



California Regional Water Quality Control Board

Los Angeles Region



Linda S. Adams
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Arnold Schwarzenegger
Governor

November 10, 2010

Katherine SantaMaria Balanza
Waste Management, Inc.
9081 Tujunga Avenue
Sun Valley, Ca 91352

Dear Ms. Balanza:

**REVISED WASTE DISCHARGE REQUIREMENTS – BRADLEY LANDFILL AND
RECYCLING CENTER, WASTE MANAGEMENT, INC., SUN VALLEY, CA (FILE
NO. 78-027, Order No. R4-2010-0198, CI6434)**

Reference is made to our letter dated September 16, 2010, which transmitted a copy of tentative revised waste discharge requirements for the subject site.

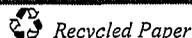
Pursuant to Division 7 of the California Water Code, this Regional Board at a public meeting held on November 4, 2010, reviewed the tentative requirements, considered all factors in the case, and adopted Order No. R4-2010-0198 relative to the Bradley Landfill and Recycling Center in Sun Valley, California. A copy of the order is attached. For recipients on the mailing list, an electronic or hard copy of this attachment will be furnished upon request.

If you have any questions, please call me at (213) 620-2253, or Mr. Douglas Cross at (213) 620-2246.

Wen Yang, Ph.D., C.E.G., C.H.G.
Senior Engineering Geologist
Landfills Unit

Enclosures: Board Order
Monitoring and Reporting Plan
Definitions of Terms
Standard Provisions

California Environmental Protection Agency



Our mission is to preserve and enhance the quality of California's water resources for the benefit of present and future generations.

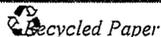
Katherine SantaMaria Balanza
Waste Management, Inc.

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cc: Leslie Graves, Land Disposal Program, State Water Resource Control Board
Peter Jan, California Department of Resources Recycling and Recovery
Pete Oda, Los Angeles County, DHS
Wayne Tsuda, City of Los Angeles, LEA
Richard Slade, Upper Los Angeles River Area Watermaster
Dan Hirsch, C/O Committee to Bridge the Gap
Rick Von Pein, Waste Management, Inc.
Laura Keener, Waste Management, Inc.
Doug Corcoran, Waste Management, Inc.

California Environmental Protection Agency



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STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

ORDER NO. R4-2010-0198
CORRECTIVE ACTION PROGRAM AND POSTCLOSURE MAINTENANCE
WASTE DISCHARGE REQUIREMENTS
FOR
WASTE MANAGEMENT INCORPORATED
(Bradley Landfill and Recycling Center)
(File No. 78-027)

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) finds:

BACKGROUND

1. Waste Management Inc. (Discharger) owns and operates the Bradley Landfill and Recycling Center (Landfill), a Class III municipal solid wastes (MSW) disposal facility at 9081 Tujunga Avenue, Sun Valley, California. The Landfill is approximately 3.5 miles southeast of the intersection of the Golden State (I-5) and Ronald Reagan (118) freeways (Figure 1).
2. The Landfill was operated from 1959 to April 14, 2007. Final closure activities at the Landfill are scheduled to be completed in the Fall of 2010. During its active life, approximately 34.8 million tons of municipal solid waste (MSW) was disposed of at the Landfill.
3. The Landfill is part of a 209-acre site (Site) of which 171 acres are permitted for landfilling. The Landfill consists of three contiguous disposal areas within a large, pre-existing, gravel pit that are commonly referred to as the Bradley East (45 acres), Bradley West, and Bradley West Extension (collectively 126 acres) (Figure 2):
 - a. Bradley East was operated as a MSW (Class III) landfill from 1959 to 1980, and has no natural or synthetic liners. Since 1980, only inert materials which consist of natural clean soils, rubble and rocks were deposited in Bradley East. Clean soils were used as daily and/or final cover on Bradley East.
 - b. Bradley West began MSW disposal operations as a class III landfill in 1980. This area is equipped with a one-foot thick compacted clay base overlain by a six-inch compacted clay liner, and a leachate collection and removal system (LCRS).
 - c. Bradley West Extension was developed in stages as a series of cells referred to as "sumps" (Sump C, Sump D, Sump E, and Sump F).
 - i. Sumps C and D were constructed in 1986, and MSW disposal began in March 1987. Sumps C and D are equipped with a single 12-inch compacted clay liner with a permeability of 1×10^{-6} centimeters per second (cm/s) or less, and LCRS.
 - ii. Sumps E and F are equipped with a composite liner and LCRS, Sump E was constructed in 1990 with a composite base liner that consists of a 3.5-foot thick compacted clay liner base with a hydraulic conductivity of 1×10^{-6} cm/s, a 2-foot thick compacted clay

November 4, 2010

liner with a hydraulic conductivity of 1×10^{-7} cm/s, and an 80 mil high density polyethylene (HDPE) geomembrane. The Sump E sidewall liner consists of a minimum 5.5-foot thick compacted clay liner having a hydraulic conductivity of 1×10^{-7} cm/s, an 80 mil HDPE geomembrane, a layer of cushioning geotextile material, and a 2-foot thick protective soil layer. The Sump E area is equipped with a pan lysimeter to detect leakage through the composite lined LCRS sump. Sump F was constructed in 1993 is equipped with a composite base liner that consists of a 2.5-foot thick compacted clay liner base having a hydraulic conductivity of 1×10^{-6} cm/s, a 3-foot thick compacted clay liner having a hydraulic conductivity of 1×10^{-7} cm/s, and an 80 mil HDPE geomembrane.

4. In accordance with the California Water Code (CWC), this Regional Board adopted Resolution No. 58-89 on April 23, 1959, prescribing waste discharge requirements (WDRs) for a portion of Bradley East. On August 13, 1959, the Regional Board adopted Order No. 59-82 amending the previous WDRs to add additional acreage. On September 25, 1978, this Regional Board adopted Order No. 78-108 for the operation of Bradley West. These WDRs were revised on January 9, 1986, to include a Monitoring and Reporting Program (M&RP) (Order No. 86-011, No. CI-6434). The WDRs were revised on November 25, 1987 with Order No. 87-153, which was subsequently amended on January 28, 1991 (Order No. 91-017) and November 6, 1993 (Order No. 93-080). On May 13, 1994, this Regional Board adopted Order No. 94-059 that includes the current WDRs that the Landfill is operating under.
5. Ancillary structures located on the Site include a scale house, a permanent office and maintenance shop facility, a truck wash facility, a materials recovery facility, a wood waste recycling facility, and a landfill gas recovery facility and flare station.
6. The final cover of the Bradley Landfill consists of an evapotranspiration (ET) cover at least five-feet thick underlain by a minimum of a one-foot thick foundation layer or interim cover soil. This final cover system is an engineered alternative to the prescriptive final cover system required under title 27 of California Code of Regulations (27 CCR), section 21090.
7. To demonstrate that the ET cover affords equivalent protection against water quality impairment as that provided by a 27 CCR prescriptive final cover system, the Discharger installed three pan lysimeters at Bradley West, and one moisture meter in at Bradley East, that will be used to monitor the effectiveness of the ET final soil cover during the postclosure maintenance period (Figure 3).
8. Post closure land use of the Landfill is un-irrigated open space. In addition, the Facility will also be used for green waste processing, electricity production using landfill gas, a municipal solid waste transfer station, and offices, which are all located off of the landfill footprint.
9. In accordance with 27 CCR, section 21090, the Discharger submitted a *Final Postclosure Maintenance Plan* (FPCMP) to the Regional Board in April 2005. Subsequently, the Discharger submitted amendments to the FPCMP to the Regional Board on February 1, 2007, November 2, 2007, December 21, 2007, and January 15, 2008. The FPCMP includes existing environmental control and monitoring systems, final closure design, final closure construction methods, construction quality assurance, post-closure maintenance, and closure and post-closure maintenance cost estimates.

10. CWC section 13263 (e) provides that all WDRs shall be reviewed periodically and, upon such review, may be revised by the Regional Board to comply with changing state or federal laws, regulations, policies, or guidelines. This Order revises the WDRs for the Landfill to include requirements for post-closure maintenance and a Corrective Action Program (CAP) for the Landfill.
11. This Order includes the attached Definition of Terms and Acronyms (Attachment A), which the Regional Water Board Executive Officer may revise as need arises.

REGULATORY REQUIREMENTS

12. Although the State Water Resources Control Board (State Board) and Regional Boards are the state agencies designated to protect water quality that may be impacted by solid waste disposal activities, the California Department of Resources Recycling and Recovery (CalRecycle, formerly California Integrated Waste Management Board, or CIWMB) regulates all other aspects of solid waste disposal in the state. California Code of Regulations, title 27 (27 CCR), promulgated on July 18, 1997, clarifies the roles and responsibilities of the State Board/Regional Boards and CalRecycle in regulating MSW disposal sites.
13. The United States Environmental Protection Agency (USEPA) under title 40 of the Code of Federal Regulations (CFR), Parts 257 and 258 (Subtitle D) revised existing regulations for MSW disposal facilities in response to the 1984 Hazardous and Solid Waste Amendments of the Resources Conservation and Recovery Act and added new detailed requirements addressing the issues of location restrictions, facility operation and design criteria, groundwater monitoring and corrective action, closure and postclosure maintenance, and financial assurance. The USEPA delegated the responsibility for implementing these regulations to states with a fully approved landfill regulatory program. As the responsible agencies for an approved state with respect to the water quality protection aspects of the federal MSW regulations, the State Board adopted Resolution No. 93-62 on June 17, 1993, and this Regional Board adopted Order No. 93-062 on September 27, 1993, to implement the federal Subtitle D regulatory requirements. Regional Board Order No. 93-062 revised existing WDRs of all active Class III landfills in this Region, including the Landfill.
14. Pursuant to section 402 (p) of the Clean Water Act and 40 CFR Parts 122, 123, and 124, the State Board adopted a National Pollutant Discharge Elimination System (NPDES) General Permit to regulate stormwater discharges associated with industrial activities in California (State Board Order 97-03-DWQ). Stormwater runoff from the Bradley Landfill is currently regulated under the general NPDES permit (WDID No. 4 19I005561, enrolled since April 7, 1992). The Discharger is implementing a Storm Water Pollution Prevention Plan (SWPPP) at the Landfill as required by the general NPDES permit.
15. On June 13, 1994, this Regional Board adopted a revised *Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan). The Basin Plan (including its subsequent amendments) designates beneficial uses and water quality objectives for the area of the Landfill. The requirements in this Order, as they are met, are in conformance with the goals of the Basin Plan.

ENVIRONMENTAL SETTING

16. The Bradley Landfill is located within the Hansen subarea of the San Fernando Valley Basin near the northeastern tip of the Verdugo Mountains. The local topography around the Landfill is generally flat with an approximate slope from north to south of one percent. The geology in the Hansen subarea, from youngest to oldest, consists of Holocene Alluvium, Pleistocene Alluvium, Miocene sedimentary formations, and Pre-Cretaceous crystalline and metamorphic rocks. The surficial geology in the area around the landfill are alluvial sediments from the Verdugo Mountains, to the east, and the San Gabriel Mountains, to the north, and are comprised of uncemented sand, gravel, and boulders.
17. The Hansen subarea is bounded by the Hansen dam to the north, the Verdugo Mountains to the east and southeast, and by the Verdugo Fault to the west and south west. Groundwater occurs within Pleistocene alluvium with a hydraulic conductivity up to 900 gallons per day per square foot (gpd/ft²), or 4.2×10^{-2} cm/s from aquifer tests. The historical groundwater flow direction is northwest to southeast. Groundwater levels in this area are strongly influenced by the Hansen Dam Spreading Grounds about 3,000 feet to the northwest, but are also influenced by precipitation, underflow from Hansen Dam, pumping from local industrial wells, and outflow from the Main San Fernando Basin. Groundwater beneath the Site has a typical annual variation of 10 to 70 feet.
18. There are three known prominent faults located in the vicinity of the Landfill:
 - a. The Tujunga segment of the San Fernando Fault, located 2.5 miles north of the Site, is of Holocene age, and is an active fault. The latest major activity on this fault was the Sylmar earthquake that occurred on February 9, 1971 and registered a moment magnitude of 6.6. No observable damage associated with the earthquake occurred at Bradley Landfill.
 - b. The Verdugo Fault is parallel to San Fernando Road, located about 100 feet inside the southwest boundary of the Site, and is of probable Pleistocene age. This fault is potentially active and has been assigned a maximum moment magnitude of 6.7 by the California Division of Mines and Geology. The Verdugo Fault acts as a barrier to the southwesterly movement of groundwater. The elevation of groundwater west of the fault is typically about 100 feet lower than it is east of the fault.
 - c. The inactive La Tuna Canyon Fault is located about one mile to the east of the Site.
19. In accordance with the Basin Plan, the beneficial uses of groundwater in the Hansen subarea are: municipal and domestic supply, agricultural supply, industrial service, and process supply. No drinking water intakes exist within one mile of the Landfill. However, there are potable water supply wells and irrigation water wells in the area that must be protected.
20. The Site is not within a 100-year floodplain. In addition, Hansen Dam, located one-half mile north of the Site, provides 100-year washout protection.
21. A variety of land uses exist within one mile of the Landfill consisting of commercial, industrial, residential, and recreational. Most of the land uses are industrial and include both active and inactive landfills, auto salvage yards, manufacturing, and active gravel mining.

ENVIRONMENTAL PROTECTION AND MONITORING SYSTEMS

22. Interim groundwater monitoring at the Landfill started on February 1, 1986. The current groundwater monitoring network at the Landfill includes two off-Site background wells (4914G and 4915B), five on-Site background wells (4915A, 4915C, 4915D, 4915E, and 4915M), seven on-Site downgradient wells (4916D, 4916F, 4916G, 4916H, 4916J, 4916L, and 4926C), and one well, west of the Verdugo Fault, that monitors a separate groundwater system (Figure 3).
23. Since 1992, the Discharger has been monitoring the leachate from the Landfill annually from LCRS sumps for constituents listed in Appendix II of 40 CFR Part 258, and re-testing for newly discovered ones, in order to create a list of constituents of concern (COC) can be released from the Landfill. By monitoring for detectable COCs, and any foreseeable breakdown products, the Discharger will be monitoring for all Appendix II constituents that could be released from the Landfill. This is the manner in which this Order meets the requirements of 40 CFR section 258.55(b).
24. 27 CCR section 20415(d) requires an unsaturated zone groundwater monitoring program at Class III Landfills. The intent of an unsaturated zone monitoring program is to monitor unsaturated soils/bedrock between the waste management unit and groundwater to potentially provide an early indication of groundwater quality degradation. One lysimeter (Lysimeter F) was installed in the Bradley West Extension (Figure 3) as required under Order No. 93-062. However, existing monitoring data indicates that the lysimeter is ineffective in supplementing water quality monitoring because they consistently fail to yield an adequate volume of water to allow analysis. Through adoption of this Order, this Regional Board grants an exemption to further unsaturated zone monitoring, pursuant to 27 CCR 20415(d)(5).
25. Landfill liquids generated at the Landfill, including leachate and gas condensate, are currently pumped to a holding tank prior to discharge to the sanitary sewer system.
26. The Discharger has installed and operates a landfill gas recovery system at the Landfill. Landfill gas is collected under vacuum through a system of vertical extraction wells and horizontal trenches. The recovered landfill gas is used at an On-Site Gas-to-Energy Facility with flares used as backup capacity.
27. The Discharger currently uses potable water for irrigation and dust control purposes at the Landfill. The Discharger intends to use recycled water for these purposes at a later date, which they will obtain from the Los Angeles Department of Water and Power (LADWP). The use of recycled water at the Landfill is in conformance with the goals of the Basin Plan and State statutes and regulations pertaining to the use of recycled water in California that can be found in the CWC, CCR, and the health and safety code (HSC). State policy promotes the use of recycled water to the maximum extent in order to supplement existing surface and groundwater supplies to help meet water needs (CWC sections 13510 to 13512).

KNOWN CONTAMINATION AND CORRECTIVE ACTION PROGRAM

28. The Discharger notified the Regional Board on June 12, 1991, that low levels of volatile organic compounds (VOCs) were detected in two down gradient monitoring wells (4916D and 4916F). In response to the detection of VOCs, the Discharger submitted an Engineering Feasibility Study

(Study) to the Regional Board on December 27, 1991. The Study contained an Evaluation Monitoring Program (EMP) pursuant to 27 CCR section 20425. The EMP was initiated on June 18, 1991.

29. In March, 1994, the Discharger submitted a *Evaluation Monitoring Report* for the Bradley Landfill to the Regional Board. The report concluded that VOCs entered groundwater at the Site as a consequence of the contact of groundwater with landfill gas. The presence of VOCs in groundwater was determined to be from the older sections of the Landfill, which are unlined or partially lined.
30. VOCs detected in groundwater at the impacted monitoring wells include 1,1-Dichloroethane, 1,1,1-Trichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, 1,2-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichloropropane, 2-Butanone, Acetone, Benzene, Bromodichloromethane, Chlorobenzene, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethene, Ethylbenzene, Dichlorofluoromethane, Methylene chloride, Tetrachloroethylene (PCE), Toluene, Trichloroethylene (TCE), trans-1,2-Dichloroethene, and Vinyl chloride. TCE and vinyl chloride are the constituents most frequently detected. The remaining VOCs, when present, were generally at low concentrations, at approximately the method detection limit of each constituent.
31. In an *Amended Report of Waste Discharge for Corrective Action Program* dated June 1, 1994, the Discharger proposed a Corrective Action Program (CAP) pursuant to 27 CCR section 20430. The CAP proposed enhanced gas extraction to prevent the contact between landfill gas and groundwater that had caused the contamination of groundwater by VOCs. Additional gas extraction wells were installed and an additional flare for the removal of extracted gas was added. The proposed CAP has been implemented at the Landfill on an interim basis since 2001.
32. The most recent monitoring results (First quarter of 2010) indicate VOC concentrations in groundwater monitoring wells at the Landfill are all below the method detection limits. The VOC concentrations in downgradient monitoring wells have been significantly reduced from 1991 levels when VOCs were first detected. This Order requires the Discharger to continue the existing corrective action measures at the Landfill, and properly manage the landfill gas collection system to prevent the contact of landfill gas with groundwater.
33. This Order is in conformance with state and federal requirements for a CAP, for known and any future releases, because it implements all applicable 27 CCR CAP requirements and all additional federal requirements under 40 CFR sections 258.56, 258.57 and 258.58, including section 258.58(a)(1)(i-iii), which requires the Discharger to implement an assessment monitoring program pursuant to 40 CFR section 258.55 in conjunction with the CAP.
34. This Order places the entire Landfill into a CAP for implementing corrective measures of the known releases meeting applicable state and federal requirements. This approach eliminates needless complexity associated with applying concurrent programs (i.e., running unaffected portions of the Landfill under a detection monitoring program (DMP) pursuant to 27 CCR section 20420 and the portions affected by the release under either an EMP or a CAP, or both). The Regional Board chooses to implement this approach by documenting and responding to the compliance status of each monitoring parameter (Mpar) individually at each compliance well separately (i.e., the Discharger will track the compliance status of each such "well/MPar pair" separately).

35. Under this Order, at any given time, each well/MPar pair will be in one of two compliance status conditions. Prior to the MPar's exhibiting a measurably significant exceedance at a given well, that well/MPar pair will be in "detection mode" and monitoring will involve statistical or non-statistical data analysis designed to detect a Landfill-related increase at that well for that MPar. Once a well/MPar pair exhibits a measurably significant increase (i.e., an initial exceedance of its Concentration Limit, verified by retesting), it will change to "tracking mode" and monitoring will involve concentration-versus-time plotting to document changes in the release. Once in tracking mode, a well/MPar pair can return to detection mode only upon inception of a proof period to demonstrate the successful completion of corrective action.
36. This Order minimizes the occurrence of false-positive indications in two ways:
 - a. It includes a non-statistical data analysis method, meeting 27 CCR section 20415(e)(8-9) requirements, that collectively analyzes all the Mpars, at a given well, whose background data exceeds its respective method detection limit no more than 10% of the time; and
 - b. All statistical and non-statistical data analysis methods used on well/MPars in detection mode data analyses under this Order include a pass-1-of-3 retesting approach (explained in the attached M&RP) imposed pursuant to 27 CCR 20080(a)(1) as a more-effective replacement for the usual discrete retest of 20415(e)(8)(E).
37. To assure compliance with the requirements and considerations under 40 CFR section 258.55 through section 258.58 and 27 CCR section 20425 in the simplest way possible, this Order:
 - a. requires statistical or non-statistical data analysis, at any given compliance well, only for those MPars that are in detection mode at that well;
 - b. requires concentration-versus-time plotting, at any given compliance well, for all MPars that are in tracking mode at that well; and
 - c. uses annual leachate sampling for all non-COC Appendix II constituents, to keep the COC list updated to include all Appendix II constituents that could be released from the Landfill. New constituents so identified automatically become a part of the COC list and an MPar for all compliance wells.
38. Given that detection mode testing can be compromised by the arrival of a COC at any background well either as a result of the release (e.g., through advective flow, in the unsaturated zone, of gas-phase VOCs in landfill gas) or through the arrival of such a constituent from an upgradient source, this Order implements a simple means for identifying such anomalies which require the Discharger to investigate their cause, and initiates appropriate adjustments to the monitoring program.
39. Given that the VOCs in the federal monitoring parameter list, Appendix I to 40 CFR part 258 (Appendix I), are all Appendix II constituents, leachate sampling from the LCRSs for Sumps A through Sumps F, in the Bradley West and Bradley West Extension areas, also serves as a basis for narrowing the scope of VOCs which the Discharger must monitor in these areas to include only those Appendix I constituents that have ever been detected in leachate, at trace level or above, and verified by retest. This is the manner in which this Order implements 40 CFR section 258.54(a)(1).

40. 27 CCR sections 20380(b) and 22222 require WDRs for MSW landfills to contain a provision which requires the discharger to obtain and maintain assurances of financial responsibility for initiating and completing corrective action for all known or reasonably foreseeable releases from the landfill (27 CCR 22220 et seq.). The Discharger has provided the Regional Board with a corrective action plan and corrective action cost estimate for all known or reasonable foreseeable releases from the Landfill, under Corrective Action Bond No. 851021.
41. In accordance with 27 CCR section 20430(h), this Order requires corrective actions measures (CAM) effectiveness reports to be submitted to the Regional Board semi-annually. The CAM effectiveness report must include, at a minimum, 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 WDRs.

ADMINISTRATIVE

42. In accordance with regulations adopted by the State Board in September 2004 regarding electronic submittal of information (ESI), the Discharger has been electronically submitting monitoring reports required under the WDRs to the State Board GeoTracker system since 2005. The Discharger is subject to any future revision to ESI requirements.
43. Revision of the WDRs for the Landfill constitutes an existing project as defined in section 15301, chapter 3, title 14 of the CCR and is therefore exempt from the provisions of the CEQA (Public Resources Code section 21000 et seq.).

The Regional Board has notified interested agencies and all known interested parties of its intent to issue requirements for postclosure maintenance, and CAP for the Landfill.

The Regional Board in a public meeting heard and considered all comments pertaining to postclosure maintenance, and CAP for the Landfill.

Any person aggrieved by this action of the Regional Board may petition the State Board to review the action in accordance with CWC section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Board must *receive* the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality/index.shtml or will be provided upon request.

IT IS HEREBY ORDERED that the Discharger shall comply with the following at the Landfill:

A. SPECIFICATIONS

1. The Landfill is closed. No MSW or any other wastes may be received at the Landfill for the purpose of disposal.
2. Inert soil, concrete, and asphalt materials that are used for the construction or repair of the final cover, access roads, or other facilities at the Site may be imported to the Landfill,

provided that the source, volume, and usage of such imported materials are reported in the corresponding semi-annual monitoring report.

3. Green waste products generated at the Landfill may be applied at the Landfill for erosion control, vegetative enhancement, or other final cover maintenance activities.
4. The Discharger shall remove any unacceptable wastes that arrive at the Site in violation of the requirements in this Order and discharge such removed waste to a legal point of disposal.

B. PROHIBITIONS

1. Discharge of waste as a result of inadequate postclosure maintenance practices, and that have not been specifically described to the Regional Board and for which valid WDRs are not in force, are prohibited.
2. The waste that the Landfill received throughout its operating life shall not:
 - a. cause the occurrence of coliform or pathogenic organisms in waters pumped from a groundwater basin;
 - b. cause the occurrence of objectionable tastes or odors in waters pumped from a groundwater basin;
 - c. cause waters pumped from a groundwater basin to foam;
 - d. cause the presence of toxic materials in waters pumped from a groundwater basin;
 - e. cause the pH of waters pumped from a groundwater basin to fall below 6.0, or rise above 9.0;
 - f. cause the Regional Board's objectives for the groundwaters or surface waters as established in the Basin Plan to be exceeded; or
 - g. cause pollution, contamination, or nuisance, as defined in CWC section 13050, or adversely affect beneficial uses of groundwaters or surface waters as established in the Basin Plan.
3. Odors, vectors, and other nuisances of waste origin that migrate beyond the limits of the Landfill are prohibited.
4. The discharge of waste to surface drainage courses or to usable groundwater is prohibited.
5. The Discharger shall conduct site operations such that there is no release from the Landfill that causes any Basin Plan objective to be exceeded at any location under, or in the vicinity of, the Landfill. Moreover, no COC shall exhibit a measurably significant increase over its respective Concentration Limit (background data set) at any well, as indicated by an approved statistical or nonstatistical data analysis method (including that method's retesting approach).

6. All federal, state, and county sanitary health codes, rules, regulations, and ordinances pertinent to the disposal of wastes on land shall be complied with in the operation and maintenance of the Landfill.

C. REQUIREMENTS FOR POSTCLOSURE MAINTENANCE

1. This Order approves the addendums to the FPCMP that was submitted to the Regional Board by the Discharger on January 15, 2008. Postclosure maintenance of the Landfill shall be conducted in accordance with the revised FPCMP and its amendments as approved by the Executive Officer.
2. The Landfill's post-closure maintenance period shall continue until the Regional Board determines that remaining wastes in all waste management units at the Landfill will not threaten water quality.
3. All containment structures and erosion and drainage control systems at the Landfill shall be designed and constructed under direct supervision of a California-registered civil engineer or certified engineering geologist, and shall be certified by the individual as meeting prescriptive standards and/or performance goals of 27 CCR.
4. The Landfill shall have containment structures that are capable of preventing degradation of the waters of the state. Construction standards for containment structures shall comply with 27 CCR requirements. Design specifications, including any alternative design proposal meeting prescriptive standards and/or performance goals of 27 CCR, are subject to the Executive Officer's review and approval prior to construction of any containment structure.
5. The Discharger shall perform an annual testing per 27 CCR section 20340(d) of any LCRS to demonstrate their operating efficiency during the postclosure maintenance period of the landfill.
6. Surface drainage from the Landfill is subject to State Board Order 97-03-DWQ (general industrial stormwater permit). The Regional Board may adopt a site specific NPDES permit for the discharge of stormwater runoff if the Regional Board determines that such a permit is necessary. No surface water or stormwater shall leave the Landfill except as permitted by a NPDES permit issued in accordance with the federal Clean Water Act (CWA) and the CCR. The Discharger shall maintain and modify, as necessary, the SWPPP developed for the Landfill.
7. Drainage controls, structures, and facilities shall be designed to divert any precipitation or tributary runoff and prevent ponding and percolation of water at the Landfill in compliance with sections 20365 and 21090(b)(1) of 27 CCR. When necessary, temporary structures shall be installed as needed to comply with this requirement.
8. The Landfill shall be graded and maintained to promote runoff of precipitation and to prevent ponding of liquids and surface water. Erosion or washout of refuse or cover materials by surface flow shall be controlled to prevent off-site migration.

9. The migration of gases from the Landfill shall be controlled as necessary to prevent water pollution, nuisance, or health hazards. The discharge of wastes or waste by-products (i.e., leachate or gas condensate) to off-site surface drainage courses or to groundwater is prohibited.
10. Gas condensate gathered from the gas monitoring and collection system at the Landfill shall not be returned to the Landfill unless approved by the Executive Officer. If approved, the condensate shall be discharged to a composite-lined portion of the Landfill. Any proposed modifications or expansions to this system shall be designed to allow the collection, testing and treatment, or disposal by approved methods, of all gas condensate produced at the Landfill.
11. The Discharger shall intercept and remove liquid detected in all LCRSs in accordance with 27 CCR section 20340(c) at the Landfill to a legal point of disposal and leachate shall not be returned to the Landfill unless it meets the requirements of this Order for on-site reuse as described in Section F below, which implements the leachate handling requirements contained in 27 CCR sections 20340(g) and 21090(a)(5), and 40 CFR section 258.28. Any leachate determined to be hazardous shall be transported by a licensed hazardous waste hauler to an approved treatment or disposal facility.
12. The Discharger shall maintain permanent survey monuments at the Landfill throughout the postclosure maintenance period. Benchmarks shall be established and maintained in sufficient numbers to enable reference to key elevations and to permit control of critical grading and compaction operations.
13. The Discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, and adequate laboratory and process controls including appropriate quality assurance procedures.
14. The Discharger shall conduct periodic inspections at the Landfill, at least once per month, to ensure the compliance of this Order. The inspections shall cover the final cover system, the water quality monitoring system, drainage system, landscape and irrigations systems, leachate collection and removal systems, landfill gas collection system, and any other systems at the Site that may have an impact to water quality. Such inspections shall be documented and reported to the Regional Board in accordance with the M&RP.
15. The Discharger shall report any noncompliance or any incident at the Landfill that are in violation of this Order. Any such information shall be provided verbally to responsible Regional Board staff within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission to the Executive Officer shall be provided within 14 days of the time that the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate, or prevent recurrence of the noncompliance. The Executive Officer, or an

authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

D. REQUIREMENTS FOR GROUNDWATER MONITORING

1. The Discharger shall implement the attached M&RP (Attachment T) which is incorporated herein by reference and revisions thereto in order to detect, at the earliest opportunity, any unauthorized discharge of waste constituents from the Landfill or any unreasonable impairment of beneficial uses associated with (caused by) discharges of waste at the Landfill and to continue the CAP for areas of the Landfill where releases to groundwater have occurred. The M&RP is designed to satisfy both federal and state regulatory monitoring requirements.
2. At any time, the Discharger may file a written request, including appropriate supporting documents, with the Executive Officer, proposing modifications to the M&RP. The Discharger shall implement any changes to the revised M&RP approved by the Executive Officer upon receipt of a signed copy of the revised M&RP.
3. The Discharger shall furnish, under penalty of perjury, technical or monitoring program reports in accordance with CWC section 13267. Failure or refusal to furnish these reports or falsifying any information provided therein renders the Discharger guilty of a misdemeanor and subject to the penalties stated in CWC section 13268. Monitoring reports shall be submitted in accordance with the provisions contained in the attached M&RP No. CI-6434, as directed by the Executive Officer.
4. The effectiveness of all groundwater monitoring wells, groundwater monitoring devices, and leachate and gas collection systems shall be maintained throughout the Landfill's postclosure maintenance period in accordance with acceptable industry standards. The Discharger shall maintain a monitoring well preventative maintenance program (MWPMP) approved by the Executive Officer. Elements of the program should include a minimum of periodic visual inspections of well integrity, pump removal and inspection, and appropriate inspection frequencies. If a well or piezometer is found to be inoperative, the Regional Board and other interested agencies shall be so informed in writing within fourteen days after such discovery, and this notification shall contain a time schedule for returning the well or piezometer to operating order. Changes to the existing program shall be submitted for Executive Officer approval at least 30 days prior to implementing the change(s). Within 60 days of the adoption of this Order, the Discharger shall submit an updated MWPMP to the Executive Officer for approval.
5. If a groundwater monitoring well or piezometer is proposed to replace an inoperative well or piezometer identified in the MWPMP, the Discharger shall not delay replacement while waiting for Executive Officer approval. However, a technical report describing the location and construction details shall be submitted to the Executive Officer within 30 days.
6. The Discharger shall provide for proper handling and disposal of water purged from groundwater monitoring wells at the Landfill during sampling. Water purged from a groundwater monitoring well shall not be returned to that well (or any other Landfill well).

7. Any abandoned groundwater monitoring wells or bore holes under the control of the Discharger, and situated within the Landfill boundaries, must be located and properly modified or sealed to prevent mixing of any waters between adjacent water-bearing zones. A notice of intent to decommission a well must be filed with the appropriate regulatory agencies prior to decommissioning. Procedures used to decommission these wells, or to modify wells still in use, must conform to the specifications of the local health department or other appropriate agencies.
8. For any monitoring wells installed at the Landfill in the future, the Discharger shall submit technical reports for approval by the Executive Officer prior to installation. These technical reports shall be submitted at least 60 days prior to the anticipated date of installation of the wells. These reports shall be accompanied by:
 - a. Maps and cross sections showing the locations of the monitoring points; and
 - b. Drawings and data showing construction details of the monitoring points. These data shall include:
 - iii. casing and test hole diameter;
 - iv. casing materials;
 - v. depth of each hole;
 - vi. the means by which the size and position of perforations shall be determined, or verified, if in the field;
 - vii. method of joining sections of casing;
 - viii. nature of filter materials;
 - ix. depth and composition of soils; and
 - x. method and length of time of well development.

Within 30 days of the installation of a groundwater monitoring well at the Landfill, the Discharger shall submit an as-built report to the Regional Board and the California Department of Water Resources (DWR), including delineation of the stratigraphy encountered and all water bearing zone(s) encountered.

9. As of the effective date of this Order, the compliance monitoring wells at the Landfill shall consist of those wells listed in Table T-1 of the M&RP. All monitoring wells shall be monitored pursuant to this Order and as directed by the Executive Officer through future revisions of the M&RP.
10. The Discharger shall install any additional groundwater, soil pore liquid, soil pore gas, or leachate monitoring devices necessary to comply with the M&RP, as adopted or as revised by the Executive Officer.
11. As of the effective date of this Order, the Landfill's constituents of concern (COCs) are those listed in Table T-2 in the M&RP. Any non-COC Appendix II constituent exceeding its respective practical quantitation limit in both an initial leachate scan and retest automatically becomes a new COC.

12. In accordance with 27 CCR section 20390, the water quality protection standard (WQPS) for the Landfill is established as the natural background groundwater quality at the Site.
13. In accordance with 27 CCR section 20390(a), the WQPS shall apply during the closure period, the post closure maintenance period, and during any compliance period for the Landfill.
14. The point of compliance (POC) for groundwater monitoring for the Landfill is a vertical surface located at the hydraulically downgradient limit of the Landfill that extends through the uppermost aquifer underlying the Landfill pursuant to 27 CCR section 20405(a).

E. REQUIREMENTS FOR A CORRECTIVE ACTION PROGRAM (CAP)

1. The Discharger shall continue the Corrective Action Program (CAP) at the Landfill that currently includes the proper managing of the landfill gas collection system to prevent the contact of landfill gas with groundwater.
2. In each semi-annual report submitted under the M&RP, the Discharger shall summarize all corrective action taken at the Landfill during the reporting period and the corrective action that will be taken for following monitoring periods. The Executive Officer may require additional corrective action that is deemed necessary.
3. If the Discharger or Executive Officer determines that the CAP either fails to contain the release or fails to provide effective remediation for the portion of the aquifer already affected by the release, the Discharger shall, pursuant to 27 CCR sections 20430(i) or (j) and 40 CFR section 258.58(b), submit an amended ROWD to make appropriate changes to the CAP within 90 days of the determination.

F. REQUIREMENTS FOR ON-SITE USE OF WATER

1. The Discharger is not currently reusing wastewater at the Landfill. Requirements in this section are to be followed in the event that the Discharger chooses to reuse wastewater at the Landfill. The Discharger shall notify Regional Board staff, in writing, at least 60 days prior to any on-site use of wastewater.
2. No water shall be routinely applied at the Landfill except for irrigation, dust control, or other non-emergency uses approved by the Executive Officer. Any water used at the Landfill, except for potable water, recycled water permitted under Water Reclamation Requirements (WRRs) adopted by the Regional Board, and any other water allowed by the Executive Officer, shall be subject to these WDRs.
3. Wastewater produced at the Landfill shall not be subject to these WDRs, pursuant to paragraph F.2 above, if it meets applicable requirements of the CWC, CCR, and HSC for recycled water. The Discharger shall demonstrate to the Executive Officer compliance with this provision before each Landfill wastewater source is used as an equivalent recycled water as defined above.

4. Requirements for the use of recycled water at the Landfill are also controlled by WRRs for the LADWP facility that will provide the recycled water, which is the source of recycled water provided the Landfill chooses to use it. General blanket Order No. 97-072, contains recycled water requirements and provisions in accordance with California Code of Regulations Title 22 Water Recycling Criteria. The use of Title 22 tertiary treated recycled water at the Landfill includes, but is not limited to landscape irrigation and dust control.
5. Mixing any Landfill wastewater source with recycled or potable water to achieve equivalence to recycled water standards, as described in paragraph F.4 above, is prohibited if deemed unsuitable by the Executive Officer.
6. During periods of precipitation, when the use of irrigation or dust control is not necessary for the purpose specified in this Order, all wastewater generated at the Landfill shall be stored, discharged to the sanitary sewer, or hauled to a legal point of disposal.
7. Washing of paved Landfill roads during rainy periods shall only occur when muddy roads create a safety concern. Washing of equipment or vehicles on the Landfill shall be confined to controlled areas where the wastewater is collected for proper disposal.
8. Overflow, runoff, or ponding caused by the over-application or improper management of on-site use of water are prohibited.
9. All uses of potable water, recycled, or wastewater shall be within the boundaries of the Landfill property. During an emergency, this water may be used for fire fighting on the Landfill or on undeveloped areas off and adjacent to the Landfill.
10. Wastewater used at the Landfill shall not percolate into the disposal areas or native soil, or enter stormwater collection systems, except as specifically permitted by this Order.

G. REQUIREMENTS FOR REPORTING SCHEDULED ACTIVITIES

1. The Discharger shall notify Regional Board staff at least 30 days prior to any maintenance activities, for approval by the Executive Officer, which could alter existing surface drainage patterns or change existing slope configurations. These activities may include, but not be limited to, significant grading activities, the importation of fill material, the design and installation of soil borings, groundwater monitoring wells and other devices for Landfill investigation purposes.
2. The Discharger shall furnish, within a reasonable time, any information the Regional Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The Discharger shall also furnish to the Regional Board, upon request, copies of records required to be kept by this Order.
3. If the Discharger becomes aware that it failed to submit any relevant facts in any report to the Regional Board, it shall submit such facts or information within fourteen days of its discovery of the omission.

4. The Regional Board shall be notified of any incident at the Landfill that are in violation of this Order and that may endanger the environment, by telephone within 24 hours from the time the Discharger becomes aware of the circumstances, and in writing within 14 days of the time that the Discharger becomes aware of the circumstances. The written notification shall fully describe the incident including what occurred, when it occurred, the duration of the incident, when correction occurred (or when correction will occur if it is a continuing incident), and the steps taken or planned to reduce, eliminate, and/or prevent recurrence of the incident. All instances of noncompliance with this Order shall also be reported to the Regional Board in the same manner as stated above, and shall also be included in the next scheduled monitoring report.
5. The Discharger shall notify the Executive Officer, in writing, at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage between the Discharger and a new owner or operator of the Landfill. Any transfer agreement between the Discharger and a new owner or operator shall include an acknowledgement that the Discharger is liable for violations up to the transfer date and that the new owner or operator is liable from the transfer date on. The agreement shall include an acknowledgement that the new owner or operator accepts responsibility for compliance with this Order.
6. The Discharger shall notify the Regional Board in writing within 14 days, if fluid is detected in a previously dry LCRS.
7. The Discharger shall notify the Regional Board of changes in information submitted in the revised FPCMP within 30 days of the change.
8. All applications, reports, or information submitted to the Executive Officer shall be signed and certified as follows:
 - a. The applications, reports, or information shall be signed as follows:
 - i. For a corporation - by a principal executive officer of at least the level of vice-president.
 - ii. For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.
 - iii. For a municipality, state, federal or other public agency - by either a principal executive officer or ranking elected official.
 - iv. For a military installation - by the base commander or the person with overall responsibility for environmental matters in that branch of the military.
 - b. All other reports required by this Order and other information required by the Executive Officer shall be signed by a person designated in paragraph [a] of this provision, or by a duly authorized representative of that person. An individual is a duly authorized representative only if:
 - i. The authorization is made in writing by a person described in paragraph [a] of this provision;
 - ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity; and

- iii. The written authorization is submitted to the Executive Officer.
- c. 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."

H. GENERAL PROVISIONS

1. This Order does not authorize violation of any federal, state, or local laws or regulations.
2. The Discharger has a continuing responsibility for correcting any problems which may arise in the future as a result of waste discharged at the Landfill, and from gases and leachate that may be caused by infiltration or precipitation of drainage waters into the waste disposal units, or by infiltration of water applied to this property during subsequent use of the land or other purposes.
3. The Discharger shall allow the Regional Board, or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
 - b. Have access to and copy, at reasonable times, any records that shall be kept under the conditions of this Order;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
 - d. Sample or monitor at reasonable times, for the purpose of assuring compliance with this Order or as otherwise authorized by the CWC, any substances or parameters at this location.
4. The Discharger shall maintain a copy of this Order at the Landfill so as to be available at all times to Landfill operating personnel.
5. These requirements do not exempt the Discharger from compliance with any other current or future law that may be applicable. They do not legalize this waste management facility, and they leave unaffected any further restraints on the disposal of wastes at this waste management facility that may be contained in other statutes.

6. This Order includes the attached "*Standard Provisions Applicable to Waste Discharge Requirements*", adopted November 7, 1990 (Attachment W) which is incorporated herein by reference.
7. The requirements adopted herein neither authorize the commission of any act causing injury to the property of another, nor protect the Discharger from liabilities under federal, state, or local laws.
8. The filing of a request by the Discharger for a modification, revocation and reissuance, or termination; or a notification of planned changes or anticipated noncompliance, does not stay any condition, provision, or requirements of this Order.
9. This Order does not convey any property rights of any sort, or any exclusive privilege.
10. The Discharger is the responsible party for these WDRs, including any M&RP or other body of requirements incorporated by reference therein. The Discharger shall comply with all conditions of these WDRs. Violations may result in enforcement actions, including regional board orders, or court orders, requiring corrective action or imposing civil monetary liability, or in modification or revocation of these WDRs by the Regional Board.
11. The Discharger shall within 48 hours of a significant earthquake event, provide an initial verbal assessment to the Regional Board of any earthquake damage at the Landfill. A detailed post-earthquake report describing any physical damages to the containment features, groundwater monitoring and/or leachate control facilities and a corrective action plan to be implemented at the Landfill shall be submitted to the Regional Board within thirty days of the earthquake event. A significant earthquake is herein defined as an earthquake event above Richter Magnitude 5.0 within a 100-kilometer radius of the property boundaries of the Landfill.
12. The Discharger shall immediately notify the Regional Board of any flooding, slope failure or other change in Landfill conditions that could impair the integrity of waste containment facilities or of precipitation and drainage control structures.
13. The Discharger shall submit to the Regional Board and to the CalRecycle evidence of financial assurance for postclosure maintenance, pursuant to 27 CCR, division 2, chapter 6. The postclosure maintenance period shall be at least 30 years. However, postclosure maintenance shall extend as long as wastes pose a threat to water quality.
14. The Discharger shall comply with all conditions of this Order and any additional conditions prescribed by the Regional Board in addenda thereto. Noncompliance with this Order constitutes a violation of the CWC and is grounds for:
 - a. enforcement action;
 - b. termination, revocation and reissuance, or modification of this Order; or
 - c. denial of a ROWD in application for new or revised WDRs.

15. The Discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.
16. This Order is not transferable to any person except after notice to the Executive Officer. The Regional Board may require modification or revocation and reissuance of this Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWC. The Discharger shall submit notice of any proposed transfer of this Order's responsibility and coverage as described under Provision No. G.5 of this Order.
17. In accordance with CWC section 13263(g), these requirements shall not create a vested right to continue to discharge and are subject to being superseded or modified. All discharges of waste into the waters of the state are privileges, not rights.
18. The provisions of this Order are severable, and if any provision of this Order, or the application of any provision of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order, shall not be affected thereby.
19. This Order becomes effective on the date of adoption by the Regional Board.
20. This Order may be terminated or modified for cause, including, but not limited to:
 - a. Violation of any term or condition contained in this Order;
 - b. Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;
 - c. A change in any condition that required either a temporary or permanent reduction or elimination of the authorized waste discharge.
21. This Order in no way limits the authority of the Regional Board, as delineated in the CWC, to require additional investigations and cleanups pertinent to this project. This Order may be revised by the Regional Board as additional information from the project becomes available.
22. Failure to comply with the terms and conditions of this Order may result in imposition of civil liability against the Discharger by the Regional Board, either by the Regional Board or judicially by the Superior Court, in accordance with CWC section 13350 et. seq. and/or referral to the Attorney General of the State of California for such legal action as may be deemed appropriate.

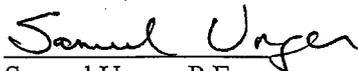
I. RESCISSIONS

1. Except for violation enforcement purposes, Regional Board Order No. 94-059, adopted May 13, 1994, is hereby superseded.
2. Because requirements applying a federal assessment monitoring program and a federal corrective action program are incorporated into this Order, the Landfill is no longer subject to Regional Board Order No. 93-062 requirements.

**Waste Management Inc.
Bradley Landfill and Recycling Center**

**Waste Discharge Requirements
Order No. R4-2010-0198**

I, Samuel Unger, Executive Officer, do certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on **November 4, 2010**.



Samuel Unger, P.E.
Executive Officer

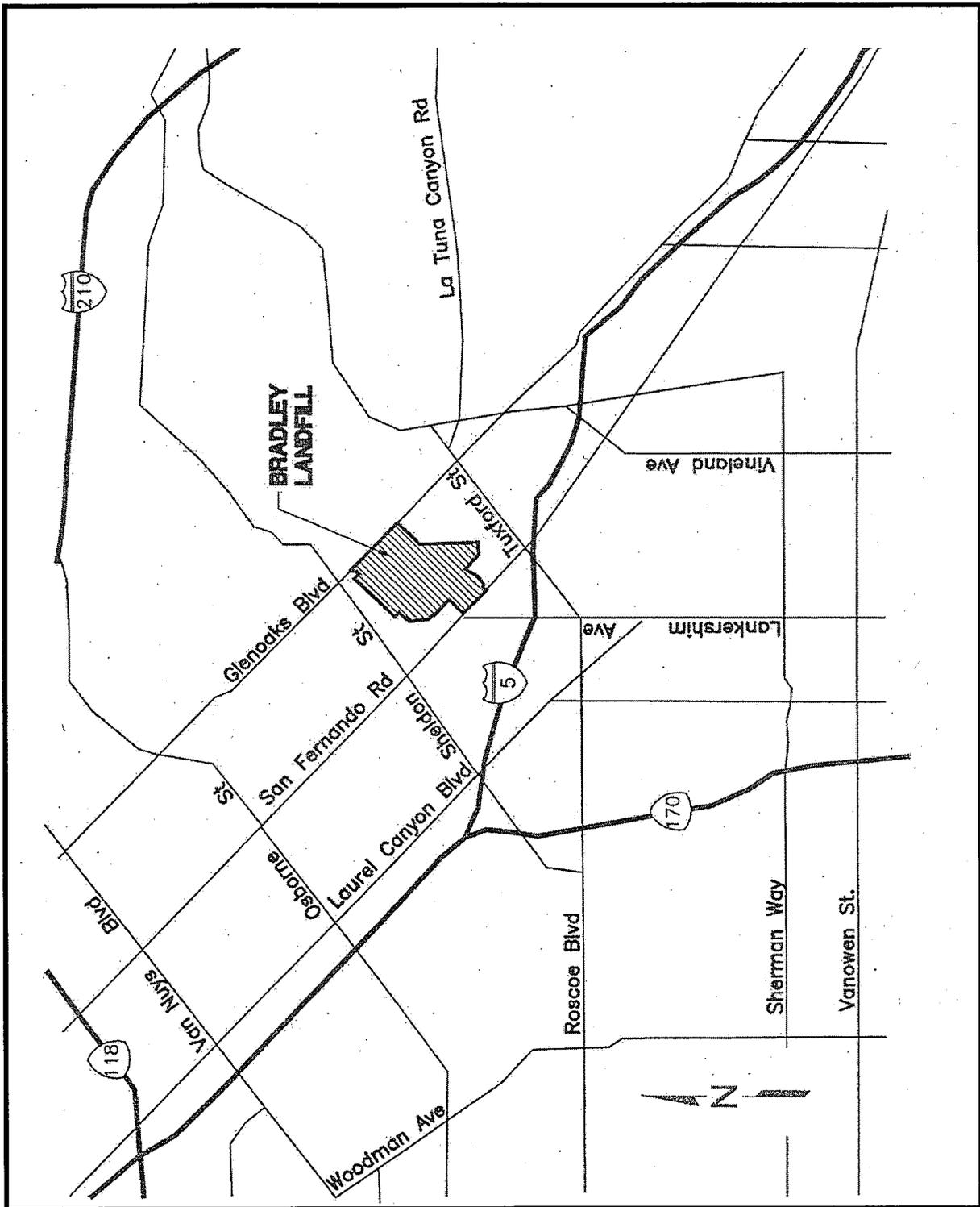


Figure 1. Location Map

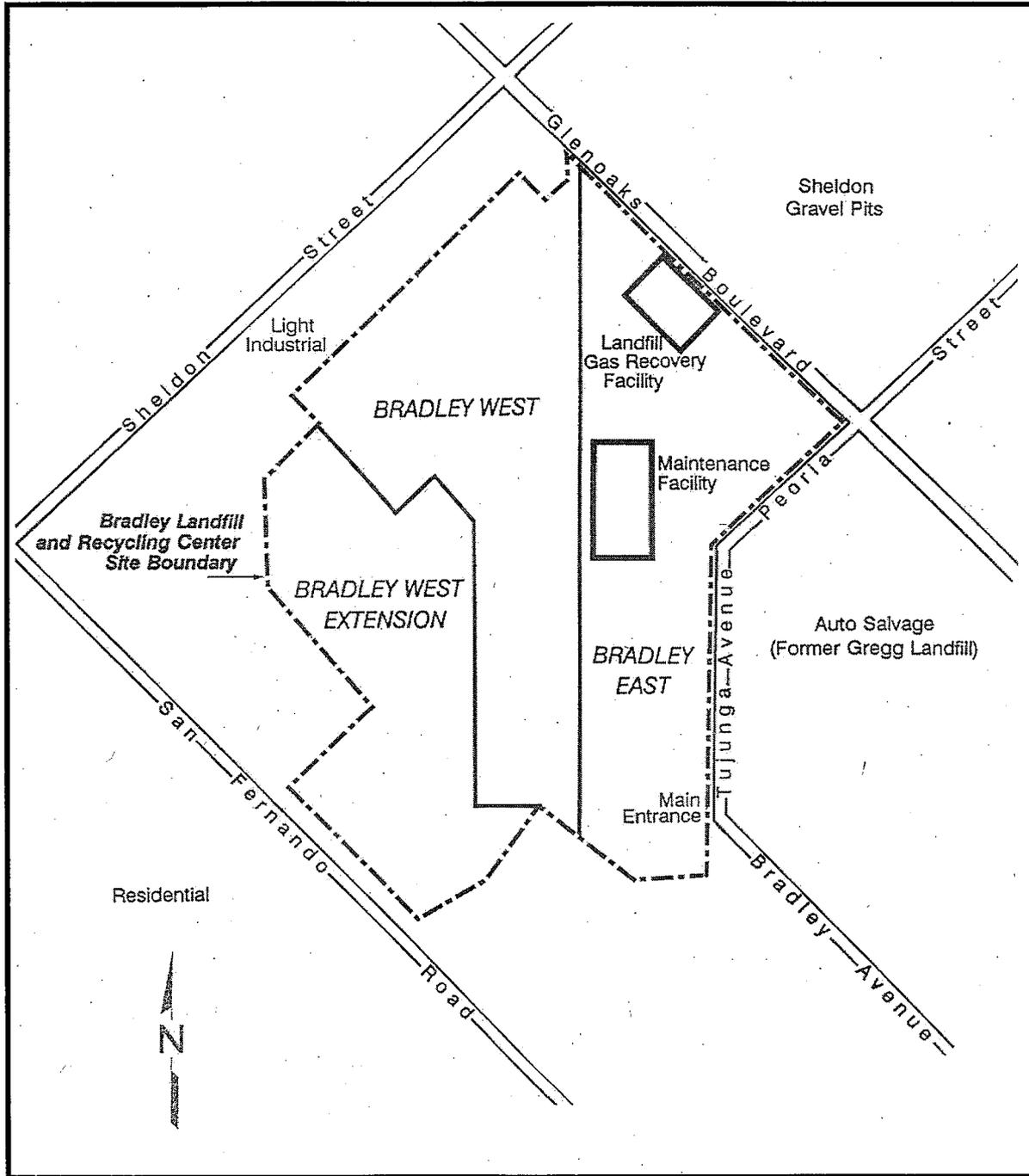


Figure 2. Landfill Cells

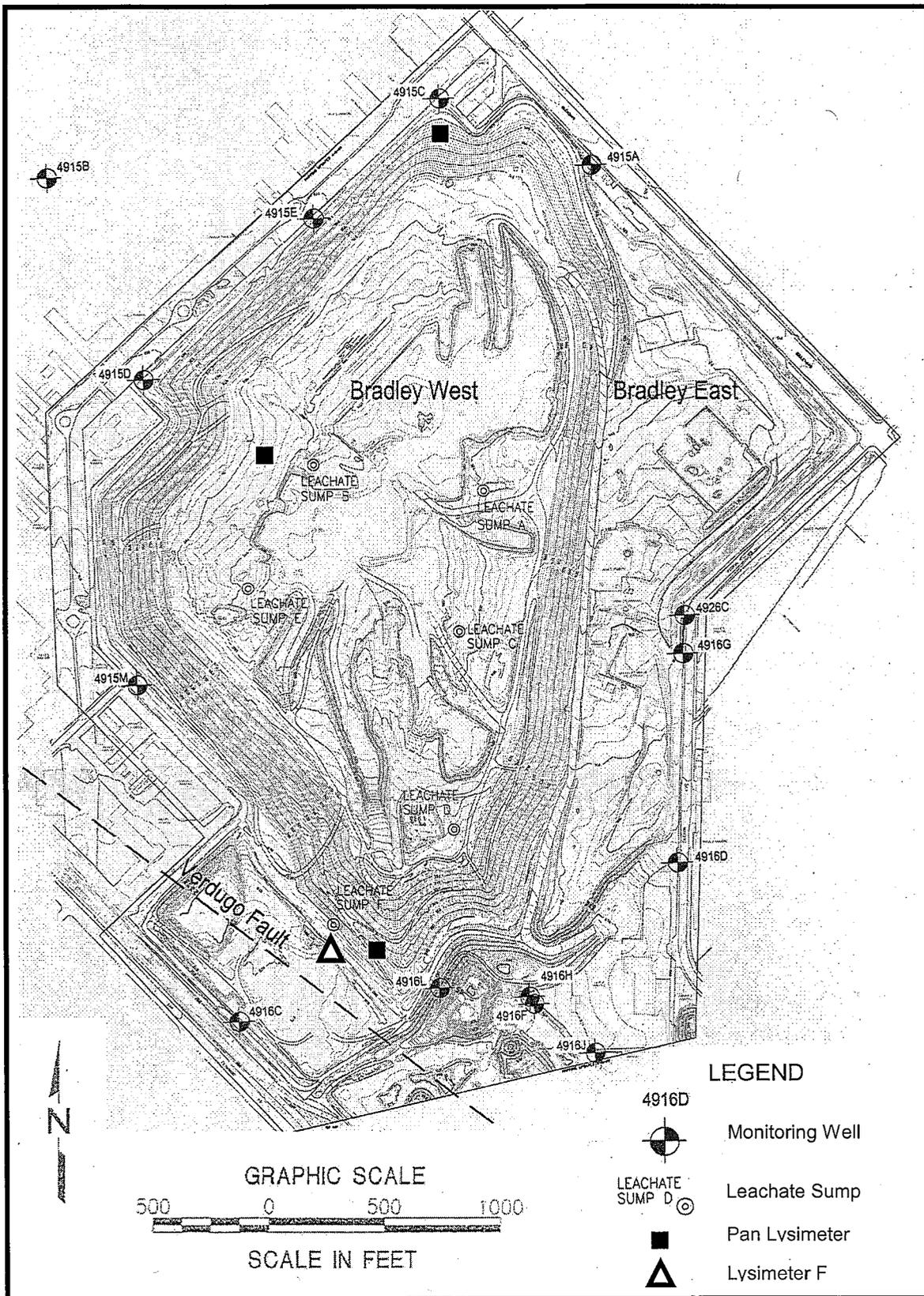


Figure 3. Well Locations, Sumps, and Lysimeters

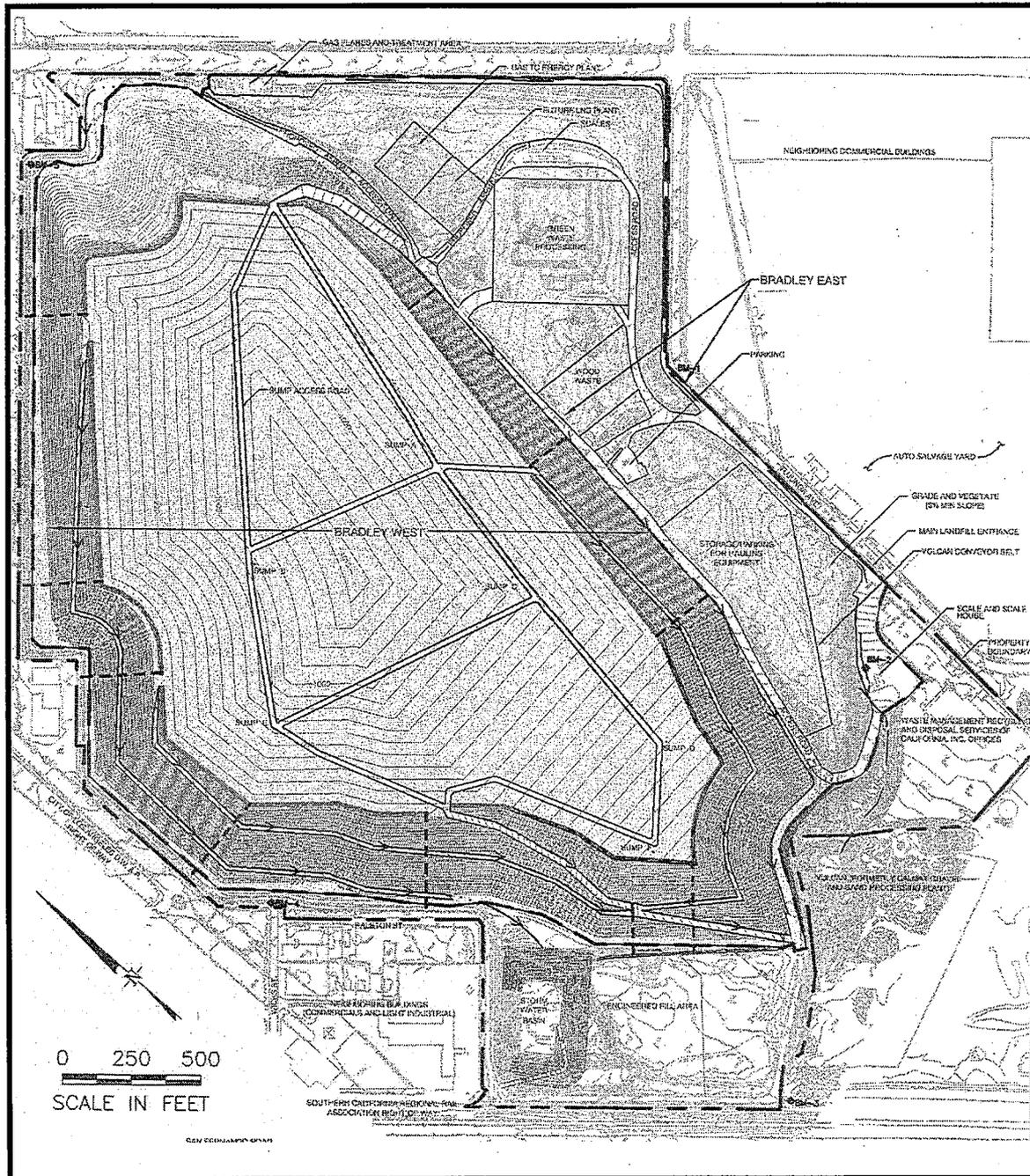


Figure 4. Final Grade

**STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

**MONITORING AND REPORTING PROGRAM NO. CI-6434
FOR
WASTE MANAGEMENT INCORPORATED
(Bradley Landfill and Recycling Center)**

(File No. 78-027)

GENERAL

1. Monitoring responsibilities of Waste Management of America (Discharger) for the Bradley Landfill and Recycling Center (Landfill) are specified in California Water Code (CWC) section 13225(a), section 13267(b) and section 13387(b), and State Water Resources Control Board (SWRCB) Resolution No. 93-62. This self-monitoring program is issued pursuant to California Regional Water Quality Control Board, Los Angeles Region (Regional Board) Order No. R4-2010-0198 (Order).
2. The Discharger shall implement this monitoring and reporting program (M&RP), as described in Section D (Requirements for Groundwater Monitoring) of the Order, starting November 4, 2010.
3. The Discharger shall comply with the requirements of title 27 of the California Code of Regulations (27 CCR), section 20415, for any water quality monitoring program required in 27 CCR section 20420, section 20425, or section 20430, as interpreted in this Order. Groundwater monitoring shall meet the requirements of 27 CCR section 20415(b) and title 40 of Code of Federal Regulations (40 CFR) section 258.51 (a, c, and d), as interpreted in this Order.

MONITORING PROGRAM

4. The groundwater monitoring network at the Landfill shall include all groundwater monitoring wells listed in Table T-1. The Regional Board Executive Officer (Executive Officer) may require the Discharger to install additional groundwater monitoring wells in response to the detection of a release of pollutant from the Landfill or other changes of site condition.
5. Unless otherwise approved by the Executive Officer, groundwater monitoring at the Landfill shall be conducted semi-annually, in April and October of each year. In the event monitoring is not performed as above because of unforeseen circumstances, substitute monitoring shall be performed as soon as possible after these times, and the reason for the delay shall be reported in the semiannual report submitted to the Regional Board.
6. Constituents of Concern (COCs) – As of the effective date of this Order, the Landfill's COCs are listed in Table T-2 and consist of all nonhazardous inorganic constituents for which the Regional Water Board would require a corrective action response, if they were included in a release, plus every constituent in Appendix II (to 40 CFR Part 258) that has ever exceeded its Practical Quantitation Limit (PQL) concentration both in an annual landfill leachate scan and also in its follow-up retest leachate sample. After the Order's effective date, the Landfill's COC list will expand, automatically, to include any Appendix II constituent thus detected-and-verified in the annual leachate scan required in this M&RP. At any given time, a COC will be on one of two mutually exclusive lists:

November 4, 2010

- a. Monitoring Parameter (MPar) List - This list, at any given time, includes several inorganic "Metals Surrogates" which take the place of the 15 federal metallic constituent MPars [as allowed by 40 CFR §258.54(a)(2)], plus all volatile organic compounds (VOCs) that are COCs, plus any former UCOCs (see next paragraph) that have become MPars per Item 10 (Five-Yearly UCOC Scan) of this M&RP.
- b. Uninvolved Constituents of Concern (UCOC) List, including all those constituents that have become COCs but are not currently on the landfill's MPar List. UCOCs must be tested at least once every five years at each monitoring well per Item 10 (Five-Yearly UCOC Scan) of this M&RP. During the five-yearly scan-testing, any UCOC that exceeds its respective 85th-percentile-of-the-background-data-set¹ concentration both in the initial sample and in a (pass-1-of-2) single retest sample from the same well moves immediately thereafter to the Landfill's MPar list (ceases being a UCOC) and begins to function as an MPar (i.e., is tested at each compliance well each Reporting Period) beginning with the next Reporting Period.

Table T-1. Required Groundwater Monitoring Wells

Location	Monitoring Wells
Down Gradient	4916D, 4916G, 4916H, 4916J, 4916L
Off Site	4915B
Background	4915A, 4915C, 4915D, 4915M

7. Concentration Limits - In accordance with 27 CCR section 20400(a)(1), the concentration limit of each COC in groundwater at the Landfill is established as the background value of that constituent. The best indication of the population mean ("background value") is the mean of a group of at least eight background data points that represent what one would expect to see, at that well, in the absence of the effect of any release. Therefore, the "Concentration Limit" for any COC is its respective background data set. One applies an appropriate statistical or nonstatistical data analysis method to this group of background data points to determine its "Threshold Value" (do-not-exceed concentration). An initial exceedance of this Threshold Value, if validated by retesting, causes that well/MPar pair to change from "Detection Mode" (no release indicated) to "Tracking Mode" (release indicated). By contrast, if a UCOC exceeds its Threshold Value (initially and in its retest), that constituent becomes an MPar (ceases to be a UCOC) and is monitored each Reporting Period thereafter at all compliance wells. The "Threshold Value" for a COC is either the upper prediction limit derived from historical monitoring data in accordance with 27 CCR section 20415(e)(7) (for constituents naturally exist in the groundwater) or its PQL (for constituents that do not naturally exist in the groundwater).
8. The current Threshold Values (upper prediction limits) for all Metals Surrogates and VOCs at all detection monitoring wells at the Landfill are listed in Table T-3. The Discharger shall update the Threshold Values in its annual report submitted to the Regional Board for the Landfill in accordance with Item 12 of this M&RP.

¹ For the purposes of scan-testing of UCOCs every five years, the "Threshold Value" (triggering concentration) for a UCOC is the upper 85th percentile of its respective Concentration Limit (background data set). During the UCOC scan, at any compliance well, if a UCOC exceeds its respective Threshold Value in the initial sample, and also exceeds it in a retest sample from that same well, taken three months later, then that constituent becomes an MPar (and ceases to be a UCOC) instantly. In a case where the UCOC's background data are all below its PQL, then its PQL serves as its Threshold Value.

Table T-2. Constituents of Concern (COC)

Monitoring Parameters (MPars)		Uninvolved COCs (UCOCs)	
Metals Surrogates: chloride nitrate nitrogen pH sulfate total dissolved solids bicarbonate alkalinity dissolved calcium dissolved magnesium Field Parameters: temperature pH electrical conductivity turbidity Supplemental Monitoring Parameters (not subject to routine statistical tests): Bicarbonate Alkalinity Total Alkalinity fluoride potassium Soluble BOD Soluble COD TOC	Volatile Organic Compounds (VOCs): 1,1,1-trichloroethane 1,1-dichloroethane 1,1-dichloroethene 1,2-dichloroethane 1,2-dichlorobenzene 1,4-dichlorobenzene 1,2-dichloropropane 2-butanone acetone benzene bromodichloromethane chlorobenzene chloroethane chloroform chloromethane cis-1,2-dichloroethene ethyl benzene methylene chloride tetrachloroethylene toluene trans-1,2-dichloroethene trichloroethylene vinyl chloride Any Other VOCs Detected and Confirmed in Annual Leachate Scans	General Parameters: boron oil & grease iron (soluble) sulfide cyanide total organic carbon total organic halogen Metals: Antimony Arsenic Barium Beryllium Chromium, total Cobalt Copper Lead Mercury Nickel Selenium Silver Thallium Vanadium Zinc	Semi-volatile Organic Compounds (SVOCs): acetophenone bis(2-ethylhexyl)phthalate dimethyl phthalate 2,4-dimethylphenol 2-methylnaphthalene 2-methylphenol 3-methylphenol 4-methylphenol naphthalene phenol Any other US EPA Appendix II pollutants (except for VOCs) and Emergent Chemicals detected and confirmed in annual Non-COC scans

Table T-3. Threshold Values* for Detection Monitoring Program Wells

Constituent	Unit	4915M	4916D	4916G	4916H	4916J	4916L
Chloride	mg/L	62	38	43	34	36	32
Nitrate	mg/L	2.7	0.5	0.90	0.63	0.92	1.5
Sulfate	mg/L	104	63	68	73	79	113
pH (Field)	Units	6.52 -	5.51 -	5.73 -	5.33 -	5.56 -	5.57 -
		8.46	8.83	8.24	8.68	8.49	9.47
Total Dissolved Solids	mg/L	475	488	483	742	756	496
Appendix I VOCs	Laboratory practical quantitation limits (PQLs)						

* Threshold Values are equivalent to Concentration Limits and are updated every two years using the most recent 10-year background data set (M&RP Item 12.).

- Annual Non-COC Scan - Pursuant to 40 CFR 258.55(b), the Discharger shall take one leachate sample at the common point immediately before the leachate holding tank and one leachate sample from one of the 6 sumps in October of each year, with all Sumps sampled at least once in a six year period and shall analyze the samples for all constituents of 40 CFR Appendix II (Appendix II) that are not already included in Table T-2 of this M&RP as COCs, and emergent chemicals including

1,4-Dioxane, 1,2,3-Trichloropropane, Perchlorate, and N-Nitroso-dimethylamine (NDMA). If the October non-COC scan identifies any previously undetected (i.e. the constituent does not exceed its respective PQL concentration) Appendix II constituent(s) or emergent chemical(s) in any leachate or groundwater samples, the Discharger shall obtain a single retest sample from that source the following April and analyze it for all such new constituents. Any constituents verified in the April retest shall become part of the COC list, with new VOCs going onto the MPar list and all other new COCs going onto the UCOC list. The Discharger shall include a prominent notification of these new COCs in the next scheduled monitoring report.

10. Five-Yearly UCOC Scan - Every five years, starting in 2011, the Discharger shall analyze a sample from each groundwater monitoring point and test for all UCOCs that are present at a concentration in excess of their respective Threshold Value (the upper-85th-percentile-concentration of their background data set). This constitutes the means by which the Discharger continues to meet the requirements of 40 CFR 258.55(b)-(d). During each such UCOC scanning event, the Discharger shall obtain and analyze a minimum of one sample from each monitoring well (sufficient to obtain a datum for each UCOC that is subject to the scan). Upon detecting a UCOC in excess of its Threshold Value, the Discharger shall, within 90 days, take a single resample from the indicating affected well(s) and reanalyze it only for the newly-detected constituent(s). Any UCOC that exceeds its respective Threshold Value in both the initial and the retest scan samples automatically becomes part of the MPar list for the Landfill. This constitutes the means by which the Discharger shall meet the requirements of 40 CFR 258.55(d)(2).
11. The Discharger shall satisfy all stormwater monitoring requirements pursuant to the Order regulating surface water discharges. Specifically, the Discharger shall satisfy requirements of general NPDES industrial stormwater permit (WDID No. 4 19I005561, enrolled since April 7, 1992), and any revisions to the permit.

DATA ANALYTICAL METHODS

12. Moving Window Concentration Limits – Unless otherwise directed by the Executive Officer, all well/COC pair statistic testing for the landfill shall use the “intra-well comparison” approach whereby the concentration limit (reference background data set) is derived from each well’s historic data. Beginning May 2011, the Discharger shall develop concentrations limits for all MPar at all groundwater monitoring wells using data obtained in the past ten (10) years. Thereafter, the concentration limits shall be updated biannually by adding monitoring data obtained in the past two years that replaces the oldest two-year data in the database. The Discharger shall report the updated background data set, for each such well/MPar pair, in each Annual Summary Monitoring Report required in this M&RP. Concentration limits for new well/COC pairs shall be developed when ten or more data points are available for the well/MPar pair.
13. Statistical Data Analysis Methodology
 - a. For the purposes of this M&RP, Minimum Level (ML) and Reporting Limit (RL), as described in Attachment 1, are functionally equivalent to method detection limit (MDL) and practical quantitation limit (PQL) with regard to reporting and statistical evaluation requirements. For this purpose, MLs and RLs shall be derived by the laboratory for each analytical procedure, according to the SWRCB’s *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (the State Implementation Policy or SIP) and the State of California’s laboratory accreditation procedures. Sample results greater than or equal to the ML/RL shall be reported “as measured” by the laboratory. Sample results less than the ML/RL shall be reported as less

than the numeric values of the ML/RL. Nominal ML and RL values shall be reported with all data. Correspondingly, any reference to "detections at or above the trace level" shall be substituted with "detections at or above the Minimum Level"

- b. Performance Standards – Pursuant to 27 CCR 20415(e)(8), in cases where the Discharger proposes to use a non-statistical data analysis method, the Discharger shall demonstrate that it meets the performance standard given in 27 CCR 20415(e)(8). For the purposes of this paragraph, pursuant to authority under 27 CCR 20080(a)(1), the error rate restrictions of 27 CCR 20415(e)(9)(B) do not apply to any statistical method that (including its retesting approach) meets or exceeds the USEPA's reference power curve (*Unified Guidance*, 2009, USEPA publication EPA 530-R-09-007).
- c. Retest is Part of the Method - In the event that an approved data analysis method provides a preliminary indication that a given COC has exhibited a measurably significant increase at a given well, the Discharger shall conduct a verification procedure either in the form of a discrete retest, in accordance with 27 CCR section 20415(e)(8)(E), or, pursuant to 27 CCR 20080(a)(1), any of the better-performing resting options (e.g., the pass-1-of-3 approach) in which the triggering concentration is lowered to counter the adverse effect that retesting would otherwise have on the data analysis method's false-negative rate (compared with a no-retest pass-1-of-1 approach). Nevertheless, any approved nonstatistical method used for data analysis shall use a pass-1-of-2 retesting approach as provide in Item 14.b. of this M&RP. The retest is part of the data analysis method, therefore, a measurably significant increase (or for a UCOC scan, a measurably significant indication that the constituent should become an MPar) exists only if the retesting does not countermand the preliminary indication, according to the retesting formula. The Discharger has the discretion to accept that the preliminary indication confirms a measurably significant increase at a given monitoring well and forgo verification retesting procedures.
- d. Limited Retest Scope - For any given groundwater monitoring point, the Discharger shall perform the verification procedure only for those MPar that have shown a preliminary indication at that well during that reporting period. At any time, the Discharger may demonstrate, in accordance with 27 CCR section 20420(k)(7), that a source other than the Landfill caused an MPar to produce a measurably significant increase at a given well or that the evidence is an artifact caused by an error in sampling, analysis, or statistical evaluation, or by natural variation in the ground water.
- e. Water Quality Monitoring Approach - The monitoring approach used for each well/MPar pair shall be controlled by whether that MPar has exhibited a measurably significant increase at that well. Therefore, the Discharger shall monitor each well/MPar pair in one of two modes, as follows:
 - i. Detection Mode - For an MPar that has not produced a measurably significant increase at that well, the purpose of monitoring, for that well/MPar pair, is to watch for the MPar's arrival at that well at a concentration in excess of its respective Threshold Value; or
 - ii. Tracking Mode - For an MPar that has produced a measurably significant increase at a given well, the purpose of the monitoring, for that well/MPar pair, is to verify the suitability and effectiveness of the existing or proposed corrective measures by tracking changes in the MPar concentration at that location via an evolving concentration-versus-time plot. For any well/MPar pair in Tracking Mode, its Threshold Value

automatically becomes the mean of its Concentration Limit (background data set), which should be plotted as a horizontal line on its concentration-versus-time plot. The goal is to indicate when the applied corrective action measures have brought the MPar's concentration down to, or below, this concentration. These plots shall be the primary input for the Discharger's twice-yearly analysis of the effectiveness of the corrective action measures.

- f. Detection Mode Data Analyses - The following applies to all detection mode data analyses (i.e., this provision does not apply to the five-year scans under Item 10 of this M&RP, or to well/MPar pairs that are in tracking mode):
- i. MPars Readily Detectable in Background - At any given groundwater monitoring point, the Discharger shall apply an approved statistical analysis method for each detection mode MPar that exceeds its respective MDL in 10% or more of the applicable background data set. For each well/MPar pair (separately), an approved statistical analysis is a method, other than analysis of variance (ANOVA), that is either validated and analyzed by the SANITAS[®] water quality data analysis software (distributed by Intelligent Decisions Technology, Inc., 22052 W 66th Street, Suite 133, Shawnee, KS 66226, Tel: (913) 829-1470) or that the Executive Officer agrees the performance standards of 27 CCR section 20415(e)(9). For any statistical data analysis method that is not validated by comparison to the USEPA's Reference Power Curve, if using SANITAS[®], the Discharger shall use the "CA Standards" and "CA Retest" settings (under the "Options" pull-down menu).
 - ii. MPars not Readily Detectable in Background - For any monitoring point at which one or more detection mode MPars exceed their respective MDL in less than 10% of the applicable background data set, the Discharger shall analyze the data for these MPars via the California Non-statistical Data Analysis Method (CNSDAM) test described in Item No. 14 of this M&RP.

14. California Non-statistical Data Analysis Method

- a. Non-Statistical Method for Detection Mode for MPars Seldom Found in Background - For any given compliance (downgradient) well, regardless of the monitoring program (Detection Monitoring Program [DMP], Evaluation Monitoring Program [EMP], Assessment Monitoring Program [AMP], or Corrective Action Program [CAP]), the Discharger shall use this data analysis method, jointly, for all constituents on the "scope list" of Item No. 14(a)(i) of this M&RP (or, for each retest sample, the modified scope list of Item No. 14(b)(ii)).
 - i. Scope List - Within 90 days of the effective date of this Order, the Discharger shall create a current "scope list" showing each detection mode MPar, at that well, that exceeds its MDL in less than 10% of its background data.
 - ii. Two Triggers - From the scope list made under Item No. 14(a)(i), above, for an initial test (or, for a retest, the modified scope list under Item No. 14(b) below), the Discharger shall identify each MPar in the current sample from that well that exceeds either its respective MDL or PQL. The Discharger shall conclude that these exceeding MPars provide a preliminary indication (or, for a retest, provide a measurably significant indication) of a change in the nature or extent of the release, at that well, if either:

- A. Five or more of the MPars on a monitoring well's scope list exceed their respective MDL; or
 - B. At least one of the MPars on a monitoring well's scope list equals or exceeds its respective PQL.
- b. Single Retest (pass-1-of-2 approach):
- i. In the event that the Discharger concludes (pursuant to Item No. 14(a)(ii) above) that there is a preliminary indication, then the Discharger shall immediately notify Regional Board staff by phone, followed by more formal notification via fax, email, or writing within fourteen days and inclusion of a notice thereof in the facility operating record. The Discharger shall, within 90 days of such indication, collect one new (retest) sample from the indicating compliance well.
 - ii. For any given compliance well, the Discharger shall analyze the retest sample only for those constituents indicated in that well's original test, under Item No. 14(a)(ii) of this M&RP, and these indicated constituents shall comprise the well's "modified scope list." As soon as the retest data are available, the Discharger shall apply the same test (under Item No. 14(a)(ii) above, but using this modified scope list) to separately analyze the retest data at that compliance well.
 - iii. If the retest sample trips either (or both) of the triggers under Item No. 14(a)(ii), then the Discharger shall conclude that there is a measurably significant increase at that well for the constituent(s) indicated in both the original and in the retest sample (i.e., not including constituents triggering in only one of the two samples). Thereafter, the Discharger: shall monitor the indicated constituent(s) in tracking mode instead of detection mode; (see Item No. 13(f)(ii) of this M&RP) at that well; shall eliminate it from the "scope list" [under Item No. 14(a)(i) of this M&RP] for that well during future runs of this nonstatistical method; shall notify the Regional Board by phone, followed by more formal notification via fax, email, or writing within fourteen days and inclusion of a notice thereof in the facility operating record; and shall note this change prominently in the body of the forthcoming monitoring report and in that report's summary.
- c. The Discharger may propose alternative non-statistical methods for MPars seldom found in background to be approved by the Executive Officer, together with a technical discussion showing how the proposed method performs at least as well as the one described above at achieving the goal of providing the earliest possible detection and measurement of a release for any given rarely-detected constituent at any given well.
15. Monitoring Data Information - For each MPar addressed during a given reporting period, the Discharger shall include in the monitoring report a listing of the prevailing MDL and PQL for that MPar, together with an indication as to whether the MDL, PQL, or both have changed since the prior reporting period. The Discharger shall require the analytical laboratory to report all applicable censored data (trace level and non-detect determinations). In the event that an MDL and/or PQL for an Mpar changes, the Discharger shall highlight that change in the report's summary and the report shall include an explanation for the change that is approved by the owner/director of the analytical laboratory.

16. Data analysis shall be carried out as soon as the data is available in accordance with statistical and non-statistical analyses requirements described in this M&RP.

SAMPLING AND ANALYTICAL PROCEDURES

17. Unless otherwise approved by the Executive Officer, all analyses shall be conducted at a laboratory certified for such analyses by the DHS. All analyses shall be conducted in accordance with the latest edition of "*Test Methods for Evaluating Physical/Chemical Methods*" (SW-846) promulgated by the USEPA (or equivalent standard methods as approved by the Executive Officer) and in accordance with an approved sampling and analysis plan. Water and waste analysis shall be performed by a laboratory approved for these analyses by the State of California. Specific methods of analysis must be identified. If methods other than USEPA-approved methods or standard methods are used, the exact methodology must be submitted for review and must be approved by the Executive Officer prior to use. For any analyses performed for which no procedures are specified in the EPA guidelines or in this M&RP, the constituent or parameter analyzed, and the method or procedure used, must be specified in the corresponding monitoring report. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall approve all reports of such work submitted to the Regional Board. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements. In addition, the Discharger is responsible for seeing that the laboratory analysis of all samples meet the following restrictions:
- a. The methods and analysis and the detection limits used must be appropriate for the expected concentrations. For detection monitoring of any constituent or parameter that is found in concentrations which produce more than 90% non-numerical determinations (i.e. "trace" or "ND") in data from background monitoring points for that medium, the analytical methods having the lowest facility-specific MDL shall be selected from among those methods which would provide valid results in light of any matrix effects involved.
 - b. Trace results falling between the MDL and the facility-specific 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 and by an estimate of the constituent's concentration.
 - c. 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. If the lab suspects that, due to 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 an estimate of the detection limit and quantitation limit actually achieved.
 - d. All quality assurance / quality control (QA/QC) data shall be reported, along with the sample results to which it applies, including the method, equipment, and analytical detection limits, the recovery rates, an explanation (corrective action) of any QA/QC measure that is outside the laboratory control limits, the results of equipment and method blanks, the results of spiked and surrogate samples, the frequency of quality control analysis, and the name and qualifications of the person(s) performing the analyses. Sample results shall be reported unadjusted for blank results or spike recovery.

- e. Upon receiving written approval from the Executive Officer, an alternative statistical or non-statistical procedure can be used for determining the significance of analytical results for a constituent that is a common laboratory contaminant (i.e., methylene chloride, acetone, diethylhexyl phthalate, and di-n-octyl phthalate) during any given reporting period in which QA/QC samples show evidence of laboratory contamination for that constituent. Nevertheless, analytical results involving detection of these analytes in any sample shall be reported and flagged for easy reference by Regional Board staff.
 - f. Within 90 days of the adoption of the Order, the discharger shall submit a technical report for approval by the Executive Officer for an analytical methodology to report unknown chromatographic peaks, along with an estimate of the concentration of the unknown analyte.
 - g. 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.
- 18. Proper chain of custody procedures shall be used in all sampling activities at the Landfill.
 - 19. All compliance groundwater monitoring system wells shall be equipped with dedicated sampling pumps, unless otherwise approved by the Executive Officer.
 - 20. All metals analyses shall be for total metals using unfiltered samples. Metals samples must be preserved in accordance with the specified laboratory methods, however care shall be taken that the dissolved metals samples are not exposed to acids until after filtering. The Discharger may elect to also obtain filtered metals representative of the dissolved phase. If so the Discharger must report the results of both the filtered and unfiltered.
 - 21. No filtering of samples taken for organics analyses shall be permitted. Samples for organic analyses shall be taken with a sampling method that minimizes volatilization and degradation of potential constituents.
 - 22. Thirty-Day Sample Procurement Limitation: For any given monitored medium, the samples taken from all monitoring points to satisfy the data analysis requirements for a given reporting period shall all be taken within a span of thirty days, and shall be taken in a manner that insures sample independence to the greatest extent feasible [27 CCR section 20415(e)(12)(B)]. For any sampling event during which samples are not collected within thirty days, the Discharger shall report the sampling period in the corresponding semiannual report.
 - 23. Groundwater sampling shall also include an accurate determination of the groundwater surface elevation and field parameters (temperature, pH, electrical conductivity, turbidity) for that monitoring point [27 CCR section 20415(e)(13)]; groundwater elevations taken prior to purging the well and sampling for monitoring parameters shall be used to fulfill groundwater flow rate/direction analyses required under Item No. 31(a)(i) of this M&RP. All field parameter measurements shall be included in the semiannual reports submitted to the Regional Board.
 - 24. Records to be maintained - Written reports shall be maintained by the Discharger or its laboratory and shall be retained for a minimum of five years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board. Such records shall show the following for each sample:
 - a. Identity of sample and of the monitoring point from which it was taken, along with the identity of the individual who obtained the sample;

- b. Date and time of sampling;
- c. Date and time that analyses were started and completed, and the name of the personnel performing each analysis;
- d. Complete procedures used, including method of preserving the sample, and the identity and volumes of reagents used;
- e. Calculations of results; and
- f. Results of analyses, and the MDL and PQL for each analysis.

REPORTS TO BE FILED WITH THE REGIONAL BOARD

25. Semiannual and annual monitoring reports for the Landfill shall be submitted to the Regional Board pursuant the following schedule.

<u>Report</u>	<u>Period</u>	<u>Date Due</u>
1 st Semiannual	January - June	September 15 th
2 nd Semiannual	July - December	March 15 th
Annual	January - December	March 15 th

The Discharger may combine the annual report with the 2nd semiannual report of the year provided that all required information is included in the combined report. The semiannual and annual reports shall include all information that is routinely required the Order and this M&RP.

26. Electronic submittal and hardcopies of report - The Discharger shall continue submitting monitoring reports required under this M&RP to the State Board GeoTracker System. In addition, a hardcopy that contains the transmittal letter, the main report text, any tables and/or figures that are directly quoted in the main report text shall be submitted to the Regional Board office by the due date. The hard copy shall include a compact disk (or other appropriate media) that contains all contents of the report (in PDF or other suitable format), including any laboratory reports, quality assurance and quality control (QA/QC) data, and filed records that are used in the report. All original laboratory reports, quality assurance and quality control (QA/QC) data, and filed records must be kept in the Landfill's operating record, as required in 27 CCR section 20415(e)(16). These data must be available for Regional Board staff review, if required.
27. All groundwater monitoring reports shall be prepared under the supervision of a California-registered professional geologist or registered civil engineer and shall be certified by the individual as meeting the prescriptive standards and/or performance goals of 27 CCR.
28. Transmittal letter - A letter transmitting the essential points shall accompany each report. Such a letter shall include a discussion of any violations found since the last such report was submitted, and shall describe actions taken or planned for correcting those violations. If the Discharger has previously submitted a detailed time schedule for correcting said violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred since the last submittal, this shall be stated in the transmittal letter.
29. Signature, certification, and perjury statement requirements - All letters transmitting monitoring reports shall follow the signature, certification, and perjury statement requirements provided in Requirement G.8 of the Order.

30. Where to submit - All reports required in this M&RP shall be addressed to:

California Regional Water Quality Control Board
Los Angeles Region
320 W. 4th Street, Suite 200
Los Angeles, California 90013
ATTN: Information Technology Unit

The program number (CI-6434) shall be clearly displayed on the cover pager of each report.

31. Semiannual monitoring reports shall be comprised of at least the following:

- a. Compliance evaluation summary - Each report shall include a compliance evaluation summary. The summary shall contain at least:
 - i. For each monitored groundwater body, a description and graphical presentation of the velocity and direction of the groundwater flow under/around the Landfill, based upon water level elevations taken during the collection of the water quality data submitted in the report. In the case where this cannot be determined with meaningful results, a statement to the nature of the groundwater flow and general flow characteristics will suffice.
 - ii. Pre-sampling purge for samples obtained from wells: For each monitoring point addressed by the report, a description of the method and time of water level measurement, of the type of pump used for purging and the placement of the pump in the well, and of the method of purging (the pumping rate, the equipment and methods used to monitor field pH, temperature, electrical conductivity and turbidity during purging, the calibration of the field equipment, results of the pH, temperature, electrical conductivity, and turbidity testing, and the method of disposing of the purge water).
 - iii. Sampling: For each monitoring point addressed by the report, a description of the sampling procedure (number and description of the samples, field blanks, travel blanks, and duplicate samples taken, the date and time of sampling, the name of the person taking the samples, and any other observations).
 - iv. A separate section titled "Summary of Non-Compliance" which discusses the compliance record and the corrective actions taken or planned that may be needed to bring the Discharger into full compliance with waste discharge requirements. This section shall be located at the front of the report and shall clearly list all non-compliance with discharge requirements.
 - v. A separate appendix containing any revised COC List (showing its then-current MPar and UCOC Lists reflecting any constituent added or constituent moved from the UCOC List to the MPar list), together with, for each such listing, the wells to which that list applies. In any such listing, the new or moved COC(s) shall be in bolded print (or otherwise emphasized).
 - vi. A separate appendix containing, for each well/COC pair, the then-current Concentration Limit per Item 7 of this M&RP.

- iii. Analytical results for wastewater. If a wastewater source was not sampled or measured during the reporting period, the reason for the omission shall be given. If no wastewater was used from a source, a statement to that effect shall be provided in lieu of analyses.
 - iv. Records of operational problems, mechanical breakdowns, and diversions to emergency storage or disposal associated with any violations, or potential violations of the Order and any corrective actions taken.
 - v. If all or a portion of the wastewater was not used because of a failure to meet the limits specified in the Order, the report shall so state and identify the disposition of the effluent.
 - f. A summary of any repair work of the final cover and any other maintenance work performed during the reporting period and plans for repair and maintenance work for the next monitoring period.
 - g. A corrective actions measures (CAM) effectiveness report (per 27 CCR section 20430(h)) that includes, at a minimum, 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 WDRs.
32. Annual monitoring reports shall contain:
- a. A graphical presentation of analytical data [27 CCR section 20415(e)(14)]: For each monitoring point, submit in graphical format the laboratory analytical data for all samples taken within at least the previous ten calendar years. Each such graph shall plot the concentration of one or more constituents over time for a given 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. On the basis of any aberrations noted in the plotted data, the Executive Officer may direct the Discharger to carry out a preliminary investigation [27 CCR section 20080(d)(2)], the results of which will determine whether or not a release is indicated;
 - b. A written summary of the groundwater analyses, indicating any changes made since the previous annual report;
 - c. A discussion of any routinely-revised intra-well background monitoring data;
 - d. An evaluation of the effectiveness of the run on/run-off control facilities, pursuant to 27 CCR section 20340 (b-d);
 - e. A evaluation of the effectiveness of the CAP pursuant to section 20080(a)(1) of 27 CCR and any further corrective actions proposed for the next monitoring period; and
33. Contingency response – Any incident at the Landfill that may endanger the environment, such as a seepage of leachate, a spill of hazardous chemicals, or discovery of a physical evidence of release as defined in 27 CCR section 20385(a)(3), shall be reported to the Regional Board pursuant to Section G.4. of the Order.

34. The Discharger may submit additional data to the Regional Board not required by this program in order to simplify reporting to other regulatory agencies.
35. If the Discharger performs analyses for any parameter more frequently than required by this M&RP using approved analytical methods, the results of those analyses shall be included in the monitoring program.

Ordered by Samuel Unger
Samuel Unger, P.E.
Executive Officer
November 4, 2010

**ATTACHMENT A:
DEFINITION OF TERMS AND ACRONYMS**

“27 CCR” means the State Water Resources Control Board’s regulations, in Division 2 of Title 27 of the California Code of Regulations, applicable to the discharge to land of waste that is not hazardous waste.

“40 CFR 258” means the regulations under Part 258 of Title 40 of the Code of Federal Regulations that apply to municipal solid waste landfills.

“ACM” means the federal Assessment of Corrective Measures process, under 40 Code of Federal Regulations section 258.56, which applies to any municipal solid waste landfill that has exhibited a measurably significant release over the applicable Water Quality Protection Standard at any well along the point of compliance for any Appendix II constituent. In California, this process is one in which the discharger determines the nature and extent of the release, implements interim corrective action measures, and develops a broad suite of possible measures, including a subset thereof which the discharger will propose for Regional Water Quality Control Board adoption under the Selection of Remedy process. Generally speaking, the federal Assessment of Corrective Measures and Selection of Remedy processes serve the same function, under the federal approach, as the Evaluation Monitoring Program does under the State approach.

“Affected parties” means all people who own, or reside upon, land outside the facility boundary that is underlain by any portion of the release from the landfill. Under Title 40 of the Code of Federal Regulations section 258.55(g)(1)(iii), the discharger must keep an up-to-date list of all such people and must assure that they are invited to the discussion of proposed corrective action measures, pursuant to Title 40 of the Code of Federal Regulations section 258.56(d).

“AMP” means a federal Assessment Monitoring Program, under Title 40 of the Code of Federal Regulations section 258.55, which applies to any municipal solid waste landfill that, under Title 40 of the Code of Federal Regulations section 258.54(c), has exhibited a measurably significant increase over the background value for any Monitoring Parameter. In California, given that a municipal solid waste landfill will have established background as the Concentration Limit for each Monitoring Parameter, the exceedance of the background value for a monitored constituent at any monitoring point also constitutes a violation of the Water Quality Protection Standard, thereby, in most instances, triggering the federal Assessment of Corrective Measures and Selection of Remedy studies. The term also describes the federal program that: 1) is ongoing during the Assessment of Corrective Measures and Selection of Remedy studies and under the Corrective Action Program; and 2) constitutes the federal monitoring program that continues after successful completion of the Corrective Action Program.

“Appendix I” (to Title 40 of the Code of Federal Regulations Part 258) means the suite of Volatile Organic Compounds and metals used as the default Monitoring Parameter list under the federal municipal solid waste landfill regulations (Title 40 of the Code of Federal Regulations section 258.1 through section 258.75). The listed constituents are a subset of those listed in Appendix II and are subject to monitoring and data analysis every six months. The Regional Water Quality Control Board can adopt surrogates for the metals, and can eliminate from the entire suite any constituent that it finds could not be released from the landfill or derived from such a release.

“Appendix II” (to Title 40 of the Code of Federal Regulations Part 258) means the suite of hazardous constituents used as the default Constituent of Concern list under the federal municipal solid waste landfill regulations (Title 40 of the Code of Federal Regulations section 258.1 through section 258.75). The listed constituents are subject to periodic scans, at selected compliance and background wells, either annually or, as adopted for this landfill, every five years. Constituents detected (trace level or higher) and verified in a retest sample become Monitoring Parameters. The Regional Water Quality Control Board can eliminate from the entire suite any constituent that it finds could not be released from the landfill or derived from such a release.

“Background,” when applied to a reference data set used in testing for a measurably -significant indication of a release for a given well / Monitoring Parameter pair, means a suite of data which comes as close as possible to representing the data one would get, for that Monitoring Parameter at that well, if there were no release from the landfill.

“Background well” means a monitoring well whose purpose is to provide an indication, for each Monitoring Parameter and monitored ground water body, of the mean (or median) and variability one would expect in the Monitoring Parameter’s concentration in that ground water body in the absence of a release from the landfill. Such wells can be upgradient, side-gradient, or (in rare instances) far-downgradient of the landfill. Due to the nearly ubiquitous presence of geographic variation, intra-well comparisons have a greater statistical power than inter-well comparisons. Therefore, the purpose of this type of well is three-fold: 1) to validate that a compliance well’s historical data, for a given Monitoring Parameter, can be used as the background data set for that well / Monitoring Parameter pair, because the compliance well’s historical data does not appear to reflect the presence of a release; 2) to identify the need to adjust the monitoring approach because of the arrival of waters affected by a release of that Monitoring Parameter from a source other than the landfill; and 3) to identify a condition in which a Monitoring Parameter is released from the landfill and migrates to this well in the unsaturated zone (e.g., Volatile Organic Compounds carried by an expanding landfill gas release in the unsaturated zone).

“Box and Whiskers Plot” is a quick way to visualize the distribution of data at a given monitoring location. The basic box plot graphically locates the median, 25th and 75th percentiles of the data set; the "whiskers" extend to the minimum and maximum values of the data set. The range between the ends of a box plot represents the Interquartile Range, which can be used as a quick estimate of spread or variability. When comparing multiple monitoring locations, box plots for each monitoring location can be lined up on the same axes to roughly compare the variability in each monitoring location. This may be used as a quick exploratory screening for the test of homogeneity of variance across multiple monitoring locations. If two or more boxes are very different in length, the variances in those monitoring location groups may be significantly different.

“California Non-statistical Data Analysis Method (CNSDAM)” means the test described in the Monitoring and Reporting Program for this landfill, for use jointly on all those Monitoring Parameters, at a given compliance well, whose applicable background data set exhibits trace level or higher concentrations in less than 10% of the data.

“CAO” means a Cleanup and Abatement Order.

“CAP” means a Corrective Action Program that implements the State Water Resource Control Board’s requirements under Title 27 of the California Code of Regulations section 20430 and under State Water Resource Control Board Policy No. 93-62 which, regarding a municipal solid waste landfill, requires the Regional Water Quality Control Board to apply any federal requirements, under Title 40 of the Code of Federal Regulations section 258.58 (federal Corrective Action Program), that are additional to, or are broader in scope than, the Title 27 California Code of Regulations requirements.

“CLGB” — see “concentration limit”

“Compliance well” means any monitoring well named in the Monitoring and Reporting Program as a ground water monitoring point to be used in detecting, or tracking, the release. The term does not include assessment wells that are used [under Title 27 of the California Code of Regulations section 20425(b) and Title 40 of the Code of Federal Regulations section 258.55(g)] to delineate the nature and extent of the release, unless the Regional Water Quality Control Board specifically names such a well as a ground water monitoring point in the Monitoring and Reporting Program.

“Concentration limit” is a part of the landfill’s Water Quality Protection Standard and means the reference background data set, or reference concentration value, for a given constituent against which one compares current compliance well data to identify, in detection mode, the arrival of the release at a given well and to identify, in tracking mode, if the corrective action measures are bringing the landfill back into compliance with the Water Quality Protection Standard [for that Monitoring Parameter], in the portion of the aquifer sampled by that compliance well]. For compliance wells within the area affected by the release, this limit can be a single number, adopted by the Regional Water Quality Control Board as a Concentration Limit Greater than Background under Title 27 of the California Code of Regulations section 20400(a)(3) through (h) and Title 40 of the Code of Federal Regulation section 258.55(i) for a given Monitoring Parameter involved in the release. Otherwise, this limit will be either the applicable background data set, for Monitoring Parameters that are readily detectable, or will be the Method Detection Limit, for a constituent that exhibits trace level or higher values in less than 10% of the background data (i.e., a Monitoring Parameter that is subject to the California Nonstatistical Data Analysis Method at that compliance well).

“Constituent of concern (COC)” is a part of the landfill’s Water Quality Protection Standard and means the list of constituents that could be released from the landfill, including the foreseeable breakdown products of all such constituents. For the ground water medium at an municipal solid waste landfill, this list must include all Appendix II constituents except for those that the discharger can show are not being mobilized in the landfill’s leachate or, for Volatile Organic Compounds only, in its produced landfill gases. A constituent on this list becomes a Monitoring Parameter only after being detected (at trace level or above) and then verified by a well-specific retest in a periodic scan of compliance wells affected by the release.

“Corrective action measure (CAM)” means an active or passive process (or installation) that the discharger implements or constructs to constrain a release, to eliminate its effects, or to prevent or minimize the release of additional waste from the landfill. The scope of the term includes “interim Corrective Action Measures,” which is applied before the adoption of the Corrective Action Program, and includes “active Corrective Action Measures,” which involves the induced movement of polluted water within the impacted aquifer (e.g., a pump-and-treat operation).

“CWC” means the statutes in the California Water Code.

“Detect,” when applied to a scan of leachate or ground water, means that the constituent for which the scan is conducted shows up at trace level or higher. For Constituents of Concern and Monitoring Parameters that are rarely detected in background, the term means analyses done using a laboratory analytical method that complies with Title 27 of the California Code of Regulations section 20415(e)(7).

“Discrete retest” means a particular means of validating a preliminary indication of a release, for a given compliance well / Monitoring Parameter pair, whereby the discharger applies an approved data analysis method to two new samples for that well / Monitoring Parameter pair. The retest validates the preliminary indication if either or both of the retest samples triggers a measurably significant increase indication. The scope of the retest, at any given compliance well, is limited to only those Monitoring Parameters that gave a preliminary indication at that monitoring point.

“Detection mode,” for a given compliance well / Monitoring Parameter pair, means a state in which one tests for a measurably significant increase, for that Monitoring Parameter at that well, using an appropriate statistical or nonstatistical data analysis method. Once that well / Monitoring Parameter pair exhibits a measurably significant increase (including an initial indication verified by a discrete retest), it is monitored, thereafter, in “tracking mode” until the inception of the proof period, following successful completion of corrective action.

“**DMP**” means a Detection Monitoring Program that implements the State Water Resources Control Board’s requirements, under Title 27 of the California Code of Regulations section 20420 and under State Water Resources Control Board Policy No. 93-62, which policy requires the Regional Water Quality Control Board to apply any federal municipal solid waste landfill requirements, under Title 40 of the Code of Federal Regulations section 258.54, that are additional to, or are broader in scope than, the Title 27 California Code of Regulations requirements.

“**EMP**” means an Evaluation Monitoring Program that implements the requirements under Title 27 of the California Code of Regulations section 20425 and under State Water Resources Control Board Policy No. 93-62, which requires the Regional Water Quality Control Board to apply any applicable federal municipal solid waste landfill requirements, under Title 40 of the Code of Federal Regulations section 258.55 through section 258.57, that are additional to, or are broader in scope than, the Title 27 California Code of Regulations requirements. This state program constitutes a stepping stone to a corrective action program, in response to the landfill exhibiting a measurably significant increase of a release or to its having exhibited physical evidence of a release [see Title 27 of the California Code of Regulations section 20385(a)(2 and 3)].

“**Existing Footprint**” (as capitalized) means the area of land, at an municipal solid waste landfill, that is covered by waste as of the date that landfill became subject to the federal regulations of Title 40 of the Code of Federal Regulations Part 258, pursuant to section 258.1 of that part.

“**Geographic variation**” means the random change in the mean, or median, concentration of a given Monitoring Parameter between different locations in a given ground water body, in the absence of a release.

“**Indicator parameter**” means all MPars that are deemed most capable of providing for a reliable indication of a Landfill release. These include common leachate indicator parameters (total dissolved solids, chloride, sulfate, and nitrate-nitrogen), all Appendix I VOCs, and all MPars for which a successful demonstration has not been made based on LCRS leachate monitoring data that the constituent cannot reliably be differentiated between LCRS leachate and groundwater. Only indicator parameters will generally be subjected to routine statistical analysis.

“**Inter-well comparison**” means a type of statistical or nonstatistical data analysis, applied to a given detection mode compliance well / Monitoring Parameter pair, in which one compares current concentration data, for that Monitoring Parameter and well, with a suite of background data from the appropriate upgradient well(s) to determine if that Monitoring Parameter has produced a measurably significant increase at that well. Generally speaking, the use of upgradient background data tends to produce higher false-positive and false-negative rates than the intra-well comparison approach, but is appropriate in those cases where it is not feasible to validate that a compliance well’s own historical data reflects water quality in the absence of a release.

“**Intra-well comparison**” means a type of statistical or nonstatistical data analysis, applied to a given detection mode compliance well / Monitoring Parameter pair, in which one compares current concentration data, for that Monitoring Parameter, with a suite of background data consisting of selected historical data from that same well to determine if that Monitoring Parameter has produced a measurably significant increase at that well. Typically, the use of a compliance well’s own historical data, for a Monitoring Parameter, provides better statistical power (to identify a real release and to avoid producing false-positive indications) than does the inter-well comparison approach, but only in a case where it is reasonable to assume that the compliance well’s own historical data does not reflect the presence of a release for that Monitoring Parameter.

“**LCRS**” means a functioning Leachate Collection and Removal System (i.e., one that produces leachate).

“**LFG**” means landfill gas, including any Volatile Organic Compounds.

“**LEA**” means local enforcement agency for the California Integrated Waste Management Board responsible for management of Waste Board regulations of 27 CCR and 40 CFR. For this Landfill the LEA is the Los Angeles County Department of Health Services, Solid Waste Program.

“**M&RP**” means the Monitoring and Reporting Program that is an attachment to the Waste Discharge Requirements (or other order) and that is incorporated by reference by the Waste Discharge Requirements.

“**Matrix effect**” means any increase in the Method Detection Limit or Peak Quantitation Limit for a given constituent as a result of the presence of other constituents, either of natural origin or introduced through a release, that are present in the sample of water or soil-pore gas being analyzed.

“**Measurably significant increase**” means a condition in which an appropriate data analysis method shows an initial indication of a release, for a given detection mode compliance well / Monitoring Parameter pair, that is verified by a discrete retest (for that well and Monitoring Parameter).

“**Method detection limit (MDL)**” means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte’s concentration is greater than zero, as defined in Title 40 of the Code of Federal Regulations section 136, Appendix B.

“**Minimum Level**” represents the lowest quantifiable concentration in a sample based upon the proper application of analytical procedures and the absence of any matrix interference. MLs also represent the lowest standard concentration on the calibration curve for a specific analytical technique after the application of appropriate method-specific factors.

“**Monitored media**” means those water and/or gas-bearing media (if applicable) that are monitored pursuant to a monitoring and reporting program. The monitored media may include:

- a. groundwater in the uppermost aquifer or in any other portion of the zone of saturation [section 20164 of Title 27 of the California Code of Regulations], in which it would be reasonable to anticipate that waste constituents migrating from the landfill could be detected, and in any perched zones underlying the landfill,
- b. any bodies of surface water that could be measurably affected by a release,
- c. soil-pore liquid beneath and/or adjacent to the landfill, and
- d. soil-pore gas beneath and/or adjacent to the landfill.

“**Monitoring parameter (MPar)**” is a part of the landfill’s Water Quality Protection Standard and means a list consisting of those Constituents of Concern that are present at a detectable level (trace level or above) in ground or surface water affected by the release. This is the subset of the Constituents of Concern that is subject to testing for a measurably significant increase, in detection mode, at all compliance wells. For ground water, at a landfill with a functioning Leachate Collection and Removal System, this suite includes all Appendix II constituents that have been detected (at trace level or above) and verified in leachate and, subsequently, have been detected (at trace level or above) and verified in a Constituents of Concern scan of ground water at compliance wells affected by the release. For ground

water, at a landfill without a functioning Leachate Collection and Removal System, this suite includes all Appendix II constituents that have been detected (at trace level or above) and verified in a Constituents of Concern scan of ground water at any compliance well affected by the release.

“Monitoring point,” for any given monitored medium (surface water, ground water, or the unsaturated zone), means a location, including any installed access device (e.g., well or lysimeter), that is named in the Monitoring and Reporting Program as a place where the discharger monitors that medium: 1) to detect the arrival of the release front for each Monitoring Parameter that is in detection mode at that location; 2) to detect changes in the concentration of each Monitoring Parameter that is in tracking mode at that location; and 3) in a case where the location that is in tracking mode for most Monitoring Parameters that are involved in the release, to detect the presence, at trace level or above, of any Constituents of Concern that have not previously been detected in that medium (Constituents of Concern newly detected and verified in that medium become Monitoring Parameters for that medium).

“MSW landfill” means any landfill that is subject to any portion of the federal regulations under Title 40 of the Code of Federal Regulations Part 258 by virtue of having received municipal solid waste (household waste) at any time and having received any waste after October 9, 1991.

“Operating record” means the organized compendium of information about the landfill and facility that the discharger maintains and makes available to the public at a site approved by the Regional Water Quality Control Board and/or the Enforcement Agency and that contains a copy of each document submitted to, or received from, any State or local regulatory agency for purposes of obtaining or updating either the Facility Permit or the Waste Discharge Requirements, demonstrating compliance with the California Environmental Quality Act, or complying (or demonstrating compliance) with any applicable requirement under Title 40 of the Code of Federal Regulations Part 258.

“Point of compliance (POC)” is, for the ground water medium, a part of the landfill’s Water Quality Protection Standard and means a conceptual vertical surface that is located, in map view, along the hydraulically downgradient limit of waste placement at the landfill and that extends downward through the uppermost aquifer underlying the Unit. The federal municipal solid waste regulations require one or more ground water monitoring points along this vertical surface to monitor the quality of ground water passing it (see Title 40 of the Code of Federal Regulations section 258.51), whereas the Regional Water Quality Control Board will name other ground water monitoring points (not along this vertical surface) as needed to provide the earliest possible detection and measurement of a release [see Title 27 of the California Code of Regulations section 20415(b)(1)].

“Practical quantitation limit (PQL)” means the value established as a target value by the United States Environmental Protection Agency that is the lowest concentration of a substance that can be consistently determined within +/- 20% of the true concentration by 75% of the laboratories tested in a performance evaluation study. Alternatively, if performance data are not available, the Practical Quantitation Limit for carcinogens is the Method Detection Limit multiplied by 5, and for noncarcinogens is the Method Detection Limit multiplied by 10. These estimated Practical Quantitation Limits are listed in Appendix II to Title 40 of the Code of Federal Regulations Part 258. Generally, these are target values that may not reflect the constraints of matrix effects; therefore, the Regional Water Quality Control Board requires the discharger to keep an up-to-date listing of the applicable laboratory-specific Practical Quantitation Limit and Method Detection Limit estimates for each analyte on the Constituent of Concern list.

“Recycled water” refers to “disinfected tertiary recycled water” as defined in California Code of Regulations, Title 22, Section 60301.230.

"Release" means the three-dimensional portion of the monitored medium (ground water, surface water, or the unsaturated zone) comprised of all locations therein that are affected by one or more Monitoring Parameters that have migrated from the landfill to such an extent that a properly constructed monitoring point, at that location, would trigger a measurably significant increase over the applicable concentration limit, using an appropriate data analysis method meeting the requirements of Title 27 of the California Code of Regulations section 20415(e)(9) and a background data set sample size of 16 or more data points.

"Reporting limit" is the same as Minimum Level when there have been no modifications, such as dilution or concentration to the standard analytical procedure during sample preparation.

"Reporting period" means the duration separating the submittal of a given type of monitoring report from the time the next iteration of that report is scheduled for submittal.

"Retest," when applied to a scan to detect the presence of an appropriate list of analytes in leachate, landfill gas, or ground water (at an affected monitoring point), means taking a single additional sample from the indicating medium (or, for ground water, the indicating monitoring point) to determine whether the initial detection, for that analyte, is valid. When applied to the six-monthly monitoring effort for a given compliance well / Monitoring Parameter pair in detection mode, see "discrete retest."

"RWQCB" or "Regional Board" means the appropriate California Regional Water Quality Control Board.

"Sample size," for a given compliance well / Monitoring Parameter pair in detection mode, means the number of data points used to represent the variability of the background population or to represent the present compliance status of the Monitoring Parameter at that well, when applying an appropriate data analysis method.

"Scan" means a determination as to whether any of a given list of constituents are detectable (at the trace level or above) in the monitored medium (typically leachate, ground water, or landfill gas). The term includes both the initial measurement and, for a newly detected constituent, the results of the single retest sample. To identify a newly detected constituent, the constituent must be detected (at trace level or above) and then verified by being detected in the single sample retest. When applied to leachate or landfill gas, the term indicates a way of determining which Appendix II constituents should be included in the landfill's the Constituents of Concern list (once detected and verified, a constituent is added permanently to the Constituents of Concern list). When applied to ground water, the term indicates a way of determining which Appendix II constituents should be included in the landfill's Monitoring Parameter list (once detected and verified at any given compliance well or background well, a constituent is added permanently to the Monitoring Parameter list).

"SOR" means a federal Selection of Remedy study, under Title 40 of the Code of Federal Regulations section 258.57, which applies to any municipal solid waste landfill that has exhibited a measurably significant release over the applicable Water Quality Protection Standard at any well along the Point Of Compliance for any Appendix II constituent. In California, this process is one in which the Regional Water Quality Control Board, in the presence of any affected persons and other interested parties, considers all relevant factors and adopts a suite of corrective action measures — developed during the Assessment of Corrective Measures study — which the discharger will apply during the Corrective Action Program to remediate the effects of the release. Generally speaking, the studies serve the same function, under the federal approach, as the Evaluation Monitoring Program does under the State approach.

“Standard observations” refers to:

- a. For receiving waters:
 - i. Floating and suspended materials of waste origin: presence or absence, source, and size of affected area;
 - ii. Discoloration and turbidity: description of color, source, and size of affected area;
 - iii. Evidence of odors: presence or absence, characterization, source, and distance of travel from source;
 - iv. Evidence of beneficial use: presence of water-associated wildlife;
 - v. Flow rate; and
 - vi. Weather conditions: wind direction and estimated velocity, total precipitation during the previous five days and on the day of observation.
- b. Along the perimeter of the landfill:
 - i. Evidence of liquid leaving or entering the landfill, estimated size of affected area, and flow rate;
 - ii. Evidence of odors: presence or absence, characterization, source, and distance of travel from source; and
 - iii. Evidence of erosion and/or of exposed refuse.
- c. For the landfill:
 - i. Evidence of ponded water at any point on the waste management facility;
 - ii. Evidence of odors: presence or absence, characterization, source, and distance of travel from source;
 - iii. Evidence of erosion and/or of daylighted refuse; and
 - iv. Standard Analysis and Measurements, which refers to:
 - A. Turbidity (only for water samples) in NTU;
 - B. Water elevation to the nearest 1/100th foot above mean sea level (only for groundwater monitoring); and
 - C. Sampling and statistical/non-statistical analysis of the Monitoring Parameters.

“SW-846” means the laboratory analytical guidance document published by the United States Environmental Protection Agency.

“SWRCB” means the California State Water Resources Control Board.

“SWRCB Resolution No. 93-62” means the order the State Water Resources Control Board adopted in 1993 as State Policy For Water Quality Control (has the force of regulation) that applies to all municipal solid waste landfills and requires a composite liner for all portions of the landfill outside of its Existing Footprint, with rare exceptions, and requires the Regional Water Quality Control Board to apply any requirement of Title 40 of the Code of Federal Regulations Part 258 that is missing from, or broader in scope than, the State Water Resources Control Boards’ landfill requirements under Title 27 of the California Code of Regulations.

“Threshold Value” is the “do-not-exceed concentration” that is statistically determined from a set of background data that reflect the Concentration Limit of a given constituent, in the absence of the effect of any release. An initial exceedance of the Threshold Value, if validated by retesting, causes that well/MPar pair to change from "Detection Mode" (no release indicated) to "Tracking Mode" (release indicated). By contrast, if a UCOC exceeds its Threshold Value (initially and in its retest), that constituent becomes an MPar (ceases to be a UCOC) and is monitored each Reporting Period thereafter at all compliance wells.

“Time Schedule Order (TSO)” is an enforceable schedule of compliance for achieving listed milestones in the cleanup.

“Time-Versus-Concentration Plot” provides a graphical method to view changes in concentration levels at a particular monitoring location(s) over time. More than one monitoring location can be compared on the same plot to look for differences between monitoring locations. They can also be used to examine the data for indications of trends.

“Tracking mode,” for a given compliance well / Monitoring Parameter pair, means a state in which there has already been a measurably significant increase (for that Monitoring Parameter at that well) such that the focus has changed from detecting the release to tracking it. In this mode, one keeps an up-to-date concentration versus time plot used in the six-monthly report validating the effectiveness of the Corrective Action Measures — required under Title 27 of the California Code of Regulations section 20430(h) — to demonstrate either that current Corrective Action Measures are effectively remediating the release or to identify the need for proposing additional/changed Corrective Action Measures under Title 27 of the California Code of Regulations section 20430(i or j) and Title 40 of the Code of Federal Regulations section 258.58(b). A well / Monitoring Parameter pair in this mode remains in this mode until the inception of the proof period following successful completion of corrective action.

“Uninvolved COC (UCOC) List” means the list of COCs that are subject only to periodic every-five-years checks.

“VOC” means any of the Volatile Organic Compounds that can be identified in a water or leachate sample under United States Environmental Protection Agency Method 8260 (see SW-846). The United States Environmental Protection Agency lists a subset of 47 such constituents in its Appendix I default Monitoring Parameter list (see Appendix I to Title 40 of the Code of Federal Regulations Part 258).

“VSRLF” means a “*very small rural landfill*” that has demonstrated to the satisfaction of the Regional Water Quality Control Board that it meets, and continues to meet, the qualifying preconditions, under Title 40 of the Code of Federal Regulations section 258.1(f), for being exempt from the federal design criteria (see Title 40 of the Code of Federal Regulations Part 258 Subpart D) and the federal monitoring requirements (see Title 40 of the Code of Federal Regulations Part 258 Subpart E). In California, to qualify as being such a landfill, the Operating Record must include the Regional Water Quality Control Board’s concurrence with the discharger’s demonstration under Title 40 of the Code of Federal

Regulations section 258.1(f). Such a landfill is still required to monitor pursuant to the Title 27 California Code of Regulations requirements and the federal exemptions cease to apply as soon as the landfill exhibits evidence of a release.

“Water quality protection standard (Water Standard)” means the multi-part system by which the discharger determines the compliance status of the landfill, with respect to the release of waste constituents. For each monitored medium, the term includes: the Constituent of Concern list and the Monitoring Parameter list (i.e., the subset of Constituents of Concern that are detectable in the that medium); the concentration limit for each Monitoring Parameter at each monitoring point; the monitoring points (for the ground water medium, these are the compliance wells); and, for the ground water medium, the point of compliance. A violation of this standard occurs whenever a Constituent of Concern that is detectable in that medium (i.e., an Monitoring Parameter) produces a measurably significant increase over its applicable concentration limit at any monitoring point, as indicated by an appropriate statistical or nonstatistical data analysis method meeting the requirements of Title 27 of the California Code of Regulations section 20415(e)(9). Such a violation triggers a change from detection mode to tracking mode for that well / Monitoring Parameter pair.

“Well / Monitoring Parameter (Well/MPar) pair” means a given Monitoring Parameter at a given well (typically a compliance well, unless a release is detected at a background well). The discharger tracks compliance with the Water Quality Protection Standard for each such pair; therefore, the minimum number of such pairs for the ground water medium is equal to the number of compliance wells times the number of Monitoring Parameters. At any given time, such a well and constituent combination will be either in detection mode or in tracking mode.

“WDRs” means Waste Discharge Requirements.

STANDARD PROVISIONS
APPLICABLE TO WASTE DISCHARGE REQUIREMENTS

1. DUTY TO COMPLY

The discharger must comply with all conditions of these waste discharge requirements. A responsible party has been designated in the Order for this project, and is legally bound to maintain the monitoring program and permit. Violations may result in enforcement actions, including Regional Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Regional Board. [CWC Section 13261, 13263, 13265, 13268, 13300, 13301, 13304, 13340, 13350].

2. GENERAL PROHIBITION

Neither the treatment nor the discharge of waste shall create a pollution, contamination or nuisance, as defined by Section 13050 of the California Water Code (CWC). [H&SC Section 5411, CWC Section 13263]

3. AVAILABILITY

A copy of these waste discharge requirements shall be maintained at the discharge facility and be available at all times to operating personnel. [CWC Section 13263]

4. CHANGE IN OWNERSHIP

The discharger must notify the Executive Officer, in writing at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage to a new discharger containing a specific date for the transfer of this Order's responsibility and coverage between the current discharger and the new discharger. This agreement shall include an acknowledgement that the existing discharger is liable for violations up to the transfer date and that the new discharger is liable from the transfer date on. [CWC Sections 13267 and 13263]

5. CHANGE IN DISCHARGE

In the event of a material change in the character, location, or volume of a discharge, the discharger shall file with this Regional Board a new Report of Waste Discharge. [CWC Section 13260(c)]. A material change includes, but is not limited to, the following:

- (a) Addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the Waste.

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WDR

Standard Provisions Applicable to
Waste Discharge Requirements

- (b) Significant change in disposal method, e.g., change from a land disposal to a direct discharge to water, or change in the method of treatment which would significantly alter the characteristics of the waste.
- (c) Significant change in the disposal area, e.g., moving the discharge to another drainage area, to a different water body, or to a disposal area significantly removed from the original area potentially causing different water quality or nuisance problems.
- (d) Increase in flow beyond that specified in the waste discharge requirements.
- (e) Increase in the area or depth to be used for solid waste disposal beyond that specified in the waste discharge requirements. [CCR Title 23 Section 2210]

6. REVISION

These waste discharge requirements are subject to review and revision by the Regional Board. [CCR Section 13263]

7. TERMINATION

Where the discharger becomes aware that it failed to submit any relevant facts in a Report of Waste Discharge or submitted incorrect information in a Report of Waste Discharge or in any report to the Regional Board, it shall promptly submit such facts or information. [CWC Sections 13260 and 13267]

8. VESTED RIGHTS

This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, do not protect the discharger from his liability under Federal, State or local laws, nor do they create a vested right for the discharger to continue the waste discharge. [CWC Section 13263(g)]

9. SEVERABILITY

Provisions of these waste discharge requirements are severable. If any provision of these requirements are found invalid, the remainder of the requirements shall not be affected. [CWC Section 921]

Standard Provisions Applicable to
Waste Discharge Requirements

10. OPERATION AND MAINTENANCE

The discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Order. [CWC Section 13263(f)]

11. HAZARDOUS RELEASES

Except for a discharge which is in compliance with these waste discharge requirements, any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) that person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State toxic disaster contingency plan adopted pursuant to Article 3.7 (commencing with Section 8574.7) of Chapter 7 of Division 1 of Title 2 of the Government Code, and immediately notify the State Board or the appropriate Regional Board of the discharge. This provision does not require reporting of any discharge of less than a reportable quantity as provided for under subdivisions (f) and (g) of Section 13271 of the Water Code unless the discharger is in violation of a prohibition in the applicable Water Quality Control plan. [CWC Section 1327(a)]

12. PETROLEUM RELEASES

Except for a discharge which is in compliance with these waste discharge requirements, any person who without regard to intent or negligence, causes or permits any oil or petroleum product to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) such person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State oil spill contingency plan adopted pursuant to Article 3.5 (commencing with Section 8574.1) of Chapter 7 of Division 1 of Title 2 of the Government Code. This provision does not require reporting of any discharge of less than 42 gallons unless the discharge is also required to be reported pursuant to Section 311 of the Clean Water Act or the discharge is in violation of a prohibition in the applicable Water Quality Control Plan. [CWC Section 13272]

Standard Provisions Applicable to
Waste Discharge Requirements

13. ENTRY AND INSPECTION

The discharger shall allow the Regional Board, or an authorized representative upon the presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
- (d) Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order, or as otherwise authorized by the California Water Code, any substances or parameters at any location. [CWC Section 13267]

14. MONITORING PROGRAM AND DEVICES

The discharger shall furnish, under penalty of perjury, technical monitoring program reports; such reports shall be submitted in accordance with specifications prepared by the Executive Officer, which specifications are subject to periodic revisions as may be warranted. [CWC Section 13267]

All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year, or more frequently, to ensure continued accuracy of the devices. Annually, the discharger shall submit to the Executive Office a written statement, signed by a registered professional engineer, certifying that all flow measurement devices have been calibrated and will reliably achieve the accuracy required.

Unless otherwise permitted by the Regional Board Executive officer, all analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. The Regional Board Executive Officer may allow use of an uncertified laboratory under exceptional circumstances, such as when the closest laboratory to the monitoring location is outside the State boundaries and therefore not subject to certification. All analyses shall be required to be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants" [40CFR Part 136] promulgated by the U.S. Environmental Protection Agency. [CCR Title 23, Section 2230]

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15. TREATMENT FAILURE

In an enforcement action, it shall not be a defense for the discharger that it would have been necessary to halt or to reduce the permitted activity in order to maintain compliance with this Order. Upon reduction, loss, or failure of the treatment facility, the discharger shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided. This provision applies, for example, when the primary source of power of the treatment facility fails, is reduced, or is lost. [CWC Section 13263(f)]

16. DISCHARGE TO NAVIGABLE WATERS

Any person discharging or proposing to discharge to navigable waters from a point source (except for discharge of dredged or fill material subject to Section 404 of the Clean Water Act and discharge subject to a general NPDES permit) must file an NPDES permit application with the Regional Board. [CCR Title 2 Section 22357]

17. ENDANGERMENT TO HEALTH AND ENVIRONMENT

The discharger shall report any noncompliance which may endanger health or the environment. Any such information shall be provided verbally to the Executive Officer within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within five days of the time the discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Executive officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. The following occurrence(s) must be reported to the Executive Office within 24 hours:

- (a) Any bypass from any portion of the treatment facility.
- (b) Any discharge of treated or untreated wastewater resulting from sewer line breaks, obstruction, surcharge or any other circumstances.
- (c) Any treatment plan upset which causes the effluent limitation of this Order to be exceeded. [CWC Sections 13263 and 13267]

18. MAINTENANCE OF RECORDS

The discharger shall retain records of all monitoring information including all calibration and maintenance records, all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and record of all data used

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to complete the application for this Order. Records shall be maintained for a minimum of three years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

Records of monitoring information shall include:

- (a) The date, exact place, and time of sampling or measurement;
 - (b) The individual(s) who performed the sampling or measurement;
 - (c) The date(s) analyses were performed;
 - (d) The individual(s) who performed the analyses;
 - (e) The analytical techniques or method used; and
 - (f) The results of such analyses.
19. (a) All application reports or information to be submitted to the Executive Office shall be signed and certified as follows:
- (1) For a corporation – by a principal executive officer or at least the level of vice president.
 - (2) For a partnership or sole proprietorship – by a general partner or the proprietor, respectively.
 - (3) For a municipality, state, federal, or other public agency – by either a principal executive officer or ranking elected official.
- (b) A duly authorized representative of a person designated in paragraph (a) of this provision may sign documents if:
- (1) The authorization is made in writing by a person described in paragraph (a) of this provision.
 - (2) The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity; and
 - (3) The written authorization is submitted to the Executive Officer.

Any person signing a document under this Section shall make the following certification:

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"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. [CWC Sections 13263, 13267, and 13268]"

20. OPERATOR CERTIFICATION

Supervisors and operators of municipal wastewater treatment plants and privately owned facilities regulated by the PUC, used in the treatment or reclamation of sewage and industrial waste shall possess a certificate of appropriate grade in accordance with Title 23, California Code of Regulations Section 3680. State Boards may accept experience in lieu of qualification training. In lieu of a properly certified wastewater treatment plant operator, the State Board may approve use of a water treatment plant operator of appropriate grade certified by the State Department of Health Services where reclamation is involved.

Each plan shall be operated and maintained in accordance with the operation and maintenance manual prepared by the municipality through the Clean Water Grant Program [CWC Title 23, Section 2233(d)]

ADDITIONAL PROVISIONS APPLICABLE TO
PUBLICLY OWNED TREATMENT WORKS' ADEQUATE CAPACITY

21. Whenever a publicly owned wastewater treatment plant will reach capacity within four years the discharger shall notify the Regional Board. A copy of such notification shall be sent to appropriate local elected officials, local permitting agencies and the press. The discharger must demonstrate that adequate steps are being taken to address the capacity problem. The discharger shall submit a technical report to the Regional Board showing flow volumes will be prevented from exceeding capacity, or how capacity will be increased, within 120 days after providing notification to the Regional Board, or within 120 days after receipt of notification from the Regional Board, of a finding that the treatment plant will reach capacity within four years. The time for filing the required technical report may be extended by the Regional Board. An extension of 30 days may be granted by the Executive Officer, and longer extensions may be granted by the Regional Board itself. [CCR Title 23, Section 2232]