



# California Regional Water Quality Control Board

## Los Angeles Region



Linda S. Adams  
Agency Secretary

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Arnold Schwarzenegger  
Governor

October 9, 2008

Mr. Dave Hauser, General Manager  
Browning-Ferris Industries of California, Inc.  
14747 San Fernando Road  
Sylmar, CA 91342

### WASTE DISCHARGE REQUIREMENTS - SUNSHINE CANYON CITY/COUNTY LANDFILL, SYLMAR, CALIFORNIA (File No. 58-076, Order No. R4-2008-0088)

Dear Mr. Hauser:

Reference is made to our letter dated August 15, 2008, which transmitted tentative waste discharge requirements (WDRs) and a monitoring and reporting program (M&RP) for the subject site. Subsequently, these documents were revised by Regional Board staff in response to comments received and were posted on the Regional Board website on September 16, 2008, at [http://www.waterboards.ca.gov/losangeles/board\\_decisions/tentative\\_orders/individual/non-mpdes/sunshine\\_canyon/index.shtml](http://www.waterboards.ca.gov/losangeles/board_decisions/tentative_orders/individual/non-mpdes/sunshine_canyon/index.shtml).

Pursuant to Division 7 of the California Water Code, this Regional Board, at a public hearing held on October 2, 2008, reviewed the tentative requirements, considered all factors in the matter, and adopted Order No. R4-2008-0088 relative to this site. During the public hearing, the Regional Board made further revisions to the tentative WDRs and M&RP as the result of testimony received at the hearing, and also included revisions identified in a change sheet submitted by staff at the hearing. All revisions are summarized in a Final Changes per Board Meeting page (copy attached).

The adopted WDRs and attachments have been posted on the Regional Board's website at [http://www.waterboards.ca.gov/losangeles/board\\_decisions/adopted\\_orders/by\\_year.shtml](http://www.waterboards.ca.gov/losangeles/board_decisions/adopted_orders/by_year.shtml). To save mailing and printing costs, hard copies of these documents have been sent only to the addressee. However, any person who would like to receive hardcopies of these documents may contact Dr. Wen Yang of the Regional Board staff at (213) 620-2253 or send an e-mail to him at [wyang@waterboards.ca.gov](mailto:wyang@waterboards.ca.gov).

All monitoring reports should be sent to the Regional Board, Attention: Information Technology Unit. Please reference all technical and monitoring reports to our Compliance File No. CI-2043. We would appreciate it if you would not combine other reports, such as progress or technical reports, with your monitoring reports, but would submit each type of report as a separate document.

*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.*

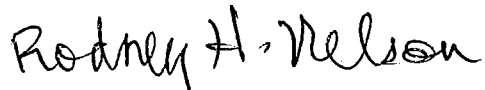
Mr. Dave Hauser  
Sunshine Canyon City/County Landfill

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October 9, 2008

If you have any questions or need additional information, please call me at (213) 620-6119 or Dr. Wen Yang at (213) 620-2253.

Sincerely,

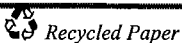


RODNEY H. NELSON  
Senior Engineering Geologist  
Land Disposal Unit

Enclosures

cc: See attached Mailing List

**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.*

## **Mailing List**

### **Firms and Agencies**

Leslie Graves, Division of Water Quality, State Water Resources Control Board  
Susan Markie, California Integrated Waste Management Board, Sacramento  
William Marciniak, California Integrated Waste Management Board, Los Angeles  
Mike Driller, Department of Water Resources  
Ken Murray, Los Angeles County, DPH  
Pete Oda, Los Angeles County, DPH  
Martin Aiyitiwa, Los Angeles County Department of Public Works  
Wayne Tsuda, City of Los Angeles, Environmental Affairs Department  
Eugene Tseng, City of Los Angeles, Environmental Affairs Department  
Ted Kowalzyk, South Coast Air Quality Management District, Diamond Bar  
Wayde Hunter, North Valley Coalition  
Anthony Pelletier, Allied Waste Industries  
Mark Macowski, Upper Los Angeles River Area Watermaster  
Wayne Aller, Knollwood Property Owners Association  
Becky Bendickson, Granada Hills North Neighborhood Council  
Kim Thompson, Granada Hill North Neighborhood Council  
Anne Ziliak, Granada Hills North Neighborhood Council  
Mary Crosby, Granada Hills North Neighborhood Council  
Gloria Molina, Supervisor, First District, County of Los Angeles  
Yvonne Burke, Supervisor, Second District, County of Los Angeles  
Don Knabe, Supervisor, Fourth District, County of Los Angeles  
Ed Reyes, Councilmember, 1st District, City of Los Angeles  
Bernard Parks, Councilmember, 8th District, City of Los Angeles  
Greig Smith, Councilmember, 12th District, City of Los Angeles  
Nancy Vanyek, Mid Valley Chamber of Commerce  
Bruce Ackerman, Economic Alliance  
Wayne Adelstein, North Valley Regional Chamber of Commerce

### **Individuals**

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Marlene Bane	Sylvia Libis
Karen Barrile	Scott and Sharon Manate
Patrick Casparian	Gus Montes
Robert Chase	Robin Navickas
Ralph Croy	Dora Prihar
Joyce Edelman	Robert Ricketts
George and Mary Edwards	Charles and Kay Stelzried
Mary Anna Kienholz	Irene Tomlinson
Jack Lester	Phil and Bobbie Wenger
Sheldon Levitt	Chris Ward
Louise Lewis	Anthony Zero

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION

519<sup>th</sup> Regular Meeting  
October 2, 2008

Item No. 15

CORRECTIVE ACTION WASTE DISCHARGE REQUIREMENT  
FOR  
BROWNING-FERRIS INDUSTRIES OF CALIFORNIA, INC.  
(SUNSHINE CANYON CITY/COUNTY LANDFILL)

**FINAL CHANGES PER BOARD MEETING**  
(Deletions are in strike-out and additions are underlined)

**Changes Made to Waste Discharge Requirements (WDRs)**

Page 2 - added to end of existing Finding 11:

11. It is the Regional Board's intent that the final cover system be designed in such a way that the Sunshine Canyon be restored to its pre-landfill vegetative conditions, as may be reasonably and technically feasible.

Page 6 (formally Page 5) - inserted new finding after existing Finding 33:

34. As required by 40 CFR 258.12, the Discharger has proposed compensatory mitigation measures to achieve no net loss of wetlands (defined by acreage and function) for the project by restoring existing degraded wetlands and creating additional manmade wetlands offsite. The compensatory mitigation measures will be conducted by the Discharger under the direction of this Regional Board and the U.S. Corps of Engineers, as provided by the Federal Clean Water Act, sections 401 and 404, respectively.

Page 6 – corrected first sentence of renumbered Finding 36 (previously Finding 35) to read:

36. The existing water quality monitoring network at the Facility includes three up-gradient monitoring wells (CM-9R3, CM-10R, and CM-11R), ....

Page 6 – corrected first sentence of renumbered Finding 39 (previously Finding 38) to read:

39. LFG at the Facility is collected by a network of horizontal and vertical LFG collection wells and collection pipelines, and is combusted at ~~two~~ three LFG flare stations onsite in accordance with SCAQMD regulations.

Page 7 - modified first clause of the 4<sup>th</sup> sentence of renumbered Finding 42 (previously Finding 41) to read:

42. Contaminated groundwater is extracted ~~from behind~~ upgradient of the cutoff wall, ...

Page 17 - inserted new paragraph # 12:

12. The Discharger shall submit a workplan within 60 days from adoption of this Order, for the Regional Board's approval, to propose the design, location, and construction schedule of deep groundwater monitoring wells that would sufficiently characterize the groundwater quality underneath the Landfill. These groundwater monitoring wells shall be added to the groundwater monitoring network required in the M&RP No. CI-2043 upon installation.

Page 23- inserted new paragraph # 22:

22. During oversight of this Order, wherever the Executive Officer is authorized to grant any approval under a particular provision of this Order, the Executive Officer is directed to assess if there is controversy associated with the decision following public notice and, if so, bring the decision to the Regional Board for approval.

**Change made to Monitoring and Reporting Program (M&RP)**

Page T-6 - inserted new paragraph after existing #2:

3. The Discharger is required to submit quarterly reports to the Executive Officer documenting the results of their load checking program.

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

**CORRECTIVE ACTION PROGRAM WASTE DISCHARGE REQUIREMENTS  
ORDER NO. R4-2008-0088**

**FOR**

**BROWNING-FERRIS INDUSTRIES OF CALIFORNIA, INC.  
(SUNSHINE CANYON CITY/COUNTY LANDFILL)  
(File No. 58-076)**

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

**BACKGROUND**

1. Browning-Ferris Industries of California, Inc. (BFI) (Discharger), an Allied Waste Industries company, owns and operates the Sunshine Canyon Landfill (Facility) at 14747 San Fernando Road, Sylmar, California. The Facility is located to the west of the intersection of the Golden State (I-5) and the Antelope Valley (SR-14) freeways, within portions of Sections 23, 24, 25, and 26 of Township 3 North (T3N), Range 16 West (R16W) of the San Bernardino Base and Meridian, and is centered at latitude 34° 19' 45"N and longitude 118° 30' 48"W (Figure 1).
2. The Facility straddles the border between the City of Los Angeles and unincorporated Los Angeles County and includes two distinct Class III municipal solid waste (MSW) management units, referred to as the Sunshine Canyon City Landfill (City Landfill) and the Sunshine Canyon County Extension Landfill (County Extension Landfill), respectively. The City Landfill is located entirely within the City of Los Angeles, while the County Extension Landfill is to the northwest of the City Landfill, within the unincorporated territory of Los Angeles County (Figure 2).
3. The City Landfill consists of a closed City Landfill Unit 1 that began accepting MSW in 1958 and ceased accepting waste in 1991, and the active City Landfill Unit 2 that has been operating since 2005. The City Landfill is currently regulated under Waste Discharge Requirements (WDRs) included in Order No. R4-2003-0155 adopted by this Regional Board on December 4, 2003. The County Extension Landfill has been in operation since 1996 and is currently regulated under WDRs included in Order No. R4-2007-0023 adopted by this Regional Board on April 5, 2007.
4. The Discharger has proposed an expansion, referred to as the City/County Landfill (Landfill), that will connect the City and County Extension landfills and create a single landfill footprint within Sunshine Canyon (Figure 3). The proposed expansion will allow the Discharger to fill the space between the two existing landfill units and increase the capacity of the site by approximately 90.2 million cubic yards. The projected life of the Landfill will be extended from approximately 2013 to 2037. This Order approves the proposed expansion, combines the requirements of Orders No. R4-2003-0155 and No. R4-2007-0023, and allows the Discharger to operate the Facility under a single set of WDRs.
5. In accordance with the California Code of Regulations, title 27 (27 CCR), section 21585, the Discharger submitted a Joint Technical Document (JTD) to this Regional Board to apply for revised WDRs for the consolidated Landfill. The JTD contains an overview of the project and includes descriptions of the environmental setting, existing facilities, design, environmental control systems,

October 2, 2008

stability analyses, facility operations, permit requirements, construction quality assurance plans, and preliminary closure and post-closure maintenance plans for the proposed expansion.

6. Throughout the history of the Facility, the landfill units have been constructed to comply with changing standards: City Landfill Unit 1 (from 1958 to 1991) was not equipped with a liner and leachate collection and removal system (LCRS); Phases I through IV of the County Extension Landfill (from 1996 to 2007) were constructed with a single composite liner system; while City Landfill Unit 2 (since 2003) and Phase V of the County Extension Landfill (since 2007) have been constructed with double composite liner systems. This Order requires that all future development of the Landfill be constructed with double composite liner systems (Figure 4).
7. Future construction of the Landfill will be developed in five phases (Phases CC-I through CC-V, Figure 3). A portion of the Landfill will be developed on the slopes of the closed City Landfill Unit 1. This Order requires that final designs and construction plans for each phase of landfill construction be reviewed and approved by Regional Board staff prior to installation and use.
8. The Facility has been developed as "canyon cut-and-cover" landfill units. Incoming waste is spread and compacted in approximately one- to two-foot thick layers, generally placed in lifts up to 20 feet high, and covered with a minimum of six inches of compacted daily cover soil or an alternative daily cover (ADC) (e.g., non-hazardous contaminated soils, tarps, green waste, etc.) that is approved by the California Integrated Waste Management Board (CIWMB) and its Local Enforcement Agency (LEA) under section 20690 of 27 CCR, and that meets the SWRCB's daily cover requirements in paragraph 20705(e) of 27 CCR.
9. The Discharger implements a load-checking program at the Facility to prevent the disposal of hazardous wastes, designated wastes, or other unacceptable materials. Intercepted hazardous materials are temporarily stored in a dedicated hazardous waste storage area and disposed of at an appropriate hazardous waste facility according to hazardous waste laws.
10. The County Extension Landfill is currently permitted to accept 6,600 tons per day of MSW with a maximum acceptance rate of 36,000 tons per week while the City Landfill is currently permitted to accept 5,500 tons/day or 30,000 tons/week of MSW. After consolidation, the Landfill will be permitted to accept a maximum of 12,100 tons/day or 66,000 tons per week of MSW.
11. The JTD includes Preliminary Closure and Post-closure Plans. In conformance with Section 21090(a) of 27 CCR, the Discharger has proposed a final cover system that includes (from bottom to top) a minimum two-foot thick foundation layer, an optional geocomposite gas drainage layer, a minimum one-foot thick low hydraulic conductivity layer, a 40-mil linear low density polyethylene (LLDPE) geomembrane, a geocomposite drainage layer, and a one-foot thick erosion-resistant layer (Figure 5). In accordance with section 20080(b)(1) of 27 CCR, this Regional Board may approve alternative final cover systems to accommodate regional and site specific conditions. It is the Regional Board's intent that the final cover system be designed in such a way that the Sunshine Canyon be restored to its pre-landfill vegetative conditions, as may be reasonably and technically feasible.
12. To evaluate the seismic stabilities of the final cover at some critical slopes of the County Extension Landfill, Order No. R4-2007-0023 included a "reopener" (Section M.1.) that stated: "*Regional Board staff shall convene a workgroup that includes other State, County and local regulatory agencies, the Discharger, and concerned groups and citizens to evaluate the seismic stability properties of the proposed final cover system, or any alternative final cover system proposed under Sections 20080(b) and 21090(a) of 27 CCR for the County Extension Landfill. After consideration*

*of comments offered by the workgroup, the Discharger shall submit a conceptual final cover design for the County Extension Landfill for the Regional Board to approve. The Regional Board will revise these requirements within two years from the date of this Order if the design of a conceptual final cover system is not approved before such date. In the interim, no landfill construction shall be conducted within the proposed Phases VI and VII areas of the Landfill.”* With the consolidation of the City and County Extension Landfills, the final slopes of concern are eliminated because the space between the two existing landfills will be filled with wastes. As such, implementation of the reopener is unnecessary and therefore not required.

13. California Water Code (CWC) section 13263 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.
14. This Order includes the attached definition of terms and acronyms (Attachment A).

### **REGULATORY REQUIREMENTS**

15. Updated state regulations governing landfills are contained in 27 CCR, which became effective on July 18, 1997. These revised regulations clarified the roles and responsibilities of the CIWMB and the California State Water Resources Control Board (State Board), as well as Regional Boards, in regulating MSW disposal facilities. The 27 CCR regulations combine prior disposal site/landfill regulations of the CIWMB and State Board that were maintained in titles 14 and 23 of the California Code of Regulations. The requirements in this Order, as they are met, are in conformance with the relevant regulations of 27 CCR, relevant regulations contained in part 258 of title 40 of the Code of Federal Regulations (40 CFR Part 258), and the CWC.
16. On June 17, 1993, the State Board adopted Resolution No. 93-62, directing each Regional Board to revise the WDRs of each active MSW landfill in its respective region to comply with federal MSW regulations in 40 CFR part 258 that are more stringent than California State regulations. To comply with Resolution No. 93-62, this Regional Board adopted Order No. 93-062 (also known as the Super Order) on September 27, 1993. Applicable requirements in the Super Order have been incorporated into this Order.
17. 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 storm water discharges associated with industrial activities in California (State Board Order 97-03-DWQ). Storm water runoff from the Facility is regulated under the general NPDES permit (WDID No. 4 19S001306, enrolled on March 27, 1992). The Discharger is implementing a Storm Water Pollution Prevention Plan (SWPPP) at the Facility as required by the general NPDES permit.

### **ENVIRONMENTAL SETTING**

18. The Facility is situated at the eastern end of the Santa Susana Mountains and the northern edge of the San Fernando Valley. Climatic conditions at the Facility are semi-arid. Rainfall typically occurs between November and April with little rainfall during the summer months. Average annual precipitation in the area is approximately 22.0 inches, with annual precipitation ranging from a high of 55.8 inches to a low of 10.2 inches. Average annual evaporation in the area is approximately 80 inches.



19. The Facility is surrounded by unincorporated areas of Los Angeles County to the north and west, and the communities of Granada Hills and Sylmar to the south and east. Land uses within 1,000 feet of the Facility include undeveloped mountainous terrain to the south and southwest, an active oil production area to the south, freeways to the north and northeast, and open space and residential areas to the south and east. O'Melveny Park of the City of Los Angeles is located to the west and southwest of the landfill property.
20. Three oil fields have been developed adjacent to the Facility site. The Newhall, Aliso Canyon, and Cascade Fields are located within one mile of the Landfill property boundary. The Cascade Oil Field is located within 1,000 feet of the southwestern portion of the Facility. Approximately 96 oil/gas wells have been identified within a one-mile radius of the project site. Abandoned oil wells are occasionally encountered during development of the Facility. The Discharger is required to decommission such abandoned oil wells in a manner protective of water quality as they are encountered.
21. The Facility is underlain predominantly by marine sedimentary rocks of the Upper Miocene to Lower Pliocene-age Towsley Formation. The Pliocene-age Pico Formation outcrops in limited areas near the eastern most portion of the Facility. The Towsley and Pico Formation bedrock consist primarily of siltstone and fine-grained sandstone inter-bedded with lenses of coarse-grained sandstone and conglomerate. The bedrock units range from relatively fresh to highly weathered, with the degree of weathering generally decreasing with increasing depth below ground surface.
22. Bedrock units at the site are locally overlain by younger alluvial deposits including alluvium, colluvium, and/or landslide debris. The alluvial deposits occur primarily along the axis of the various sub-canyons that comprise Sunshine Canyon and consist of varying mixtures of unconsolidated sand, gravel, silt, and clay. The alluvial deposits are locally up to 30 feet thick. Substantial thickness of artificial fill has been placed in some areas of the Facility.
23. The bedrock formations beneath Sunshine Canyon are folded into a series of anticlines and synclines that plunge to the southeast. Near the southern margin of the Canyon, the bedrock units are truncated by several east-west trending faults, which dip steeply to the north beneath the southern portion of the Facility. A second fault zone ("Fault A") is located north of the City Landfill within the County Extension Landfill property. Several crude oil seeps associated with this fault zone were noted during previous construction of the Landfill. Faults mapped at the Facility have been determined to be formed during the mid-Pleistocene period (i.e., 750,000 to 125,000 years ago).
24. There are no known active faults within the Facility area. Active faults are defined as Holocene epoch faults that have exhibited movement in the last 11,000 years. The closest major active faults to the site are the Santa Susana Fault, which is about half a mile to the south of the site, and the San Fernando-Sierra Madre Fault, which is about two miles to the southeast of the site. The most prominent active fault in the area, the San Andreas Fault, is about 24 miles to the northeast.
25. 27 CCR, section 20370, requires that Class I and Class II solid waste management units be designed to withstand a maximum credible earthquake (MCE) and Class III units be designed to withstand a maximum probable earthquake (MPE) without damage to the foundation or to the structures which control leachate, surface drainage, erosion, or gas. This Regional Board requires that Class III landfills in this region to be designed to accommodate an MCE event.
26. The Seismic Hazard Zone Map for the Oat Mountain 7.5 minute quadrangle, released February 1, 1998, by the California Division of Mines and Geology Seismic Hazards Mapping Program,

indicates that the Facility is located outside identified liquefaction zones, but within areas with a previous occurrence of landslide movement, or potential for permanent ground displacements, that requires mitigation. Landslide deposits have been identified within the footprint of the Facility. This Order requires the Discharger to properly remove and/or otherwise mitigate such landslide deposits prior the installation of landfill liner systems.

27. The Facility is not underlain by a major groundwater basin. However, the northern boundary of the San Fernando Groundwater Basin, an important groundwater resource in this Region, is located approximately one mile to the south of the Facility. Pollutants released from the Facility could potentially be carried out of the canyon and reach the groundwater basin. As part of the Corrective Action Program required by Regional Board Order R4-2003-0155 for the Sunshine Canyon City Landfill, the Discharger has installed an impermeable subsurface barrier (cutoff wall) across the mouth of the Sunshine Canyon. Groundwater is currently being extracted from behind the cutoff wall and treated for on-site use. Such operations minimize the potential for contaminated groundwater to leave the canyon and impact groundwater quality in the San Fernando Groundwater Basin.
28. Groundwater beneath the Facility occurs in two main zones: a shallow, unconfined water bearing zone consisting of alluvial deposits and the upper weathered portion of the bedrock, and a deeper, locally confined water-bearing zone consisting primarily of relatively fresh bedrock. Hydraulic conductivity of bedrocks beneath Sunshine Canyon ranges from  $10^{-3}$  to  $10^{-9}$  centimeters per second (cm/sec) with values increasing with greater weathering and fracturing density. The hydraulic conductivity of the alluvial deposits is estimated to be from  $10^{-2}$  to  $10^{-4}$  cm/sec.
29. The majority of groundwater flow beneath the Facility occurs within alluvium and weathered bedrock near canyon bottoms, generally following pre-landfill construction topography. Groundwater flow within the canyon is generally to the southeast towards the mouth of Sunshine Canyon and the velocity of groundwater flow within the alluvium is estimated to be from 0.04 to 4.4 ft/day.
30. There is an overall transition with depth from mostly Ca-MgSO<sub>4</sub> groundwater to mostly Na-HCO<sub>3</sub> groundwater at the Facility. The majority of the groundwater within the shallow water-bearing zone is a Ca-MgSO<sub>4</sub> type water with total dissolved solids (TDS) ranging from 2,000 to 4,000 mg/L. Groundwater within the unweathered bedrock zone is primarily a Na-HCO<sub>3</sub> type water with TDS ranging from 1,000 to 3,000 mg/L. Because of high concentrations of salts and low yield, groundwater at the site is currently not used as a drinking water source.
31. Geographic variation of groundwater quality is substantial within the Facility. In general, concentrations of dissolved solids, particularly chloride, tend to be higher towards the mouth of Sunshine Canyon. A study conducted by the Discharger between October 1994 and August 1996 ("chloride investigation") concluded that the observed differences in chloride concentrations between upgradient and downgradient groundwater monitoring wells at the Facility were likely the result of upward migration of oilfield brine along fault fractures to shallow groundwater.
32. The Facility is located within the Los Angeles River Watershed Basin. Surface water runoff generated at the Facility is retained temporarily in a sedimentation basin at the mouth of Sunshine Canyon before being discharged to a flood control channel leading to the Los Angeles River. The Los Angeles Reservoir, which stores water from the Los Angeles Aqueduct, is located approximately 1.5 miles to the southwest of the Facility.

33. The Facility is identified as being in a Zone C area on the Flood Insurance Rate Map (FIRM) by the Federal Emergency Management Agency (FEMA) sponsored by the National Flood Insurance Program. Zone C includes areas of minimal flooding.
34. As required by 40 CFR 258.12, the Discharger has proposed compensatory mitigation measures to achieve no net loss of wetlands (defined by acreage and function) for the project by restoring existing degraded wetlands and creating additional manmade wetlands offsite. The compensatory mitigation measures will be conducted by the Discharger under the direction of this Regional Board and the U.S. Corps of Engineers, as provided by the Federal Clean Water Act, sections 401 and 404, respectively.

#### **ENVIRONMENTAL MONITORING AND CONTROL SYSTEMS**

35. Groundwater monitoring at the Facility started at the City Landfill in 1986 and the County Extension Landfill in 1995. Current groundwater monitoring activities are required under Monitoring and Reporting Program (M&RP) No. CI-2043, which is included in Regional Board Order No. R4-2003-0155, and M&RP No. CI-7059, which is included in Regional Board Order No. R4-2007-0023. This Order requires the Discharger to implement a unified groundwater monitoring program, which will be identified as M&RP No. CI-2043, at the Landfill (Attachment T).
36. The existing water quality monitoring network at the Facility includes three up-gradient monitoring wells (CM-9R3, CM-10R, and CM-11R) and three down-gradient wells (CM-15, CM-16R, and CM-17R) at the County Extension Landfill and 12 down-gradient monitoring wells (MW-1, MW-2A, MW-2B, MW-5, MW-6, MW-9, MW-13R, MW-14, DW-1, DW-2, DW-3, and DW-4). Monitoring wells CM-15, CM-16R, and CM-17R are located between the County Extension Landfill and the City Landfills and will be eliminated with the construction of the landfill liner system in the area. Locations of the groundwater monitoring wells are displayed in the M&RP No. CI-2043.
37. During the construction of the County Extension Landfill and City Landfill Unit 2, the Discharger installed subdrain systems to capture groundwater seepage under the landfill's liner system. Liquid collected at the outlets of these subdrains has been sampled to monitor groundwater quality within the vadose zone (unsaturated zone). The subdrain system will be extended as necessary with the development of the Landfill. In addition to the subdrain system, a lysimeter (LY-6) has been installed underneath the leachate collection sump at the County Extension Landfill and another lysimeter (LY-7) has been installed between the primary and secondary liner system at the City Landfill. Liquid samples collected at the lysimeters are used for vadose zone groundwater monitoring.
38. As required by the South Coast Air Quality Management District (SCAQMD), the Discharger has installed 31 gas probes within the unsaturated zone around the Facility for field methane gas monitoring. These gas probes are utilized to monitor volatile organic compounds (VOCs) in landfill gas (LFG) that may cause groundwater contamination. The network will be modified as necessary with the development of the Landfill.
39. LFG at the Facility is collected by a network of horizontal and vertical LFG collection wells and collection pipelines, and is combusted at three LFG flare stations onsite in accordance with SCAQMD regulations. LFG condensate is collected from sumps located at various low points in LFG header pipes.

40. The Facility is equipped with an on-site leachate treatment plant. Leachate and gas condensate collected at the Facility are treated before being used for dust control or irrigation at the site, or discharged to the sanitary sewer system in accordance with requirements established by the City of Los Angeles Industrial Waste Division for the Facility. Treatment processes at the plant consist primarily of air stripping and carbon adsorption to remove organic compounds and chlorination to reduce concentrations of sulfides. In accordance with sections 20200(d) and 20340(g) of 27 CCR, SWRCB Resolution No. 93-62, and 40 CFR 258.28, this Order allows the Discharger to reintroduce landfill leachate and gas condensate to the Landfill in areas equipped with a double composite liner system.

**KNOWN CONTAMINATION AND CORRECTIVE ACTION PROGRAMS**

41. Both Order No. R4-2003-0155 and Order No. R4-2007-0023 contain corrective action programs (CAP) that require the Discharger to remediate known contamination at the Facility. Requirements of those CAPs have been incorporated into this Order.
42. At the City Landfill, VOCs, 1,4-dioxane, and elevated concentrations of select inorganic constituents, such as chloride, have been detected in a number of shallow groundwater monitoring wells. These pollutants are believed to originate from the unlined City Landfill Unit 1. As required by the CAP for the City Landfill, the Discharger installed an impermeable subsurface barrier (cutoff wall) across the mouth of Sunshine Canyon in 2004. Contaminated groundwater is extracted upgradient of the cutoff wall, treated as necessary, and either used for irrigation or dust control on-site or discharged to the Los Angeles City sanitary sewer system. Such operations minimize the potential for contaminated groundwater to leave the site. The most recent groundwater monitoring data (for year 2007) indicates that no VOCs are detectable in groundwater wells down gradient to the cut-off wall. However, 1,4-dioxane is still detected (ranging from 7.8 to 18 ug/L) in several shallow groundwater monitoring wells (MW-1, MW-5, and MW-13R) down gradient to the cutoff wall, although concentrations have declined from the peak high level in 2005 (up to 36 ug/L in MW-1).
43. At the County Extension Landfill, groundwater collected from the subdrain system (subdrain water) has been impacted by VOCs since 2000. Such contamination is believed to have originated from landfill gas entering the subdrain system. The CAP for the County Extension Landfill requires the Discharger to collect, treat as necessary, and properly manage VOC-impacted subdrain water. The treated subdrain water is either used on-site for dust control or discharged to the Los Angeles City sanitary sewer system. The most recent analytical data (for year 2007) indicates that several VOCs are still detected in water samples from subdrains A, B, and C at the County Extension Landfill. VOCs that are consistently detected at concentrations above their California maximum contamination levels (MCL) are summarized in the following table.

Constituent	Concentration Range (ug/L)	Average Concentration (ug/L)	MCL (ug/L)
Benzene	0.9-4.6	2.9	1
cis-1,2-dichloroethene (cis-1,2-DCE)	1.4-16	9.9	6
Vinyl chloride	1.3-2.5	2.0	0.5

\* Data obtained in 11 sampling events from February 2, 2007 to November 29, 2007.

44. Pursuant to 27 CCR section 20380(b), this Regional Board adopted Order No. R4-2007-0064 on December 6, 2007 requiring the Discharger to obtain and maintain assurances of financial responsibility for initiating and completing corrective actions for all known or reasonably foreseeable releases from the Facility. The amount of such assurance for the County Extension Landfill was determined to be at least \$1,712,130, while that for the City Landfill was determined to be \$4,147,680, both are adjusted annually for inflation. This Order does not change the total amount of financial assurance for known or reasonably foreseeable releases for the Facility, which is \$5,859,810, adjusted annually for inflation.
45. This Order is in conformance with State Board Resolution No. 93-62 because it requires a CAP for known and future releases that implements all applicable 27 CCR requirements and all additional federal requirements under 40 CFR part 258.58, including parts 258.58(a)(1)(i-iii), which require the Discharger to implement an Assessment Monitoring Program (AMP) pursuant to 40 CFR part 258.55 in conjunction with the CAP.
46. Since 1996, the Discharger has been monitoring leachate annually for constituents listed in Appendix II of 40 CFR part 258 (Appendix II constituents), and re-testing for newly discovered ones, in order to create a proposed constituent of concern (COC) list containing those Appendix II constituents that could be released from the Landfill. This Order narrows the scope of the COC list to include, from Appendix II, only those constituents that have been detected and verified in leachate. 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 part 258.55(b).
47. Given that the VOCs in the Appendix I (to 40 CFR part 258) federal Monitoring Parameter list are all Appendix II constituents, the leachate sampling at the site also serves as a basis for narrowing the scope of VOCs which the Discharger must monitor to include only those federal Appendix I constituents that have ever been detected in leachate, at trace levels or above, and verified by retest. This is the manner in which this Order implements 40 CFR part 258.54(a)(1).
48. This Order places the entire Facility into a CAP in order to plan and propose corrective measures meeting applicable State and Federal requirements. This approach eliminates needless complexity associated with applying concurrent programs (i.e., running unaffected portions under a detection monitoring program (DMP) and the portions affected by the release under either an evaluation monitoring program (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).
49. 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 an unnatural increase at that well for that MPar. Once a well/MPar pair exhibits a "measurably significant increase," 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 the proof period to demonstrate the successful completion of corrective action.
50. To eliminate the adverse effects of geographic variation of water quality at the site, this Order requires an intra-well-comparison style of monitoring for all well/MPar pairs for which this

approach is feasible. Under this approach, each well's historic data is used as the reference against which new data is tested.

51. This Order minimizes the occurrence of false-positive indications in three ways: a) it includes a non-statistical data analysis method, meeting 27 CCR section 20415(e), subsections (8) & (9), that collectively analyzes all MPars, at a given well, whose background data exceeds its respective Method Detection Limit (MDL) no more than 10% of the time; b) all statistical and non-statistical data analysis methods used on well/MPars in Detection Mode data analyses include a discrete retest as described under 27 CCR section 20415(e)(8)(E); and c) it applies a sampling and analysis methodology that minimizes the number of constituents that are subject to statistical or non-statistical data analysis.
52. To assure compliance with the requirements and considerations under 40 CFR sections 258.55 through 258.57 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; c) utilizes an initial scan for all Appendix II constituents at all point of compliance wells involved in the release to be sure that the MPar and COC lists include all Appendix II constituents detectable in groundwater; d) thereafter, uses a periodic (five yearly) presence/absence screening of all COCs, rather than statistical/non-statistical data analysis, at all appropriate wells to keep the MPar list updated to include all COCs that are detectable in groundwater; e) uses annual leachate sampling, for all non-COC Appendix II constituents, to keep the COC list updated to include all Appendix II constituents that the landfill could release; and f) implements an automatic update procedure to assure that the MPar and COC lists remain current.
53. Given that Detection Mode testing can be compromised by a COC arriving 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 LFG) or through the arrival of such a constituent from an upgradient source, this Order implements a simple means for identifying such anomalies, requires the Discharger to investigate their cause, and initiates appropriate adjustments to the monitoring program.

#### **CEQA AND ADMINISTRATIVE MATTERS**

54. The development of the Landfill is supported by the following documents that were prepared under the California Environmental Quality Act (CEQA): a Final Environmental Impact Report (FEIR) certified by the County of Los Angeles Board of Supervisors on November 30, 1993 (State Clearinghouse No. 89071210), a Final Subsequent Environmental Impact Report (FSEIR) certified by the City of Los Angeles Planning Commission and City Council on December 10, 1999 (State Clearinghouse No. 92041053), and an Addendum to the FEIR and FSEIR prepared by the County of Los Angeles Department of Planning and circulated in October 2004 (State Clearinghouse No. 1989071210). The adoption of this Order is consistent with the purpose of the FEIR, the FSEIR, and the Addendum.
55. 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), which has been subsequently amended. The Basin Plan designates the following beneficial uses and established water quality objectives for groundwater within the San Fernando Groundwater Basin: municipal and domestic supply, agricultural supply, industrial process supply, and industrial service supply. The requirements in this Order are in conformance with the goals of the Basin Plan.

56. The Regional Board has notified the Discharger and interested agencies and persons of its intent to adopt waste discharge requirements for this disposal of waste to land and discharge, and has provided the Discharger and interested persons with an opportunity to submit their written views and recommendations.
57. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge and to the tentative requirements.

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

**A. Acceptable Materials**

1. The Landfill is a Class III solid waste management facility. The Landfill will accept waste for recycling, composting, and disposal as deemed acceptable at this class of facility by the Regional Board through orders or regulations.
2. Wastes disposed of at the Landfill shall be limited to certain non-hazardous solid wastes (as described in section 20220(a) of 27 CCR), contaminated soils that are not hazardous, inert solid wastes (as described in section 20230 of 27 CCR), and treated wood waste.
  - a. Non-hazardous solid waste means all putrescible and non-putrescible solid, semi-solid and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semi-solid wastes, and other discarded waste (whether of solid or semi-solid consistency), provided that such wastes do not contain wastes which must be managed as hazardous wastes, or wastes which contain soluble pollutants in concentrations which exceed applicable water quality objectives, or could cause degradation to waters of the State (i.e., designated waste).
  - b. Inert waste means that subset of solid waste that does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives, and does not contain significant quantities of decomposable waste.
  - c. Treated wood, as defined in California Health and Safety Code (CHSC) section 25150.7, means wood that has been treated with a chemical preservative for the purposes of protecting wood against insects, microorganisms, fungi, and other environmental conditions that can lead to decay of the wood, and the chemical preservative is registered pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

**B. Unacceptable Materials**

1. No hazardous wastes (as defined in title 22 of the California Code of Regulations (22 CCR) section 66261.3 et seq.), designated wastes (as defined in CWC section 13173, other than contaminated soils that are not hazardous), or special wastes (27 CCR section 20164, as categorized in 22 CCR sections 66261.120, 66261.122, 66261.124), such as liquids, oils, waxes, tars, soaps, solvents, or readily water-soluble solids, such as salts, borax, lye, caustic or acids shall be disposed of at the Landfill.

2. No semi-solid wastes shall be disposed of at the Landfill. Semi-solid waste means waste containing less than 50 percent solids, as described in section 20200 of 27 CCR. In cases of spoiled semi-solid food wastes and certain other non-hazardous wastes, the Regional Board authorizes Regional Board staff to approve solidification or waste disposal operations at the landfill on a case-by-case basis.
3. No materials that are of a toxic nature, such as insecticides, or poisons, shall be disposed of at the Landfill.
4. No radioactive waste, including low level radioactive waste, as defined by the agency with jurisdictional authority, shall be disposed of at the Landfill.
5. No infectious materials or hospital or laboratory wastes, except those authorized for disposal to land by official agencies charged with control of plant, animal and human disease, shall be disposed of at the Landfill.
6. No pesticide containers shall be disposed of at the Landfill, unless they are rendered nonhazardous by triple rinsing. Otherwise, they must be hauled off-site to a legal point of disposal.
7. No septic tank or chemical toilet wastes, sewage sludge, incinerator ash, asbestos or asbestos products, or dead animals, shall be disposed of at the Landfill.

**C. Prohibitions**

1. Discharge of waste to land as a result of inadequate waste disposal and 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 discharge of waste shall not:
  - a. cause the occurrence of coliform or pathogenic organisms in waters of a groundwater basin;
  - b. cause the occurrence of objectionable tastes or odors in waters of a groundwater basin;
  - c. cause waters of a groundwater basin to foam;
  - d. cause the presence of toxic materials in waters of a groundwater basin;
  - e. cause the pH of waters of a groundwater basin to fall below 6.0, or rise above 9.0;
  - f. cause the Regional Board's water quality objectives for groundwaters or surface waters as established in the Basin Plan to be exceeded; nor
  - 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 beyond the limits of the Landfill are prohibited.



4. The discharge of waste to surface drainage courses or to groundwater is prohibited.
5. Basin Plan prohibitions shall not be violated.
6. No federal, state, and county sanitary health codes, rules, regulations, and ordinances pertinent to the disposal of wastes on land shall be violated in the operation and maintenance of the Landfill.
7. No wetlands shall be removed, filled, or otherwise impacted unless a section 404 permit and section 401 certification are issued under the Federal Clean Water Act.

**D. Requirements for Containment Structures**

1. 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 the prescriptive standards and/or performance goals of 27 CCR.
2. The Landfill shall have containment structures that are capable of preventing degradation of the waters of the State and shall be designed to withstand a MCE without failure. Construction standards for containment structures shall comply with 27 CCR requirements. Design specifications, including any alternative design proposal meeting the prescriptive standards and/or performance goals of 27 CCR and State Board Order No. 93-62, are subject to the Executive Officer's review and approval prior to construction of any containment structure.
3. All future development of the Landfill shall be constructed with a double composite liner system, as proposed in the JTD and illustrated in Figure 4. Leachate collection sumps at the Landfill shall be equipped with lysimeters. All liner and leachate collection system designs for the Landfill must be submitted to the Regional Board for the Executive Officer's approval. No liners shall be installed unless the design is approved by the Executive Officer.
4. The static factor of safety (FS) of all interim slopes (slopes that exist for a period less than six months) and final configuration of the Landfill, including liner systems, final covers, and cut and fill slopes, shall not be less than 1.5.
5. Landfill refuse slopes shall be designed and constructed in a manner that will resist settlement and prevent failure during a MPE for interim slopes, or a MCE for final refuse slopes. Critical slopes shall be designed to have FS's no less than 1.5. If a Newmark-type seismic deformation analysis is used in lieu of achieving a FS of no less than 1.5, the calculated permanent seismic deformation must not exceed six inches for liner systems and must not exceed 36 inches for the final cover.
6. Cut and subgrade slopes, fill slopes, refuse cells and visual berms shall be designed and excavated/constructed in a manner that will resist settlement and remain stable during the design earthquake event in accordance with section 20370 of 27 CCR. Final cut-and-fill slopes at the County Landfill shall have an overall slope gradient no steeper than 1.5H:1V (horizontal to vertical), except for the case when a steeper slope provides a more stable configuration. Final maximum refuse slope gradient at the County Landfill shall not be steeper than 3H:1V.

7. The Discharger shall submit detailed designed plans, specifications, and descriptions for all proposed containment structures and construction features for the Executive Officer's approval at least 90 days prior to construction.
8. All design plans shall contain detailed construction quality assurance (CQA) programs as required by 27 CCR. All CQA activities shall be conducted by third parties that are independent from the Discharger and the contractor who carries out the construction.
9. Prior to start of construction of any containment structure, a geologic map of the final excavation grade shall be prepared for review, approval, and confirmation in the field by Regional Board staff.
10. No disposal shall occur in a new area until the corresponding construction is completed, certified, and approved by Regional Board staff.
11. The construction report, including drawings documenting "as-built" conditions, shall be submitted within 60 days after the completion of construction. If the "as-built" conditions are virtually identical to the approved design plans and specifications, only change sheets need be submitted in lieu of a complete set of drawings.
12. The landfill gas collection system at the unlined area of the site shall be designed so that gas condensate is not returned to the waste management unit through the collection system.
13. The Discharger shall perform an annual testing per 27 CCR section 20340(d) of any LCRS to demonstrate their operating efficiency during the operational, closure and postclosure maintenance periods of the Landfill.

**E. Requirements for Disposal Site Operations**

1. The Discharger shall maintain an operating record for the Landfill in accordance with 40 CFR Part 258.29(a). All records of site operations, landfill construction, inspection, monitoring, remediation, and copies of design plans, construction quality assurance documents, monitoring reports, and technical reports that are submitted to regulatory agencies, shall be included in the operating record.
2. 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.
3. 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.
4. Wastes deposited at the Landfill shall be confined thereto, and shall not be permitted to blow, fall, or otherwise migrate off-site, or to enter off-site water drainage facilities or watercourses.
5. The Discharger shall implement a load-checking program at the Landfill, subject to approval of the Executive Officer, to prevent the disposal of hazardous wastes, designated wastes, or other unacceptable wastes.

6. Waste material shall not be discharged on any ground surface that is less than five feet above the highest anticipated groundwater level.
7. The Discharger shall comply with notification procedures contained in section 13271 of the CWC with regard to the discharge of hazardous wastes. The Discharger shall remove, and relocate to a legal point of disposal, any wastes that are discharged at the Landfill in violation of these requirements. For the purpose of these requirements a legal point of disposal is defined as one permitted by the California Department of Toxic Substances Control (DTSC) or for which WDRs have been established by a California regional water quality control board and is in full compliance with its respective DTSC permit and/or Regional Board WDRs. The source and final disposition (and location) of such wastes, as well as methods undertaken to prevent future recurrence of such disposal shall be reported in monitoring reports submitted under M&RP No. CI-2043.
8. All wastes shall be covered at least once during each 24-hour period in accordance with sections 20680 and 20705 of 27 CCR. Intermediate cover over wastes discharged to the Landfill shall be designed and constructed to minimize percolation of precipitation through wastes and contact with material deposited. Other measures will be taken as needed to prevent a condition of nuisance from fly breeding, rodent harborage, and other vector-related activities.
9. Alternative daily cover (ADC) may be used, so long as it is either removed completely at the beginning of the operating day (e.g., tarps) or is a material that the landfill could accept as a waste.
10. The migration of gases from the Landfill shall be controlled 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.
11. Any proposed modifications or expansions to the gas monitoring and collection system at the Landfill shall be designed to allow the collection, testing and treatment, or disposal by approved methods, of all gas condensate produced at the Landfill.
12. In any area within the Landfill where a natural spring or seep is observed, provisions shall be made and/or facilities shall be provided to ensure that this water will not come in contact with decomposable refuse. The locations of all springs and seeps found prior to, during, or after placement of waste material that could affect the Landfill shall be reported to the Regional Board within 24 hours.
13. The Discharger shall develop/maintain permanent survey monuments at the Landfill throughout the development, closure and postclosure maintenance periods. 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.
14. 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.

15. No wastewater or storm water shall leave the Landfill except as permitted by a NPDES permit issued in accordance with the federal Clean Water Act (CWA) and the CWC. The Discharger shall maintain and modify, as necessary, a storm water pollution prevention plan developed for the Facility.
16. Any abandoned 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. If such abandoned wells or bore holes are encountered during construction activities, the Discharger must notify the designated Regional Board staff contact verbally with 24 hours and in writing within seven days. Such abandoned wells or bore holes must be properly decommissioned before all affected construction activities can proceed.
17. The Discharger shall report any noncompliance or any incident resulting from operations at the Landfill that are in violation of this Order. Any such information shall be provided verbally to the designated Regional Board staff contact within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall be provided to the Regional Board within seven 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 designated Regional Board staff may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.
18. Where 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 seven days of its discovery of the omission.

**F. Requirements for Water Quality Protection Standard**

1. In accordance with 27 CCR section 20390, the water quality protection standard (WQPS) for the Landfill are established as the natural background groundwater quality at the site. The current statistically-derived do-not-exceed concentrations (upper prediction limits) for indicator parameters are included in M&RP No. CI-2043. The Discharger shall update the do-not-exceed concentrations at least every two years based on concurrent monitoring data, as required by the M&RP.
2. In accordance with 27 CCR section 20405, the compliance point(s) where WQPS apply shall be a vertical surface located at the hydraulically downgradient limit of the each unit that extends through the uppermost aquifer underlying the unit at the Landfill or an alternate location approved by the Executive Officer.
3. In accordance with 27 CCR section 20390(a), WQPS shall apply during the active life of the Landfill, the closure period, the post closure maintenance period, and during any compliance period.

**G. Requirements for Groundwater Monitoring**

1. The Discharger shall implement the attached M&RP No. CI-2043, 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 (or caused by) discharge of wastes to the Landfill.
2. At any time, the Discharger may file a written request, including appropriate supporting documents, with the Executive Officer, proposing modifications to M&RP No. CI-2043. The Discharger shall implement any changes in the revised M&RP approved by the Executive Officer upon receipt of a signed copy of the revised M&RP.
3. Unless otherwise approved by the Executive Officer, all analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. All analyses shall be conducted in accordance with the latest edition of "*Test Methods for Evaluating Physical/Chemical Methods*" (SW-846) promulgated by the United States Environmental Protection Agency.
4. 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 may render 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 specifications contained in M&RP No. CI-2043, which is subject to periodic revisions as warranted and approved by the Executive Officer. Additionally, monitoring reports shall be prepared and signed by a registered civil engineer or registered geologist.
5. The effectiveness of all monitoring wells, monitoring devices, and leachate and gas collection systems at the Landfill shall be maintained at all times, including the postclosure maintenance period in accordance with acceptable industry standards. The Discharger shall maintain a Monitoring Well Preventative Maintenance Program approved by the Executive Officer for the Landfill. Elements of the program shall include, as a minimum, periodic visual inspections of well integrity, pump removal and inspection, and appropriate inspection frequencies. Within 60 days of the adoption of this Order, the Discharger shall submit an updated Monitoring Well Preventative Maintenance Program to the Executive Officer for approval.
6. If a well or piezometer is found to be inoperative, the Regional Board and other interested agencies shall be so informed in writing within seven days of such discovery and this notification shall contain a time schedule for returning the well to operating order. Changes to the existing monitoring program shall be submitted for Executive Officer approval at least 30 days prior to implementing the change(s).
7. If a well or piezometer is proposed to replace an inoperative well or piezometer identified in the "Monitoring Well Preventative Maintenance Program", 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.

8. The Discharger shall provide for proper handling and disposal of water purged from monitoring wells at the Landfill during sampling. Water purged from a monitoring well shall not be returned to that well (or any other monitoring well).
9. 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:
    - i. casing and test hole diameter;
    - ii. casing materials;
    - iii. depth of each hole;
    - iv. the means by which the size and position of perforations shall be determined, or verified, if in the field;
    - v. method of joining sections of casing;
    - vi. nature of filter materials;
    - vii. depth and composition of soils; and
    - viii. method and length of time of well development.
10. Compliance monitoring wells at the Landfill are specified in M&RP No. CI-2043. Any existing monitoring wells that are not included in the current monitoring program shall be placed on standby status. All monitoring wells shall be monitored pursuant to this Order and as directed by the Executive Officer through future revisions of the M&RP.
11. The Discharger shall install any additional groundwater, soil pore liquid, soil pore gas, or leachate monitoring devices necessary to comply with M&RP No. CI-2043 as adopted or as revised by the Executive Officer.
12. The Discharger shall submit a workplan within 60 days from adoption of this Order, for the Regional Board's approval, to propose the design, location, and construction schedule of deep groundwater monitoring wells that would sufficiently characterize the groundwater quality underneath the Landfill. These groundwater monitoring wells shall be added to the groundwater monitoring network required in the M&RP No. CI-2043 upon installation.

#### **H. Requirements for Corrective Action Program (CAP)**

1. The Discharger shall maintain and operate the groundwater extraction system at the cutoff wall at the entrance area of the Facility to prevent contaminated groundwater from leaving the site. The system shall be operated with an automatic mechanism to maintain, to extent feasible, a water level in the extraction wells to the upgradient of the cutoff wall that is lower than the water levels in the observation wells to the down-gradient of the cutoff wall.
2. The Discharger shall retain and collect all groundwater seepages that are affected by the closed City Landfill Unit 1. In no circumstance shall such seepage water be released offsite.

3. The Discharger shall retain and collect all subdrain water at the Landfill that is impacted by VOCs.<sup>1</sup>
4. All contaminated water, including but not limited to, extracted groundwater, seepage water, and VOC impacted subdrain water, shall be treated as necessary at the onsite leachate treatment plant and either beneficially re-used at the Facility or properly discharged to the sanitary sewer system. The on-site use of contaminated water shall meet all the requirements in Section I of this Order.
5. The Discharger shall take adequate measures to prevent landfill gas from contaminating groundwater and subdrain water at the site, including installation of additional gas extraction wells as needed and monitoring the concentration of methane in the subdrain system.
6. In each semi-annual report submitted under M&RP No. CI-2043, the Discharger shall summarize all corrective actions taken at the Landfill during the reporting period, progress made on eliminating the impact of the Landfill on subdrain water, and the corrective actions that will be taken for the following monitoring periods. The Executive Officer may require additional corrective actions that are deemed necessary by Regional Board staff.

**I. Provisions for Onsite Use of Water**

1. Any water used for landscape irrigation, dust control or other non-emergency uses, shall be subject to WDRs, except for potable water uses and any other water allowed by this Order.
2. Other than potable water, irrigation and dust control water used at the Landfill shall be limited to the groundwater extracted from wells and trenches, groundwater seepage collected at the surface, subdrain water, and stormwater collected at sedimentation basins.
3. No leachate or gas condensate shall be used at the Landfill for dust control and irrigation purposes unless they meet the conditions in Paragraph 10 of this Section below.
4. No water shall be routinely applied to the Landfill except for landscape irrigation and dust control water. Water used for these purposes shall only be applied by spraying, and in quantities not to exceed what is necessary to support plant life, or to control wind borne dust particulates. Significant overflow or runoff caused by irrigation or dust control water is prohibited.
5. During periods of precipitation, when the use of water for irrigation or dust control is not necessary for the purpose specified in this Order, all non-storm water collected at the site shall be stored or disposed at a legal point of disposal.
6. Wastewater used at the Landfill shall not percolate into the disposal areas or native soil, or enter the storm water collection system, unless specifically permitted by WDRs.
7. All uses of water 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.

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<sup>1</sup> VOC impacted subdrain water refers to any subdrain water that contains any VOC at a concentration higher than the laboratory reporting limit of the constituent.

8. Treated wastewaters, such as leachate, gas condensate, contaminated groundwater and subdrain water, that are used onsite for dust control or irrigation shall be monitored in accordance with M&RP No. CI-2043. Water samples shall be taken prior to the mixture of the water with potable water sources.
9. Water used on-site for dust control or irrigation, except for potable water uses, shall at all times be within the range of 6.0 to 9.0 pH units.
10. Any water used on-site for irrigation or dust control shall not exceed the maximum contaminant levels contained in section 64435 of Title 22, California Code of Regulations for heavy metals, nitrates and organic chemicals, and in section 64473 of Title 22 for copper and zinc. Radioactivity shall not exceed the limits specified in sections 64441 and 64443 of Title 22 (or subsequent revisions).

**J. Provisions for Management of Leachate and Gas Condensate**

1. The Discharger shall intercept and remove any liquid detected in the leachate collection and removal system and the gas monitoring and collection system. Leachate and gas condensate (landfill liquids) shall be managed in one or more of the following ways: (a) by removal from the site to a legal point of disposal; (b) by treatment in the existing wastewater treatment facility and used on-site in accordance with Section I above; or (c) by direct return to the Landfill in accordance with Paragraph 3 below.
2. The Discharger shall monitor the quality of leachate and gas condensate as required in M&RP CI-2043. Any leachate determined to be hazardous shall be transported by a licensed hazardous waste hauler to an approved treatment or disposal facility.
3. Landfill liquids may be returned to the Landfill in conformance with sections 20200(d) and 20340(g) of 27 CCR under the following conditions:
  - a. Only landfill liquids generated at the Landfill may be returned.
  - b. Landfill liquids shall be discharged only over areas that are equipped with a double composite liner system.
  - c. Landfill liquids shall be discharged using methods that limit personnel from coming into direct contact with the liquids.
  - d. Landfill liquids may be reintroduced back into the Landfill by applying to solid waste as it is placed, or by subsurface infiltration through vertical wells, horizontal trenches, and permeable layers, as proposed in the JTD.
  - e. Geotextile alternate daily cover shall not be used on areas in which landfill liquids have been applied to the uppermost layer of solid waste. Waste to which landfill liquids have been applied must be covered by additional solid waste prior to application of a geotextile alternate daily cover.
  - f. The practice of reintroducing landfill liquids to the Landfill shall not cause noxious odors to be perceived off-site.



- g. The quantities, methods of application, and locations of landfill liquids reintroduction at the Landfill must be reported in the semi-annual and annual reports required under the M&PR.
- h. The practice of reintroducing landfill liquids to the Landfill shall be limited to leachate and gas condensate only. No other liquids, such as extracted groundwater, subdrain water, and stormwater runoff, shall be reintroduced.

**K. Provisions for Drainage and Erosion Control**

1. Waste management units shall be designed, constructed, and maintained to prevent, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, and washout which could occur as a result of precipitation from a 100-year, 24-hour frequency storm. This shall be accomplished by, at a minimum, the following:
  - a. Top deck surfaces shall be constructed to achieve a minimum of three percent (3%) slope, including structures which direct water to downdrains;
  - b. Downdrains and other necessary drainage structures must be constructed for all sideslopes as necessary; and
  - c. All components of the facility drainage system must be designed and constructed to withstand site-specific maximum intensity precipitation (peak flow) from a 100-year, 24-hour storm.
2. Leachate and landfill gas condensate containment system structures shall be protected and maintained continuously to ensure their effectiveness and to prevent commingling of leachate and gas condensate with surface run-on and runoff.
3. The Discharger shall design, construct, and maintain:
  - a. A run-on drainage control system to prevent flow from off-site sources onto the disposal areas of the Landfill (active or inactive portions), and to collect and divert both the calculated volume of precipitation and the peak flow from off-site sources that result from a 100-year, 24-hour storm;
  - b. A runoff drainage control system to minimize sheet flow from the disposal areas, and to collect and divert both the calculated volume of precipitation and the peak flow from on-site surface runoff that results from a 100-year, 24-hour storm; and
  - c. Drainage control structures to divert natural seepage from native ground and to prevent such seepage from entering the waste management units.
4. All drainage structures shall be protected and maintained continuously to ensure their effectiveness.
5. Annually, by October 1<sup>st</sup>, all drainage control system construction and maintenance activities shall be completed. The Annual Summary Report required under M&RP No. CI-2043 shall include a drainage control system maintenance report that includes, but not be limited to, the following information:

- a. For the previous 12 months, a summary of the adequacy and effectiveness of the drainage control system to collect and divert the calculated volume of precipitation and peak flows resulting from a 100-year, 24-hour storm;
  - b. A tabular summary of both new and existing drainage control structures, including the types and completion dates of maintenance activities performed for each of these structures; and
  - c. An 11"x17" or larger site map, prepared by either aerial surveillance or a professional civil engineer, indicating the locations of the elements listed in Item b. above, and the flow direction of all site drainage. The map shall be updated at least annually.
7. Periodic inspection of the waste management units, the drainage control system, and all containment structures shall be performed to assess the conditions of these facilities and to initiate corrective actions necessary to maintain compliance with this Order.

**L. Provisions for Closure and Postclosure Maintenance of City Landfill Unit 1**

1. The Discharger has a continuing responsibility for correcting any problems which may arise in the future as a result of waste discharged at City Landfill Unit 1, 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.
2. 27 CCR, section 21890(b), provides that postclosure maintenance plans may be revised during the postclosure maintenance period upon concurrence with the local enforcement agency (LEA) and approval by the CIWMB and the Regional Board. Within 180 days of the adoption of this Order, the Discharger shall submit a revised postclosure maintenance plan for City Landfill Unit 1 to reflect the current site conditions. The plan shall include post-closure maintenance procedures for both the areas that will be affected by the development of City/County Landfill and those areas that have been permanently closed.
3. Postclosure maintenance activities at City Landfill Unit 1 shall be reported as required in M&RP No. CI-2043.

**M. General Provisions**

1. The Discharger shall maintain a copy of this Order at the Landfill so as to be available at all times to Landfill operating personnel.
2. The Discharger shall comply with all applicable provisions, requirements, and procedures contained in the most recent version of 27 CCR and any future amendments.
3. 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.
4. This Order includes the attached "*Standard Provisions Applicable to Waste Discharge Requirements*", adopted November 7, 1990 (Attachment W) which is incorporated herein by reference. The Landfill continues to be subject to Regional Board Order No. 93-062

incorporating federal Resource Conservation and Recovery Act (42 U.S.C. section 6901, et seq.) regulations, which are also incorporated herein by reference. If there is any conflict between provisions stated herein and the standard provisions, Regional Board Order No. 93-062, or federal regulations, the provisions stated herein will prevail.

5. The requirements adopted herein do not 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.
6. 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.
7. This Order does not convey any property rights of any sort, or any exclusive privilege.
8. The Discharger is the responsible party for these WDRs and any M&RP for the Landfill. 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.
9. 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.
10. The Discharger shall immediately notify the Regional Board of any flooding, slope failure or other change in site conditions that could impair the integrity of waste containment facilities or of precipitation and drainage control structures.
11. The Discharger shall maintain financial assurance for final closure and postclosure maintenance of the Landfill, pursuant to 27 CCR, division 2, chapter 6. The postclosure period shall be at least 30 years. However, the postclosure maintenance period shall extend as long as wastes pose a threat to water quality.
12. In accordance with section 20380(b) of 27 CCR, the Discharger shall maintain assurances of financial responsibility for initiating and completing corrective action for all known or reasonably foreseeable releases from the Landfill. The Executive Officer may reconsider the amount of such assurance based on changing site conditions or applicable State or Federal regulations.
13. 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

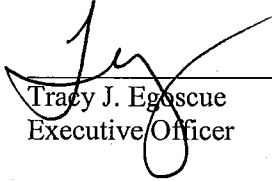
- c. denial of a report of waste discharge (ROWD) in application for new or revised WDRs.
14. The Discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.
15. 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.
16. In accordance with CWC section 13263(g), these requirements shall not create a vested right to continue to discharge and are subject to rescission or modification. All discharges of waste into the waters of the state are privileges, not rights.
17. 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.
18. This Order becomes effective on the date of adoption by the Regional Board.
19. 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.
20. This Order in no way limits the authority of the Regional Board, as contained 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.
21. 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, 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.
22. During oversight of this Order, wherever the Executive Officer is authorized to grant any approval under a particular provision of this Order, the Executive Officer is directed to assess if there is controversy associated with the decision following public notice and, if so, bring the decision to the Regional Board for approval.

#### **N. Rescissions**

1. Except for enforcement purposes, Regional Board Order No. R4-2003-0155, adopted on December 4, 2003, is hereby rescinded.
2. Except for enforcement purposes, Regional Board Order No. R4-2007-0023, adopted on April 5, 2007, is hereby rescinded.

3. Except for enforcement purposes, Regional Board Order No. R4-2007-0064, adopted on December 6, 2007, is here by rescinded.

I, Tracy J. Egoscue, 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 October 2, 2008.



Tracy J. Egoscue  
Executive Officer

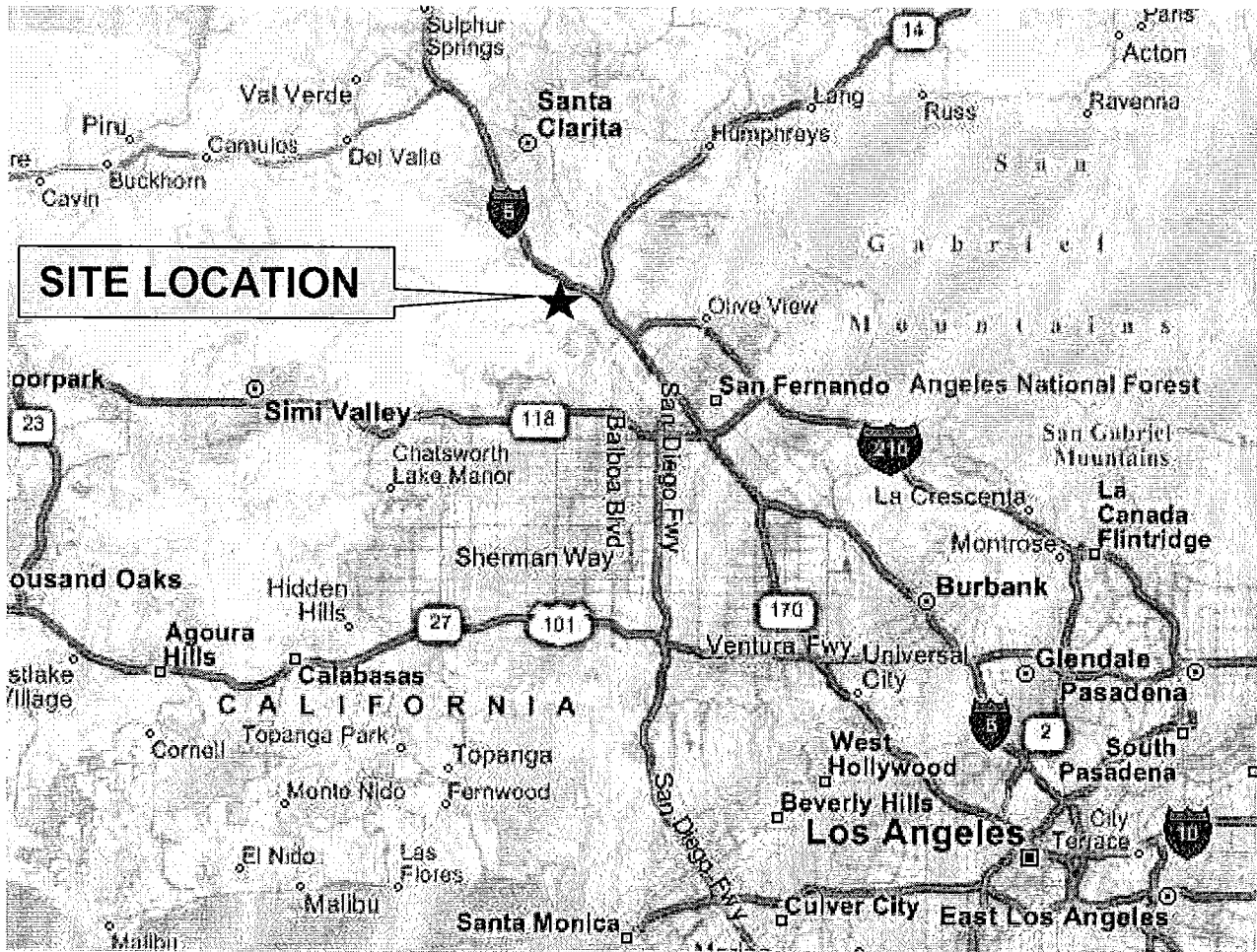
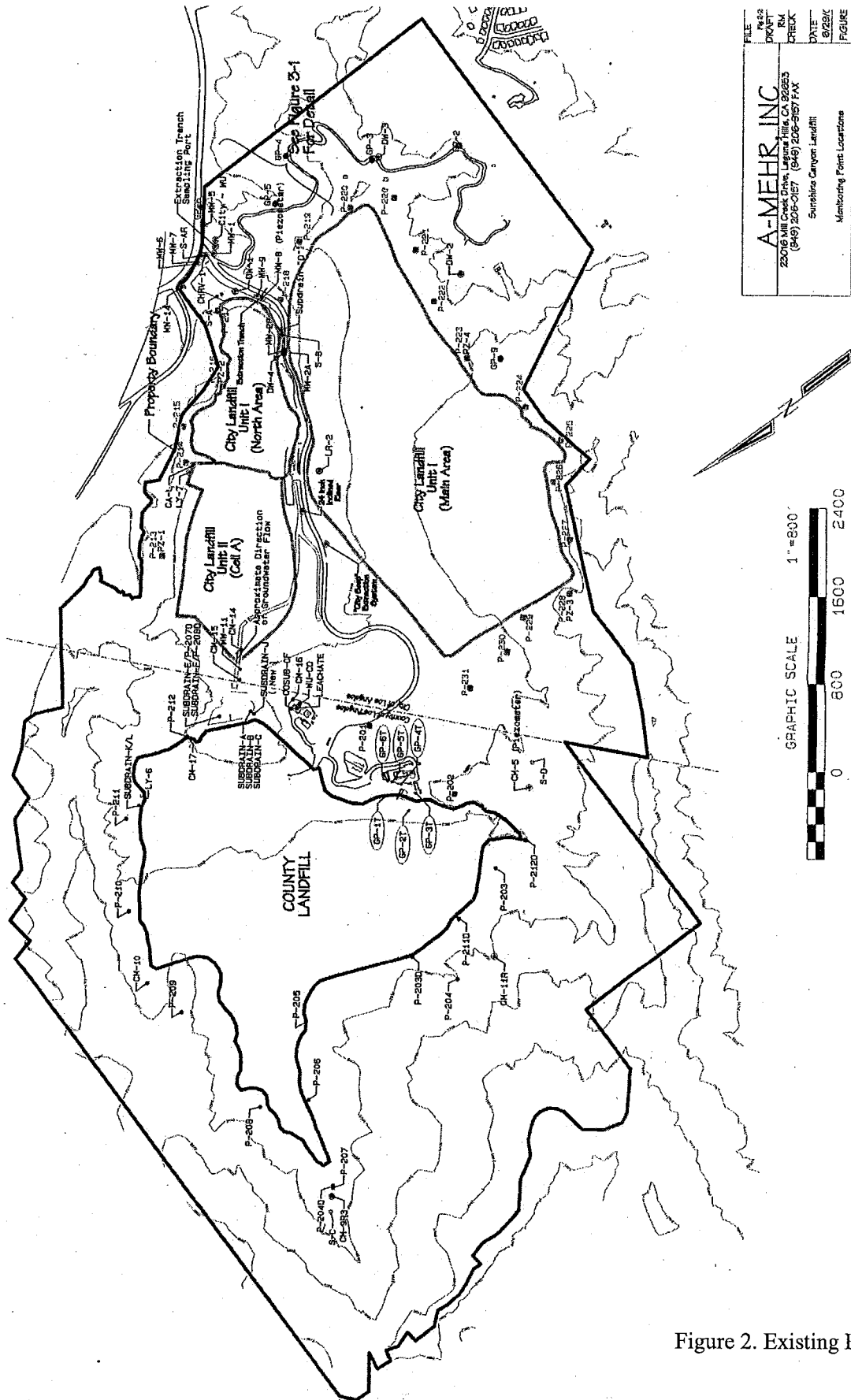


Figure 1. Location Map



FILE	DATE	FIGURE
R4-2	02/25/07	
DRAFT		
BY		
CHECK		
DATE		
BY		
FIGURE		

**A-MEHR INC**  
 22016 Mill Creek Drive, Laguna Hills, CA 92653  
 (949) 206-0157 (949) 206-5157 FAX  
 Sunshine Canyon Landfill  
 Monitoring Point Locations

Figure 2. Existing Facilities





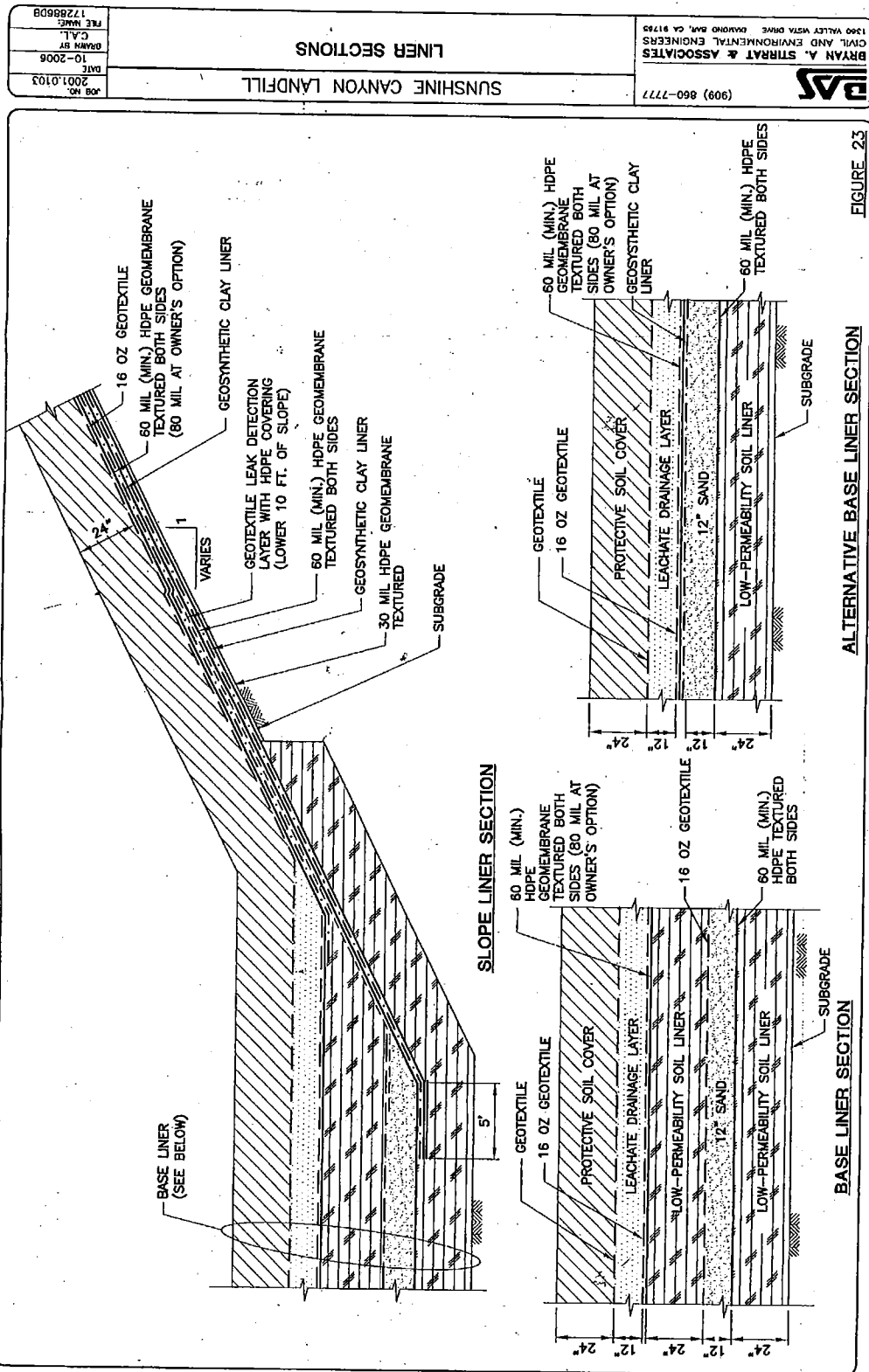


Figure 4. Proposed Phase CC-I through CC-V Liner Systems

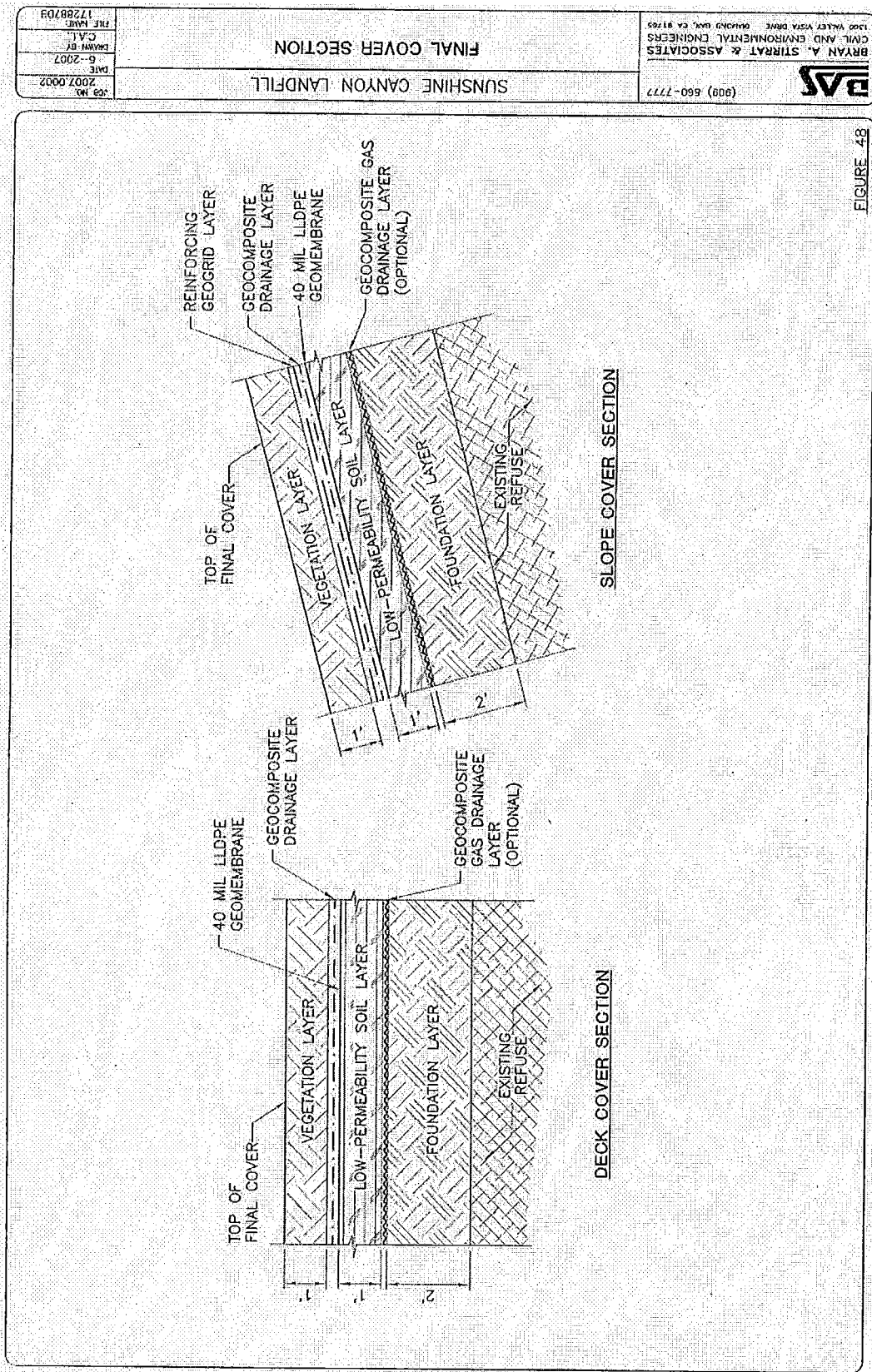


Figure 5. Proposed Final Cover Systems

## 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 Medium"** means any natural medium that consists of or contains waters of the state (e.g., ground water, surface water, or the unsaturated zone) that has been affected by a release from a waste management unit.

**"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 Constituents"** means the suite of 47 volatile organic constituents and 17 metals used as the default monitoring parameter list in 40 CFR §258.

**"Appendix II Constituents"** means the suite of 213 hazardous constituents used as the default constituent of concern list in 40 CFR §258.

**"Background"** means the concentrations or measures of constituents or indicator parameters in water or soil that has not been affected by waste constituents or leachate from the waste management unit being monitored.

**"Background Monitoring Point"** means a well, device, or location specified in the waste discharge requirements at which monitoring for background water quality or background soil quality is conducted.

**"Concentration Limit"** is a part of the Landfill's Water 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 Standard.

“**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 a 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).

“**Control Chart**” means a graphical method for evaluating whether a process is or is not in a state of statistical control.

“**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).

“**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.

“**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.

“**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’s having exhibited 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 a 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 Parameters**” in this Order means a suite of parameters that are considered capable of providing reliable indication of a release from the landfill unit.

“**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).

“**Leachate**” means any liquid formed by the drainage of liquids from waste or by the percolation or flow of liquid through waste.

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

“**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.

“**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.

“**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 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.

“**Supplemental Parameters**” in this Order means a suite of parameters that provide important information regarding groundwater geochemistry but are not expected to show significant variation in groundwater in the event of a landfill release.

“**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’s landfill requirements under Title 27 of the California Code of Regulations.

“**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.

“**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.

“**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).

**“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.

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

**MONITORING AND REPORTING PROGRAM (No. CI-2043)**

FOR

**BROWNING-FERRIS INDUSTRIES OF CALIFORNIA, INC.  
(SUNSHINE CANYON CITY/COUNTY LANDFILL)**

Browning-Ferris Industries of California, Inc. (BFI) (Discharger) shall implement this revised Monitoring and Reporting Program (M&RP<sup>1</sup>) at the Sunshine Canyon City/County Landfill (Landfill) beginning the effective date of Regional Board Order No. R4-2008-0088.

**I. REQUIRED REPORTS AND CONTINGENCY RESPONSE**

The Discharger shall submit the following reports to this Regional Board in accordance with the schedules specified.

**A. SEMI-ANNUAL MONITORING REPORT**

A written Monitoring Report shall be submitted semi-annually by February 15 (for the period from July 1 to December 31) and August 15 (for the period from January 1 to June 30) of each year. Semi-annual Reports shall include, but should not be limited to, the following:

1. **Transmittal Letter:** A letter transmitting the essential points shall accompany each report. The 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. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice president or above, or by his/her duly authorized representative, if such a representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.
2. **Summary of Non-Compliance:** The report shall contain a summary of non-compliance that discusses the compliance record and the corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. Significant aspects of any on-going corrective action measures conducted during the monitoring period shall also be summarized. This section shall be located at the front of the report and shall clearly list all non-compliance with discharge requirements, as well as all exceedances of water quality protection standards.
3. **Site Conditions:** General discussion of site conditions (geology, climate, 100-year 24-hour storm, and watershed specifics, etc.) relative to water quality monitoring.

<sup>1</sup> Terms and acronyms used in this Program are defined in Attachment A of Regional Board Order R4-2008-0088 as well as section 20164 of 27 CCR.

4. **Narrative Description:** A narrative discussion of the site's various monitoring activities and results. Each requirement of Part II of this M&RP shall be specifically discussed.
5. **Laboratory Results:** Laboratory results and statements demonstrating compliance with Part II of this M&RP. Results of additional water sampling and analyses performed at the Landfill outside of the requirements of this M&RP, shall be summarized and reported. If the results of such additional sampling and analyses have or will be reported under separate cover, a statement as such shall be included in the monitoring report.
6. **Standard Observations:** A summary and certification of completion of all Standard Observations for the Landfill property in accordance with NPDES monitoring and reporting requirements. The records of observation are to be included with the semi-annual report due August 15th.
7. **Management of Liquids:** A summary of the total volumes, on a monthly basis, of landfill leachate, gas condensate, and contaminated subdrain water extracted at the site, and how these liquids are handled. If leachate and gas condensate are returned to the Landfill during the period per Section J of R4-2008-0088, the report must also include methods of leachate and condensate reintroduction, locations where such liquids are returned to the Landfill, and the quantities of liquids returned at each location.
8. **Waste Disposal Reporting:** Waste disposal activities at the site, including:
  - a. A tabular list of the estimated average monthly quantities (in cubic yards and tons) deposited each month.
  - b. An estimate of the remaining capacity (in cubic yards and tons) and the remaining life of the site in years and months.
  - c. A certification that all wastes deposited were deposited in compliance with the Regional Board's requirements, and that no wastes were deposited outside of the boundaries of the waste management area as specified in the Regional Board's requirements.
  - d. A description of the location and an estimate of the seepage rate or flow of all known seeps and springs at the site.
  - e. The estimated amount of water used at the waste management area for landscape irrigation, compaction, dust control, etc., during each month. (If a source other than potable water is used, the sources and amounts of water from each source shall also be reported.)
  - f. The Discharger shall report all unacceptable wastes inadvertently received at this site and their disposition. The following details shall be included:
    - i. The source (if known), including the hauler, of the unacceptable wastes and date received and/or discovered.
    - ii. Identification of waste (if known) and the amount of waste.
    - iii. The name and address of the hauler who removed the waste from this site.
    - iv. The ultimate point of disposal for the waste.

- v. The Discharger's actions to prevent recurrence of the attempted depositing of unacceptable wastes by this source or individual.

If no unacceptable wastes were received (or discovered) during the month, the report shall so state.

9. **Map(s):** Map(s) or aerial photograph(s) showing waste disposal and monitoring locations, relative physical features, and groundwater contours to the greatest degree of accuracy possible.

## **B. ANNUAL SUMMARY REPORT**

The Discharger shall submit an annual summary report to the Regional Board covering the previous monitoring year. The annual monitoring period ends December 31. This report may be combined with the second semi-annual report of the year and shall be submitted no later than February 15 of each year. The annual summary report shall include at least the following:

1. **Discussion:** Include a comprehensive discussion of the compliance record, any significant monitoring system and operational changes, a summary of corrective action results and milestones, and a review of construction projects, with water quality significance, completed or commenced in the past year or planned for the up-coming year.
2. **Graphical Presentation of Analytical Data:** For each Monitoring Point, submit in graphical format the laboratory analytical data for all samples taken within at least the previous eight 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. Maximum contaminant levels (MCL) shall be graphed along with constituent concentrations where applicable. 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. In lieu of including graphs in the Annual Report, the Discharger may provide references if such data have been submitted electronically to a data base that is accessible to Regional Board staff.
3. **Analytical Data:** All monitoring analytical data obtained during the previous year, presented in tabular form. Additionally, complete data histories of each well shall be submitted in an electronic format acceptable to the Regional Board.
4. **Map(s):** Map(s) showing the areas where any significant events have taken place during the previous calendar year.

## **C. CONTINGENCY RESPONSE**

1. **Leachate Seep:** The Discharger shall, within 24 hours of discovery, report to the designated Regional Board staff by telephone any previously unreported seepage from the Landfill. A written report shall be filed with the Regional Board within seven days, containing at least the following information:
  - a. Map - A map showing the location(s) of seepage.
  - b. Flow rate - An estimate of the flow rate.

- c. Description - A description of the nature of the discharge (e.g., all pertinent observations and analyses).
  - d. Location - Location of sample(s) collected for laboratory analysis, as appropriate.
  - e. Corrective measures - approved (or proposed for consideration) by the Executive Officer.
2. **Response to an Initial Indication of a Release:** Should the initial statistical or non-statistical comparison indicate that a release is tentatively identified, the Discharger shall:
- a. Within 24 hours, verbally notify the designated Regional Board staff contact as to the Monitoring Point(s) and constituent(s) or parameter(s) involved;
  - b. Provide written notification to the Regional Board by certified mail within seven days of such determination; and
  - c. Do either of the following:
    - i. Carry out a discrete re-test in accordance with Section II.B.9.b. of this M&RP<sup>2</sup>. If the re-test confirms the existence of a release or the Discharger fails to perform the re-test, the Discharger shall carry out the release discovery response requirements in Section I.C.4. In any case, the Discharger shall inform the Regional Board of the re-test outcome within 24 hours of results becoming available, following up with written results submitted by certified mail within seven days, or
    - ii. Make a determination, in accordance with 27 CCR section 20420(k)(7), that a source other than the waste management unit caused the release or that the evidence is an artifact caused by an error in sampling, analysis, or statistical evaluation or by natural variation in the groundwater, surface water, or the unsaturated zone.
3. **Physical Evidence of a Release:** If either the Discharger or the Executive Officer determines that there is significant physical evidence of a release (27 CCR section 20385(a)(3)), the Discharger shall conclude that a release has been discovered and shall:
- a. Within seven days notify the Regional Board of this fact by certified mail (or acknowledge the Regional Board's determination).
  - b. Carry out the requirements of Section I.C.4. for all potentially affected monitored media.
  - c. Carry out any additional investigations stipulated in writing by the Executive Officer for the purpose of identifying the cause of the indication.
4. **Release Discovery Response:** If either the Discharger or the Executive Officer concludes that a release has been discovered, the following steps shall be carried out:
- a. If this conclusion is not based upon monitoring for all COCs, the Discharger shall sample for all COCs at all Monitoring Points in the affected medium. Within seven days of receiving the

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<sup>2</sup> In case the discrete re-test is triggered by detections of common laboratory contaminants (i.e., acetone, toluene, methylene chloride, and carbon disulfide) the Discharger may postpone the discrete re-test until after the next quarterly monitoring event. Re-test will not be required unless the same pollutants are also detected in the next quarterly monitoring event.

laboratory analytical results, the Discharger shall notify the Executive Officer, by certified mail, of the concentration of all COCs at each Monitoring Point. This notification shall include a synopsis showing, for each Monitoring Point, those constituents that exhibit an unusually high concentration.

- b. The Discharger shall, within 90 days of discovering the release, submit an Amended Report of Waste Discharge to the Regional Board proposing an Evaluation Monitoring and Reporting Program that:
    - i. Meets the requirements of 27 CCR sections 20420 and 20425.
    - ii. Satisfies the requirements of 40 CFR 258.55(g)(I)(ii) by committing to install at least one monitoring well at the facility boundary directly down gradient of the center of the release.
  - c. The Discharger shall, within 180 days of discovering the release, submit a preliminary engineering feasibility study [27 CCR § 20420(k)(6)] to the Regional Board meeting the requirements of 27 CCR section 20430.
  - d. The Discharger shall immediately begin delineating the nature and extent of the release by installing and monitoring assessment wells as necessary to assure that it can meet the requirements of 27 CCR section 20425 to submit a delineation report within 90 days of when the Executive Officer directs the Discharger to begin the Evaluation Monitoring and Reporting Program.
5. **Release Beyond Facility Boundary:** Any time the Discharger concludes (or the Executive Officer directs the Discharger to conclude) that a release from the Landfill has proceeded beyond the facility boundary, the Discharger shall so notify all persons who either own or reside upon the land that directly overlies any part of the plume (Affected Persons) as follows:
- a. Initial notification to Affected Persons shall be accomplished within 14 days of making this conclusion and shall include a description of the Discharger's current knowledge of the nature and extent of the release.
  - b. Subsequent to initial notification, the Discharger shall provide updates to all Affected Persons, including any persons newly affected by a change in the boundary of the release, within 14 days of concluding there has been any material change in the nature or extent of the release.
  - c. Each time the Discharger sends a notification to Affected Persons (under a. or b., above), it shall, within seven days of sending such notification, provide the Regional Board with, and add into the Facility's operating record, both a copy of the notification and a current mailing list of Affected Persons.

#### **D. SUBMITTING OF REPORTS**

1. Each monitoring report shall contain the following statement:

"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.”

2. A duly authorized representative of the Discharger may sign the documents if:
  - a. The authorization is made in writing by the person described above;
  - b. The authorization specified an individual or person having responsibility for the overall operation of the regulated disposal system; and
  - c. The written authorization is submitted to the Executive Officer.
3. The Discharger is required to submit quarterly reports to the Executive Officer documenting the results of their load checking program.
4. The Discharger shall submit all scheduled reports required in this M&RP electronically, in accordance with section 3890 et. seq. of title 23 of the California Code of Regulations, division 3. In addition, a hard copy of the report and a compact disk that contains all electronic submittals shall be submitted to the Regional Board. To reduce volume, appendices to the report, such as field records and laboratory reports, may be omitted from the hard copy.
5. All reports required in this M&RP shall be addressed to:

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

## **II. REQUIRED MONITORING AND INSPECTIONS**

The Discharger shall conduct the following monitoring and inspections at the Landfill. Unless otherwise indicated, all monitoring data and inspection results shall be reported to the Regional Board as outlined in Section I of this M&RP. In addition, Regional Board staff shall conduct annual testing appropriate to confirm the accuracy of the Discharger's self monitoring.

### **A. ENVIRONMENTAL MONITORING NETWORKS**

The Discharger shall conduct analytical monitoring on groundwater, surface water, leachate, and the vadose (unsaturated) zone at the Landfill. The current environmental monitoring points for the Landfill are summarized in Table T-1 and their locations are displayed on Figure T-1.

### **B. ANALYTICAL MONITORING**

1. **Initial Full Appendix II Scan:** Within 30 days of the adoption of this Order, all groundwater monitoring points where a full Appendix II Scan has not been performed within the last five years must be sampled and analyzed for the presence or absence of all Appendix II constituents that are not yet on the landfill's Monitoring Parameter (MPar) list. Such sampling shall also be performed at any new groundwater monitoring well within 30 days of its installation. For any Appendix II constituent detected in the scan that is not yet on the landfill's MPar list, the Discharger shall resample for that constituent, within 30 days, at all monitoring points where the constituent(s)

was detected. Any Appendix II constituent that is detected and confirmed at one or more groundwater monitoring points becomes a new constituent of concern (COC) for the Landfill and shall be added to the Landfill's MPar list, pursuant to 40 CFR 258.55(b-d).

**Table T-1: Water Quality Monitoring Points at the Landfill**

Media Monitored	Monitoring Point	Location
Groundwater	CM-9R3, CM-10R, CM-11R	Up-gradient
	CM-15, CM-16R, CM-17R	Temporary <sup>[1]</sup>
	MW-1, MW-5, MW-6, MW-13R, MW-14, DW-1, DW-2, DW-3	Down Gradient
	MW-2A, MW-2B, MW-9, DW-4, Extraction Trench	Reference <sup>[2]</sup>
	ET-1, ET-2, ET3, EW-1, EW-2, EW-3, EW-4, EW-5	Extraction <sup>[3]</sup>
	OM-1, OM-2, OM-3	Observation <sup>[4]</sup>
Surface/Storm Water	As required under NPDES stormwater permits	N/A
Leachate	All leachate sump(s)	N/A
Unsaturated zone	All subdrain outfalls, lysimeters, and landfill gas monitoring points	N/A

<sup>[1]</sup> These wells will be decommissioned as necessary with the development of landfill liner construction.

<sup>[2]</sup> These wells are located upgradient of the cutoff wall and analytical data from these wells are used for evaluation purposes only.

<sup>[3]</sup> These wells are used for groundwater extraction and groundwater level monitoring only. No groundwater sampling is required for these wells

<sup>[4]</sup> These wells are used for groundwater level monitoring only. No groundwater sampling is required for these wells

2. **COC List:** As of the date of this M&RP, the COC list for the Landfill consists of all those constituents listed in Table T-2 below. In addition, at any subsequent time, the COC list shall include: all Appendix II constituents detected and verified in the initial scan under Sections II.B.1. and all Appendix II constituents that have been detected and affirmed in the leachate scan required by this M&RP. The Discharger shall notify Regional Board staff of any such new addition to the COC list immediately, via phone, fax, or e-mail, shall note it in the operating record within 14 days of the verification, and shall note prominently the constituent(s) added to the COC list in the next scheduled monitoring report.
3. **Monitoring Parameters (MPars):** Current Groundwater MPars at the Landfill are listed in Table T-2, including:
  - a. **Indicator Parameters**, including all Inorganic Indicator Parameters, Appendix I VOCs, methyl tertiary butyl ether (MTBE), and 1,4-Dioxane. These constituents are considered capable of providing reliable indication of a release from the Landfill. The Discharger shall apply the statistical analyses described in Section II.B.8. or nonstatistical analysis in Section II.B.9. of this M&RP to analyze all groundwater monitoring data obtained under this program
  - b. **Supplemental Parameters** are inorganic constituents that provide important information regarding groundwater geochemistry but are not expected to show significant variation in groundwater in the event of a landfill release. Monitoring data for the Supplemental Parameters will generally be used for informational purposes only and will not be subjected to routine statistical analysis.



- c. **Other COCs:** These include trace metals and any other pollutants that have been detected and confirmed to be in leachate from the landfill.
4. **Ongoing Background Well Testing:** Even though most data analysis will be via Intra-Well comparisons, The Discharger shall continue to monitor background wells, for each MPar and COC, each time that MPar or COC is monitored at down gradient wells. Water quality data obtained from background wells shall be processed and reported the same way as Detection Monitoring Wells. The Discharger shall follow the requirements in Section I.C.2. of this M&RP in response to the detection of any VOCs at any background well at the site.

**Table T- 2** Current Constituents of Concern at the Landfill

Monitoring Parameters		Supplemental Parameters	Other COCs
Indicator Parameters			
<b>Inorganic Parameters:</b>	Bromochloromethane	Bicarbonate (as CaCO <sub>3</sub> )	<b>Metals:</b> Antimony Arsenic Barium Beryllium Chromium, total Cobalt Copper Lead Mercury Nickel Selenium Silver Tin Thallium Vanadium Zinc  <b>Any other pollutants that are detected and confirmed in landfill leachate</b>
Alkalinity, total	Bromodichloromethane	Boron, total	
Ammonia, nitrogen	Bromoform	Bromide	
Chemical oxygen demand (COD)	Bromomethane	Calcium, total	
Chloride	c-1,2-Dichloroethene	Carbon dioxide, lab	
Potassium, total	c-1,3-Dichloropropene	Fluoride	
Total dissolved solids (TDS)	Carbon Disulfide	Iron, total	
Total organic carbon (TOC)	Carbon Tetrachloride	Magnesium, total	
	Chlorobenzene	Manganese, total	
	Chloroethane	Nitrate-N	
	Chloroform	pH, field	
	Chloromethane	Sodium, total	
<b>Appendix I VOCs:</b>	Dibromochloromethane	Sulfate	
1,1,1,2-Tetrachloroethane	Dibromomethane	Sulfide	
1,1,1-Trichloroethane	Dichlorodifluoromethane	Specific conductance, field	
1,1,2,2-Tetrachloroethane	Ethylbenzene	Temperature, field	
1,1,2-Trichloroethane	Iodomethane	Turbidity, field	
1,1-Dichloroethane	Methylene chloride		
1,1-Dichloroethene	o-Xylene		
1,2,3-Trichloropropane	p/m-Xylene		
1,2-Dibromo-3-chloropropane	Styrene		
1,2-Dibromoethane	t-1,2-Dichloroethene		
1,2-Dichlorobenzene	t-1,3-Dichloropropene		
1,2-Dichloroethane	t-1,4-Dichloro-2-Butene		
1,2-Dichloropropane	Tetrachloroethene		
1,4-Dichlorobenzene	Toluene		
2-Butanone	Trichloroethene		
2-Hexanone	Trichlorofluoromethane		
4-Methyl-2-Pentanone	Vinyl Acetate		
Acetone	Vinyl Chloride		
Acrylonitrile	<b>Other Organics:</b>		
Benzene	Dichlorodifluoromethane (DCDFM)		
	Methyl tertiary butyl ether (MTBE)		
	1,4-Dioxane		

5. **Water Quality Protection Standard (WQPS):** In accordance with 27 CCR section 20390, WQPS for the Landfill is established as the natural background groundwater quality at the site. The concentration limit of a constituent is set to either the statistically predicted value (if the constituent naturally exists) or the laboratory detection limit (if the constituent does not naturally exist in the water).
6. **Development and Updating of Concentration Limits:** The current statistically-derived do-not-exceed concentrations (upper prediction limits derived from concentration limits) for indicator parameters at down gradient groundwater monitoring wells at the Landfill are listed in Table T-3. The Discharger shall continue to develop and update Concentration Limits following the procedures provided in Section II.B.8.a. of this M&RP. The Discharger shall review Concentration Limits biannually in its annual reports submitted to the Regional Board. When appropriate, new Concentration Limits shall be proposed. For any well/Mpar pair for which the Intra-Well Comparison analysis is not applicable, the Discharger shall use the Inter-Well comparison analysis to determine whether water quality protection standards are violated.

**Table T-3. Down Gradient Well Inorganic Indicator Parameters Do-Not-Exceed Concentrations (in mg/L)**

	MW-1	MW-5	MW-6	MW-13R	MW-14	DW-1	DW-2	DW-3	CM-15	CM-16	CM-17
Alkalinity	1024.	1015.	573.	778.	528.	605.	578.	200.	601.	545.	443.
Ammonia N	14.1	3.1	1.3	8.0	0.3	2.0	3.2	0.7	3.60	3.85	1.53
COD	245.	294.	57.7	455.	93.7	52.7	32.1	26.2	66.1	6.40	50.3
Chloride	443.	494.	81.1	239.	124.	19.5	13.8	17.5	18.4	6.64	18.0
Potassium	62.0	20.3	11.5	29.8	13.6	4.8	8.2	13.8	10.7	4.94	10.1
TDS	5289.	4723.	4422.	2919	5370.	2883.	2117.	2278.	2885.	997.	3426.
TOC	93.3	82.3	19.9	67.1	20.6	14.7	7.1	4.3	16.7	36.2	15.5
Appendix II Organics	Laboratory detection limits or reporting limits										

7. **Groundwater Quality Monitoring:** The Discharger shall conduct the following groundwater monitoring activities at the Landfill:
  - a. **Quarterly Monitoring** shall be conducted at all groundwater monitoring wells and subdrain outfalls. Water samples from these monitoring points shall be analyzed for all Indicator Parameters on a quarterly basis and all Supplemental Parameters on a semi-annual basis;
  - b. **Five-Yearly COC Scan:** Every five years, starting in 2007, the Discharger shall analyze a sample from each ground water monitoring point for the detectable presence (including trace determinations) of all COCs that are not yet on the Monitoring Parameter list. This constitutes the means by which the Discharger continues to meet the requirements of 40 CFR 258.55(b)-(d).
    - i. During each such COC scanning event, the Discharger shall obtain and analyze a minimum of one sample from each monitoring well (sufficient to obtain a datum for each COC that is subject to the scan). Upon detecting (including trace value) a COC that is not yet on the MPar list, the Discharger shall, within 30 days, take a single resample from the indicating affected well(s) and reanalyze it only for the newly-detected constituent(s).

- ii. Any COC detected in samples collected from a groundwater monitoring well, and verified by a retest, automatically becomes part of the MPar list for the facility. This constitutes the means by which the Discharger shall meet the requirements of 40 CFR 258.55(d) (2).

**8. Statistical Data Analysis Methodology**

- a. Intra-well comparison methods shall be used for all compliance wells for all constituents that are detectable at concentrations above their respective Method Detection Limit (MDL) in 10% or more of the background data to date. Every two years, following the adoption of this M&RP, as part of the annual monitoring summary report, the Discharger shall add the newer data to the background data set for each well/MPar pair after validating (via a method approved by the Executive Officer) that the new data does not indicate an increase over the existing background data. At that time, the Discharger shall also retire the well/MPar's oldest two years of background data, thereby producing a data set covering the then-previous eight years. The Discharger shall validate the proposed intra-well background data set as follows for each MPar at each well (initially) or, subsequently, at a new well or for a new MPar at an existing well. The Discharger shall report the validated or updated background data set, for each affected well/MPar pair, in the next scheduled monitoring report. Upon approval by the Executive Officer of the proposed additional background data, it becomes part of the intra-well Concentration Limit for that well/MPar pair. The Discharger may use an alternative statistical method or approach for development of a do-not-exceed concentration based upon the revised intra-point Concentration Limit, if approved by Regional Board staff.
- b. Per 27 CCR section 20415(e)(9)(C), if a control chart approach is used to evaluate water quality monitoring data, the specific type of control chart and its associated statistical parameter values (e.g., the upper control limit) shall be included in the supporting documentation as required by 27 CCR section 20415(e)(7). The Discharger shall use the procedure only if this supporting documentation shows the procedure to be protective of human health and the environment. Any control charting procedure must have a false positive rate of no less than 1 percent for each monitoring point charted. For example, upper control limits on X bar or R Charts used only once every six months (where no composite retest is used) must be set at no more than 2.327 standard deviations of the statistic plotted for a one-sided statistical comparison, or at no more than 2.576 standard deviations of the statistic plotted for a two-sided statistical comparison.
- c. In the event that an approved data analysis method provides a preliminary indication that a given monitoring parameter has a measurably significant increase at a given well, the Discharger shall conduct a verification procedure (retest) in accordance with 27 CCR section 20415(e)(8)(E).
- d. The verification procedure shall be performed only for the constituent(s) or parameter(s) that has shown "measurably significant" (see 27 CCR section 20164) evidence of a release, and shall be performed only for those monitoring points at which a release is indicated.
- e. For any COC or monitoring parameter that is detectable at concentrations above its respective MDL in 10% or less of the background data to date, the constituent's concentration limit shall be its MDL. A measurable exceedance of this concentration limit shall be determined by application of the non-statistical analysis method described in Section II.B.9 of this M&RP.

- f. **Water Quality Monitoring Approach:** Except for COC scans, the monitoring approach used for each monitoring parameter at each compliance well (well/MPar pair) shall be controlled by whether that monitoring parameter has exhibited a measurably significant increase at that well as verified by retesting. Therefore, the Discharger shall monitor each well/MPar pair in one of two modes, as follows, either:
- 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 strong enough to trigger a measurably significant indication using an appropriate statistical or nonstatistical data analysis method; 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's concentration at that location via an evolving concentration-versus-time plot.
- g. **Detection Mode Data Analyses:** The following applies to all detection mode data analyses (i.e., this Section does not apply to the scans under Sections II.B.1 or II.B.7.c.):
- i. **Monitoring Parameters Readily Detectable in Background:** At any given monitoring point, the Discharger shall apply an appropriate statistical analysis for each detection mode monitoring parameter that exceeds its respective MDL in at least 10% of the applicable background data set;
  - ii. **Monitoring Parameters Not Readily Detectable in Background:** For any monitoring point at which one or more monitoring parameters, in detection mode, exceed their respective MDL in less than 10% of the applicable background data set, the Discharger shall analyze the data for these monitoring parameters via the California Nonstatistical Data Analysis Method (CNSDAM) test described in Section A.9 of this M&RP.

9. **California Nonstatistical Data Analysis Method (CNSDAM)**

- a. **Non-Statistical Method for Detection Mode for MPars Seldom Found in Background:** For any given compliance (downgradient) well, regardless of the monitoring program (DMP, EMP, AMP, or CAP), the Discharger shall use this data analysis method, jointly, for all constituents on the "scope list" in Section II.B.9.a.i. of this M&RP (or, for each retest sample, the modified scope list of Section II.B.9.b.ii.).
- i. **Scope List:** Within 30 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 Section II.B.9.a.i. above, for an initial test (or, for a retest, the modified scope list under Section II.B.9.b.ii. 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) Two 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. **Discrete Retest** [27 CCR § 20415(e)(8)(E)]:
- i. In the event that the Discharger concludes (pursuant to Section II.B.9.a.ii above) that there is a preliminary indication, then the Discharger shall immediately notify the designated Regional Board staff by phone, fax, or e-mail and, within 30 days of such indication, shall collect two new (re-test) samples from the indicating compliance well.
  - ii. For any given compliance well, the Discharger shall analyze the retest samples only for those constituents indicated in that well's original test, under Section II.B.9.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 Section II.B.9.a.ii above, but using this modified scope list) to separately analyze each of the two suites of retest data at that compliance well.
  - iii. If either (or both) of the retest samples trips either (or both) of the triggers under Section II.B.9.a.ii, then the Discharger shall conclude that there is a measurably significant increase at that well for the constituent(s) indicated in the validating retest sample(s). Furthermore, thereafter, the Discharger shall monitor the indicated constituent(s) in tracking mode at that well, shall remove the constituent(s) from the scope list created for that well, notify the Regional Board in writing, and highlight this conclusion and these changes in the next scheduled monitoring report and in the Landfill's operating record.
10. **Groundwater Flow Direction:** the Discharger shall measure the water level in each well at least quarterly and determine the presence of horizontal and vertical gradients and groundwater flow rate and direction for the respective groundwater body.
11. **Leachate Monitoring:** The Discharger shall conduct leachate monitoring at all leachate collection sumps at the Landfill as follows:
- a. **Annual Appendix II Constituent Scan:** Leachate samples shall be taken at each monitoring point each year during the month of October. The samples shall be analyzed for all Appendix II Constituents in 40 CFR, part 258, that are not already a COC for the Landfill.
  - b. **Retest:** If any constituents that are not in the COC list are detected in the leachate sampling event at any sampling point above their respective PQL concentrations, the Discharger shall resample the leachate at that point during the next April and analyze the sample for those detected constituents. If any such constituent is confirmed to be in the leachate, the Discharger shall add the constituent to the COC list and report this to the Regional Board within two weeks of the confirmation, and shall begin collecting quarterly samples (for a total of at least eight) to develop a concentration limit for the new constituent.
  - c. **Reporting:** Leachate monitoring results shall be included in the semi-annual and annual report that covers the period during which the monitoring is conducted.
12. **Vadose Zone Monitoring:** Vadose zone monitoring at the Landfill shall include:

- a. **Subdrain Monitoring:** As allowed under 27 CCR section 20415(d)(5), subdrain liquid monitoring will be conducted for those cells that require the placement of subdrains to control groundwater seepage beneath the liner system at the Landfill.
  - b. **Lysimeter Monitoring:** A leachate sump shall be constructed for each waste management unit that includes a secondary leak detection system, essentially a lysimeter below the sump. Once each quarter, the lysimeters shall be checked for the presence of liquids. In the event liquids are present in a quantity feasible to sample, samples will be taken and analyzed, to the extent feasible, for the parameters indicated in Table T-2.
  - c. **Landfill Gas Monitoring:** The Discharger shall include in the semi-annual reports all the monthly gas probe monitoring results conducted in accordance with South Coast Air Quality Management District Rule 1150.1.
13. **Surface Water Monitoring:** Surface water monitoring at the site shall be conducted as required under the General NPDES Stormwater Permit as described in Finding No. 17 of Order No. R4-2008-0088. In addition to reporting under the General NPDES Stormwater Permit, all surface/storm water monitoring results shall be included in appropriate semi-annual or annual reports submitted to the Regional Board under this M&RP.
14. **Water Used on Site for Irrigation and Dust Control:** The Discharger shall record the amount of water used on site for the purposes of irrigation and dust control from each source on a monthly basis. Each water source, other than potable water, shall be sampled quarterly and analyzed for pH, heavy metals, nitrate, and VOCs.

### **C. SITE INSPECTIONS**

The Discharger shall inspect the Landfill in accordance with the following schedule, and record, at a minimum, Standard Observations.

1. During the wet season (October through April), following each storm that produces storm water runoff, or on a monthly basis if no storm produces runoff during the month.
2. During the dry season, a minimum of one inspection shall be performed every three months.
3. **Standard Observations** during a site inspection shall include at least the following:
  - a. Evidence of any surface water leaving or entering the waste management unit, estimated size of affected area, and estimated flow rate (show affected area on map).
  - b. Evidence of odors; presence or absence, characterization, source, and distance of travel from source.
  - c. Evidence of erosion and/or of exposed refuse.
  - d. Inspection of all storm water discharge locations for evidence of non-storm water discharges during dry seasons, and integrity during wet seasons.
  - e. Evidence of ponded water at any point on the waste management facility (show affected area on map).

- f. Compliance with the Storm Water Pollution Prevention Plan, insuring that the terms of the General NPDES Stormwater Permit are properly implemented.
- g. Integrity of all drainage systems.

### **PART III: SAMPLING AND ANALYTICAL PROCEDURES**

#### **A. SAMPLING AND ANALYTICAL METHODS**

Sample collection, storage, and analysis shall be performed according to the most recent version of Standard USEPA Methods (USEPA publication "SW-846"), and in accordance with a sampling and analysis plan acceptable to the Executive Officer. A State of California approved laboratory shall perform water analysis. Specific methods of analysis must be identified. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign reports of such work submitted to the Regional Board. In addition, the Discharger is responsible for seeing that the laboratory analysis of samples from all Monitoring Points meets the following restrictions:

1. The methods of 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 determinations) in historical data for that medium, the SW-846 analytical method having the lowest Method Detection Limit (MDL) shall be selected.
2. Trace results (results falling between the MDL and the Practical Quantitation Limit (PQL)) for organic compounds shall be reported as such.
3. MDL and PQL shall be derived by the laboratory for each analytical procedure, according to State of California laboratory accreditation procedures. Both limits shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the laboratory. If the laboratory suspects that, due to a change in matrix or other effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived values, the results shall be flagged accordingly, and an estimate of the limit actually achieved shall be included.
4. 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 censored data (trace level and non-detect determinations). In the event that an MPar's MDL and/or PQL change, the Discharger shall highlight that change in the report's summary and the report shall include an explanation for the change that is written and signed by the owner/director of the analytical laboratory.
5. Quality assurance and quality control (QA/QC) data shall be reported along with the sample results to which it applies. Sample results shall be reported unadjusted for blank results or spike recovery. The QA/QC data submittal shall include:
  - a. The method, equipment, and analytical detection limits.
  - b. The recovery rates, including an explanation for any recovery rate that is outside the USEPA-specified recovery rate.

- c. The results of equipment and method blanks.
  - d. The results of spiked and surrogate samples.
  - e. The frequency of quality control analysis.
  - f. The name and qualifications of the person(s) performing the analyses.
6. QA/QC analytical results involving detection of common laboratory contaminants in any sample shall be reported and flagged for easy reference.
  7. Non-targeted chromatographic peaks shall be identified, quantified, and reported to a reasonable extent. When significant unknown peaks are encountered, second column or second method confirmation procedures shall be performed in an attempt to identify and more accurately quantify the unknown analyte(s).

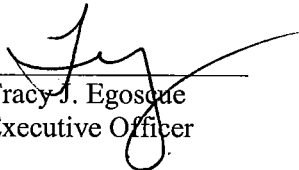
**B. RECORDS TO BE MAINTAINED**

Analytical records shall be maintained by the Discharger or laboratory, and shall be retained for a minimum of five years. The period of retention shall be extended during the course of any unresolved litigation or when directed by the Executive Officer. Such records shall show the following for each sample:

1. Identity of sample and the actual Monitoring Point designation from which it was taken, along with the identity of the individual who obtained the sample.
2. Date and time of sampling.
3. Date and time that analyses were started and completed, and the name of personnel performing each analysis.
4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used.
5. Results of analyses, and Method Detection Limit and Practical Quantitation Limit for each analysis.

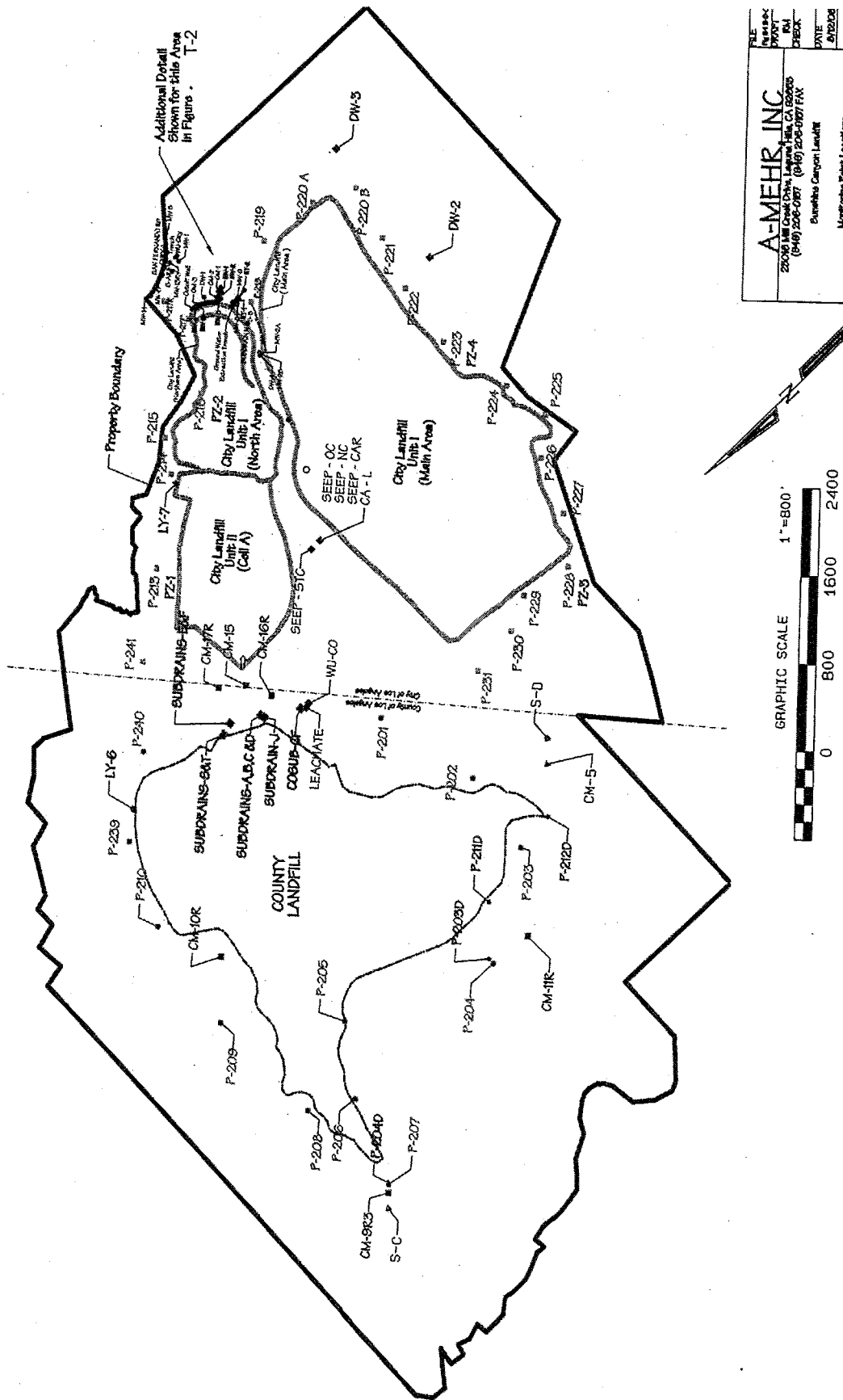
These records and reports are public documents and shall be made available for inspection during normal business hours at the office of the California Regional Water Quality Control Board, Los Angeles Region.

ORDERED BY:

  
Tracy J. Egosque  
Executive Officer

DATE: October 2, 2008





FILE	CI-2043
PROJECT	SUNSHINE CANYON LANDFILL
REV	01
CHECK	AM
DATE	01/20/08
<b>A-MEHR, INC.</b> 2300 W. Coast Drive, Laguna Hills, CA 92653 (949) 226-0167 (949) 226-0167 FAX Sunshine Canyon Landfill Monitorha Point Location	

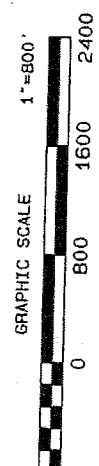


Figure T-1

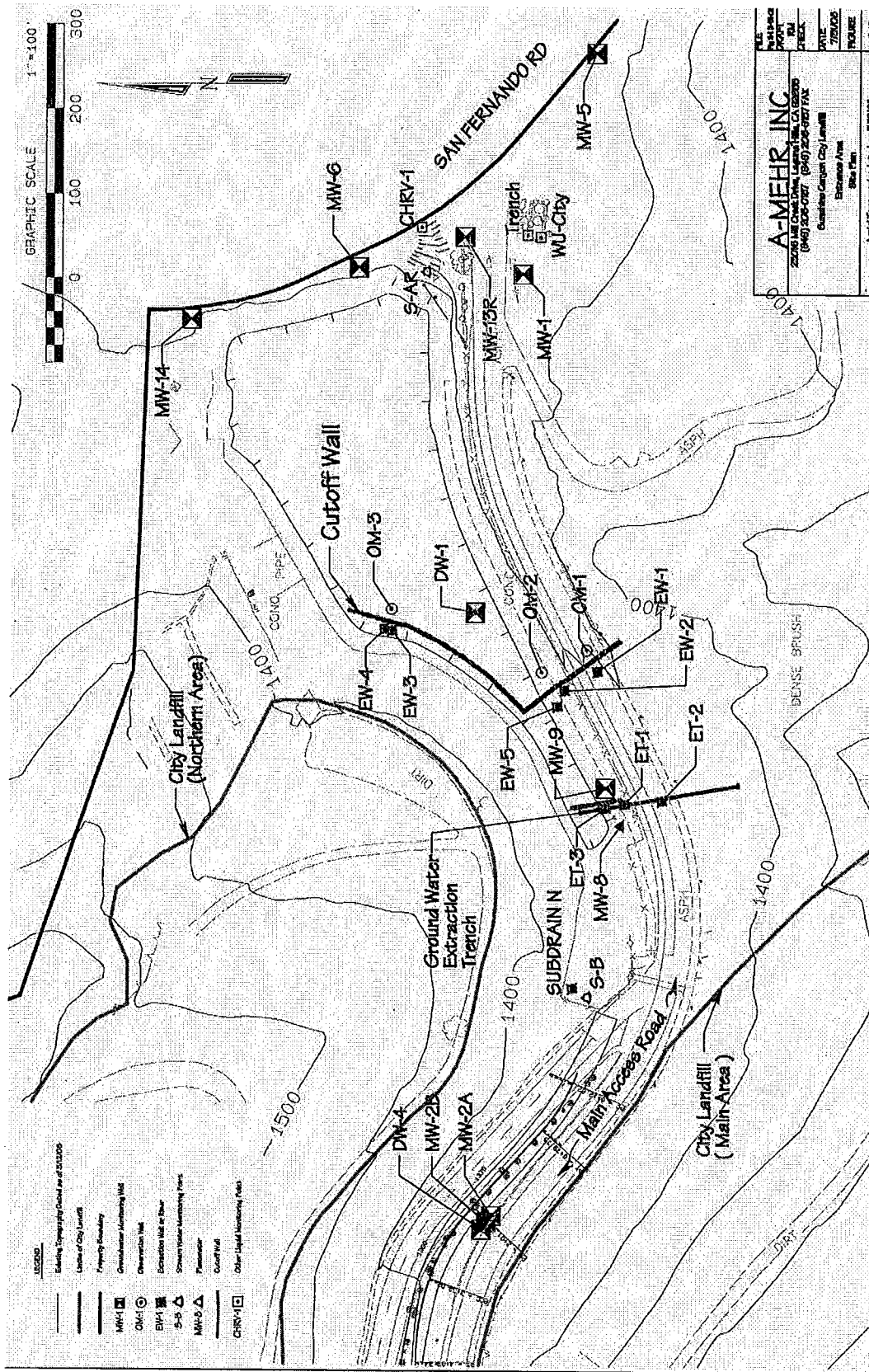


Figure T-2