CALIFORNIIA REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION

ORDER NO. R7-2003-0100

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. 97-073 for the phased expansion of this Class III landfill to a planned 42-acre lined Class III landfill. Phases I, II, and IIIa have been previously constructed and comprise approximately 19 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 WMF is currently regulated by WDRs found in Board Order No. 97-073, adopted on June 25, 1997 and Board Order No. 98-082. This Board Order updates Board Order No. 97-073 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 the Resource Conservation Recovery Act (RCRA), also known as Subtitle D.

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 Facility presently has a total potential waste capacity of approximately 2,598,603 tons (assuming a waste density of 1,360 lbs/cy), with an approximate total volume of 3,821,475 cubic yards (as of 6/12/02, approximately 735,995 cy has been consumed).

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 three (3) 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 ½ 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 2.5 inches and an average annual pan evaporation rate greater than 50 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 (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, sewage sludge, inert solid fill, ash, 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, as described in Finding No. 4. This Order updates WDRs for the

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

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. R7-2003-0100, 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 it 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. 97-073 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 in the discharge of waste to the new 42-acre waste management unit.

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

3. Drainage features within the WMU shall be designed to control the runoff from a 100-year, 24-hour, storm event.
4. 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.

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

6. Pursuant to Title 27 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.

7. Leachate collection sumps shall be designed and operated to keep leachate levels at a minimum with 2 feet of freeboard and 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.

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

    a. Daily cover – a minimum of six (6) inches of compacted soil, or alternative material, 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, placed over the waste area that has been inactive for period greater than 180 days. Existing daily cover may be used as part of the intermediate cover.

9. 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.

10. Any alternative materials used for daily or intermediate cover which 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.
11. 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.

12. 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.

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

14. The discharger shall place any leachate removed from the LCRS sumps into a leachate management system as specified below in Specification 15 of this Board Order.

15. 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 should 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 ration less than 5:1 by weight in that WMU at the Facility.

16. 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.

17. 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.

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

19. 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).

20. 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.

21. 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 of art used in this Board Order regarding monitoring are defined in Part 1 of the attached Monitoring and Reporting Program No. R7-2003-0100 and revisions thereto, hereby incorporated by reference.):

    a. The discharger shall test for the monitoring parameters and Constituents of Concern (COCs) listed in Monitoring and Reporting Program No. R7-2003-0100, 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 Constituent of Concern (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. R7-2003-0100, 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 the Standard is broken (i.e., a release is discovered), the WMU begins 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 is automatically extended until the WMU has been in continuous compliance for at least three (3) consecutive years.

22. The discharger shall report Monitoring parameters from the constituents listed in Monitoring and Reporting Program No. R7-2003-0100, and future revisions thereto. These monitoring parameters are subject to the most appropriate statistical or non-statistical tests under Monitoring and Reporting Program No. R7-2003-0100, Part III A, and any revised Monitoring and Reporting Program approved by the Regional Board's Executive Officer.

23. The discharger shall, for any future expansion, install additional ground water, soil-pore liquid, or leachate monitoring devices to comply with the Monitoring and Reporting Program No. R7-2003-0100 and revisions thereto. The discharger shall submit to the Regional Board's Executive Officer, 120 days prior to construction, a plan for these installations.

24. 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.

25. The discharger shall submit to the Regional Board's Executive Officer for review and approval, the "Final Construction Design Drawings and Specifications" 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 25 (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 which would occur for the MPE and 40 CFR Section 258.14 (b) event loading, shall 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.

5. Slope stability analyses that 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.

7. Calculations of minimum factor of safety for interim and final slopes, pursuant to Specification 25 (a)(i) and (a)(ii) above.

8. Leachate head calculations.

9. Drainage system flow calculations.

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

12. Details of liquefaction mitigation measures.

13. Any other applicable analyses.

b. Construction Drawings and Specifications – Detailed sets of construction drawings and specification with sufficient detail to build the WMU containment system. 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. 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 would be 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. 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.

e. 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. 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.

f. 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, which should be taken if a "significant field change" is found to be 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.

26. 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.

27. The discharger shall have on-site at all time during construction of future expansion to the Facility, a qualified team to perform Construction Quality Assurance/Quality Control 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 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 this third party must be acceptable to the discharger and approved by the Regional Board's Executive Officer.

28. 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.

29. 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 shall include, but 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.

30. Waste shall not be disposed where it can be carried from the Facility and discharged into waters of the United States.

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

32. In order to minimize the potential for windblown litter and particulates from the facility site that would pollute surface waters off the Facility site, 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.

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.

33. Truck and container wash water shall continue to be treated and discharged in accordance with Board Order No. R7-2003-0100. If analysis of the wash water indicates the presence of any hazardous substance, it shall be managed in accordance with California Code of Regulations, Title 22, Section 66000, et seq.

34. The discharger shall remove and relocate any waste that is discharged at this facility in violation of these requirements.

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

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

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

38. 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.

39. 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.

40. If there is statistically significant evidence of a release from the WMU as 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. R7-2003-0100 and future revisions thereto.

41. The corrective action plan shall be applicable for 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%);

   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. Sewage sludge from a wastewater treatment plant with 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 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 can cause erosion or decay, or otherwise reduce or impair the integrity of containment structures is prohibited.

6. The discharge or deposit of waste which 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 which, in turn: (1) require a higher level of containment than provided by this WMU; or (2) impair the integrity of the containment structure, is prohibited.

C. Provisions

1. The discharger shall comply with all applicable regulations of Title 27 and the Resource Conservation and Recovery Act (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 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. R7-2003-0100, 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. 25 of the Board Order.

9. The discharger shall comply with Monitoring and Reporting Program No. R7-2003-0100, 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 appropriate portions of the content of this Board Order, and shall maintain a copy of this 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, to:

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

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

    c. Inspect a 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 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.

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. The discharger shall neither cause nor contribute to the contamination or pollution of groundwater via the release of waste constituents in either liquid or gaseous phase.

24. 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 United States Environmental Protection Agency.

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

26. 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.

27. 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.

28. 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.

29. At any time, the discharger may file a written request (including appropriate supporting documents) with the Regional Board's Executive Officer, proposing 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 report, the Regional Board's Executive Officer shall either reject the proposal 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 up receipt of a revised Monitoring and Reporting Program. The report due date is within two (2) months of realizing that a change is appropriate, or of being notified by the Regional Board's Executive Officer.

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

31. 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.

32. 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, Philip A. Gruenberg, 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 May 7, 2003.

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PHILIP A. GRUENBERG
Executive Officer