

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2007-0042

WASTE DISCHARGE REQUIREMENTS
FOR
OROVILLE LANDFILL PROPERTIES, OROVILLE LANDFILL PROPERTIES LLC,
JACK M. STEEBLES LLC,
CAROL ANN SEIDENGLANZ LLC, AND STEVEN CONN SEIDENGLANZ LLC
FOR
CLEAN-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, Oroville Landfill Properties LLC, Jack M. Steebles LLC, Carol Ann Seidenglanz LLC, and Steven Conn Seidenglanz LLC (hereafter Discharger) own a Class III 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 105 acre facility consists of three existing unlined waste management units (Unit) covering approximately 27.5 acres, as shown in Attachment B, which is incorporated herein and made part of this Order. The facility is comprised of Assessor Parcel Numbers (APNs) 078-100-015, 078-100-046, and 078-090-014. APNs 078-100-047 and 035-470-012 were also included as being part of the facility in previous waste discharge requirements. However, the Discharger has shown that no waste disposal activities occurred on the latter two parcels, so they have been removed from the requirements in this Order.
3. APNs 078-100-015 and 078-090-014 are owned by Oroville Landfill Properties, Jack M. Steebles LLC, Carol Ann Seidenglanz LLC, and Steven Conn Seidenglanz LLC. APN 078-100-046 is owned by Oroville Landfill Properties LLC, Jack M. Steebles LLC, Carol Ann Seidenglanz LLC, and Steven Conn Seidenglanz LLC.
4. 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. Waste Discharge Requirements Order No. R5-2005-0027 was issued on 27 January 2005 and required the Discharger to close (cap wastes in place) or clean-close (excavate and remove all residual wastes) the three existing Units. This Order supercedes all previous Orders and allows for clean-closure of the three existing Units.

5. Section 21090(f) of Title 27 California Code of Regulations (hereafter Title 27 or 27 CCR) states in part, "The purpose of clean-closure is to render the landfill (including all surrounding environs contaminated by waste released from the landfill) no longer capable of posing a threat to water quality."

SITE DESCRIPTION

6. 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.
7. The previous site owner, Louisiana-Pacific Corporation, planted eucalyptus trees and spread sawdust from their mill operations along the south and east sides of the landfill property on parcel numbers APN 078-100-015, APN 078-100-046, and APN 078-090-014. After initial placement of the sawdust mulch, leachate consisting primarily of tannins and lignins was generated from the decomposing wood wastes and had the potential to enter storm water drainage courses. The Discharger constructed Pond 7 in the southeast corner of APN 078-090-014 to capture leachate laden storm water. The Discharger has requested to remove APN 078-090-014 from these waste discharge requirements. However, before APN 078-090-014 is removed from the waste discharge requirements, the Discharger will need to demonstrate that residual wastes, which may be present on the parcel, pose no threat to water quality.
8. 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 Lone 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.
9. 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.
10. Land uses within 1,000 feet of the facility are zoned industrial.
11. 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.

12. 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.
13. The waste management facility is not within a 100-year flood plain.

WASTE AND SITE CLASSIFICATION

14. 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.
15. 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. 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

16. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (hereafter Basin Plan), designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.
17. 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.
18. 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.
19. 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.
20. 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.

21. The direction of groundwater flow is toward the southwest. The groundwater gradient measured during first quarter 2004 was 0.01 feet per foot.
22. 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

23. 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. It has been reported that monitoring well LF-3 was abandoned after Unit 1 ceased accepting wastes. 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. All remaining monitoring wells will be abandoned at the completion of the clean-closure project after the Discharger demonstrates that residual wastes left at the site pose no threat to water quality.
24. Monitoring well LF-1A was installed in August 2000 and is located north and hydraulically upgradient of Unit 1. The total depth of well LF-1A is 138 feet with a screen 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 screen 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 screen 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 screen interval between 138 and 168 feet bgs.
25. 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 depth, water discharges off site to surface drainage courses and toward the Feather River. A leachate seep has occasionally appeared 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.

26. 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.
27. 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.
28. 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.
29. 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.
30. 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.

FINANCIAL ASSURANCES

31. The Discharger submitted updated Closure and Post-Closure Maintenance Cost Estimates dated 13 July 2006. Costs for closure were estimated to be \$1,602,376.00 and costs for 30 years of post-closure maintenance were estimated to be \$1,427,218.00. The cost estimates included a *Professional Certification for Initial Closure and Post-Closure Maintenance Costs* dated 13 July 2006, which was signed and stamped by the Discharger's consultant, a Registered Professional Engineer. The Discharger and the Regional Water Board are currently engaged in negotiations regarding the amount of

financial assurances described herein. These negotiations may result in the financial assurances being adjusted accordingly.

32. The Discharger established a Letter of Credit dated 29 September 2006 in the amount of \$3,133,494.00 to cover closure and post-closure maintenance costs.
33. The Discharger submitted an 8 April 2004 cost estimate for initiating and completing corrective action for all known or reasonably foreseeable releases from the landfill. The foreseeable release scenario that was used to develop the cost estimate involves corrective action associated with leachate seeps at the landfill surface and potential assessment of groundwater impacts. The 8 April 2004 corrective action cost estimate is \$103,900.00. This estimate has not been increased to reflect inflation factors since its initial development. Additionally, the Discharger has not demonstrated financial assurances for initiating and completing corrective action in the amount of the approved cost estimate, pursuant to Section 22221 of Title 27.
34. Section 22236 of Title 27 requires the Discharger to submit a report **by 1 June of each year** calculating the increase in the cost estimates for closure and/or post-closure maintenance and/or corrective action due to the inflation factor for the previous calendar year. The Discharger must increase the monetary amount of the financial mechanism(s) based upon the inflation factor.

LANDFILL CLOSURE

35. 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 been observed during previous wet weather seasons. 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.
36. 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.
37. 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 post-closure maintenance period.
38. The Discharger submitted a revised Report of Waste Discharge (ROWD) for Clean-Closure of the Oroville Landfill Properties Class III Wood Waste Landfill dated 20 December 2006. In the ROWD, the Discharger proposes to excavate wood wastes from Units 1 and 2,

process and separate the wastes from cover soils on-site, and then haul the recovered wood waste to a facility approved by the Executive Officer for re-use or disposal. The Discharger also proposes to excavate wood ash from Unit 4 and haul the materials to agricultural lands for use as a soil amendment.

39. This Order allows the Discharger to proceed with clean-closure actions in accordance with Section 21090(f) of Title 27, the 20 December 2006 revised ROWD, and the requirements of these waste discharge requirements and the attached monitoring and reporting program.

CEQA AND OTHER CONSIDERATIONS

40. The action to revise waste discharge requirements for this existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resource Code Section 21000, et seq., and the CEQA guidelines, in accordance with Title 14 CCR, Section 15301.
41. 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*.
42. 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. R5-2007-0042" are necessary to assure compliance with these waste discharge requirements. The Discharger owns and operates the facility that discharges the waste subject to this Order.

PROCEDURAL REQUIREMENTS

43. 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. No local agency has expressed any concern regarding clean-closure of the Units at the landfill.
44. The Regional Board notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the clean-closure project, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
45. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.
46. 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. R5-2005-0027 is rescinded, and Oroville Landfill Properties, Oroville Landfill Properties LLC, 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' to any part of this facility 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 waste to any Unit is prohibited, with the exception of temporary storage of materials recovered during clean-closure activities at Units 1, 2, and 4.
3. The discharge of wastes outside of a Unit or portions of a Unit specifically designed for their containment is prohibited.

4. Any waste that has been discharged at this site or recovered as part of the landfill clean-closure activities shall not cause a release of pollutants, or waste constituents in a manner that could cause a condition of nuisance, degradation, contamination, or pollution of groundwater or surface water 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.
5. The discharge of solid or liquid waste or leachate to surface waters, surface water drainage courses, or groundwater is prohibited.
6. Waste that has been discharged 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.
7. Clean-closure operations shall be managed so that nuisance conditions, including offensive odors, off-site noise impacts, off-site lighting impacts, fugitive dust, traffic congestion, etc., are not created. Complaints regarding nuisance conditions may require modification of clean-closure site operation activities.

B. FACILITY SPECIFICATIONS

1. The Discharger shall, in a timely manner, remove and relocate any waste 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. Additional surface water detention or retention basins may be necessary as clean-closure activities proceed. 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* that is site specific and addresses clean-closure of landfill Units in accordance with State Water Resources Control Board Order No. 97-03-DWQ and subsequent replacement Orders. Any storm water discharge off site shall be done in accordance with applicable storm water regulations and Monitoring and Reporting Program No. R5-2007-0042.
8. The Discharger shall submit for Executive Officer review and approval **by 1 October annually for the life of the clean-closure project and the post-clean-closure monitoring period** a Winterization Plan. The Winterization Plan should describe specific erosion and sediment control best management practices (BMPs) to be implemented for each upcoming wet weather season and include a discussion regarding any proposed clean-closure work activities during the wet weather season. The Winterization Plan shall also include a site map showing anticipated storm water drainage patterns and locations of major BMPs. The Winterization Plan shall be implemented **by 1 November annually**.

C. CLEAN-CLOSURE SPECIFICATIONS

1. The Discharger shall submit at least **30 days prior to beginning clean-closure excavation activities and no later than 15 June 2007**, a detailed clean-closure construction schedule. The schedule shall describe specific activities and the Unit they are proposed to occur in, anticipated installation of appurtenant structures such as additional detention/retention ponds to assist with storm water management, and anticipated installation of nuisance controls that may be necessary to maintain compliance with this Order. The schedule shall be updated at least quarterly in the Facility Clean-Closure Monitoring Reports.
2. Materials recovered from Units 1 and 2 shall be segregated from materials recovered in Unit 4 at all times.
3. Ash recovered from Unit 4 and hauled off-site for use as a soil amendment shall be applied at appropriate agronomic rates.
4. Wood ash may only be applied to agricultural lands in a manner that does not cause pollution or nuisances. Ash applied to agricultural lands as a soil amendment shall be disked or tilled into the native ground by the landowner within seven days after being discharged. If the ash is not disked or tilled into the ground surface within seven days after discharge, then appropriate wind/water erosion and sediment

control BMPs shall be installed by the landowner around the stockpile to prevent nuisances and discharges of ash to surface water drainage courses.

5. The following minimum setback distances shall be required for ash discharged to agricultural lands:

To Prevent Nuisance Conditions

From Occupied Dwelling	300 feet
From Businesses, Schools, Hospitals, or Churches	300 feet

To Protect Water Quality

From Ponds, Lakes, Streams, Wetlands	100 feet
From Natural and Man Made Drainages	100 feet
From Wells or Springs	100 feet

6. The Discharger shall ensure its compliance with this Order for all off-site discharges of wood ash excavated from Unit 4. The Discharger shall notify the property owner where ash is applied of the ash management requirements of this Order.
7. The Discharger shall submit for Executive Officer review and approval **prior to beginning clean-closure activities and no later than 15 June 2007** a work plan proposing to assess wood waste applications on the south and eastern portion of APN 078-100-046, the southeastern section of APN 078-100-015, and the eastern majority of APN 078-090-014. The work plan should include a sampling program and discuss specific ways to determine whether residual wood waste that may be on the parcels poses a threat to surface water quality, groundwater quality, or public health and the environment.
8. With the exception of rock that may be recovered during waste processing operations, materials (soil/rock/residual waste – spoils piles) separated from recovered wood waste in Units 1 and 2 shall be sampled and analyzed for the constituents and at the frequencies listed in Monitoring and Reporting Program No. R5-2007-0042. These sample results shall be reviewed and approved by the Executive Officer prior to discharging the spoils back to land on-site. Recovered rock shall be stored on-site and used by the Discharger at their discretion. Any proposal to haul spoils (including rock) off-site shall be reviewed and approved by the Executive Officer.
9. Wastes in each Unit that become exposed due to clean-closure activities and stockpiled recovered materials shall be covered with canvas tarps, plastic tarps, or six inches of soil at the end of each workday. Wastes or stockpiled recovered materials that will be left undisturbed for more than 90 days shall be covered with

- 12 inches of soil. Appropriate erosion and sediment control BMPs shall be installed as needed.
10. Leachate that may be encountered during clean-closure activities shall be collected, quantified, and stored on-site until necessary characterization is completed in accordance with Monitoring and Reporting Program No. R5-2007-0042 and off-site disposal is arranged, as approved by the Executive Officer.
 11. Decommissioned groundwater monitoring wells that may be encountered in Units 1 or 2 during clean-closure excavation activities shall be properly destroyed under permit from Butte County Environmental Health Division. Any well that is not completely removed from a Unit during clean-closure activities shall be marked on a final site map to be included with the Final Clean-Closure Report.
 12. The Discharger shall submit **by 1 August 2007** a Confirmation Sampling Plan that is acceptable to the Executive Officer. The Confirmation Sampling Plan should involve visual inspections and include laboratory analyses of native subgrade soils below each Unit and each sediment detention basin. Sideslope sampling may also be necessary to demonstrate wastes no longer pose a threat to water quality. Typical confirmation sampling programs include use of numbered grids and random number generators to establish sampling locations. Guidance documents such as the U.S.E.P.A. SW 846 Manual (Chapter 9) should be useful with helping develop a site and Unit specific confirmation sampling program.
 13. The Discharger shall monitor groundwater beneath the facility and perform the Standard Observations listed in Monitoring and Reporting Program No. R5-2007-0042 for two consecutive years following completion of clean-closure excavation activities. Upon completion of the two-year post-clean-closure maintenance period, the Discharger may request termination of all monitoring requirements.
 14. The Discharger shall submit a work plan for destruction of each Detection Monitoring Program groundwater monitoring well upon completion of the two-year post-clean-closure maintenance period. All wells shall be destroyed under permit from Butte County Environmental Health Division.
 15. Within 60 days after completing clean-closure of Units 1, 2, and 4 and the sawdust application areas on APNs 078-100-046, 078-100-015, and 078-090-014, the Discharger shall submit a Final Clean-Closure Report that documents all investigation and waste removal activities undertaken during the project. The Final Clean-Closure Report shall also include a site map indicating final topography, all laboratory data (excluding Detection Monitoring Program groundwater, surface water, and leachate monitoring results), volumes/tonnages of wastes hauled off-site, and final end-use locations of recovered materials.

16. If the Discharger's attempt to clean-close the landfill does not succeed or fails to meet the requirements or purpose stated within Section 21090(f) of Title 27 or fails to comply with the requirement of this Order, then the Discharger shall close the landfill in accordance with the Closure and Post-Closure Standards listed in Chapter 1, Subchapter 5, of Title 27 beginning with Section 20950, and carry out post-closure maintenance in the same manner as though the Discharger had not attempted clean-closure.
17. If the Discharger fails to excavate and remove wastes from the site and/or fails to proceed with clean-closure activities for a period of 12 consecutive months, then the clean-closure project shall be deemed incomplete and the Discharger shall close the landfill in accordance with the Closure and Post-Closure Standards listed in Chapter 1, Subchapter 5, of Title 27 beginning with Section 20950, and carry out post-closure maintenance in the same manner as though the Discharger had not attempted clean-closure.

D. DETECTION MONITORING SPECIFICATIONS

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, surface water, and leachate monitoring as specified in Monitoring and Reporting Program No. R5-2007-0042.
3. The Discharger shall provide Regional Board staff a minimum of **one week** notification prior to commencing any field activities related to the installation, repair, or abandonment of monitoring devices, and a minimum 48 hour notification prior to the collection of samples associated with a detection monitoring program, evaluation monitoring program, or corrective action program.
4. The Discharger shall submit for Executive Officer review and approval **by 15 June 2007** a Water Quality Protection Standard Report in accordance with applicable provisions of Title 27 and Monitoring and Reporting Program No. R5-2007-0042.
5. The Discharger shall comply with the Water Quality Protection Standard as required in this Order, Monitoring and Reporting Program No. R5-2007-0042, and the Standard Provisions and Reporting Requirements, dated April 2000.
6. 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.

7. 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.
8. 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. R5-2007-0042 and Title 27 CCR Section 20415(e).
9. The Discharger shall submit **by 15 June 2007** 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.
10. 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.
11. 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.
12. The **methods of analysis and the detection limits** used must be appropriate for the expected concentrations. 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.

13. **“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.
14. **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.
15. 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.
16. 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.
17. 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.
18. 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".

19. 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).
20. 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.
21. 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 ¶22, 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.

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

E. PROVISIONS

1. The Discharger shall maintain a copy of this Order at the facility and make it available at all times to facility operating personnel, who shall be familiar with its contents, and to regulatory agency personnel.
2. The Discharger shall comply with all applicable provisions of Title 27 CCR that are not specifically referred to in this Order.
3. The Discharger shall comply with Monitoring and Reporting Program No. R5-2007-0042, 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 Chapter 15 (23 CCR 2510, et seq.) and Part 258 (40 CFR 258)*, dated September 1993, 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, clean-closure, and post-clean-closure maintenance period of the Unit(s) and until the clean-closure project is completed and the waste discharge requirements are rescinded.
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 E.5. above and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer of this Order shall be approved or disapproved by the Regional Board.
10. The Discharger shall submit for Executive Officer review and approval **by 15 June 2007** updated cost estimates for initiating and completing corrective action for all known or reasonably foreseeable releases from the landfill in accordance with Section 22221 of Title 27. The Discharger shall demonstrate adequate financial resources for initiating and completing corrective action for all known or reasonably foreseeable releases in the amount of the approved cost estimate using one of the approved mechanisms in Title 27 **by 1 August 2007**.
11. The Discharger shall maintain financial assurance mechanisms for closure, post-closure maintenance, and corrective action costs in amounts approved by the Executive Officer and as specified in Chapter 6 of Title 27 until the post-clean-closure maintenance period is completed and approved by the Executive Officer.
12. The Discharger shall submit for Executive Officer review and approval **by 1 June annually**, a report calculating the increase in the cost estimates for closure and/or post-closure maintenance and/or corrective action due to the inflation factor for the previous calendar year in accordance with Section 22236 of Title 27. Once the inflation factor adjusted cost estimates are approved, the Discharger shall increase the monetary amount of the financial mechanisms for closure and/or post-closure maintenance and/or corrective action based upon the inflation factor calculation and provide proof of the financial assurance increase **by 1 August annually**.

13. Upon completion of the clean-closure project and the post-clean-closure maintenance period and with the approval of the Executive Officer, all financial assurances shall be released to the Discharger.
14. 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. Clean Closure	
1. Submit a detailed clean-closure construction schedule. <i>(see Clean-Closure Specification C.1)</i>	By 15 June 2007
2. Submit a work plan proposing to assess wood waste application activities on the south and eastern portion of APN 078-100-046, the southeastern section of APN 078-100-015, and the eastern majority of APN 078-090-014. <i>(see Clean-Closure Specification C.7)</i>	By 15 June 2007
3. Submit a Confirmation Sampling Plan that is acceptable to the Executive Officer. <i>(see Clean-Closure Specification C.12)</i>	By 1 August 2007
4. Submit a work plan proposing destruction of all groundwater detection monitoring wells. <i>(see Clean-Closure Specification C.14)</i>	Before Project Completion
5. Submit a Final Clean-Closure Report that documents all investigation and waste removal activities undertaken during the project. <i>(see Clean-Closure Specification C.15)</i>	60 Days After Project Completion
B. Facility Monitoring	
1. Submit a Winterization Plan. <i>(see Facility Specification B.8)</i>	By 1 October Annually
2. Submit a Water Quality Protection Standard Report. <i>(see Detection Monitoring Specification D.4)</i>	By 15 June 2007
3. Submit a Sample collection and Analysis Plan. <i>(see Detection Monitoring Specification D.9)</i>	By 15 June 2007

<u>TASK</u>	<u>COMPLIANCE DATE</u>
C. Financial Assurances	
1. Submit updated cost estimates for initiating and completing corrective action for all known or reasonably foreseeable releases. <i>(see Provision E. 10)</i>	By 15 June 2007
2. Provide proof of adequate financial assurances in the amount of the approved cost estimate for known or reasonably foreseeable releases. <i>(see Provision E. 10)</i>	By 1 August 2007
3. Provide a report calculating the increase in the cost estimates for closure and/or post-closure maintenance and/or corrective action due to the inflation factor for the previous calendar year. <i>(see Provision E. 12)</i>	By 1 June Annually
4. Provide proof that the financial mechanisms for closure and/or post-closure maintenance and/or corrective action have been increased based upon the annual inflation factor calculation. <i>(see Provision E. 12)</i>	By 1 August Annually

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 4 May 2007.

PAMELA C. CREEDON, Executive Officer

DPS: sae
5/14/07

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2007-0042

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

FOR
CLEAN-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), and with the *Standard Provisions and Reporting Requirements for Chapter 15 (23 CCR 2510, et seq) and Part 258 (40 CFR 258)* dated September 1993, is ordered by Waste Discharge Requirements Order No. R5-2007-0042.

A. REQUIRED MONITORING REPORTS

<u>REPORT</u>	<u>FREQUENCY</u>
1. Groundwater Monitoring (see D.1 below)	See Table 1
2. Annual Monitoring Summary Report (see E.6. below)	Annually by 31 January
3. Leachate Monitoring (see D.2 below)	See Table II
4. Surface Water Monitoring (see D.3 below)	See Table III
5. Facility Clean-Closure Monitoring Report (see D.4 below)	Quarterly
6. Winterization Plan	Annually by 1 October
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. R5-2007-0042 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 compliance with the 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 below.

Field and laboratory tests shall be reported in each monitoring report. Quarterly, 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>
Quarterly	Quarterly	31 March	30 April
		30 June	31 July
		30 September	31 October
		31 December	31 January
Semiannually	Semiannually	30 June	31 July
		31 December	31 January
Annually	Annually	31 December	31 January

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.

The Discharger shall also 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 below, and a discussion of compliance with the Waste Discharge Requirements and the Water Quality Protection Standard.

C. WATER QUALITY PROTECTION STANDARD AND COMPLIANCE PERIOD

The Discharger shall submit a Water Quality Protection Standard Report in accordance with Detection Monitoring Specification D.4 of Order No. R5-2007-0042. For each waste management unit (Unit), the Water Quality Protection Standard shall consist of all monitoring parameters and constituents of concern, the point of compliance, and all water quality monitoring points for each monitored medium. The Water Quality Protection Standard, or any modification thereto, shall be submitted in a report for Executive Officer review and approval.

1. Water Quality Protection Standard Report

The report shall:

- a. Identify **all distinct bodies of surface (ie: storm water detention ponds) 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 each surface water detention pond, 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).

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

2. Constituents of Concern

The constituents of concern include all the waste constituents, their reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the Unit. The Discharger shall monitor all constituents of concern in accordance with the frequencies and methods listed in Tables 1 through IV.

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 IV for the specified monitored medium.

3. Concentration Limits

For a naturally occurring constituents of concern, the concentration limit 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 post-clean-closure maintenance 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.2 of Waste Discharge Requirements, Order No. R5-2007-0042. All monitoring shall be conducted in accordance with a Sample Collection and Analysis Plan, which includes quality assurance/quality control standards, that shall be submitted for review and approval by 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 this Order and 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 an approved Sample Collection and Analysis Plan. 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. Basic construction details for the wells are described below:

Well ID	Year Installed	Total Depth in Feet	Screen Interval	Well Type
LF-1A	2000	138 ft. bgs	115 to 135 ft. bgs	Background
LF-2	1987	162 ft. bgs	138 to 158 ft. bgs	Compliance
LF-4	1987	160 ft. bgs	129 to 159 ft. bgs	Compliance
LF-5	1987	169 ft. bgs	138 to 168 ft. bgs	Compliance

bgs – Below ground surface

During each calendar quarter, 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 and submitted with each Semiannual Groundwater, Surface Water, and Leachate Monitoring Report.

Groundwater samples shall be collected semiannually 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 and constituents of concern in accordance with the frequencies specified in Tables 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 Schoeller plot.

Groundwater monitoring results shall be reported semiannually.

2. Leachate Monitoring

All three Units at the Oroville Landfill Properties Class III Wood Waste Landfill are unlined and no leachate collection and removal system exists at the site. However, leachate seeps have previously been observed along the ground surface at the northwestern portion of Unit 1. Additionally, the Discharger encountered at least one area of perched accumulated leachate within Unit 1 during the clean-closure pilot study.

In response to the leachate seeps, the Discharger installed a leachate seep control

system in September 2004. The leachate seep control system consists of a plastic lined interceptor trench with a perforated collection pipe placed in the bottom. Blank collection pipe extends down the hillside from the seep area toward a 500 gallon plastic holding tank.

The leachate seep control system shall be inspected weekly from 1 October through 31 May annually, and monthly from 1 June through 30 September 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. **Inspection dates, observations, and sample results shall be reported with the corresponding Semiannual Groundwater, Surface Water, and Leachate Monitoring Report for the period when samples were collected or observations.** The quantity of leachate shall be *estimated* and reported as Leachate Flow Rate (in gallons/day).

In addition, any leachate that may be encountered during clean-closure activities of the Units shall be collected and stored on-site until characterization and off-site disposal is arranged. **The volume and disposition of any leachate that is encountered during clean-closure activities shall be reported in the corresponding Quarterly Facility Clean-Closure Monitoring Report and the Semiannual Groundwater, Surface Water, and Leachate Monitoring Report, for the period when the observations were made and/or samples collected.** Documentation of proper disposal of collected leachate shall be reported in the appropriate Quarterly Facility Clean-Closure Monitoring Report and the Semiannual Groundwater, Surface Water, and Leachate Monitoring Report for the time period when leachate disposal occurred.

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 beyond the eucalyptus grove and sawdust application area. Surface drainage from the site and Units drains towards these three ponds.

Site drainage patterns may change as clean-closure of each Unit proceeds. The Discharger is responsible for ensuring that wastes do not impact surface water drainage courses and that all storm water discharges are in compliance with applicable regulations, the Basin Plan, and State Water Resources Control Board Order No 97-03-DWQ and subsequent replacement Orders.

The Discharger shall monitor the three detention basins weekly between 1 October and 31 May annually, and monthly between 1 June and 30 September 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. **Results of the surface water monitoring program shall be reported in each Semiannual Groundwater, Surface Water, and Leachate Monitoring Report.**

4. Facility Clean-Closure Monitoring

Clean-closure of Units 1, 2, and 4 involves excavating wood wastes and wood ash and hauling them off-site to locations or facilities approved by the Executive Officer. Units 1 and 2 contain wood wastes, while Unit 4 contains wood ash. Clean-closure monitoring is broken down by Unit and the type of materials to be characterized (ie: wood waste, wood ash, separated soil/rock/waste mix {spoils pile}, and confirmation sampling of the native soil subgrade at the bottom of each Unit) as follows:

a. Units 1 and 2 – Wood Waste

The Discharger proposes excavating wood wastes from Units 1 and 2 and hauling them to a facility approved by the Executive Officer for re-use or disposal. If the Discharger wishes to haul wood waste to another facility or location, then the Discharger must first receive approval from the Executive Officer prior to modifying clean-closure operations.

The following information shall be reported with each Quarterly Facility Clean-Closure Monitoring Report:

- 1) Daily number of trucks transporting wood waste off-site.
- 2) Daily volume (cubic yards) and tonnage of wood waste hauled.
- 3) Copies of manifests or shipping papers from the approved end-use facility showing date of receipt and volume/tonnage of wood waste for each load.

b. Unit 4 – Wood Ash

The Discharger proposes excavating wood ash from Unit 4 and hauling recovered materials to agricultural lands for use as a soil amendment. In order to ensure that recovered materials from Unit 4 do not pose a threat to public health or the environment, the Discharger is required to characterize recovered materials prior to hauling them off-site.

One sample for every 500 cubic yards of wood ash (including the soil/rock/waste/mixture referred to as a spoils pile) excavated from Unit 4 shall be analyzed for the following constituents:

- pH
- Polycyclic Aromatic Hydrocarbons – Method 8310
- Total and Dissolved Metal Concentrations – (Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Chromium VI, Cobalt, Copper, Lead, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Vanadium, and Zinc) – Method 6010/7000 for all metals except Chromium VI, which is Method 7199. Dissolved analyses may use deionized water as the extractant.

Ash sample results shall be reviewed to determine proper classification of the material prior to hauling off-site. Only material classified as inert or non-hazardous solid waste may be hauled off-site for use as an agricultural soil amendment.

The following information shall be reported with each Quarterly Facility Clean-Closure Monitoring Report:

- 1) Provide the physical address or location where ash will be applied.
- 2) Provide property owner contact information including phone number and mailing address for location(s) where ash will be applied.
- 3) Report the tonnage and/or volume and date of ash application to each agricultural land location.
- 4) Provide laboratory analytical data for ash samples collected during the reporting period.
- 5) If rock is recovered from ash and cover soil, report the volume/tonnage that is collected and indicate locations of any stockpiles or final placement areas on a site map.

c. All Units - Soil/Rock/Waste Mix (Spoils Piles)

It is anticipated that layers of soil covering wastes in each Unit will be encountered during clean-closure activities. The Discharger plans on separating and collecting rock from the cover soil, at least in Units 1 and 2, for re-use on-site. Other residual materials (spoils) may also be collected and stored on-site.

It is anticipated that the spoils pile generated from Unit 4 will be hauled off in the same manner as the recovered wood ash. Additional laboratory characterization may be required for any Unit 4 spoils pile left on-site.

Spoils piles (except for rock) from Units 1 and 2 that remain on-site shall be tested for the same constituents as the confirmation sampling required for the native soil subgrade at the bottom of each Unit, which is listed below. One sample for every 200 cubic yards of spoils is required.

The following information shall be reported with each Quarterly Facility Clean-Closure Monitoring Report:

- 1) The Unit of origin and volume/tonnage of the any spoils piles left on-site.
- 2) For rock that is separated and recovered during processing operations, report the volume/tonnage that is collected and indicate locations of any stockpiles or final placement areas on a site map
- 3) All laboratory sample results for each spoils pile left on-site.
- 4) A map showing the final disposal location for each spoils pile. Note that spoils piles from Units 1 or 2 may not be disposed in Unit 4, and vice versa.

d. Solid Waste Disposal

It is anticipated that the Discharger will encounter non-hazardous solid wastes other than wood wastes and wood ash while clean-closing Units 1, 2, and 4. Other wastes that may be encountered include hazardous wastes, metal pieces, sanding belts, plastic debris, etc.

All wastes, other than wood wastes from units 1 and 2 and wood ash from Unit 4, shall be collected for appropriate off-site disposal at a permitted facility.

Hazardous wastes shall be properly labeled and transported to an appropriate disposal facility by a licensed hauler.

The following information shall be reported with each Quarterly Facility Clean-Closure Monitoring Report:

- 1) The Unit of origin and a description of the wastes collected for off-site disposal.
- 2) The volume and tonnage of wastes collected for off-site disposal.
- 3) Name of disposal facility and date of off-site disposal.
- 4) The disposal receipts, shipping papers, manifests, etc. documenting proper disposal.

e. Unit Confirmation Sampling

The goal of clean-closure 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. A confirmation sampling program will be used at each Unit and each sediment detention basin to demonstrate that residual wastes no longer pose a threat to water quality. Clean-Closure Specification C.15 of Order No. _____ requires the Discharger to submit a Confirmation Sampling Plan that is acceptable to the Executive Officer.

Units and sediment detention basins shall be visually inspected to ensure the majority of waste has been physically removed. After the visual inspection confirms that no significant waste material remains, then the Discharger shall implement an approved confirmation sampling program. Sampling frequency shall be in accordance with the approved confirmation sampling program. The required analyses are based on the Unit or area being evaluated and the wastes that were contained within the Unit.

Analyses Required for Units 1 and 2 and Each Sediment Detention Basin

- Formaldehyde – Method 8315A
- Pentachlorophenol – Canadian Pulp Method
- 2,3,4,6 - Tetrachlorophenol – Canadian Pulp Method
- Polycyclic Aromatic Hydrocarbons – Method 8310
- Total and Dissolved Metal Concentrations – (Arsenic, Chromium, Chromium VI, Copper, Iron, Manganese, Vanadium, Zinc – Method 6010/7000 for all metals except Chromium VI, which is Method 7199. Dissolved analyses may use deionized water as the extractant.
- Volatile Organic Compounds – Method 8260B
- Semivolatile Organic Compounds (Acid Phenolics only) – Method 8270.

Analyses Required for Unit 4

- pH
- Polycyclic Aromatic Hydrocarbons – Method 8310
- Total and Dissolved Metal Concentrations – (Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Chromium VI, Cobalt, Copper, Lead, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Vanadium, and Zinc) – Method 6010/7000 for all metals except Chromium VI, which is Method 7199. Dissolved analyses may use deionized water as the extractant.
- Soluble Chloride (DI WET)
- Soluble Sodium (DI WET)
- Conductivity – Method 120.1 (DI Extract)

f. Storm Event Monitoring

Annually, prior to the anticipated rainy season, but no later than **30 September**, the Discharger shall conduct an inspection of the facility to determine whether the site is prepared for winter weather. 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 Reporting Requirements below. Any necessary construction, maintenance, or repairs shall be completed **within 30 days of the inspection**.

Additionally, 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. The facility inspection shall include the Standard Observations contained in Section E.4.f of Reporting Requirements below. Necessary repairs shall be completed **within 30 days of the inspection**. The Discharger shall report the dates and results of these facility inspections in the corresponding Semiannual Groundwater, Surface Water, and Leachate Monitoring Report covering the period when observations were made.

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 post-clean-closure 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 quarterly Facility Clean-Closure Monitoring 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 Quarterly Facility Clean-Closure Monitoring Report and Semiannual Groundwater, Surface Water, and Leachate Monitoring Report shall include a **compliance evaluation summary**. The compliance evaluation summary shall include a discussion of progress with the clean-closure project. 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 Sample Collection 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 be performed at least weekly during the life of the clean-closure project.** 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.
5. The Discharger shall report by telephone any seepage from the disposal area **immediately** after it is discovered. A written report shall be filed with the Regional Board **within seven days**, containing at least the following information:
- a. A map showing the location(s) of seepage;
 - b. An estimate of the flow rate;
 - c. A description of the nature of the discharge (e.g., all pertinent observations and analyses);
 - d. Verification that samples have been submitted for analyses of the Constituents of Concern and Monitoring Parameters, and an estimated date that the results will be submitted to the Regional Board; and
 - e. Corrective measures underway or proposed, and corresponding time schedule.
6. The Discharger shall submit an **Annual Monitoring Summary Report** to the Regional Board covering the reporting period of the previous monitoring year. This report shall contain:
- a. All monitoring parameters and constituents of concern shall be graphed so as to show historical trends at each monitoring point and background monitoring point, for all samples taken within at least the previous five calendar years. Each such graph shall plot the concentration of one or more constituents for the period of record for a given monitoring point or background monitoring point, at a scale appropriate to show trends or variations in water quality. The graphs shall plot each datum, rather than plotting mean values. For any given constituent or parameter, the scale for background plots shall be the same as that used to plot downgradient data. Graphical analysis of monitoring data may be used to provide significant evidence of a release.
 - b. Unless otherwise exempted by the Executive Officer, all monitoring analytical data obtained during the previous five calendar years shall be submitted in tabular form as well as in a digital file format acceptable to the Executive Officer. The Regional Board regards the submittal of data in hard copy and in digital format as "...the form necessary for..." statistical analysis [Title 27 CCR Section 20420(h)], in that this facilitates periodic review by the Regional Board.
 - c. A comprehensive discussion of the compliance record, and the result of any corrective actions taken or planned which may be needed to bring the Discharger into full compliance with the waste discharge requirements.

- d. A map showing the areas where clean-closure activities occurred during the reporting period.
- e. A written summary describing the progress of the clean-closure project during the reporting period.
- f. An evaluation of the effectiveness of the leachate monitoring/control facilities.

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

Ordered by

PAMELA C. CREEDON, Executive Officer

4 May 2007

(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.	Semiannually
Temperature	°C	Semiannually
Electrical Conductivity	µmhos/cm	Semiannually
pH	pH units	Semiannually
Turbidity	Turbidity units	Semiannually
Monitoring Parameters		
Total Dissolved Solids (TDS)	mg/L	Semiannually
Chloride	mg/L	Semiannually
Carbonate	mg/L	Semiannually
Bicarbonate	mg/L	Semiannually
Nitrate - Nitrogen	mg/L	Semiannually
Sulfate	mg/L	Semiannually
Calcium	mg/L	Semiannually
Magnesium	mg/L	Semiannually
Potassium	mg/L	Semiannually
Sodium	mg/L	Semiannually
Tannins and Lignins	mg/L	Semiannually
Formaldehyde (USEPA Method 8315)	µg/L	Semiannually
Pentachlorophenol (Canadian Pulp Method)	µg/L	Semiannually
2,3,4,6-Tetrachlorophenol (Canadian Pulp Method)	µg/L	Semiannually
Volatile Organic Compounds (USEPA Method 8260, see Table IV)	µg/L	Semiannually
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

* Annual samples shall be collected during the 4th calendar quarter of each year.

** The 5-year samples shall be collected during 4th quarter of 2007, and during the 4th calendar quarter every 5 years thereafter.

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	* Annually
Chloride	mg/L	* Annually
Carbonate	mg/L	* Annually
Bicarbonate	mg/L	* Annually
Nitrate - Nitrogen	mg/L	* Annually
Sulfate	mg/L	* Annually
Calcium	mg/L	* Annually
Magnesium	mg/L	* Annually
Potassium	mg/L	* Annually
Sodium	mg/L	* Annually
Tannins and Lignins	mg/L	* Annually
Formaldehyde (USEPA Method 8315)	µg/L	* Annually
Pentachlorophenol (Canadian Pulp Method)	µg/L	* Annually
2,3,4,6-Tetrachlorophenol (Canadian Pulp Method)	µg/L	* Annually
Volatile Organic Compounds (USEPA Method 8260, see Table IV)	µg/L	* Annually
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

* Annual samples shall be collected during the 4th calendar quarter of each year. If there is an insufficient volume of leachate available during the 4th quarter, then samples shall be collected at the earliest possible date when sufficient volumes exist for sampling purposes.

TABLE III
SURFACE WATER DETECTION MONITORING PROGRAM

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Field Parameters		
Freeboard	Feet/Inches	Weekly or Monthly
Temperature	°C	Monthly
Electrical Conductivity	µmhos/cm	Monthly
pH	pH units	Monthly
Total Suspended Solids	mg/L	Monthly
Total Settleable Solids	ml/L	Monthly
Turbidity	Turbidity units	Monthly
Discharge Flow Rate	Gallons/Day	Monthly
Monitoring Parameters		
Total Dissolved Solids (TDS)	mg/L	*Semiannually
Total Organic Carbon	mg/L	*Semiannually
Tannins and Lignins	mg/L	*Semiannually
Formaldehyde (USEPA Method 8315)	µg/L	*Semiannually
Pentachlorophenol (Canadian Pulp Method)	µg/L	*Semiannually
2,3,4,6-Tetrachlorophenol (Canadian Pulp Method)	µg/L	*Semiannually
Volatile Organic Compounds (USEPA Method 8260, see Table IV)	µg/L	*Semiannually
Constituents of Concern (see Table IV)		
Inorganics (dissolved)	mg/L or µg/L	** Annually
Semi-Volatile Organic Compounds (USEPA Method 8270C)	µg/L	*** 5 years

- * Semiannual samples shall be collected during the 2nd and 4th calendar quarters of each year.
- ** Annual samples shall be collected during the 4th calendar quarter of each year. If the detention basins contain no liquids during the 4th calendar quarter, then samples shall be collected at the earliest possible date when sufficient volumes exist for sampling purposes.
- *** The 5-year samples shall be collected during 4th quarter of 2007, and during the 4th calendar quarter every 5 years thereafter.

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)
Trichlorofluoromethane (CFC- 11)
1,2,3-Trichloropropane
Vinyl acetate

TABLE IV
CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS

Continued

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
4,4'-DDE
4,4'-DDT
Diallate
Dibenz[a,h]anthracene

TABLE IV

CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS

Continued

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
3-Methylcholanthrene
Methyl methanesulfonate
2-Methylnaphthalene
1,4-Naphthoquinone

TABLE IV

CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS

Continued

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-butyl nitrosamine)
N-Nitrosodiethylamine (Diethyl nitrosamine)
N-Nitrosodimethylamine (Dimethyl nitrosamine)
N-Nitrosodiphenylamine (Diphenyl nitrosamine)
N-Nitrosodipropylamine (N-Nitroso-N-dipropylamine; Di-n-propyl nitrosamine)
N-Nitrosomethylethylamine (Methylethyl nitrosamine)
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. R5-2007-0042
OROVILLE LANDFILL PROPERTIES, ET AL.
FOR CLEAN-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, Oroville Landfill Properties LLC, Jack M. Steebles LLC, Carol Ann Seidenglanz LLC, and Steven Conn Seidenglanz LLC (hereafter Oroville Landfill Properties, et al. or Discharger). 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 105 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 Lone 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 proposes to clean-close the landfill and transport recovered materials to locations or facilities approved by the Executive Officer for re-use or disposal. Once the clean-closure project is complete, the Discharger will implement appropriate erosion and sediment control best management practices until the site is stabilized. Two years of post-clean-closure groundwater monitoring is also required after completion of the clean-closure project. The Discharger will no longer be subject to waste discharge requirements or post-closure maintenance after completion of the clean-closure project is approved. This revised Order allows for clean-closure of the Oroville Landfill Properties Class III Wood Waste Landfill.



