CALIFORNIIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER NO. R7-2005-0102

WASTE DISCHARGE REQUIREMENTS
FOR
IMPERIAL LANDFILL, INC., OWNER/OPERATOR
ALLIED IMPERIAL LANDFILL
CLASS III MUNICIPAL SOLID WASTE MANAGEMENT FACILITY
East of Imperial – Imperial County

The California Regional Water Quality Control Board, Colorado River Basin Region, finds that:

1. Imperial Landfill, Inc., 3354 Dogwood Road, Imperial, CA 92251 (hereinafter referred to as the discharger), is the owner and operator of Allied Imperial Landfill, 104 East Robinson Road, Imperial, California 92251 (hereinafter referred to as the Facility), submitted to the Regional Water Quality Control Board (Regional Board) a Report of Waste Discharge (ROWD) and an application for Waste Discharge Requirements (WDRs) (Form 200), both dated March 28, 2002.

2. The Facility was previously named Republic Imperial Landfill and was owned and operated by Republic Imperial Acquisition Corporation.

3. The Facility is located at 104 East Robinson Road in Imperial, California, as shown on the Site Map, Attachment A, attached hereto and made as part of this Board Order. Access to the site is by road via either State Route (SR) 111 or Dogwood Road as shown on the Site Map.

4. The Facility contains the following two (2) waste management units (WMUs):

   a. A closed, unlined, 31-acre Class III landfill currently regulated under Closure and Post-Closure Monitoring and Maintenance WDRs, Board Order No. 98-082.

   b. An active, lined, Class III landfill. This Board Order updates existing Board Order No. R7-2003-100 for the phased expansion of this Class III landfill to a planned 42-acre lined Class III landfill. Phases I, II, III, IVa and Va have been previously constructed and comprise approximately 28 acres. They are currently active.

5. Definitions: The following terms used in this Board Order are as defined:

   a. Discharger – Any person who discharges waste that could affect the quality of the waters of the state, and includes any person who owns a waste management unit or who is responsible for the operation of the waste management unit (Title 27, California Code of Regulations).

b. Waste Management Facility (WMF) – The entire parcel of property at which waste discharge operations are conducted. Such a facility may include one (1) or more waste management units.

c. Waste Management Unit (WMU) – An area of Land, or a portion of a Waste Management Facility at which waste is or was discharged. The term includes containment features, ancillary features for precipitation and drainage control and monitoring.

d. Landfill – A waste management unit at which waste is discharged in or on land for disposal. It does not include surface impoundments, waste piles, land and soil treatment.

e. Municipal Solid Waste (MSW) - as defined in 40 CFR Part 258.

6. The WMU is currently regulated by WDRs found in Board Order No. R7-2003-0100, adopted on May 7, 2003. This Board Order updates Board Order No. R7-2003-100 to incorporate the laws and regulations as set forth in the California Water Code and combined State Water Resources Control Board (SWRCB)/California Integrated Waste Management Board (CIWMB) Regulations, Division 2, Title 27 (hereinafter referred to as Title 27) and federal regulations under Subtitle D of the Resource Conservation and Recovery Act (RCRA).

7. On September 15, 1993, the Regional Board adopted Board Order No. 93-071, which amended all municipal solid waste landfill Board Orders to comply with federal regulations.

8. The 42- acre WMU will have a total volume of approximately 3,821,475 cubic yards (cy). As of May 2005 approximately 1,503,502 cy have been utilized.

9. The unlined 31-acre Class III WMU is closed. It was capped with a four-foot thick monolithic cover in 2002. The capped unit was also covered with a gravel armor to further protect against erosion.

10. The Facility site encompasses all of Tract 223 and a portion of Tract 197 in T15S, R14E, SBB&M, the area of 170 acres as shown on Attachment A appended hereto and made a part of this Board Order. The site is utilized as follows:

a. An approximately 31-acre landfill that is unlined and closed in the eastern portion of the Facility.

b. The active, western WMU has been constructed in four (4) previous phases. This WMU is planned to encompass approximately 42 acres when all phases are built. All phases in this WMU are lined with a composite liner that consists of two (2) feet of clay and a 60-mil High Density Polyethylene (HDPE) and a Leachate Collection and Removal System (LCRS).

c. An approximately 2 acre unlined area designed for short-term storage of green waste that is chipped and used for daily or intermediate cover.

d. Office and shop buildings are located at the entrance to the facility in the southwest corner of the property, and a scale house is located approximately 1,000 feet northwest of the entrance, near the middle of the property. As the facility develops the scale house and/or entrance may be relocated east of its existing location.

11. Land use within 1,000 feet of the Facility as shown on the Site Map is as follows:

    a. Fallow and cultivated agricultural fields.
    b. Five (5) residences located within 900 feet of the Facility property boundary.

12. The Facility is bounded on the north by McCall Drain 1B, the Date Canal, and Neckel Road; on the east by Parcel B, Tract 197; on the south by the Dogwood Canal, the McCall Drain 1, and Robinson Road; and on the west by Tract 222.

13. The Facility is not located in a 100-year flood plain.

14. The Facility is centrally located within the Imperial Valley Physiographic Province. The valley slopes gently to the northeast on a very flat plain. General land elevation is between 75 and 85 feet below mean sea level (MSL) in the vicinity of the Facility. The Imperial Fault scarp, part of an active fault system, crosses the Facility site and adds about 10 to 15 feet of local relief at the northeast corner of the property. Along the eastern boundary of the Facility, vertical components of movement of the Imperial Fault have produced a scarp that adds about 10 to 15 feet to the local elevation on the western side of the fault trace. This scarp is dissected at generally right angles to the fault trace by erosional gullies and arroyos except where obliterated by man-made construction. At the Facility, unconsolidated Quaternary clay, silt, and fine sand have been deposited by ancient Lake Cahuilla and local sediments from recent erosional reworking form the surficial deposits.

15. The dominant geological feature in the region is the Salton Trough, which forms part of the Colorado Desert Geomorphic Province. The Imperial Valley is essentially a flat featureless alluvial basin along its western and eastern boundaries. Below the alluvial cover of Imperial Valley lies an unexposed succession of Tertiary and Quaternary sedimentary rocks thought to be at least 20,000 feet thick. Surface sediments consist of Holocene clay and silt alluvium grading to sandy gravel near the mountains.

16. During Quaternary time, from at least 13,000 years ago to as recently as several hundred years ago, the central parts of Imperial Valley, including the site, lay beneath ancient Lake Cahuilla. Lake Cahuilla originated by periodic over flow and diversions of the Colorado River into the Salton Basin. Sediments from Lake Cahuilla consist primarily of silt and clay in the central portion of the basin.

17. Active fault zones occur in the Valley. The principal fault zones consist of (1) the San Andreas system which parallels the northeast margin of the Salton Trough and obliquely transects its southwest flank; (2) the Clark and Coyote Creek branches of the San Jacinto fault zone which transects the southwest flank of the Salton Trough; and (3) the Elsinore fault zone along the southwest edge of the trough, (4) the Brawley fault zone, including the seismic zone that marks its northward extension, and the Imperial, Superstition Hills, and the Superstition Mountain faults are situated on or nearest the axis of the trough. With the exception of the Brawley fault zone, the above-named faults display the surficial features characteristic of the San Andreas system throughout California; linearity, northwest-southeast trend, physiographic evidence of recent activity and right-lateral displacement.

18. The dominant tectonic feature in the area is the Imperial Fault. The fault trends southeast through the Imperial Valley, cuts across the northeast corner of the WMF property west of State Route 111 and passes east of the City of El Centro. Movement on the Imperial Fault is well documented from extensive field investigations conducted after the Imperial Valley earthquakes of 1940 and 1979. Although displacement along the fault is generally right lateral, some vertical components of displacement exist.

19. The discharger reports that studies conducted since 1992 have revealed the presence of other faults, roughly parallel to but smaller than the Imperial Fault, trending through areas of the central portion of the WMF. In 1979, two (2) surface ruptures were mapped by the U.S.G.S. following the earthquake along the Imperial Fault in October 1979. Initial shallow trench evaluation of the two (2) surface ruptures in 1992 was conducted by Cascade Pacific Engineering, Inc., resulting in verification of subsurface deformation coincident with the northern mapped rupture. Subsequently, two (2) additional shallow trenching investigations were conducted by EMCON. The objective of the investigations was to document any fault or fault-related features regardless of size. The results of the investigations include evidence of a number of discontinuities, ancillary faults existing along a north/south zone in the central portion of the Facility. The faults in areas of the central zone appear to be ancillary to the Imperial Fault. In contrast to the strike-slip displacement of the Imperial Fault, relative movement of the ancillary faults appears to be normal, with the downthrown side being to the east.

20. The discharger reports that there are no known Holocene faults within 200 feet of the footprint of the 42-acre western WMU.

21. The climate of the region is arid. Climatological data obtained from measurements from 1951 to 1980 indicate an average seasonal precipitation of 3 inches and an average annual pan evaporation rate greater than 75 inches.

22. The wind direction follows two (2) general patterns:

    a. Seasonally from fall through spring, prevailing winds are from the west and northwest. Most of these winds originate in the Los Angeles basin area. Humidity is lowest under these conditions.

b. Summer weather patterns are often dominated by an intense, heat-induced low pressure area that forms over the interior deserts, drawing air from the area to the south of the Facility. Humidity is highest under these conditions.

23. There are no perennial natural surface water features at the site. Manmade surface water structures consist of a canal system that conducts water from the All-American Canal and agricultural drains which lead to the Alamo and New Rivers, and ultimately discharge to the Salton Sea. These are:

    a. Canals: On the south side, lying between the Facility and McCall Drain 1, the Dogwood Canal feeds irrigation water to the areas east of the Facility. The Date Canal lies just north of McCall Drain 1B along the north boundary of the site. During closure activities of the 31-acre unlined landfill, portions of the McCall Drain 1B to the north and the Dogwood Canal to the south were piped underground.

    b. Drains: The two (2) local agricultural drains in the adjoining area, the McCall Drains 1B and 1 are located on the north side and south side of the Facility, respectively.

24. Surface drainage from the WMU is controlled and directed into the drainage system via berms, ditches, and culverts. The WMU was re-contoured in early 1992 to minimize ponding of water in interior areas and to prevent uncontrolled runoff from eroding exterior slopes of the 31-acre landfill. Surface drainage from exterior slopes along the south, east, and north sides of the 31- acre landfill is now prevented from leaving the site by exterior berms which direct runoff into surface channels and into the McCall Drain 1B via a 12-inch outlet pipe located near the northeast corner of the site. The drains carry very low quality water relative to the irrigation canals, typically showing high levels of conductivity due to dissolved salts derived from natural and agricultural sources.

25. The discharger reports that, in general, ground water in Imperial Valley is of poor quality. The total dissolved solids range from approximately 15,000 ppm in shallow ground water to 2,000 ppm in some deeper aquifers found 1,000 feet below ground surface.

26. The discharger has performed several hydrological and geological studies, including drilling geotechnical wells to log subsurface conditions and establish water levels beneath the WMF. The discharger reports that:

    a. Average depth to shallow ground water ranges from 8 to 14 feet below ground surface.

    b. The general ground water flow at the Facility is from the southwest to the northeast.

    c. In-situ permeability determined from slug tests averaged approximately 3.3×10^{-4} cm/sec.

d. The shallow aquifer appears confined. However, the deeper aquifer is under pressure and has an upward vertical gradient.

27. Federal regulations for storm water discharges were promulgated by the U.S. Environmental Protection Agency (EPA) (40 CFR Parts 122, 123, and 124). The regulation require specific categories of facilities which discharge storm water associated with industrial activity to obtain NPDES permits and to implement Best Conventional Pollutant Technology (BCPT) to reduce or eliminate industrial storm water pollution.

28. The State Water Resources Control Board adopted Order No. 97-03-DWQ (General Permit No. CAS000001) specifying WDRs for discharges of storm water associated with industrial activities, excluding construction activities, and requiring submittal of a Notice of Intent (NOI) by industries to be covered under the Permit.

29. The Water Quality Control Plan for the Colorado River Basin Region of California (Basin Plan) was adopted on November 17, 1993, and designates the beneficial uses of ground and surface waters in this Region.

30. The Allied Imperial Landfill is located in the Imperial Hydrologic Unit. The beneficial use of groundwater in the Imperial Hydrologic Unit are:

    a. Municipal (MUN)[1]
    b. Industrial (IND)

31. The discharger currently accepts municipal solid waste (MSW) from the cities of Imperial, Calipatria, and El Centro, and other parties in the surrounding unincorporated areas of Imperial County. The discharger does not plan to accept waste from outside of Imperial County, except for a limited amount from the Borrego Springs area.

32. Based on the projected waste generation rate and the current remaining capacity in the WMU, the Facility is expected to accept waste through 2012.

33. The discharger reports that currently accepted waste types include residential refuse, commercial solid wastes, industrial wastes, construction and demolition debris, inert solid fill, and tires. No hazardous or designated wastes can be accepted for disposal at the Allied Imperial Landfill.

34. The County of Imperial, on September 3, 1996, certified a Final Environmental Impact Report (EIR) for the proposed expansion of the facility, dated July 1996, as adequate and in compliance with the California Environmental Quality Act (CEQA, Public Resources Code Section 21000 et seq.).

35. The proposed project that was the subject of the 1996 EIR was a 42-acre expansion, to be developed in stages. After the County certified the EIR, the Board issued Board Order No. 97-073 for earlier phases of the landfill. Order 97-073 was later updated to Board

[1] The actual municipal usage is limited to only a small portion of the ground water unit.

Order No. R7-2003-0100. This Order updates WDRs for the final phases of the expansion discussed in the EIR. The mitigation measures set forth in this Order will reduce any potential environmental impacts of the project to less than significant.

36. The monitoring and reporting requirements in Monitoring and Reporting Program No. R7-2005-0102, and revisions thereto, are necessary to determine compliance with these WDRs and to determine the facility's impacts, if any, on receiving water.

37. The Board has notified the discharger and all known interested agencies and persons of its intent to issue these WDRs and has provided them with an opportunity for a public meeting and an opportunity to submit comments.

38. The Board in a public meeting heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED that Board Order No. R7-2003-100 be rescinded, and in order to meet the provisions contained in Division 7 of the California Water Code, RCRA Subtitle D and regulations adopted thereunder, and the provisions of the Federal Clean Water Act and regulations and guidelines adopted thereunder, the discharger shall comply with the following requirements regarding the discharge of waste to the new 42-acre WMU.

A. Specifications

1. The treatment or disposal of wastes at this WMU shall not cause pollution or nuisance as defined in Sections 13050(l) and 13050(m) of Division 7 of the California Water Code.

2. "Treated wood" wastes may be discharged but only to an area equipped with a composite liner and leachate collection and removal system and shall be handled in accordance with California Health and Safety Code Sections 25143.1.5 and 25150.7. "Treated wood" means wood that has been treated with a chemical preservative for purposes of protecting the wood against attacks from insects, microorganisms, fungi, and other environmental conditions that can lead to decay of the wood and the chemical preservative is registered pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. Sec. 136 seq.). This may include but is not limited to, waste wood that has been treated with chromated copper arsenate (CCA), pentachlorophenol, creosote, acid copper chromate (ACC), ammoniacal copper arsenate (ACA), ammoniacal copper zinc arsenate (ACZA), or chromated zinc chloride (CZC).

3. Treated wood must be managed to ensure consistency with Sections 25143.1.5 and 25150.7 of the Health and Safety Code. If a verified release is detected from the unit where treated wood is disposed, the disposal of treated wood will be terminated at the unit with the verified release until corrective action ceases the release.

4. The WMU shall be protected from any washout or erosion of wastes or covering material and from inundation due to rainfall.

5. Drainage features within the WMU shall be designed to control the runoff from a 100-year, 24-hour, storm event.

6. The discharger shall implement a self-monitoring and reporting program in order to detect, at the earliest opportunity, any unauthorized discharge of waste constituents from the WMU, or any unreasonable impairment of beneficial uses associated with (caused by) discharges of waste to the WMU.

7. Wastes shall not be discharged on any ground surface that is less than five (5) feet above the highest anticipated ground water level.

8. Pursuant to Title 27 of the California Code of Regulations, each future WMU of this Facility shall have:

   a. A liner
   b. A leachate collection and removal system (LCRS);
   c. A gas collection/removal system; and
   d. A vadose zone leachate and gas monitoring system, if technically feasible.

   The nature and extent of the vadose zone leachate and gas (if applicable) monitoring system shall be reviewed, when appropriate, to determine whether expanded or reduced monitoring requirements shall be implemented based on actual operating experience. The burden of demonstrating the appropriateness of any reduced monitoring requirements shall be placed upon the discharger.

9. Leachate collection sumps shall be designed and operated to keep leachate levels at a minimum and provide easy access for inspection and monitoring, and shall have double containment. Detailed designs for leachate collection sumps for the WMU shall be approved by the Regional Board's Executive Officer prior to construction.

10. The discharger shall provide interim cover to the MSW as follows:

    a. Daily cover – a minimum of six (6) inches of compacted soil, or alternative material, shall be placed over the exposed waste at least once in every 24 hours.

    b. Intermediate cover – a minimum of 12 inches of compacted soil, or equivalent, shall be placed over the waste area that has been inactive for a period greater than 180 days. Existing daily cover may be used as part of the intermediate cover.

11. The intermediate and daily covers for the WMU shall:

    a. Control disease vectors pursuant to 40 CFR Section 258.22;

    b. Minimize infiltration into the WMU;

c. Control erosion and convey run-off to the storm water management system at manageable, non-scouring flow rates;

d. Control and contain landfill gas; and

e. Minimize the potential for windblown litter and particulates.

12. Any alternative materials used for daily or intermediate cover that may have a different characteristic and thickness, compared to the requirements of Specifications 8 and 9 of this Board Order, shall be approved by the Regional Board's Executive Officer prior to use. The discharger shall demonstrate that the alternative material and thickness will control disease vectors without presenting a threat to human health and the environment.

13. All LCRS's shall be designed to:

    a. Function without clogging throughout the active life of the WMF and during the post-closure maintenance period.

    b. Maintain less than 1-foot depth of leachate over any of the landfill liners, except for conditions where the first lift of the MSW has not been placed in a segment.

    c. Remove twice the maximum anticipated daily volume of leachate from the landfill.

    d. Be of sufficient strength and thickness to prevent collapse under the pressures exerted by the overlying waste, waste cover material, and by any equipment used at the landfill.

14. The discharger shall test the LCRS on an annual basis. A detailed plan for testing the LCRS performance shall be submitted to the Regional Board's Executive Officer for approval. The discharger shall submit the test results to the Regional Board.

15. Any monitoring and reporting of the leachate shall be done as specified in the self-monitoring program and revisions thereto.

16. The discharger shall place any leachate removed from the LCRS sumps into a leachate management system as specified below in Specification 16 of this Board Order.

17. Prior to operation, the discharger shall submit a detailed Leachate Management Plan for the Facility acceptable to the Regional Board's Executive Officer. This plan shall estimate the quantity of leachate produced and stored, and describe the ultimate disposal point of the leachate. The report shall evaluate the quantity of the leachate produced from each WMU and determine the maximum safe operating level for the leachate containment facilities. If leachate collects, a plan shall be provided with a detailed assessment of alternative disposal methods together with a plan for implementation of preferred alternatives. If re-circulation of leachate is to be considered, the discharger must

demonstrate that the quantity of leachate being re-circulated will not result in a solid-to-liquid ratio less than 5:1 by weight in that WMU at the Facility.

18. The discharger shall ensure that the foundation of the WMU and the structures which control leachate, surface drainage, erosion and gas mitigation for the WMU are constructed and maintained to withstand conditions generated during a Maximum Probable Earthquake (MPE) event without damage that is not readily repairable. Leachate sumps, and interim and final berms shall be designed and constructed to withstand the MPE at the Facility.

19. For any material used for all or any portion of the leachate detection/monitoring system, base liner, LCRS, horizontal and vertical gas collection/removal systems, and daily, intermediate, and final cover, the discharger must demonstrate to the satisfaction of the Regional Boards' Executive Officer that the material is compatible chemically and biologically with the MSW leachate. The discharger must also demonstrate, to the satisfaction of the Regional Board's Executive Officer, that material used for any portion of the WMU has proper shear strength to withstand all the applicable normal and shear forces exerted onto these materials during and after the closure of the Facility.

20. Adequate measures shall be taken to assure that flood or surface drainage waters do not erode or otherwise render portions of the Facility inoperable.

21. Surface drainage from tributary areas, and internal site drainage from surface or subsurface sources, shall not contact or percolate through the waste discharged at this WMU. Storm water drainage ditches shall be constructed to ensure that all non-contact surface water runoff is diverted away from the disposal area, such that it does not contact the MSW or leachate (except for contact surface water, which shall be contained).

22. The exterior surfaces of the WMU area, including daily cover, and intermediate and final covers shall be graded and maintained to promote lateral run-off or precipitation and to prevent ponding.

23. The discharger shall follow the Water Quality Protection Standards (WQPS) for detection monitoring established by the Regional Board in this Board Order pursuant to Title 27, Section 20390. The following are five (5) parts of WQPS as established by the Regional Board (the terms used in this Board Order regarding monitoring are defined in Part 1 of the attached Monitoring and Reporting Program No. R7-2005-0102 and revisions thereto, which are hereby incorporated by this reference.):

    a. The discharger shall test for the monitoring parameters and Constituents of Concern (COCs) listed in Monitoring and Reporting Program No. R7-2005-0102, and revisions thereto, from any samples taken from the following:

        1. Water bearing media (i.e., groundwater, surface water, and liquids in the vadose zone)

2. Perimeter gas monitoring system

b. Concentration Limits – The concentration limits for each monitoring point assigned to a detection monitoring program (Monitoring and Reporting Program Part II), and the concentration limit for each COC (or monitoring parameters) shall be the background values as obtained during that reporting period (defined in Monitoring and Reporting Program Part I).

c. Monitoring points and background monitoring points for detection monitoring shall be those listed in Part II of the attached Monitoring and Reporting Program No. R7-2005-0102, and any revised Monitoring and Reporting Program approved by the Regional Board's Executive Officer.

d. The point of compliance is the property boundary or as otherwise approved by the Regional Board's Executive Officer, and extends down (vertically) through the zone of saturation.

e. Compliance period – The estimated duration of the compliance period for the Allied Imperial Landfill is 6 years. Each time a release is discovered, the WMU shall begin a compliance period on the date the Regional Board directs the discharger to begin an Evaluation Monitoring Program (EMP). If the discharger's Corrective Action Program (CAP) has not achieved compliance with the Standard by the scheduled end of the compliance period, the compliance period shall be automatically extended until the WMU has been in continuous compliance for at least three (3) consecutive years.

24. The discharger shall report monitoring parameters from the constituents listed in Monitoring and Reporting Program No. R7-2005-0102, and future revisions thereto. These monitoring parameters are subject to the most appropriate statistical or non-statistical tests under Monitoring and Reporting Program No. R7-2005-0102, Part III A, and any revised Monitoring and Reporting Program approved by the Regional Board's Executive Officer.

25. The discharger shall, for any future expansion, adequate ground water, soil-pore liquid, or leachate monitoring devices to comply with the Monitoring and Reporting Program No. R7-2005-0102 and revisions thereto. The discharger shall submit to the Regional Board's Executive Officer, 120 days prior to construction, a plan for these installations.

26. Methane, carbon dioxide, and other landfill gases shall be adequately vented, removed from each WMU of the Facility, or otherwise controlled to prevent the danger of explosion, underground fires, nuisance conditions, or the impairment of beneficial uses of water due to the migration of gas through the vadose zone.

27. The discharger shall submit to the Regional Board's Executive Officer for review and approval the "Final Construction Design Drawings and Specifications" at least 120 days

prior to initiation of construction of each future phase of the landfill. The plans and specifications shall take into consideration the following:

a. Engineering Designs and Analysis:

1. Interim and final slopes shall have a minimum factor of safety of 1.50 for static conditions.

2. Interim and final slopes shall have a minimum factor of safety of 1.50 for dynamic conditions.

3. In lieu of Specification 26 (a)(2) above, (i.e., under dynamic conditions) the discharger shall demonstrate to the satisfaction of the Regional Board's Executive Officer that the maximum permanent displacement that could be expected to occur for the MPE and 40 CFR Section 258.14 (b) event loading, should not jeopardize the integrity of the final cover, base liner, monitoring and containment systems.

4. Details of the minimum requirements (i.e., shear strength) associated with each element of the WMU required to meet slope stability criteria shall be provided.

5. Slope stability analyses shall explicitly model the actual WMU slopes, including benches. The actual residual shear strengths corresponding to the specific liner interfaces shall be employed in the analyses.

6. Seismic and static slope stability calculations for all slopes under the appropriate range of loading conditions shall be provided.

7. Calculations of minimum factor of safety for interim and final slopes, pursuant to Specification 26 (a)(1) and (a)(2) above shall be provided.

8. Leachate head calculations shall be provided.

9. Drainage system flow calculations shall be provided.

10. Settlement analyses of the foundation, cover system, and waste shall be provided.

11. Analyses indicating capability of the material used for the containment system such as VLDPE, HDPE, GG, Geotextile, or any other material to withstand the anticipated overburden pressure plus the weight of any operating equipment used that could cause axial loading on the containment system shall be provided.

12. Details of liquefaction mitigation measures shall be provided.

13. Any other applicable analyses shall be approved.

b. Construction Drawings and Specifications – Detailed sets of construction drawings and specification with sufficient detail to build the WMU containment system shall be provided. The construction plans shall include horizontal coordinates (± 0.1 ft.), elevations (± 0.01 ft), and grades (± 0.1 percent). The plan should show locations of all interim and permanent berms, earthen and concrete channels, bench v-ditches, trapezoidal down drains, sumps, benches, pipe connection details, liner overlaps, lines seaming or welding, and layer minimum thickness.

c. Detailed Fill Plan – The fill plan detailing the limits of acceptable interim geometrics for all locations of the WMU shall be provided. All phases of construction where waste and/or fills are being placed over the completed liner system shall be considered to be interim waste slopes. Such slopes shall be designed to meet a minimum slope stability factor of safety pursuant to Specification 26 (a). A range of maximum acceptable slopes for different fill heights and locations are acceptable.

d. Construction Quality Control/Quality Assurance – A Construction Quality Control/Quality Assurance (CQC/CQA) plan to be implemented during construction of the containment system by an independent engineering firm that is not owned by the discharger shall be provided. This plan should contain, at a minimum, the following:

    1. Quality control/quality assurance procedures for each geosynthetic and fill material to be incorporated within the WMU liner and cover system.

    2. Detailed testing, inspection, and acceptance criteria for each geosynthetic and fill material to be incorporated within the WMU liner and cover system.

    3. Detailed foundation acceptance criteria and acceptable interim waste slopes.

    4. A plan for:

        a. Performing interface shear strengths, prior to liner installation, using the specific geosynthetic material specified for different elements of the liners. The test shall be performed for the range of normal stress, moisture conditions, and displacement rates which simulate actual field conditions;

        b. The determination of shear strength values which must be equal to or greater than the shear strengths employed in the slope stability analyses performed during final design; and

        c. A written determination by a Registered Geologist, or Certified Engineering Geologist, licensed in the State of California, of Holocene fault absence following grading, prior to development of any portion of the WMU.

d. Contractor Quality Control – A specification indicating that each contractor or manufacturer is responsible for implementing their own quality control plan as required by the detailed construction specifications, shall be provided. All material and workmanship shall be tested in accordance with the quality control/quality assurance plan. All tests may be observed by the CQC/CQA firm and all test results shall be submitted to the CQC/CQA firm for review and approval.

e. Field Changes:

1. Construction drawings and specifications shall be developed to minimize, to the extent feasible, the need for "significant field changes". "Significant field changes include, but are not limited to:

   a. Changes in material specifications;
   b. Changes in soil liner compaction criteria;
   c. Changes in liner system component thickness;
   d. Increase in side slope grades;
   e. Decrease in bottom slope grades;
   f. Decrease or increase in the height of the slopes;
   g. Decrease or increase in the width of benches; and
   h. Changes to the WMU grading plan.

2. A plan outlining the following steps, shall be taken if a "significant field change" is determined necessary:

   a. The contractor shall notify the construction manager or the owner regarding the proposed change(s).

   b. The construction manager or owner shall have the design engineer review the proposed change. The review shall include any engineering analysis that needs to be done to ensure that all design criteria are met with the proposed change.

   c. The discharger shall submit the proposed change to the Regional Board's Executive Officer for review and approval. The proposed change shall be accompanied by an explanation for the changes, a copy of the engineering analysis, and all changes to the design drawings and specifications

   d. The Regional Board's Executive Officer shall review the proposed change in a timely fashion and must approve the proposed change before it can be accepted. Such approval will not be given unless supported by slope stability analyses demonstrating that the field changes do not result in slope stability factors of safety less than the minimum acceptable values.

28. Adequate measures shall be taken to ensure that no part of the liner system (i.e., HDPE, VLDPE, GT) is punctured during construction, operation, or closure/post-closure activities.

29. The discharger shall have on-site at all time during construction of future expansion to the Facility, a qualified team to perform CQA/QC over all aspects of foundation excavating/grading and liner system construction to ensure that the foundation and liner systems are being built in accordance with the approved design. All observations and test results shall be periodically submitted to the Regional Board's Executive Officer after construction. The Regional Board's Executive Officer shall retain the right to have Regional Board representatives on-site during all aspects of the WMU liner system construction. If during the course of construction the discharger desires to make a "significant field change" to the design, the discharger shall submit all necessary engineering calculations, drawings and/or specifications to the Regional Board's Executive Officer for his review and approval. If the Regional Board's Executive Officer, or his agent, deems it necessary to have the proposed change reviewed by a third party, the discharger shall be responsible for paying for any additional and reasonable costs and fees that may be incurred and that are not covered by other funding sources. Reasonable costs and fees may include field visits and observations, review of the discharger's changes, including drawing, specifications and/or analyses, QA/QC, and travel. Qualifications of the third party must be acceptable to the discharger and approved by the Regional Board's Executive Officer.

30. Waste shall not be placed in any area of the WMU until the Regional Board's Executive Officer has approved the detailed design plans and construction quality assurance plan for construction of the containment structures, and has received written certification by a California Registered Civil Engineer or Certified Engineering Geologist that the structures have been constructed in accordance with those plans.

31. A periodic load-checking program shall be implemented to ensure that hazardous waste is not discharged at the Facility. The program must be submitted to the Regional Board's Executive Officer for approval. The program includes, but is not be limited to:

    a. Random loads to be checked;
    b. Description of training program for on-site personnel;
    c. Record keeping and reporting program;
    d. Program implementation schedule; and
    e. Disposal options for waste found not to be in compliance with the Board Order.

    Hazardous wastes shall be properly manifested and transported off-site within 90 days for disposal at an appropriate permitted facility.

32. Waste shall not be disposed in the Facility where it can be discharged into waters of the United States.

33. Wastes shall not be placed in or allowed to remain in ponded water from any source.

34. In order to minimize the potential for windblown litter and particulates from the Facility that would pollute surface waters off the Facility, the MSW:

    a. Shall be compacted into the working face of the WMU as soon as practicable and covered with a daily cover promptly, and in any event within 24 hours of placement,

    b. Shall have a minimum of 6 inches of compacted soil or approved alternatives used as a daily cover,

    c. Shall have a daily litter pickup and disposal program implemented and in adjacent off-site areas; and

    d. Shall have litter control fencing installed around the Facility and the landfill footprint. A standard of "zero" escape of litter from the permitted Facility shall be established through the use of appropriate control systems and the collection of any escaped litter from the working face.

35. The discharger shall remove and relocate any waste that is discharged at the Facility in violation of these requirements.

36. The discharger shall maintain visible monuments identifying the boundary limits of each currently active area and the entire WMU.

37. Public contact with MSW and/or leachate shall be prevented through such means as fences, signs, and other acceptable physical barriers.

38. MSW shall be confined to the Facility as described on the attached site map.

39. Waters used for dust control and for fire suppression shall be limited to amounts necessary for these purposes so as to minimize any potential for infiltration of these waters into the WMU.

40. Petroleum fuels, recovered solvents, and other liquids shall be stored in appropriate containers within the facility and managed and maintained in accordance with applicable federal, state and local regulations. The discharger shall establish procedures, acceptable to the Regional Board's Executive Officer, for rapid remediation of minor petroleum hydrocarbon spills from vehicles used for construction or MSW handling at the Facility.

41. If there is "statistically significant evidence of a release" from the WMU, as that term is defined in Title 27, the discharger shall institute an evaluation monitoring program in accordance with Part I.E.2d of the attached Monitoring and Reporting Program No. R7-2005-0102 and future revisions thereto.

42. The corrective action plan shall be applicable as long as the release poses a threat to ground water quality.

B. Prohibitions

1. The discharge of waste to land not owned by the discharger and the discharge of waste to areas outside the 42-acre landfill (hereinafter referred to as the Waste Management Unit (WMU) without an approved liner is prohibited.

2. The discharge of the following wastes as defined in Title 27, Chapter 3 of the California Code of Regulations (hereinafter referred to as Title 27) is prohibited at the Allied Imperial Landfill:

   a. Hazardous waste, as defined in California Code of Regulations Title 22, Section 66261, except for waste that is hazardous only due to the friable asbestos content;

   b. Designated waste as defined in Title 27;

   c. Liquid waste (moisture content more than 50%); as defined in Title 27;

   d. Recyclable White goods (i.e. large intact household appliances);

   e. Infectious wastes;

   f. Geothermal wastes;

   g. Incinerator ash, unless approved by the Regional Board's Executive Officer and allowed under California Regulations;

   h. Radioactive waste; and

   i. Wastewater treatment plant Sewage sludge that has a moisture content greater than 40 percent.

3. The discharger shall neither cause nor contribute to the following conditions:

   a. Contamination or pollution of ground water via the release of waste constituents in either the liquid or gaseous phase.

   b. Increase in the concentration of waste constituents in soil-pore gas, soil-pore liquid, soil or other geologic material outside of the WMU, if such waste constituents could migrate to waters of the state, in either liquid or gaseous phase, and cause contamination, pollution, or nuisance.

4. The discharge of waste to surface water, surface water drainage courses, or to ground water is prohibited.

5. The discharge or deposit of wastes that could cause erosion or decay, or otherwise reduce or impair the integrity of containment structures is prohibited.

6. The discharge or deposit of waste is prohibited if such waste, when mixed or commingled with other wastes in the 42-acre landfill, could produce chemical reactions that create heat or pressure, fire or explosion, toxic by-products, or reaction and require a higher level of containment than provided by this WMU or (2) impair the integrity of the containment structure.

C. Provisions

1. The discharger shall comply with all applicable regulations of Title 27 RCRA Subtitle D that are not specifically referred to in this Board Order.

2. The discharger shall comply with all Specifications, Prohibitions, and Provisions of this Board Order immediately upon its adoption.

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

4. The discharger is the responsible party for the WDRs, and Monitoring and Reporting Program No. R7-2005-0102, and revisions thereto, for the WMU; and must comply with all of the conditions of this Board Order. Any noncompliance with this Board Order constitutes a violation of the Porter-Cologne Water Quality Control Act and is grounds for enforcement actions, including Regional Board Orders or court orders, requiring corrective action or imposing civil monetary liability or modification or revocation of these WDRs by the Regional Board.

5. Prior to any change of ownership or management of this operation, the discharger shall transmit a copy of this Board Order to the succeeding owner/operator, and forward a copy of the transmittal letter to the Regional Board.

6. This Board Order does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws.

7. The Regional Board considers the property owner to have a continuing responsibility for correcting any problems that may arise in the future as a result of this waste discharge.

8. The discharger shall submit to the Regional Board's Executive Officer "Final Construction Design Plans and Specifications", as described in Specification No. 26 of the Board Order.

9. The discharger shall comply with Monitoring and Reporting Program No. R7-2005-0102, and future revisions thereto, as specified by the Regional Board's Executive Officer.

10. The discharger shall ensure that all WMU operating personnel are familiar with the content of this Board Order, and shall maintain a copy of the Board Order at the Facility.

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

    a. To enter upon the premises regulated by this Board Order, or the place where records are kept under the conditions of the Board Order;

    b. To have access to and be able to copy , at reasonable times, any records that must be kept under the conditions of this Board Order;

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

    d. Sample or monitor at reasonable times, for the purpose of assuring compliance with this Board Order or as otherwise authorized by the California Water Code, any substances or parameters at this Facility.

12. The Facility shall be readily accessible for sampling and inspection.

13. The discharger shall at all times properly operate and maintain all facilities and systems of treatment and control that are installed or used by the discharger to achieve compliance with this Board Order. Proper operation and maintenance shall also include adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the discharger only when necessary to achieve compliance with the conditions of this Board Order.

14. Adequate measures shall be taken to assure that unauthorized persons are effectively excluded from contact with the waste disposal facilities.

15. Adequate measures shall be taken to assure that flood or surface drainage waters do not erode or otherwise render portions of the discharge facilities inoperable.

16. The discharger shall immediately notify the Regional Board of any flooding, slope failure, or other change in site conditions that could impair the integrity of waste containment facilities or of precipitation and drainage control structures.

17. The discharger shall maintain a legible record using a reporting form approved by the Regional Board's Executive Officer of the volume and weight (in tons) of MSW received at the Facility, and the manner and location of disposal of such MSW.

18. All containment structures, LCRS, monitoring systems, and erosion and drainage control systems shall be designed and constructed under supervision of a registered civil engineer

or certified engineering geologist and shall be certified by the individual as meeting the requirements of this Board Order.

19. Two years prior to the anticipated closure of the Facility, or any portions thereof, the discharger shall submit to the Regional Board, for review and approval by the Regional Board Executive Officer, a closure and post-closure maintenance plan in accordance with Section 21769 of Title 27.

20. The closure plan shall include:

    a. Facility location map;
    b. Topographic maps;
    c. Maximum extent of closures;
    d. Current monitoring and control systems;
    e. Land uses;
    f. Estimated closure date and schedule;
    g. General closure description;
    h. Other special requirements;
    i. Revised closure cost estimates (if appropriate); and
    j. Any other applicable requirements as specified in Title 27.

21. The post-closure maintenance plan shall include:

    a. Security and fencing;
    b. Survey monuments;
    c. Final Cover;
    d. Storm water management system;
    e. Leachate collection and removal system (LCRS);
    f. Leachate management system;
    g. Active gas extraction system, if necessary;
    h. Vadose zone leachate monitoring system;
    i. Vadose zone soil-pore gas monitoring system, if necessary; and
    j. Groundwater quality monitoring system.

22. The discharger shall submit a detailed post-earthquake inspection and corrective action plan to be implemented in the event of any earthquake generating significant ground shaking (i.e., Modified Mercalli Intensity V or greater) at or near the Facility. The Plan shall describe the containment features, groundwater monitoring, leachate control facilities, storm water management system, and gas monitoring facilities, potentially impacted by the static and seismic deformations of the WMU. The plan shall provide for reporting results of the post-earthquake inspection to the Regional Board within 15 working days of the occurrence of the earthquake. Immediately after an earthquake event causing damage to the Facility, the corrective action plan shall be implemented, and this Board shall be notified of any damage.

23. Unless otherwise approved by the Regional Board's Executive Officer, all water quality monitoring analyses shall be conducted at a laboratory certified for such analyses by the California State Department of Health Services. All analyses shall be conducted in accordance with the latest edition of "Guidance Establishing Test Procedures for Analysis of Pollutants", promulgated by the EPA.

24. The discharger shall furnish, under the penalty of perjury, technical monitoring program reports. These reports shall be submitted in accordance with specifications prepared by the Regional Board's Executive Officer. Such specifications are subject to periodic revision as may be warranted.

25. The discharger shall submit a Notice of Intent (NOI) to the State Water Resources Control Board to be covered under the Statewide General NPDES permit for Storm Water Discharges associated with Industrial Activities, Order No. 97-03 DWQ, NPDES No. CAS000001. The discharger shall comply with all the discharge prohibitions, receiving water limitations, and provisions of the General permit.

26. The discharger shall submit a revised sampling and monitoring plan for storm water discharges to the Regional Board's Executive Officer for review and approval not less than 90 days prior to commencement of construction of future expansions to the Facility. The plan shall meet the minimum requirements of Section B, Monitoring and Reporting Program Requirements of the Statewide General NPDES Permit of Storm Water Discharges Associated with Industrial Activities, Order No. 97-03-DWQ, NPDES No. CAS000001.

27. This Board Order is subject to Regional Board review and updating, as necessary, to comply with changing State or Federal laws, regulations policies or guidelines, or changes in the discharge characteristics.

28. At any time, the discharger may file a written request (including appropriate supporting documents) with the Regional Board's Executive Officer to propose appropriate modifications to the Monitoring and Reporting Program. The request may address changes:

    a. To any statistical method, non-statistical method, or retest method used with a given constituent or parameter;

    b. To the manner of determining the background value for a constituent or parameter;

    c. To the method for displaying annual data plots;

    d. To the laboratory analytical method used to test for a given constituent or parameter;

    e. To the media being monitored (e.g., the addition of soil-pore gas to the media being monitored);

f. To the number or placement of monitoring points or background monitoring points for a given monitored medium; or

g. To any aspect of monitoring or QA/QC.

After receiving and analyzing such a request, the Regional Board's Executive Officer shall either reject the request for reasons listed, or shall incorporate it, along with any necessary changes, into the attached Monitoring and Reporting Program. The discharger shall implement any changes in the Monitoring and Reporting Program proposed by the Regional Board's Executive Officer upon receipt of a revised Monitoring and Reporting Program. The report due date is due within two (2) months of realizing that a change is appropriate, or of being notified by the Regional Board's Executive Officer.

29. The discharger shall submit to the Regional Board and the California Integrated Waste Management Board (CIWMB) evidence of Financial Assurance for Closure and Post-Closure pursuant to Section 20950 of Title 27.

30. Financial assurances for post-closure shall be as determined by the CIWMB in accordance with appropriate regulations. The post-closure maintenance period shall be at least 30 years, or as long as the waste poses a threat to water quality.

31. Within 180 days of the adoption of this Board Order, the discharger shall submit to the Regional Board, in accordance with Section 20430 of Title 27, assurances of financial responsibility acceptable to the Regional Board's Executive Officer for initiating and completing corrective action for all known or reasonably foreseeable releases from the Facility.

I, Robert Perdue, 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, Colorado River Basin Region, on November 16, 2005.

ROBERT PERDUE
Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

MONITORING AND REPORTING PROGRAM NO. R7-2005-0102
FOR
IMPERIAL LANDFILL, INC., OWNER/OPERATOR
ALLIED IMPERIAL LANDFILL
CLASS III MUNICIPAL SOLID WASTE MANAGEMENT FACILITY
Imperial County

CONSISTS OF

PART I, PART II, AND PART III

PART I

A. GENERAL

A Discharger who owns or operates a Waste Management Facility is required to comply with the provisions of Chapter 3, Subchapter 3, Article 1,Title 27, California Code of Regulations for the purpose of detecting, characterizing, and responding to releases to the ground water. from the Waste Management Facility. Section 13267, California Water Code gives the Regional Board authority to require monitoring program reports for discharges that could affect the quality of waters within its region. State Water Resources Control Board Resolution No. 93-062 requires the Regional Board to implement federal Municipal Solid Waste Regulations (Title 40 Code of Federal Regulations, Parts 257 and 258).

This self-monitoring program is issued pursuant to Provision No. 9 of Regional Board Order No. R7-2005-0102. The principal purposes of a self-monitoring program by a waste discharger are:

1. To document compliance with WDRs and prohibitions established by the Regional Board;

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

3. To prepare water quality analyses.

B. DEFINITION OF TERMS

1. The "Monitored Media" are those water- or gas-bearing media that are monitored pursuant to this Monitoring and Reporting Program. The monitored Media may include: (1) ground water in the uppermost aquifer, in any other portion of the zone of saturation (Section 20164, Title 27) in which it would be reasonable to anticipate that waste constituents migrating from the WMF could be detected, and in any perched zones underlying the WMF, (2) any bodies of surface water that could be measurably affected by a release, (3) soil-pore liquid beneath and/or adjacent to the WMF, and (4) soil-pore gas beneath and/or adjacent to the WMF.

2. The "Constituents of Concern (COC)" are those constituents which are likely to be in the waste in the landfill or which are likely to be derived from waste constituents, in the event of a release. The list of Constituents of Concern for this WMF is found in Part II.B.1 and Part II.B.2 of this program.

3. The "Monitoring Parameters" consists of a short list of constituents and parameters used for the majority of the monitoring activity. The list of Monitoring Parameters for this WMF is found in Part III. Summary of Monitoring and Reporting Programs, C.1. of this program. Monitoring for the short list of Monitoring Parameters constitutes "indirect

monitoring", in that the results are used to indirectly indicate the success or failure of adequate containment for the longer list of Constituents of Concern.

4. The "Volatile Organics Composite Monitoring Parameter for Water (VOC_{water})" and the "Volatile Organics Composite Monitoring Parameter for Soil-Pore Gas (VOC_{gas})" are composite Monitoring Parameters addressing all volatile organic constituents detectable in a sample of water- or soil-pore gas, respectively. (See Part III.A.2. of this Program for additional discussion of these Monitoring Parameters).

5. "Standard Observations" refers to:

   a. For Adjacent Surface Waters or Receiving Waters:

      1. Floating and suspended materials of waste origin: presence or absence, source, and size of affected area;

      2. Discoloration and turbidity: description of color, source, and size of affected area;

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

      4. Evidence of beneficial use: presence of water-associated wildlife;

      5. Flow Rate; and

      6. Weather conditions: wind direction and estimated velocity, total precipitation during the previous five (5) days and on the day of observation.

   b. Along the perimeter of the Landfill:

      1. Evidence of liquid leaving or entering the WMF, estimated size of affected area, and flow rate (show affected area on a map);

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

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

   c. For the Landfill:

      1. Evidence of ponded water at any point on the WMF (show affected area on a map);

      2. Evidence of odor: presence, characterization, source, and distance of travel from source;

3. Evidence of erosion and/or of day-lighted refuse; and

4. "Standard Analysis and Measurements", which refers to:

   Turbidity (only for water samples) in NTU;

   a. Water elevation to the nearest 1/100th foot relative to mean sea level (only for ground water monitoring); and

   b. Sampling and statistical/non-statistical analysis of the Monitoring Parameters.

6. "Matrix Effect" refers to any increase in the Method Detection Limit or Practical Quantitation Limit for a given constituent as a result of the presence of other constituents – either of natural origin or introduced though a release – that are present in the sample of water or soil-pore gas being analyzed.

7. Facility-Specific Method Detection Limit (MDL)", for a given analytical laboratory using a given analytical method to detect a given constituent (in spite of any Matrix Effect) means the lowest concentration that the laboratory can regularly differentiate – with 99 percent reliability – between a sample which contains the constituent and a sample which does not.

8. "Facility-Specific Practical Quantitation Limit (PQL)", for a given analytical laboratory using a given analytical method to determine the concentration of a given constituent (in spite of any Matrix Effect) means the lowest constituent concentration the laboratory can regularly quantify within specified limits of precision that are acceptable to the Regional Board's Executive Officer.

9. "Reporting Period" means the duration separating the submittal of a given type of monitoring report from the time the next iteration of that report is scheduled for submittal. Therefore, the reporting period for Monitoring Parameters is semi-annual. The reporting period for Constituents of Concern is every five years. An Annual Report period extends from January 1 to December 31 of the each year. A summary of due dates for all Monitoring Reports can be found in Part III. Summary of Reporting Requirements of this program.

10. "Receiving Waters" refers to any surface water, which actually or potentially receives surface or ground waters, which pass over, through or under waste materials or contaminated soils.

11. "Affected Persons" refers to all individuals who either own or reside upon the land that directly overlies any part of that portion of gas or liquid-phase release that has migrated beyond the facility boundary.

C. SAMPLING AND ANALYTICAL METHODS

Sampling collection, storage, and analysis shall be performed according to the most recent version of Standard USEPA methods, and in accordance with an approved sampling and analysis plan. Water and waste analysis shall be performed by a laboratory approved by the State of California for these analyses. Specific methods of analysis must be identified. If methods other than USEPA-approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Board's Executive Officer prior to use. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Board. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements. In addition, the Discharger is responsible for seeing that the laboratory analysis of all samples from Monitoring Points and Background Monitoring Points meets the following restrictions:

1. The methods and analysis and the detection limits used must be appropriate for the expected concentrations. For detection monitoring of any constituent or parameter that is found in concentrations which produce more than 90 percent non-numerical determinations (i.e. "trace" or "ND") in data from Background Monitoring Points for that medium, the analytical methods having the lowest "facility-specific method detection limit (MDL)", defined in Part I.B.7, shall be selected from among those methods which would provide valid results in light of any "Matrix Effects" (defined in Part I.B.6.) involved.

2. "Trace" results, results falling between the MDL and the facility-specific practical quantitation limit (PQL), shall be reported as such, and shall be accompanied both by the estimated MDL and PQL values for that analytical run and by an estimate of the constituent's concentration.

3. MDLs and PQLs shall be derived by the laboratory for each analytical procedure, according to State of California laboratory accreditation procedures. These MDLs and PQLs shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the laboratory, rather than simply being quoted from USEPA analytical method manuals. 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 MDL/PQL values, the results shall be flagged accordingly, along with an estimate of the detection limit and quantitation limit actually achieved.

4. All QA/QC data shall be reported, along with the sample results to which it applies, including the method, equipment, and analytical detection limits, the recovery rates, an explanation of any recovery rate that is less than 80 percent, the results of equipment and method blanks, the results of spiked and surrogate samples, the frequency of quality control analysis, and the name and qualifications of the person(s) performing the analyses. Sample results shall be reported unadjusted for blank results or spike recovery.

5. Upon receiving written approval from the Regional Board's Executive Officer, an alternative statistical or non-statistical procedure can be used for determining the significance of analytical results for a constituent that is a common laboratory contaminant (i.e., methylene chloride, acetone, diethylhexyl phthalate, and di-n-octyl phthalate) during any given Reporting Period in which QA/QC samples show evidence of laboratory contamination for that constituent. Nevertheless, analytical results involving detection of these analytes in any background or downgradient sample shall be reported and flagged for easy reference by the Regional Board staff.

6. Unknown chromatographic peaks shall be reported, along with an estimate of the concentration of the unknown analyte. When unknown peaks are encountered, second column or second method confirmation procedures shall be performed to attempt to identify and more accurately quantify the unknown analyte.

7. In cases where contaminants are detected in QA/QC samples (i.e. field, trip, or laboratory blanks), the accompanying sample results shall be appropriately flagged.

8. The MDL shall always be calculated such that it represents a concentration associated with a 99 percent reliability of a non-zero result.

D. RECORDS TO BE MAINTAINED

Written reports shall be maintained by the Discharger or laboratory, and shall be retained for a minimum of five (5) years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board. Such records shall show the following for each sample:

1. Identity of sample and of the Monitoring Point or Background Monitoring Point from which it was taken, along with the identity of the individual who obtained the sample;

2. Date and time of sampling;

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

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

5. Calculations of results; and

6. Results of analyses, and the MDL and PQL for each analysis.

E. REPORTS TO BE FILED WITH THE BOARD

1. DETECTION MONITORING REPORT

A written "Detection Monitoring Report" shall be submitted semi-annually (Part II.B.1.), in addition to an "Annual Summary Report" (Part I.E.3.). Every five years, the Discharger shall submit a report concerning the direct analysis of all Constituents of Concern as indicated in Part II.B.2. ("COC Report"). All reports shall be submitted no later than their respective due dates as listed in Summary of Monitoring and Reporting Requirements. The reports shall be comprised of at least the following:

a. Letter of Transmittal

A letter transmitting the essential points in each report shall accompany each report. Such a letter shall include a discussion of any requirement violations found since the last such report was submitted, and shall describe actions taken or planned for correcting those violations. If the Discharger has previously submitted a detailed time schedule for correcting said requirement 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 letter of transmittal. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice president or above, or by his/her duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct;

b. Each Detection Monitoring Report and each COC Report shall include a compliance evaluation summary. The summary shall contain at least:

1. For each monitored ground water body, a description and graphical presentation of the velocity and direction of the ground water flow under/around the WMF, based upon water level elevations taken during the collection of the water quality data submitted in the report;

2. Pre-Sampling Purge for Samples Obtained From Wells: For each monitoring well addressed by the report, a description of the method and time of water level measurement, of the type of pump used for purging and the placement of the pump in the well, and of the method of purging (the pumping rate, the equipments and methods used to monitor field pH, temperature, and conductivity during purging, the calibration of field equipment, results of the pH, temperature, conductivity, and turbidity testing, the well recovery time, and the method of disposing of the purge water);

3. Sampling: For each Monitoring Point and Background Monitoring Point addressed by the report, a description of the type of pump – or other device – used

and its placement for sampling, and a detailed description of the sampling procedure (number and description of the samples, field blanks, travel blanks, and duplicate samples taken, the type of containers and preservatives used, the date and time of sampling, the name and qualifications of the person actually taking the samples, and any other observations);

c. A map or aerial photograph showing the locations of observation stations, Monitoring Points, and Background Monitoring Points;

d. For each Detection Monitoring Report and each COC Report, include laboratory statements of results of all analyses demonstrating compliance with Part I.C.;

e. An evaluation of the effectiveness of the run-off/run-on control facilities;

f. A summary and certification of completion of all Standard Observations (Part I.B.5.) for the WMF, for the perimeter of the WMF, and for the Surface Waters or Receiving Waters; and

g. The quantity and types of wastes discharged and the locations in the WMF where waste has been placed since submittal of last such report.

2. CONTINGENCY REPORTING

a. The Discharger shall report by telephone concerning any seepage from the disposal area immediately after it is discovered. A written report shall be filed with the Regional Board within seven (7) days, containing at least the following:

1. A map showing the locations(s) of seepage;

2. An estimate of the flow rate;

3. A description of the nature of the discharge (e.g., all pertinent observations and analyses); and

4. Corrective measures underway or proposed.

b. Should the initial statistical comparison (Part III.A.1.) or non-statistical comparison (Part III.A.2.) indicate, for any Constituent of Concern or Monitoring Parameter, that a release is tentatively identified, the Discharger shall immediately notify the Regional Board verbally as to the Monitoring Point(s) and constituent(s) or parameter(s) involved, shall provide written notification by certified mail with seven (7) days of such determination (Section 20420(j), Title 27), and shall carry out a discrete retest pursuant to Part III.A.3. If the retest confirms the existence of a release, the Discharger shall carry out the requirements of Part I.E.2.d. In any case, the Discharger shall inform the Regional Board of the outcome of the retest as soon

as the results are available, following up with written results submitted by certified mail within seven (7) days of completing the retest analysis.

c. If either the Discharger or the Regional Board determines that there is significant physical evidence of a release (Section 20420(j), Title 27) the Discharger shall immediately notify the Regional Board of this fact by certified mail (or acknowledge the Regional Board's determination) and shall carry out the requirements of Part I.E.2.d. for all potentially-affected monitored media.

d. If the Discharger concludes that a release has been discovered:

   i. If this conclusion is <u>not</u> based upon "direct monitoring" of the Constituents of Concern, pursuant to Part II.B.2, then the Discharger shall, within 30 days, sample for all Constituents of Concern at all Monitoring Points and submit them for laboratory analysis. Within seven (7) days of receiving the laboratory analytical results, the discharger shall notify the Regional Board, by certified mail, of the concentration of all Constituents of Concern at each Monitoring Point. Because this scan is not to be tested against background, only a single datum is required for each Constituent of Concern at each Monitoring Point (Section 20420(k)(1), Title 27);

   ii. The Discharger shall, within 90 days of discovering the release, submit a Revised Report of Waste Discharge proposing an Evaluation Monitoring Program meeting the requirements of Section 20420(k)(5) and Section 20425, Title 27; and

   iii. The Discharger shall, within 180 days of discovering the release, submit a preliminary engineering feasibility study meeting the requirements of Section 20420(k)(6), Title 27.

e. Any time the Discharger concludes – or the Regional Board Executive Officer directs the Discharger to conclude – that a liquid- or gaseous-phase release from the WMF 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).

   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; and

   ii Subsequent to initial notification, the Discharger shall provide updates to all Affected Persons – including any newly Affected Persons – within 14 days of concluding there has been any material change in the nature or extent of the release.

3. ANNUAL SUMMARY REPORT

The Discharger shall submit an annual report to the Regional Board by March 15th each year covering the previous monitoring year. This report shall contain:

a. A Graphical Presentation of Analytical Data (Section 20415(e)(14), Title 27). For each Monitoring Point and Background Monitoring Point, submit in graphical format the laboratory analytical data for all samples taken within at least the previous five (5) calendar years. Each such graph shall plot the concentration of one or more constituents over time for a given Monitoring Point and Background Monitoring Point, at a scale appropriate to show trends or variations in water quality. The graphs shall plot each datum, rather than plotting mean values. For any given constituent or parameter, the scale for background plots shall be the same as that used to plot downgradient data. On the basis of any aberrations noted in the plotted data, the Regional Board's Executive Officer may direct the Discharger to carry out a preliminary investigation (Section 20080(d)(2), Title 27), the results of which will determine whether or not a release is indicated;

b. All monitoring analytical data obtained during the previous two six-month Reporting Periods, shall be presented in tabular form as well as in an electronic file format acceptable to the Regional Board's Executive Officer. The Regional Board regards the submittal of data in hard copy and on disk as "...the form necessary for..." statistical analysis (Section 20420(h), Title 27) in that this facilitates periodic review by the Regional Board's statistical consultant;

c. A comprehensive discussion of the compliance record, and the result of any corrective action taken or planned which may be needed to bring the Discharger into full compliance with the WDRs;

d. A map showing the area, if any, in which filling has been completed during the previous calendar year;

e. A written summary of the ground water and soil-pore gas (if applicable) analyses, indicating any changes made since the previous annual summary report; and

f. An evaluation of the effectiveness of the Leachate Collection and Removal System (LCRS), pursuant to Section 20340, Title 27.

PART II: MONITORING AND OBSERVATION SCHEDULE

A. WASTE MONITORING

Report semi-annually, as part of the Monitoring Report on, or before, July 31st and January 31st.

1. Record the total volume and weight of refuse in cubic yards and tons disposed of at the site during each month, showing locations and dimensions on a sketch or map.

2. Record a description of the waste stream, including the percentage of the waste type (i.e., residential, commercial, industrial, or construction debris).

3. Record the location and aerial extent of disposal of each waste type.

B. GROUNDWATER AND SOIL-PORE GAS SAMPLING/ANALYSIS FOR DETECTION MONITORING

1. "Indirect Monitoring" for Monitoring Parameters Done Semi-Annually. The ground water monitoring points assigned to Detection Monitoring in Part II.B.4. of this Program, and shall be sampled semi-annually. Semi-Annual Reports shall be submitted on or before July 31st and January 31st of each year. The Detection Monitoring Points shall be sampled for the following Monitoring Parameters:

Parameter & Constituents	Unit
1. Groundwater Elevations	(USGS Datum)
2. Temperature	°F
3. pH	-----
4. Specific Conductance	Micromhos/cm
5. Total Dissolved Solids (TDS)	mg/L[1]
6. Chloride	mg/L
7. Nitrate Nitrogen	mg/L
8. Sodium	mg/L
9. Sulfate	mg/L
10. Total Hardness	mg/L
11. Volatile Organics (Appendix 1, 40 CFR 258 (EPA Method 8260)	µg/L[2]

The collection, preservation and holding times of all samples shall be in accordance with United States Environmental Protection Agency (USEPA) approved procedures. Unless otherwise approved by the Regional Board's Executive Officer, all analyses shall be conducted by a laboratory certified by the State Department of Health Services. All analyses

[1] mg/L – milligrams per liter
[2] µg/L – micrograms per liter

shall be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants" (40 CFR 136), promulgated by the USEPA.

2. "Direct Monitoring" of all Constituent of Concern Every Five (5) Years. In the absence of a release being indicated (1) pursuant to Parts II.B.1. and III.A.3. for a Monitoring Parameter, (2) based upon physical evidence, pursuant to Part I.E.2.c. or (3) by a study required by the Regional Board's Executive Officer based upon anomalies noted during visual inspection of graphically-depicted analytical data (Part I.E.3.a.), then the Discharger shall sample all Monitoring Points and Background Monitoring Points of water-bearing media, not including soil-pore gas, for all Constituents of Concern every fifth year.

   The Constituents of Concern for water-bearing media (i.e. ground water, surface water, and soil-pore liquid) shall consist of the combined listing of all constituents listed in Appendices I and II, 40 CFR Part 258, in addition to:

Constituent	Units
1. Total Dissolved Solds (TDS)	mg/L
2. Sulfate	mg/L
3. Carbonate	mg/L
4. pH	-----
5. Chloride	mg/L

   The Five-Year Constituents of Concern Report shall be submitted with the appropriate Annual Report for that five-year sampling event.

3. "Monitoring Points and Background Monitoring Points for Each Monitored Medium": The Discharger shall sample the following Monitoring Points and Background Monitoring Points in accordance with the sampling schedule given under Parts II.B.1. and II.B.2 (immediately foregoing), taking enough samples to qualify for the most appropriate test under Part III.

   a. Ground Water

      1. Ground water monitoring wells are located as Attachment C.

      2. For the purpose of establishing an initial pool of background data for each Constituent of Concern at each Background Monitoring Point in each monitored medium (Section 20415(e)(6), Title 27:

         a. Whenever a new Constituent of Concern is added to the Water Quality Protection Standard, including any added by the adoption of this Board Order, the Discharger shall collect at least one sample quarterly for at least one year from each Background Monitoring Point in each monitored medium and analyze for the newly-added constituent(s); and

b. Whenever a new Background Monitoring Point is added, including any added by this Board Order, the Discharger shall sample it at least quarterly for at least one year, analyzing for all Constituents of Concern and Monitoring Parameters.

3. The Discharger shall measure the water level in each well and determine ground water flow rate and direction in each ground water body described in Part II.B.4. and Part II.B.5 semi-annually, including the times of expected highest and lowest elevations of the water level for the respective ground water body. This information shall be included in the semi-annual monitoring report (Section 20415(e)(15), Title 27).

4. The point of compliance for ground water monitoring shall be the location of the approved ground water monitoring wells.

5. For ground water in the uppermost aquifer, Monitoring Points MW-7, MW-8, MW-9, MW-10, MW-13, MW-14, and MW-15 shall be considered Point of Compliance monitoring wells (down gradient);

6. Monitoring Points MW-12 and MW-16 (installed in September 2002) shall be considered the Background Monitoring Point (up gradient).

b. Vadose Zone

1. For establishing soil-pore gas background values, two background samples shall be taken three months apart and analyzed for the vadose pore gas constituents of concern.

2. Monitoring and sampling of the vadose zone leachate shall be done semi-annually for the indicator parameters established in Part 1.B.2 of this program.

3. The point of compliance shall be the location of the vadose monitoring wells.

c. Gas Monitoring

1. Gas monitoring probes shall be sampled semi-annually using a portable combustible gas meter to check for the presence of methane gas while the landfill is operating.

2. Monitoring results shall be reported to the Regional Board semi-annually.

3. During the post-closure maintenance period, monitoring shall be done on a semi-annul basis; or at a frequency determined by the Regional Board's Executive Officer.

4. A corrective action plan shall be implemented in the event that a gas is detected in quantities greater than the maximum allowable level in Section 17783, of Title 14, or 40 CFR Section 258.23

C. ON-SITE OBESERVATIONS

Weekly site inspections to be reported semi-annually. As described in Part I.B.5., standard observations of the site including the landfill, nearby surface waters, and the perimeter of the landfill. Discharger shall document inspections and corrective actions (if any).

PART III: STATISTICAL AND NON-STATISTICAL ANALYSES OF SAMPLE DATA DURING A DETECTION MONITORING PROGRAM

A. The Discharger shall use the following methods to compare the downgradient concentration of each monitored constituent or parameter with its respective background concentration to determine if there has been a release from the WMF. For any given data set, proceed sequentially down the list of statistical analysis methods listed in Part III.A.1., followed by the non-statistical method in Part III.A.2., using the first method for which the data qualifies. If that analysis tentatively indicates the detection of a release, implement the retest procedure under Part III.A.3.

1. Statistical Methods. The Discharger shall use one of the following statistical methods to analyze Constituents of Concern or Monitoring Parameters, which exhibit concentrations exceeding their respective MDL in at least ten percent of the background samples taken during that Reporting Period. Each of these statistical methods is more fully described in the statistical methods discussion, below. Except for pH, which uses a two-tailed approach, the statistical analysis for all constituents and parameters shall be one-tailed (testing only statistically significant increase relative to background):

   a. One-Way Parametric Analysis of Variance ANOVA followed by multiple comparisons (Section 20415(e)(8)(A), Title 27). This method requires at least four (4) independent samples from each Monitoring Point and Background Monitoring Point during each sampling episode. It shall be used when the background data from the parameter or constituent, obtained during a given sampling period, has not more than 15 percent of the data below the PQL. Prior to analysis, replace all 'trace' determinations with a value halfway between the PQL and the MDL values reported for that sample run, and replace all "non-detect" determinations with a value equal to half the MDL value reported for that sample run. The ANOVA shall be carried out at the 95 percent confidence level. Following the ANOVA, the data from each downgradient Monitoring Point shall be tested at a 99 percent confidence level against the pooled background data. If these multiple comparisons cause the Null Hypothesis (i.e., that there is no release) to be rejected at any Monitoring Point, the Discharger shall conclude that a release is tentatively indicated from that parameter or constituent;

   b. One (1)-Way Non-Parametric ANOVA (Kruskal-Wallis Test), followed by multiple comparisons. This method requires at least nine independent samples from each Monitoring Point and Background Monitoring Point, therefore, the Discharger shall anticipate the need for taking more than four samples per Monitoring Point, based upon past monitoring results. This method shall be used when the pooled background data for the parameter or constituent, obtained within a given sampling period, has not more than 50 percent of the data below the PQL. The ANOVA shall be carried out at a 95 percent confidence level. Following the ANOVA, the data from each downgradient Monitoring Point shall be tested at a 99 percent confidence level

against the pooled background data. If these multiple comparisons cause the Null Hypothesis (i.e., that there is no release) to be rejected at any Monitoring Point, the Discharger shall conclude that a release is tentatively indicated for that parameter or constituent; or

c. Method of Proportions. This method shall be used if the "combined data set", the data from a given Monitoring Point in combination with data from the Background Monitoring Points, has between 50 percent and 90 percent of the data below the MDL for the constituent or parameter in question. This method (1) requires at least nine (9) downgradient data points per Monitoring Point per Reporting Period, (2) requires at least 30 data points in the combined data set, and (3) requires that $N * P > 5$ (where N is the number of data points in the combined data set and P is the proportion of the combined set that exceeds the MDL); therefore, the Discharger shall anticipate the number of samples required, based upon past monitoring results. The test shall be carried out at the 99 percent confidence level. If the analysis results in rejection of the Null Hypothesis (i.e., that there is no release), the Discharger shall conclude that a release is tentatively indicated for that constituent or parameter; or

d. Other Statistical Methods. These include methods pursuant to Section 20415(e)(8)(E).

2. Non-Statistical Method. The Discharger shall use the following non-statistical method for the VOC_{water} and VOC_{spg} Composite Monitoring Parameters and for all Constituents of Concern which are not amenable to statistical tests under Part III.A.1.; each of these groupings of constituents utilizes a separate variant of the test, as listed below. Regardless of the variant used, the method involves a two-step process: (1) from all constituents to which the variant applies, compile a list of those constituents which exceed their respective MDL in the downgradient sample, yet do so in less than 10 percent of the applicable background samples; and (2) (where several independent samples have been analyzed for that constituent at a given Monitoring Point) from the sample which contains the largest number of constituents. Background shall be represented by the data from all samples taken from the appropriate Background Monitoring Points during that Reporting Period (at least one sample from each Background Monitoring Point). The method shall be implemented as follows:

a. For the Volatile Organics Composite Monitoring Parameter for Water Samples (VOC_{water}): For any given Monitoring Point, the VOC_{water} Monitoring Parameter is a composite parameter addressing all VOCs detectable using USEPA Method 8260, including at least all 47 VOCs listed in Appendix I to 40 CFR 258, and all unidentified peaks. Compile a list of each VOC which (1) exceeds its MDL in the Monitoring Point sample (an unidentified peak is compared to its presumed (MDL), and also (2) exceeds its MDL in less than 10 percent of the samples taken during that Reporting Period from that medium's Background Monitoring Points. The Discharger shall conclude that a release is tentatively indicated for the VOC_{water} Composite Monitoring Parameter if the list either (1) contains two or more constituents, or (2) contains one constituent that exceeds its PQL;

b. For the Volatile Organics Composite Monitoring Parameter for Soil-Pore Gas Samples (VOC_{spg}): The VOC_{spg} Monitoring Parameter is a composite parameter for soil-pore gas addressing at least all 47 VOCs listed in Appendix I 40 CFR 258, based upon either GC or GC/MS analysis of at least 10 liter samples of soil-pore gas (e.g., collected in a vacuum canister). It involves the same scope of VOCs as does the VOC_{water} Monitoring Parameter. Compile a list of each VOC which (1) exceeds its MDL in the Monitoring Point sample (as unidentified peak is compared to its presumed MDL), and also (2) exceeds its MDL in less than 10 percent of the samples taken during that Reporting Period from the (soil-pore-gas) Background Monitoring Points. The Discharger shall conclude that a release is tentatively indicated for the VOC_{spg} Composite Monitoring Parameter if the list either (1) contains two or more constituents, or (2) contains one constituent that exceeds its PQL; or

c. For Constituent of Concern: Compile a list of constituents that exceed their respective MDL at the Monitoring Point yet do so in less than 10 percent of the background samples taken during that Reporting Period. The Discharger shall conclude that a release is tentatively indicated if the list either (1) contains two or more constituents, or contains one constituent, which exceeds its PQL.

3. Discrete Retest (Section 20415(e)(8)(E), Title 27). In the event that the Discharger concludes that a release has been tentatively indicated (under Parts III.A.1. or III.A.2.), the Discharger shall, within 30 days of this indication, collect two (2) new suites of samples for the indicated Constituent(s) of Concern or Monitoring Parameter(s) at each indicating Monitoring Point, collecting at least as many samples per suite as were used for the initial test. Re-sampling of the Background Monitoring Points is optional. As soon as the data is available, the Discharger shall rerun the statistical method (or non-statistical comparison) separately upon each suite of retest data. For any indicated Monitoring Parameter or Constituent of Concern at an affected Monitoring Point, if the test results of either (or both) of the retest data suites confirms the original indication, the Discharger shall conclude that a release has been discovered. All retests shall be carried out only for the Monitoring Point(s) for which a release is tentatively indicated, and only for the Constituent of Concern or Monitoring Parameter which triggered the indication there, as follows:

a. If an ANOVA method was used, the retest shall involve only a repeat of the multiple comparison procedure, carried out separately on each of the two new suites of samples taken from the indicating Monitoring Point;

b. If the Method of Proportions statistical test was used, the retest shall consist of a full repeat of the statistical test for the indicated constituent or parameter, using the new sample suites from the indicating Monitoring Point;

c. If the non-statistical method was used:

1. Because the VOC Composite Monitoring Parameters (VOC_{water} or VOC_{spg}) each address, as a single parameter, an entire family of constituents, which are likely to

be present in any landfill release, the scope of the laboratory analysis for each retest sample shall include all VOCs detectable in that retest sample. Therefore, a confirming retest for either parameter shall have validated the original indication even if the suite of constituents in the confirming retest samples(s) differs from that in the sample which initiated the retest;

2. Because all Constituents of Concern that are jointly addressed in the non-statistical testing under Part III.A.2.c. remain as individual Constituents of Concern, the scope of the laboratory analysis for the non-statistical retest samples shall be narrowed to involve only those constituents detected in the sample which initiated the retest.

B. RESPONSES TO VOC DETECTION IN BACKGROUND

1. Except as indicated in Part III.B.2., below, any time the laboratory analysis of a sample from a Background Monitoring Point, sampled for VOCs under Part III.A., shows either (1) two or more VOCs above their respective MDL, or (2) one VOC above its respective PQL, then the Discharger shall immediately notify the Regional Board by phone that possible background contamination has occurred, shall followup with written notification by certified mail within seven days, and shall obtain two new independent VOC samples from that Background Monitoring Point and send them for laboratory analysis of all detectable VOCs within 30 days. If either or both the new samples validates the presence of VOC(s) at that Background Monitoring Point, using the above procedure, the Discharger shall:

   a. Immediately notify the Regional Board about the VOC(s) verified to be present at that Background Monitoring Point, and follow up with written notification submitted by certified mail within seven (7) days of validation; and

   b. Within 180 days of validation, submit a report, acceptable to the Regional Board's Executive Officer, which examines the possibility that the detected VOC(s) originated from the WMF and proposing appropriate changes to the Monitoring Program.

2. If the Regional Board's Executive Officer determines, after reviewing the report submitted under Part III.B.1.b., that the VOC(s) detected originated from a source other than the WMF, the Regional Board's Executive Officer will make appropriate changes to the Monitoring Program.

3. If the Regional Board's Executive Officer determines, after reviewing the report submitted under Part III.B.1.b., that the detected VOC(s) most likely originated from the WMF, the Discharger shall assume that a release has been detected and shall immediately begin carrying out the requirements of Part I.E.2.d.

SUMMARY OF MONITORING AND REPORTING REQUIREMENTS

1. The Discharger shall arrange the data in tabular form so that the specified information is readily discernible. The data shall be summarized in such a manner as to clearly illustrate whether the facility is operating in compliance with Waste Discharge Requirements.

2. Records of monitoring information shall include:

   a. The date, exact place, and time of sampling or measurement(s);
   b. The individual(s) who performed the sampling or measurement(s);
   c. The date(s) analyses were performed;
   d. The individual(s) who performed the analyses;
   e. The analytical techniques or method used; and
   f. The results of such analyses.

3. Each report shall contain the following statement:

   "I declare under the penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations."

4. A duly authorized representative of the Discharger may sign the documents if:

   a. The authorization is made in writing by the person described above;
   b. The authorization specified an individual or person having responsibility for the overall operation of the regulated disposal system; and
   c. The written authorization is submitted to the Regional Board's Executive Officer.

5. Monitoring Reports shall be certified under penalty of perjury to be true and correct, and shall contain the required information at the frequency designated in this Monitoring and Reporting Program.

6. Semi-Annual Monitoring Reports shall be submitted to the Regional Board according to the following schedule:

   a. First Semi-Annual (January through June) – Report due by July 31st
   b. Second Semi-Annual (July through December) – Report due by January 31st

7. Annual Summary Reports shall be submitted to the Regional Board by March 15th of the each year, covering the Reporting Period from January 1st through December 31st of the previous year.

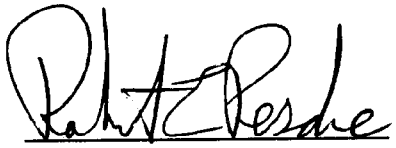
8. Five-Year COC Reports Continuing with the 2002 Fall COC sampling event schedule, with successive sampling efforts being carried out alternately between the spring of one Five-Year sampling event, and the fall of the next five-year sampling event, and every fifth year thereafter, as long as the WMF is in operation and through the closure/post-closure period.

   The Five-Year COC Report shall be submitted with the appropriate Annual Report due on March 15th of the appropriate year for the particular Five-Year COC sampling event, pursuant to Parts II.B.2.

9. Contingency Reports Notify immediately by telephone, and submit a written report pursuant to Part I.E.2. of this Monitoring and Reporting Program.

10. Submit Monitoring Reports to:

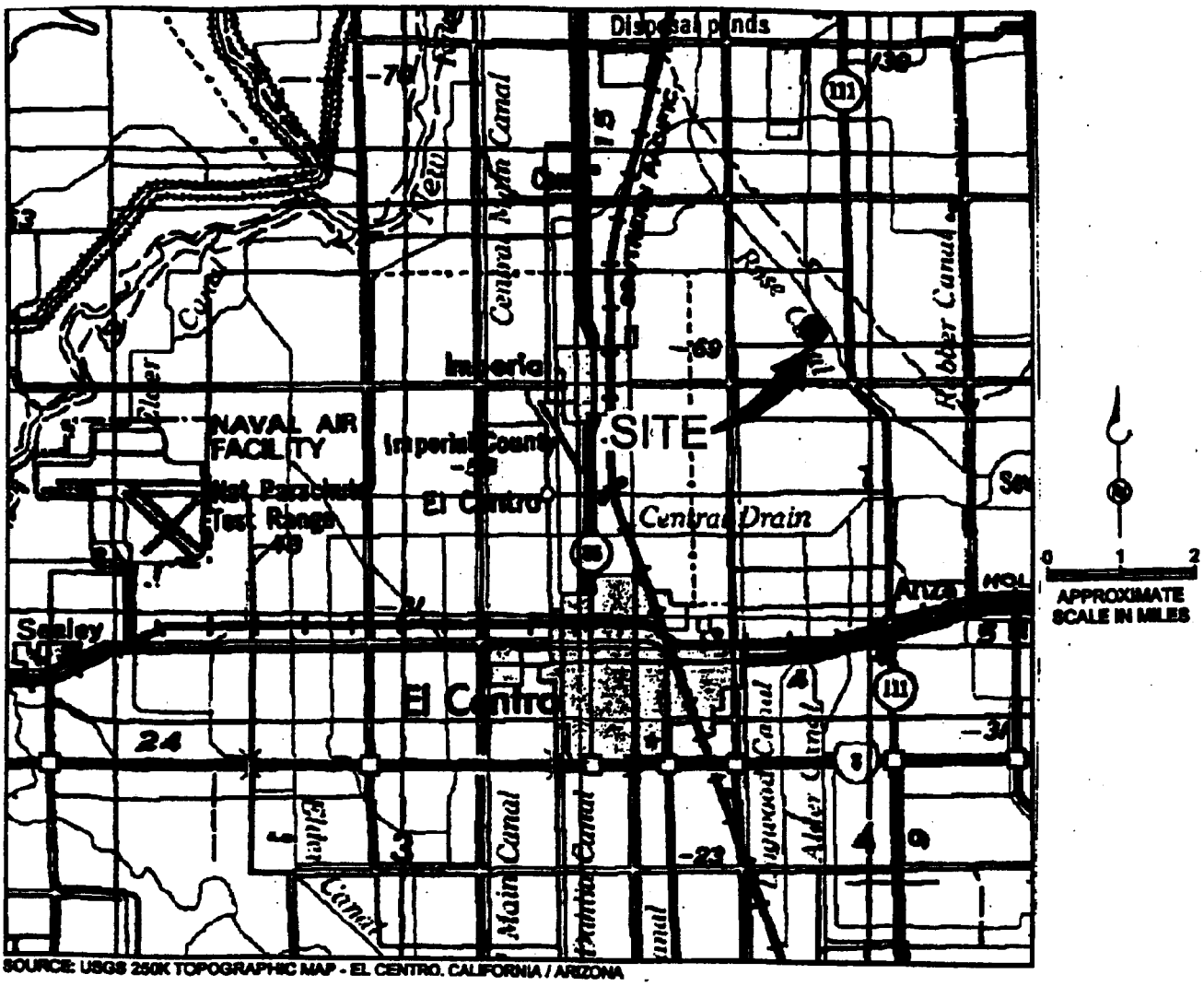
    California Regional Water Quality Control Board
    Colorado River Basin Region
    73-720 Fred Waring Drive, Suite 100
    Palm Desert, CA 92260



Executive Officer

November 16, 2005
Date

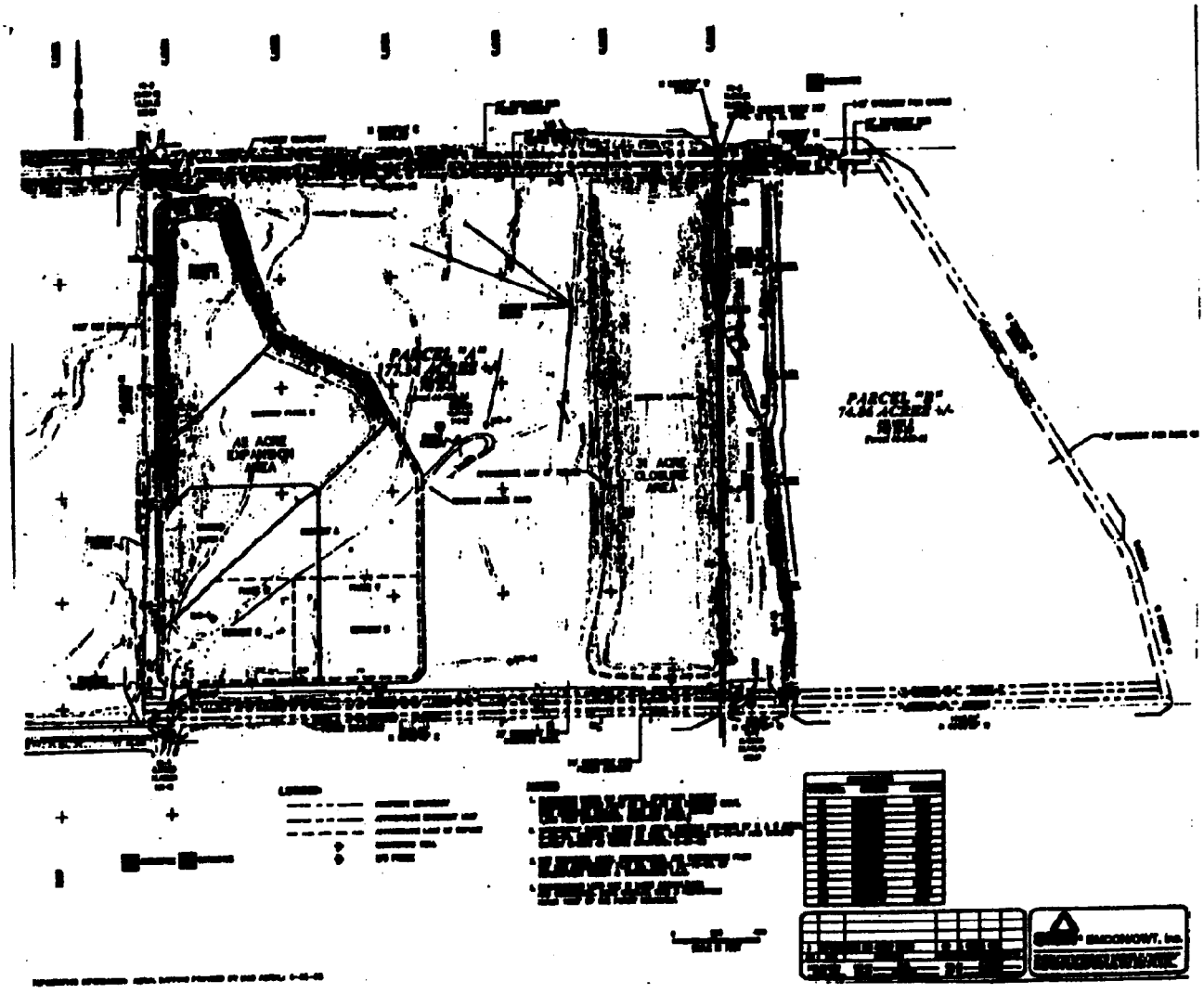
California Regional Water Quality Control Board
Colorado River Basin Region



SOURCE: USGS 250K TOPOGRAPHIC MAP - EL CENTRO, CALIFORNIA / ARIZONA

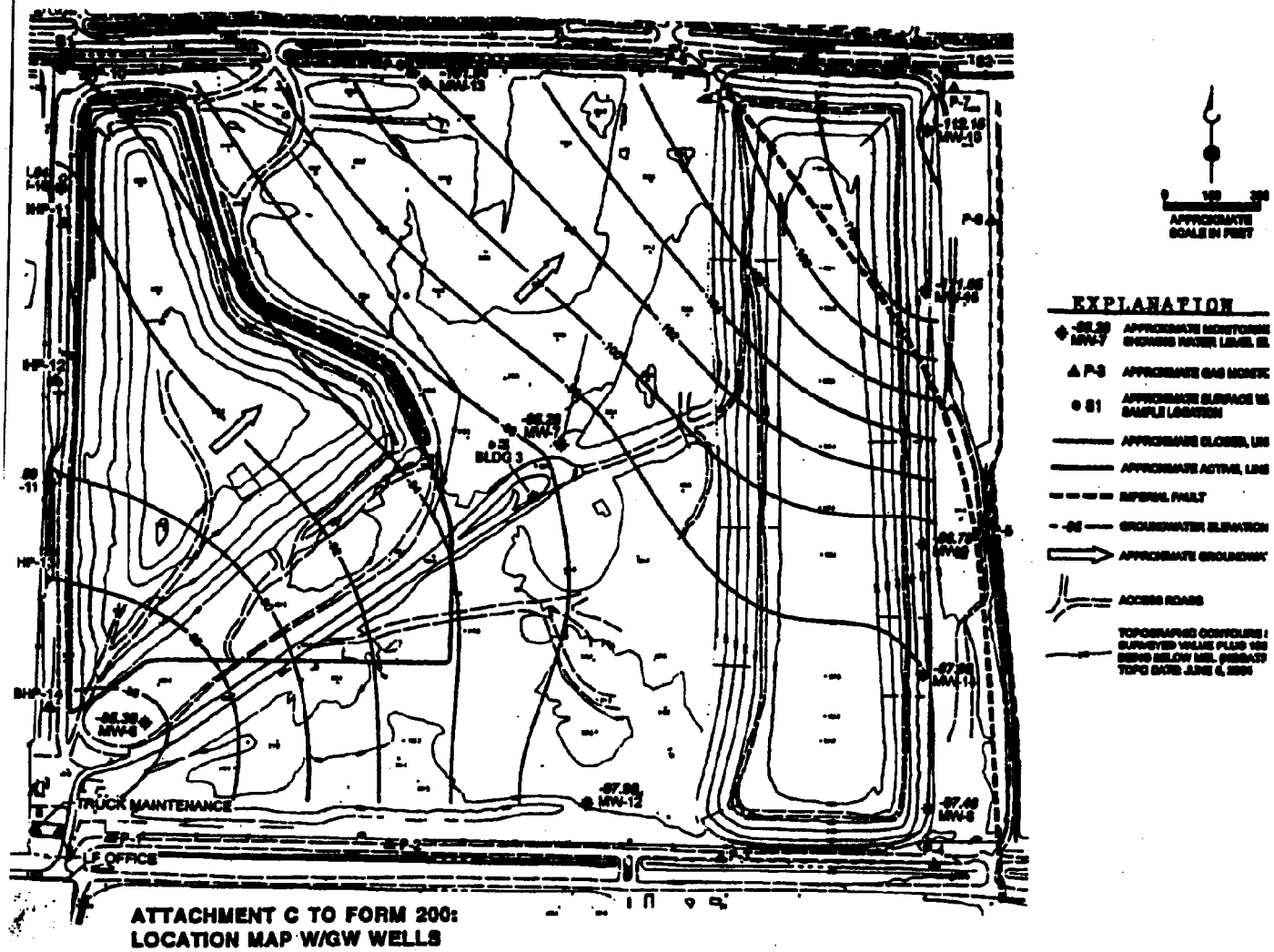
ATTACHMENT A
SITE LOCATION MAP
IMPERIAL LANDFILL, INC., OWNER/OPERATOR
ALLIED IMPERIAL LANDFILL
CLASS III MUNICIPAL SOLID WASTE MANAGEMENT FACILITY
East of Imperial – Imperial County
Board Order No. R7-2005-0102

California Regional Water Quality Control Board
Colorado River Basin Region



ATTACHMENT B
SITE MAP
IMPERIAL LANDFILL, INC., OWNER/OPERATOR
ALLIED IMPERIAL LANDFILL
CLASS III MUNICIPAL SOLID WASTE MANAGEMENT FACILITY
East of Imperial – Imperial County
Board Order No. R7-2005-0102

California Regional Water Quality Control Board
Colorado River Basin Region



ATTACHMENT C TO FORM 200:
LOCATION MAP W/GW WELLS

ATTACHMENT C
GROUNDWATER CONTOUR MAP
IMPERIAL LANDFILL, INC., OWNER/OPERATOR
ALLIED IMPERIAL LANDFILL
CLASS III MUNICIPAL SOLID WASTE MANAGEMENT FACILITY
East of Imperial – Imperial County
Board Order No. R7-2005-0102