CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906

WASTE DISCHARGE REQUIREMENTS ORDER NO. R3-2007-0027

FOR

FOXEN CANYON CLOSED CLASS III LANDFILL
SANTA BARBARA COUNTY
Waste Discharger Identification No. 3 420301002

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

LANDFILL OWNER AND LOCATION

1. The County of Santa Barbara ("County") operates the Foxen Canyon Closed Class III Landfill ("Landfill"), which is located on 37.5 acres of land leased from the Chamberlin Trust ("Owner"). These Waste Discharge Requirements apply to both the County and the Owner and refers to the County and the Owner as "Discharger."

2. The Landfill is located in Santa Barbara County at 4004 Foxen Canyon Road, approximately two miles north of the town of Los Olivos as shown in Attachment 1.

3. The Landfill is in Sections 10 and 15, Township 7, Range 31 West, San Bernardino Base & Meridian. The sites latitude and longitude are 34°41'40"N and 120°07'30"W. The assessor's parcel number for the Landfill is 133-151-56.

PURPOSE OF ORDER

4. The Landfill became inactive on July 8, 2003.

5. The County last submitted a Report of Disposal Site Information on January 13, 1998 and updated the Foxen Canyon Landfill Final Closure and Post-Closure Maintenance Plan in September 2005. On September 28, 2006 the Executive Officer approved an amendment to the Closure Plan delaying closure construction activities into 2007.

6. This Order reflects the Landfill's closed status, and establishes requirements for closure, post-closure maintenance and long-term monitoring, pursuant to California Code of Regulations Title 27, Solid Waste (hereafter "Title 27"), effective July 18, 1997, and pursuant to Code of Federal Regulations Title 40, Parts 257 and 258, Solid Waste Facility Disposal Criteria.

7. The Landfill is currently regulated by Waste Discharge Requirements Order No. 94-32 (hereafter "Order 94-32"), as adopted by the Board on April 8, 1994. The Landfill is also currently regulated by Order No. 93-84 "Waste Discharge Requirements Amendment for All Municipal Solid Waste Landfills in the Central Coast Region" (Super Order). The Super Order updated all Region 3 Landfill WDRs to comply with the federal landfill regulations, 40

CFR Parts 257 and 258. Order R3-2007-0027 replaces Order No. 94-32, and the Super Order as it applies to this Landfill, and specifically prohibits additional discharge of solid waste at the Landfill.

CLASSIFICATION AND WASTE TYPE

8. The Landfill is classified as a Closed Class III nonhazardous solid waste landfill pursuant to Title 27 §20200.

LANDFILL DESCRIPTION AND HISTORY

9. The Landfill is located on 37.5 acres of leased land. The final waste footprint (within the meaning of Subtitle D of the Resource Conservation and Recovery Act of 1976 (RCRA), 42 U.S.C. § 6941, et. seq ("Subtitle D")) comprises 18.4 acres with the remaining acreage devoted to access roads and facilities devoted to a transfer station. A Site Map and Final Elevation Map are shown in Attachments 2 and 3, respectively.

10. Land adjacent to the Landfill is zoned for agricultural purposes and is generally used for range land and grazing. Nearby land is also used for oil extraction, and crop cultivation. The closest residence is approximately one mile southeast of the southern limit of the facility.

11. The average annual precipitation is approximately 15.8 inches based on rainfall data collected at the landfill from 1995-2003. Nearby weather stations CIMIS #64 (1992-2003), SBC 218 (1951-2003) and SBS 233 (1955-2003) have recorded average annual precipitation of 19.9, 15.5, and 17.3 inches, respectively.

12. The Landfill opened in 1970 to serve the residents of the Santa Ynez Valley. During its 33 years of activity it received waste from the cities of Solvang and Buellton, and the unincorporated towns of Los Olivos, Santa Ynez, Ballard and surrounding rural areas.

13. The Landfill became inactive on July 8, 2003 with approximately 82,000 cubic yards of airspace remaining. Santa Barbara County initially planned to clean close the nearby Santa Ynez Airport Closed Landfill and dispose of the waste in the remaining airspace at the Foxen Canyon Landfill. This option was abandoned on December 5, 2004, in response to the opposition presented at local hearings by representatives from community groups.

14. The method of discharge at the Landfill was area fill and cover. The total waste discharged at the Landfill is estimated to be 1.5 million cubic yards.

15. On July 8, 2003, the Santa Ynez Valley Recycling and Transfer Station opened in the area immediately north of the inactive landfill. The recycling and transfer station will continue to operate following formal closure of the Landfill.

16. The closed Landfill will be maintained as non-irrigated, low-maintenance, undeveloped open space.

GEOLOGY/HYDROGEOLOGY

17. **Setting** – The Landfill is located at the southern end of the Coast Ranges geologic province within a structural block known as the Santa Maria Basin. The site is directly underlain by the Quaternary-age alluvium followed by the Plio-Pleistocene Paso Robles Formation.

18. **Topography** – Elevations at the Landfill (above mean sea level) range from 940 feet at the Landfill toe to 1150 feet at the peaks of the Landfill boundary.

19. **Stratigraphy** – The Quaternary-age alluvium is limited to the south end of the Landfill. The alluvium consists of approximately 18 vertical feet of stiff, moist, silty clay, dark brown to black with some fine to coarse grained pebbles derived from the Paso Robles Formation. The majority of the alluvium beneath the Landfill was removed prior to waste placement.

    The Paso Robles Formation consists primarily of poorly sorted gravel, sand, and clay. Previous mapping of the Paso Robles Formation at the site performed by EMCON & Associates (1992) identified seven lithologic zones designated from youngest to oldest A, A-1, B, C, D, E, and F.
    - The A zone has varied thickness from 110 feet beneath the southeast end of the landfill to 200 feet under the southwest corner. This zone is composed of subequal proportions of claystone, sandstone or conglomerate. The claystone is typically massive, of low hardness, with trace amounts of silt, sand, and pebbles.
    - The A-1 zone is comprised of claystone, with interbeds of sandstone and conglomerate. The zone is located as a band across the northwest to southeast portion of the site and underlies the central portion of the landfill. It attains a thickness of 45-55 feet thick beneath the central and southern portion of the site.
    - The B zone is 30 feet in thickness across the site and contains a sandstone and conglomerate unit with minor claystone interbeds across most of the site grading into claystone in the southeast corner of the site.
    - The C zone has a thickness up to 90 feet and is composed of claystone with trace amounts of clayey fine sand The claystone is usually massive with a mottled texture.
    - The D zone consists of 30 to 40 feet of sandstone and clayey conglomerate with interbeds of low hardness claystone.
    - The E zone consists of approximately 80-feet of soft, yellowish-brown to gray claystone. Minor pebbly interbeds are present but the majority of the zone is of low permeability.
    - The F zone is greater than 250 feet thick and is characterized by coarse sandstone and conglomerate units that are between 10 to 40 feet in thickness.

20. **Structure** – The underlying sediments dip towards the southwest at approximately 5 degrees. Fractures and joints within the surface exposures of the Paso Robles Formation have not been observed.

21. **Permeabilites** – Based on the zones described above, zones A, A-1, C and E are low permeability claystone units which act to restrict water movement between the water bearing B, D, and F zones, respectively. Zones A, A-1, C and E have conductivities ranging from 1×10^{-7} and 7.7×10^{-8}. Zone D has the highest in-situ hydraulic conductivity with a range between 1.1×10^{-3} to 3.2×10^{-3}.

22. **Faulting** – Several known active faults lie within 10 miles of the Foxen Canyon Landfill including the Los Alamos fault located 1 mile from the site, the Nacimiento fault located 9

miles from the site, and the Santa Ynez fault located 8 miles from the site. A GeoSyntec 2005 Seismic Hazard Evaluation calculates a peak ground acceleration of approximately 0.9g resulting from a maximum credible earthquake of 6.8 on the Richter scale at the Los Alamos fault.

23. **Hydrogeology** – The Landfill is located in the Santa Ynez Upland Groundwater Basin. The Paso Robles Formation under and adjacent to the Landfill is the primary source of drinking water in portions of Santa Barbara County. Groundwater at the site is primarily encountered at depths in excess of 225 feet with localized perched zones, within discrete layers of the Paso Robles Formation, at depths of approximately 150 feet. The perched groundwater generally flows towards the south and southeast.

SURFACE WATER AND GROUNDWATER

24. The Landfill is not in the 100 year flood plain. The watershed surrounding the Landfill totals 44 acres.

25. Surface water runoff from the Landfill is controlled by engineered slopes and drainage structures integrated into the final cover. The topdeck has a uniform slope of three percent. Benches have a width of twelve feet, a six percent cross fall and a slope rate of four to six percent with flow lines reinforced with geosynthetic erosion matting. A Final Elevation Map is shown in Attachment 3.

26. Onsite drainage flows around the northern and southern slopes of the Landfill towards the east. Runoff from these two areas passes through culverts to separate sedimentation basins. The water from the sedimentation basins then drains through a culvert to Foxen Canyon Creek, which in turn drains into Alamo Pintado Creek approximately three miles south of the site. Alamo Pintado Creek flows south into the Santa Ynez River.

27. The Landfill has five active groundwater monitoring wells MW3, MW4, MW8, MW9 and MW10; two lysimeters: LY1 and LY2; and a surface water monitoring point SWMP1 as shown on Attachment 2.

28. Prior to issuance of the previous Order No. 94-32, quarterly monitoring indicated the possible presence of volatile organic compounds in perched groundwater and the vadose (unsaturated) zone. The County was required to perform an evaluation monitoring program and propose a corrective action program. The County submitted a Proposed Evaluation Monitoring Program on March 10, 1995, and an Engineering Feasibility Study Corrective Action Plan on September 13, 1996. The reports indicated that landfill gas was believed to be impacting the vadose zone and perched groundwater. Proposed corrective action included the construction of a landfill gas collection system, with the possibility of a leachate cut-off barrier and/or passive gas vent in the form of gravel filled trench.

29. Based on recent monitoring, gas extraction appears to have reduced gas migration and the impact of the perched groundwater zone significantly.
    - The monitoring wells have been consistently nondetect for volatile organic compounds (VOCs) except for MW10 which has sporadically contained tetrachloroethylene (PCE) detected with a high concentration of 3.0 ppb in June 1998 and a most recent concentration of 1.32 ppb in May 2005.
    - The lysimeters have been inconsistent at providing enough water to analyze over the last three years. VOCs were regularly detected in LY1 prior to 1998 and inconsistently

since, with detections of acetone (90 ppb in March 1999), 1,4-dichlorobenzene (10.1 ppb and 6.12 ppb in June 2002 and September 2002, respectively), methyl tertiary-butyl ether (trace in March 2002), and dimethlydisulfide (24 ppb and 13.339 ppb in July 2000 and August 2001, respectively). Since 2003 only one sample was available from LY1 and it was nondetect for VOCs. VOCs were regularly detected in LY2 from 1998 to 2002 but a sample has not been available from the lysimeter since 2003. Provision E.27 of this Order requires the Discharger to evaluate the current monitoring network and corrective action taken and propose improvements if necessary. Additionally, installation of the final cover will reduce the infiltration of water into the waste and minimize both production of leachate and gas.

30. There is one supply well onsite and several supply wells known to exist approximately 1 mile to the south of the Landfill.

BASIN PLAN

31. The Water Quality Control Plan, Central Coast Basin (Basin Plan) incorporates statewide plans and policies by reference and contains a strategy for protecting beneficial uses of waters of the State. This Order implements the water quality objectives stated in that Plan.

32. The Basin Plan identifies the following present and anticipated beneficial uses of the Santa Ynez River downstream of the Landfill:

    a. Municipal and domestic supply
    b. Agricultural supply
    c. Industrial supply
    d. Groundwater recharge
    e. Water contact recreation
    f. Non-contact water recreation
    g. wildlife habitat
    h. Cold fresh water habitat
    i. Warm fresh water habitat
    j. Migration of aquatic organisms
    k. Spawning, reproduction, and/or early development
    l. Rare, threatened, or endangered species
    m. Freshwater replenishment
    n. Commercial and sport fishing

33. The Basin Plan identifies the following present and anticipated beneficial uses of groundwater in the vicinity of the Landfill:

    a. Agricultural water supply
    b. Municipal and domestic water supply
    c. Industrial use

CALIFORNIA ENVIRONMENTAL QUALITY ACT

34. This Order requires compliance with other regulations and orders, contains prohibitions, discharge specifications, water quality protection standards, and provisions intended to protect the environment by mitigating or avoiding impacts of the project on water quality. This Order is for an existing facility and therefore is exempt from provisions of the California

Environmental Quality Act (Public Resources Code, §21000, and et seq.) in accordance with Title 14, Chapter 3, §15301.

GENERAL FINDINGS

35. Due to the Paso Robles Formation underlying the Landfill's waste management units, the Landfill does not meet the geologic setting requirements of Title 27 §20250(b)(1) regarding preventing waste from posing a threat to water quality.

36. The County submitted an Alternative Final Cover Feasibility Study in February 2005. On May 4, 2005, the Executive Officer approved the use of a 4-foot Evapotranspirative Final Cover for the Landfill including the use of up to 1 foot of interim cover (dependent upon Executive Officer approval and final construction quality assurance) as part of the final cover. On February 16, 2006, the Executive Officer approved the use of interim cover as final cover for a ¼ acre area on the South Embankment. Final cover design is diagramed in Attachment 4.

37. The goal of closure, including but not limited to the installation of a final cover, is to minimize infiltration of water into the waste, thereby minimizing production of leachate and gas. After closure, the final cover constitutes the Landfill's principal waste containment feature.

38. The goal of post-closure maintenance is to assure the Landfill continues to comply with closure requirements of Title 27 and 40 CFR Part 258 and the goal described in the prior Finding, until such time as the waste in the Landfill no longer constitutes a potential threat to water quality.

39. This Landfill is included in Santa Barbara County's Solid Waste Management Plan and is also regulated by the Santa Barbara County Public Health Department Environmental Health Services (Local Enforcement Agency), and California Integrated Waste Management Board.

40. All technical or monitoring reports required by this Order are necessary to determine compliance with the requirements of this Order and to ensure that discharges from the Landfill are not impacting waters of the State. The evidence supporting these requirements is described in the findings and requirements of the Order.

41. On June 15, 2007, the Water Board notified the Discharger and interested agencies and persons of its intent to issue Waste Discharge Requirements for the closed Landfill, and has provided the opportunity to review a copy of the proposed Order and submit written views and comments.

42. After considering all comments pertaining to this discharge during a public hearing on September 7, 2007, this Order was found consistent with the above findings.

IT IS HEREBY ORDERED pursuant to authority in §13263 and 13267 of the California Water Code, the Discharger, their agents, successors, and assigns in maintaining or owning the closed Foxen Canyon Class III Landfill, shall comply with the following:

A. COMPLIANCE WITH OTHER REGULATIONS AND ORDERS

1. Discharge of waste, closure, post-closure maintenance and long-term monitoring shall comply with all applicable requirements contained in the California Code of Regulations Title 27, Division 2 Solid Waste (Title 27) and 40 CFR Parts 257 and 258. If any applicable regulation requirements overlap or conflict in any manner, the most water quality protective requirement shall govern in all cases, unless specifically stated otherwise in this Order.

2. The Discharger shall monitor potential releases from the Landfill to surface water runoff by complying with all requirements contained in the State Water Resources Control Board's National Pollutant Discharge Elimination System General Permit No. CAS000001 "Waste Discharge Requirements for Discharge of Storm Water Associated with Industrial Activities Excluding Construction Activities" or any amendment, renewal or replacement (General Permit).

B. PROHIBITIONS

1. Discharge of wastes at the Landfill is prohibited, except as provided in an Executive Officer approved Closure and Post-Closure Maintenance Plan for the Landfill.

2. Discharge of waste or leachate to ponded water or waters of the State, including groundwater, is prohibited.

C. SPECIFICATIONS

1. The Discharger shall ensure the Landfill remains closed and maintain the Landfill in conformance with the Central Water Board Executive Officer approved Closure Plan, except where the plan conflicts with this Order. In the event of conflict, this Order shall govern in cases where it is more protective of water quality. Any changes to the Closure Plan that may affect compliance with this Order must be approved by the Executive Officer.

2. Closure and containment systems shall be as follows: All landfill waste disposal areas at final elevations shall receive final cover pursuant to CCR Title 27, Section 21090, which meets either a. or b. below:

   a. Prescriptive Cover System:
      - Minimum two-foot thick foundation layer placed over waste, compacted to maximum density obtainable at optimum moisture conditions [CCR Title 27, Section 21090 (a)(1)].
      - For units not equipped with a Subtitle D composite liner system, a low hydraulic conductivity layer, consisting of one-foot thick compacted clay with a hydraulic conductivity of $1x10^{-6}$ centimeter per second or less.
      - For units equipped with a Subtitle D composite liner system, a low hydraulic conductivity layer equal to or less than the hydraulic conductivity of the bottom liner system.

- At least one foot of soil capable of supporting vegetation, resisting erosion, and protecting the underlying low hydraulic conductivity layer.

b. An engineered alternative final cover design, approved by the Executive Officer. Engineered alternative designs must satisfy the performance criteria in 40 CFR Parts 257 and 258, and satisfy the criteria for an engineered alternative to the above prescriptive design, as provided by CCR Title 27.

3. All Landfill containment structures and drainage facilities shall be designed, constructed, and maintained to limit, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, overtopping, and damage due to natural disasters (e.g., 100 years 24-hour precipitation, the maximum probable earthquake, and severe wind storms).

4. The Discharger shall install at least two permanent monuments, installed by a licensed land surveyor, from which the location of all wastes, containment structures, and monitoring facilities can be determined throughout the Post-Closure Maintenance Period (see Specification C.14). Cumulative waste subsidence and settlement of areas where final cover is installed shall be documented in the annual monitoring report.

5. Condensate or leachate shall:

   a. Be returned to only a waste management unit equipped with a containment system that meets or exceeds the performance standard of CCR Title 27, 40 CFR §258.40(a)(2), or in this Order, whichever is more protective of water quality;
   b. Be measured by volume and recorded on a monthly basis. These monthly volumes shall be included as a part of monitoring submittals as required in the most recent Monitoring and Reporting Program;
   c. Have a second containment system sized to hold 100% of the primary containment system holding capacity;
   d. Be discharged in compliance with this Order.
   e. Condensate or leachate shall not be discharged within 48 hours of any forecasted rain event.
   f. If condensate or leachate is found to be detrimental to the cover vegetation, another appropriate means of disposal shall be used.

6. Methane and other landfill gases shall be adequately vented, removed from the Landfill, or otherwise controlled to prevent the danger of explosion, adverse health effects, nuisance conditions, or the impairment of beneficial uses of water due to migration through the vadose zone. Discharger shall comply with all gas control requirements of Title 27.

7. All landfill surfaces and working faces shall be graded and operated to minimize rainfall infiltration into wastes, to prevent ponding of water, and to resist erosion. Positive drainage to divert rainfall runoff from areas containing waste shall be provided.

8. Storage facilities associated with precipitation and drainage control systems shall be emptied immediately following each storm, or otherwise managed, to maintain the design capacity of the system.

9. Throughout the Post-Closure Maintenance Period, the Discharger shall:

   a. Maintain the structural integrity and effectiveness of all containment structures, and maintain the final cover as necessary to correct the effects of settlement or other adverse factors.
   b. Maintain monitoring systems as specified in this Order.
   c. Prevent erosion and related damage of the final cover due to drainage.
   d. Protect and maintain surveyed monuments.

10. Discharge of waste shall not cause the release of pollutants, contaminants, or waste constituents in a manner, which could cause a condition of pollution or contamination to occur.

11. Discharge of waste shall not create nuisance, as defined by California Water Code §13050(m).

12. The Discharger shall prevent formation of a habitat for carriers of pathogenic microorganisms.

13. Wastes discharged in violation of this Order, shall be removed and relocated.

14. The Post-Closure Maintenance Period and Compliance Period ("Post-Closure Maintenance Period"), pursuant to Title 27 §20380(d)(1), §20410, and §20950, and 40 CFR §258.61(a), is a minimum of thirty years, and shall continue until the Water Board or Executive Officer determines waste discharged at the Landfill no longer poses a threat to water quality. The Post-Closure Maintenance Period start date shall correspond with the later of:
   - The final closure construction completion date; or,
   - The date the Executive Officer approves all documents, pursuant to Title 27 [i.e., §20323 – Construction Quality Assurance Plan, §20324(a) – Construction Quality Assurance Performance Standards, §20324(d)(1)(C) – Final Documentation Report and §21760(a)(1) – As Built Plans].

D. WATER QUALITY PROTECTION STANDARDS

1. The discharge of waste shall not cause a statistically significant difference in water quality over background concentrations for proposed Concentration Limits for each Constituent of Concern or Monitoring Parameter (per MRP No. R3-2007-0027) at the Point of Compliance. The Concentration Limits shall be maintained for as long as the waste poses a threat to water quality (i.e., for the Post-Closure Maintenance Period). Discharge of waste shall not adversely impact the quality of waters of the State.

2. Discharge of waste shall not cause concentrations of chemicals and radionuclides in groundwater downgradient of the Landfill to exceed the State Department of Health Services latest recommended Drinking Water Action Levels or Maximum Contaminant Levels of the California Code of Regulations Title 22, Division 4, Chapter 15, Article 5.5.

3. Discharge of waste shall not cause a violation of any applicable water quality objective for receiving waters adopted by the Water Board or the State Water Resources Control Board.

4. Discharge of waste shall neither cause nor contribute to any surface water impacts, including, but not limited to:

   a. Floating, suspended, or macroscopic particulate matter or foam.
   b. Increases in bottom deposits or aquatic growth.
   c. An adverse change in temperature, turbidity, or apparent color beyond natural background levels.
   d. The creation or contribution of visible, floating, suspended, or oil or other products of petroleum origin.
   e. The introduction or increase in concentration of toxic or other pollutants/contaminants resulting in unreasonable impairment of beneficial uses of waters of the State.

5. Constituents of Concern and monitoring parameters for groundwater and landfill gas are listed in MRP No. R3-2007-0027. Monitoring points and background monitoring points shall be those specified in MRP No. R3-2007-0027. Performance monitoring specifications for the alternative cover design are included in MRP No. R3-2007-0027.

E. PROVISIONS

1. Order No. 94-32, adopted by this Water Board on April 8, 1994, is hereby rescinded and the Landfill is no longer subject to the Super Order.

2. The Discharger is responsible for waste containment, monitoring and correcting any problems resulting from the discharge of waste during the Post-Closure Maintenance Period, as defined in Specification C.14.

3. The Discharger shall comply with "Monitoring and Reporting Program (MRP) No. R3-2007-0027," including any modifications of the MRP by the Executive Officer.

4. By **October 1, of each year,** all necessary runoff diversion and erosion prevention measures shall be implemented. All necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed.

5. By **October 1, of each year**, vegetation shall be planted (as necessary) and maintained over all slopes within the entire Landfill area to prevent erosion. Vegetation shall be selected to require a minimum of irrigation and maintenance and shall have a rooting depth consistent with cover design. Upon Executive Officer approval, non-hazardous sludge may be utilized as a soil amendment to promote vegetation. Soil amendments and fertilizers (including wastewater sludge) used to establish vegetation shall not exceed the vegetation's agronomic rates (i.e., annual nutrient needs), unless approved by the Executive Officer.

6. By **December 31, 2007**, the Discharger shall complete closure construction activities specified in the September 2005 Final Closure and Post-Closure Maintenance Plan and any subsequent Executive Officer approved amendments.

7. The Water Board will review and revise this Order as appropriate, should additional data become available through monitoring or investigation that indicates compliance with this Order is not adequately protective of water quality or for any other reason.

8. If the Discharger or the Water Board determines, pursuant to Title 27, §20420, that there is evidence of a release from any portion of the Landfill, the Discharger shall immediately

implement the procedures outlined in Title 27 Sections 20380, 20385, 20430 and MRP No. R3-2007-0027.

9. The Water Board shall be allowed, at any time and without prior notification:

   a. Entry upon the Landfill area or where records are kept under the conditions of this Order and MRP No. R3-2007-0027.
   b. Access to copy any records that must be kept under the conditions of this Order and MRP No. R3-2007-0027.
   c. To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order and MRP No. R3-2007-0027.
   d. To photograph, sample, and monitor for the purpose of showing compliance with this Order.

10. The Discharger shall take all reasonable steps to minimize or correct adverse impacts on the environment resulting from non-compliance with this Order.

11. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

    a. Violation of any term or condition contained in this Order.
    b. Obtaining this Order by misrepresentation, or by failure to disclose fully all relevant facts.
    c. A change in any condition or endangerment to human health or environment that requires a temporary or permanent reduction or elimination of the authorized discharge.
    d. A material change in character, location, or volume of the waste being discharge to land.

REPORTING

12. By **March 31, 2009**, the Owner shall record a notation on the deed to the Landfill property, or some other instrument that a potential purchaser normally examines during title search. The deed notation shall include a detailed description of the closed landfill, including a map. The description must include at a minimum: the date that closure was completed; the boundaries including height and depths of the filled area; if the site was closed in increments, the boundaries of each waste management unit; and the location where the Final Closure and Post-Closure Plan can be obtained. A copy of the notation will be included in the Landfill record and the Owner will submit a copy of the recorded notation to the Central Coast Water Board Executive Officer. The notation must in perpetuity notify any potential purchaser of the property that:

    a. The land has been used as a landfill.
    b. The land use is restricted by the approved post-closure maintenance plan, pursuant to Title 27, Section 21170. The deed notation must include all information required by Section 21170.
    c. Pursuant to Title 27, Section 21090, should the Discharger default in post-closure care, liability shifts to the new owner/operator.

13. Except for data the Water Board determines to be confidential under §13267(b)(2) of the California Water Code, all reports prepared in accordance with this Order shall be available for public inspection at the Water Board office.

14. Reports shall be submitted in advance of any planned changes in the permitted Landfill or any activity that could potentially result in noncompliance. Advance submittal should reflect relative need for Water Board review and concurrence.

15. The Discharger shall notify the Water Board with a written request of any proposed change in ownership or responsibility for construction or operation of the Landfill in accordance with Title 27, §21710(c)(1). The written request shall be given at least 90 days prior to the effective date of change in ownership or responsibility and shall:

    a. Be accompanied by an amended Report of Waste Discharge and any technical documents that are needed to demonstrate continued compliance with these Waste Discharge Requirements.
    b. Contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Water Board.
    c. Contain a statement indicating that the new owner or operator assumes full responsibility for compliance with this Order.

16. Request for change in ownership or responsibility may be approved or disapproved in writing by the Executive Officer. In the event of any change in ownership of this Landfill, the Discharger shall notify the succeeding owner or operator, in writing, of the existence of this Order. A copy of that notification shall be sent to the Executive Officer.

17. The Discharger shall furnish, within a reasonable time, any information the Executive Officer may request to determine compliance with this Order or to determine whether cause exists for modifying or terminating this Order.

18. The Discharger or persons employed by the Discharger shall comply with all notice and reporting requirements of the State Department of Water Resources and with concurrence of the Executive Officer regarding the construction, alteration, destruction, or abandonment of all monitoring wells used for compliance with this Order or with the MRP No. R3-2007-0027, as required by §13750.5 through §13755 and §13267 of the California Water Code.

19. Should the Discharger discover that it failed to submit any relevant facts or that it submitted incorrect information, it shall promptly submit the missing or corrected information.

20. All reports shall be signed as follows:

    a. By either a principal executive officer or ranking elected official.
    b. Their "duly authorized representative."
    c. A California Registered Civil Engineer or Certified Engineering Geologist must sign engineering reports.

21. The Discharger shall notify the Executive Officer, within 24 hours by telephone and within 14 days in writing, of:

    a. Any noncompliance potentially or actually endangering health or the environment.
    b. Any flooding, equipment failure, slope failure, or other change in Landfill conditions which could impair the integrity of waste containment facilities or of precipitation and drainage control structures.
    c. Leachate seep occurring on or in proximity to the Landfill

d. Violation of a Discharge Prohibition.

22. Reports of compliance or noncompliance with, or any progress reports on, final requirements contained in any compliance schedule shall be submitted within 14-days following each scheduled date. If reporting noncompliance, the report shall include a description of:

    a. The reason for non-compliance.
    b. A description of the non-compliance.
    c. Schedule of tasks necessary to achieve compliance.
    d. An estimated date for achieving full compliance.

23. Any noncompliance, which threatens the Landfill's containment integrity, shall be promptly corrected. Correction schedules are subject to the approval of the Executive Officer, except when delays will threaten the environment and/or the Landfill's integrity (i.e., emergency corrective measures). Corrections initiated prior to Executive Officer approval shall be so stated in the above described report.

24. By **October 1 of each year**, the Discharger shall submit a Wet Weather Preparedness Report (WWPR). The WWPR shall describe compliance with Provisions E.4 and E.5, above. The report shall also detail preparedness actions taken to ensure discharges to surface or groundwater do not occur during the impending rainy season, and ensure compliance with all other relevant Title 27 and 40 CFR Part 258 criteria.

25. By **January 31 of each year**, the Discharger shall submit a Compliance Report addressing compliance with all terms of this Order. The report can be included in the Landfill's Annual Report to the Executive Officer.

26. The Discharger shall maintain a financial assurance instrument to cover the estimated costs for initiating and completing corrective action of all known or reasonably foreseeable releases from the Landfill until the end of the Post-Closure Maintenance Period pursuant to CCR Title 27 (Sections 22207 [Closure Fund], 22212 [Post-Closure Fund], and 22220 et seq. [Corrective Action Fund]). By **June 30, 2008 and every five years thereafter,** the Discharger shall submit a Financial Assurance Report that either validates the financial assurance instrument's ongoing viability or proposes and substantiates any needed changes. Alternatively, the report may be included yearly with the annual monitoring report.

27. By **January 31, 2008 and every five years thereafter**, the Discharger shall submit an Evaluation Report containing the following:

    a. Define the current vertical and horizontal extent of the VOC pollution in groundwater.
    b. Summarize tabularly and graphically all historical monitoring information documenting both VOC and inorganic groundwater impacts and trends.
    c. Define and evaluate trends for VOCs and inorganic parameters; compare to previously made assumptions and conclusions.
    d. Evaluate the performance of existing corrective actions; propose modification and/or improvements as necessary.
    e. Evaluate the effectiveness of the monitoring well network to evaluate and document background conditions, groundwater impacts, effectiveness of corrective actions, and possible future releases; propose improvements as necessary.

28. By **September 30, 2010 and every five years thereafter**, the Discharger shall submit an updated Final Closure and Post-Closure Maintenance Plan. The Final Closure and Post-Closure Maintenance Plan shall describe the methods, controls, and maintenance used to ensure protection of the quality of surface and groundwater during post-closure maintenance period and during any proposed subsequent use of the land. The Final Closure and Post-Closure Maintenance Plan shall include:

    a. A description of the final cover including documentation of compliance with all applicable State and Federal regulations and as built plans or maps.
    b. An estimate of the waste disposal area and an estimate of the maximum inventory of wastes at the site over the active life of the Landfill.
    c. Documentation of all activities taken to close the Landfill, including Construction Quality Assurance, as required by CCR Title 27 and 40 CFR Parts 257 and 258 regulations.
    d. Estimated post-closure maintenance costs.
    e. A proposal for a trust fund or equivalent financial arrangement to provide sufficient funding for post-closure maintenance.
    f. The amount to be deposited in the trust fund or equivalent financial arrangement each year.

    The Final Closure and Post-Closure Maintenance Plan shall be prepared by or under the supervision of a California Registered Civil Engineer or Certified Engineering Geologist, and shall be consistent with all applicable state and federal regulations, including CCR Title 27 and 40 CFR Parts 257 and 258.

ENFORCEMENT

29. The Discharger must comply with all conditions of this Order. Non-compliance violates state law and is grounds for enforcement action or modification of the Order.

30. Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of §13267 of the California Water Code, or falsifying any information provided therein, is guilty of a misdemeanor.

31. The Discharger and any person who violates Waste Discharge Requirements and/or who intentionally or negligently discharges waste or causes or permits waste to be discharged into surface waters or groundwater of the state may be liable for civil and/or criminal remedies, as appropriate, pursuant to Sections 13350, 13385, and 13387 of the California Water Code.

32. Provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.

33. This Order does not authorize commission of any act causing injury to the property of another, does not convey any property rights of any sort, does not remove liability under federal, state, or local laws, and does not guarantee a capacity right.

34. All technical and monitoring reports submitted pursuant to this Order are being required pursuant to §13267 of the California Water Code. Failure to submit reports in accordance with schedules established by this Order, attachments to this Order, or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer may subject the Discharger to enforcement action pursuant to §13268 of the California Water Code.

35. The Discharger must comply with all conditions of these Waste Discharge Requirements. Violations may result in enforcement actions, including Water Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Water Board. [CWC Sections 13261, 13267, 13263, 13265, 13268, 13300, 13301, 13304, 13340, 13350].

36. The Discharger or Owner shall comply with the following submittal and implementation schedule for all tasks and/or reports required by this Order.

REPORT AND IMPLEMENTATION DATE SUMMARY

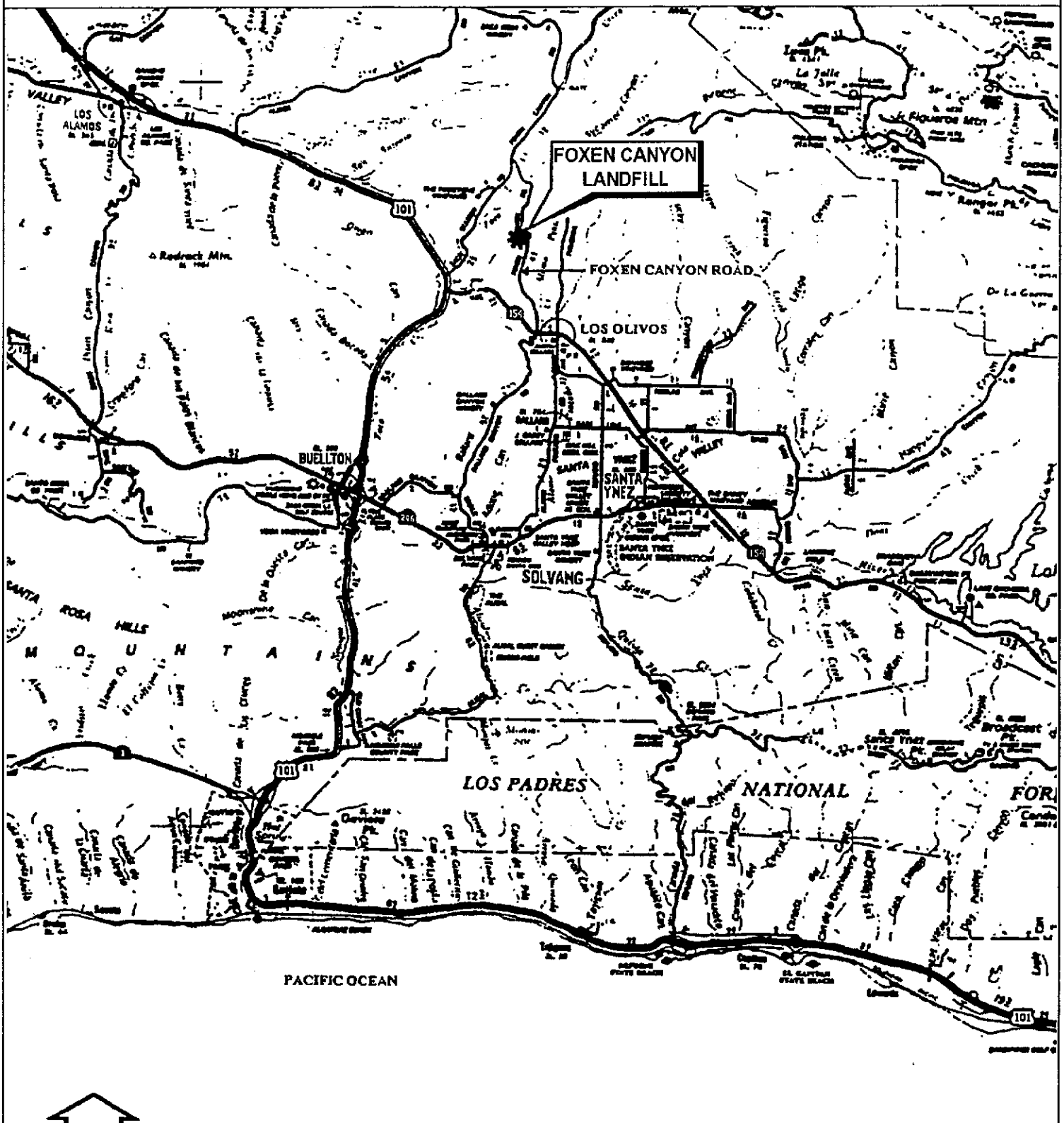
TASK	IMPLEMENTATION DATE
Runoff diversion and erosion prevention [Provision No. E.4]	October 1, of each year
Vegetation placement over entire Landfill area [Provision No. E.5]	October 1, of each year
Complete Closure Construction Activities [Provision No. E.6]	December 31, 2007
File Deed Notation [Provision No. E.12]	March 31, 2009
REPORT	**DUE DATE**
Wet Weather Preparedness Report [Provision No. E.24]	October 1, of each year
Compliance Report [Provision No. E.25]	January 31, of each year
Financial Assurance Report [Provision No. E.26]	June 30, 2008, every five years; or with annual monitoring reports
Evaluation Report [Provision E.27]	Jan. 31, 2008, every five years
Final Closure and Post-Closure Maintenance Plan [Provision E.28]	Sept. 30, 2010, every five years

I, Roger W. Briggs, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Coast Region, on September 7, 2007.

_____

Executive Officer

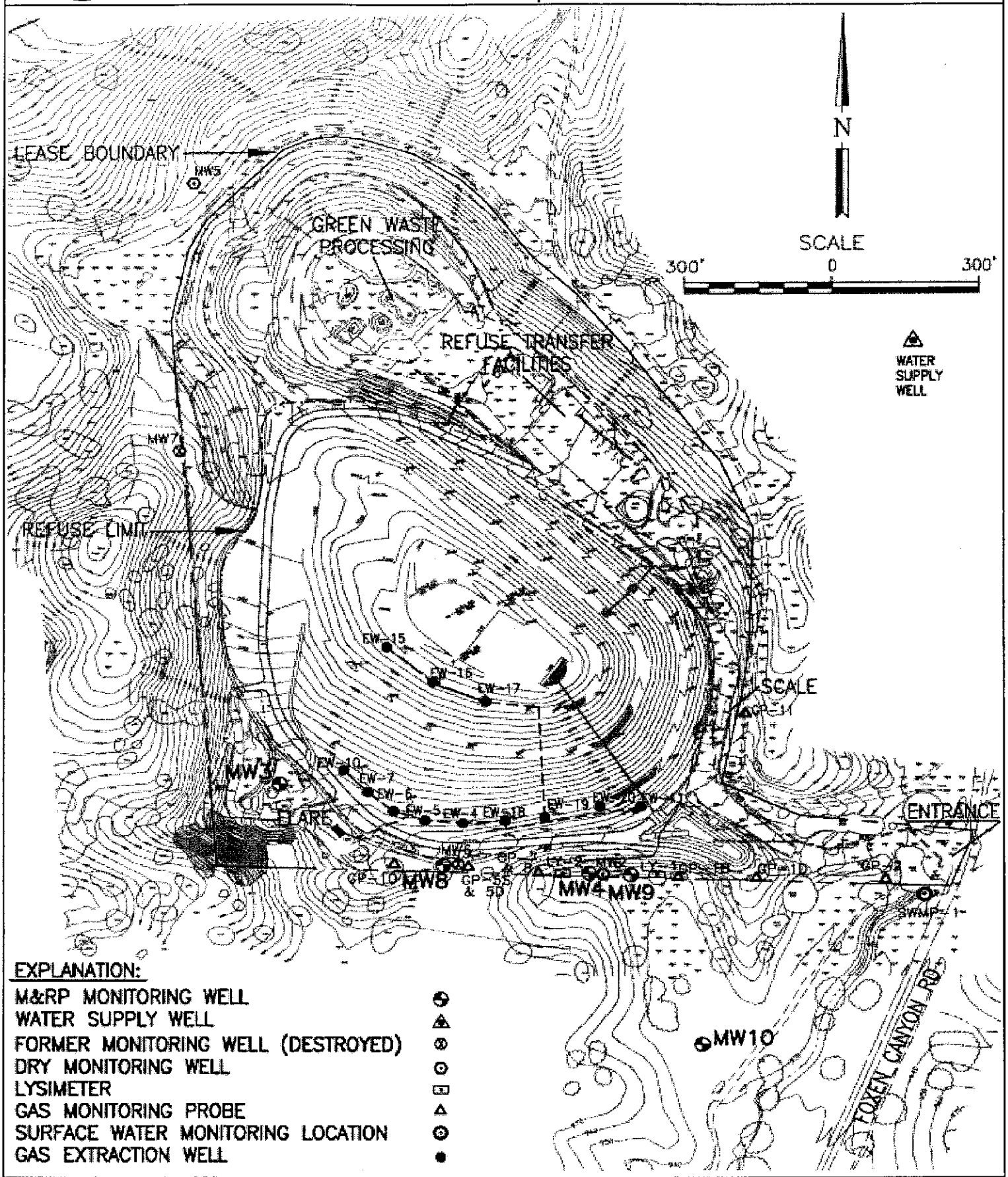
Foxen Canyon Closed Class III Landfill
Order No. R3-2007-0027
Location Map



Attachment 1

Foxen Canyon Closed Class III Landfill
Order No. R3-2007-0027

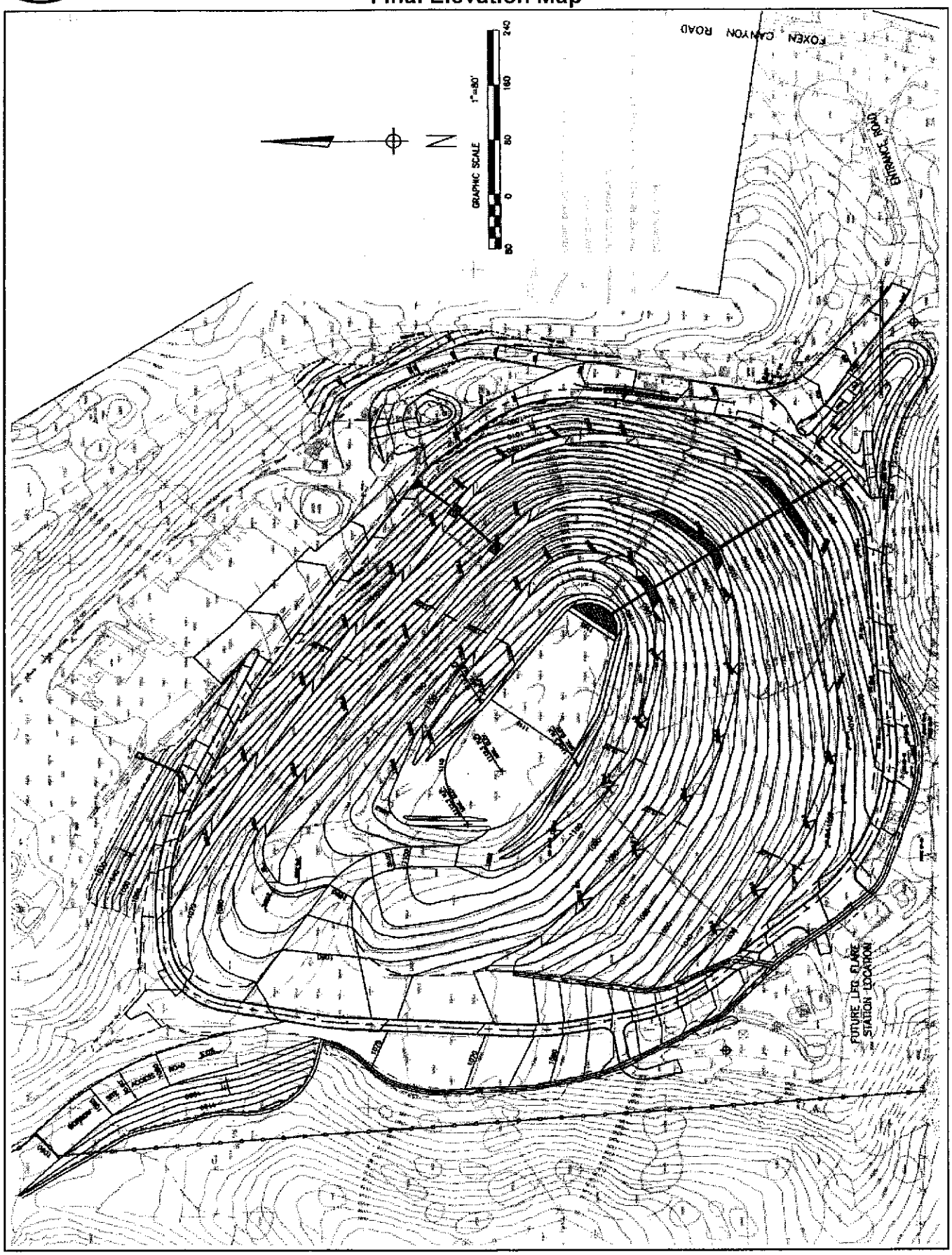
Site Map



Attachment 2

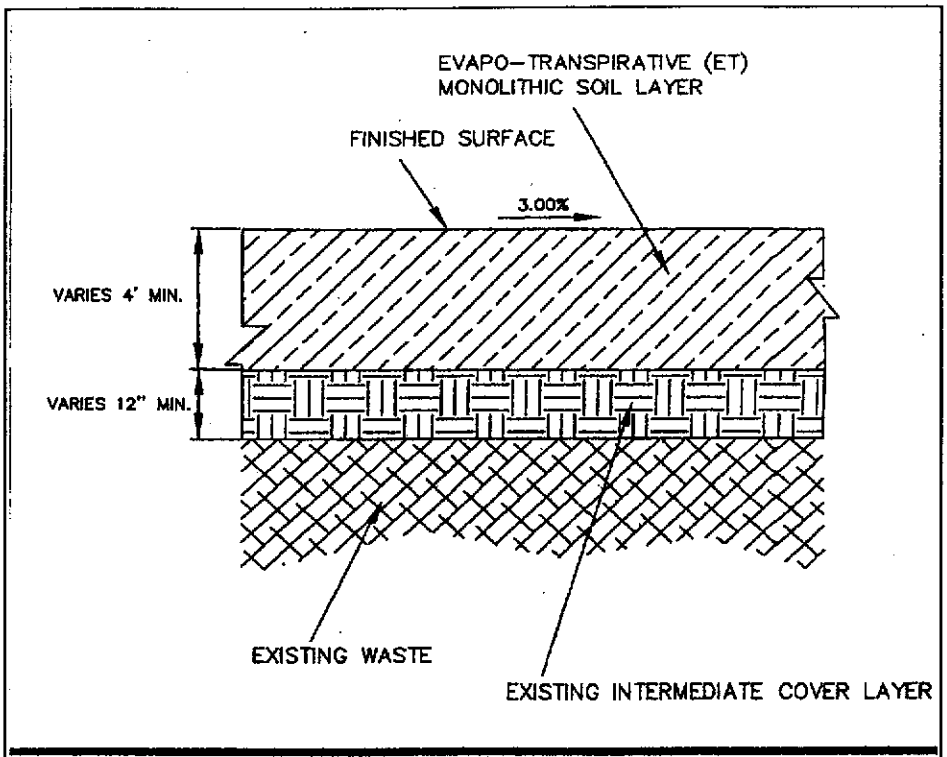
Foxen Canyon Closed Class III Landfill
Order No. R3-2007-0027

Final Elevation Map

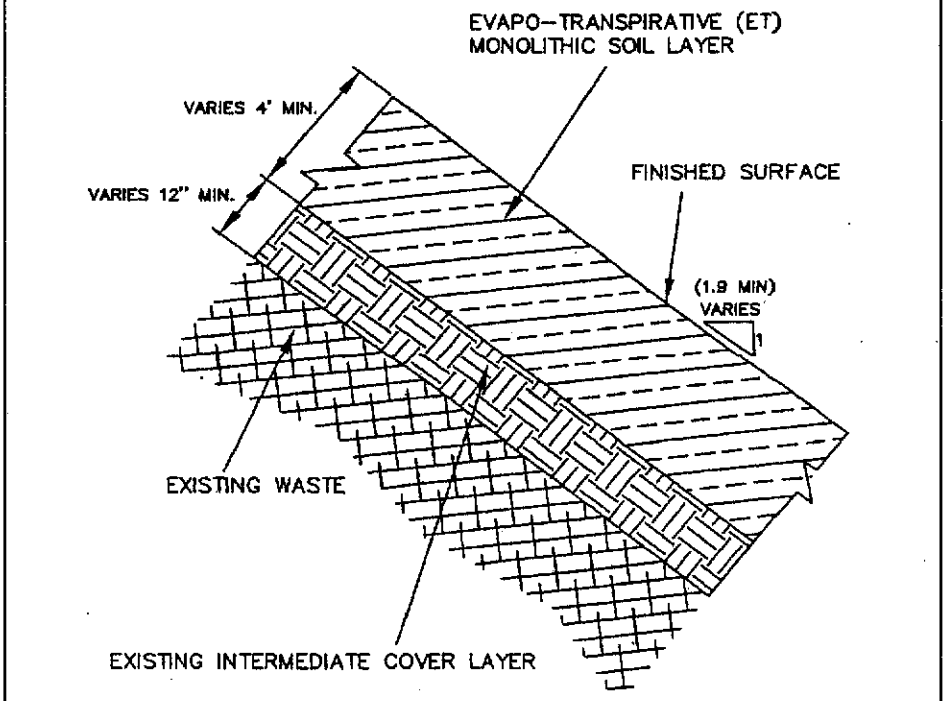


Attachment 3

Foxen Canyon Closed Class III Landfill
Order No. R3-2007-0027
Final Cover Design



TYPICAL DECK COVER SECTION (NTS)



TYPICAL SLOPE COVER SECTION (NTS)

Attachment 4

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401-7906

MONITORING AND REPORTING PROGRAM NO. R3-2007-0027
Waste Discharge Identification No. 3 420301002

FOR

FOXEN CANYON CLOSED CLASS III LANDFILL
SANTA BARBARA COUNTY

PART I: MONITORING AND OBSERVATION SCHEDULE

Unless otherwise indicated, all monitoring and observations shall be reported as outlined in **Part III**.

A. SITE INSPECTIONS

The Discharger shall inspect the Foxen Canyon Closed Class III Landfill (hereafter "Landfill"), in accordance with the following schedule, and record at a minimum, the Standard Observations listed below:

1. **Site Inspection Schedule**:

   a. During the wet season (**October through April**), following each storm that produces storm water runoff and discharge, with inspections performed at least monthly.
   b. During the dry season (**May through September**) minimum one inspection each **three month period.**

2. **Standard Observations**

   a. Along the Landfill perimeter
      i. Evidence of liquid leaving or entering the Landfill.
      ii. Evidence of odors.
      iii. Evidence of erosion and/or exposed waste.
      iv. Inspection of storm water discharge locations for evidence of non-storm water discharges during dry season, and integrity of drainage systems during wet season.
   b. At the Landfill
      i. Evidence of ponded water at any point on the Landfill.
      ii. Evidence of odors.
      iii. Evidence of erosion and/or exposed refuse.
      iv. Compliance with Storm Water Pollution Prevention Plan, insuring that the terms of the General Permit are properly implemented.
      v. Integrity of drainage systems.
   c. For Receiving Waters
      i. Floating and suspended materials of waste origin.
      ii. Discoloration and turbidity.
      iii. Evidence of odors.
      iv. Evidence of beneficial use – presence of water-associated wildlife.
      v. Estimated flow rate to the receiving water.

B. DRAINAGE SYSTEMS INSPECTIONS

The Discharger shall inspect all drainage control systems following each runoff-producing storm event and record the following information:

1. Whether stormwater sedimentation basins and drainage ditches contain liquids.

2. General conditions of the stormwater facilities.

3. Compliance with the Landfill's Stormwater Pollution Prevention Plan, insuring the terms of the General Industrial Stormwater Permit are properly implemented.

4. Steps taken to correct any problems found during inspection and date(s) when corrective action was taken.

C. RAINFALL DATA

The Discharger shall record the following information from the nearest monitoring station:

1. Total precipitation, in inches, during each **three month period.**

2. Number of storms (≥1 inch in 24 hours) received during each **three month period.**

3. Precipitation, in inches, and return interval (25 year, 100 year, etc.) during the most intense twenty-four hour storm of each **three-month period.**

D. POLLUTION CONTROL SYSTEMS INSPECTIONS

The Discharger shall inspect all pollution control systems and record the following information as appropriate:

1. Landfill Gas Extraction System

   a. Monthly - inspect entire landfill gas extraction system for system integrity. Include monthly inspection, maintenance and testing demonstrations in Semiannual monitoring reports;
   b. Monthly - Record volume of landfill gas extracted. Report monthly volume and annual sub-totals. Indicate how volume measurement is made;
   c. Monthly - Record volume of landfill gas condensate. Report monthly, semiannual and annual sub-totals in Semiannual reports and report disposal method utilized. When more than one disposal method is used, be volume specific for each method;
   d. Semiannually - Using most recent landfill gas and condensate contaminant concentration data and collection volume, compute contaminant mass removed on a semiannual basis.
   e. Annually - submit an annual operational summary for the landfill gas extraction system;
   f. Annually - Sample landfill gas in the collection header and analyze for volatile organic compounds (VOCs).
   g. Annually - Sample landfill gas condensate and analyze for VOCs; and
   h. Annually – Summarize and report all scheduled and unscheduled maintenance.

E. EVAPOTRANSPIRATIVE COVER PERFORMANCE MONITORING

The Discharger shall evaluate final cover performance for a minimum of five years starting in January 2009:

1. Soil Moisture Analyses – Soil moisture profiles shall be monitored at locations approved by the Executive Officer. Moisture shall be monitored using solid state electronic monitoring devices, installed to report soil moisture content at six-inch vertical intervals within the cover section with one monitoring point at the base of the cover. Monitoring probes shall be standard of practice soil moisture monitoring instruments,

calibrated and installed to manufacturer's specifications. A data logger shall be incorporated to collect and store soil moisture data on a hourly basis.

2. Climatological Data – A local climatological data station may be used to collect daily values of solar radiation, windspeed and direction, relative humidity, temperature, and precipitation for purposes of estimating potential evapotranspiration; however, these data must correlate with local site conditions.

3. Vegetation Data – On an annual basis, visually estimate the vegetation coverage and vegetative health over the landfill cover and compare that condition to the initial model assumptions and vegetative coverage from previous years.

4. Soil Profile Data – On an annual basis, visually inspect the cover including but not limited to three specific transects, describe the surface soil conditions, including any evidence of preferential pathways for percolation of moisture.

F. GROUNDWATER MONITORING

Unless otherwise authorized by the Executive Officer, all new groundwater-monitoring wells shall be incorporated into this monitoring and reporting program, and shall be sampled on a quarterly basis for a minimum of four consecutive quarters. Changes to the monitoring frequency, Monitoring Parameters or Constituents of Concern may be made upon receiving prior written approval from the Executive Officer. The Groundwater Monitoring Points shall include those shown in Table 1 below, locations are shown on R3-2007-0027, Attachment 2. For each monitored groundwater body, the water level in each well and piezometer shall be measured, at least quarterly, including the times of expected highest and lowest elevations of the water level. Horizontal and vertical gradients, groundwater flow rate, and direction for the respective groundwater body shall also be determined. Groundwater elevations for all wells in a given groundwater body shall be measured within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater flow rate and direction. The observed groundwater characteristics shall be compared with those of previous determinations, noting the appearance of any trends, and of any indications that a change in the hydrogeologic conditions beneath the site has occurred. This information shall be reported in the Semiannual Monitoring Reports.

G. STORM WATER MONITORING

Unless required more frequently due to an indication of a release, the storm water discharge point(s) shall be monitored in accordance with the facility's National Pollutant Discharge Elimination System permit (NPDES). Storm water is sampled at the last accessible point before the storm water is discharged offsite. Samples are collected for two storm events per year, and within the first hour of discharge. Analytical analysis of the storm water samples includes pH, total suspended solids, specific conductance, oil and grease, and iron. Storm water discharge point(s) shall be monitored In accordance with the facility's National Pollutant Discharge Elimination System permit (NPDES).

H. ANALYTICAL MONITORING AND MONITORING LOCATIONS

The Discharger shall monitor the Landfill monitoring points in accordance with the following schedule(s). Monitoring locations are shown on R3-2007-027, Attachment 2, and include groundwater monitoring wells, gas collection wells and headers, and surface water locations. Locations shall be sampled for Parameters shown in Table 2, and Constituents of Concern shown in Table 3.

1. **Groundwater and Surface Water Monitoring Parameters:** Monitoring Points shall be analyzed per Table 1 for the Monitoring Parameters listed in Table 2. The groundwater and surface water monitoring point locations are shown in R3-2007-0027, Attachment 2.

2. **Landfill Gas Migration Monitoring:**
   Gas probes and on-site structures adjacent to the waste deposit areas shall be monitored **quarterly** for the monitoring parameters in Table 4 except for VOCs. Monitoring results shall be submitted to the Board in Semiannual reports and include information specified in Title 27, Section 20934.

3. **Constituents of Concern:** The Constituents of Concern (COC) includes constituents listed in **Table 3,** below. Monitoring for COC shall encompass only those COCs that do not also serve as Monitoring Parameters. Analysis of COCs shall be carried out **once every five years**, at each of the site's groundwater and surface water monitoring points, unless required more frequently due to an indication of a release. Wells that have not previously been sampled for COCs shall be sampled and analyzed for all COCs within three months of this program becoming effective.

4. **Sample Procurement Limitation:** For any given monitored medium, the samples taken from Monitoring Points to satisfy the data analysis requirements for a given Monitoring Period shall be taken within a span not exceeding 30 days, and shall be taken in a manner that ensures sample independence to the greatest extent feasible [CCR Title 27, Section 20415(e)(12)(B)]. Sampling for successive monitoring periods shall occur at least 30 days apart.

TABLE 1
MONITORING POINTS

Monitoring Points (See Attachment 2)		Monitoring Program		Monitoring Parameters/Frequency		
Well ID	Monitoring Zone	Detection Monitoring	Corrective Action Monitoring	Parameters	COCs[6b]	Frequency[2]
MW-3	Paso Robles Formation	X		Table 2	Table 3	Semiannually
MW-4	Paso Robles Formation	X		Table 2	Table 3	Semiannually
MW-8	Paso Robles Formation	X		Table 2	Table 3	Semiannually
MW-9	Alluvium Perched Zone		X	Table 2	Table 3	Quarterly
MW-10	Alluvium Perched Zone		X	Table 2	Table 3	Quarterly
LY-1	Vadose Zone		X	Table 2	Table 3	Quarterly
LY-2	Vadose Zone		X	Table 2	Table 3	Quarterly
SWMP1	Surface Water	X		Table 2	Table 3	Semiannually[3] (During a flow event)
Gas Probes	Gas Migration	X		Table 4 (w/o VOCs)		Quarterly
Gas Collection Header	Collection System		X	Table 4		Annually
Gas Condensate	Collection System		X	VOCs		Annually

[1] Sample once every five years for full suite of analytes listed in Table 3. Next sampling event August 2008
[2] Quarterly monitoring shall be performed during Jan.-Mar., April-June, July-Sept., and Oct.-Dec. and includes water levels for all wells and piezometers. Semiannual monitoring shall be performed during Jan.-June and July-Dec.
[3] SWMP1 shall also be monitored if the Discharger observes an impact from the Landfill to runoff (ie. Leachate seep, exposed waste)

TABLE 2
MONITORING PARAMETERS

Parameter	USEPA Method[4]	Units
Well Water Elevation and Depth [1]	Sounder	0.01 feet
Electrical Conductivity	Field	µmhos/cm
pH	Field	pH Units
Temperature	Field	°F/°C
Turbidity	Field	NTU
Dissolved Oxygen	Field	Varies
Barium (dissolved) [2]	200.8/3015/6020A/6010B	mg/L
Chemical Oxygen Demand [2]	410.1	mg/L
Chloride [2]	300.0/9253	mg/L
Nitrate (as Nitrogen) [2]	300.0/353.2	mg/L
Sodium [2]	200.7/3015/6010B	mg/L
Sulfate [2]	300.0	mg/L
Total Dissolved Solids (TDS) [2]	160.1	mg/L
VOCs [3] (including oxygenates).	8260B	µg/L

[1] Water elevation shall be recorded from all monitoring wells and piezometers **QUARTERLY** as defined in Table I.
[2] Are subject to the statistical evaluation method described in Part II.D. of the Sample and Collection and Analysis Section, herein.
[3] The VOCs include all Volatile Organic Compounds (VOCs) detectable using USEPA Method 8260B including at a minimum all 47 VOCs listed in Appendix I to 40 CFR 258, and all unidentified peaks. Oxygenates include methyl tertiary-butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl tertiary-butyl ether (ETBE), tertiary-amyl methyl ether (TAME), and tertiary-butyl alcohol (TBA). VOCs will be subjected to the non-statistical evaluation method described in Part II.E. of the Sample Collection and Analysis Section, herein.
[4] Or most recently approved EPA method that provides the lowest practicable detection limits.

TABLE 3
CONSTITUENTS OF CONCERN

Parameter[1]	Method[2]	Units
Antimony	6010B	mg/L
Arsenic	7060A	mg/L
Barium	6010B	mg/L
Beryllium	6010B	mg/L
Cadmium	6010B	mg/L
Chromium	6010B/7196A	mg/L
Cobalt	6010B	mg/L
Copper	6010B	mg/L
Cyanide	9010 or 335.2	mg/L
Lead	7421	mg/L
Magnesium	6010B	mg/L
Mercury	7470A	mg/L
Nickel	6010B	mg/L
Selenium	7740	mg/L
Silver	6010B	mg/L
Sulfide	9030B or 376.1	mg/L
Thallium	7841	mg/L
Tin	6010B	mg/L
Vanadium	6010B	mg/L
Zinc	6010B	mg/L
Chlorophenoxy Herbicides	8151A	µg/L
Organochlorine Pesticides	8081A	µg/L
Organophosphorous Pesticides	8141A	µg/L
PCBs	8082	µg/L
Phthalate Esters	8060	µg/L
Phenols	8040	µg/L
Nonhalogenated Volatiles	8015M	µg/L
Semi-Volatile Organic Compounds	8270C	µg/L
Volatile Organic Compounds, Appendix II[3]	8260B	µg/L

(1) The Discharger shall analyze for all parameters using the USEPA analytical methods indicated above (or updated method), including all constituents listed in Appendix II to 40 CFR, Part 258. Wells that are normally monitored for COCs in Table 2 do not need to be re-sampled for same constituents in Table 3, during COC sampling events. The Quarterly, Semiannual, and COC monitoring event shall be conducted simultaneously.

(2) Or most recently approved EPA method that provides the lowest practicable detection limits.

(3) Includes MTBE (EPA Method 8260B), 1,4-Dioxane, TBA

TABLE 4
LANDFILL GAS MONITORING PARAMETERS

Parameter	Method	Units
Methane	Field	ppm
Carbon Dioxide	Field	ppm
Oxygen	Field	ppm
VOCs	TO-14	ppmv

PART II: SAMPLE COLLECTION AND ANALYSIS

A. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analysis shall be performed according to the most recent version of Standard U.S. Environmental Protection Agency (USEPA) methods (USEPA publication "SW-846"), and in accordance with a sampling and analysis plan approved by the Water Board's Executive Officer. All water analyses shall be performed by a laboratory certified for these analyses by the State of California Environmental Laboratory Program. Specific methods of analysis must be identified. The director of the laboratory whose name appears in the certification shall supervise all analytical work in his/her laboratory and shall sign reports of such work submitted to the Board. In addition, the Discharger is responsible for seeing that the laboratory analysis of samples from Monitoring Points meets the following restrictions:

1. **Methods Selection:** 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 analytical method having the lowest Method Detection Limit (MDL) shall be selected.

2. **Trace results:** Results falling between the MDL and the Practical Quantitation (PQL) Limit shall be reported as "trace", and shall be accompanied by both the (nominal or estimated) MDL and PQL values for that analytical run.

3. **Nominal or Estimated MDL and PQL:** The nominal MDL and PQL shall be derived by the laboratory for each analytical procedure, according to State of California laboratory accreditation procedures. Both 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 their effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived values, the results shall be flagged accordingly, and an estimate of the limit actually achieved shall be included.

4. **Quality Assurance and Quality Control (QA/QC) data:** All QA/QC data shall be reported along with the sample results to which it applies. Sample results shall be reported unadjusted for blank results or spike recovery. The QA/QC data submittal shall include:

    a. Method, equipment, and analytical detection limits.
    b. Recovery rates, an explanation for any recovery rate that is outside the USEPA-specified recovery rate.
    c. Results of equipment and method blanks.
    d. Results of spiked and surrogate samples.
    e. Frequency of quality control analysis.
    f. Chain of custody logs.
    g. Name and qualifications of the person(s) performing the analyses.

5. **Common Laboratory Contaminant:** QA/QC analytical results involving detection of common laboratory contaminants in any sample shall be reported and flagged for easy reference.

6. **Unknowns:** Non-targeted chromatographic peaks shall be identified, quantified, and reported to a reasonable extent. When significant unknown peaks are encountered, second column or second method confirmation procedures shall be performed in attempt to identify and more accurately quantify the unknown analyte(s).

7. **Other Contaminants:** In cases where contaminants are detected in QA/QC samples (i.e. filed, trip, or lab blanks), the accompanying results shall be appropriately flagged for easy reference.

B. CONCENTRATION LIMIT DETERMINATION

1. The concentration limit for Monitoring Parameters and Constituents of Concern shall be determined as follows:
   a. In cases where the constituent's Method Detection Limit is exceeded in less than ten percent of the historical samples, the MDL is the Concentration Limit.
   b. In cases where the constituent's MDL is exceeded in ten percent or more of the historical sample, a statistically based Concentration Limit must be defined and regularly updated as follows:
      i. Statistically analyze existing monitoring data, and propose, to the Executive Officer, statistically derived Concentration Limits for each Constituent of Concern and each Monitoring Parameter at each Monitoring Point for which sufficient data exists.
      ii. In cases where sufficient data for statistically determining Concentration Limits does not exist the Discharger shall collect samples and analyze for Constituent(s) of Concern and Monitoring Parameter(s) which require additional data. Once sufficient data is obtained, the Discharger shall submit proposed Concentration Limit(s) to the Executive Officer for approval. This procedure shall take no longer than two calendar years.
      iii. Sample and analyze new Monitoring Points, including any added by this monitoring and reporting program, until sufficient data is available to establish a proposed Concentration Limit for all COC and Monitoring Parameters. Once sufficient data is obtained the Discharger shall submit the proposed Concentration Limit(s) to the Executive Officer for approval. This procedure shall take no longer than two calendar years.

2. The Discharger shall review Concentration Limits annually. The past years data will be reviewed for application to revision of Concentration Limits. When appropriate, new Concentration Limits shall be proposed along with technical rationale for proposing the change.

C. RECORDS TO BE MAINTAINED

Records shall be maintained in accordance with CCR Title 27 §21720(f). 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 requested by the Executive Officer. Such records shall show the following of each sample:

1. Identification of sample, Monitoring Point from which the sample was taken, and individual that obtained the sample.

2. Date and time of sampling.

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

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

5. Results of analyses, and Methods Detection Limit and Practical Quantitation Limit for each analysis.

6. A complete chain of custody log.

D. STATISTICAL ANALYSIS

For Detection Monitoring during a COC event, the Discharger shall use statistical methods to analyze COCs that exhibit concentrations that equal or exceed their respective MDL in at least ten percent of applicable historical samples. For routine (i.e., semiannual) detection monitoring, the Discharger shall apply statistical methods for those Detection Monitoring Parameters defined in **Table 2** of Part I.G. The Discharger may

propose and use any statistical method that meets the requirements of California Code of Regulations, Title 27, Section 20414(e)(7). All statistical methods and programs proposed by the Discharger are subject to Executive Officer approval.

E. NON-STATISTICAL METHOD

The Discharger shall use the following non-statistical method for analyzing constituents, which are detected in less than 10% of applicable historical samples. This method involves a two-step process:

1. From constituents to whom the method applies, compile a specific list of those constituents, which exceed their respective MDL. The list shall be compiled based on either data from the single sample or in cases of multiple independent samples, from the sample, which contains the largest number of constituents.

2. Evaluate whether the listed constituents meet either of two possible triggering conditions. Either the list from a single well contains two or more constituents, or contains one constituent, which equals or exceeds its Practical Quantitation Limit. If either condition is met, the Discharger shall conclude that a release is tentatively indicated and shall immediately implement the appropriate re-test procedure under Part III.C.

F. RE-TEST PROCEDURE

1. In the event that the Discharger concludes that a release has been tentatively indicated, the Discharger shall carry out the appropriate reporting requirements and, within 30 days of receipt of analytical results, collect two new suites of samples for the indicated COC or Monitoring Parameter(s) at each indicating Monitoring Point, collecting at least as many samples per Monitoring Point as were used for the initial test.

2. Analyze each of the two suites of re-tested data using the same statistical method (or non-statistical comparison) that provided the tentative indication of a release. If the test results of either (or both) of the re-tested data suites confirm the original indication, the Discharger shall conclude that a release has been discovered and shall carry out the requirements of Part IV.C.

3. Re-tests shall be carried out only for the Monitoring Point(s) for which a release is tentatively indicated, and only for the COC for Monitoring Parameter(s) which triggered the indication. When an analyte of the VOC composite parameter is re-tested the results of the entire VOC composite shall be reported. In that case, a re-test shall validate the original release in the sample, which initiated the re-test.

PART III: REPORTING

A. MONITORING REPORT

A written Monitoring Report shall be submitted semi-annually by **July 31st and January 31st** of each year. Monitoring Reports will be submitted in an electronic format, with text, tables, figures, laboratory analytical data, and appendices placed on a compact disc in PDF format. Accompany the electronic version of the report will be a hard copy transmittal letter, with signatures of preparers and submitters (in accordance with Provision - Reporting E.13 & 21 of Waste Discharge Requirements Order No. R3-2007-0027), along with an abstract of the report text. The Monitoring Report shall address all facets of the Landfill's monitoring. Reports shall include, at a minimum, the following:

1. **Letter of Transmittal:** A letter transmitting the essential points shall accompany each report. The letter shall include a discussion of violations that occurred since the last such report was submitted. If no new violations have been discovered since the last submittal, this shall be stated in the transmittal letter. Both the monitoring report and the transmittal letter shall be signed by a principal executive officer at the level of vice president. Upon Water Board Executive Officer approval, the cited signature can be by a California Registered Civil Engineer or Certified Engineering Geologist who has been given signing

authority by the cited signatories. The transmittal letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

2. **Compliance Summary :** The update shall contain at least:

   a. Discussion of compliance with concentration limits. Release indications and actions taken.
   b. For each monitored groundwater body, calculate groundwater velocity and, based upon water level elevations taken during the Monitoring Period, graphically present groundwater flow direction under and around the Unit.

3. **Graphical Presentation of Analytical Data:** For each Monitoring Point in each medium, submit, in graphical format, the complete history of laboratory analytical data. Graphs shall effectively illustrate trends and/or variations in the laboratory analytical data (e.g., proper scale). Each graph shall plot a single constituent concentration over time at one (for intra-well comparison) or more (for inter-well comparisons) monitoring points in a single medium. Maximum contaminant levels (MCL) and/or concentration limits shall be graphed along with constituent concentrations where applicable. When multiple samples are taken, graphs shall plot each datum, rather than plotting mean values.

4. **Corrective Action Summary:** Discuss significant aspects of any corrective action measures conducted during the monitoring period. Calculate pollutant load removed from the sites impacted media by mass (water, gas, leachate) removal system(s). Mass removal calculations shall be based on actual analytical data as required by Part I.E. Present discussion and indications, relating mass removal data to the violation the corrective action is addressing.

5. **Evapotranspirative Cover Performance Evaluation:**

   a. Collect Part I.E. water balance parameter data over a five-year duration starting in January 2009.
   b. Provide the Executive Officer with Part I.E. parameter data on a semiannual basis; in addition, provide tables, graphs, and preliminary performance evaluation in two biannual reports (estimated submittal with the January 2011 and 2013 semiannual monitoring reports).
   c. At the end of the five-year monitoring period, model unsaturated zone soil moisture variability using rigorous unsaturated flow software (such as UNSAT-H, or an equivalent computer code) and representative soil permeabilities and soil-moisture characteristic curves.
   d. Use the results of Part 5.c modeling to check the integrity of the alternative cover design model by comparing the simulated versus actual moisture contents. If observed field conditions (moisture content, vegetation, and soil permeability) are not accurately represented by the design model, or if modeling does not mimic the moisture contents observed, then the model shall be re-calibrated using updated input parameters.
   e. Once consistency is achieved between the simulated and monitored data, compare the flux performance of the alternative to the prescriptive standard cover section, using actual water balance parameter data, and data from relative wet periods in the climatological record (if necessary). Provide the results in one final report at the end of the five-year monitoring period (estimated submittal due with the January 2014 semiannual monitoring report).
   f. If modeling results in percolation estimates that exceed the prescriptive performance criteria, then the Discharger shall develop a final cover evaluation report including recommendations for mitigation of observed cover conditions in accordance with the submittal requirements for an evaluation monitoring program and engineering feasibility study (Section 20415, CCR Title 27).

6. **Laboratory Results:** Laboratory results and statements demonstrating compliance with Part II (Sample Collection and Analysis) and results of analyses performed at the Landfill, outside the requirements of this MRP, shall be summarized and reported.

7. **Sampling Summary:**

   a. For each Monitoring Point addressed by the report, a description of: 1) the method and time of water level measurement; 2) the method of purging and purge rate and well recovery time; and 3) field parameter readings.
   b. For each Monitoring Point addressed by the report, a description of the type of sampling device used, its placement for sampling, and a description of the sampling procedure (number of samples, field blanks, travel blanks, and duplicate samples taken; the date and time of sampling; the name and qualification of the person actually taking the samples; description of any anomalies).

8. **Standard Observations:** A summary of Standard Observations made during the Monitoring Period as described in Part I.A.2.

9. **Map(s):** A map or an aerial photograph showing Monitoring Points, relative physical features, and with groundwater contours overlaid on the map or the aerial photograph to the greatest degree of accuracy possible.

10. **Proof of Notice to "Affected Persons"**

    a. Copy of mailing list of "Affected Persons."
    b. Copy of letter sent to "Affected Persons."

B. ANNUAL SUMMARY REPORT

The Discharger shall submit an annual report to the Water Board covering the previous monitoring year. The annual Monitoring Period ends on December 31st each year. This report may be combined with the Second Semiannual Monitoring Report of the year and shall be submitted no later than **January 31st** each year. The annual report must include the information outlined in Part III.A., above, and the following:

1. **Discussion:** Include a comprehensive discussion of the compliance record, a review of the past year's 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.

2. **Statistical Limit Review:** Statistically derived concentration limits shall be reviewed annually and revised as necessary. Data collected during the past year shall be discussed and considered for inclusion in, and determination of, proposed limits for the coming year. For statistical limits that are changed from the previous year, include a comprehensive discussion of the proposed limit for Executive Officer review and consideration.

3. **Analytical Data:** Complete historical analytical data presented in a tabular form and on 3.5" diskettes or CD-ROM, and Excel™ format or in another file format acceptable to the Executive Officer.

4. **Graphical Presentation of Data:** All monitoring analytical data obtained during the previous year, presented in tabular and graphical form as well as on **CDROM**, in MS-EXCEL format or in another file format acceptable to the Executive Officer. Additionally complete data histories of each well shall be submitted on **CDROM**.

5. **Gas Collection System:** Results of annual gas collection system and condensate testing as required by Part I.D.1. Where condensate is used for dust control, testing that shows the condensate is non-hazardous shall be submitted annually.

6. **Map(s):** A map, or set of maps, that indicate(s) the type of cover material in place (final, long-term intermediate, or intermediate) over inactive and completed areas.

C. CONTINGENCY RESPONSE

1. **Leachate Seep:** The Discharger shall, within 24 hours, report by telephone or electronic mail concerning the discovery of any previously unreported seepage from the Landfill disposal area. A written report shall be filed with the Water Board within **seven days**, containing at least the following information:

   a. **Map** - a map showing the location(s) of seepage.
   b. **Flow rate** - an estimate of the flow rate.
   c. **Description** - a description of the nature of the discharge (e.g., all pertinent observations and analysis).
   d. **Location** - Location of sample(s) collected for laboratory analysis, as appropriate.
   e. **Corrective measures** - A summary of corrective measures both taken and proposed.

2. **Physical Evidence of a Release:** If either the Discharger or the Water Board Executive Officer determines that there is significant physical evidence of a release pursuant to Title 27, Section 20385(a)(3), the Discharger shall conclude that a release has been discovered and shall:

   a. Within seven days notify the Water Board of this fact by certified mail (or acknowledge the Regional Water Board's determination).
   b. Carry out the appropriate Release Discovery Response for all potentially-affected monitored media.
   c. Carry out any additional investigations stipulated in writing by the Water Board Executive Officer for the purpose of identifying the cause of the indication.

3. **Responses to an Initial Indication of a Release**
   Should the initial statistical or non-statistical comparison (under Part II.D.) indicate that a new release is tentatively identified, the Discharger shall:

   a. Within 24 hours, notify the Board verbally or via electronic mail as to the Monitoring Point(s) and constituent(s) or parameter(s) involved;
   b. Provide written notification by certified mail within seven days of such determination; and,
   c. Either of the following:
      i Shall carry out a discrete re-test in accordance with Part II.F. 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 requirements of Part III.C.4. In any case, the Discharger shall inform the Board of the re-test outcome within 24 hours of results becoming available, following up with written results submitted by certified mail within seven days, or;
      ii Make a determination, in accordance with Title 27, Section 20420(k)(7), that a source other than the waste management unit caused the release or that the evidence is an artifact caused by an error in sampling, analysis, or statistical evaluation or by natural variation in the groundwater, surface water, or the unsaturated zone.

4. **Release Discovery Response**
   If the Discharger concludes that a new release has been discovered the following steps shall be carried out:

   a. If this conclusion is not based upon monitoring for COC, the Discharger shall sample for COC at Monitoring Points in the affected medium. Within seven days of receiving the laboratory analytical results, the Discharger shall notify the Executive Officer, by certified mail, of the concentration of COC at each Monitoring Point. This notification shall include a synopsis showing, for each Monitoring Point, those constituents that exhibit an unusually high concentration;
   b. The Discharger shall, within 90 days of discovering the release, submit to the Executive Officer a Revised Report of Waste Discharge proposing an Evaluation Monitoring and Reporting Program that:
      i. meets the requirements of Title 27, Sections 20420 and 20425; and