. The action to revise waste discharge requirements for this existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resource Code Section 21000, et seq., and the CEQA guidelines, in accordance with Title 14 CCR, Section 15301.
39. This Order implements:
 - a. *The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (and subsequent revisions);
 - b. The prescriptive standards and performance goals of Chapters 1 through 7, Subdivision 1, Division 2, Title 27 CCR, effective 18 July 1997, and subsequent revisions;
 - c. *The Porter-Cologne Water Quality Control Act* (as amended 1 January 2004 and subsequent revisions); and
 - d. State Water Resources Control Board Resolution No. 68-16, *Statement of Policy With Respect to Maintaining High Quality of Waters in California*.
40. Section 13267(b) of California Water Code provides that: "In conducting an investigation specified in subdivision (a), the Regional Board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposed to discharge within its region, or any citizen or domiciliary, or political agency or entity of this state who had

discharged, discharges, or is suspected of discharging, or who proposed to discharge waste outside of its region that could affect the quality of the waters of the state within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. The monitoring and reporting program required by this Order and the attached "Monitoring and Reporting Program No. R5-2005-0027 " are necessary to assure compliance with these waste discharge requirements. The Discharger operates the facility that discharges the waste subject to this Order.

PROCEDURAL REQUIREMENTS

41. 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.
42. 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.
43. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.
44. 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. 90-266 is rescinded, and Oroville Landfill Properties LP, Oroville Landfill Properties Inc, Jack M. Steebles LLC, Carol Ann Seidenglanz LLC, and Steven Conn Seidenglanz LLC, 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 'hazardous waste' or 'designated waste' is prohibited. For the purposes of this Order, the term 'hazardous waste' is as defined in Title 23 CCR, Section 2510 et seq., and 'designated waste' is as defined in Title 27 CCR.
2. The discharge of wastes outside of a Unit or portions of a Unit specifically designed for their containment is prohibited.
3. The discharge of liquid or semi-solid waste (i.e.: waste containing less than 50 percent solids) is prohibited.
4. The discharge of any waste besides wood waste to Unit 2 or cogeneration ash to Unit 4 is prohibited.
5. Co-mingling of ash from Unit 4 with wood wastes in Units 1 or 2 is prohibited.
6. After **15 October 2005 and site closure (or clean-closure) is complete**, the discharge of waste to any Unit is prohibited.
7. Any waste discharge at this site shall not cause a 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.
8. The discharge of solid or liquid waste or leachate to surface waters, surface water drainage courses, or groundwater is prohibited.
9. Any waste discharge at this site shall not cause an 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 off-site, equipment failure, slope failure, or other

change in site conditions that could impair the integrity of waste or leachate containment facilities or precipitation and drainage control structures.

3. 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 the waste discharge requirements.
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 beneficial uses of surface water or groundwater due to migration through the unsaturated zone.
6. Surface drainage within the waste management facility shall be directed to one of three storm water detention basins. Each detention basin shall be operated and maintained to minimize vectors and odors. A freeboard of at least two feet shall be maintained in each detention basin at all times.
7. 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. Any storm water discharge off site shall be done in accordance with applicable storm water regulations and Monitoring and Reporting Program No. R5-2005-0027.

C. CLOSURE CONSTRUCTION SPECIFICATIONS

1. The Discharger shall submit **by 1 April 2005**, a Final Clean-Closure Pilot Study Report discussing the feasibility of clean-closing the landfill. The Final Pilot Study Report shall include a recommendation for closing or clean-closing the landfill Units in accordance with the Performance Standards described in Title 27 CCR Section 20950.
2. The Discharger shall submit for Executive Officer review and approval **by 1 May 2005 and prior to construction**, Final Closure and Postclosure Maintenance Plans, which include design plans and specifications for completing landfill closure and a Construction Quality Assurance Plan meeting the requirements of Title 27 CCR Section 20324, or a Clean-Closure Plan meeting the requirements of Title 27 CCR Sections 21090(f) and 21810.
3. If the landfill Units are proposed to be closed in place, the Discharger shall construct a final cover system in accordance with Title 27 CCR Section 21090(a) that shall

include:

- a. A foundation layer using appropriate materials engineered and constructed to minimize differential settlement and impacts to the final cover system. Foundation layer soil shall be compacted to the maximum density obtainable at optimum moisture content using methods that are in accordance with accepted civil engineering practices;
 - b. A low-hydraulic-conductivity layer constructed over the foundation layer to minimize infiltration of water through the final cover system; and
 - c. An erosion-resistant layer constructed over the low-hydraulic-conductivity layer for protection and to prevent migration of sediments away from the closed Unit.
4. Any landfill cover system shall be graded and maintained to promote lateral runoff of precipitation and to prevent water ponding over buried wastes.
 5. Any landfill cover system shall be designed and constructed to withstand a maximum probable earthquake.
 6. All necessary precipitation and drainage control systems (including storm water detention ponds) shall be designed, constructed, and maintained to accommodate the anticipated volume of precipitation and peak flows from surface runoff under 100-year, 24-hour storm events.
 7. If landfill Units are to be closed in place, at least two permanent monuments, installed by a licensed land surveyor, shall be installed into the final cover system so that the locations and elevations of all wastes, containment structures, and monitoring facilities can be determined throughout the postclosure maintenance period.
 8. The Discharger may propose changes to a landfill final cover system design prior to construction, provided that approved components are not eliminated, the engineering properties of the components are not substantially reduced, and the proposed final cover system results in the protection of water quality equal to or greater than the design prescribed by Title 27 CCR and this Order. 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 Regional Board.
 9. Following completion of final closure or clean-closure construction **and no later than 1 December 2005**, the Discharger shall submit the final project documentation (in accordance with Title 27 CCR Section 20324(d)(1)(C) for a landfill final cover

system) for Executive Officer 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 construction was in accordance with the Final Closure Plan or Clean-Closure Plan and with the prescriptive standards and performance goals of Title 27 CCR.

10. A third party independent of both the Discharger and the construction contractor shall perform all of the construction quality assurance monitoring and testing during the construction of the final cover system.
11. If wastes are closed in place, the Discharger shall record with the Butte County Recorder's Office, a deed restriction that runs with the land, that identifies the exact location of the landfill, and that restricts activities that will impact the integrity of the Unit. The deed restriction must indicate that the restrictions may not be removed without approval of the Regional Board. Prior to recording the deed restriction, the Discharger shall submit the proposed deed restriction to the Executive Officer for review and approval. Once approved, and no later than **1 December 2005**, the Discharger shall submit proof of the deed restriction recording with the Butte County Recorder's Office.
12. Closure or clean-closure activities (other than completing the clean-closure pilot study) shall not proceed in the absence of closure waste discharge requirements.

D. DETECTION MONITORING SPECIFICATIONS (only applicable for Units that are not clean-closed)

1. The Discharger shall comply with the detection monitoring program provisions of Title 27 CCR for groundwater and surface water.
2. The Discharger shall conduct groundwater and surface water monitoring as specified in Monitoring and Reporting Program No. R5-2005-0027.
3. The Discharger shall install **by 1 October 2005** an additional point of compliance well at the hydraulically downgradient and western edge of Unit 1.
4. The Discharger shall submit **by 1 October 2005** information regarding the current condition of monitoring wells LF-1, LF-3, and W-2. If these wells have been properly abandoned, then submit documentation (i.e.: permits, well seal inspection notes, etc.) of the official abandonment. If these wells have not been abandoned and are determined to be unnecessary for use in the groundwater detection monitoring program, then provide by the date above a work plan/proposal for properly abandoning monitoring wells LF-1, LF-3, and W-2.

5. 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.
6. The Discharger shall submit **by 1 October 2005** a Water Quality Protection Standard Report in accordance with Title 27 CCR and Monitoring and Reporting Program No. R5-2005-0027 for Executive Officer for review and approval.
7. The Discharger shall comply with the Water Quality Protection Standard as specified in this Order, Monitoring and Reporting Program No. R5-2005-0027, and the Standard Provisions and Reporting Requirements, dated April 2000.
8. The Water Quality Protection Standard 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., US-EPA methods 8260 and 8270). The repeated detection of one or more non-naturally occurring organic compounds in samples above the Water Quality Protection Standard from detection monitoring wells is evidence of a release from the Unit.
9. The concentrations of the constituents of concern in waters passing the Point of Compliance shall not exceed the concentration limits established in the Water Quality Protection Standard Report.
10. 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. R5-2005-0027 and Title 27 CCR Section 20415(e).
11. The Discharger shall submit **by 1 October 2005** for Executive Officer review and approval a Sample Collection and Analysis Plan. The Sample Collection and Analysis Plan shall at a minimum include:
 - a. Sample collection procedures describing purging techniques, sampling equipment, and decontamination of sampling equipment;
 - b. Sample preservation information and shipment procedures;
 - c. Sample analytical methods and procedures;
 - d. Sample quality assurance/quality control (QA/QC) procedures; and
 - e. Chain of Custody control.

12. 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. 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.
13. 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.
14. 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.
15. **“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.
16. **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.
17. 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.

18. 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 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.
19. Unknown chromatographic peaks shall be reported, flagged, and tracked for potential comparison to subsequent unknown peaks that may be observed in future sampling events. Identification of unknown chromatographic peaks that recur in subsequent sampling events may be required.
20. The statistical method shall account for data below the practical quantitation limit (PQL) with one or more statistical procedures that are protective of human health and the environment. Any PQL validated pursuant to Title 27 CCR Section 20415(e)(7) that is used in the statistical method shall be **the lowest concentration (or value) that can be reliably achieved** within limits of precision and accuracy specified in the WDRs for routine laboratory operating conditions that are available to the facility. The Discharger's technical report, pursuant to Title 27 CCR Section 20415(e)(7), shall consider the PQLs listed in Appendix IX to Chapter 14 of Division 4.5 of Title 22, CCR, for guidance when specifying limits of precision and accuracy. For any given constituent monitored at a background or downgradient monitoring point, an indication that falls between the MDL and the PQL for that constituent (hereinafter called a "trace" detection) shall be identified and used in appropriate statistical or nonstatistical tests. Nevertheless, for a statistical method that is compatible with the proportion of censored data (trace and ND indications) in the data set, the Discharger can use the laboratory's concentration estimates in the trace range (if available) for statistical analysis, in order to increase the statistical power by decreasing the number of "ties".

21. 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).
22. The Discharger may propose an alternate statistical method [to the methods listed under Title 27 CCR Section 20415(e)(8)(A-D)] in accordance with Title 27 CCR Section 20415(e)(8)(E), for review and approval 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.
23. The Discharger shall use the following non-statistical method for all analytes that are detected in less than 10% of the background samples. The non-statistical method shall be implemented as follows:
 - a. From the constituent of concern or monitoring parameter list, identify each analyte in the **current** sample that exceeds either its respective MDL or PQL. The Discharger shall conclude that the exceedance provides a preliminary indication of a release or a change in the nature or extent of the release, at that monitoring point, if *either*:
 - 1) The data contains two or more analytes that are detected in less than 10% of background samples that equal or exceed their respective MDLs; or
 - 2) The data contains one or more analyte that equals or exceeds its PQL.
 - b. **Discrete Retest** [Title 27 CCR Section 20415(e)(8)(E)]:
 - 1) In the event that the Discharger concludes that there is a preliminary indication of a release, then the Discharger shall immediately notify Regional Board staff by phone or e-mail and, within 30 days of such indication, shall collect two new (retest) samples from the monitoring point where the release is preliminarily indicated.
 - 2) For any given retest sample, the Discharger shall include, in the retest analysis, **only the laboratory analytical results for those analytes detected in the original sample**. As soon as the retest data are available, the Discharger shall conclude that there is measurably significant evidence of a release if two or more analytes equal or exceed their respective MDLs or if one or more analyte equals or exceeds its PQL and shall:

- a) **Immediately** notify the Regional Board about any constituent or constituents verified to be present at the monitoring point, and follow up with written notification submitted by certified mail **within seven days** of validation; and
 - b) Comply with ¶24, below if any constituent or constituents were verified to be present.
- 3) Any analyte that triggers a discrete retest per this method shall be added to the monitoring parameter list such that it is monitored during each regular monitoring event.
24. If the Discharger determines that there is measurably significant evidence of a release from the Unit at any monitoring point, the Discharger shall **immediately** implement the requirements of **XI. Response To A Release, C. Release Has Been Verified**, contained in the Standard Provisions and Reporting Requirements.

E. 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 throughout the life of the facility including the postclosure period.

Such legible records shall show the following for each sample:

- a. Sample identification and the monitoring point or background monitoring point from which it was taken, along with the identity of the individual who obtained the sample;
- b. Date, time, and manner of sampling;
- c. Date and time that analyses were started and completed, and the name of the personnel and laboratory performing each analysis;

- d. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used;
 - e. Calculation of results; and
 - f. Results of analyses, and the MDL and PQL for each analysis.
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.

- 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 facility and make it available at all times to facility operating personnel, who shall be familiar with its contents, and to regulatory agency personnel.
2. The Discharger shall comply with all applicable provisions of Title 27 CCR that are not specifically referred to in this Order.
3. The Discharger shall comply with Monitoring and Reporting Program No. R5-2005-0027, 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 Nonhazardous Solid Waste Discharges Regulated by Title 27 and/or Subtitle D* (Title 27 CCR Section 20005 et seq. and 40 CFR 258), 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. For Units that are not clean-closed, 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 annual renewal documentation to the Executive Officer **by 1 November annually** for review and approval.

11. If Units are closed in place, the Discharger shall maintain financial assurance mechanisms for closure and postclosure maintenance costs as specified in Chapter 6 of Title 27. Cost estimates for closure and postclosure maintenance are to be included with the Final Closure and Postclosure Maintenance Plan, which is due **by 1 May 2005**. The Discharger shall demonstrate financial assurances in the amounts of the approved cost estimates **by 1 July 2005**. If the landfill is to be clean-closed, cost estimates for clean closing the landfill are to be submitted with the Clean-Closure Plan, which is due **by 1 May 2005**. The Discharger shall demonstrate financial assurances in the amount of the approved clean-closure cost estimate **by 1 July 2005**.
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. Closure or Clean-Closure Construction	
1. Submit a Final Clean-Closure Pilot Study Report discussing the feasibility of clean-closing the landfill. (see Closure Construction Specification C.1)	by 1 April 2005
2. Submit a Final Clean-Closure Plan or Final Closure and Postclosure Maintenance Plans that include Construction Quality Assurance Plan, design plans, and specifications for Executive Officer review and approval. (see Closure Construction Specification C.2)	by 1 May 2005
3. Complete landfill closure or clean-closure activities in accordance with an approved Final Closure and Postclosure Maintenance Plan or Clean-Closure Plan, respectively.	by 15 October 2005
4. Upon completion of the landfill closure or clean-closure project, submit for Executive Officer review and approval, a final report	by 1 December 2005

demonstrating construction was in accordance with the approved design plans and specifications, and with the prescriptive standards and performance goals of Title 27 CCR.
(see Closure Construction Specification C.9)

5. For Units closed in place, submit proof of the deed restriction recording from the Butte County Recorder's Office. **by 1 December 2005**
(see Closure Construction Specification C.11)

B. Groundwater Monitoring (Only if Units closed in-place)

1. Submit a work plan for installation of an additional point of compliance groundwater monitoring well (to be designated as LF-6) along the west and hydraulically downgradient edge of Unit 1. **by 1 June 2005**
2. Complete installation of the additional groundwater monitoring well (to be designated as LF-6) along the west and hydraulically downgradient edge of Unit 1. **by 1 October 2005**
(see Detection Monitoring Specification D.3)
3. Provide information regarding the current status of monitoring wells LF-1, LF-3, and W-2. If these wells have been properly abandoned, then submit documentation of the official abandonment. If the wells have not been abandoned, then submit a work plan/proposal for properly abandoning them. **by 1 October 2005**
(see Detection Monitoring Specification D.4.)
4. Submit a Water Quality Protection Standard Report in accordance with Title 27 CCR and Monitoring and Reporting Program No. R5-2005-0027. **by 1 October 2005**
(see Detection Monitoring Specification D.6)
5. Submit a Sample Collection and Analysis Plan. **by 1 October 2005**
(see Detection Monitoring Specification D.11)

C. Financial Assurances

WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2005-0027
OROVILLE LANDFILL PROPERTIES, ETAL
FOR CLOSURE OF
OROVILLE LANDFILL PROPERTIES CLASS III WOOD WASTE LANDFILL
BUTTE COUNTY

-25-

1. Submit proof of adequate financial resources, **by 1 July 2005**
using an approved mechanism pursuant to
Title 27 CCR, for costs associated with
clean-closing the landfill or for closure construction
and for postclosure maintenance activities if wastes
are to be closed in-place. (see Provision F.11)

I, THOMAS R. PINKOS, 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 27 January 2005.

THOMAS R. PINKOS, Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2005-0027

FOR
OROVILLE LANDFILL PROPERTIES LP, OROVILLE LANDFILL PROPERTIES INC,
JACK M. STEEBLES LLC, CAROL ANN SEIDENGLANZ LLC,
AND STEVEN CONN SEIDENGLANZ LLC

FOR
CLOSURE OF
OROVILLE LANDFILL PROPERTIES CLASS III WOOD WASTE LANDFILL
BUTTE COUNTY

Compliance with this Monitoring and Reporting Program, with Title 27, California Code of Regulations, Section 20005, et seq. (hereafter Title 27 CCR), and with the *Standard Provisions and Reporting Requirements for Waste Discharge Requirements for Nonhazardous Solid Waste Discharges Regulated by Title 27 and/or Subtitle D (27 CCR §20005 et seq. and 40 CFR 258)*, dated April 2000, is ordered by Waste Discharge Requirements Order No. R5-2005-0027.

A. REQUIRED MONITORING REPORTS

<u>Report</u>	<u>Due</u>
1. Groundwater Monitoring (Section D.1)	See Table I
2. Annual Monitoring Summary Report (Order No. R5-2005-0027, E.6.)	Annually by 31 January
3. Leachate Monitoring (Section D.2)	See Table II
5. Surface Water Monitoring (Section D.3)	See Table III
6. Facility Monitoring Inspection Report (Section D.4.a.)	Annually by 15 November
7. Response to a Release (Standard Provisions and Reporting Requirements)	As necessary

B. REPORTING

The Discharger shall report monitoring data and information as required in this Monitoring and Reporting Program and as required in Order No. R5-2005-0027 and the Standard Provisions and Reporting Requirements. Reports that do not comply with the

required format will be **REJECTED** and the Discharger shall be deemed to be in noncompliance with the waste discharge requirements. In reporting the monitoring data required by this program, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. The data shall be summarized in such a manner so as to illustrate clearly the compliance with waste discharge requirements or the lack thereof. Data shall also be submitted in a digital format acceptable to the Executive Officer.

Each monitoring report shall include a compliance evaluation summary as specified in Reporting Requirements E.4. of Order No. R5-2005-0027.

Field and laboratory tests shall be reported in each monitoring report. Monthly, semiannual, and annual monitoring reports shall be submitted to the Regional Board in accordance with the following schedule for the calendar period in which samples were taken or observations made.

<u>Sampling Frequency</u>	<u>Reporting Frequency</u>	<u>Reporting Periods End</u>	<u>Report Date Due</u>
Monthly	Monthly	Last Day of Month	By end of month following the month that samples were taken or observations made
Semiannually	Semiannually	30 June 31 December	31 July 31 January
Annually	Annually	31 December	31 January

The Discharger shall submit an **Annual Monitoring Summary Report** to the Regional Board covering the previous monitoring year. The annual report shall contain the information specified in Reporting Requirements E.6. of Order No. R5-2005-0027, and a discussion of compliance with the Waste Discharge Requirements and the Water Quality Protection Standard.

The results of **all monitoring** conducted at the site shall be reported to the Regional Board in accordance with the reporting schedule above for the calendar period in which samples were taken or observations made.

C. WATER QUALITY PROTECTION STANDARD AND COMPLIANCE PERIOD

1. Water Quality Protection Standard Report

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

The Water Quality Protection Standard for naturally occurring waste constituents consists of the constituents of concern, the concentration limits, and the point of compliance and all monitoring points. The Executive Officer shall review and approve the Water Quality Protection Standard, or any modification thereto, for each monitored medium.

The report shall:

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

If subsequent sampling of the background monitoring point(s) indicates significant water quality changes due to either seasonal fluctuations or other reasons unrelated to waste management activities at the site, the Discharger may request modification of the Water Quality Protection Standard.

2. Constituents of Concern

The constituents of concern include all the waste constituents, their reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the Unit. The constituents of concern for all Units at the facility are those listed in Tables I through IV for the specified monitored medium. The Discharger shall monitor all constituents of concern at the frequency required by Monitoring and Reporting Program No. R5-2005-0027.

- a. **Monitoring Parameters**

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

3. Concentration Limits

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

- a. By calculation in accordance with a statistical method pursuant to §20415 of Title 27; or
- b. By an alternate statistical method acceptable to the Executive Officer in accordance with §20415 of Title 27.

4. Point of Compliance

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

5. Compliance Period

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

D. MONITORING

The Discharger shall comply with the detection monitoring program provisions of Title 27 for groundwater and surface water in accordance with Detection Monitoring Specifications D.1 and D.7 of Waste Discharge Requirements, Order No. R5-2005-0027. All monitoring shall be conducted in accordance with a Sample Collection and Analysis Plan, which includes quality assurance/quality control standards, that is acceptable to the Executive Officer.

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

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

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

1. Groundwater

The Discharger shall operate and maintain a groundwater detection monitoring system that complies with the applicable provisions of §20415 and §20420 of Title 27 in accordance with a Detection Monitoring Program approved by the Executive Officer. The Discharger shall collect, preserve, and transport groundwater samples in accordance with the approved Sample Collection and Analysis Plan.

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

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

Groundwater samples shall be collected from the point-of-compliance wells, background wells, and any additional wells added as part of the approved groundwater monitoring system. Samples shall be collected and analyzed for the monitoring parameters in accordance with the methods and frequency specified in Table I. All monitoring parameters and constituents of concern shall be graphed so as to show historical trends at each sample location.

The monitoring parameters shall also be evaluated each reporting period with

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

The current groundwater monitoring system at Oroville Landfill Properties Class III Wood Waste Landfill includes four monitoring wells, LF-1A, LF-2, LF-4, and LF-5. Monitoring well LF-1A is located hydraulically upgradient of Unit 1 and provides background water quality data. Well LF-2 is downgradient of Unit 2, LF-4 is down or cross gradient of Unit 1, and LF-5 is downgradient of Unit 2. All additional wells installed subsequent to the writing of these Waste Discharge Requirements for use in the groundwater detection monitoring program shall be monitored in accordance with this Monitoring and Reporting Program.

2. Leachate Monitoring

All of the Units at the Oroville Landfill Properties Class III Wood Waste Landfill are unlined and do not have leachate collection and removal systems. However, leachate seeps have previously been observed along the northwestern portion of Unit 1.

In response to the leachate seeps, the Discharger installed a leachate seep control system in September 2004. The leachate seep control system included construction of a plastic lined interceptor trench with a perforated collection pipe placed in the bottom. Blank collection pipe was extended down the hillside from the seep area toward a 500 gallon holding tank.

The leachate seep control system shall be inspected weekly from 15 October through 15 May annually. Additionally, the system shall be inspected within 24 hours after any storm event of 1 inch or greater rainfall. Upon detection of leachate in the holding tank, the Discharger shall sample the liquid and analyze for the constituents listed in Table II. A second sample shall be collected during second quarter of each year. Inspection dates, observations, and sample results shall be reported with each semiannual monitoring report. The quantity of leachate shall be *estimated* and reported as Leachate Flow Rate (in gallons/day).

3. Surface Water Monitoring

Three unlined storm water detention basins exist at the site. Pond 1 is located at the northwest corner of Unit 1, Pond 5 is located at the western edge of Unit 2, and Pond 7 is located at the southeast corner of the facility. Surface drainage from the site and Units drains towards these three ponds.

The Discharger shall monitor the three detention basins weekly between 15 October and 15 May annually to ensure that two feet or more of freeboard exists. Liquid in the detention basins shall be sampled for the constituents and at the frequencies listed in Table III. All monitoring parameters shall be graphed so as to show historical trends at each sample location.

5. Facility Monitoring

a. Facility Inspection

Annually, prior to the anticipated rainy season, but no later than **30 September**, the Discharger shall conduct an inspection of the facility. The inspection shall assess damage to the drainage control system, groundwater monitoring equipment (including wells, etc.), and shall include the Standard Observations contained in Section E.4.f. of Order No. R5-2005-0027. Any necessary construction, maintenance, or repairs shall be completed by **31 October**. By **15 November** of each year, the Discharger shall submit an annual report describing the results of the inspection and the repair measures implemented, including photographs of the problem and the repairs.

b. Storm Events

The Discharger shall inspect all precipitation, diversion, and drainage facilities for damage **within 7 days** following *major storm events*. Major storm events are defined as 1 inch or more of rainfall within a 24 hour period. Necessary repairs shall be completed **within 30 days** of the inspection. The Discharger shall report any damage and subsequent repairs within 45 days of completion of the repairs, including photographs of the problem and the repairs.

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

Ordered By:

THOMAS R. PINKOS, Executive Officer

27 January 2005

(Date)

TABLE I
GROUNDWATER DETECTION MONITORING PROGRAM

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Field Parameters		
Groundwater Elevation	Ft. & hundredths, M.S.L.	Quarterly
Temperature	°C	Semiannual
Electrical Conductivity	µmhos/cm	Semiannual
pH	pH units	Semiannual
Turbidity	Turbidity units	Semiannual
Monitoring Parameters		
Total Dissolved Solids (TDS)	mg/L	Semiannual
Chloride	mg/L	Semiannual
Carbonate	mg/L	Semiannual
Bicarbonate	mg/L	Semiannual
Nitrate - Nitrogen	mg/L	Semiannual
Sulfate	mg/L	Semiannual
Calcium	mg/L	Semiannual
Magnesium	mg/L	Semiannual
Potassium	mg/L	Semiannual
Sodium	mg/L	Semiannual
Tannins and Lignins	mg/L	Semiannual
Formaldehyde (USEPA Method 8315)	µg/L	Semiannual
Pentachlorophenol (USEPA Method 8270)	µg/L	Semiannual
Volatile Organic Compounds (USEPA Method 8260, see Table IV)	µg/L	Semiannual
Constituents of Concern (see Table IV)		
Total Organic Carbon	mg/L	Annually
Inorganics (dissolved)	mg/L or µg/L	Annually
Semi-Volatile Organic Compounds (USEPA Method 8270C)	µg/L	5 years

TABLE II
LEACHATE DETECTION MONITORING PROGRAM

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Field Parameters		
Total Flow	Gallons	Monthly
Flow Rate	Gallons/Day	Monthly
Electrical Conductivity	µmhos/cm	Monthly
pH	pH units	Monthly
Monitoring Parameters		
Total Dissolved Solids (TDS)	mg/L	Semiannual
Chloride	mg/L	Semiannual
Carbonate	mg/L	Semiannual
Bicarbonate	mg/L	Semiannual
Nitrate - Nitrogen	mg/L	Semiannual
Sulfate	mg/L	Semiannual
Calcium	mg/L	Semiannual
Magnesium	mg/L	Semiannual
Potassium	mg/L	Semiannual
Sodium	mg/L	Semiannual
Tannins and Lignins	mg/L	Semiannual
Formaldehyde (USEPA Method 8315)	µg/L	Semiannual
Pentachlorophenol (USEPA Method 8270)	µg/L	Semiannual
Volatile Organic Compounds (USEPA Method 8260, see Table IV)	µg/L	Semiannual
Constituents of Concern (see Table IV)		
Total Organic Carbon	mg/L	Annually
Inorganics (dissolved)	mg/L or µg/L	Annually
Semi-Volatile Organic Compounds (USEPA Method 8270C)	µg/L	Annually

TABLE III
SURFACE WATER DETECTION MONITORING PROGRAM

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Field Parameters		
Freeboard	Feet	Monthly
Temperature	°C	Monthly
Electrical Conductivity	µmhos/cm	Monthly
pH	pH units	Monthly
Turbidity	Turbidity units	Monthly
Discharge Flow Rate	Gallons/Day	Monthly
Monitoring Parameters		
Total Dissolved Solids (TDS)	mg/L	Semiannual
Chloride	mg/L	Semiannual
Carbonate	mg/L	Semiannual
Bicarbonate	mg/L	Semiannual
Nitrate - Nitrogen	mg/L	Semiannual
Sulfate	mg/L	Semiannual
Calcium	mg/L	Semiannual
Magnesium	mg/L	Semiannual
Potassium	mg/L	Semiannual
Sodium	mg/L	Semiannual
Tannins and Lignins	mg/L	Semiannual
Formaldehyde (USEPA Method 8315)	µg/L	Semiannual
Pentachlorophenol (USEPA Method 8270)	µg/L	Semiannual
Volatile Organic Compounds (USEPA Method 8260, see Table IV)	µg/L	Semiannual
Constituents of Concern (see Table IV)		
Total Organic Carbon	mg/L	Annually
Inorganics (dissolved)	mg/L or µg/L	Annually
Semi-Volatile Organic Compounds (USEPA Method 8270C)	µg/L	5 years

TABLE IV

CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS

<u>Inorganics (dissolved):</u>	<u>USEPA Method</u>
Cadmium	7131A
Total Chromium	6010
Chromium VI	3500
Copper	6010
Zinc	6010
Iron	6010
Manganese	6010
Arsenic	7062
Lead	7421
Mercury	7470A
Nickel	7521
Cyanide	9010B
Sulfide	9030B

Volatile Organic Compounds:

USEPA Method 8260

Acetone
Acetonitrile (Methyl cyanide)
Acrolein
Acrylonitrile
Allyl chloride (3-Chloropropene)
Benzene
Bromochloromethane (Chlorobromomethane)
Bromodichloromethane (Dibromochloromethane)
Bromoform (Tribromomethane)
Carbon disulfide
Carbon tetrachloride
Chlorobenzene
Chloroethane (Ethyl chloride)
Chloroform (Trichloromethane)
Chloroprene
Dibromochloromethane (Chlorodibromomethane)
1,2-Dibromo-3-chloropropane (DBCP)
1,2-Dibromoethane (Ethylene dibromide; EDB)
o-Dichlorobenzene (1,2-Dichlorobenzene)
m-Dichlorobenzene (1,3-Dichlorobenzene)
p-Dichlorobenzene (1,4-Dichlorobenzene)
trans- 1,4-Dichloro-2-butene
Dichlorodifluoromethane (CFC 12)
1,1 -Dichloroethane (Ethylidene chloride)

TABLE IV

CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS

Continued

1,2-Dichloroethane (Ethylene dichloride)
1,1 -Dichloroethylene (1, 1-Dichloroethene; Vinylidene chloride)
cis- 1,2-Dichloroethylene (cis- 1,2-Dichloroethene)
trans- 1,2-Dichloroethylene (trans- 1,2-Dichloroethene)
1,2-Dichloropropane (Propylene dichloride)
1,3-Dichloropropane (Trimethylene dichloride)
2,2-Dichloropropane (Isopropylidene chloride)
1,1 -Dichloropropene
cis- 1,3-Dichloropropene
trans- 1,3-Dichloropropene
Di-isopropylether (DIPE)
Ethanol
Ethyltertiary butyl ether
Ethylbenzene
Ethyl methacrylate
Hexachlorobutadiene
Hexachloroethane
2-Hexanone (Methyl butyl ketone)
Isobutyl alcohol
Methacrylonitrile
Methyl bromide (Bromomethane)
Methyl chloride (Chloromethane)
Methyl ethyl ketone (MEK; 2-Butanone)
Methyl iodide (Iodomethane)
Methyl t-butyl ether
Methyl methacrylate
4-Methyl-2-pentanone (Methyl isobutyl ketone)
Methylene bromide (Dibromomethane)
Methylene chloride (Dichloromethane)
Naphthalene
Propionitrile (Ethyl cyanide)
Styrene
Tertiary amyl methyl ether
Tertiary butyl alcohol
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane
Tetrachloroethylene (Tetrachloroethene; Perchloroethylene; PCE)
Toluene
1,2,4-Trichlorobenzene
1,1,1 -Trichloroethane, Methylchloroform
1,1,2-Trichloroethane
Trichloroethylene (Trichloroethene; TCE)

TABLE IV

CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS

Continued

Trichlorofluoromethane (CFC- 11)
1,2,3-Trichloropropane
Vinyl acetate
Vinyl chloride (Chloroethene)
Xylene (total)

Semi-Volatile Organic Compounds:

USEPA Method 8270 - base, neutral, & acid extractables

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

TABLE IV

CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS

Continued

4,4'-DDE
4,4'-DDT
Diallate
Dibenz[a,h]anthracene
Dibenzofuran
Di-n-butyl phthalate
3,3'-Dichlorobenzidine
2,4-Dichlorophenol
2,6-Dichlorophenol
Dieldrin
Diethyl phthalate
p-(Dimethylamino)azobenzene
7,12-Dimethylbenz[a]anthracene
3,3'-Dimethylbenzidine
2,4-Dimethylphenol (m-Xylenol)
Dimethyl phthalate
m-Dinitrobenzene
4,6-Dinitro-o-cresol (4,6-Dinitro-2-methylphenol)
2,4-Dinitrophenol
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Di-n-octyl phthalate
Diphenylamine
Endosulfan I
Endosulfan II
Endosulfan sulfate
Endrin
Endrin aldehyde
Ethyl methanesulfonate
Famphur
Fluoranthene
Fluorene
Heptachlor
Heptachlor epoxide
Hexachlorobenzene
Hexachlorocyclopentadiene
Hexachloropropene
Indeno(1,2,3-c,d)pyrene
Isodrin
Isophorone
Isosafrole
Kepone
Methapyrilene
Methoxychlor

TABLE IV

CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS

Continued

3-Methylcholanthrene
Methyl methanesulfonate
2-Methylnaphthalene
1,4-Naphthoquinone
1-Naphthylamine
2-Naphthylamine
o-Nitroaniline (2-Nitroaniline)
m-Nitroaniline (3-Nitroaniline)
p-Nitroaniline (4-Nitroaniline)
Nitrobenzene
o-Nitrophenol (2-Nitrophenol)
p-Nitrophenol (4-Nitrophenol)
N-Nitrosodi-n-butylamine (Di-n-butylnitrosamine)
N-Nitrosodiethylamine (Diethylnitrosamine)
N-Nitrosodimethylamine (Dimethylnitrosamine)
N-Nitrosodiphenylamine (Diphenylnitrosamine)
N-Nitrosodipropylamine (N-Nitroso-N-dipropylamine; Di-n-propylnitrosamine)
N-Nitrosomethylethylamine (Methylethylnitrosamine)
N-Nitrosopiperidine
N-Nitrosopyrrolidine
5-Nitro-o-toluidine
Pentachlorobenzene
Pentachloronitrobenzene (PCNB)
Pentachlorophenol
Phenacetin
Phenanthrene
Phenol
p-Phenylenediamine
Polychlorinated biphenyls (PCBs; Aroclors)
Pronamide
Pyrene
Safrole
1,2,4,5-Tetrachlorobenzene
2,3,4,6-Tetrachlorophenol
o-Toluidine
Toxaphene
2,4,5-Trichlorophenol
0,0,0-Triethyl phosphorothioate
sym-Trinitrobenzene

INFORMATION SHEET

ORDER NO. R5-2005-0027
OROVILLE LANDFILL PROPERTIES, ET AL
FOR CLOSURE OF
OROVILLE LANDFILL PROPERTIES CLASS III WOOD WASTE LANDFILL
BUTTE COUNTY

The Oroville Landfill Properties Class III Wood Waste Landfill is located approximately three miles south of Oroville. The site is owned by Oroville Landfill Properties LP, Oroville Landfill Properties Inc, Jack M. Steebles LLC, Carol Ann Seidenglanz LLC, and Steven Conn Seidenglanz LLC (hereafter Oroville Landfill Properties, ET AL). The site began operations in 1973 under the former ownership of Louisiana-Pacific Corporation. In September 2002, Oroville Landfill Properties ET AL purchased the site

Three waste management units (Units) exist at the 115 acre facility. Units 1 and 2 were used for disposal of wood waste and Unit 4 was used for disposal of ash from a nearby wood fired cogeneration facility. No wastes have been disposed at the site since 2001.

Four major geologic units have been identified beneath the site. The units that have been identified from the top of the meta-volcanic bedrock to the ground surface are the Ione Formation, the Merhten Formation, the Nomlaki Tuff, and the Laguna Formation. With the exception of the volcanic Nomlaki Tuff, the units are composed of Cenozoic flood deposits from the current and ancestral Feather River System. The Laguna and Merhten Formations contain water bearing sands and gravels that are commonly separated by interbedded clayey aquitards.

Four monitoring wells make up the groundwater detection monitoring system. First encountered groundwater is between 75 and 140 feet below the native ground surface. Groundwater flow at the site is generally towards the southwest.

The Discharger has proposed a pilot study to determine whether clean-closing the landfill is feasible so that the land may be reclaimed for alternative development. This Order prescribes a schedule for submitting the clean-closure feasibility determination, and further prescribes a schedule for clean-closure of the landfill or for closing the wastes in place with installation of an engineered final cover system over the buried wastes. This Order additionally revises former Waste Discharge Requirements Order No. 90-266 to be consistent with applicable provisions of Title 27 California Code of Regulations.



