

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2005-0069
WASTE DISCHARGE REQUIREMENTS
FOR
COUNTY OF PLACER DEPARTMENT OF FACILITY SERVICES
FORESTHILL LANDFILL
CLASS III LANDFILL
POST-CLOSURE MAINTENANCE AND MONITORING
PLACER COUNTY

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

1. Placer County Department of Facility Services (hereafter referred to as “Discharger”) owns and operates the 4.2-acre Foresthill Landfill, a closed Class III landfill on Patent Road off Todd Valley Road, approximately two miles southwest of Foresthill. The site is in Section 3, T13N, R10E, R6E, MDB&M, corresponding to Assessor Parcel Number 255-110-015, as shown in Attachment A, which is incorporated herein and made part of this Order.
2. The 52-acre site includes the landfill, associated drainage facilities, monitoring wells, and access roads, an adjacent transfer station to the north, and undeveloped land to the east and west, as shown in Attachment B: Site Map, which is incorporated herein and made a part of this Order.
3. The landfill operated from 1966 to 1983 accepting primarily household waste, construction debris, and green waste. Reports on file state that the refuse was disposed of by the trench-and-cover method. It is unknown whether any burn dump activity was conducted at the site. The facility ceased accepting wastes in 1983 and was closed in 1984. Since construction of the onsite transfer station in 1984, all household waste has been transported for disposal at the Western Regional Landfill in Lincoln.
4. The landfill is unlined and does not have a leachate collection and recovery system.
5. Effective 18 July 1997, the water quality regulations for Class II and Class III disposal facilities formerly contained in Chapter 15, Title 23, California Code of Regulations (CCR), and the solid waste regulations formerly in Title 14, CCR, were consolidated into Chapters 1 through 7, Subdivision 1, Division 2, Title 27, CCR (Title 27). These WDRs implement Title 27 regulations and prescribe updated requirements for post-closure maintenance and monitoring for the closed landfill.
6. The landfill is not subject to federal Subtitle D regulations (Title 40, Code of Federal Regulations, Part 258) because it ceased accepting wastes before the effective date of those regulations, 9 October 1991.

WASTES AND UNIT CLASSIFICATION

7. The landfill accepted solid wastes classified as “inert” and “nonhazardous” under Sections 20230 and 20220 of Title 27, respectively. Approximately 50,000 tons of waste was discharged to the landfill. Reports on file state that no liquid or hazardous wastes were accepted at the landfill.
8. The landfill is an existing, reclassified Class III waste management unit under Section 20080(d) of Title 27, since it operated prior to 27 November 1984. The landfill is an inactive unit under Section 20080(g) because it ceased accepting wastes prior to 27 November 1984.

SITE DESCRIPTION

9. The site is on a hill overlooking a valley in the west-sloping foothills of the Sierra Nevada Mountains. The average elevation of the landfill is about 2570 feet MSL.
10. Historically the area was used for hydraulic gold mining. Current surrounding land uses include small and large tract residential development, roads, and undeveloped shrub land and forestland.
11. There are approximately 35 private domestic wells within a one-mile radius of the site, ranging in depth from 60 to 250 feet. None of these wells are down gradient of the landfill. There is also one County-owned industrial supply well for fire suppression immediately north of the site. Small tract residences (i.e. less than an acre) in the site vicinity are generally connected to public water supplied by the Foresthill Public Utilities District.
12. The site is not within a 100-year floodplain.

SURFACE AND STORM WATER

13. Surface drainage is to an unnamed, intermittent drainage tributary to Pond Creek, which flows into the Middle Fork of the American River.
14. *The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* designates beneficial uses, establishes water quality objectives, and contains implementation plans and policies for all waters of the Basin.
15. The beneficial uses of surface waters of the Middle Fork of the American River and its tributaries are municipal and domestic supply; agricultural supply; power generation; recreation; fresh water habitat; and preservation and enhancement of fish, wildlife, and other aquatic resources.
16. The site receives an average of 52 inches per year of precipitation as determined from Rainfall Depth Duration Frequency data provided by the State Department of Water Resources for the Foresthill Station. The 2-year, 24-hour precipitation event at the station is 3.7 inches and the 100-year, 24-hour precipitation event is 8.3 inches.

GEOLOGY

17. Historical hydraulic mining activities removed much onsite soil leaving exposed bedrock and scattered rubble. Where onsite soil exists, it typically consists of up to two feet of gravelly loam underlain by up to 10 feet of sandy and/or silty clays soils. Underlying these soils is typically up to 50 feet of tertiary-age weathered, sheared, and/or fractured metasedimentary deposits (i.e. claystone or claystone breccia) underlain by metavolcanic bedrock such as metabasalt. Reports on file state that the bedrock in the northern part of the site is high in iron and manganese, which have been detected in groundwater in this area.
18. There are no known Holocene faults within 1000 feet of the facility. The closest known active fault in the vicinity, the Southern Melones Fault, is about 2 1/4 miles east of the landfill. No determination of maximum probable earthquake has been made.

GROUNDWATER

19. The beneficial uses of the ground water are domestic, municipal, agricultural, and industrial supply.
20. The groundwater gradient averages about 0.05 ft/ft to the east. Groundwater elevations range from approximately 2715 feet MSL along the western landfill perimeter to approximately 2685 feet MSL along the eastern landfill perimeter, with a seasonal variation up to about plus or minus 3 feet. The depth to groundwater ranges from about 30 to 100 feet depending on the surface topography and direction relative to the gradient.

Groundwater Monitoring

21. A 1988 Solid Waste Assessment Test (SWAT) investigation found no apparent groundwater impacts from the landfill and no impacts have been detected in subsequent groundwater monitoring conducted under WDRs. Dissolved iron has been historically detected above the Secondary Maximum Concentration Limit (300 µg/L) both upgradient and down gradient of the landfill but appears to be attributable to natural conditions in the soil and bedrock.
22. There are five monitoring wells at the site, including one upgradient well (MW-3), three down gradient wells (MWs 2, 4 and 5), and one side gradient well (MW-1), as shown in Attachment B. MWs 2, 3 and 5 are screened in the sedimentary or metasedimentary deposits, while MW-1 is screened in the underlying bedrock. MW-4, the shallowest well, was completed in the unsaturated zone and has been dry since its installation in 1990. The Discharger plans to abandon this well and it has not been included as a monitoring point in the monitoring and reporting program under this Order.

LANDFILL CLOSURE

23. The landfill was originally closed in 1984 with a non-prescriptive soil cover that subsequently eroded away. In 1996 the Discharger re-capped the landfill pursuant to a September 1994 Final Closure Plan submitted under WDRs (see attached Information Sheet). The final cover included a two-foot foundation layer consisting of gravelly clay

overlain by a one to five foot thick layer of vegetative cover soil. No low hydraulic conductivity layer was included in the non-prescriptive design.

24. The landfill cover deck is graded at a minimum 3 percent slope from the crest area in the northern part of the site to the landfill toe in the southern part of the site. The steepest side slope (4H:1V) is along the northwest side of the unit.

A Section 21750(f)(5) technical report demonstrating the stability of the cover slopes was not prepared for this facility because none of the cover slopes are steeper than 3H:1V (or contain a geosynthetic component) and the Discharger closed the unit prior to July 18, 1997. See Sections 21090(a) and 20310(g).

Drainage

25. Landfill runoff is directed by a series of cover berms/swales and overside drains to a concrete-lined V-ditch that runs along the southern, eastern, and western sides of the landfill (see Attachment B). The ditch discharges at three locations to unlined seasonal drains that flow offsite to Pond Creek. An unlined ditch along the northern landfill perimeter directs sheet flow run-on around the landfill to the eastern and western perimeter drains. Drainage from the transfer station area north of the landfill flows into the eastern perimeter drain.

Landfill Gas

26. There are no landfill gas (LFG) monitoring wells at the site. Concentrations of methane detected by bar hole punch along the site perimeter have been less than two percent of the lower explosive limit (i.e. <1,000 parts per million by volume). No landfill gas collection or venting facilities have been installed at the landfill.

COST ESTIMATES AND FINANCIAL ASSURANCES

27. The Discharger is required to demonstrate financial assurances for post-closure maintenance to the Regional Board pursuant to Section 22212 of Title 27. The annual cost of post-closure maintenance and monitoring is estimated to be \$45,000 in 2005 dollars. The Discharger has an enterprise account funded by franchise fees collected from solid waste haulers to cover these annual costs. The Discharger is not required to demonstrate financial assurances for post-closure maintenance to the California Integrated Waste Management Board (CIWMB) because, pursuant to Section 22210(b), the landfill ceased operations before January 1, 1988.
28. The Discharger is also required to maintain financial assurances for corrective action to the Regional Board in accordance with Sections 22212 and 22222 of Title 27, respectively. Since no release has been detected at the site since initiation of monitoring in 1988, the Discharger has stated that a future release at the site is unlikely. Notwithstanding, the Discharger has included in the enterprise account a minimum of \$10,000 above the costs of post-closure maintenance and monitoring to cover costs of a reasonably foreseeable corrective action such as installation of gas vents.

CEQA AND OTHER CONSIDERATIONS

29. The action to revise the WDRs is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21000, et seq.), in accordance with Title 14, CCR Section 15301 for existing facilities.
30. 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 (Monitoring and Reporting Program No. R5-2005-0069, attached) is necessary to assure compliance with these WDRs. The Discharger operates the facility that discharges the waste subject to this Order.
31. This order implements:
 - a. The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition; and
 - b. Chapters 1 through 7, Subdivision 1, Division 2, Title 27, of the California Code of Regulations, effective 18 July 1997, and subsequent revisions.

PROCEDURAL REQUIREMENTS

32. 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.
33. The Regional Board notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
34. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.
35. 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.waterboards.ca.gov/water_laws/index.html and will be provided on request.

IT IS HEREBY ORDERED, pursuant to Sections 13263 and 13267 of the California Water Code, that Order No. 94-053 is rescinded, and that Placer County Department of Facility Services, 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. DISCHARGE PROHIBITIONS

1. The discharge of new or additional waste to the landfill is prohibited.
2. The discharge of solid or liquid wastes, including treated or untreated wastewater, sump liquid, or groundwater, to any surface water or any surface water drainage course is prohibited without a National Pollutant Discharge Elimination System (NPDES) permit authorizing the discharge.
3. The landfill shall not cause pollution or a nuisance, as defined by the California Water Code, Section 13050, and shall not cause degradation of any water supply.

B. DISCHARGE SPECIFICATIONS

1. Landfill waste shall remain within the designated disposal area at all times.
2. The Discharger shall, in a timely manner, remove and relocate any wastes discharged at this facility in violation of this Order.
3. Storm water runoff from the facility shall be monitored in accordance with applicable storm water regulations.
4. A minimum separation of five feet shall be maintained between wastes or leachate and the highest anticipated elevation of underlying groundwater per Section 20240(c) of Title 27.

C. POST-CLOSURE SPECIFICATIONS

1. The Discharger shall maintain waste containment facilities, the landfill final cover, precipitation and drainage controls, monitoring wells, and shall continue to monitor ground water and surface waters per Monitoring and Reporting Program No. R5-2005-0069 throughout the post-closure maintenance period.
2. All final cover slopes shall be capable of withstanding a maximum probable earthquake.
3. In spite of differential settlement, the final cover shall be graded and maintained to prevent ponding, promote lateral runoff, and prevent soil erosion due to high run-off velocities.

4. The vegetative cover layer shall be maintained with native or other vegetation capable of providing effective erosion resistance.
5. The Discharger shall conduct an aerial site survey of the site for the purpose of updating the topographic map for the site at least every five years.
6. Precipitation and drainage control systems shall be operated and maintained to convey peak flows from a 100-year, 24-hour storm event.
7. Annually, prior to the anticipated rainy season but no later than **31 October**, any necessary erosion control measures shall be implemented and any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent storm water flows from:
 - a. Contacting or percolating through wastes,
 - b. Causing erosion or inundation of the landfill cover or other areas of the site, or
 - c. Causing sedimentation and clogging of the storm drains.
8. Any proposed change in post-closure use shall be in accordance with Section 21190 of Title 27.

D. FACILITY SPECIFICATIONS

1. The Discharger shall maintain in good working order any facility, control system, or monitoring device installed to achieve compliance with the waste discharge requirements. All storm water controls, including drainage facilities, shall be maintained so that they function effectively during precipitation events.
2. All wells within 500 feet of the waste management units shall have sanitary seals that meet the requirements of the Placer County Department of Health and Human Services or shall be properly abandoned. A record of the sealing and/or abandonment of such wells shall be sent to the Board and to the State Department of Water Resources.
3. The Discharger or persons employed by the Discharger shall comply with all notice and reporting requirements of the State Department of Water Resources with regard to construction, alteration, destruction, or abandonment of all monitoring wells used for compliance with this Order or with Monitoring and Reporting Program No. R5-2005-0069, as required by Section 13750 through 13755 of the California Water Code.

E. MONITORING SPECIFICATIONS

1. The Discharger shall conduct groundwater monitoring as specified in Monitoring and Reporting Program (MRP) No. R5-2005-0069. Groundwater monitoring shall include background and detection monitoring. Background monitoring shall be conducted for the purpose of establishing concentration limits as part of the Water Quality Protection

Standard per Section 20400(a) of Title 27. Detection monitoring shall be conducted for the purpose of detecting a release per Section 20420(b).

2. The Discharger shall comply with the Water Quality Protection Standard as specified in MRP No. R5-2005-0069.
3. The concentrations of the constituents of concern in waters passing the Point of Compliance shall not exceed concentration limits established in accordance with MRP No. R5-2005-0069.
4. The Sampling and Analysis Plan required for water quality monitoring under the Standard Provisions (*Provision 1, General Provisions for Monitoring*) shall include the following elements:
 - 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; Sample quality assurance/quality control (QA/QC) procedures; and
 - d. Chain of Custody control.
5. The Discharger shall provide Regional Board staff a minimum of **one-week** notification prior to commencing any field activities related to the installation, non-routine repair, or abandonment of monitoring devices. The Discharger shall also provide Regional Board staff with a sampling schedule at least 48 hours prior to initiation of each groundwater monitoring event conducted pursuant to MRP No. R5-2005-0069.

MONITORING DATA ANALYSIS

6. All monitoring data analysis methods shall be consistent with the performance standards specified in Section 20415(e)(9) and sampling standards specified in Section 20415(e)(12).
7. Some of the monitoring data analysis procedures specified in these WDRs (including the MRP) are different than, or are contradictory to, those specified in the Standard Provisions (incorporated under Provision G.3 of this Order). In particular, Monitoring Specification E.9 specifies the intrawell prediction limits data analysis method proposed by the Discharger rather than the hierarchical Analysis of Variance (ANOVA) approach described in the Standard Provisions for exceedance detection and retest. Monitoring Specifications E.10 and 11 clarify which specific constituent groups shall be evaluated statistically and which constituent groups shall be evaluated non-statistically. Monitoring Specification E.11 treats VOCs as individual monitoring parameters rather than as a single combined monitoring parameter as set forth in the Standard Provisions. In accordance with General Provision 8 of the Standard Provisions, the data analysis specifications in the WDRs and MRP shall govern over those of the Standard Provisions in such cases where they are inconsistent.

8. 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 Section 20415(e)(7) of Title 27 that is used in the statistical method shall be **the lowest concentration (or value) that can be reliably achieved** within limits of precision and accuracy specified in the WDRs for routine laboratory operating conditions that are available to the facility. The Discharger's technical report, pursuant to Section 20415(e)(7) of Title 27, shall consider the PQLs listed in Appendix IX to Chapter 14 of Division 4.5 of Title 22, California Code of Regulations, for guidance when specifying limits of precision and accuracy. For any given constituent monitored at a background or down gradient 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".
9. For inorganic monitoring parameters and COCs for which at least 10% of the data equal or exceed their respective MDL, the Discharger shall use the method of intrawell prediction limits for detection monitoring, or an alternate statistical method approved by Regional Board staff in accordance with the Standard Provisions, to establish concentration limits pursuant to Section 20400 of Title 27. The Discharger shall conclude that any analyte that exceeds its concentration limit provides a preliminary indication [or, for a retest, provides measurably significant evidence] of a release at that monitoring point. Any COC confirmed by retest as part of a release shall be added to the monitoring parameter list such that it is monitored during each regular monitoring event.
10. For inorganic monitoring parameters and COCs for which less than 10% of the data from background samples equal or exceed their respective MDL, the Discharger shall use a nonstatistical data analysis method for determining concentration limits and detecting a release. The Discharger shall use the following trigger for these constituents:
 - a. From the constituent of concern or monitoring parameter list, identify each analyte in the current sample that exceeds its MDL. The Discharger shall conclude that the exceedance provides a preliminary indication [or, for a retest, provides measurably significant evidence] of a release at that monitoring point, if the data contains an analyte that exceeds its PQL.

Any COC 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.

11. For VOCs and other organic COCs (i.e. non-naturally occurring COCs) the Discharger shall use a nonstatistical data analysis method for determining concentration limits and detecting a release. The Discharger shall use the following trigger these constituents:
 - a. From the constituent of concern or monitoring parameter list, identify each analyte in the current sample that exceeds its respective MDL. The Discharger shall conclude that the data provides a preliminary indication [or, for a retest, provides measurably significant evidence] of a release (existing or new) at that monitoring point, if either:
 - 1) The data contains two or more analytes that equal or exceed their respective MDLs; or
 - 2) The data contains one analyte that equals or exceeds its PQL.

Any COC 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.

Discrete Retest

12. If the above statistical or non-statistical trigger procedures used for groundwater monitoring data analysis provide a preliminary indication of a release at a given monitoring point, 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.
 - a. 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 apply the same tests [i.e. 9.a for statistical constituents, 10.a or 11.a for non-statistical constituents], to separately analyze each of the two suites of retest data at the monitoring point where the release is preliminarily indicated.
 - b. If either (or both) of the retest samples trips the applicable trigger above (9.a, 10.a or 11.a), then the Discharger shall conclude that there is measurably significant evidence of a release at that monitoring point for the analyte(s) indicated in the validating retest sample(s) and shall:
 - 1) Immediately notify the Regional Board about the constituent verified to be present at the monitoring point, and follow up with written notification submitted by certified mail within seven days of validation; and
 - 2) Comply with 13, below.

Exceedances that the Discharger demonstrates (per Section 20420(k)(7) of Title 27) are the result of sample corruption, laboratory interferences, error, natural variation in the groundwater or other cause not associated with a release from the unit shall not trigger notification of a tentative release, and shall not trigger a retest unless a retest is necessary to make the demonstration.

13. 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 Response To A Release, contained in the Standard Provisions.

F. REPORTING REQUIREMENTS

1. The Discharger shall comply with the reporting requirements specified in this Order, in Monitoring and Reporting Program Order No. R5-2005-0069 and in the Standard Provisions.
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. The Discharger shall notify the Regional Board in writing of any proposed change in ownership or responsibility for construction or operation of the landfill. 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 the Standard Provisions (Reporting Requirement 5) and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer of this Order shall be approved or disapproved by the Regional Board.
4. The discharger shall **mail a copy of each** monitoring **report** and any other reports required by this Order to:

California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670
(or the current address if the office relocates)

G. PROVISIONS

1. The Discharger shall maintain a copy of this Order 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 the Monitoring and Reporting Program No. R5-2005-0069, which is attached to and made part of this Order. A violation of the MRP is a violation of these waste discharge requirements.
3. The Discharger shall comply with the Standard Provisions and Reporting Requirements (Standard Provisions), dated August 1997, which are hereby incorporated into this Order. The Standard Provisions contain important provisions and requirements with which the Discharger must comply. A violation of any of the Standard Provisions is a violation of these waste discharge requirements.
4. The Discharger or persons employed by the Discharger shall comply with all notice and reporting requirements of the State Department of Water Resources with regard to construction, alteration, destruction, or abandonment of all monitoring wells used for compliance with this Order or with Monitoring and Reporting Program No. R5-2005-0069, as required by Section 13750 through 13755 of the California Water Code.
5. The Discharger shall immediately notify the Regional Board of any flooding, equipment failure, slope failure, or other change in site conditions that could impair the integrity of waste containment facilities or of precipitation and drainage control structures.
6. The Discharger shall maintain waste containment facilities, the landfill final cover, precipitation and drainage controls, monitoring wells, and shall continue to monitor ground water and surface waters per Monitoring and Reporting Program No. R5-2005-0069 throughout the post-closure maintenance period.
7. The post-closure maintenance period shall continue until the Regional Board verifies that remaining waste in the landfill will not threaten water quality.
8. The owners of the waste management facility shall have the continuing responsibility to assure protection of usable waters from discharged wastes and from gases and leachate generated by discharged wastes during the closure and post-closure maintenance period of the landfill and during subsequent use of the property for other purposes.
9. The Discharger shall update the Final Post-Closure Maintenance Plan as necessary to reflect current operations and requirements under these WDRs and MRP No. R5-2005-0069. The plan shall include updated cost estimates for post-closure

maintenance and monitoring as necessary to comply with these WDRs. A copy of the updated plan shall be provided to the Regional Board by **30 September 2005**.

10. The Discharger shall maintain assurances of financial responsibility for post-closure maintenance of the landfill in an amount approved by the Executive Officer in consultation with the California Integrated Waste Management Board (CIWMB). The financial assurances mechanism shall be an irrevocable fund or other acceptable mechanism under the CIWMB-promulgated sections of Chapter 6, Title 27, but with the Regional Board named as beneficiary.
11. The Discharger shall maintain assurances of financial responsibility for initiating and completing corrective action for all known or reasonably foreseeable releases from the landfill in an amount approved by the Executive Officer. The financial assurances mechanism shall be an irrevocable fund or other acceptable mechanism under the CIWMB-promulgated sections of Chapter 6, Title 27, but with the Regional Board named as beneficiary.
12. 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.
13. 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.
14. The Discharger shall also notify the Regional Board of any proposed land use or closure plan changes. This notification shall be given 90 days prior to the effective date of the change and shall be accompanied by an amended Report of Waste Discharge and any technical documents that are needed to demonstrate continued compliance with these waste discharge requirements.
15. The Regional Board will review this Order periodically and will revise these requirements when necessary.

I, THOMAS R. PINKOS, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 29 April 2005.

THOMAS R. PINKOS, Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2005-0069
MONITORING AND REPORTING PROGRAM
COUNTY OF PLACER DEPARTMENT OF FACILITY SERVICES
FORESTHILL LANDFILL
CLASS III LANDFILL
POST-CLOSURE MAINTENANCE AND MONITORING
PLACER COUNTY

The 4.2 acre closed landfill operated from 1966 to 1983 accepting primarily household refuse. The landfill was capped in 1996 with a non-prescriptive soil cover three to five feet thick. Groundwater monitoring has not shown any impacts from the landfill and groundwater quality at the site is good, with total dissolved solids (TDS) and chloride generally detected below 150 mg/L and 30 mg/L respectively. Storm water runoff is directed to perimeter drains that discharge offsite into natural drainage courses tributary to Pond Creek. Storm water discharges from the site, including the adjacent transfer station, are monitored under the General Industrial Storm Water Permit (see Attachment B: Site Map).

Pursuant to Section 20080(g) of Title 27, the Discharger shall maintain water quality monitoring systems for background and detection monitoring. Compliance with this MRP is ordered by Waste Discharge Requirements (WDRs) Order No. R5-2005-0069.

A. SUMMARY OF MONITORING & REPORTING FREQUENCIES

Table A

Section	Reporting	Frequency
B.	1. Semiannual Report	Semiannually
	2. Annual Summary Report	Annually
	3. Constituents of Concern Report	Every 5 years
C.	Water Quality Protection Standard Report	Update as necessary
Section	Monitoring	Frequency
D.	Leachate Monitoring	Same as F.1
E.	Groundwater Monitoring:	
	1. Elevation	Quarterly
	2. Background & Detection Monitoring:	Semiannually/Every two years (See Table E.3.B)
	3. Constituents of Concern	Every 5 years
F.	Facility Monitoring:	
	1. Standard Observations	
	A. Wet Season	Monthly
	B. Dry Season	Quarterly
	2. Maintenance Inspections	Quarterly
	3. After Storm Events	Within 7 Days After Significant Storm Event
	4. Site Winterization	Annually

B. REPORTING

1. Semiannual Reports

The Discharger shall report monitoring data and information as required in this Monitoring and Reporting Program and as required under Order No. R5-2005-0069 and the Standard Provisions and Reporting Requirements (August 1997). Reports shall be submitted **semiannually**. Each semiannual monitoring report shall include the following information:

- A. A compliance evaluation summary for the monitoring period.
- B. A tabular summary of well information from the installation logs, including well name, top-of-casing elevation, total depth, depths/elevations of screened interval, aquifer or zone (i.e. uppermost), and soil type(s) over the screened interval.
- C. The results of groundwater elevation monitoring.
- D. Tabular summaries of monitoring data for each media showing sampling dates, well, constituents, concentrations, and concentration limits. The table shall also clearly show whether new monitoring data exceedances occurred during the monitoring period (i.e. highlight exceedances).
- E. Tables of historical monitoring data for each unit showing well, sampling dates, constituents, concentrations, and concentration limits. The data shall be presented so as to clearly show historical concentrations at each well.
- F. Field and laboratory tests sheets.

2. Annual Monitoring Summary Report

An Annual Monitoring Summary Report (Annual Report) shall also be prepared and submitted in accordance with this section of the MRP and Standard Provisions (*Provision 4, Reports to be Filed with the Board, REPORTING REQUIREMENTS*). The report shall summarize monitoring results for the prior year and include a discussion of compliance with the WDRs and the Water Quality Protection Standard. The report shall also include the following:

- A. Tabular and graphical summaries, including time series plots of historical monitoring data (including the prior year's data) for each monitoring parameter/COC.
- B. An electronic copy of the data in a digital format acceptable to the Executive Officer.
- C. A copy of the Sampling and Analysis Plan referenced in the Standard Provisions (*Provision 1, Provisions for Monitoring*).

The Annual Report may be included in the Second Semiannual Report for each year.

Reports that do not comply with the above-required format will be **REJECTED** and the Discharger shall be deemed to be in noncompliance with the waste discharge requirements. The semiannual and annual 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:

Table B

<u>Report</u>	<u>End of Reporting Period</u>	<u>Date Report Due</u>
First Semiannual	30 June	31 July
Second Semiannual	31 December	31 January
Annual Report	31 December	31 January

c. WATER QUALITY PROTECTION STANDARD (Section 20390)

The Water Quality Protection Standard (WQPS) shall consist of all Constituents of Concern, Concentration Limits for each constituent of concern, Monitoring Points, Point of Compliance, and the Compliance Period.

1. Constituents of Concern (Section 20395 of Title 27)

The constituents of concern (COCs) for the landfill shall be as follows:

Table C

Constituents of Concern	Units	Test Method
Field Parameters:	See Attachment D	
General Minerals:	See Attachment D	
Inorganics (dissolved) ¹	µg/L	See Attachment D
Volatile Organic Compounds	µg/L	USEPA Method 8260B
Semi-Volatile Organic Compounds ²	µg/L	USEPA Method 8270
Organophosphorus Pesticides ²	µg/L	USEPA Method 8141A
Chlorinated Herbicides ²	µg/L	USEPA Method 8151
Organochlorine Pesticides ²	µg/L	USEPA Method 8081A
Polychlorinated Biphenols (PCBs) ²	µg/L	USEPA Method 8082

1. Five-year monitoring may be discontinued for those COCs not detected during initial five-year monitoring event.
2. Five-year monitoring for these COCs may be discontinued if none detected during initial five-year monitoring event.

COC monitoring under this Order shall be conducted by 15 December 2005 and at least every five years thereafter. Any COC that is confirmed by retest (i.e. per WDR Monitoring Specification E.12) to be a constituent of a release shall be added to the monitoring parameter list (Table 3B herein and Attachment C). In such cases, the Discharger shall also follow the Response to Release requirements of the WDRs (Monitoring Specification E.13) and 1997 Standard Provisions.

2. Concentration Limits (Section 20400)

- a. For VOCs and other organic COCs the concentration limit shall be the MDL.
- b. For inorganic monitoring parameters and COCs for which at least 10% of the data from background samples equal or exceed their respective MDL, the concentration limit shall be determined as follows:
 - i. Using the Prediction Limits statistical procedure applied to historical background data; and/or
 - ii. An equivalent non-parametric procedure where appropriate (e.g. greater than 50

- percent non-detects or data not normally or log normally distributed); and/or
- iii. Using an alternative statistical method approved by Regional Board staff per Monitoring Specification E.9 of the WDRs and the Standard Provisions.
- c. For inorganic monitoring parameters and COCs for which less than 10% of the data from background samples equal or exceed their respective MDL, the concentration limit shall be the PQL.

Statistical concentration limits shall be based on historical background data and updated as necessary to reflect current background conditions. Prior to calculating concentration limits, the historical data shall be screened for trends to ensure that the data used is of a single statistical population (i.e. does not show appreciable variation per Section 20415(e)(10). Concentration limits shall also take into account any seasonality in the data. Concentration limits may be based on intrawell monitoring (i.e. using each well's historical data as background) provided that the historical data is representative of current background conditions.

3. Monitoring Points (Section 20405)

The monitoring points for groundwater monitoring shall be as listed in Table E.3A herein.

4. Point of Compliance (Section 20405)

The point of compliance (POC) for the water standard is a vertical surface located at the hydraulically down gradient limit of each Unit that extends through the uppermost aquifer underlying the Unit. The POC wells shall be MWs-2, 5 and any future wells installed along the POC`.

5. Compliance Period (Section 20410)

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

D. LEACHATE MONITORING

The Discharger shall monitor the landfill for leachate seeps **monthly** during the wet season and **quarterly** during the dry season as part of standard observations. Any leachate seeps observed during these inspections or at any other time shall be sampled and analyzed for the constituents of concern referenced in Table C herein. Reporting shall be conducted in accordance with the Standard Provisions (*Provision 3, Reports to be Filed with the Board, REPORTING REQUIREMENTS*).

E. GROUNDWATER MONITORING

1. Groundwater Elevation Monitoring (Section 20415(e)(13))

The groundwater surface elevation (in feet and hundredths, MSL) in all wells and piezometers shall be measured on a **quarterly** basis. Groundwater elevations taken prior to purging the well and sampling for Monitoring Parameters may be used to fulfill this requirement. Groundwater elevations for all upgradient and down gradient wells for a given groundwater body shall be measured within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater gradient and direction. The results of groundwater elevation monitoring shall be displayed on a water table contour map and/or groundwater flow net for the site and included in each monitoring report. The Discharger shall use the groundwater elevation monitoring data to determine the following:

- A. The groundwater flow velocity
- B. The gradient direction in the upper aquifer, and in any additional zone of saturation monitored pursuant to this MRP
- C. Times of highest and lowest elevations of the water levels in the wells
- D. Separation of groundwater from the lowest point of the unit

The results of these determinations shall be included in the semi-annual reports.

2. Background Monitoring (Section 20415(b)(1)(A))

The Discharger shall install and operate a sufficient number of Background Monitoring Points at appropriate locations and depths to yield ground water samples from the uppermost aquifer that represent the quality of ground water that has not been affected by a release from the units per Section 20415(b)(1)(A) of Title 27. Background monitoring data analysis shall include developing/updating concentration limits for statistical monitoring parameters and COCs, as necessary. For the purpose of developing concentration limits, each well may serve as its own background.

- A. Monitoring Points: As specified in Table E.3A.
- B. Monitoring Schedule: As specified in Table E.3B.

3. Detection Monitoring (Section 20420)

The Discharger shall install and operate a groundwater detection monitoring system for the purpose of detecting a release from the unit. A sufficient number of samples shall be taken from all Monitoring Points and Background Monitoring Points to satisfy the data analysis requirements for a given Reporting Period, and shall be taken in a manner that ensures sample independence to the greatest extent feasible. Collection and analysis of samples shall be in accordance with procedures set forth in the Sampling and Analysis Plan per the Standard Provisions.

- A. The groundwater monitoring points for the landfill disposal area shall be as

follows:

Table E.3A
Detection Monitoring Wells

Unit	Upgradient	Downgradient¹	Side Gradient
Landfill	MW-3	MWs 2 and 5	MW-1

1. MW-4 not included because it is a dry well scheduled for abandonment.

The detection monitoring locations shall include any future wells installed along the point of compliance, down gradient, and/or side gradient of the unit in order to monitor the landfill for a release.

B. Monitoring Schedule

Groundwater samples shall be collected and analyzed in accordance with the following schedule:

Table E.3B
Detection Monitoring Schedule

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Field Parameters		
Elevation	Feet MSL	Quarterly
Specific Conductance	µMhos/cm	Semiannually
pH	pH units	Semiannually
Temperature	°C	Semiannually
Turbidity	NTU	Semiannually
Monitoring Parameters (Attachment C)		
General Minerals		
TDS	mg/L	Semiannually
Chloride	mg/L	Semiannually
Total Alkalinity	mg/L	Semiannually
Total Hardness	mg/L	Semiannually
VOCs	µg/L	Every 2 years
Constituents of Concern		
(Table C and Attachment D)		Every 5 years

C. Monitoring Data Analysis

Monitoring data analysis shall include the following:

- a. Background Data
 - Updating concentration limits for statistical monitoring parameters and COCs, as necessary.
- b. Detection Monitoring Data
 - Comparisons with concentration limit to identify whether any exceedances have occurred
 - Comparisons of retest data with concentration limit to confirm whether a release has occurred for a given constituent

The results of the above analysis, including a narrative discussion, shall be included in each semiannual report and summarized in the Annual Report, as specified under Reporting B.2, above. If a release is indicated, the Discharger shall follow the Response to Release procedures per the WDRs (Monitoring Specification E.13) and 1997 Standard Provisions.

F. FACILITY MONITORING

1. Standard Observations

Standard Observations shall be performed **monthly** during the wet season (October 1 to April 30) and **quarterly** during the dry season (May 1 to September 30) and shall include those elements identified in Definition 24 of the Standard Provisions. Each monitoring report shall include a summary and certification of completion of all Standard Observations in accordance with the Standard Provisions (*Provision 2h, Reports to be Filed with the Board, REPORTING REQUIREMENTS*). Field logs of standard observations shall also be included in the report.

2. Regular Maintenance Inspections

Landfill facilities (i.e. monitoring wells) shall be inspected **quarterly** to identify the need for maintenance and repairs. Necessary repairs shall be completed within 30 days of each inspection. Field logs of these inspections and documentation of the repairs shall be included in each semiannual monitoring report.

3. After Storm Events

Within seven days following each significant storm event (i.e. one which produces 3.0 inches or more of precipitation within a 24-hour period, as measured at the Foresthill Station), the Discharger shall inspect the landfill cover and precipitation and drainage facilities for damage. Areas of erosion or sedimentation observed during the inspection(s) shall be flagged and repaired within seven days of identification. If repairs cannot be completed within the seven-day time frame, the Discharger shall notify the Regional Board of such and provide a schedule for completing necessary repairs. Findings and repairs implemented as a result of these inspections shall be included in each semiannual monitoring report. If no inspection was conducted because

there was no significant storm event during the semiannual period, the report shall state such fact.

4. Site Winterization

Annually, prior to the anticipated rainy season, but no later than **30 September**, the Discharger shall conduct an inspection of the facility for the purpose of winterizing the site. The inspection shall identify any damage to the landfill cover, grade, precipitation and drainage controls, access roads and other landfill facilities. Any necessary construction, maintenance, or repairs to these facilities shall be completed by **31 October**. The Discharger shall document the results of the winterization inspection and any repair measures implemented in the Annual Report due by **31 January** of each year.

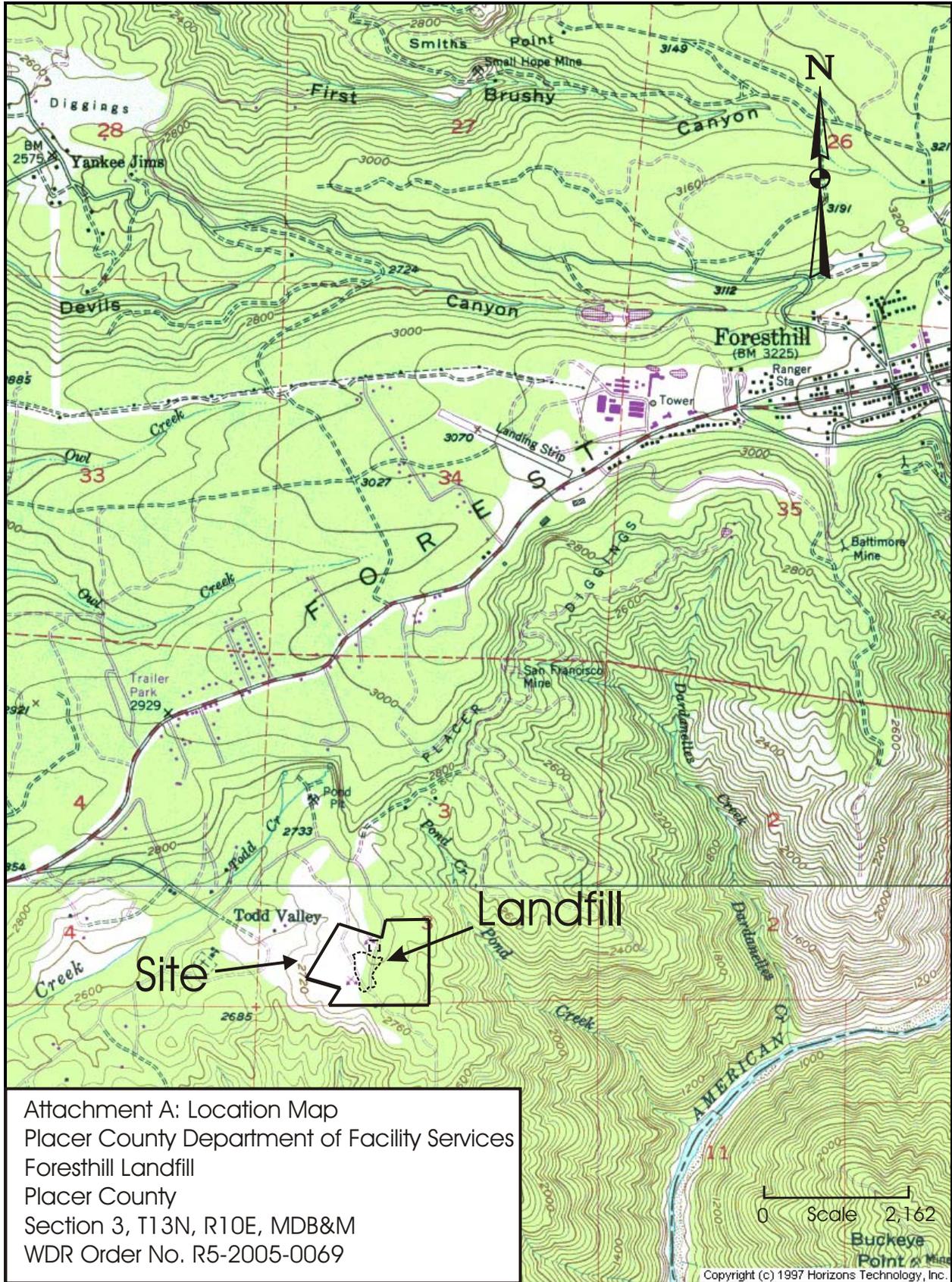
Documentation of the results of the above inspections and any repairs implemented shall include field observations, the location of any damage observed (i.e. on a site map), photographs of the damage, and a description of any repairs implemented, including post-repair photographs.

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

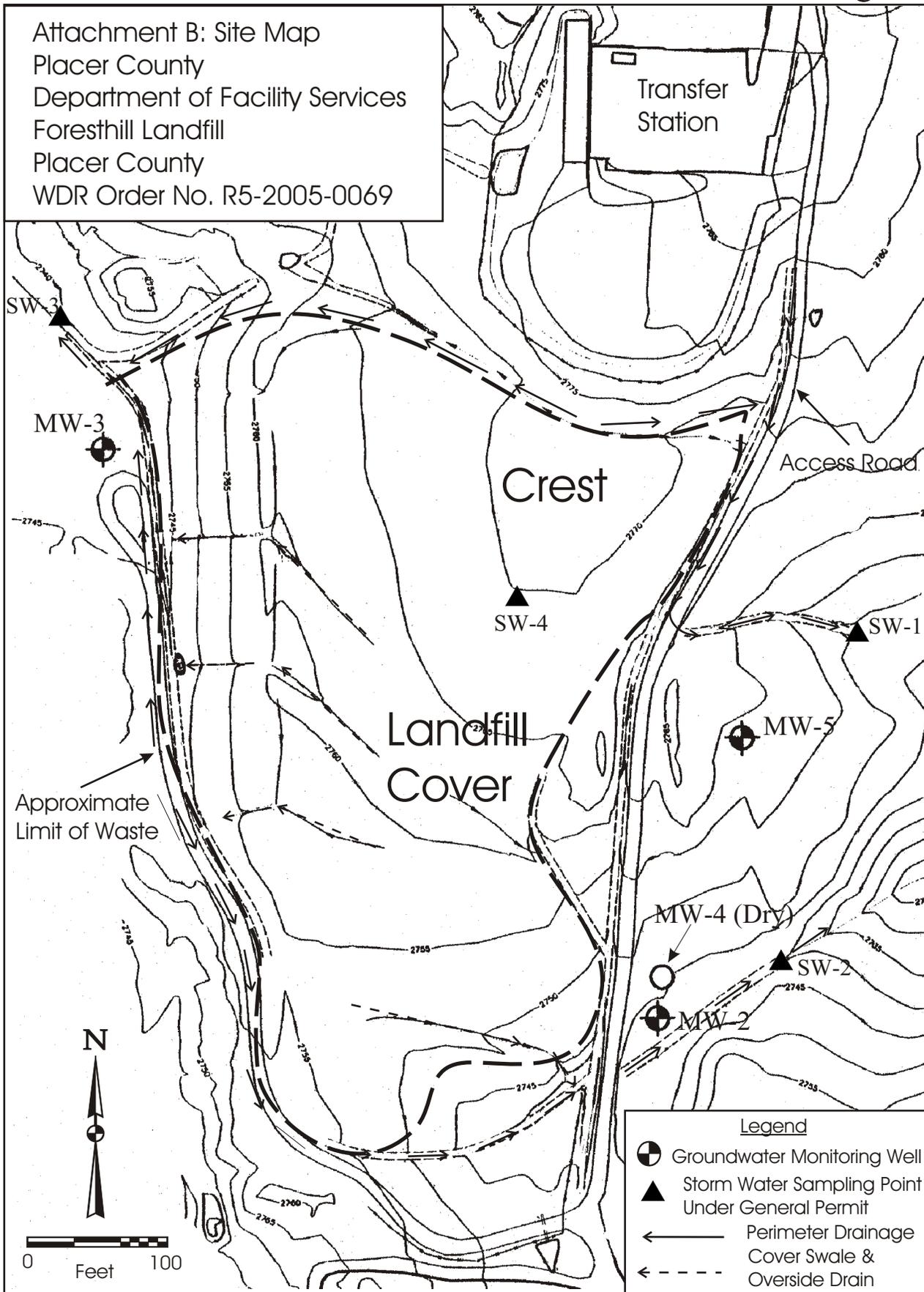
Ordered by: _____
THOMAS R. PINKOS, Executive Officer

29 April 2005
(Date)

Attachments
JDM:



Attachment B: Site Map
 Placer County
 Department of Facility Services
 Foresthill Landfill
 Placer County
 WDR Order No. R5-2005-0069



ATTACHMENT C

MONITORING PARAMETERS & APPROVED USEPA ANALYTICAL METHODS

Field Parameters	USEPA Test Method
Groundwater Elevation	----
pH	----
Specific conductance	----
Temperature	----
Turbidity	----

General Minerals	USEPA Test Method
Total Dissolved Solids (TDS)	2540C
Total Alkalinity	2310B
Total Hardness	2340B
Chloride	300 (anion scan)

Volatile Organic Compounds¹ (VOCs, by USEPA Method 8260B):

Acetone
Acetonitrile
Acrolein
Acrylonitrile
Allyl chloride (3-Chloropropene)
Tert-Amyl methyl ether
Benzene
Bromobenzene
Bromochloromethane
Bromodichloromethane
Bromoform (Tribromomethane)
Tert-Butyl alcohol
n-Butylbenzene
sec-Butylbenzene
tert-Butylbenzene
tert-Butyl ethyl ether
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)
1,2-Dichloroethane (Ethylene dichloride)
1,1 -Dichloroethylene (1,1 -Dichloroethene; Vinylidene chloride)

ATTACHMENT C (CON'T)

cis- 1,2-Dichloroethylene (cis- 1,2-Dichloroethene)
trans-1,2-Dichloroethylene (trans-1,2-Dichloroethene)
1,2-Dichloropropane (Propylene dichloride)
1,3-Dichloropropane
2,2-Dichloropropene
1,1-Dichloropropene
cis- 1,3-Dichloropropene
trans- 1,3-Dichloropropene
Ethylbenzene
Ethyl methacrylate
Hexachlorobutadiene
Hexachloroethane
2-Hexanone (Methyl butyl ketone)
Iodomethane (Methyl iodide)
Isobutyl alcohol
di-Isopropyl ether
Methacrylonitrile
Methyl bromide (Bromomethene)
Methylene bromide (Dibromomethane)
Methylene chloride (Dichloromethane)
Methyl chloride (Chloromethane)
Methyl ethyl ketone (MEK: 2-Butanone)
4-Methyl-2-pentanone (Methyl isobutylketone)
Methyl tert-butyl ether (MtBE)
Naphthalene
2-Nitropropane
n-Propylbenzene
Propionitrile
Styrene
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane
Tetrachloroethylene (Tetrachloroethene; Perchloroethylene)
Toluene
1,2,4-Trichlorobenzene
1,1,1-Trichloroethane (Methylchloroform)
1,1,2-Trichloroethane
Trichloroethylene (Trichloroethene)
Trichlorofluoromethane (CFC- 11)
1,2,3-Trichloropropane
1,2,4-Trimethylbenzene
1,3,5-Trimethylbenzene
Vinyl chloride
Xylenes (total)

-
1. Unknown chromatographic peaks shall be reported, along with an estimate of the concentration of the unknown analyte per the Standard Provisions (Provision 7, *Sampling and Analytical Methods, PROVISIONS FOR MONITORING*)

ATTACHMENT D

CONSTITUENTS OF CONCERN & APPROVED USEPA ANALYTICAL METHODS

Field Parameters	USEPA Test Method
Groundwater Elevation	----
pH	----
Specific conductance	----
Temperature	----
Turbidity	----

General Minerals	USEPA Test Method
Total Dissolved Solids (TDS)	2540C
Total Alkalinity	2310B
Total Hardness	2340B

Major Anions

Bicarbonate	2310B
Chloride	300 (anion scan)
Nitrate – Nitrogen	300 (anion scan)
Sulfates	300 (anion scan)

Major Cations

Calcium	200.7 (trace method)
Magnesium	200.7 (trace method)
Potassium	200.7 (trace method)
Sodium	200.7 (trace method)

Volatile Organic Compounds¹ (VOCs, by USEPA Method 8260B):

Acetone
Acetonitrile
Acrolein
Acrylonitrile
Allyl chloride (3-Chloropropene)
Tert-Amyl methyl ether
Benzene
Bromobenzene
Bromochloromethane
Bromodichloromethane
Bromoform (Tribromomethane)
Tert-Butyl alcohol
n-Butylbenzene
sec-Butylbenzene
tert-Butylbenzene
tert-Butyl ethyl ether
Carbon disulfide
Carbon tetrachloride
Chlorobenzene
Chloroethane (Ethyl chloride)

ATTACHMENT D (CON'T)

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)
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
2,2-Dichloropropene
1,1-Dichloropropene
cis- 1,3-Dichloropropene
trans- 1,3-Dichloropropene
Ethylbenzene
Ethyl methacrylate
Hexachlorobutadiene
Hexachloroethane
2-Hexanone (Methyl butyl ketone)
Iodomethane (Methyl iodide)
Isobutyl alcohol
di-Isopropyl ether
Methacrylonitrile
Methyl bromide (Bromomethene)
Methylene bromide (Dibromomethane)
Methylene chloride (Dichloromethane)
Methyl chloride (Chloromethane)
Methyl ethyl ketone (MEK: 2-Butanone)
4-Methyl-2-pentanone (Methyl isobutylketone)
Methyl tert-butyl ether (MtBE)
Naphthalene
2-Nitropropane
n-Propylbenzene
Propionitrile
Styrene
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane
Tetrachloroethylene (Tetrachloroethene; Perchloroethylene)
Toluene
1,2,4-Trichlorobenzene

ATTACHMENT D (CON'T)

1,1,1-Trichloethane (Methylchloroform)
1,1,2-Trichloroethane
Trichloroethylene (Trichloroethene)
Trichlorofluoromethane (CFC- 11)
1,2,3-Trichloropropane
1,2,4-Trimethylbenzene
1,3,5-Trimethylbenzene
Vinyl chloride
Xylenes (total)

Dissolved Inorganics²	USEPA Test Method
Aluminum	200.7/6010
Antimony	200.7/6010
Arsenic	200.9/200.8
Barium	200.7/6010
Beryllium	200.7/6010
Cadmium	200.7/6010
Chromium	200.7/6010
Hexavalent Chromium	7199/1636
Cobalt	200.7/6010
Copper	200.7/6010
Cyanide	335.4/9010
Iron	200.7/6010
Lead	200.9/200.8
Manganese	200.7/6010
Mercury	7470A
Molybdenum	200.7/6010
Nickel	200.9/200.8
Selenium	200.9/200.8
Silver	200.7/6010
Sulfide	9030
Thallium	200.7/6010
Tin	200.7/6010
Vanadium	200.7/6010
Zinc	200.7/6010

Semivolatile Organic Compounds^{1,3} (USEPA Method 8270 - base, neutral, & acid extractables):

Acenaphthene
Acenaphthylene
Acetophenone
2-Acetylaminofluorene (2-AAF)
4-Aminobiphenyl
Anthracene

ATTACHMENT D (CON'T)

Benzo[a]anthracene (Benzanthracene)
Benzo[b]fluoranthene
Benzo[k]fluoranthene
Benzo[g,h,i]perylene
Benzo[a]pyrene
Benzyl alcohol
Bis(2-ethylhexyl) phthalate
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)
p-Chloroaniline
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)
Dibenz[a,h]anthracene
Dibenzofuran
Di-n-butyl phthalate
3,3'-Dichlorobenzidine
2,4-Dichlorophenol
2,6-Dichlorophenol
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
Ethyl methanesulfonate
Famphur
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachloropropene
Indeno(1,2,3-c,d)pyrene

ATTACHMENT D (CON'T)

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

ATTACHMENT D (CON'T)

Organochlorine Pesticides^{1,3} (USEPA Method 8081A)

Aldrin
 α -BHC
 β -BHC
 γ -BHC (Lindane)
 δ -BHC
Chlorobenzilate
 α -Chlordane
 γ -Chlordane
Chlordane – not otherwise specified
DBCP
4,4'-DDD
4,4'-DDE
4,4'-DDT
Diallate
Dieldrin
Endosulfan I
Endosulfan II
Endosulfan sulfate
Endrin
Endrin aldehyde
Endrin ketone
Heptachlor
Heptachlor epoxide
Hexachlorocyclopentadiene
Isodrin
Methoxychlor
Toxaphene

Polychlorinated Biphenols^{1,3} (PCBs, USEPA Method 8082)

Aroclor 1016
Aroclor 1221
Aroclor 1232
Aroclor 1242
Aroclor 1248
Aroclor 1254
Aroclor 1260

Organophosphorus Pesticides^{1,3} (USEPA Method 8141A):

Chlorpyrifos
Diazinon
Dimethoate
Disulfoton
Ethion
Famphur
Malathion
Parathion

ATTACHMENT D (CON'T)

Parathion-ethyl
Parathion-methyl
Phorate

Chlorinated Herbicides^{1,3} (USEPA Method 8151A):

2,4-D (2,4-Dichlorophenoxyacetic acid)
Dicamba
Dinoseb (DNBP; 2-sec-Butyl-4,6-dinitrophenol)
MCPA
MCP
Silvex (2,4,5-Trichlorophenoxypropionic acid; 2,4,5-TP)
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)
Pentachlorophenol

-
1. Unknown chromatographic peaks shall be reported, along with an estimate of the concentration of the unknown analyte per the Standard Provisions (Provision 7, *Sampling and Analytical Methods, PROVISIONS FOR MONITORING*).
 2. Samples shall be filtered prior to performing dissolved inorganics analysis. Five-year monitoring may be discontinued for those COCs not detected during initial five-year monitoring event.
 3. Five-year monitoring for these COCs may be discontinued if none detected during initial five-year monitoring event.

INFORMATION SHEET

ORDER NO. R5-2005-0069
COUNTY OF PLACER
DEPARTMENT OF FACILITY SERVICES
FORESTHILL LANDFILL
PLACER COUNTY

The 52-acre site is in the Todd Valley area about two miles southwest of the community of Foresthill. The landfill comprises about 4.2 acres of the site.

Ownership

The site property was previously federal land administered by the United States Bureau of Land Management (BLM) which leased a portion of the site, including the landfill and adjacent transfer station areas, to Placer County. The leased area corresponded to an old federal mining claim. Previous Waste Discharge Requirements Order No. 94-053 included the BLM as a Discharger. In 2000, Placer County acquired the land patent from the BLM and as such, the BLM is not a Discharger under these WDRs.

Closure

The landfill is a "CAI" (closed, abandoned or inactive) unit under Title 27 regulations since it stopped accepting wastes in 1983 and was therefore inactive prior to 27 November 1984. Since the landfill is a CAI, a prescriptive Title 27 cover was not required for landfill closure. The landfill was closed in 1984 with a non-prescriptive cover consisting of about three feet of silty sand (see January 1991 *Existing Final Cover Evaluation Report*, Emcon Associates). After significant erosion of the original cover, the Discharger re-capped the landfill in 1996.

The new cover was constructed in accordance with a September 1994 Final Closure Plan submitted under previous WDRs (*Closure And Postclosure Maintenance Plans and Technical Specifications For Closure Of The Foresthill Landfill*, prepared by Lawrence & Associates). The reconstructed cover was also a non-prescriptive design consisting of a two foot foundation layer and a one to five foot thick vegetative cover layer. Approximately 14,000 cubic yards of local borrow soil was used to construct the foundation layer, which consisted of gravelly clay (uppermost six inches compacted to 90%). Another 13,000 cubic yards of local borrow was used to construct the vegetative cover layer. Soil from excavation of the landfill perimeter ditches was also used as vegetative cover soil. No low hydraulic conductivity layer was included in the landfill cover design.

Groundwater

The gradient direction is to the east. To date, groundwater detection monitoring has not shown any impacts from the landfill. Detection monitoring is by the intrawell approach where each well serves as its own background.

Drainage

Surface drainage in the site area is to Pond Creek, which flows to into the Middle Fork of the American River approximately one mile southeast of the site.