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ENVIRONMENTAL PROTECTION

Los Angeles Regional Water Quality Control Board

February 15, 2013

Mr. Scott Tignac, District Manager
Simi Valley Landfill and Recycling Center
2801 Madera Road
Simi Valley, CA 93065

RESPONSE TO COMMENTS - TENTATIVE WASTE DISCHARGE REQUIREMENTS - SIMI VALLEY LANDFILL AND RECYCLING CENTER, SIMI VALLEY, CA (FILE NO. 69-090, ORDER NO. R4-2003-0152, CI-5643, WDID 4A560306001)

Dear Mr. Tignac:

Reference is made to a letter from this Regional Water Quality Control Board (Regional Board), dated January 3, 2013, transmitting tentative Waste Discharge Requirements (WDRs) for the Simi Valley Landfill and Recycling Center municipal solid waste landfill (Landfill) in Simi Valley, California (tentative Order). The deadline for submitting comments on the tentative Order was February 11, 2013. The Discharger was the only party to submit comments on the tentative Order by the deadline. Regional Board staff has considered all comments submitted, made appropriate revisions to the tentative Order accordingly, and prepared the attached Response to Comments. A redline version that includes all revisions to the tentative Order released on January 3, 2013, as well as copies of all comments received, are also attached to this letter.

Should you have any questions, please contact Dr. Enrique Casas at (213) 620-2299 (ecasas@waterboards.ca.gov).

Sincerely,

Wen Yang, Ph.D., P.G., C.E.G.
Land Disposal Unit Chief

Attachments
1) Comments received,
2) Responses to comments received
3) Revised tentative WDRs in redline format

cc: MAILING LIST

Mailing List
(VIA EMAIL ONLY)

cc: Ms. Leslie Graves, State Water Resources Control Board
Honorable Elton Gallegly, 24th Congressional District
Mr. Mark De Bie, Waste Permitting, Compliance and Mitigation Division, CalRecycle
Mr. Martin Perez, CalRecycle
Mr. Reed Sato, Department of Toxic Substance Control
Mr. Ed Pert, Department of Fish and Game
Mr. Mark Stuart, Chief, Department of Water Resources, Southern District
Mr. Terry Oda, U.S. Environmental Protection Agency
Mr. Bill Stratton, County of Ventura Environmental Health Division
Mr. Darrell Siegrist, County of Ventura Environmental Health Division
Ms. Melinda Talent, County of Ventura Environmental Health Division
Mr. Chris Stephens, County of Ventura Resource Management Agency
Ms. Kim Prillhart, County of Ventura Planning Division
Ms. Rita Graham, County of Ventura Office of Agricultural Commissioner
Ms. Alicia Stratton, County of Ventura Air Pollution Control District
Mr. Reddy Pakala, County of Ventura Integrated Waste Management Division
Ms. Laura Behjan, City Manager City of Simi Valley
Mr. Gerhart Hubner, County of Ventura Watershed Protection District
Ms. Susan B. Mulligan, Calleguas Municipal Water District
Mr. Steve Bachman, United Water Conservation District
Mr. Wayne Fishback
Ms. Alice Sterling

WASTE MANAGEMENT

SIMI VALLEY LANDFILL
AND RECYCLING CENTER
2801 Madera Road
Simi Valley, California 93065
(805) 579-7267
(805) 579-7482 Fax

February 11, 2013

VIA ELECTRONIC & REGULAR MAIL
ecasas@waterboards.ca.gov.

Dr. Enrique Casas
Regional Water Quality Control Board – Los Angeles
320 W. 4th Street, Suite 200
Los Angeles, CA 90013

Re: Comments to the Simi Valley Landfill & Recycling Center Tentative Waste Discharge Requirements

Dear Dr. Casas:

Waste Management of California, Inc. (WMC), owner/operator of the Simi Valley Landfill and Recycling Center appreciates the opportunity to provide comments on the Tentative Waste Discharge Requirements (WDR) and Monitoring and Reporting Program (MRP) for the Simi Valley Landfill and Recycling Center (SVLRC). WMC appreciates the effort that regional board staff has put into this document.

1. WDR Comments

- WDR, Page 4, Line d: For clarification purposes, the 9,250 tons per day (TPD) allocation went from 3,000TPD to 6,000 TPD for disposal. The text states 3,250 TPD to 6,000 TPD for disposal.

- WDR, Page 16, Line A.2. : Non-friable asbestos waste should be added to the list of acceptable waste streams.

2. MRP Comments

- MRP, Page T-3, Line *i*: SVLRC has customers that bring in dewatered sludge on an infrequent basis (once or twice per year) and quarterly sampling is unfeasible. WM suggests the following language be included:

  - "In cases where infrequent sludge loads are received and quarterly sampling is not feasible, sample results representative of the incoming sludge shall be obtained and submitted as described."

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- MRP, Page T-4 Line *iv*: Test results from TSW generators are received on a monthly basis and submitted in the corresponding semi-annual report to regional board staff. WM feels there is a 12+ year history of storm water, groundwater and leachate analysis and test results as well as sufficient test results of the TSW material itself, that any additional analysis is unnecessary and unwarranted. As such, this requirement should be removed.

- MRP, PageT-10, Line *g.i*: The quarterly monitoring at all groundwater monitoring wells is excessive. Semi-annual monitoring is more than sufficient for site conditions, as has been demonstrated by the current semi-annual sampling frequency. Average groundwater velocities at the existing site are slow and range from 0.010 – 5.80 feet/year; that would make quarterly sampling of the existing wells unnecessary. Although we understand the RWQCB's rationale for the quarterly sampling, which is aimed at sample independence should a resample event be necessary, WM would prefer to coordinate a resample event in a 30-day window as opposed to quarterly sampling. It would be appropriate to monitor the wells at the expansion area quarterly for a period (e.g., 2 years) to establish a baseline and then reduce the sampling frequency to semiannual to account for the very slow moving groundwater conditions.

- MRP, Page T-11: WM is concerned that the sampling procedure outline in this section will result in an extensive inorganic MPar Indicator Parameter list primarily through the continued addition of trace metals. (Note, the MPar inorganic Indicator Parameters are subject to statistical evaluation whereas the MPar inorganic Supplemental Parameters are not). Such an extensive inorganic Indicator Parameter list will undermine the effectiveness and reliability of the monitoring program while simultaneously burdening the site with excessive monitoring and statistical evaluations (with a high false-positive error rate).

- As such, WM proposes the addition of the following text, which can be inserted as a stand-alone paragraph "C" (i.e., C.2.g.ii.C.)

    - *"As an alternative to paragraphs A and B, above, the discharger may perform a parameter optimization evaluation to create a site-specific inorganic MPar Indicator Parameter list. The site-specific list would modify/replace only the inorganic indicator parameters listed on Table T-2. The parameter optimization approach shall consider the source (leachate) concentration, as well as dilution/attenuation and other mobility considerations in the selection of MPars will likely provide the best relative indicators of a release from the landfill."*

- *MRP, T-18, Table 1, Leachate Section: Sump 1 should be removed as an active leachate monitoring point. Sump 1 is not part of the active LCRS and serves no useful purpose. As such, it should be removed as a monitoring point.*

- *MRP, T-18, Table 1, Unsaturated Zone Section: The North and South sludge bed lysimeters should be removed as active monitoring points. The sludge drying beds are no longer in operation and as such, the lysimeters serve no useful purpose and should be removed from monitoring.*

* * *

Thank you for your consideration of our comments. WMC looks forward to working with board staff to resolve the concerns expressed in this letter.

Please contact me if you have any questions or concerns.

Sincerely,

SCOTT TIGNAC
District Manager

cc:
Jim Riley, WMC
Mark Verwiel, WMC
Laura Keener, WMC

Response to Comments

Commenter (Date submitted)	Summary of Comments	Response / Action
Waste Management - Discharger (2/11/2013)	(1) Tentative Order, Finding No. Q.d For clarification purposes, the 9,250 tons per day (TPD) allocation went from 3,000 TPD to 6,000TPD for disposal. The text states 3,250 TPD to 6,000 TPD for disposal.	The correction was made to the tentative Order.
	(2) Tentative Order, Specification No. A.2 Non-friable asbestos waste should be added to the list of acceptable waste streams.	Section 14 (Prohibitions) of the Solid Waste Facility Permit issued on April 3, 2012 by CalRecycle indicates that "The permittee is prohibited from accepting Hazardous, radioactive (as defined in Chapter 6.1, Division 20 of the Health and Safety Code), medical (as defined in Division 104, Part 14, Section 117690 of the Health and Safety Code), liquid, designated, or other wastes requiring special treatment or handling, except as indicated in the JTD and approved amendments thereto and as approved by the LEA and other federal, state, and local agencies." The acceptance of non-friable asbestos, including special handling procedures is included in the Landfill Joint Technical Document (JTD) dated August 16, 2011. Therefore, Regional Board staff accepts the proposed language and the tentative Order was modified to be consistent with other landfills in the Region that accept non-friable asbestos. Specification No. A.2 (page 16) was amended accordingly and A.7 (page 17) was added to include information regarding non-friable asbestos.
	(3) Monitoring and Reporting Program Item No. B.1.i Simi Valley Landfill and Recycling Center has customers that bring in dewatered sludge on an infrequent basis (once or twice per year) and quarterly sampling is unfeasible. WM suggests the following language be added: • "In cases where infrequent sludge loads are received and quarterly sampling is not feasible, sample results representative of the incoming sludge shall be obtained and submitted as described"	Regional Board staff agrees that the proposed language more accurately reflects Landfill operations. A revised version of the suggested language has been added as Item B.1.i.*iii* as follows: iii. For small generators that dispose of dewatered sludge at the Landfill at a frequency less than one disposal event per quarter, the sample shall be a composited sample that is representative of the incoming dewatered sludge load. The total percent solids of the sample shall be reported and analyzed pursuant to B.1.i.*ii,* above.

Response to Comments

Commenter (Date submitted)	Summary of Comments	Response / Action
Waste Management - Discharger (2/11/2013)	(4) Monitoring and Reporting Program Item No. B.1.j Test results from TSW generators are received on a monthly basis and submitted in the corresponding semi-annual report to regional board staff. WM feels there is a 12+ year history of storm water, groundwater and leachate analysis and test results as well as sufficient test results of the TSW material itself, that any additional analysis is unnecessary and unwarranted. As such, this requirement should be removed.	Regional Board staff does not agree with the comment. Monitoring of stormwater for an expanded suite of contaminants that might result from the use of wastes in support of Landfill operations [i.e. the use of Treated Shredder Waste (TSW) as alternative daily cover] was only initiated in 2011 with the adoption of Regional Board Order No. R4.2011.0052. It is not clear to Regional Board staff that the testing program conducted by generators is capable of fully characterizing the TSW that is shipped to the Landfill, i.e. the TSW is not segregated based on disposal destinations and tested accordingly. Moreover, it is not clear to Regional Board staff whether there is significant variability in the TSW waste stream over time. Given the extensive use of these materials as alternative daily cover and their likelihood to come in contact with stormwater, Regional Board staff believes that the additional testing included in the tentative Order is warranted. The tentative Order was not modified in response to this comment.
	(5) Monitoring and Reporting Program Item No. C.2.g The quarterly monitoring at all groundwater monitoring is excessive. Semi-annual monitoring is more than sufficient for site conditions, as has been demonstrated by the currently semi-annual sampling frequency. Average groundwater velocities at the existing site are slow and range from 0.015 to 5.80 feet/year; that would make quarterly sampling of the existing wells unnecessary. Although we understand the RWQCB's rationale for the quarterly sampling, which is aimed as sample independence should a resample event be necessary, WM would prefer to coordinate a resample event in a 30-day window as opposed to quarterly sampling. It would be appropriate to monitor wells at the expansion area quarterly for a period (e.g. 2 years) to establish a baseline and then reduce the sampling frequency to semiannual to account for the very slow moving groundwater conditions.	Regional Board staff agrees that semi-annual monitoring for a Detection Monitoring Program, as is the case at the Landfill, is warranted and consistent with other landfills in the Region. Of note, a change from quarterly to semi-annual monitoring does not necessitate a change in the retesting frequency from 90 to 30 days to confirm a potential release to groundwater as is suggested in the Discharger's comments. We also agree that quarterly monitoring of new monitoring wells in the proposed expansion area is important to establish background water quality characteristics in the shortest time reasonable. All appropriate references to a quarterly groundwater sampling in the tentative Order were modified to reflect semi-annual groundwater monitoring and the requirement for background groundwater quality in Item No. C.1 (page T-9) was expanded to include "a minimum four quarterly sampling events."

Response to Comments

Commenter (Date submitted)	Summary of Comments	Response / Action
Waste Management - Discharger (2/11/2013)	(6) Monitoring and Reporting Program Item No. C.2. WM is concerned that the sampling procedure outline in this section will result in an extensive inorganic MPar Indicator Parameter list primarily through the addition of trace metals. (Note, the MPar inorganic Indicator Parmanters are subject to statistical evaluation whereas the MPar inorganic Supplemental Parameters are not). Such an extensive inorganic Indicator Parameter list will undermine the effectiveness and reliability of the monitoring program while simultaneously burdening the site with excessive monitoring and statistical evaluations (with a high false-positive error rate). As such, WM proposes the addition of the following text, which can be inserted as a stand-alone paragraph C (i.e., C.2.g.ii.C.) • "As an alternative to paragraphs A and B, above, the discharger may perform a parameter optimization evaluation to create a site-specific inorganic MPar Indicator Parameter list. The site-specific list would modify/replace only the inorganic indicator parameters listed in Table T-2. The parameter optimization approach shall consider the source (leachate) concentration, as well as dilution/attenuation and other mobility considerations in the selection of MPars will likely provide the best relative indicators of a release from the landfill"	Regional Board staff agrees with the intent of the comment that Indicator Parameters be focused on the constituents can provide a reliable indication of a release from the Landfill. To further clarify this point the tentative Order was revised to add a note to Table T-2 (page T-19), that allows for adjusting the list of Indicator Parameters as follows: *Any modification to the list of Indicator Parameters evaluated through statistical analysis based on source (leachate) concentration or related information must be fully described in each corresponding semi-annual monitoring report.
	(7) Monitoring and Reporting Program Table T-1, Leachate Sump Sump 1 should be removed as an active leachate monitoring point. Sump 1 is not part of the active LCRS and serves no useful purpose. As such, it should be removed as a monitoring point.	Regional Board staff disagrees that sampling of Sump 1 serves no useful purpose. Sump 1 is associated with a leachate barrier and collection system (toe barrier) that was installed at the southern, downgradient, boundary of the unlined portion of the Landfill that includes the area were hazardous waste materials were deposited. The purpose of the barrier system was to intercept and extract leachate from the canyon alluvium underlying the Landfill thereby preventing potential migration of wastes offsite. The canyon alluvium is considered to be the primary groundwater pathway for a waste discharge from the existing Landfill. Sump 1 provides groundwater quality monitoring in support of downgradient monitoring well M-01ARD. The tentative Order was not modified in response to this comment.

Response to Comments

Commenter (Date submitted)	Summary of Comments	Response / Action
Waste Management - Discharger (2/11/2013)	(8) Monitoring and Reporting Program Table T-1, Unsaturated Zone Section The North and South sludge bed lysimeters should be removed as active monitoring points. The sludge drying beds are no longer in operations as as such, the lysimeters serve no usefull purpose and should be removed from monitoring.	Regional Board staff agrees with the comment. Table T-1 of the tentative Order was modified accordingly.

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

ORDER NO. R4-2013-XXXX

WASTE DISCHARGE REQUIREMENTS FOR MUNICIPAL SOLID WASTE DISPOSAL

WASTE MANAGEMENT OF CALIFORNIA, INC.
(SIMI VALLEY LANDFILL AND RECYCLING CENTER)
(FILE NO. 69-090)

T E N T A T I V E

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

BACKGROUND

1. The Simi Valley Landfill and Recycling Center (Landfill) is a Class III municipal solid waste (MSW) landfill located in the foothills of the Santa Susana Mountains. The Landfill's address is 2801 Madera Road, Simi Valley, California 93065 (Figure 1). The Landfill is currently owned and operated by Waste Management of California, Inc. (Discharger).

2. The following is a condensed chronologic history of the development of the Landfill.

   A. The Ventura County Planning Commission issued Conditional Use Permit (CUP) No. 3142 authorizing the establishment and operation of the Landfill in 1970 on property owned by Moreland Investment Company. CUP-3142 has subsequently been amended by a series of modifications throughout the development of the Landfill.

   B. On March 11, 1970, the Regional Board adopted Resolution No. 70-21 prescribing Waste Discharge Requirements (WDRs) to the Ventura County Department of Public Works, then lessee to Moreland Investment Company, for the disposal of MSW and designated wastes at specific areas of the Landfill.

   C. On May 27, 1970, the Regional Board adopted Resolution No. 70-36 prescribing WDRs for the Ventura County Department of Public Works for the disposal of MSW, designated wastes, and hazardous wastes at specific areas of the Landfill. Pursuant to the Resolution, hazardous solid and liquid waste disposal was allowed on approximately thirty acres of a designated 75-acre portion of the property in the northern part of the Landfill (Figure 2). Resolution No. 70-36 terminated Resolution No. 70-21.

   D. Starting on July 1, 1972, the operation of the Landfill was transferred from the Ventura County Department of Public Works to the Ventura Regional County Sanitation District, a special district formed under the California Special District Reorganization Act of 1965.

   E. On January 8, 1982, Moreland Investment Company gave notice to the Ventura Regional County Sanitation District of the proposed termination of the Landfill property lease in order to sell the property to the Discharger.

F. On May 23, 1983, the Regional Board adopted Order No. 83-26 prescribing revised WDRs for the operation of the Landfill by the Discharger. Included in the WDRs was the prohibition of continued disposal of liquid wastes and hazardous wastes. Approximately 29,000 tons of solid, liquid and containerized hazardous wastes were discharged at the Landfill during the period when hazardous waste disposal was permitted. Order No. 83-26 terminated Order No. 70-36.

G. On November 30, 1988, the California Department of Health Services (DHS), now the Department of Toxic Substances Control (DTSC), indicated to the California Integrated Waste Management Board (CIWMB), now the California Department of Resources Recycling and Recovery (CalRecycle), that MSW overfilling above the existing hazardous waste disposal area would not damage existing hazardous waste containment systems and complied with existing standards. Subsequently, a compacted clay layer was constructed over the hazardous waste area to separate MSW wastes from underlying hazardous wastes. (Refer to Finding No. 37 for construction details of the clay cap).

H. On February 26, 1990, the Regional Board adopted Order No. 90-034 revising WDRs for the Landfill and approving an expansion of the Landfill from approximately 233 acres to 271.6 acres, with an increase in the refuse footprint from approximately 83 acres to 135.2 acres. For all areas of the Landfill where waste disposal had not yet occurred, the Discharger was required to construct a composite liner system prior to discharge of any waste. In addition, the revised WDRs permitted the discharge of dewatered sewage and water treatment sludge at the Landfill. Order No. 90-034 terminated Order No. 83-26.

I. On October 9, 1991, the United States Environmental Protection Agency (USEPA), under title 40 of the Code of Federal Regulations (40 CFR), revised existing regulations for MSW disposal facilities in response to the 1984 Hazardous and Solid Waste Amendments of the Resource Conservation and Recovery Act (RCRA) and added detailed requirements addressing location restriction, facility operation and design criteria, groundwater monitoring and corrective action, closure and postclosure maintenance, and financial assurance. USEPA delegated the responsibility for implementing these regulations to states that have a fully approved landfill regulatory program. As responsible agencies for an approved state, the California State Water Resources Control Board (State Board) and the Regional Board revised WDRs for each MSW landfill in the Region to implement the federal 40 CFR regulatory requirements (State Board Resolution No. 93-62 and Regional Board Order No. 93-62, respectively). Regional Board Order No. 93-062, also known as the Super Order, was adopted on September 27, 1993.

J. Since 1998, treated shredder waste (TSW) has been disposed of at the Landfill. TSW consists primarily of non-metallic materials that remain after recyclable metals in automobiles and major household appliances have been removed. TSW has been regulated as a non-RCRA hazardous waste in California since 1984 because of the presence of lead, cadmium, copper, and zinc at levels above the regulatory thresholds for those metals. Between 1986 and 1992, DHS issued conditional non-hazardous waste classifications to shredder facilities in California who successfully treated their shredder waste to non-hazardous levels using metals fixation treatment technologies. Once a facility operator received a non-hazardous waste classification, the TSW from that facility was no longer regulated as a hazardous waste and could be disposed of at MSW landfills in the State. California's regulation of TSW and shredder facilities is formalized in DTSC Policy and Procedure No. 88-6.

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K. On June 29, 2000, the Regional Board adopted Order No. 00-092 that included revised WDRs for the Landfill to reflect changes in site conditions and revisions to title 27 of the California Code of Regulations (27 CCR) pertaining to MSW landfills. Order No. 00-092 terminated Order No. 90-034.

L. On November 26, 2002, the Ventura County Resource Management Agency approved CUP Major Modification No. 6 (CUP-3142-6) that provided for a property exchange between the Discharger and the Unocal Investment Company, owner of the land adjoining the Landfill property to the north. The property exchange included conveyance of ownership or easement rights on seven contiguous pieces of land. With these changes in ownership and easement rights, the Landfill property boundary increased from 271.6 acres to 297.45 acres. In conjunction with the property exchange, the Discharger added 50.4 acres to the previously permitted 135.2 acre Landfill footprint, bringing the total Landfill footprint to 185.6 acres.

M. On December 4, 2003, the Regional Board adopted Order No. R4-2003-0152 to allow for the proposed expansion of the Landfill to a total of 185.6 acres, an increase in the approximate volume of deposited waste by an additional 20 million cubic yards, and an expansion of operating life of up to thirty years. Order No. R4-2003-0152 terminated Order No. 00-092.

N. On January 29, 2006, the Regional Board adopted Order R4-2006-0007 as Addendum No. 1 to Order No. 93-062 establishing requirements for the acceptance of treated wood waste (TWW) at MSW landfills throughout the Region, including the Landfill. Order R4-2006-0007 provides that, pursuant to California Health and Safety Code (HSC) sections 25143.1.5 and 25150.7, as amended in 2004, TWW can be discharged to a composite lined portion of a MSW landfill.

O. On March 6, 2008, the Regional Board adopted Order R4-2008-0013 that included WDRs for the disposal of solid waste generated from wildfires at MSW landfills in the Region. Order R4-2008-0013 permitted the discharge of solid waste from wildfires into a composite lined portion of MSW landfills.

P. On March 3, 2011, the Regional Board adopted Order No. R4-2011-0052 to establish requirements for the disposal or use onsite of contaminated soils at MSW landfills in the Los Angeles Region, including the Landfill. Order No. R4-2011-0052 requires specific procedures for acceptance, disposal, and use onsite of contaminated soils, the use onsite of related wastes, and an expanded storm water pollution prevention plan (SWPPP) to protect the quality of the waters of the State.

Q. On July 19, 2011, the Ventura County Resource Management Agency approved Major Modification No. 8 (CUP-3142-8), which authorizes:

   a. Expansion of the CUP boundary from 297.5 to 887.1 acres and expansion of the permitted landfill footprint from 185.6 to 368 acres (Figure 3);

   b. Increasing the maximum permitted elevation for waste disposal from 1,118 to 1,275 feet above mean sea level (msl);

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c. Increasing the waste disposal capacity from 43.5 to 119.6 million cubic yards;

d. Maintaining the permitted limit of 9,250 tons per day (TPD) of combined waste recycling and disposal but changing the current allocation of ~~3,250~~ 3,000 TPD for disposal and ~~6,000~~ 6,250 TPD for recycling to 6,000 TPD for disposal and 3,250 TPD for recycling;

e. Extending the Landfill operating life by approximately 27 years (to approximately 50 years from present);

f. The construction and operation of a materials recovery and recyclables transfer station;

g. The construction and operation of an environmental collection facility (public household hazardous waste drop off facility);

h. The expansion and improvement of an existing green waste processing facility and a construction, demolition, and inert (CDI) waste recycling facility;

i. The construction of a vehicle refuse and recycling hauling facility; and

j. Expanding the existing Landfill gas-to-energy operations.

R. On August 29, 2011, the Discharger submitted a Joint Technical Document (JTD) to the Regional Board to apply for WDRs for the expansion of the Landfill pursuant to conditions of Major Modification No. 8 (CUP-3142-8). The proposed expansion will occur in three phases beyond the currently permitted (Phase 1) portion of Landfill development (Figure 3). The JTD contains an overview of the project and includes descriptions of the environmental setting, existing facilities, design, environmental control systems, stability analyses, facility operations, permit requirements, construction quality assurance plan, and preliminary closure and postclosure maintenance plans for the proposed Landfill expansion. The JTD complies with requirements of 27 CCR section 21750 (Waste Management Unit Characteristics and Attributes to be Described in the ROWD).

S. This Order supersedes WDRs included in Regional Board Order No. R4-2003-0152 and incorporates requirements included in Order Nos. 93-062, R4-2006-0007, R4-2008-0013 and R4-2011-0052.

ENVIRONMENTAL SETTING

3. The Landfill is bounded by unnamed hills and the Alamos Canyon to the north and northwest and the Ronald Reagan (118) Freeway and Brea Canyon to the south and southwest (Figure 1).

4. Topography prior to the development of the Landfill was characterized by a series of steep-sided canyons and narrow ridges.

5. Geologic units at the Landfill site include Holocene-aged alluvium deposited on canyon floors consisting of up to thirty feet of gravels, sands, silts, and clays, underlain by Oligocene-aged sedimentary rocks of the Sespe Formation composed of alternating beds of tan-to-pale, grayish-white,

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fine- to medium-grained, poorly-sorted, silty to clayey sandstone and reddish and greenish siltstones and claystones (Figures 4).

6. The Landfill is located on the northern limb of the Simi Anticline of which the east-west trending axis is approximately 0.5 mile south of the Landfill property boundary. As a result, all sedimentary bedrock near the Landfill site strikes from N70°E to N85°E and dips 25 to 35 degrees northwest beneath the Big Mountain Range, with a mean bedding strike of N75°E and dip of 26 degrees towards the northwest.

7. The proposed Landfill expansion includes areas located within a 100-year flood plain according to the Federal Emergency Management Agency Flood Insurance Map for Ventura County, California (Figure 5). The proposed Landfill expansion is required to comply with 27 CCR 20260(c) and 40 CFR 258.11 to prevent inundation or washout due to floods.

8. The Landfill lies in an area of limited groundwater resources. The underlying Sespe Formation has only limited ability to store or transmit water. Groundwater beneath the Landfill is found in two zones. A shallow aquifer in alluvial materials directly underlying the Landfill conveys groundwater southerly towards the Simi Valley Groundwater Basin (Figure 6). Groundwater also occurs within semi-confined sandstones of the Sespe Formation. Water-bearing bedrock zones occur primarily as relatively distinct sandstone beds (or portions of beds) layered between fine-grained siltstone and claystone beds.

9. The proposed expansion area occupies two distinct watersheds. The northern expansion area coincides with the boundaries of a large, east-west trending valley located north of the existing Landfill. This valley drains to the west, towards Alamos Canyon. The western expansion area is separated from the existing Landfill by a ridge, and is situated in a steep canyon that drains to the west-southwest, away from the Landfill. Groundwater in both expansion areas flows from ridge tops to canyon-valley centers, and then flows down-canyon towards valley outlets. Vertical groundwater gradients in northern expansion area wells are mostly downwards at high elevations and mostly upwards at lower elevations, with the stronger upward gradients in the canyon bottoms. Figure 7 is a groundwater gradient map that demonstrates strong topographic control on groundwater flow at the site.

10. Pursuant to 27 CCR section 20240(c), all new landfill waste management units shall be sited, designed, constructed, and operated to ensure that wastes will be a minimum of five feet above the highest anticipated elevation of underlying groundwater.

11. The Landfill is located within the Arroyo Simi hydrologic unit of the Calleguas-Conejo Creek Watershed and lies immediately to the north of the Simi Valley Groundwater Basin.

12. There are no known active faults within 200 feet of the Landfill. Active faults are defined as Holocene epoch faults that have ruptured in the last 11,000 years. The active fault closest to the Landfill is the Simi-Santa Rosa Fault, located approximately 0.7 miles southwest of the Landfill (Figure 8). The Simi-Santa Rosa Fault is a reverse-oblique fault that dips north at approximately 60 degrees and has a slip rate of approximately one millimeter per year. The most recent update of the joint study by the California Department of Conservation, Division of Mines and Geology and United

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States Geological Survey (CDMG/USGS, 2003) assigned a maximum credible earthquake (MCE) moment magnitude (Mw) of 7.0 to the Simi-Santa Rosa Fault.

13. Known local non-Holocene faults are shown in Figure 4. The Strathern Fault extends east-west across the Landfill and trends parallel to the Simi Anticline. The Strathern Fault is truncated to the east by the Cañada de la Brea Fault, which trends approximately east-west through the extreme northern part of the existing (Phase 1) Landfill. The CDMG/USGS [2003] study does not recognize the Strathern Fault and Cañada de la Brea Fault as active or potentially active seismic sources.

14. A report titled *Seismic Hazard Zone Report for the Simi Valley East and Simi Valley West 7.5-Minute Quadrangles, Ventura and Los Angeles Counties, California* (1997), produced by the California Department of Conservation, Division of Mines and Geology (incorporated herein by reference), discusses the liquefaction, landslide and horizontal ground acceleration hazards associated with the seismic risk for the area where the Landfill is located. Bedrock conditions at the Landfill result in a minor threat from earthquake-induced liquefaction or landslide movements. A seismic hazard evaluation for the Landfill by the Discharger based on historical seismicity and published studies of known active and potentially active faults and earthquake zones within a 62-mile radius of the Landfill indicates that the seismic hazard at the Landfill is dominated by a Mw 6.7 earthquake on the Simi-Santa Rosa Fault. When placed at the closest distance from the fault to the Landfill of 0.7 miles this Mw 6.7 event induces a peak horizontal ground acceleration of 0.5g and significant duration of strong ground shaking of 11 seconds in bedrock at the Landfill.

15. The Landfill site is under the jurisdiction of the Ventura County Air Pollution Control District (VCAPCD). The VCAPCD issued *Authority to Construct* and granted *Permit to Operate No. 1395* for the Landfill in July 1993. The units included under this permit are the waste recycling facilities, the diesel/hydraulic shredding and screening system, and the Landfill gas collection and flare system.

16. Information taken from VCAPCD records indicates prevailing winds at the Landfill are dominated by a sea breeze circulation pattern, are in a dominant east-west direction and typically range from approximately nine to fifteen miles per hour, with gusts in the winter months ranging upwards of twenty miles per hour. From the fall through spring, strong warm "Santa Ana" winds blow periodically from the northeast. Average annual rainfall is approximately 18 inches with most precipitation occurring as a result of winter storms between November and April.

17. The Landfill is located on the southern boundary of the Simi Oil Field. This oil field lies immediately north of the Cañada de la Brea Fault and local oil accumulations are likely related with the fault. A large number of historically producing oil wells, currently abandoned, were drilled within one mile of the Landfill (Figure 9). The presence of naturally occurring petroleum deposits associated with local oil production may affect the interpretation of water quality monitoring at the Landfill. Numerous volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) have been detected in groundwater. Because of the natural occurrence of organic compounds such as benzene, toluene, xylene, and ethylbenzene, this Order requires the Discharger to verify whether petroleum hydrocarbon compounds detected at the site are naturally occurring or related to landfill operations.

18. The JTD indicates that all known abandoned oil and water wells on the Landfill have been decommissioned according to appropriate California Department of Conservation, Division of Oil and Gas (now the California Division of Oil, Gas, and Geothermal Resources or DOGGR),

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guidelines. Some improperly decommissioned wells may exist for which no records exist. This Order specifies that, upon discovery of any such wells, they will be properly decommissioned according to the appropriate DOGGR requirements.

19. Land uses surrounding the Landfill include agricultural, commercial, industrial and open space. The Ventura County Planning Department has zoned the lands adjacent to the Landfill as open space and commercial planned development (Figure 10).

ENVIRONMENTAL PROTECTION AND MONITORING SYSTEMS

20. Pursuant to 27 CCR section 21760, the JTD integrates:

    a. A Design Report, which includes:
        i. Preliminary and as-built plans;
        ii. Monitoring system plans and rationale;
        iii. Inspection procedures; and

    b. An Operations Plan, which includes:
        i. A description of proposed treatment, storage, and disposal methods;
        ii. Contingency plans for the failure or breakdown of waste handling facilities or containment systems, including notice of any such failure, or any detection of waste or leachate in monitoring facilities, to the Regional Board, local governments, and water users downgradient of the Landfill; and
        iii. A description of inspection and maintenance programs that will be undertaken regularly during disposal operations and the postclosure maintenance period.

21. The Landfill has been operated as a "cut and cover" canyon landfill. Soil, for use as cover, is excavated within the Landfill property, or provided by reclaiming dirt loads from the incoming waste stream. Refuse is spread and compacted in cells approximately eighteen to twenty feet in height. An approximately fifteen-foot wide bench is constructed approximately every forty vertical feet to provide slope stability, erosion and drainage control, and maintenance access. The Discharger intends to continue canyon landfilling operations for the proposed expansion.

22. Engineered containment features for continued development of the Landfill will be constructed to the prescriptive standards of 27 CCR and 40 CFR or equivalent performance standards. This Order specifies that final design and construction methods for proposed engineered environmental control systems be reviewed and approved by the Regional Board Executive Officer prior to installation and use.

23. Section 20260 of 27 CCR requires a site operator to install a clay liner when site characteristics alone are not adequate to ensure protection of the quality of groundwater or surface water. Section 20080(b) of 27 CCR allows the Regional Board to approve engineered alternatives to constructions or prescriptive standards in applicable regulations if it is demonstrated that the construction or prescriptive standard is not feasible and that the proposed engineered alternative affords equivalent protection against water quality impairment. The Discharger has constructed liner systems under several expansion areas constructed after the approval of CUP Major Modification No. 5 (CUP-3142-5) that comply with state and federal liner requirements and generally consist of (from bottom to top)

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a subdrain, a clay or geosynthetic clay liner, a synthetic geomembrane, a blanket leachate collection and removal system (LCRS), and a protective layer of soil (Figure 11). Areas that are equipped with composite liner systems at the Landfill are displayed in Figure 12. Cell A (4.3 acres) was lined in January 1990 with a 60-mil high density polyethylene (HDPE) geomembrane placed in direct and uniform contact over a one-foot-thick compacted clay base liner. Subsequently, Cell B1 (6.9 acres, 1994), Cell B2 (12.9 acres, 1996), Cell B3 (5.3 acres, 2000), Cell D1 (8 acres, 2004) and Cell D2 and 3 (18 acres, 2006) were lined with comparable composite liners.

24. Section 20370 of 27 CCR requires that hazardous and designated waste landfills be designed to withstand a maximum credible earthquake (MCE) and MSW units be designed to withstand a maximum probable earthquake (MPE) without damage to the foundation or to the structures which control leachate, surface drainage, or erosion, or gas. This Regional Board requires that all final MSW Landfill refuse fills must be designed to withstand a MCE to prevent failure of the refuse fill during the postclosure maintenance period.

25. The Discharger has performed stability analyses in support of the design of the proposed Landfill expansion, including static, and where appropriate, seismic evaluations of native slopes, cut slopes, interim configurations of waste fill, and final configurations of waste fill (Proposed Design Basis for Northern and Western Expansions, Simi Valley Landfill and Recycling Center, GeoSyntec Consultants, December 5, 2005). On February 14, 2012, the JTD was forwarded to staff of the California Department of Water Resources (DWR), Division of Engineering to request assistance in evaluating the slope stability analyses included in JTD. The requirements contained in this Order conform with DWR slope stability review comments.

26. The landfill-gas management system at the Landfill is designed and operated to actively collect and control landfill gas generated within the Landfill. The landfill-gas management system consists of a network of vertical and horizontal extraction wells, laterals, headers, condensate management systems, flares, and a landfill gas-to-energy facility (Figure 13). Condensate from the facility is collected and conveyed to the existing condensate collection and disposal system at the landfill-gas flare pursuant to requirements of the VCAPCD. This Order requires that the landfill-gas management system at the Landfill be designed and operated to actively collect and control landfill gas generated in the proposed expansion area.

27. The existing perimeter landfill-gas monitoring system consists of fourteen multi-depth gas monitoring probes located around the Landfill (Figure 14). The lateral spacing between adjacent gas monitoring probes was established in accordance with requirements of 27 CCR section 20925. Each of the gas probes contains one to four individual nested probes. These probes, as well as all additional probes required to monitor gas migration in the expansion area, will be monitored monthly for methane pursuant to requirements of CalRecycle and the County of Ventura Environmental Health Division. This Order requires that the perimeter landfill-gas monitoring system at the Landfill be designed and operated to actively monitor landfill gas migration in the proposed expansion area.

28. Surface water flow from the Landfill drains to the south end of the property where it discharges offsite towards the Arroyo Simi, located about 0.75 miles south of the Landfill. To prevent siltation of the natural drainage channel to the south of the property, a sedimentation basin was constructed downgradient of the Landfill. The sedimentation basin is designed to accommodate surface water flows from the Landfill and allow sediments to settle out of suspension prior to discharge offsite. This

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Order requires that additional sedimentation basins be constructed at new discharge points that are part of the proposed Landfill expansion (Figure 15).

29. Existing storm water control facilities at the Landfill are designed and maintained to accommodate flows from a 100-year, 24-hour frequency storm (Figure 16). This Order requires that storm water control facilities at the Landfill must be designed and maintained to accommodate flows from a 100-year, 24-hour frequency storm in the proposed expansion area.

30. Stormwater monitoring is conducted pursuant to the State Board general industrial storm water permit (Order No. 97-03-DWQ) and Regional Board Order No. R4-2011-0052, which expanded stormwater monitoring to more specifically assess contaminants of concern for Los Angeles Region landfills that accept contaminated soils, or related wastes, for disposal or use onsite. This Order requires that storm water monitoring at the Landfill be conducted pursuant to Order No. 97-03-DWQ and Regional Board Order No. R4-2011-0052 in the proposed expansion area.

31. In 1986 a leachate barrier and collection system (toe barrier) was installed at the southern, downgradient, boundary of the Landfill. The purpose of the barrier system was to intercept and extract leachate from the canyon alluvium underlying the Landfill thereby preventing potential migration of wastes offsite. The canyon alluvium is considered to be the primary groundwater pathway for a waste discharge from the Landfill. The main elements of the barrier system are a 12-foot wide subsurface compacted-clay barrier keyed a minimum of five feet into competent bedrock and extending across the alluvial canyon; a LDRS consisting of a drainage layer, subdrain and sump (Sump 1) installed on the Landfill side of the barrier; and a removal and storage system consisting of a pump, piping and storage tanks.

32. Groundwater quality monitoring commenced at the Landfill in the early 1980's, and was incorporated into Regional Board Order No. 83-26 monitoring and reporting program (MRP) No. CI-5643 on May 23, 1983. A Solid Waste Assessment Test (SWAT) investigation of the Landfill performed in 1989 did not establish any impact on groundwater from waste disposal activities at the Landfill and continued groundwater quality indicates that there has been no discharge of waste to groundwater at the time of this Order. The current Landfill groundwater monitoring well network consists of twelve groundwater monitoring wells and five piezometers (Figure 17). Eleven wells are within the Sespe Formation and are used to monitor groundwater quality in different sandstone layers of the formation. One well is located approximately 100 feet south of the toe barrier and monitors the water in the alluvium downgradient of the Landfill. Five piezometers are used to determine groundwater elevation in individual sandstone beds. This Order requires that groundwater quality monitoring at the Landfill be conducted for the proposed expansion area pursuant to to MRP No. CI-5643 and applicable requirements of 27 CCR and 40 CFR.

33. Vadose zone soil moisture monitoring at the Landfill consists of a pan lysimeter under the Cell B-3 sump consisting of a 60-mil geomembrane liner, a cushion and filter geotextile; a one-foot thick layer of drainage aggregate; and a six-inch HDPE riser pipe.

34. Pursuant to Order No. 90-034, a compacted clay layer was constructed over all wastes in the former hazardous waste area consisting of a four- to five-foot thick layer of compacted low-permeability soils with a saturated hydraulic conductivity ranging from $4x10^{-5}$ cm/sec to $2x10^{-7}$ cm/sec. The compacted layer was intended to serve as a liner for overlying municipal wastes. Moreover, the

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northern-most part of the former hazardous waste disposal area was capped with an additional one-foot thick layer of compacted low-permeability soil with a saturated hydraulic conductivity of $1x10^{-7}$ cm/sec or less. The area was graded to provide positive drainage into Cell A which is lined with a composite (clay and geosynthetic) liner and contains a LCRS allowing for leachate collection from the municipal waste placed above the former hazardous waste disposal area.

35. Wastewaters produced at the Landfill include liquids collected from the equipment washpad area and liquids extracted from the toe barrier system. Wastewaters are treated using granular activated-carbon adsorbing filters to use onsite for dust suppression purposes. Prior to use onsite, the liquid must meet all conditions of Section G (Requirements for Onsite Water Use) of this Order.

36. Pursuant to 27 CCR sections 20090(b) and (e), 20200(d), 20340(g) and 40 CFR section 258.28, reintroduction of leachate and gas condensate back into the Landfill is an acceptable practice under specific conditions. The conditions that apply to the Landfill are that (1) the receiving unit has an LCRS; (2) the receiving unit has at least the same classification as the unit(s) from which the leachate was extracted; (3) the discharge to a different unit must be approved by the Regional Board; and (4) the discharge of leachate to a different unit shall not exceed the moisture holding capacity of the receiving unit. On December 21, 2001, the Regional Board Executive Officer approved reintroduction of leachate collected and gas condensate (Figure 18) over portions of the Landfill that are equipped with a LCRS (existing cells A, B and D). This Order includes requirements for the reintroduction of leachate and gas condensate back into the Landfill if approved.

37. The Discharger continues to implement a waste-load-checking program, as managed by the local enforcement agency for CalRecycle, to prevent the disposal of hazardous wastes, designated wastes, or other unacceptable materials. Hazardous materials intercepted at the Landfill are temporarily stored in a dedicated hazardous waste storage area and disposed of at an appropriate hazardous waste facility according to hazardous waste laws.

38. A green waste chipping and grinding area is located west of the Landfill disposal area (Figure 19). The processing area is operated by a third-party contractor and receives 200 to 500 tons per day of green material. There is no composting onsite and the processed greenwaste materials are either shipped offsite to cogeneration operations and agricultural and soil amendment companies, or used onsite for mulch and alternative daily cover (ADC). The greenwaste processing operations at the Landfill are subject to requirements of this Order.

39. CUP-3142, Major Modification No. 8, Condition 63(b) allows the compositing of food waste and manure at the expanded facility. Food waste and manure processing would be conducted on an asphalt pad downgradient of the green waste operations and kept separate from green waste operations to minimize the potential for contamination of the green waste. However, the Discharger is not planning a composting facility at the site at this time. Prior to initiating food waste and manure composting at the Landfill property, the Discharger is required to submit a ROWD for the Regional Board to adopt WDRs for composting operations.

40. The processing of recyclable CDI wastes is permitted for the expanded facility pursuant to CUP-3142, Major Modification No. 8, within a CDI transfer processing facility (Figure 19). Vehicles containing materials as defined by 14 CCR section 17381(e) (C&D Debris) will be routed to the CDI transfer processing facility. Recyclable material will be removed by hand or machine for further

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processing onsite or offsite. Residual material meeting the definition of CDI alternate daily cover will be crushed for use onsite. Dust control measures will be utilized during the processing of material. Refuse removed from the loads will be disposed of at the Landfill working face. This Order includes requirements for CDI debris processing at the Landfill.

41. CUP-3142, Major Modification No. 8, provides for development of a material recycling facility/recyclables transfer facility (MRF/RTF) to enhance recycling capabilities for the community. The MRF/RTF will be located on approximately two acres and will be comprised of a 50,000 square foot, 35 foot tall building for recycling activities (Figure 19). The facility will accommodate the front-end processing of up to 500 tons per day of source-separated recyclables and/or the transfer of recyclables to locations offsite for further processing.

42. CUP-3142, Major Modification No. 8, provides for development of a Public Household Hazardous Waste Collection Facility – Simi Valley Environmental Collection Center (SVECC), where local residents can properly dispose of their household hazardous wastes. The SVECC facility will provide a convenient and safe location for residents to drop off their household paints, solvents, antifreeze, flammables, and electronic waste. A 1,000 square-feet building adjacent to the MRF/RTF will house the SVECC and contain 2-4 skid-mounted units specified for storage of materials collected from the public. The SVECC will be operated by personnel licensed to properly handle the discarded wastes and insure proper transport to permitted facilities offsite for recycling or disposal of all materials.

REGULATORY REQUIREMENTS

43. On June 13, 1994 the Regional Board adopted a revised Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan) which was amended on January 27, 1997 by Regional Board Resolution No. 97-02. The requirements contained in this Order implement the applicable provisions of the Basin Plan.

44. The Basin Plan designates the existing beneficial use of wildlife habitat, potential beneficial use of municipal and domestic supply, intermittent beneficial uses of industrial process supply, groundwater recharge, freshwater replenishment, water contact recreation, non-contact water recreation, and warm freshwater habitat for the Arroyo Simi. The beneficial uses of surface waters in the canyons of the Landfill are not individually designated in the Basin Plan; however application of the tributary rule requires that the beneficial uses of any specifically designated water body apply to its tributary streams. The requirements in this Order protect the beneficial uses designated in the Basin Plan for canyons and streams at the Landfill that are tributary to the Arroyo Simi.

45. The Basin Plan contains water quality objectives and beneficial uses for groundwater of the Simi Valley Groundwater Basin. The designated beneficial uses include municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.

46. While the State Board and Regional Boards are the state agencies designated to protect water quality resulting from solid waste disposal activities, CalRecycle regulates all other aspects of solid waste disposal in the State. To remove regulatory overlap, conflict, and duplication between CalRecycle and the State Board/Regional Boards, the California Legislature, under the Solid Waste Disposal Regulatory Reform Act of 1993, streamlined the state's solid waste disposal regulatory process by developing one consolidated set of solid waste disposal facility regulations. The revised regulations,

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promulgated under 27 CCR on July 18, 1997, clarify the roles and responsibilities of CalRecycle and the State Board/Regional Boards in regulating MSW disposal sites.

47. The 27 CCR regulations combine prior disposal site/landfill regulations of CalRecycle and the State Board/Regional Boards that were maintained in titles 14 and 23 of the CCR. The requirements in this Order conform with the relevant regulations of 27 CCR, 40 CFR, and the Porter-Cologne Water Quality Control Act (commencing with California Water Code [CWC] section 13000).

48. Section 13267(b) of the California Water Code authorizes the regional boards to require a person who discharged waste or is suspected of having discharged waste to furnish technical and monitoring reports. The technical and monitoring reports required by this Order and the attached MRP (No. CI-5643) are necessary to assure compliance with these waste discharge requirements. The Discharger owns and operates the facility that discharges the waste subject to this Order.

49. The County of Ventura Environmental Health Division is the local enforcement agency for CalRecycle in Ventura County where the Landfill is located.

50. The Discharger is subject to State Board Order No. 97-03-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001, "Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities." The Landfill is enrolled under the general industrial storm water permit WDID No. 456S005786 (enrolled on April 7, 1992).

51. The State Board has implemented regulations that require the electronic submittal of information (ESI) for Groundwater Cleanup programs (section 3890 et seq. of 23CCR and division 3 of 27 CCR). Starting January 1, 2005, required electronic submittal and submittal of a portable data format (PDF) copy of certain reports was extended to include all State Board groundwater cleanup programs, including the Land Disposal Program. The requirements contained in this Order, conform with ESI reporting regulations. Documents that cannot be conveniently reviewed in electronic format, such as large maps or drawings, shall be submitted as hard copies to the Regional Board office at:

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

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52. Definitions of terms used in this Order shall be as set forth in 27 CCR section 20164, 14 CCR section 17381, CWC section 13050, 40 CFR part 258.2, and other applicable state and federal regulations.

53. Public Resources Code section 21000 et seq. (California Environmental Quality Act (CEQA)) requires the lead agency to conduct an assessment of the potential environmental impacts associated with a project. Where appropriate, an environmental impact report identifying the potentially significant environmental impacts is prepared, along with any necessary mitigation measures and statement of overriding considerations before proceeding with a project.

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54. The County of Ventura is the lead agency under CEQA with respect to the activities that are the subject of this Order. On July 19, 2011, the Ventura County Board of Supervisors adopted a resolution approving and certifying a Final Environmental Impact Report adopting findings and statements of fact regarding effects, mitigation measures, and alternatives, adopted the Mitigation Monitoring and Reporting Program and approved the revised footprint expansion/time extension request for the Landfill under CUP-3142, Major Modification No. 8.

55. The Regional Board is a responsible agency under CEQA with respect to the activities that are the subject of this Order. As a responsible agency, the Regional Board is required to consider the environmental documents prepared by the lead agency and reach its own conclusions regarding whether to approve the project. The Regional Board has considered the Final EIR certified by the County.

56. The Final EIR identified potentially significant impacts to the environment from the proposed project. Impacts within the regulatory authority of the Regional Board include impacts to surface water quality, impacts associated with floodplain modification, and impacts to biological resources in wetlands and riparian corridors. The Final EIR identified the following mitigation measures to reduce these potential impacts to less than significant, which measures are conditions of Conditional Use Permit 3142, Major Modification No. 8:

    a. **Surface Water Quality Impacts:** The proposed project could degrade the quality of surface water such that it fails to meet water quality objectives identified in the Basin Plan.

    Mitigation: The project must meet at least one of the Municipal National Pollution Discharge Elimination System (NPDES) Permit applicability criteria for new development or redevelopment projects (Part 4.C.) ["Programs for Planning and Land Development" of the July 2000 Regional Water Quality Control Board Ventura Countywide Municipal Stormwater NPDES Permit CAS004002] and, the Discharger shall submit a complete Surface Quality Urban Impact Mitigation Plan (SQUIMP) in accordance with the provisions of the 2000 Municipal NPDES Permit and the 2002 Ventura Countywide Stormwater Program "Technical Guidance Manual for Stormwater Quality Control Measures".

    Mitigation: The Discharger shall maintain the project site in compliance with all water quality provisions of the NPDES General Industrial Stormwater Permit No. CAS000001, Waste Discharge Requirements for Discharges of Stormwater Runoff Associated with Industrial Activities. The Discharger shall ensure compliance with the State Water Resources Control Board NPDES General Industrial Stormwater Permit No. CAS000001.

    Mitigation: The Discharger shall maintain the project site in compliance with all water quality provisions of the Ventura Countywide Municipal Stormwater NPDES Permit CAS004002 and comply with and implement an effective combination of erosion and sediment control Best Management Practices (BMPs) as applicable in accordance with Subpart 4.F "Development Construction Program" of the Municipal Stormwater NPDES Permit CAS004002.

    b. **Flooding Hazard Impacts:** The proposed project could contribute to flooding hazards in Ventura County.

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Mitigation: The Discharger shall armor the detention/sedimentation basin identified as Basin No. 6 in the *Simi Valley Landfill and Recycling Center Expansion Project Final EIR* (SAIC, December 2010, Figure 3.3-6), sufficiently to withstand erosive flow associated with a 100-year storm event along Alamos Canyon Creek. Basin armoring may include rock rip-rap, precast concrete block, or roller compacted concrete. The Discharger shall also coordinate with the Watershed Protection District, Advanced Planning Section, Floodplain Management Division, in developing erosion control features within Alamos Canyon Creek, downstream of the proposed detention/sedimentation basin in the northwest portion of Phase III, at the confluence of Alamos Canyon Creek and the tributary creek to the northeast, to address increased stormwater runoff flow velocities adjacent to Basin No. 6. Alternatively, the Discharger shall redesign Basin No. 6 such that it does not encroach on the designated floodplain. The Discharger shall retain a California licensed civil engineer to prepare a hydrologic analysis for Basin No. 6 that includes the requirements of this condition. The Discharger shall also have a drainage report prepared that shall provide estimates on the increase in the peak runoff rate due to the increase in impervious area from the proposed development, and identify specific measures to achieve compliance with the Watershed Protection District's standard, which is that there must be no increase in peak runoff rate in any storm event.

c. **Biological Impacts:** The proposed project could impact wetlands and riparian wildlife habitat.

Mitigation: The Discharger shall retain a qualified biologist to prepare and implement a Wetlands Mitigation Plan (WMP) that is acceptable to the Planning Division, prior to the initiation of ground disturbance activities within 100 feet of the known seeps. The WMP must include the: enhancement, expansion, or restoration of existing wetlands; creation/establishment of new wetlands; or, permanent protection of wetlands in the project vicinity. At a minimum, the WMP must include the following components:

- A minimum mitigation ratio of 3:1 for acres of mitigation area versus acres impacted as a result of the WMP;
- Location(s) of mitigation on suitable portions of the project site or other property that can be protected in perpetuity from future development;
- Timing for the implementation of the WMP;
- Detailed information on the vegetation, quality, soils, and hydrology of the mitigation site prior to implementation of the WMP;
- The mitigation shall have a goal of no net loss of wetlands;
- Methods for restoration, creation, or enhancement (as applicable);
- The biologist shall obtain baseline information (i.e., a description of the ecological characteristics of the proposed mitigation project site), which shall be used as a basis for measuring mitigation performance. Baseline information may include: descriptions of historic and existing plant communities; historic and existing hydrology; soil conditions; a map showing the locations of the impact and mitigation site(s) or the geographic coordinates for those site(s); and, other characteristics appropriate to the type of resource proposed as compensation;
- Monitoring, maintenance, and reporting for a minimum monitoring period, which shall not be less than five years;

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- Performance criteria that are based on replacement of the characteristics and functions of the wetlands being impacted, which must be approved by the County and any other appropriate regulatory agency. At a minimum, performance criteria must include the following parameters: percent of vegetative cover; plant diversity; percent of non-native plant species; target functions and values; and, target hydrological regime;
- An adaptive management strategy to address unforeseen changes in site conditions or other components of the mitigation project, including the party or parties responsible for implementing adaptive management measures; and,
- Procedures to ensure protection of the mitigation sites in perpetuity, either through the recordation of a conservation easement, a biological restrictive covenant, or other agreement approved by the County and other relevant regulatory agencies (e.g., USFWS or CDFG).

Mitigation: To ensure the continued availability of the Alamos Canyon Wildlife Corridor (Corridor) for the benefit of native plants and wildlife, the Discharger shall enhance and manage habitat in, and adjacent to, the Corridor, including the riparian zone and adjacent upland habitats. The area to be preserved shall include the Alamos Canyon Corridor within the following boundaries: the SR-118 freeway on the south end; the latitude of the northernmost portion of the buffer area associated with the proposed landfill expansion on the north end; the project CUP boundary on the east side; and, the rim of Alamos Canyon on the west side. In order to ensure that the Corridor enhancements remain in perpetuity, the Discharger shall record a biological restrictive covenant with the County of Ventura that encompasses the Corridor area to be enhanced/preserved.

Mitigation: The Discharger shall retain a qualified biologist to prepare and implement a HRMP that includes habitat enhancements along the channel in Alamos Canyon in order to improve overstory cover for migrating animals and to increase potential habitat for species that rely on riparian corridors. The plan must provide for planting and maintenance of sycamore and coast live oak trees in, and adjacent to, Alamos Canyon in areas void of trees. By focusing especially on areas of the canyon near the landfill and areas having direct line of sight to the landfill, the plan must create a pattern of more continuous tree cover. The Discharger shall establish a minimum of 30 sycamores and 30 coast live oaks within Alamos Canyon.

Mitigation: The Discharger shall retain a qualified biologist to prepare and implement a HRMP, which includes at least two of the following improvements or enhancements to the Alamos Canyon crossings:

<u>Alamos Canyon West Corridor</u>:
- Enhance and maintain riparian vegetation near culverts.

<u>Alamos Canyon Road Undercrossing</u>:
- Increase the vegetative cover along Alamos Canyon Road.
- Replace the paved road with a decomposed granite surface if it is still used for maintenance, otherwise remove the road surface and base entirely and replace it with native vegetation.
- Remove the barbed wire fencing along the road.

<u>Alamos Canyon East Corridor</u>:
- Increase vegetation cover along the drainage.

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Measures Applicable to the three Alamos Canyon Corridors:

- Install fencing to funnel wildlife into the Alamos Canyon undercrossings.

The Discharger shall coordinate with Caltrans to ensure that the improvements will not conflict with any planned Caltrans projects and document such coordination in the HRMP.

57. The requirements in this Order, Conditional Use Permit 3142, Major Modification No. 8, the Ventura County Municipal Stormwater National Pollutant Discharge Elimination System (NPDES) Permit CAS004002, and General Industrial Stormwater NPDES Permit No. CAS000001, incorporate mitigation measures that are necessary to reduce the potential impacts that are within the jurisdiction of the Regional Board to less than significant.

58. The Regional Board notified the Discharger, interested agencies, and all known interested persons of its intent to issue requirements for waste disposal for the Landfill and provided an opportunity to submit written and oral comments in compliance with applicable notice and public comment requirements. The Regional Board in a public meeting on March 7, 2013 heard and considered all comments pertaining to waste disposal at the Landfill.

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

IT IS HEREBY ORDERED that the Discharger shall comply with the following requirements pertaining to the Landfill:

A. Specifications

1. The Discharger shall only accept waste for disposal at the Landfill that is deemed acceptable for disposal at a MSW facility by the Regional Board through orders or regulations.

2. Wastes disposed of at the Landfill shall be limited to municipal solid wastes (as described in 27 CCR section 20220(a)), inert waste (as described in 27 CCR section 20230), TSW that are classified as non-hazardous by DTSC, water treatment sludge, TWW, non-friable asbestos, and non-hazardous, non-designated contaminated soils and related wastes.

3. 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

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concentrations which exceed applicable water quality objectives, or could cause degradation of waters of the state (i.e., designated waste).

4. TSW may be discharged subject to the reporting requirements of MRP No. CI-5643 and used as ADC pursuant to requirements of Regional Board Order No. R4-2011-0052 and 27 CCR section 20690.

5. Dewatered sewage sludge (including preliminary bar screening and grit chamber material) or water treatment sludge may be discharged under the following conditions:

   a. Sludge shall only be discharged in areas equipped with liner and LCRS systems, provided it contains at least twenty percent solids if primary sludge, or at least fifteen percent solids if secondary sludge, mixtures of primary or secondary sludges, or water treatment sludge; and

   b. A minimum solids-to-liquids ratio of five-to-one (5:1) by weight shall be maintained to ensure that the co-disposal will not exceed the initial moisture-holding capacity of the non-hazardous solid waste.

6. TWW may be disposed of at the Landfill under the following conditions:

   a. Discharge of TWW shall only be to composite-lined portions of the Landfill.

   b. The TWW is managed so as to prevent scavenging.

   c. Any management of the TWW at the Landfill prior to disposal, or in lieu of disposal, complies with applicable HSC requirements.

   d. TWW disposal shall be discontinued if monitoring of the composite-lined portion of the Landfill where TWW disposal has occurred indicates a verified discharge until corrective action results in cessation of the discharge.

7. Non-friable Asbestos Waste:

   a. Asbestos is a naturally occurring fibrous mineral used in many applications for its fire resistance, noise insulation and electrical insulation properties. Common uses prior to the mid-1970's included building products such as pipe insulation, acoustical sound-proofing, house insulation, fireprpofing, house siding, floor coverings, roofing materials and heating and cooling systems.

   b. There are two general forms of asbestos: friable and non-friable. Friable asbestos can be crumbled, pulverized or reduced to a powder by hand pressure when dry and is the most dangerous form. Non-friable asbestos cannot easily be pulverized or reduced to a powder. Resilient floor tile, roof felts, asphalt tiles, asphalts, mastics, and transite roofing shingles, siding and piping are considered non-friable forms of asbestos, unless they are or will be damaged during demolition or renovation activities. Nonfriable asbestos that is damaged to the extent that it can be crumbled or reduced to a powder by hand pressure must be handled and packaged like friable asbestos waste.

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c. "Asbestos Containing Waste" or "ACW" means asbestos containing waste managed at a landfill as authorized by section 25143.7 of the California Health and Safety Code, which contains greater than (1%) friable asbestos by weight. Section 25143.7 states that "waste containing asbestos may be disposed of at any landfill which has waste discharge requirements issued by the regional water quality control board which allow the disposal of such waste, provided that the wastes are handled and disposed of in accordance with the Toxic Substances Control Act (P.L.94-469) and all applicable laws and regulations.".

d. Asbestos containing waste does not include waste contaminated with another hazardous waste as identified in title 22, California Code of Regulations, chapter 11, division 4.5.

B. Unacceptable Materials

1. No hazardous wastes (as defined in 22 CCR section 66261.3 et seq.), designated wastes (as defined in CWC section 13173), or special wastes (27 CCR section 20164, as categorized in 22 CCR sections 66261.120, 66261.122, and 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, except sludges under conditions set forth in section A.5 (Dewatered Sewage) above, or unless they are first processed in a solidification operation approved by the Regional Board Executive Officer. Semi-solid waste means waste containing less than fifty percent solids, as described in 27 CCR section 20200(d)(3). In cases of spoiled, discarded, or expired semi-solid food wastes, Regional Board staff is authorized to approve solidification or waste disposal operations at the Landfill on a case-by-case basis.

3. No radioactive waste, including low level radioactive waste, as defined by the agency with jurisdictional authority, shall be disposed of at the Landfill.

4. No materials that are of a toxic nature, such as insecticides, poisons or hazardous materials shall be disposed of at the Landfill.

5. No medical wastes, including infectious materials, hospital or laboratory wastes, except those authorized for disposal to land by the agency with jurisdictional authority for the 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 non-hazardous by triple rinsing. Otherwise, they must be hauled offsite to a legal point of disposal.

7. No septic tank or chemical toilet wastes shall be disposed of at the Landfill.

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C. Prohibitions

1. The discharge of waste to land as a result of inadequate waste disposal 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 the groundwater basin;
   b. cause the occurrence of objectionable tastes or odors in the groundwater basin;
   c. cause waters pumped from a groundwater basin to foam;
   d. cause the presence of toxic materials in the groundwater basin;
   e. cause the pH of waters in the groundwater basin to fall below 6.5, or rise above 8.5;
   f. cause the Regional Board's objectives for groundwater or surface waters as established in the Basin Plan to be exceeded; or
   g. cause pollution, contamination, or nuisance, as defined in CWC section 13050, or adversely affect beneficial uses of groundwater or surface waters as established in the Basin Plan.

3. Odors, vectors, and other nuisances originating from waste that migrate beyond the limits of the Landfill are prohibited.

4. The discharge of waste to surface drainage courses or groundwater is prohibited.

5. The Discharger shall conduct site operations such that no constituents of concern (COCs) shall exhibit a measurably significant increase over its respective concentration limit (background data set) at any well, as indicated by an approved statistical or non-statistical data analysis method (including the method retesting approach).

6. The Discharger shall comply with all federal, state, and county sanitary health codes, rules, regulations, and ordinances pertinent to the disposal of wastes on land and the operation and maintenance of the Landfill.

D. Requirements for Disposal Site Operations

1. The Discharger shall maintain an operating record for the Landfill in accordance with 40 CFR section 258.29(a). All records of Landfill operations, construction, inspection, monitoring and 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. The Discharger shall comply with notification procedures contained in CWC section 13271 in regards 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 a point of disposal for which a California regional water quality control board has established WDRs with which the point of disposal is in full compliance. The Discharger shall inform the Regional Board pursuant to ESI reporting requirements within seven days when the Discharger determines that relocation

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of wastes is necessary. The source and final disposition (and location) of the wastes, as well as methods undertaken to prevent future recurrence of such disposal shall also be reported.

3. The Landfill shall be graded and maintained to promote run-off of precipitation and to prevent ponding of liquids and surface water. Erosion or washout of refuse or cover materials by surface flows shall be controlled to prevent offsite migration.

4. All wastes shall be covered at least once during each 24-hour period in accordance with 27 CCR sections 20680, 20690, and 20705. Intermediate cover over wastes discharged to the Landfill shall be designed and constructed to minimize percolation of precipitation through wastes and contact with waste materials.

5. Wastes deposited at the Landfill shall be confined thereto, and shall not be permitted to blow, fall, or otherwise migrate off the Landfill, or to enter water drainage or water courses offsite.

6. ADC may be used consistent with 27 CCR section 20690 and Regional Board Order No. R4-2011-0052, subject to the following conditions:

   a. TSW may be discharged or used as ADC at the Landfill, provided it is not discharged or used on final refuse fill slopes.

   b. Sludge-derived material shall not be used as ADC in areas of the Landfill where public access is permitted.

7. The migration of gases from the Landfill shall be controlled as necessary to prevent water pollution, nuisance, or health hazards.

8. Leachate and gas condensate collected at the Landfill may be returned to the Landfill as described in the Leachate and Condensate Reintroduction Design and Operation Plan dated January 2001, which was approved by the Regional Board Executive Officer on December 21, 2001, and meets the following requirements:

   a. Spray application to the working land disposal areas is prohibited.

   b. The Discharger shall limit liquids reintroduction at the Landfill to areas underlain by a composite liner. No portion of a gallery, trench, or well used for liquids reintroduction shall be constructed within 100 feet of the vertical boundary of existing composite liner limits.

   c. The Discharger shall routinely monitor for visible seeps and evaluate the potential migration of reintroduced liquids beyond composite-lined areas of the Landfill.

   d. The Discharger shall provide notification to Regional Board staff a minimum of thirty days prior to the construction of any liquids reintroduction facilities, including an updated map showing all galleries, trenches, or wells.

   e. The Discharger shall routinely monitor the amount of leachate and condensate produced and the volumes reintroduced at each gallery, trench, or well. A summary of the leachate and

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condensate production and reintroduction shall be reported semiannually pursuant to requirements of MRP No. CI-5643.

9. The Discharger shall intercept and remove any liquid detected in a Landfill LCRS to a legal point of disposal unless it is returned to the Landfill as described in the Leachate and Condensate Reintroduction Design and Operation Plan, dated January 2001 or otherwise approved by the Regional Board Executive Officer. If any liquid is determined to be hazardous, a licensed hazardous waste hauler shall transport all such liquid to an approved treatment and disposal facility.

10. 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 in the Landfill. 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 semiannually. The Discharger shall monitor seepage for the monitoring parameters identified in MRP No. CI-5643.

11. In accordance with 27 CCR section 20240(c), waste material shall not be discharged on any ground surface that is less than five feet above the highest anticipated groundwater elevation. The base of the treatment zone, which is defined as the bottom of the LCRS layer of the liner system, shall be a minimum of five feet above the highest anticipated elevation of underlying groundwater.

12. 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.

13. 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, commencing with section 13000.

14. 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.

15. The Discharger shall report to the Regional Board any non-compliance or any incident resulting from Landfill operations that are in violation of this Order. Any such information shall be provided verbally to Regional Board staff within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission pursuant to ESI reporting requirements shall also be provided to the Regional Board Executive Officer within seven days of the time that the Discharger becomes aware of the circumstances. The written submission shall contain a description of the non-compliance and its cause; the period of non-compliance, including exact

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dates and times, and if the non-compliance 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 non-compliance.

16. The Discharger shall notify the Regional Board as soon as possible of any incident resulting from Landfill operations that may endanger human health or the environment. The notification shall fully describe the incident, including time of occurrence and duration of the incident, a description of the type of, time of, and duration of corrective measures, when correction will be complete (if the endangerment is continual), and the steps taken or planned to reduce or prevent recurrence.

17. The Discharger is authorized to operate a greenwaste processing facility within the site property boundaries that meets the following requirements:

    a. Greenwaste processing shall be limited to the areas designated for such activities. Any significant revision or modification of the greenwaste processing area, or any proposed change in operations, must be submitted pursuant to ESI reporting requirements to the Regional Board Executive Officer for review and approval before the proposed change in operations or modification is implemented.

    b. No wastewater or storm water shall leave the greenwaste processing area except as permitted by a NPDES permit issued in accordance with the CWA and CWC, commencing with section 13000. The Discharger shall maintain and modify, as necessary, a SWPPP developed for the green waste processing area.

    c. Odors from greenwaste processing shall not create a nuisance offsite.

18. The Discharger is authorized to operate a CDI processing facility within the site property boundaries that meets the following requirements:

    a. CDI processing shall be limited to the areas designated for such activities. Any significant revision or modification of the CDI processing area, or any proposed change in operations, must be submitted pursuant to ESI reporting requirements to the Regional Board Executive Officer for review and approval before the proposed change in operations or modification is implemented.

    b. No wastewater or storm water shall leave the CDI processing area except as permitted by a NPDES permit issued in accordance with the CWA and CWC, commencing with section 13000. The Discharger shall maintain and modify, as necessary, a SWPPP developed for the CDI processing area.

    c. Residual wastes from the CDI processing operation that are used onsite as ADC or alternative intermediate cover (AIC) shall consist of inert materials (i.e. soil, concrete, bricks, plaster, weather asphalt) only. Residual wastes that contain decomposable materials may be used as ADC or AIC if the Discharger makes a demonstration to the Executive Officer that these residual wastes will not leach contaminants to surface waters or if the residual wastes are a

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component of cover operations such that the residual wastes are not exposed at the ground surface during wet weather conditions.

19. The Discharger shall establish and maintain a sufficient number of benchmarks at the Landfill to enable reference to key elevations and to permit control of critical grading and compaction operations.

20. The Discharger shall submit to the Regional Board and to CalRecycle evidence of financial assurance for closure and postclosure maintenance, pursuant to 27 CCR sections 22200 through 22278. The postclosure period shall be at least thirty years. However, the postclosure maintenance period shall extend as long as wastes pose a threat to water quality.

21. In accordance with Section 22220 of 27 CCR, the Discharger maintains assurance of financial responsibility for initiating and completing corrective action for all known or reasonably foreseeable releases from the existing Landfill (27 CCR 22220 et seq.). Prior to the acceptance of wastes in the expansion area waste management unit(s), the Discharger shall submit a revised cost estimate of financial assurance for all known or reasonably foreseeable releases from the expanded Landfill to the Regional Board. Once the corrective action cost estimate is reviewed and approved by the Regional Board Executive Officer, the Discharger shall work with CalRecycle staff to provide and maintain acceptable financial assurance mechanisms for corrective action.

E. Requirements for Containment Systems

1. Design specifications, including any alternative design proposal meeting the prescriptive standards and/or performance goals of 27 CCR, are subject to the Regional Board Executive Officer's approval prior to construction of any containment structure. The Discharger shall submit detailed design plans, specifications, and descriptions for all proposed containment structures and construction features for the Regional Board Executive Officer's approval at least 90 days prior to construction. The design plans shall contain detailed quality assurance/quality control requirements for the proposed construction as required by 27 CCR.

2. As part of the design report for a composite liner phase, the Discharger shall include a report updating seismic stability analyses in the JTD for the area of the composite liner phase. Specifically, the report shall substantiate the basis for how the MPE was selected and/or calculated for the Landfill site, confirm conformance with MCE requirements in section 258.14(b)(1) of 40 CFR, Part 258, Subpart B and the Regional Board policy that all final Landfill refuse fills incorporate the MCE to resist settlement and prevent failure, and conform to the proposed waste mass thickness/configuration. Moreover, the report shall include copies of all information or conclusions reached by the Discharger cited in the report. Subsequently, as part of the technical design for each composite liner phase constructed at the Landfill, the Discharger shall submit an updated seismic design analysis report that includes:

    a. A summary of subsurface data used in the stability design of the composite liner phase. Specifically, soils data for any alluvium present, information regarding the location, extent, and any investigations performed on existing landslides, and updated groundwater data to confirm the historical high groundwater elevation.

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b. Laboratory testing/data to confirm the material properties, including shear strength values, for alluvium, bedrock, or engineered fill materials.

c. Laboratory testing/data for all proposed geomembrane/geotextile liner materials. Specifically, estimates of the internal strength and interface strength of the geomembrane/geotextile from actual test results from similar configurations or from the literature.

d. A liquefaction analysis for any areas where a significant amount of saturated alluvium is to remain after excavation for the composite liner foundation.

3. All containment structures and erosion and drainage control systems at the Landfill shall be designed and constructed under direct supervision of a California-registered civil engineer or certified engineering geologist, and shall be certified by the individual as meeting the prescriptive standards and/or performance goals of 27 CCR.

4. The Discharger shall apply for a Clean Water Act Section 401 Water Quality Certification (WQC) for the reconstruction of jurisdictional portions of Alamos Canyon Creek located within the proposed expansion area.

5. The Landfill shall be designed, constructed, and maintained to prevent, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, and washout in compliance with 27 CCR sections 20365 and 21090(b)(1) 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 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 Landfill drainage system must be designed and constructed to withstand site-specific maximum intensity precipitation (peak flow) from a 100-year, 24-hour storm.

6. The Discharger shall install new and replacement landfill gas probes and gas collections systems (wells and trenches) necessary to maintain landfill gas control throughout the Landfill.

7. Leachate and landfill-gas condensate containment systems shall be protected and maintained continuously to ensure their effectiveness and to prevent commingling of leachate and gas condensate with surface water run-on and run-off.

8. The Discharger shall design, construct, and maintain:

   a. A run-on drainage control system to prevent flow from sources offsite 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 sources offsite that result from a 100-year,

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24-hour storm. When necessary, temporary structures shall be installed as needed to comply with this requirement;

b. A run-off drainage control system to minimize sheet flow from disposal areas, and to collect and divert both the calculated volume of precipitation and the peak flow from on-site surface run-off 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 Landfill.

d. All drainage structures shall be protected and maintained continuously to ensure their effectiveness.

9. Periodic inspection of the Landfill, including drainage control systems and all containment structures shall be performed to assess the conditions of these facilities and to maintain compliance with this Order.

10. The static factor-of-safety (FOS) of final configurations of the Landfill, including liner systems, final covers, and cut and fill slopes, shall not be less than 1.5, while the static FOS for interim slopes (slopes existing for a period less than six months) shall not be less than 1.2.

11. Landfill refuse slopes shall be designed pursuant to the requirements in 27 CCR and constructed in a manner that will resist settlement and prevent failure during an MPE for interim slopes, or an MCE for final refuse slopes. Critical slopes shall be designed to have an FOS no less than 1.5. If a Newmark-type seismic deformation analysis is used in lieu of achieving an FOS 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.

12. Prior to start of construction of any containment structure in native areas, a geologic map of the final excavation grade shall be prepared for review, approval, and confirmation in the field by Regional Board staff.

13. The construction report, including construction quality assurance (CQA) data and 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 preliminary plans and specifications, only change sheets need be submitted in lieu of a complete set of drawings.

14. No waste disposal operations shall occur in a new area until the corresponding construction is completed, certified to meet design standards by the engineer of record, and approved by the Regional Board Executive Officer.

15. The Discharger shall perform an annual testing per 27 CCR section 20340(d) of all LCRS to demonstrate their operating efficiency during the operational, closure and postclosure maintenance periods of the Landfill.

F. Requirements for Groundwater Monitoring

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1. In accordance with 27 CCR section 20390, the water quality protection standards (WQPS) for the Landfill are established as the natural background groundwater quality at the Landfill, which 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). WQPS that have been calculated based on available water quality data are included in MRP No. CI-5643. The following are five parts of the WQPS as established by the Regional Board:

   a. WQPS may be modified for site specific purposes by the Regional Board based on more recent or complete groundwater monitoring data such as from the monitoring network required by this Order, changes in background water quality, or for any other reason deemed valid by the Regional Board Executive Officer. Proposed changes must be in accordance with guidelines described in appropriate sections of 27 CCR.

   b. The Discharger shall test for the monitoring parameters and the COCs listed in MRP No. CI-5643.

   c. Concentration Limits - The concentration limit for each monitoring parameter and COC for each monitoring point shall be its background value as calculated using an appropriate statistical methodology for a given reporting period.

   d. Monitoring points - (perimeter monitoring points and points of compliance) for detection monitoring shall be those listed in MRP No. CI-5643. The points of compliance extend through the zone of saturation.

   e. Compliance period - The compliance period for the Landfill, (i.e. the minimum period of time during which the Discharger shall conduct a water quality monitoring program) shall extend past the closure of the Landfill and through the regulatory postclosure maintenance period.

2. The Discharger shall conduct required monitoring and response programs in accordance with 27 CCR sections 20385. (A detection monitoring program per 27 CCR section 20420, an evaluation monitoring program per 27 CCR section 20425, or a corrective action program per 27 CCR section 20430, depending on where a measurably significant release of waste has been detected at the Landfill and whether corrective action is required).

3. The Discharger shall implement the attached MRP No. CI-5643, 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 the discharges of waste to the Landfill.

4. At any time, the Discharger may file a written request, including appropriate supporting documents, with the Regional Board Executive Officer, proposing modifications to MRP No. CI-5643. The Discharger shall implement any changes in the revised MRP approved by the Regional Board Executive Officer upon receipt of a signed copy of revised MRP No. CI-5643.

5. Appropriate points of compliance must be established in the proposed expansion area for both the northern and western areas that encompass distinct alluvial valleys. Based on the hydrogeology

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results presented by GeoSyntec Consultants (2005) the compliance monitoring points shall target alluvial groundwater.

6. Monitoring parameters and COCs listed in MRP No. CI-5643 are subject to appropriate statistical or non-statistical tests included in MRP No. CI-5643 sections and may be revised by the Regional Board Executive Officer as needed.

7. Unless otherwise approved by the Regional Board Executive Officer, all analyses shall be conducted at a laboratory certified for such analyses by the State Department of Public Health. All analyses shall be conducted in accordance with the latest edition of the USEPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846) promulgated.

8. The Discharger shall furnish, under penalty of perjury, technical or monitoring program reports in accordance with CWC section 13267. Failure or refusal to furnish these reports or falsifying any information provided therein renders the Discharger guilty of a misdemeanor and subject to the penalties stated in CWC section 13268. Monitoring reports shall be submitted in accordance with the specifications contained in MRP No. CI-5643, as directed by the Regional Board Executive Officer. MRP No. CI-5643 is subject to periodic revisions, as warranted and approved by the Regional Board Executive Officer.

9. The effectiveness of all monitoring wells, monitoring devices, and leachate and gas collection systems shall be maintained for the active life of the Landfill and during the closure and postclosure maintenance periods in accordance with acceptable industry standards. If any of the monitoring wells and/or monitoring devices are damaged, destroyed, or abandoned for any reason, the Discharger shall immediately provide substitutes acceptable to the Regional Board Executive Officer to meet the monitoring requirements of this Order.

10. The Discharger shall maintain a Monitoring Well Preventative Maintenance Program approved by the Regional Board 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 Regional Board to be approved by the Regional Board Executive Officer.

11. If a well or piezometer is found to be inoperative, the Regional Board and other interested agencies shall be so informed pursuant to ESI reporting requirements within seven days of such discovery, and this notification shall contain a time schedule for returning the well or piezometer to operating order. Changes to the existing monitoring program shall be submitted for Regional Board Executive Officer's approval at least thirty days prior to implementing the change(s).

12. For any monitoring wells or piezometers installed in the future, the Discharger shall submit technical reports for approval by the Regional Board Executive Officer prior to installation. These technical reports shall be submitted at least sixty days prior to the anticipated date of installation of the wells or piezometers. These reports shall be accompanied by:

    a. Maps and cross sections showing the locations of the monitoring points; and,

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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.

13. The Discharger shall install any additional groundwater, soil pore liquid, soil pore gas, or leachate monitoring devices necessary to comply with MRP No. CI-5643 as adopted or as revised by the Regional Board Executive Officer.

14. The Discharger shall provide for proper handling and disposal of water purged from the monitoring wells during sampling. Water purged from a well shall not be returned to that well (or any other well).

15. The Discharger shall complete an isotopic or isotopologue analysis on any VOCs (such as methane, benzene, toluene, ethyl benzene, and xylenes) detected in the headspace of any Landfill groundwater monitoring wells to determine whether the VOCs are associated with naturally occurring petroleum hydrocarbons present in the underlying bedrock or related to Landfill operations.

G. Requirements for Onsite Water Use

1. No water shall be routinely applied to refuse fill areas except for landscape irrigation, dust control, winter deck construction, road construction, final cover construction or non-emergency uses approved by the Regional Board Executive Officer. Water used for irrigation, dust control, or construction purposes shall be applied only on completed lifts, in quantities not to exceed that necessary to reduce immediate dust hazards, support plant life, or to achieve desired compaction. Overflow or run-off caused by the over-application or improper management of irrigation or dust control water is prohibited. Any water used at the Landfill, except for potable water, reclaimed water regulated under Regional Board Water Reuse Requirements (WRRs), and any other water allowed by the Regional Board Executive Officer, shall be subject to these WDRs.

2. No wastewater shall leave the Landfill except as permitted by an NPDES permit issued in accordance with the CWA and CWC. The Discharger shall maintain and modify, as necessary, a SWPPP developed for the Landfill subject to approval by the Regional Board Executive Officer.

3. All use of landscape irrigation, or dust control 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 site.

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4. Washing of Landfill equipment or vehicles shall be confined to areas where the wastewater will not percolate into the disposal areas or native soils, or enter the storm water collection system. Washing of paved Landfill roads during rainy periods shall only occur when muddy roads create a safety concern.

5. Wastewater used at the Landfill shall not percolate into the disposal areas or native soil, or enter storm water collection systems, except as specifically permitted by this Order.

6. During periods of precipitation, when the reuse of any wastewater is not necessary for the purposes specified in this Order, the wastewater shall be stored or disposed at a legal point of disposal.

7. Wastewater from cleaning site equipment, water purged from wells, condensate removed from the Landfill gas collection system, and leachate removed from the Landfill LCRS intended to be used onsite for dust control or irrigation shall at all times be within the range of 6.5 to 8.5 pH units, and shall not exceed the following limits:

Constituent	Concentration
Total organic carbon	110 mg/L
Oil or grease	15 mg/L
Volatile organic compounds	Non-detect

8. A sampling station shall be established for each wastewater source where representative samples can be obtained. Wastewater samples shall be obtained at sampling stations prior to being mixed with sources of other water. The minimum sampling frequency for wastewaters is on a quarterly basis for water used for dust control, irrigation or other on-site land applications, except for water purged from wells where the minimum sampling frequency shall be semi-annual.

9. Should there be a change in wastewater sampling stations, the Discharger shall submit to the Regional Board a technical report containing a complete description of each proposed wastewater sampling station. Data to support the claim that the proposed station will provide samples representative of the entire flow from that source shall be included.

H. Requirements for Reporting Scheduled Activities

1. The Discharger shall comply with all reporting requirements included in MRP No. CI-5643.

2. The Discharger shall notify Regional Board staff at least thirty days prior to any maintenance activities, for approval by the Regional Board Executive Officer, that could alter existing surface drainage patterns or change existing slope configurations. These activities may include, but not be limited to, significant grading activities, the importation of fill material, the design and installation of soil borings, groundwater monitoring wells and other devices for Landfill investigation purposes.

3. The Discharger shall furnish, within a reasonable time, any information the Regional Board may require to determine whether cause exists for modifying, revoking and reissuing, or terminating

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this Order. The Discharger shall also furnish to the Regional Board, upon request, copies of records required to be kept by this Order.

4. If the Discharger becomes aware that the Discharger failed to submit any relevant facts in any report to the Regional Board, it shall submit such facts or information pursuant to ESI reporting requirements within seven days of its discovery of the omission.

5. The Regional Board shall be notified of any incident resulting from Landfill operations that may endanger the environment, by telephone within 24 hours, and pursuant to ESI reporting requirements within 14 days. The written notification shall fully describe the incident including what occurred, when it occurred, the duration of the incident, when correction occurred (or when correction will occur if it is a continuing incident), and the steps taken or planned to reduce, eliminate, and/or prevent recurrence. All instances of non-compliance with this Order shall also be reported to the Regional Board in the same manner as stated above, and included in the next scheduled monitoring report.

6. The Discharger shall notify the Regional Board pursuant to ESI reporting requirements within seven days if fluid is detected in a previously dry LCRS.

7. Pursuant to 27 CCR sections 21130 and 21132, the Discharger shall submit a copy of the emergency response plan, including any proposed amendments thereto, to the Regional Board within 90 days of the adoption of this Order.

8. The Discharger shall submit or update the "Operations Plan" for the Landfill within 90 days after adoption of this Order, to be approved by the Regional Board Executive Officer, describing Landfill operations which shall include:

   a. A description of existing and proposed waste treatment, storage, and disposal methods.

   b. Contingency plans for the failure or breakdown of waste handling facilities which could potentially have water quality effects, including notice of any such failure, or any detection of waste or leachate in monitoring facilities, to the Regional Board, appropriate local governments, and water users downgradient of the Landfill.

   c. A description of inspection and maintenance programs which will be undertaken regularly during disposal operations, the closure, and the postclosure maintenance period of facilities or equipment, which could have potential water quality effects.

9. The Discharger shall notify the Regional Board of changes in information submitted in the JTD and supplementary information, including any material change in the types, quantities, or concentrations of wastes discharged, or Landfill operations and features. The Discharger shall notify the Regional Board at least 120 days before any material change is made at the Landfill.

10. The Discharger shall comply with the closure and postclosure maintenance requirements and notification requirements contained in 27 CCR section 21769. Closure must be in accordance with a closure plan and postclosure maintenance plan approved by the Regional Board Executive Officer and CalRecycle.

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11. Reports of the quality and quantity of sludge disposed of at the Landfill shall be included in each monitoring period.

12. The Discharger shall report (on a semi-annual basis) the total volume of all irrigation water used at the Landfill each month and the area(s) where it is applied.

13. The Discharger shall report (on a semi-annual basis) the monthly total volume of TSW received at the Landfill and the volume of TSW used as ADC and the area(s) where TSW is applied.

14. All applications, reports, or information submitted to the Regional Board Executive Officer shall be signed and certified as follows:

    a. The applications, reports, or information shall be signed as follows:

        i. For a corporation - by a principal executive officer of at least the level of vice-president.

        ii. For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.

        iii. For a municipality, state, federal or other public agency - by either a principal executive officer or ranking elected official.

        iv. For a military installation - by the base commander or the person with overall responsibility for environmental matters in that branch of the military.

    b. All other reports required by this Order and other information required by the Executive Officer shall be signed by a person designated in paragraph [a] of this provision, or by a duly authorized representative of that person. An individual is a duly authorized representative only if:

        i. The authorization is made in writing by a person described in paragraph [a] of this provision;

        ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity; and

        iii. The written authorization is submitted to the Regional Board Executive Officer.

c. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information,

TENTATIVE

including the possibility of fine and imprisonment for known violation."

I. General Provisions

1. Where necessary to protect water quality, pursuant to 27 CCR sections 20012 (a) and (b), the Regional Board can implement CalRecycle requirements promulgated in 27 CCR.

2. This Order does not authorize violation of any federal, state, or local laws or regulations.

3. The Discharger shall comply with all applicable provisions, requirements, and procedures contained in 27 CCR and any future amendments.

4. The Discharger shall maintain a copy of this Order at its local offices and shall ensure that all site-operating personnel are familiar with its content and that it is available to operating personnel at all times.

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

   a. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;

   b. Have access to and copy, at reasonable times, any records that shall be kept under the conditions of this Order;

   c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

   d. Sample or monitor at reasonable times, for the purpose of assuring compliance with this Order or as otherwise authorized by the CWC, any substances or parameters at this location.

6. All regulated disposal systems shall be readily accessible for sampling and inspection.

7. This Order includes the attached *Standard Provisions Applicable to Waste Discharge Requirements* (Standard Provisions), adopted November 7, 1990 (Attachment W), which are incorporated herein by reference. Because requirements applying a federal assessment monitoring program are incorporated into this Order, and federal requirements for composite liner systems have been implemented for the remaining permitted waste footprint, the Landfill is no longer subject to Regional Board Order No. 93-062 requirements. The Landfill continues to be subject to Regional Board Order Nos. R4-2006-0007, R4-2008-0013 and R4-2011-0052, which are also incorporated herein by reference. If there is any conflict between provisions stated herein and the Standard Provisions or Regional Board Order Nos. R4-2006-0007, R4-2008-0013, and R4-2011-0052, the provisions stated herein will prevail.

8. The Discharger shall contact the Regional Board within 48 hours of any significant earthquake event that has impacted the Landfill. 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

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the Landfill. A detailed post-earthquake report describing any physical damages to the containment features, groundwater monitoring and/or leachate control facilities, and a plan for corrective action, including implementation schedule, shall be submitted to the Regional Board within seven days.

9. Pursuant to 27 CCR sections 20012, 21200 and 21630, the Discharger shall notify the Regional Board Executive Officer, pursuant to ESI reporting requirements, at least thirty days in advance of any proposed transfer of this Order's responsibility and coverage between the Discharger and a new owner or operator of the Landfill. Any transfer agreement between the Discharger and a new owner or operator shall include an acknowledgement that the Discharger is liable for violations up to the transfer date and that the new owner or operator is liable from the transfer date on. The agreement shall include an acknowledgement that the new owner or operator shall accept responsibility for compliance with this Order and 27 CCR requirements for operations, closure, and postclosure maintenance of the Landfill.

10. The Discharger shall immediately notify the Regional Board of any flooding, fire, slope failure or other change in Landfill conditions, which could impair the integrity of waste containment facilities or of precipitation and drainage control structures.

11. The Discharger shall comply with all conditions of this Order and any additional conditions prescribed by the Regional Board in addenda thereto. Non-compliance with this Order constitutes a violation of the CWC and is grounds for:

    a. Enforcement action, including Regional Board orders or court orders, requiring corrective action or imposing civil monetary liability;

    b. Termination, revocation and reissuance, or modification of this Order; or

    c. Denial of a ROWD in application for new or revised WDRs.

12. The Discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from non-compliance with this Order, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the non-compliance.

13. This Order may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:

    a. Violation of any terms or conditions of this Order;

    b. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts; or

    c. A change in any condition that requires either a temporary or permanent reduction, or elimination of the authorized discharge.

14. This Order is not transferable to any person except after notice to the Regional Board Executive Officer. The Regional Board may require modification or revocation and reissuance of this Order

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to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWC.

15. In accordance with CWC section 13263(g), these requirements shall not create a vested right to continue to discharge and are subject to termination or modification. All discharges of waste into the waters of the state are privileges, not rights.

16. The filing of a request by the Discharger for the modification, revocation and reissuance, or termination of this Order or notification of planned changes or anticipated non-compliance does not stay any condition of this Order.

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. Pursuant to CWC section 13263(e), these requirements are subject to periodic review and revision by the Regional Board.

19. This Order becomes effective on the date of adoption by the Regional Board.

J. Termination

1. Except for enforcement purposes, Regional Board Order No. R4-2003-0152, adopted on December 4, 2003, is hereby terminated.

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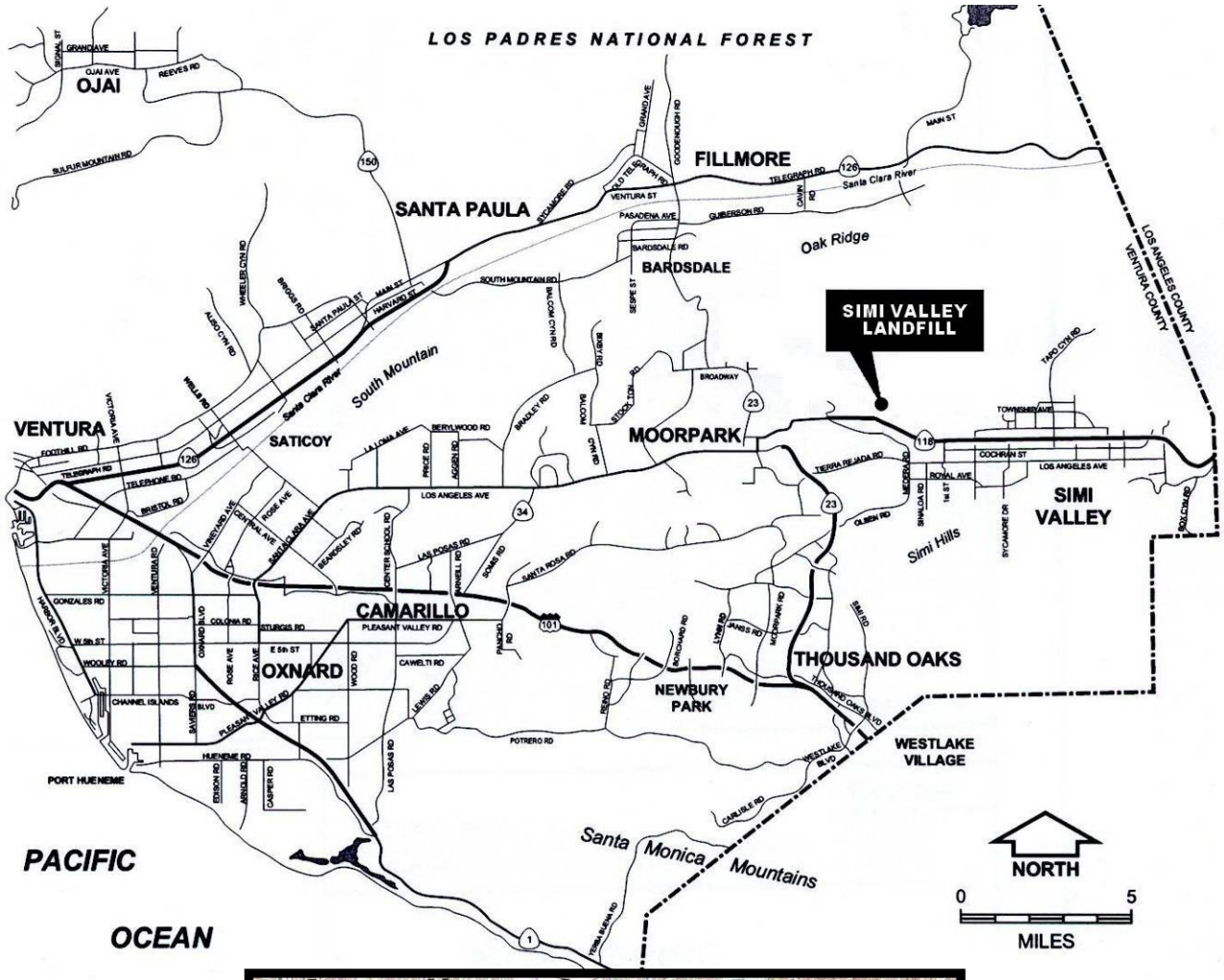
I, Samuel Unger, Executive Officer, do certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on March 7, 2013.

_____

Samuel Unger, P.E.
Executive Officer

TENTATIVE

FIGURE 1:
LOCATION MAPS



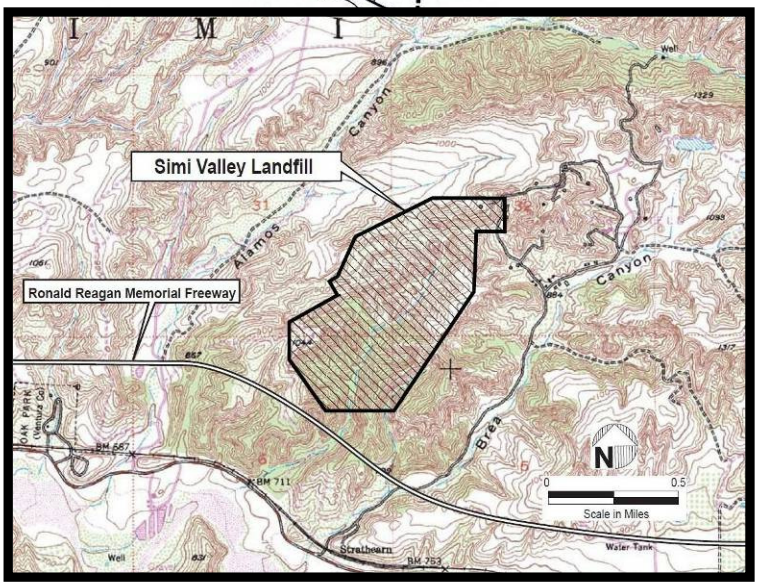


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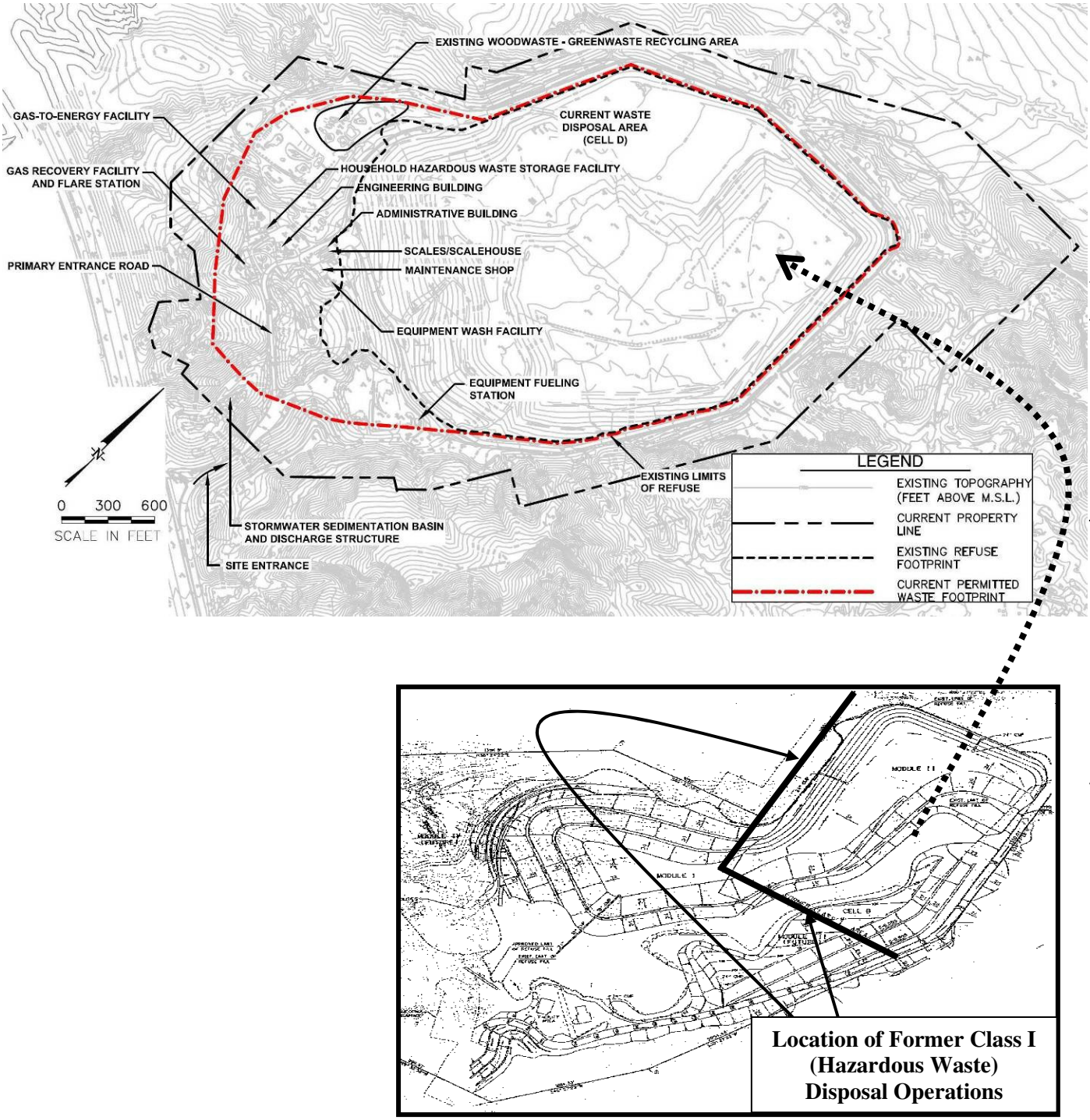
FIGURE 2:
EXISTING LANDFILL FOOTPRINT AND LOCATION OF FORMER CLASS I (HAZARDOUS WASTE) DISPOSAL AREA



TENTATIVE

FIGURE 3:
PROPOSED EXPANSION PHASES

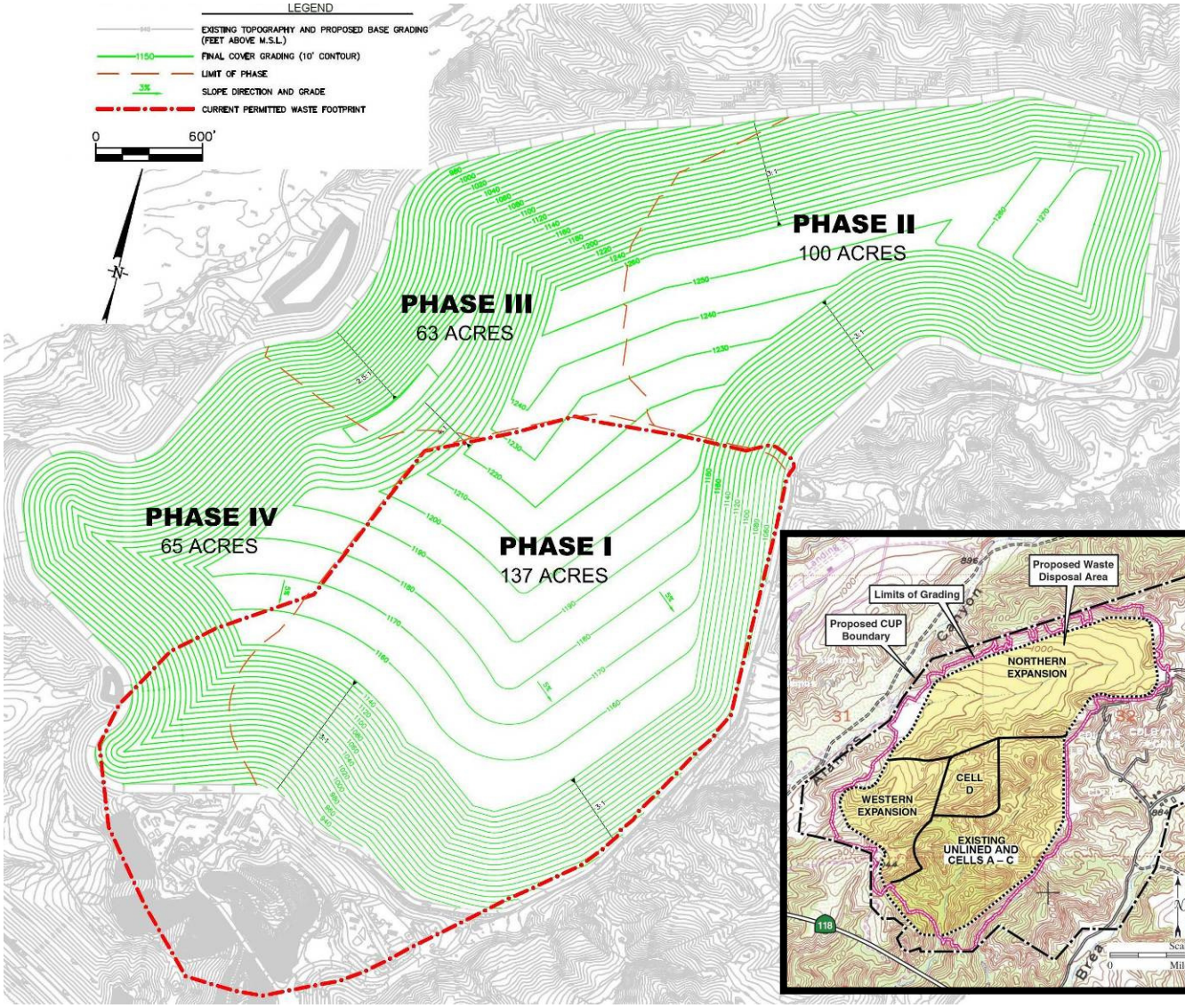


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FIGURE 4:
GEOLOGIC MAP

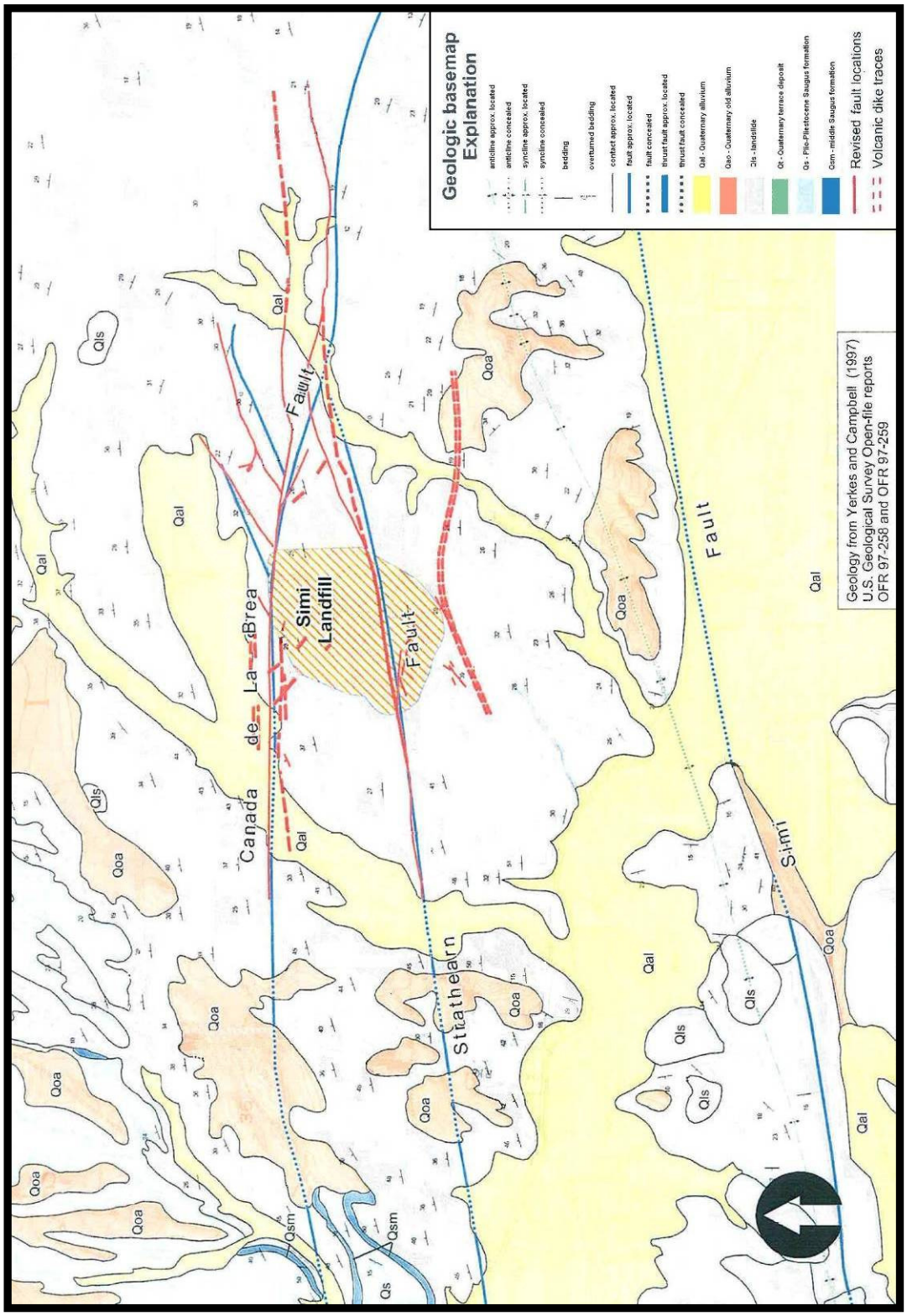

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FIGURE 5:
FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD HAZARD AREA MAP

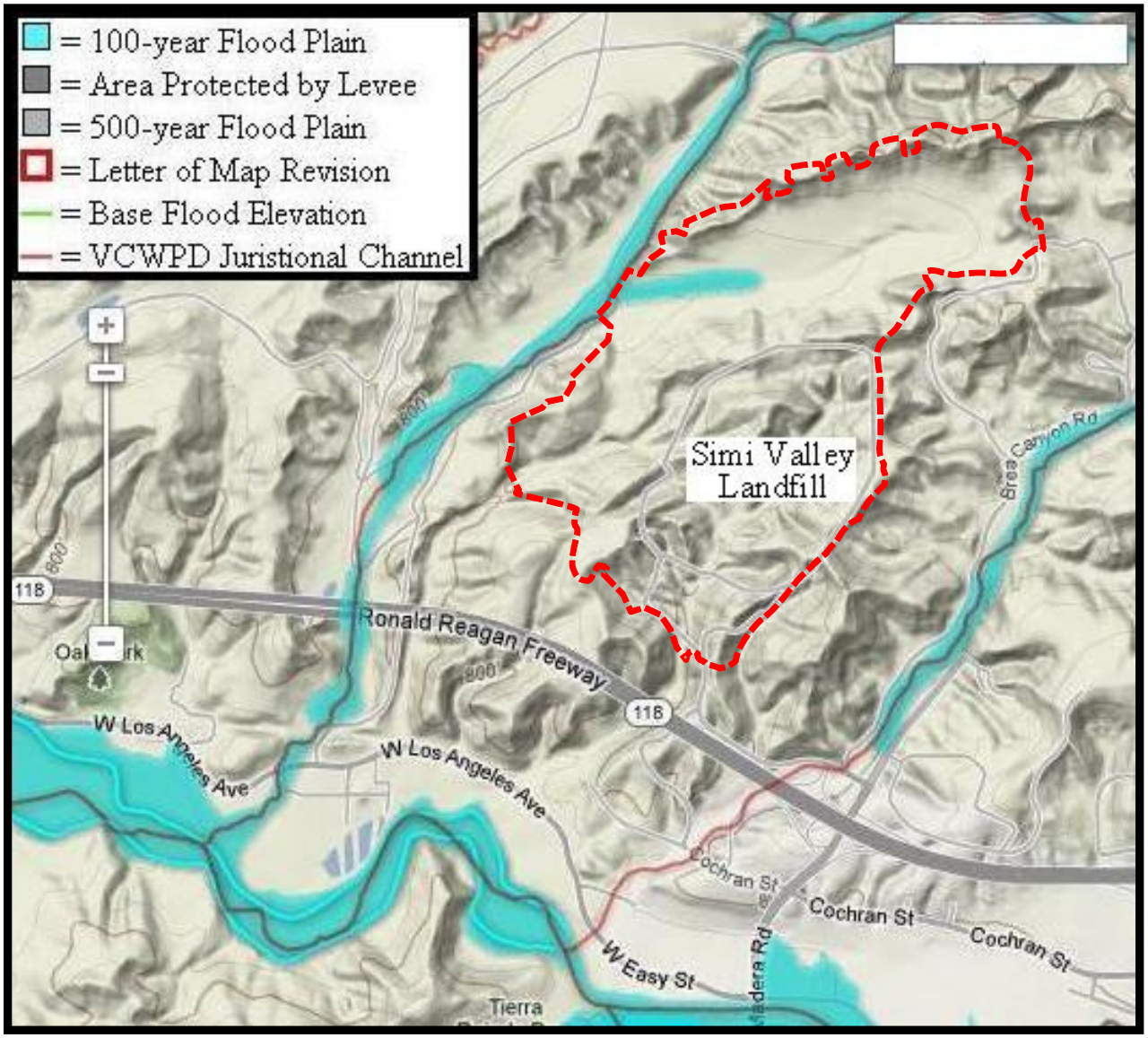

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FIGURE 6:
GROUNDWATER BASINS

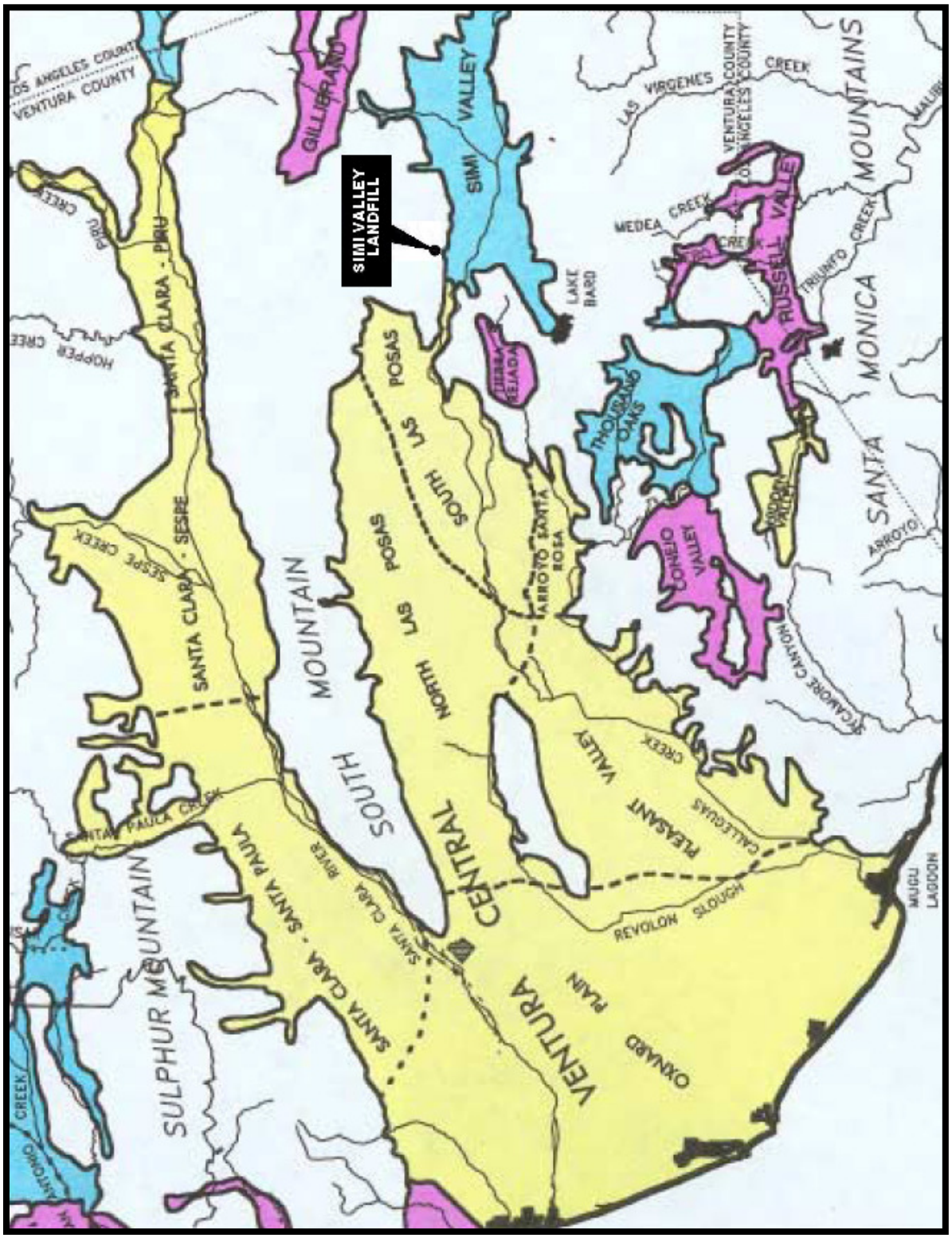

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FIGURE 7:
GROUNDWATER CONTOUR MAP AND PROPOSED SUBDRAIN SYSTEM

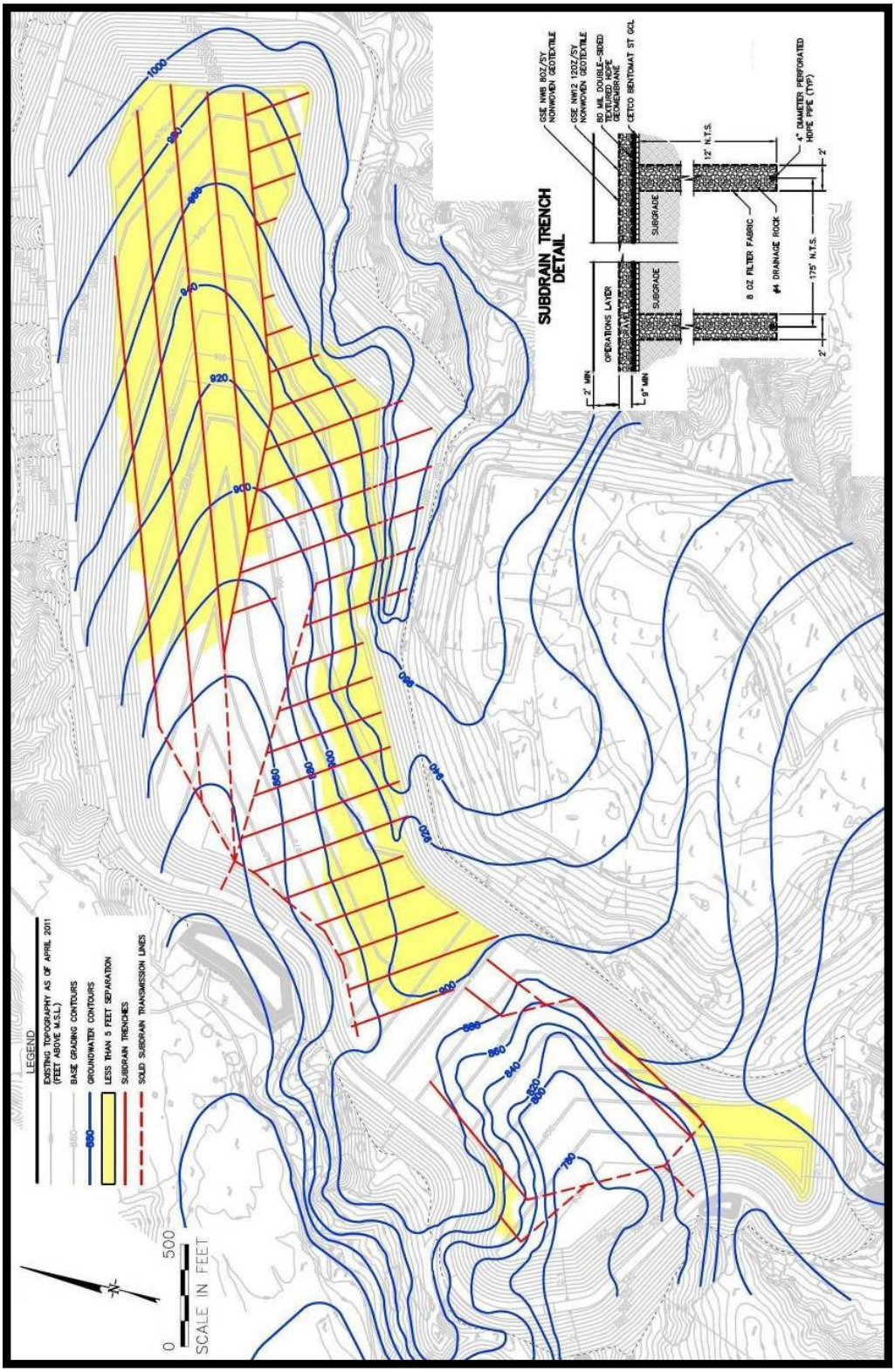

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FIGURE 8:
REGIONAL ACTIVE FAULT MAP

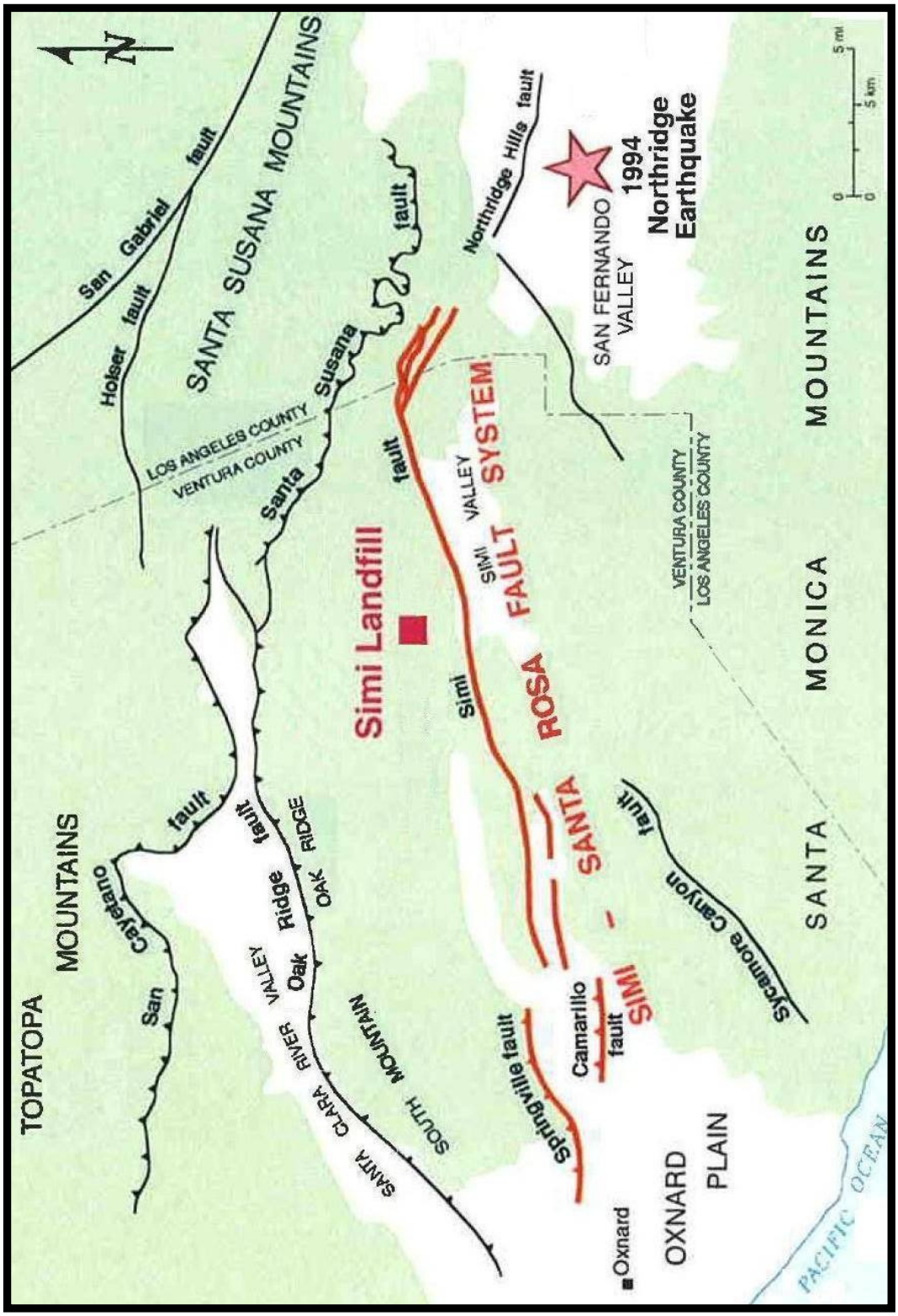

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FIGURE 9:
OIL WELLS

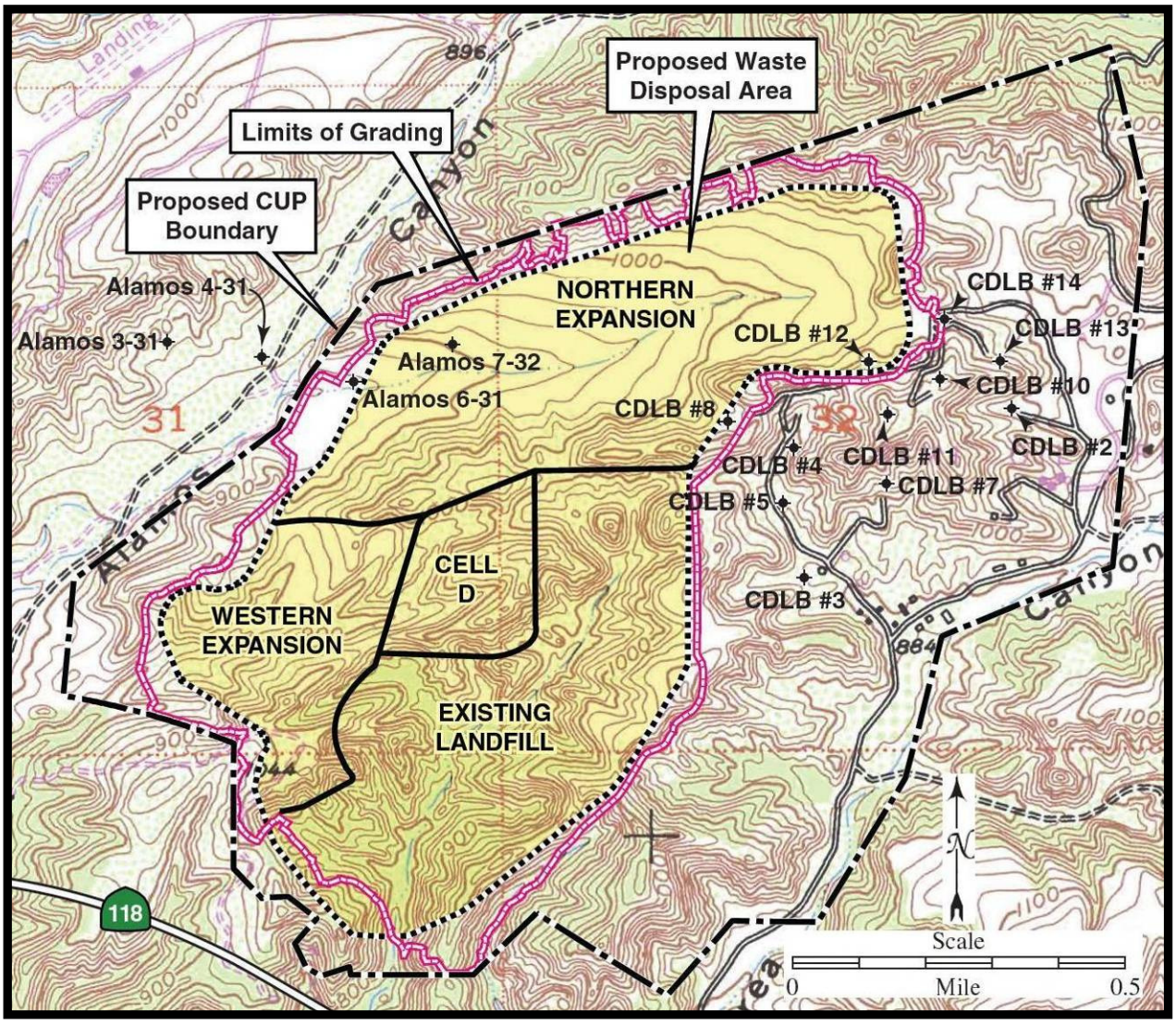

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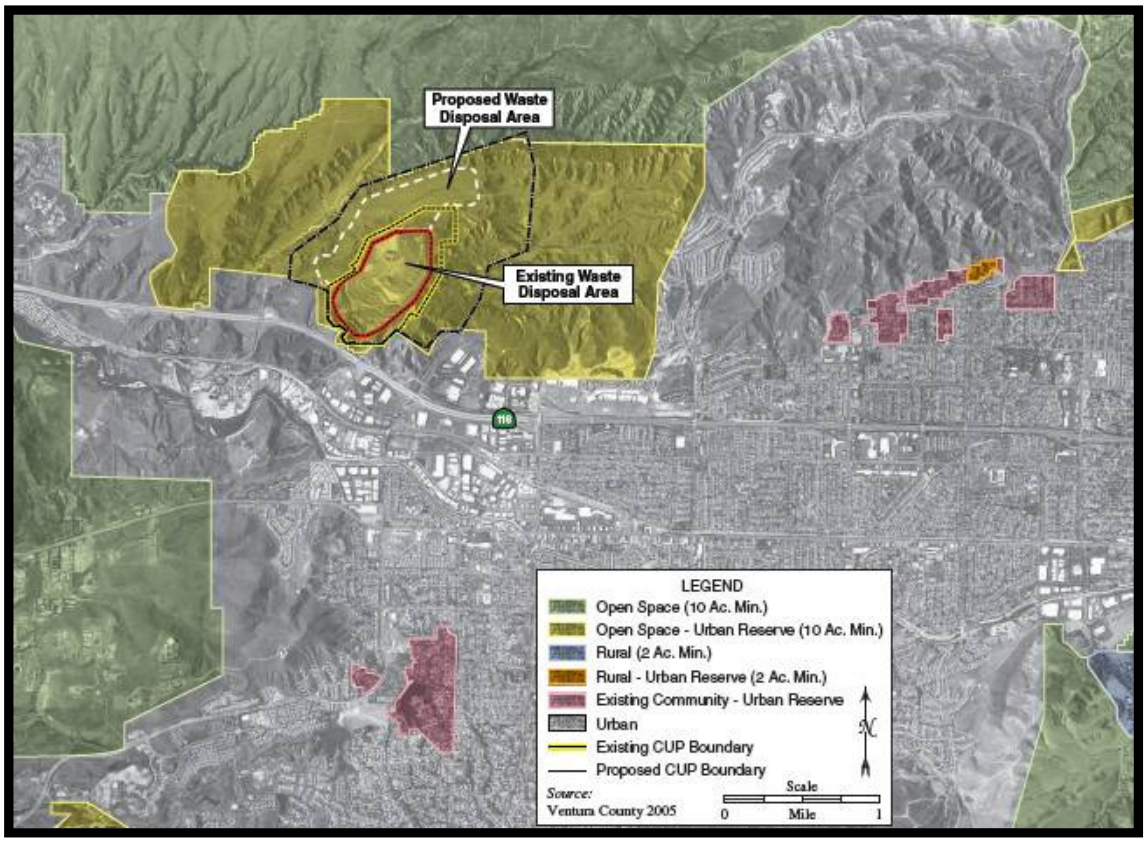
FIGURE 10:
REGIONAL LAND USE DESIGNATIONS



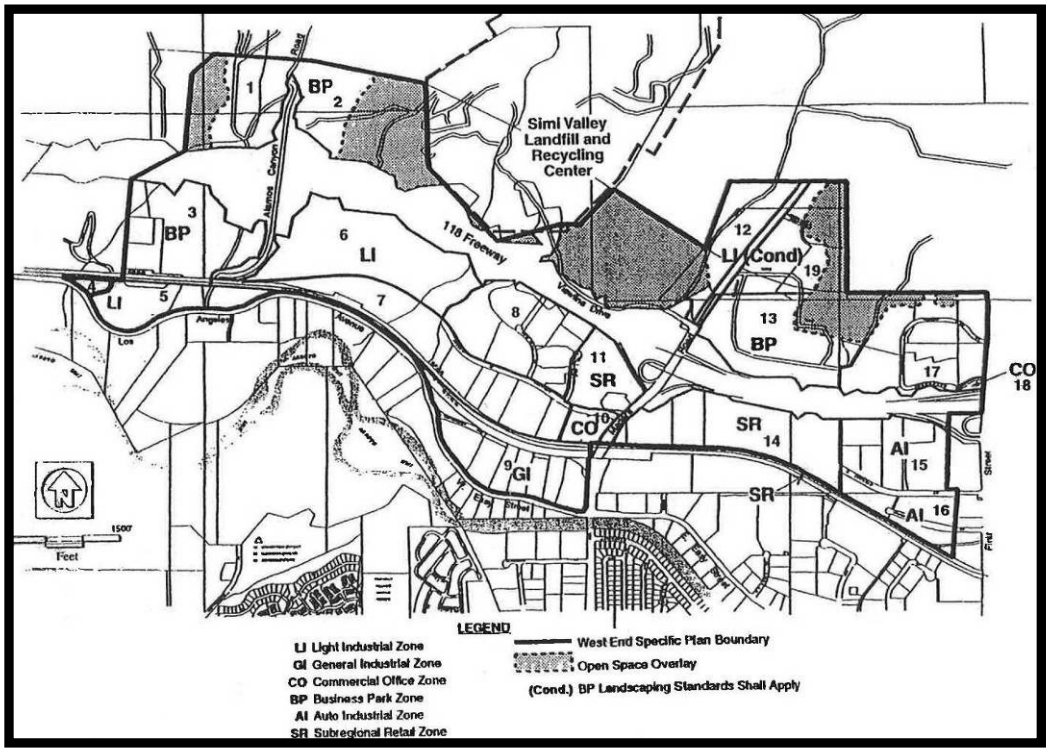


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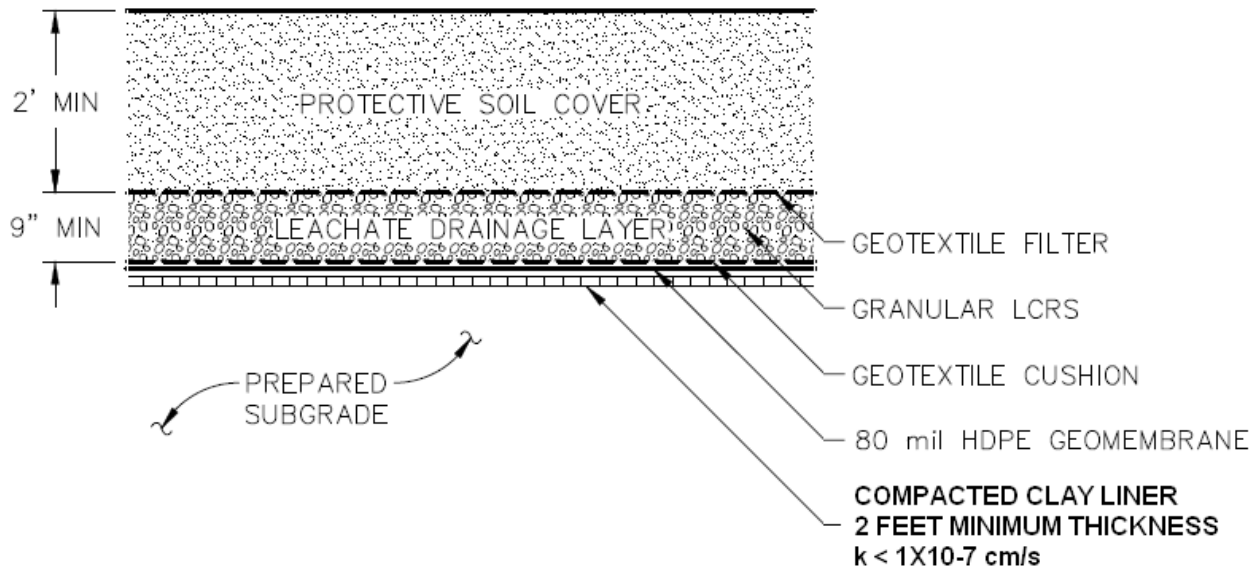
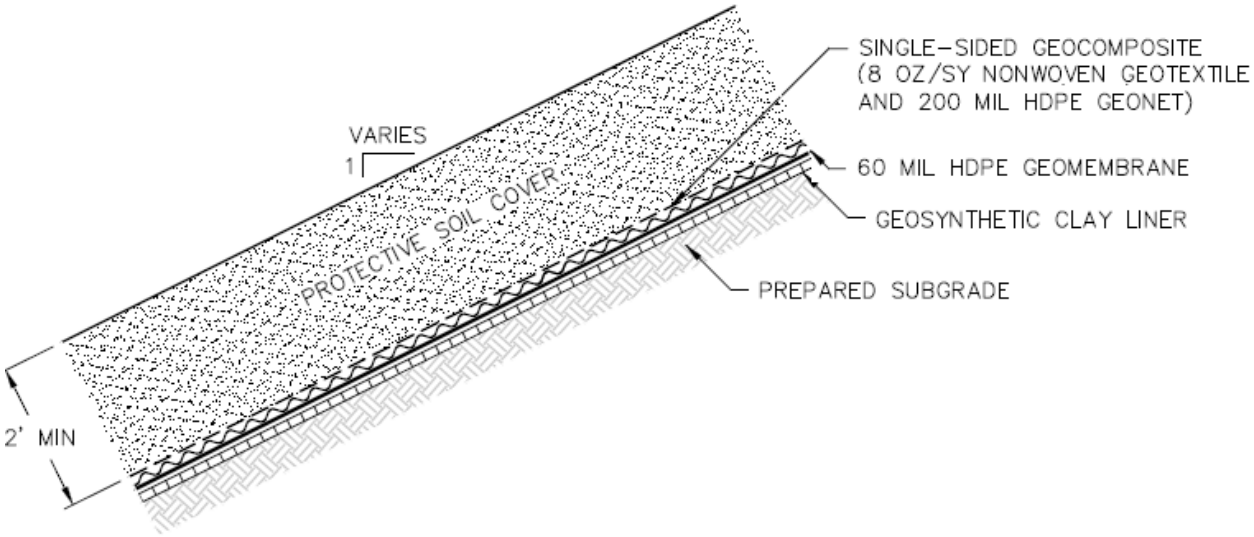
FIGURE 11:
COMPOSITE LINER SYSTEMS



BASE LINER



SIDE SLOPE LINER

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FIGURE 12:
EXISTING COMPOSITE LINER SYSTEM AREAS

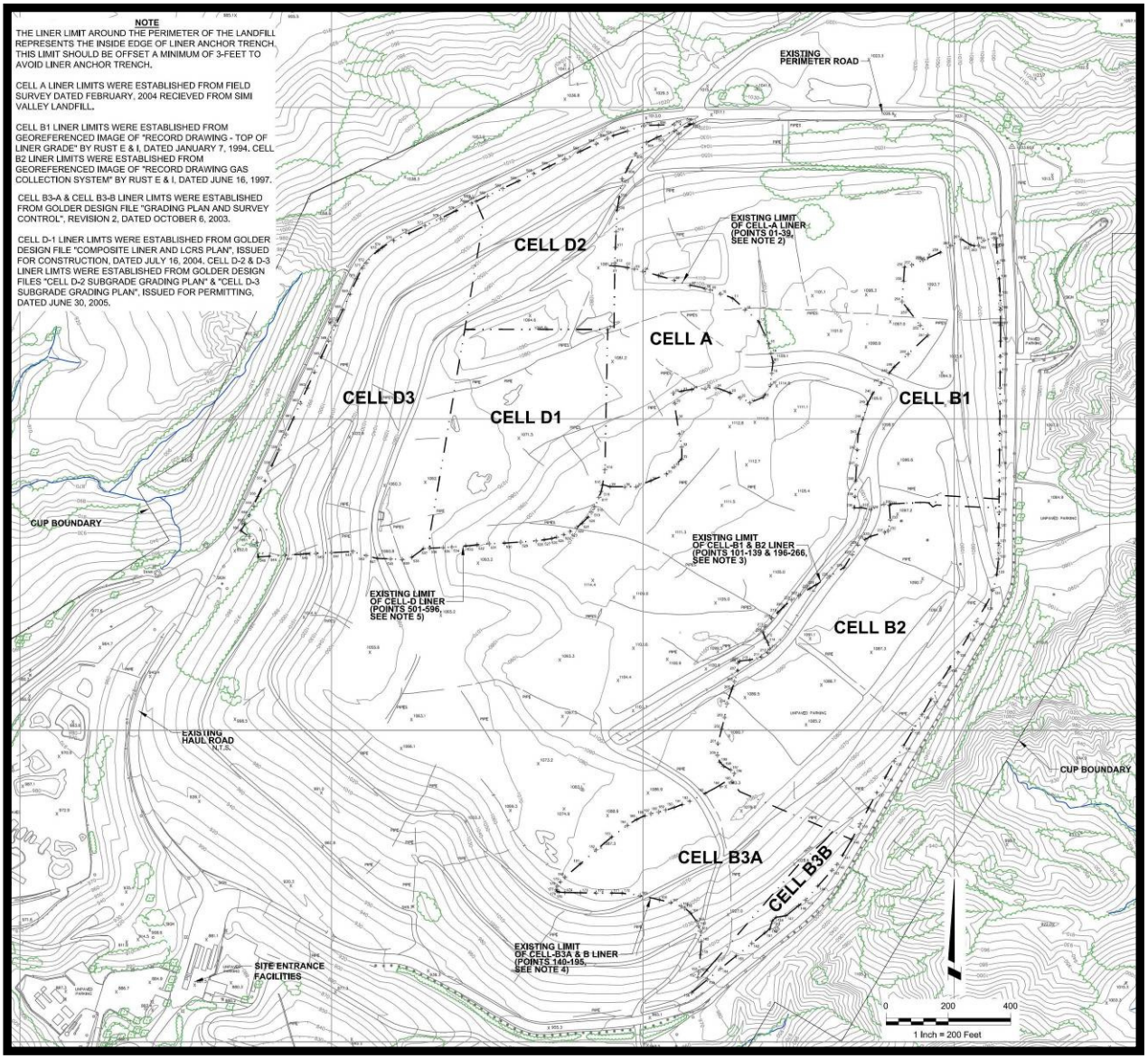

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FIGURE 13:
EXISTING LANDFILL GAS EXTRACTION SYSTEM

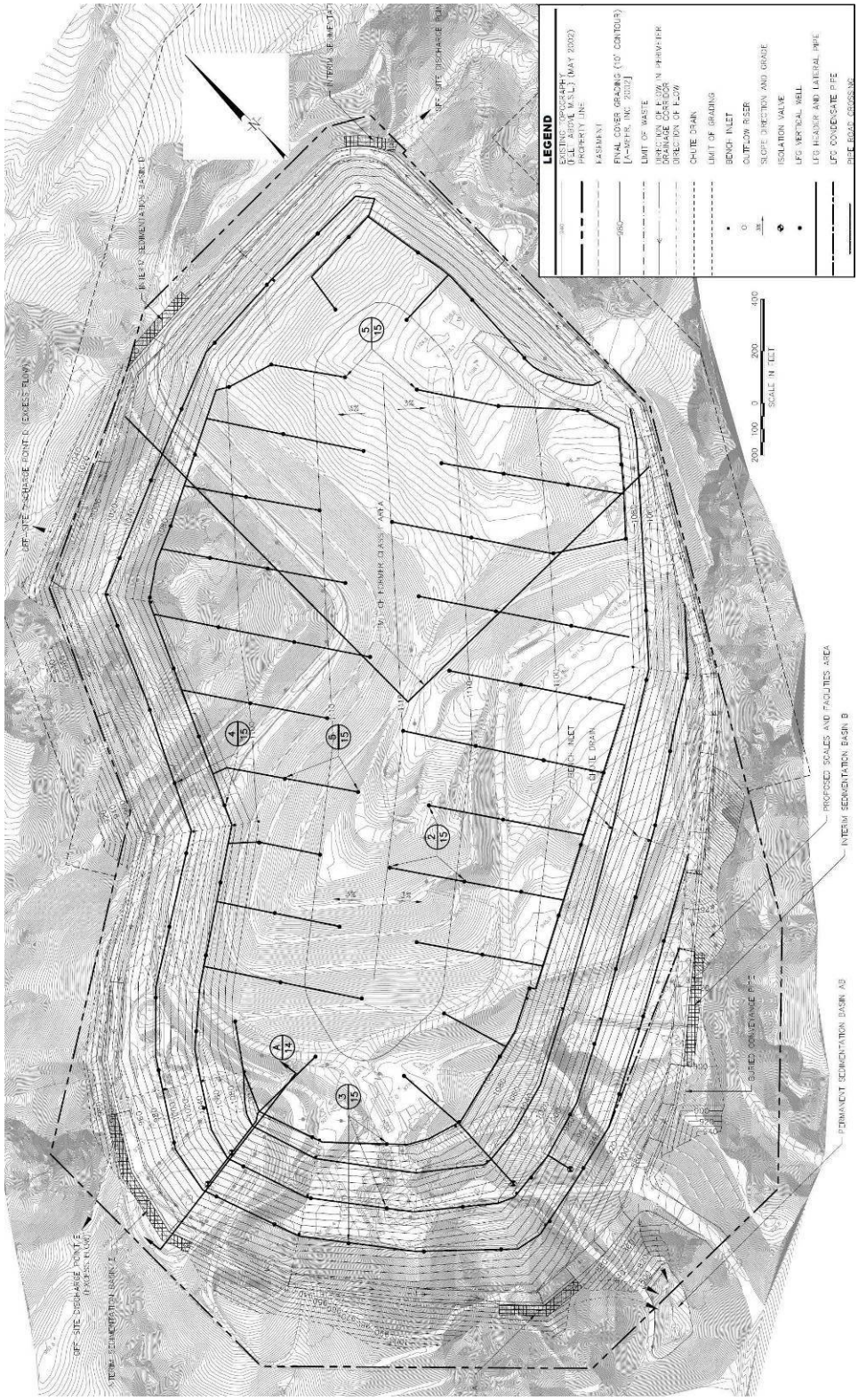

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FIGURE 14:
EXISTING PERIMETER GAS PROBE MONITORING LOCATIONS

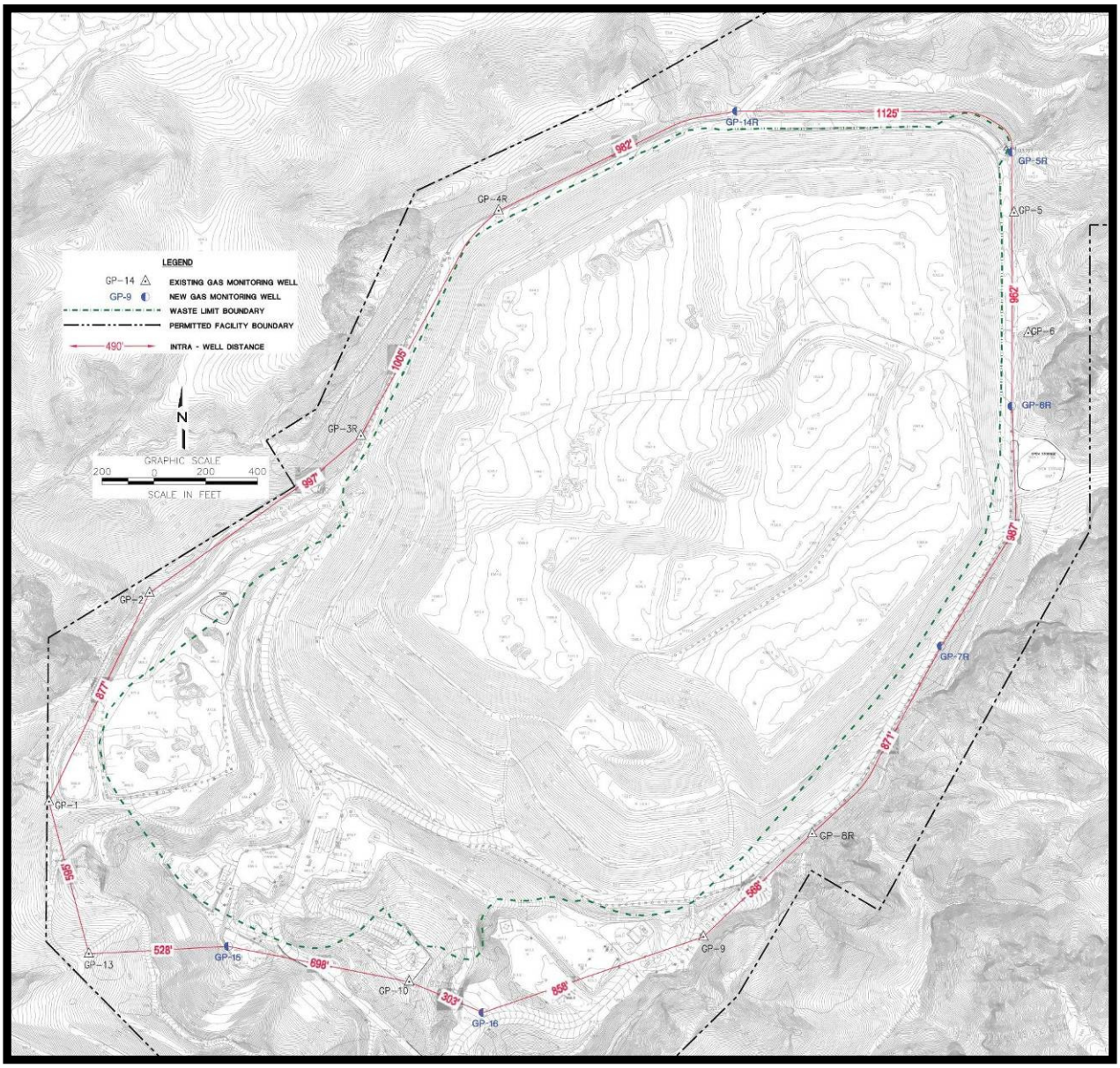

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FIGURE 15:
EXISTING AND PROPOSED STORMWATER DISCHARGE LOCATIONS

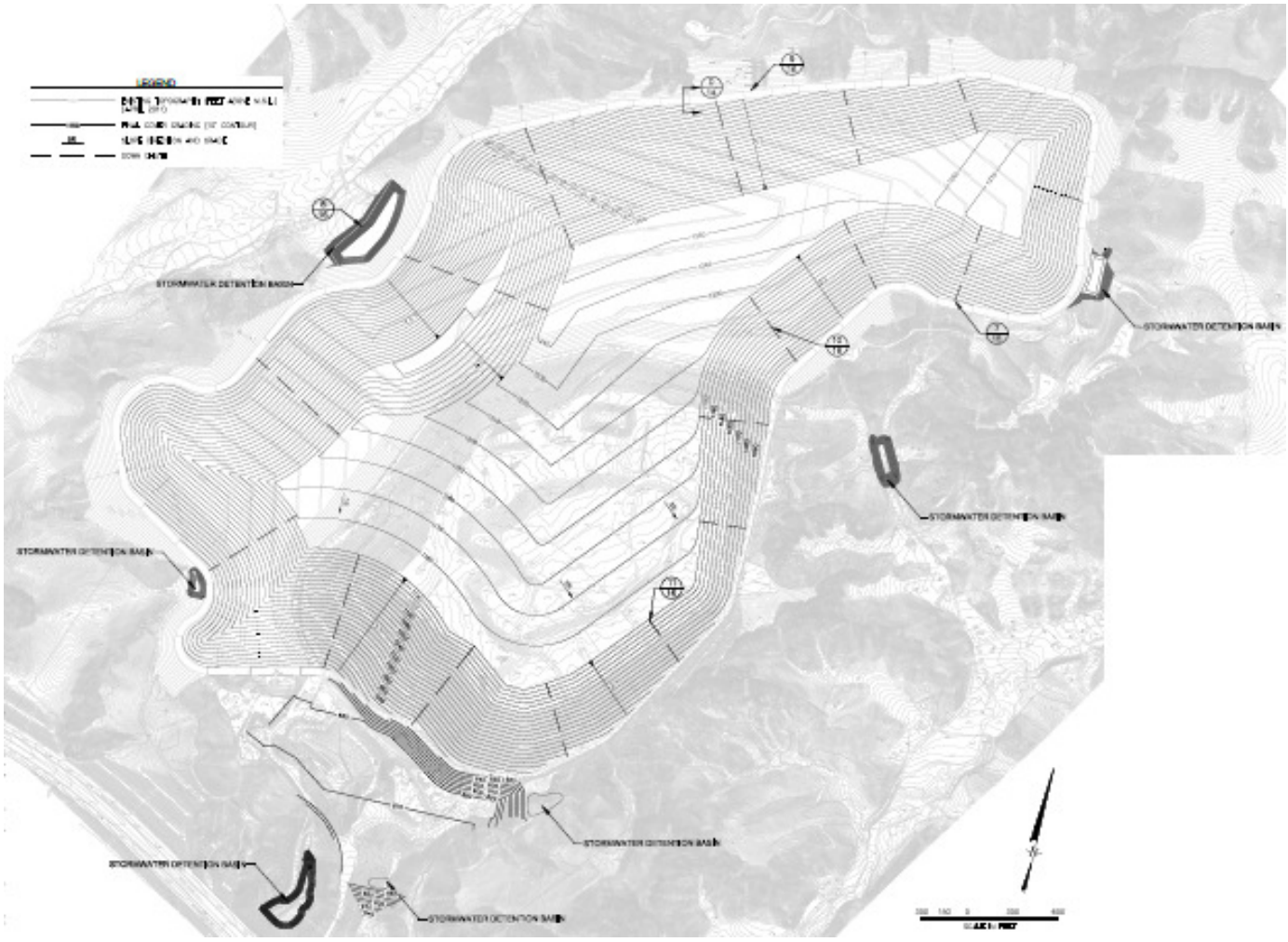

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FIGURE 16:
EXISTING STORMWATER DRAINAGE SYSTEM

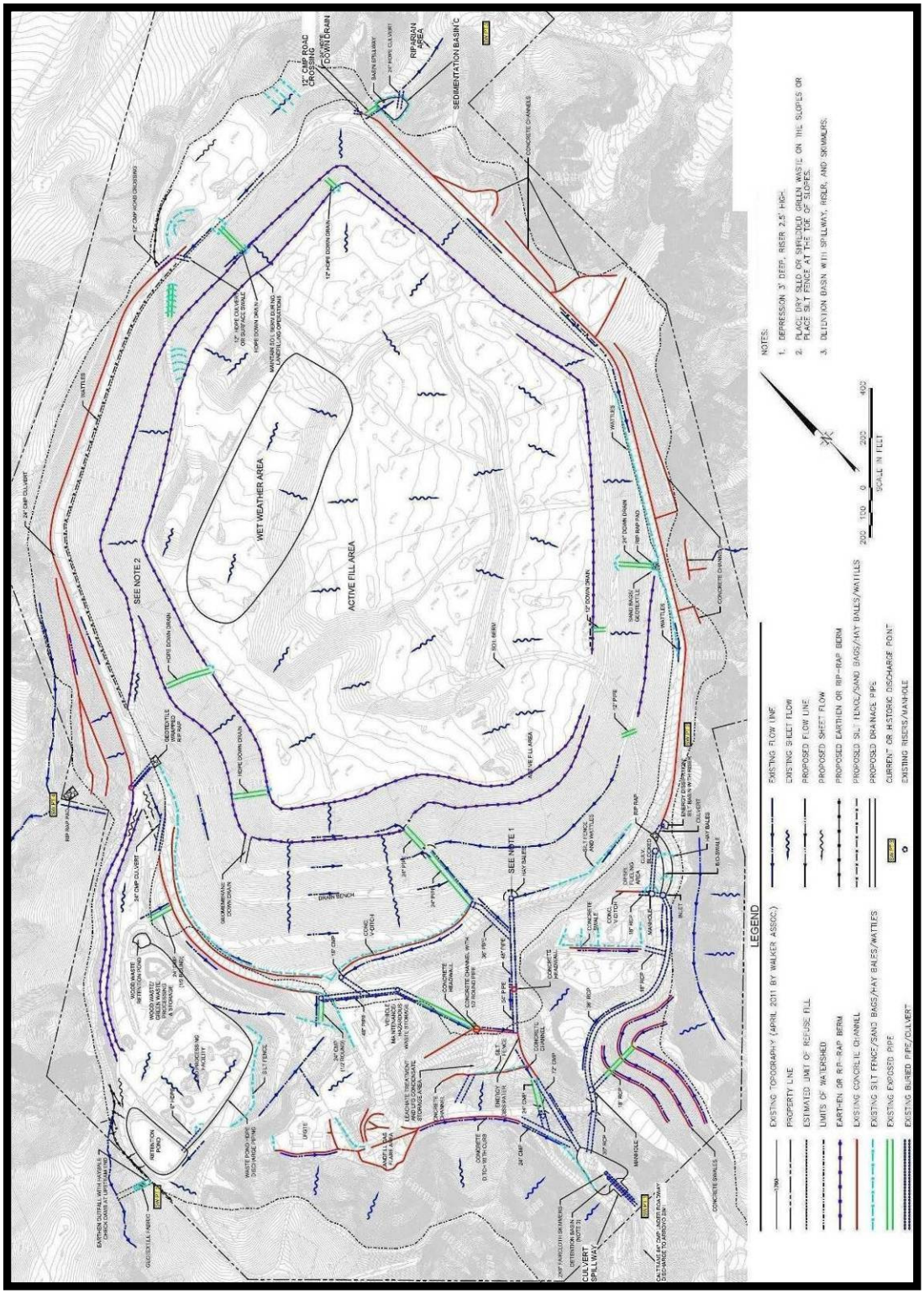

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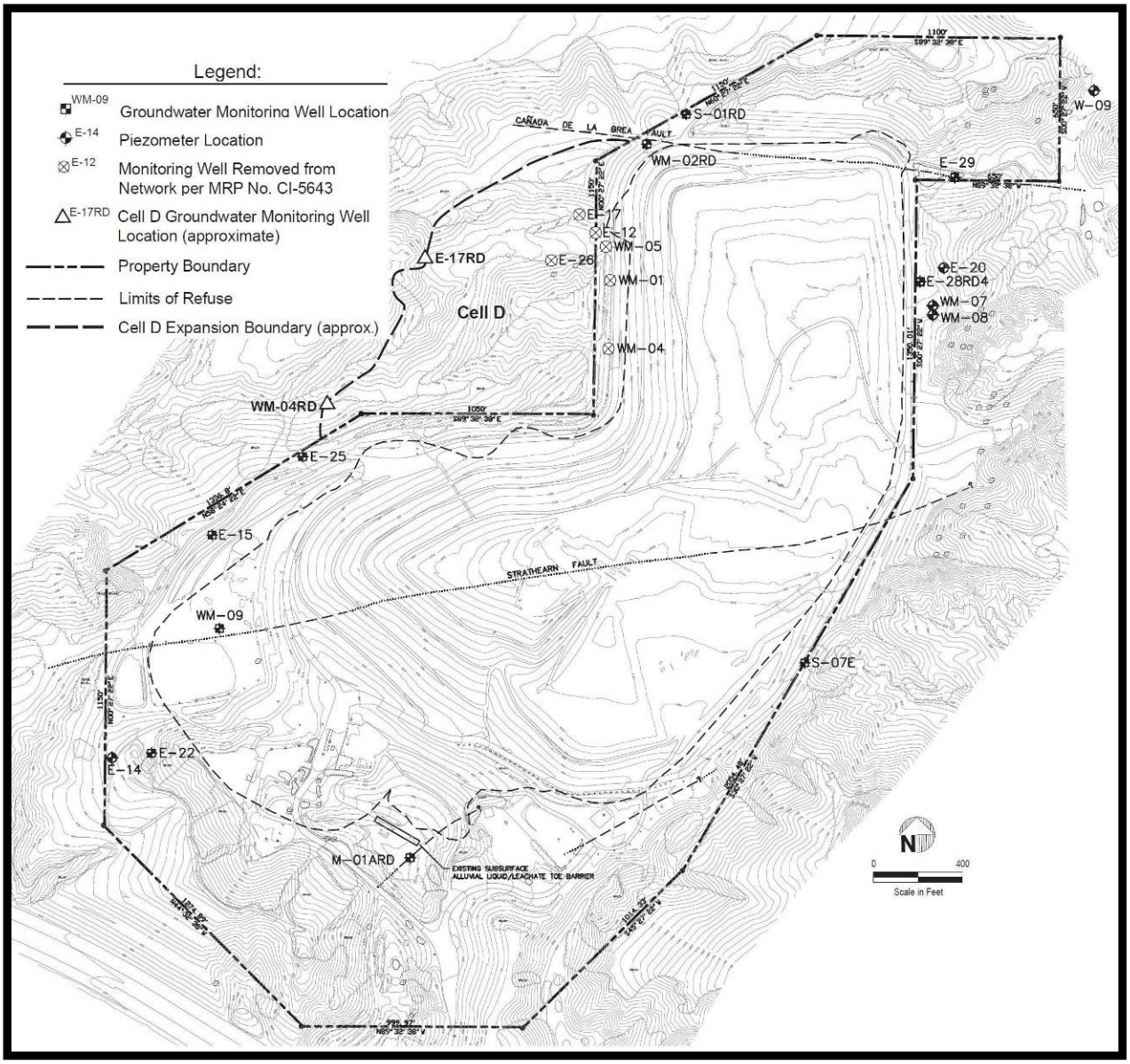
FIGURE 17:
EXISTING COMPLIANCE GROUNDWATER MONITORING LOCATIONS



T E N T A T I V E

FIGURE 18:
EXISTING LEACHATE RECIRCULATION AREAS

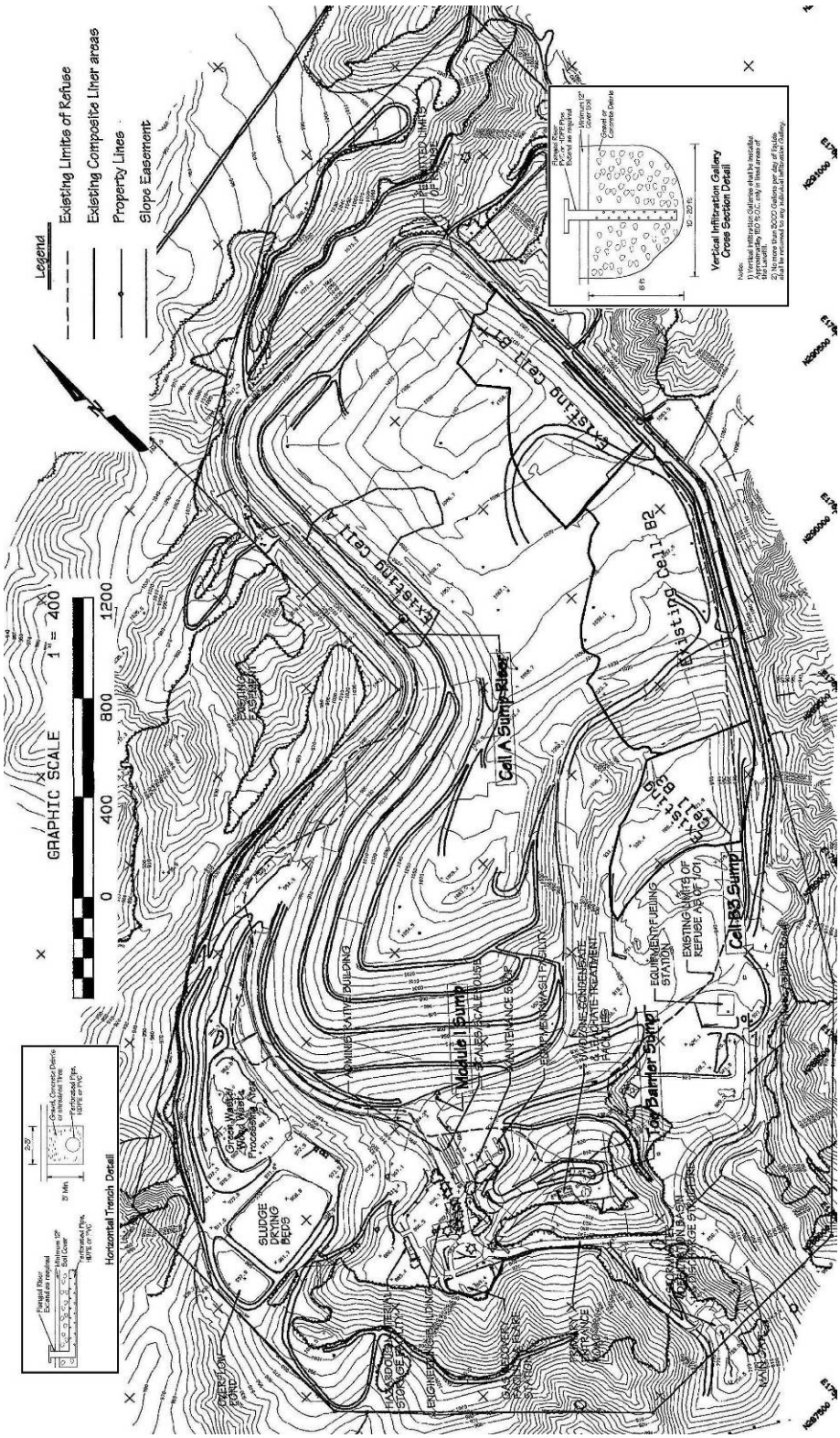


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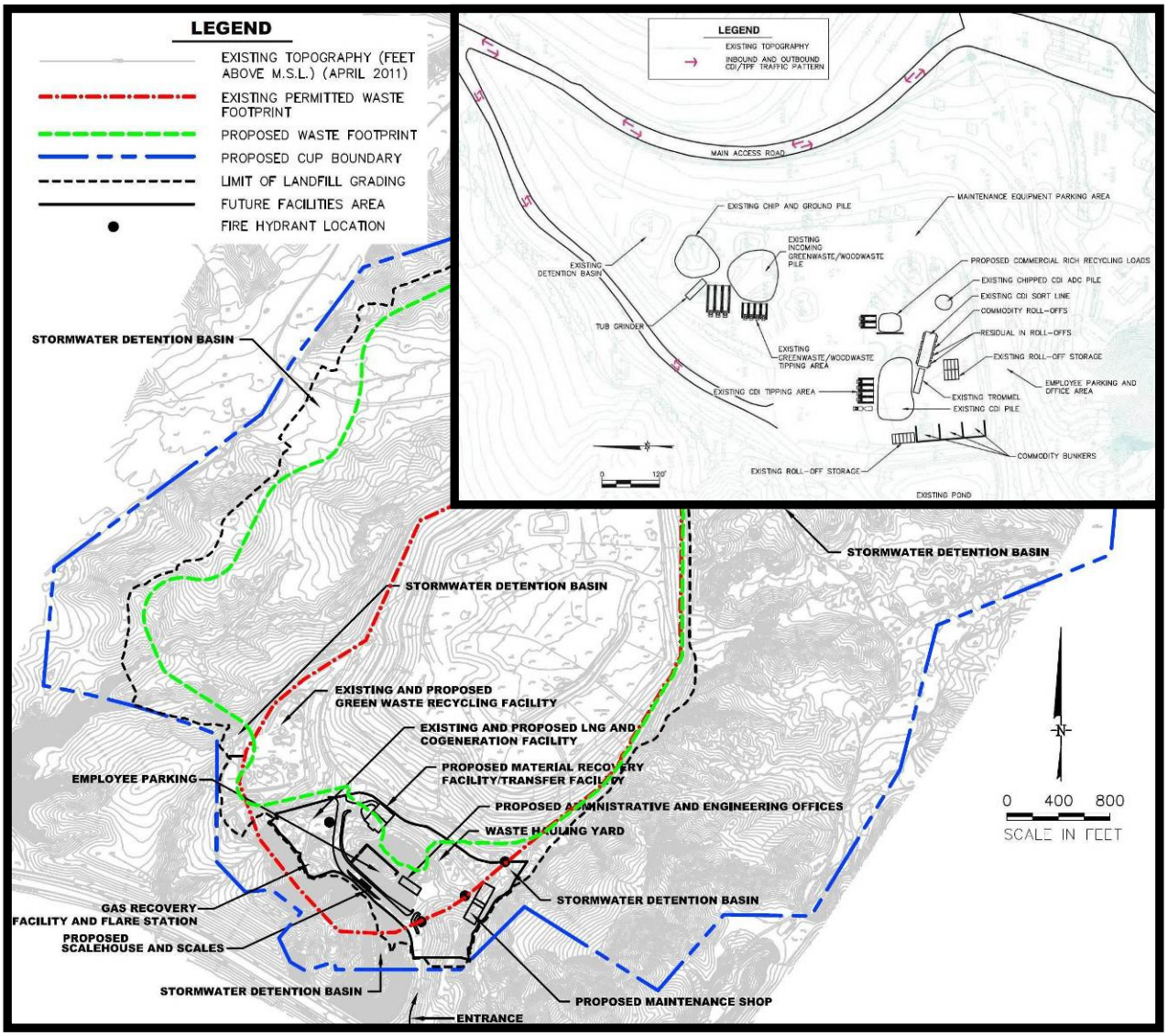
FIGURE 19:
EXISTING AND PROPOSED ANCILLARY FACILITIES



T E N T A T I V E

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

MONITORING AND REPORTING PROGRAM (NO. CI-5643)

FOR
WASTE MANAGEMENT OF CALIFORNIA, INC.
SIMI VALLEY LANDFILL AND RECYCLING CENTER

T E N T A T I V E

A. GENERAL

1. This self-monitoring and reporting program (MRP) implements the requirements of title 27 of the California Code of Regulations (27 CCR), title 40 of the Code of Federal Regulations, part 258, and State Water Resources Control Board (State Board) Resolution No. 93-62. In addition, California Water Code (CWC) section 13267(b) authorizes the regional boards to require technical or monitoring program reports. Compliance by Waste Management of California, Inc. (Discharger) with the terms of this MRP for the Simi Valley Landfill and Recycling Center (Landfill) is required by California Regional Water Quality Control Board, Los Angeles Region (Regional Board) Order No. R4-2013-XXXX (Order) and California Water Code (CWC) section 13267(b).

2. The principal purposes of a self-monitoring program by a waste discharger are:

   a. To document compliance with discharge requirements and prohibitions established by the Regional Board;

   b. To facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge; and

   c. To prepare water quality analyses.

3. The Discharger shall implement this MRP at the Landfill as required in the Order, starting the first monitoring period immediately following adoption of the Order.

4. The Discharger shall comply with the requirements of 27 CCR section 20415 for any water quality monitoring program developed to satisfy 27 CCR sections 20420, 20425, or 20430, as required in the Order and this MRP.

   a. Groundwater monitoring shall meet the requirements of 27 CCR section 20415(b) and 40 CFR section 258.51 (a, c, and d);

   b. Surface water monitoring shall meet the requirements of 27 CCR section 20415(c) and NPDES requirements, as required in this MRP and the State Board General NPDES Stormwater Permit for Industrial Activities (General Industrial Stormwater Permit). In addition, whenever possible, the Discharger shall measure volumetric flow or, at a minimum, visually estimate the flow rate for all surface water monitoring points with flowing water (i.e. any flowing seeps or springs that develop during the development or operation of the Landfill).

B. REQUIRED REPORTS AND CONTINGENCY RESPONSE

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

1. Semi-Annual Monitoring Report

A written monitoring report shall be submitted semi-annually by April 30 (for the period from October 1 to March 31) and October 31 (for the period from April 1 to September 30) of each year. Any reporting or tabulation requirements less than semi-annual in length (i.e., monthly or quarterly) shall be submitted in corresponding semi-annual reports. Semi-annual reports shall include, but shall not be limited to, the following items and sequence:

a. 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 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 and certified in accordance with section H.14 of the Order.

b. 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.

c. Site Conditions: General discussion of site conditions (geology, climate, 100-year 24-hour storm, and watershed specifics, etc.) relative to water quality monitoring.

d. Narrative Description: A narrative discussion of the various monitoring activities and results for the site. Each requirement of Section C (Required Water Quality Monitoring and Inspection Program) of this MRP shall be specifically discussed.

e. Laboratory Results: Laboratory results and statements demonstrating compliance with Section C (Required Water Quality Monitoring and Inspection Program) of this MRP. Results of additional water sampling and analyses performed at the Landfill, outside of the requirements of this MRP, 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.

f. Standard Observations: A summary and certification of completion of all standard observations for the Landfill property in accordance with the NPDES Stormwater Permit monitoring and reporting requirements. The records of observation are to be included with the semi-annual report due April 30th.

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g. Management of Liquids: A summary of the total volumes, on a monthly basis, of Landfill leachate, gas condensate, and any contaminated subdrain water and groundwater extracted at the site, and how these liquids are handled.

h. Waste Disposal Reporting: Waste disposal activities at the site, including**:**

i. A tabular list of the estimated average monthly quantities (in cubic yards and tons) deposited each month.

ii. An estimate of the remaining capacity (in cubic yards and tons) and the remaining life of the site in years and months.

iii. A certification that all wastes 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.

iv. A description of the location and an estimate of the seepage rate or flow of all known seeps and springs at the site.

v. 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.)

vi. The Discharger shall report all unacceptable wastes inadvertently received at this site and their disposition. The following details shall be included:

A. The source (if known), including the hauler, of the unacceptable wastes and date received and/or discovered.

B. Identification of waste (if known) and the amount of waste.

C. The name and address of the hauler who removed the waste from this site.

D. The ultimate point of disposal for the waste.

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

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

i. Dewatered Sludge Sampling and Reporting **-** In addition to reporting the quantity of dewatered sludge per each generator deposited each month, quarterly samples of incoming sludge shall be obtained and analyzed as follows:

i. A daily representative sample shall be weight-proportioned as a composite and mixed as completely as possible (preferably in the absence of oxygen) into a single sample. The total percent solids of the sample shall be reported.

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ii. An extraction solution of the sludge shall be prepared using the Waste Extraction Test (WET) method as outlined in the California Department of Public Health's California Assessment Manual for Hazardous Wastes (CAM), and analyzed as following:

A. All testing shall be done within 48 hours after the extraction solution is prepared.

B. The extracts shall be analyzed for Total Threshold Limit Concentration (TTLC) for the following metals: Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Vanadium, and Zinc. If the concentration of any constituent exceeds 10 times of its Soluble Threshold Limit Concentration (STLC), then the sample shall be analyzed for STLC of that constituent.

C. The dewatered sludge shall also be analyzed semiannually for the following parameters: polychlorinated biphenyls (PCBs), trichloroethylene (TCE), perchloroethylene (PCE), carbon tetrachloride, DDT, DDE, DDD, Endrin, Lindane, Methoxychlor, Toxaphene, 2,4-D and 2,4,5-TP (Silvex).

iii. For small generators that dispose of dewatered sludge at the Landfill at a frequency less than one disposal event per quarter, the sample shall be a composited sample that is representative of the incoming dewatered sludge load. The total percent solids of the sample shall be reported and analyzed pursuant to B.1.i.*ii*, above.

~~*iii.*~~*iv.* Sludge analyses results shall be reported in the corresponding semi-annual report, as separate sections along with the pertinent laboratory data.

j. Treated Shredder Waste (TSW) Monitoring and Reporting - The Discharger shall track and report the disposal of TSW at the Landfill on a monthly basis, including the source, quantity (volume and/or weight), disposition at the Landfill (waste disposal versus re-use as ADC), and all analytical results of TSW, including those provided by the generator, to confirm compliance with the Department of Toxic Substances Control (DTSC) Policy and Procedure No. 88-6 and the Order. Within 60 days of the adoption of the Order, the Discharger shall develop a Waste Acceptance Plan (WAP), or amend the WAP associated with Order No. R4-2011-0052, for approval by the Executive Officer, as follows:

i. The Discharger shall develop a tracking system for all TSW accepted at the Landfill. The tracking system shall identify the generator for all TSW loads accepted, confirm that the TSW load complied with DTSC Policy and Procedure No. 88-6 for disposal as non-hazardous waste, list the quantity (volume and/or weight), and document the disposition at the Landfill (waste disposal versus re-use as ADC).

ii. The Discharger shall tabulate and report the quantity of TSW disposed/reused at the Landfill for each calendar month from each generator.

iii. The WAP shall include best management practices for assuring that any TSW temporarily stockpiled at the Landfill does not result in a release of pollutants to surface water.

iv. Once each quarter, on a random basis, the Discharger shall collect one TSW sample from each generator source for leachability testing pursuant to the Synthetic

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Precipitation Leaching Procedure (Method 1312) of the latest edition of Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846) promulgated by the USEPA, or equivalent method, as approved by the Executive Officer. The purpose of the testing is to determine the leachability of potential constituents of potential concern (PCOCs) from TSW in contact with rainwater. PCOCs shall include CAM-17 metals, VOCs, SVOCs, and any other constituents required by the Executive Officer. Any PCOC identified in the TSW leaching extraction testing shall be included in surface water monitoring conducted pursuant to the General Industrial Stormwater Permit and/or Order No. R4-2011-0052. After four quarters of TSW leachability testing the Discharger may request the Executive Officer to revise the testing schedule if warranted by the testing results (i.e. PCOCs results are consistent).

k. 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.

2. 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 a semi-annual report and shall be submitted no later than April 30 of each year. The annual summary report shall include at least the following:

a. 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 upcoming year.

b. 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.

c. 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 Executive Officer.

d. Map(s): Map(s) showing the areas where any significant events have taken place during the previous calendar year.

e. A drainage control system maintenance report that includes, but is not limited to, the following information:

i. For the previous twelve 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;

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ii. 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

iii. A site map, 11 inches by 17 inches or larger, prepared by either aerial surveillance or a licensed surveyor, indicating the location of the elements listed in Section 2.e.ii above, and the flow direction of all Landfill drainage. The map shall be updated at least annually.

3. Contingency Response

a. Leachate Seep: The Discharger shall, within 24 hours of discovery, report to Regional Board staff by telephone any previously unreported seepage from the Landfill. A written report shall be filed with the Regional Board pursuant to electronic submittal of information (ESI) reporting requirements within seven days, and contain at least the following information:

i. Map - A map showing the location(s) of seepage.

ii. Flow rate - An estimate of the flow rate.

iii. Description - A description of the nature of the discharge (e.g., all pertinent observations and analyses).

iv. Location - Location of sample(s) collected for laboratory analysis, as appropriate.

v. Corrective measures - approved (or proposed for consideration) by the Regional Board Executive Officer.

b. 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:

i. Within 24 hours, verbally notify the designated Regional Board staff contact as to the monitoring point(s) and constituent(s) or parameter(s) involved;

ii. Provide written notification pursuant to ESI reporting requirements within seven days of such determination; and

iii. Do either of the following:

A. Carry out a discrete re-test in accordance with Section C.2.i.*ii* of this MRP[1]. 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 B.3.d. 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 pursuant to ESI reporting requirements within seven days, or

[1] 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~~ semi-annual monitoring event. Re-testing for constituents that are common laboratory contaminants will not be required unless the same pollutants are detected in the following ~~quarterly~~ semi-annual monitoring event.

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B. Make a determination, in accordance with 27 CCR section 20420(k)(7) that a source other than the waste management unit caused the evidence of a 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.

c. Physical Evidence of a Release: If either the Discharger or the Regional Board 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:

i. Within seven days notify the Regional Board of this fact pursuant to ESI reporting requirements (or acknowledge the Regional Board's determination).

ii. Carry out the requirements of Section B.3.d for all potentially affected monitored media.

iii. Carry out any additional investigations stipulated in writing by the Regional Board Executive Officer for the purpose of identifying the cause of the indication.

d. Release Discovery Response: If either the Discharger or the Regional Board Executive Officer concludes that a release has been discovered, the following steps shall be carried out:

i. 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 (i.e. groundwater). Within seven days of receiving the laboratory analytical results, the Discharger shall notify the Regional Board Executive Officer, pursuant to ESI reporting requirements, 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.

ii. The Discharger shall, within 90 days of discovering the release, submit an amended report of waste discharge proposing an evaluation monitoring program (EMP) that:

A. Meets the requirements of 27 CCR sections 20420 and 20425.

B. Satisfies the requirements of 40 CFR 258.55(g)(1)(ii) by installing at least one monitoring well at the facility boundary directly downgradient of the center of the release.

iii. The Discharger shall, within 180 days of discovering the release, submit a preliminary engineering feasibility study (27 CCR section 20420(k)(6)) for a corrective action program necessary to meet the requirements of 27 CCR section 20430.

iv. 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 Regional Board Executive Officer directs the Discharger to begin the EMP.

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e. Release Beyond Facility Boundary: If the Discharger or Regional Board Executive Officer concludes 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:

i. 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.

ii. 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.

iii. Each time the Discharger sends a notification to Affected Persons (under Sections 3.e.i. or 3.e.ii, above), it shall, within seven days of sending such notification, provide the Regional Board with both a copy pursuant to ESI reporting requirements of the notification and a current mailing list of Affected Persons.

4. Submitting of Reports

a. The Discharger shall submit all scheduled reports required in the Order and this MRP electronically, in accordance with 23 CCR section 3890 et. seq., or as directed by the Regional Board Executive Officer. Until directed otherwise by the Regional Board Executive Officer, all reports shall be submitted to the State Board GeoTracker data system in searchable Portable Document Format (PDF) files (Geotracker Global ID. L10002680436). In addition, all groundwater analytical data and monitoring well locations shall be submitted to GeoTracker in Electronic Deliverable Format (EDF). Documents that cannot be conveniently reviewed in electronic format, such as large maps or drawings, shall be submitted as hard copies to the Regional Board office as instructed by Regional Board staff.

b. All reports required in this MRP shall be addressed to:

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

C. REQUIRED WATER QUALITY MONITORING AND INSPECTION PROGRAM

The Discharger shall conduct the following water quality monitoring and inspection program at the Landfill. Unless otherwise indicated, all monitoring data and inspection results shall be reported to the Regional Board as outlined in Section B (Required Reports and Contingency Response) of this MRP. In addition, Regional Board staff may conduct appropriate verification tests to confirm the accuracy of the Discharger's self monitoring.

1. Environmental Monitoring Networks

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The Discharger shall conduct analytical monitoring of 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/or their locations are displayed on Figures T-1 and T-2. Within 90 days of the adoption of the Order, the Discharger shall submit a work plan, for approval by the Regional Board Executive Officer, for constructing environmental monitoring systems for groundwater, surface water, leachate, and the vadose (unsaturated) zone in the proposed expansion area of the Landfill. In the northern expansion area, groundwater monitoring may include existing wells NE-8A and NE-9A. In the western expansion area, groundwater monitoring may include existing well WE-10. Prior to the disposal of wastes in the proposed expansion area, the Discharger shall have installed a groundwater monitoring and surface water network capable of supplying background groundwater quality information for the expansion area that includes at a minimum four quarterly sampling events.

2. Water Quality Monitoring

a. Initial Full Appendix II Scan[2] – Within 30 days of the adoption of this Order, all downgradient 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. A full Appendix II scan shall also be performed at any new groundwater monitoring well within thirty 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 ninety 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).

b. COC List — As of the date of this MRP, the COC list for the Landfill consists of all those constituents listed in Table T-2. At any subsequent time, the COC list shall include: all Appendix II constituents detected and affirmed in the initial scan under Section C.2.a, all Appendix II constituents that have been detected and affirmed in the leachate scan required by this MRP, and any constituent added by the Regional Board Executive Officer. 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 Landfill's operating record within fourteen days of the verification, and shall report the addition of constituent(s) to the COC list in the next scheduled monitoring report.

c. MPars: Current groundwater MPars at the Landfill are listed in Table T-2, including:

i. Indicator Parameters: 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 C.2.h or non-statistical analysis in Section C.2.i of this MRP indicator parameter constituents to analyze all groundwater monitoring data obtained under this program for all downgradient groundwater monitoring wells. Add language about parameter optimization.

ii. Supplemental Parameters: These are inorganic constituents that provide important information regarding groundwater geochemistry but may not show significant

[2] An Appendix II Scan refers to a laboratory test that includes the analyses of all constituents listed in 40 CFR Par 258 Appendix II.

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variation in groundwater in the event of a Landfill release. Monitoring data for supplemental parameters will generally be used to differentiate between any distinct groundwater bodies and will not be subjected to routine statistical analysis.

iii. Other COCs: These include trace metals or other pollutants that have been detected and confirmed to be in leachate from the Landfill.

d. 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 B.3.b of this MRP in response to the detection of any volatile organic compounds (VOCs) at any background well at the site.

e. Water Quality Protection Standard (WQPS) - In accordance with 27 CCR section 20390, the WQPS for the Landfill is established as natural background groundwater quality at the site, which is either the statistically predicted value (if the constituent exists naturally) or the laboratory detection limit (if the constituent does not naturally exist in groundwater).

f. Development and Updating of Concentration Limits – Current concentration limits (statistically predicted values) for inorganic indicator parameters at downgradient groundwater monitoring wells at the Landfill are listed in Table T-3. The Discharger shall continue to develop and update concentration limits, including new downgradient monitoring wells in the proposed expansion area, following the procedures provided in Section C.2.h.*i* of this MRP. The Discharger shall review concentration limits biannually in annual reports submitted to the Regional Board. When appropriate, new concentration limits shall be proposed. For any well/Mpar pair for which an intra-well comparison analysis is not applicable, the Discharger shall use an inter-well comparison analysis to determine whether water quality protection standards are violated.

g. Groundwater Quality Monitoring – The Discharger shall conduct the following groundwater monitoring activities at the Landfill:

i. ~~Quarterly~~ Semi-annual monitoring shall be conducted at all downgradient groundwater monitoring wells and subdrain outfalls as shown in the following schedule:

Period	Sampling Period
January – March	March
April - June	June
July – September	September
October – December	December

Water samples from these monitoring points shall be analyzed for all indicator parameters ~~on a quarterly basis, all~~ and supplemental parameters on a semi-annual basis (in April and October), and all other COCs on an annual basis (in October);

ii. Five-Yearly COC Scan — Every five years, starting in 2013, the Discharger shall analyze a sample from all downgradient groundwater monitoring wells for the detectable presence (including trace determinations) of all COCs that are not yet on the MPar list.

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This constitutes the means by which the Discharger continues to meet the requirements of 40 CFR 258.55(b)-(d).

A. 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 thirty days, take a single resample from the indicating affected well(s) and reanalyze it only for the newly-detected constituent(s).

B. 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).

h. Statistical Data Analysis Methodology

i. 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 ten percent or more of the background data to date. Initially, for each given MPar at a given downgradient monitoring well (well/MPar pair), the proposed background data set shall consist of all validated data from that compliance well and parameter, from the preceding five-year period. Every two years, following the adoption of this MRP, 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 Regional Board 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 five 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. The Discharger may use an alternative statistical method or approach for development of concentration limits, if approved by Regional Board staff.

ii. 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.

iii. In the event that an approved data analysis method provides a preliminary indication that a given MPar 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). To maintain sample independence, the retest sampling shall be conducted

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within 90 to 100 days of the initial sampling event and can be coordinated with the corresponding ~~quarterly~~ semi-annual sampling event. The verification procedure shall be performed only for the constituent(s) or parameter(s) that has shown "measurably significant" (as defined by 27 CCR section 20164) evidence of a release, and shall be performed only for those monitoring points at which a release is indicated.

iv. For any COC or MPar 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 C.2.i of this MRP.

v. Water Quality Monitoring Approach — Except for COC scans, the monitoring approach used for each MPar at all compliance wells (well/MPar pair) shall be controlled by whether that MPar has exhibited a measurably significant increase at that well. Therefore, the Discharger shall monitor each well/MPar pair in one of two modes, as follows, either:

A. 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

B. 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.

vi. 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 C.2.a or C.2.g.*ii*):

A. MPars Readily Detectable in Background — At any given monitoring point, the Discharger shall apply an appropriate statistical analysis for each detection mode MPar that exceeds its respective MDL in at least 10% of the applicable background data set;

B. MPars Not Readily Detectable in Background — For any monitoring point at which one or more MPars, 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 MPars via the California Nonstatistical Data Analysis Method (CNSDAM) test described in Section C.2.i of this MRP.

i. California Non-statistical Data Analysis Method (CNSDAM)

i. 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 C.2.i.*i*.A of this MRP (or, for each retest sample, the modified scope list of Section C.2.i.*ii*.B).

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A. 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.

B. Two Triggers - From the scope list made under Section C.2.i.*i*.A, for an initial test (or, for a retest, the modified scope list under Section C.2.i.*ii*.B), 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.

ii. Discrete Retest [27 CCR section 20415(e)(8)(E)]**:**

A. In the event that the Discharger concludes (pursuant to Section C.2.i.*i*.B) that there is a preliminary indication, then the Discharger shall immediately notify 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. To maintain sample independence, the retest sampling shall be conducted within 90 to 100 days of the initial sampling event~~ and can be coordinated with the corresponding quarterly sampling event~~.

B. 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 C.2.i.*i*.B of this MRP, 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 C.2.i.*i*.B, but using this modified scope list) to separately analyze each of the two suites of retest data at that compliance well.

C. If either (or both) of the retest samples trips either (or both) of the triggers under Section C.2.i.*i*.B, 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, 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.

j. Groundwater Flow Direction – the Discharger shall measure the water level in each well listed in Table T-1 at least quarterly and determine the presence of horizontal and vertical gradients and groundwater flow rate and direction for the respective groundwater body. The Discharger shall determine groundwater flow direction by water level readings monitoring wells listed in Table T-1and existing piezometers (WM-07, WM-08, E-14, WM-05, E-12, E-20, W-09) along the east and west perimeters of the Landfill.

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k. Leachate Monitoring – The Discharger shall conduct leachate monitoring at all leachate collection sumps at the Landfill as follows:

i. Annual Appendix II Constituent Scan - Leachate samples shall be taken at each monitoring point each year during the month of September. The samples shall be analyzed for all Appendix II Constituents in 40 CFR, part 258.

ii. Retest - If any constituents that are not in the COC list are detected in the leachate sampling event at any sampling point, the Discharger shall resample the leachate at that point during the next March 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.

iii. Reporting - Leachate monitoring results shall be included in the semi-annual and annual report that covers the period during which the monitoring is conducted.

l. Vadose Zone Monitoring – Vadose zone monitoring at the Landfill shall be conducted semi-annually and include:

i. 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. In the event liquids are present in a quantity feasible to sample, samples will be taken and analyzed, to the extent feasible, for all indicator parameters in Table T-2.

ii. 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 all indicator parameters in Table T-2.

iii. Landfill Gas Monitoring - The Discharger shall include in the semi-annual reports all monthly gas probe monitoring results conducted in accordance with South Coast Air Quality Management District Rule 1150.1. If Landfill-related gases are detected above a methane gas concentration in excess of five percent by volume, the Discharger shall implement the following program:

a. Perform an evaluation to determine the source of the methane (i.e., thermogenic due to local natural petroleum deposits or landfill-related). If the methane is determined to be thermogenic, no action related to the groundwater program will be necessary.

b. If the evaluation of methane source indicates that it is Landfill-related, the Discharger shall sample the nearest groundwater monitoring well listed in Table T-1 and complete applicable provision of groundwater monitoring well sampling and analysis for Appendix I VOCs, as described in section C.2 of this MRP for downgradient groundwater monitoring wells.

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m. Surface Water Monitoring – Surface water monitoring is not required in this MRP because runoff at the Landfill are monitored under the General NPDES Stormwater Permit and Regional Board Order No. R4-2011-0052.

n. 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.

3. **Site Inspections**

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

a. 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.

b. During the dry season, a minimum of one inspection shall be performed every three months.

c. Standard Observations during a site inspection shall include at least the following:

i. 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).

ii. Evidence of odors; presence or absence, characterization, source, and distance of travel from source.

iii. Evidence of erosion and/or of exposed refuse.

iv. Inspection of all storm water discharge locations for evidence of non-storm water discharges during dry seasons, and integrity during wet seasons.

v. Evidence of ponded water at any point on the waste management facility (show affected area on map).

vi. Compliance with the Storm Water Pollution Prevention Plan, insuring that the terms of the General NPDES Stormwater Permit are properly implemented.

vii. Integrity of all drainage systems.

D. SAMPLING AND ANALYTICAL PROCEDURES

1. 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 Regional Board 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

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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:

a. 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) in historical data for that medium, the SW-846 analytical method having the lowest MDL shall be selected.

b. Trace results (results falling between the MDL and the practical quantitation limit (PQL)) for organic compounds shall be reported as such.

c. 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.

d. 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.

e. 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:

   i. The method, equipment, and analytical detection limits.

   ii. The recovery rates, including an explanation for any recovery rate that is outside the USEPA-specified recovery rate.

   iii. The results of equipment and method blanks.

   iv. The results of spiked and surrogate samples.

   v. The frequency of quality control analysis.

   vi. The name and qualifications of the person(s) performing the analyses.

f. QA/QC analytical results involving detection of common laboratory contaminants in any sample shall be reported and flagged for easy reference.

g. Non-targeted chromatographic peaks shall be identified, quantified, and reported to a reasonable extent. When significant unknown peaks are encountered, second column or

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second method confirmation procedures shall be performed in an attempt to identify and more accurately quantify the unknown analyte(s).

2. 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 Regional Board Executive Officer. These records and reports are public documents and shall be made available for inspection during normal business hours at the Regional Board office. Such records shall show the following for each sample:

a. 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.

b. Date and time of sampling.

c. Date and time that analyses were started and completed, and the name of personnel performing each analysis.

d. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used.

e. Results of analyses, and MDL and PQL for each analysis.

ORDERED BY: _____ DATE: March 7, 2013
Samuel Unger, P.E.
Executive Officer

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TABLE T-1:
Landfill Monitoring Locations

Media Monitored	Monitoring Points	Location
Groundwater	M-01ARD, WM-04RD, E-17RD	Downgradient
	WM-09, E-22, E-29, E-28RD4, WM-02RD, S-07E, S-01RD, E-25, E-15	Upgradient, Side-gradient
Groundwater Elevation	M-01ARD, WM-04RD, E-17RD, WM-09, E-22, E-29, E-28RD4, WM-02RD, S-07E, S-01RD, E-25, E-15, WM-07, WM-08, E-14, WM-05, E-12, E-20, W-09	Downgradient, Upgradient, Sidegradient
Surface Water	SW PT-1, SW PT-3, SW PT-4, SW PT-5	Outfalls
Leachate	Toe Barrier, Sump 1, Cell A Sump, Cell B Sump, Cell D Sump	N/A
Unsaturated zone	All subdrain outfalls, ~~lysimeters (North sludge bed, South sludge bed)~~, and gas monitoring probes (GP-1, GP-2, GP-3R, GP-4R, GP-5R, GP-6R, GP-7R, GP-8R, GP-9, GP-10, GP-13, GP-14R, GP-15, and GP-16)	N/A

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TABLE T-2:
Constituents of Concern at the Landfill

Monitoring Parameters (MPars)			Other COCs
Indicator Parameters*		**Supplemental Parameters**	
Inorganic Parameters: Alkalinity, total Ammonia, nitrogen Chemical oxygen demand (COD) Chloride Nitrate-N Sodium Sulfate Potassium, total Total dissolved solids (TDS) Total organic carbon (TOC) **Appendix I VOCs:** 1,1,1,2-Tetrachloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethene 1,2,3-Trichloropropane 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloropropane 1,4-Dichlorobenzene 2-Butanone 2-Hexanone 4-Methyl-2-Pentanone Acetone Acrylonitrile Benzene	Bromochloromethane Bromodichloromethane Bromoform Bromomethane c-1,2-Dichloroethene c-1,3-Dichloropropene Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane Chloroform Chloromethane Dibromochloromethane Dibromomethane Dichlorodifluoromethane Ethylbenzene Iodomethane Methylene chloride o-Xylene p/m-Xylene Styrene t-1,2-Dichloroethene t-1,3-Dichloropropene t-1,4-Dichloro-2-Butene Tetrachloroethene Toluene Trichloroethene Trichlorofluoromethane Vinyl Acetate Vinyl Chloride **Other Organics:** Dichlorodifluoromethane (DCDFM) Methyl tertiary butyl ether (MTBE) 1,4-Dioxane	Bicarbonate (as $CaCO_3$) Boron, total Bromide Calcium, total Carbon dioxide, lab Fluoride Iron, total Magnesium, total Manganese, total pH, field Sodium, total Sulfide Specific conductance, field Temperature, field Turbidity, field	**Metals:** Antimony Arsenic Barium Beryllium Cadmium Chromium, total Cobalt Copper Lead Mercury Nickel Selenium Silver Thallium Vanadium Zinc **Any other pollutants detected and confirmed in Landfill leachate or added by the Regional Board Executive Officer**

*Any modification to the list of Indicator Parameters evaluated through statistical analysis based on source (leachate) concentration or related information must be fully described in each corresponding semi-annual monitoring report.

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TABLE T-3:
Downgradient Well Indicator Parameter Concentration Limits (in mg/l) MRP[3].

Constituents	**M-01ARD**	**WM-04RD**	**E-17RD**
Alkalinity, total	1265.5	426.9	714.2
Ammonia as N	TBD	TBD	TBD
COD	131	12.0	43.9
Chloride	2077	267.3	247.3
Potassium	TBD	TBD	TBD
Nitrate-N	4.8	0.30	0.10
Sodium	1919	4752	1200
Sulfate	6302	1798	3867
TDS	1507	3263	6156
TOC	TBD	TBD	TBD
Appendix I VOCs	DL/TBD	DL/TBD	DL/TBD

DL = The concentration limit for man-made constituents is the laboratory detection limit.
X Constituent not required to be monitored based on LCRS monitoring results.
✔ = MPar not subject to statistical analysis based on site-specific background water quality.
TM = Tracking mode; MPar concentration versus time plot required.
TBD Concentration Limit to be determined using Statistical Data Analysis Methodology.

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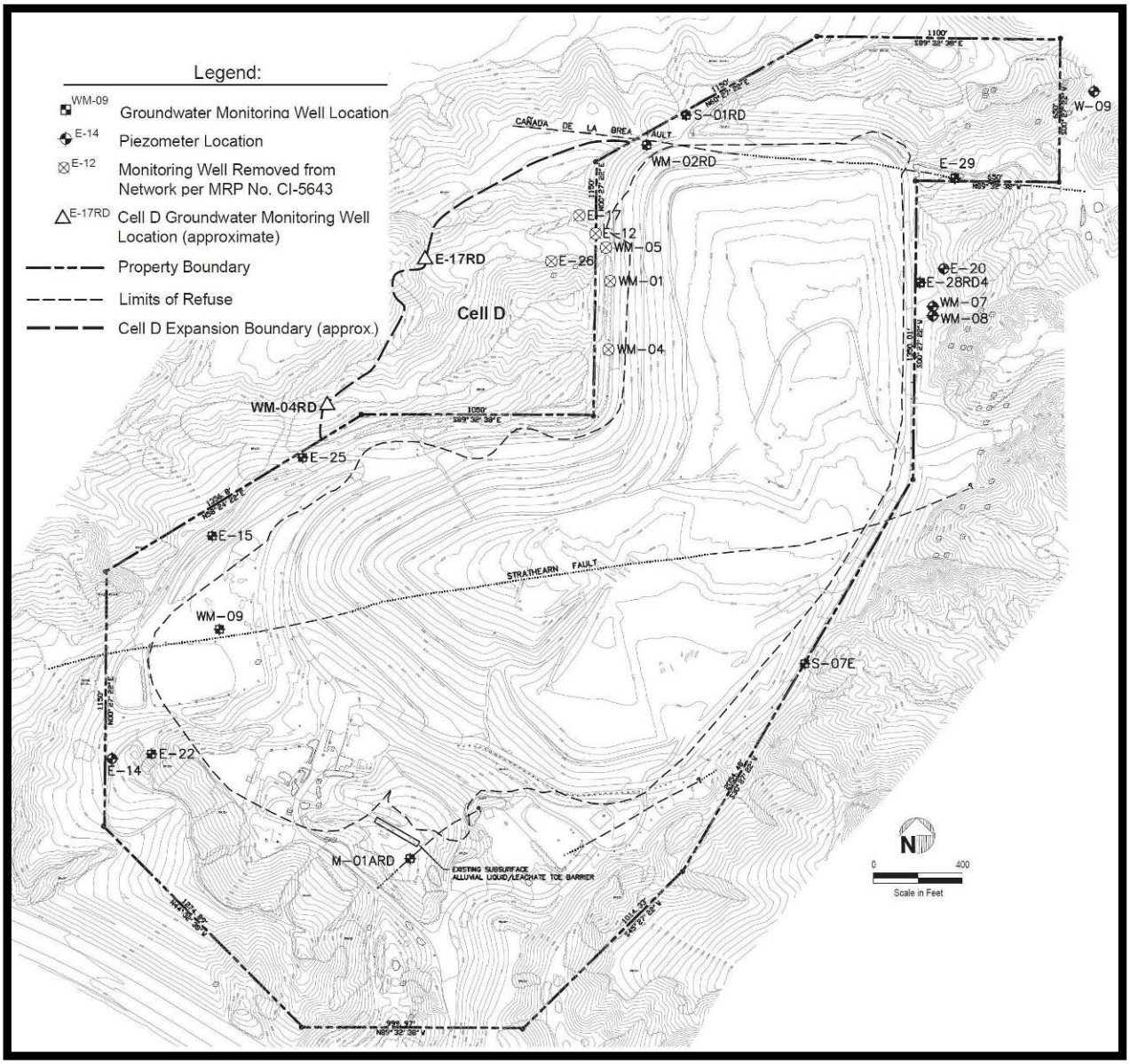
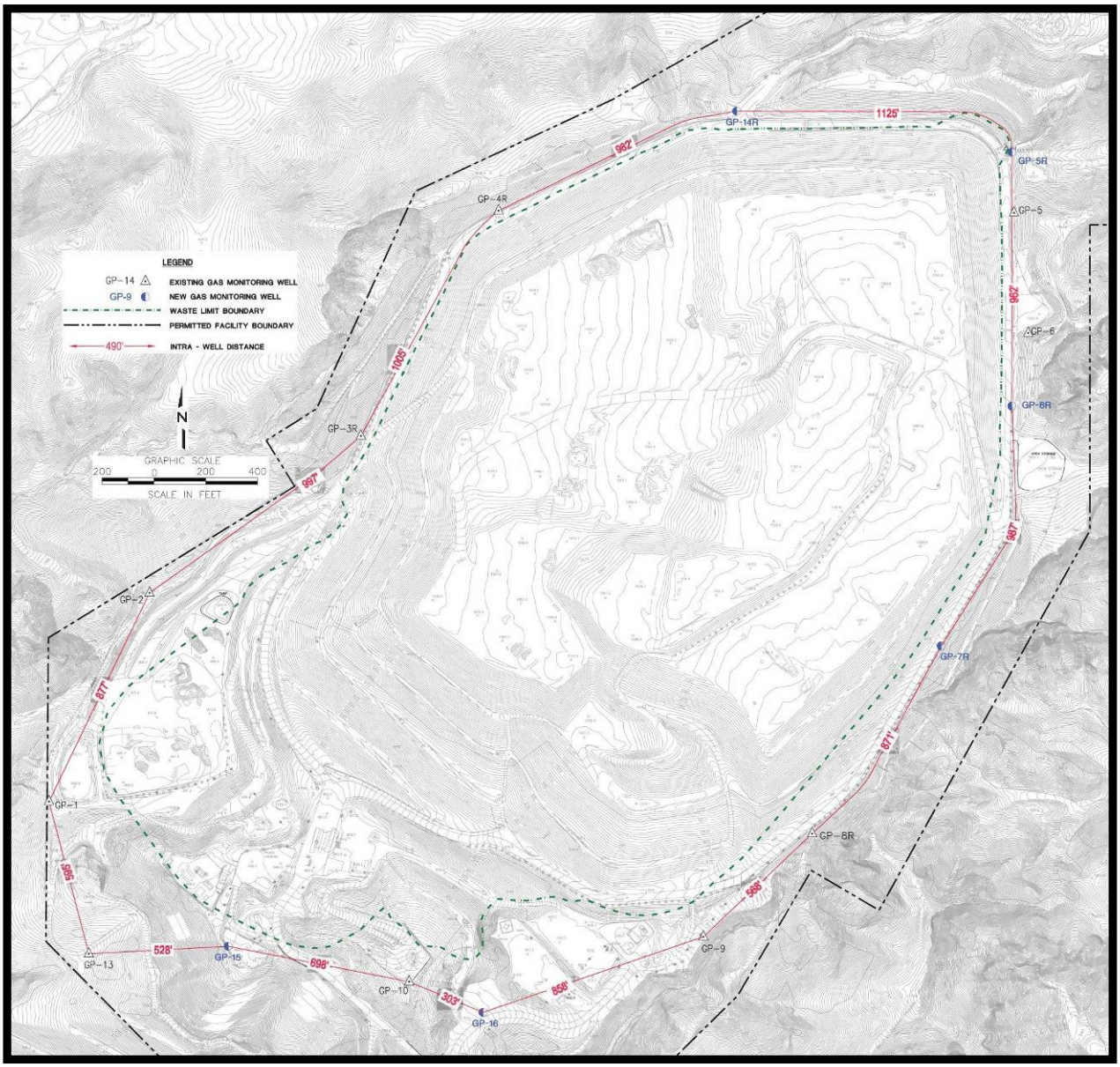
[3] Any time a new downgradient monitoring well is added, an indicator parameter concentration limit is updated, or the status of an indicator parameter changes (i.e. is not required to be monitored based on LCRS monitoring results [X], is not subject to statistical analysis based on site-specific background water quality [✔], or is placed in tracking mode [TM]), the Discharger shall provide the Regional Board with an updated list of this table in the corresponding semi-annual monitoring report.

FIGURE T-1:
EXISTING COMPLIANCE GROUNDWATER MONITORING LOCATIONS



T E N T A T I V E

FIGURE T-2:
EXISTING PERIMETER GAS PROBE MONITORING LOCATIONS



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