

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

ORDER NO. R2-2005-0020

**UPDATED WASTE DISCHARGE REQUIREMENTS AND RECISSION OF ORDER
NO. 94-025**

**INTERNATIONAL DISPOSAL CORPORATION OF CALIFORNIA
NEWBY ISLAND CLASS III LANDFILL
SAN JOSE, SANTA CLARA COUNTY**

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The California Regional Water Quality Control Board, San Francisco Bay Region, hereinafter called the Water Board, finds that:

I. FINDINGS

A. FACILITY OWNERSHIP

1. International Disposal Corporation of California (IDC), a wholly owned subsidiary of Allied Waste Industries, Inc., is the site legal owner and the landfill operator, (hereinafter referred to as discharger). The Newby Island Class III landfill is located on 342 acres in north San Jose in Santa Clara County. The site is located at the western end of Dixon Landing Road (Figure 1).

B. PURPOSE OF ORDER

2. This Order updates the ground and surface water monitoring and leachate management programs. The update includes the compost and recycling area groundwater monitoring program and provides updated information describing the site configuration, operations, and history. This Order also specifies deadlines for tasks that are detailed in the provision section of the Order and rescinds the previous Order.

FACILITY DESCRIPTION

3. The Newby Island Sanitary Landfill property is an irregularly shaped, 342-acre parcel bounded by Coyote Creek on the east and north and by South Mud Slough on the south and west (Figure 2). The current refuse fill elevation is approximately 140 feet above MSL, and the subgrade elevation of refuse cells varies from approximately -10 to -40 mean seal level (MSL). Vegetation at the site is limited to landscaping near structures and grasses and shrubs that have been planted as part of the erosion control program.
4. Newby Island has been operated as a solid waste facility since 1930. It was originally reclaimed from tidal marshlands in the late 1800s by constructing a perimeter dike system. Prior to its use as a sanitary landfill, it was operated as an orchard and pasture lands. Placement of refuse was performed from 1930 to 1956 in selected areas in the northern portion of the island. The site began operating as a sanitary landfill in 1956 (EMCON Associates, 1972).
5. The landfill consists of three main parcels (Figure 3):
 - a) An unlined parcel, which consists of waste placed after 1930 that occurred within unlined cells excavated to a depth of approximately -10 feet MSL within the northern, eastern, and western margins of the property;
 - b) A Chapter 15-lined (1984 version) parcel, which includes Subareas 1 through 8, was developed from 1986 to 1994 by excavating native soils to depths of approximately -40 feet MSL. These cells were constructed in accordance with Title 23 CCR Chapter 15 and include two feet of 1.0E-06 cm/sec low-hydraulic conductivity compacted clay overlain by a 12-inch thick granular LCRS; and
 - c) A Subtitle D-lined parcel that has accepted waste from 1994 to the present, which is designated Subareas 9A, 9B, and 9C. The cells were constructed by excavating native soils to a depth of approximately -40 feet MSL, which is overlain by a subdrain, a composite liner, and a granular LCRS on the floor. A geocomposite drainage net is utilized on the side slopes for leachate collection in lieu of a gravel drain blanket. The composite liner system in these areas consists of a high-density polyethylene (HDPE) geomembrane that overlies two feet of 1.0E-07 cm/sec compacted clay. In the lined floor areas, an additional three feet of 1.0E-06 cm/sec clay is provided at the base of the liner system.
6. The landfill contains collection basins utilized for the storage of storm water and groundwater impoundments for groundwater pumped from the subdrain. Leachate is pumped directly to tanks and trucked from the site for disposal. The location of these basins and impoundments is depicted on Figure 4.

C. REPORT OF WASTE DISCHARGE

7. In October 1992, the discharger submitted a Revised Report of Waste Discharge (ROWD) as requested by this Water Board.

D. RELATED ORDERS

i. Waste Discharge Requirements

8. The Water Board adopted Order No. 82-41, amending Order No. 75-22, on June 16, 1982, which found that undeveloped portions of the site, approximately where Subarea 9 and the planned Subareas 10, 11, and 12 are located were waters of the United States and wetlands and prohibited filling in Subareas 9, 10, 11, and 12 until the discharger provided appropriate mitigation.
9. On November 18, 1987, the Water Board adopted Order No. 87-152, rescinding Order Nos. 75-22 and 82-64. Order No. 87-152 required design of a surface water drainage control system and preparation of a leachate management plan.
10. On September 15, 1993 the Water Board adopted Order No. 93-113 as a general permit implementing the requirements of Subtitle D (Title 40, Code of Federal Regulations [CFR], Parts 257 and 258, 11 "Federal MSW regulations").
11. On February 16, 1994, the Water Board adopted Order No. 94-025 to: a) update the groundwater monitoring and leachate management programs; b) establish a set of construction specifications for the Subareas 9, 10, 11, and 12 for liner, LCRS, and storm water retention ponds construction. In addition, the Order consolidated the requirements of Subtitle D (Title 40 Part 258 of the Federal Code of Regulations) and the requirements of Chapter 15 (Article 5, Title 23, Division 3) (extant Title 27) of the California Code of Regulations (CCR).

ii. NPDES Permits

12. On December 15, 1982 the Water Board adopted Order Nos. 82-63 (an NPDES Permit) and 82-64. Order No. 82-63 allowed the filling of waters of the State contained in Area 2 based upon mitigation acceptable to the Water Board and compliance with the requirements of Order No. 82-64 that addressed the construction and operation of the landfill. Order No. 82-41 was rescinded by Order No. 82-64 and Order Nos. 75-22 and 82-64 were rescinded by the adoption of Order No. 87-152 on November 23, 1987 (see Finding No. 9 above).
13. On October 29, 2003 the discharger submitted a Notice of Intent (NOI) to comply with the State Water Resources Control Board's General Permit for Storm Water Discharges Associated with Industrial Activities - NPDES Permit

No. CAS000001. The attached Self-Monitoring Program and Provision No. 7 present specific storm water monitoring requirements.

iii. Resolutions

14. Water Board Resolution 89-39, "Sources of Drinking Water," defines potential sources of drinking water to include all groundwater in the region, with limited exceptions for areas containing high TDS (greater than 3000 mg/l TDS), high background contaminant levels, or those areas with a low-yield. Some groundwater underlying and adjacent to the site qualifies as a potential source of drinking water, although there is no current use of the site's groundwater, nor any anticipated plans for its use.

iv. Solid Waste Facilities Permit

15. Solid Waste Facilities Permit No. 43-AN 0003 was finalized on March 14, 1997 and allows 4,000 tons of non-hazardous waste to be discharged each day and prohibits the placement of liquid waste sludge, designated wastes, friable asbestos, or hazardous waste with the following exceptions:
- a) Non-liquid treatment residue such as solids from screens and settling tanks and sludge containing at least 15-20% solids;
 - b) Non-liquid sewage treatment residue such as solids from screens and grit chambers and sludge containing at least 15-20% solids;
 - c) Wastes containing less than 50% solids, which have been approved by the Local Enforcement Agency (LEA) and the Water Board;
 - d) Triple-rinsed containers in accordance with Title 22 CCR Section 66261.7;
 - e) Manure;
 - f) Dead animals or portions thereof;
 - g) Ashes from household burning;
 - h) Non-hazardous solid waste as defined in CCR Chapter 15 Section 2523 that are not prohibited in other portions of the Solid Waste Facilities Permit or the Water Board Waste Discharge Requirements; and
 - i) Contaminated soils and other industrial wastes are permitted with prior approval by the LEA and the Water Board and in compliance with all other regulatory requirements.

E. GEOLOGIC SETTING

16. Newby Island is located within the Coast Range geomorphic province at the southern end of San Francisco Bay. The Santa Clara Valley trends northwest and is bounded on the southwest by the Santa Cruz Mountains and on the northeast by the Diablo Range. The bed rock core of these mountain ranges is composed of the Jurassic-Cretaceous Franciscan Formation, which consists of various rock types: sandstone, shale, chert, conglomerate, metamorphic rocks, and mélangé composed of fragmented and sheared Franciscan rocks. Cretaceous sandstone, shale and conglomerate, altered and metamorphosed ultramafic rocks, and younger (Oligocene through Plio-Pleistocene) volcanic and sedimentary bedrock formations flank the Franciscan assemblage.
17. Newby Island Sanitary Landfill is situated on the gentle, northwest-sloping, relatively level San Francisco Bay marshlands. Its surface is covered by a dark bluish-gray clay (locally known as a Younger Bay Mud) deposited during the Holocene epoch (within the last 11,000 years). The thickness of Younger Bay Mud within Newby Island varies from 3 to 31 feet in thickness, with an apparent thickening west toward the Bay.

The geologic units at the site are the Franciscan Formation of Jurassic-Cretaceous age that is believed to underlie the site at depths of approximately 3,000 feet, overlain by the Santa Clara Formation, which in turn is overlain by Quaternary age mud and alluvium. The Quaternary age alluvium consists of interbedded continentally derived mud and alluvium that has been designated Older Bay Mud of Late Pleistocene age overlain by Younger Bay Mud of Holocene age.

Geologic structures in the region are affected by a major northwest trending fault system. On the east side of San Francisco Bay are the right-lateral Hayward fault and Calaveras fault, and on the west side is the right-lateral San Andreas Fault. Newby Island is located approximately 3.5 and 7 miles southwest of the Hayward fault and Calaveras fault, respectively, and 15 miles northeast of the San Andreas Fault.

F. HYDROGEOLOGIC SETTING

18. Newby Island is located at the southern extremity of the Niles Cone Groundwater Subarea, which is part of the extensive Fremont Groundwater Area. The extensive nature of the aquifers in the Niles Cone Subarea east of the site has made it possible to delineate specific aquifers and aquicludes and to correlate them from one well to the next. The major water bearing formations underlying the site are briefly described as follows:
- a) Perched Water Table: this type of water is common throughout the site, usually occurring at depths less than 20 feet below ground surface (-15 feet MSL). The perched zone occurs in the low permeability younger bay mud and is characterized by very poor water quality with high chloride, specific conductance, and total dissolved solids (TDS);
 - b) The Newark Aquifer - A shallow saline aquifer system, occurs at elevations from 90 to 110 feet below ground surface (-85 MSL). Water quality within the aquifer is very poor, showing evidence of past saline water intrusion. This aquifer beneath the site is of low yield (less than 5 gallons per minute), of moderate hydraulic conductivity (5×10^{-4} cm/sec) and consists principally of sandy clay within thin interbeds of sand and gravel; and
 - c) The Centerville Aquifer - The top of this deeper freshwater aquifer lies between 200 to 250 feet below ground surface (-195 MSL). This water-bearing zone is separated from the Newark Aquifer by a thick clay aquiclude, which effectively separates the Centerville aquifer from saline water contained in the Newark Aquifer. This potable water bearing formation is composed of angular shell fragments and rounded, pebble-sized gravel with scattered thin calcareous cemented layers. The yield of this zone is about 50 to 100 gallons per minute (gpm).
19. Groundwater in the vicinity of the landfill flows west towards the San Francisco Bay. However, due to groundwater pumping from the underdrain and leachate collection wells, groundwater beneath the landfill generally flows towards the center of the site achieving an inward gradient (Figure 5).
20. Surface waters in the vicinity of the landfill include Coyote Creek to the north and east, south Mud Slough to the south and west, the San Francisco Bay to the west.

G. WASTES AND THEIR CLASSIFICATION

21. Waste received at Newby Island landfill consists of non-hazardous solid wastes and inert wastes as defined by the California Code of Regulations (CCR), Title

27 Sections 20200 - 20230. These wastes are generated from residential, commercial, industrial, and agricultural sources. The waste stream consists of approximately 23 percent residential waste, 39 percent commercial waste, 37 percent industrial and agricultural waste, and one percent demolition wastes.

22. No hazardous or radioactive wastes, wastewater treatment sludge (bio-solids), unless conditions of Prohibition No.5 are met, or liquid wastes are received or allowed to enter the site. Potentially or suspected radioactive materials are screened at the gate with scintillometer equipment. The scintillometer equipment operates continuously during the hours that the site receives refuse.
23. The site does not currently accept asbestos waste or untreated infectious waste.
24. Non-friable asbestos is allowed to be disposed at those sections of the facility that are in compliance with the requirements of Title 27.
25. Small dead animals are received and incorporated into the daily waste stream in conformance with permit regulations.
26. Construction and demolition wastes and tires are accepted in conformance with the Solid Waste Facilities Permit. However, the tires are not disposed at the facility but are transferred to a permitted waste tire operator.
27. Treated wood wastes may be discharged but only to an area equipped with a composite liner and leachate collection and removal system and as detailed in Specification No. 9.
28. Contaminated soils are accepted and disposed at the site based on waste acceptance criteria approved by the Water Board (Attachment A).
29. The site operates a composting facility that processes green waste and wood waste. The site also operates a separate co-composting facility with a storm water collection system that ensures that no contact water mixes with clean storm water.

H. LANDFILL DESIGN & OPERATION

i. Leachate Collection And Removal System For The Unlined Area (Area 1).

30. While the unlined cells are not equipped with a functioning LCRS, they abut the younger lined cells that were excavated to greater depths (-40 feet MSL) creating a hydraulic potential for leachate to migrate from the unlined cells to the adjacent deeper, younger cells that are lined, thus creating an inward gradient. In addition, a dewatering system was also installed in the unlined area, which includes 18 dual-purpose landfill gas/leachate wells (Figure 6).

Pumps within the leachate wells are set to a target extraction elevation of 0 MSL.

ii. Leachate Collection And Recovery System For The Chapter 15 Lined Parcel (Subareas 1-8)

31. Subareas 1 through 8 (Figures 6 and 7) include a blanket drain LCRS. The LCRS includes individual cell drainage through gravel drains, which lead to leachate extraction sumps. The gravel drainage layer is placed on a minimum 0.5 percent subgrade slope to induce migration of fluid toward the leachate collection sumps.

iii. Leachate Collection & Removal System Subtitle D Lined Parcel (Subarea 9)

32. The design of Subareas 9A, 9B, and 9C includes an integrated LCRS. This system consists of a gravel drainage blanket constructed immediately above a composite liner and a network of High Density Polyethylene (HDPE) leachate collection pipelines. The pipe networks collect and convey leachate toward the designated collection sump in Subarea 9C. The LCRS on the sideslope consists of a geocomposite which drains into the bottom LCRS. Leachate is transported by gravity flow to a temporary collection sump located at the lowest points in the collection system (Figures 6 and 8).

33. Subarea 9 also contains a subdrain collection system located beneath the composite liner, which remove groundwater from beneath the landfill. The subdrain consists of a series of six-inch diameter groundwater collection pipes placed in drainage gravel, which is in turn placed in a geotextile-lined trench excavated below subgrade. This subdrain pipe system is spaced throughout the base area of Subareas 9A, 9B, and 9C and connects to a single temporary main collector line. The subdrain collection system installed on the sideslopes consists of a geocomposite backdrain consisting of a geonet drainage layer placed below the low-permeability soil component of the liner and against the finished subgrade.

iv. Proposed Landfill Cap

34. The proposed final cap shall consist of a two-foot thick foundation layer, a one-foot thick low hydraulic conductivity layer (1×10^{-6} cm/sec), and one-foot thick vegetative layer (Figure 9).

I. SLOPE STABILITY

35. Newby Island is located approximately 3.5 to 7 miles southwest of the Hayward and Calaveras Faults, respectively, and 15.0 miles northeast of the San Andreas Fault. The Hayward Fault is the "active" fault considered to have the most

significant effect at the site from a design standpoint. Based on a deterministic perspective, the maximum probable earthquake from the Hayward Fault has a 6.7 moment magnitude, generating a peak horizontal ground acceleration of 0.38g at the project site (Blake, 2004). The maximum credible earthquake from the Hayward Fault has a 7.3 moment magnitude, generating a peak horizontal ground acceleration of 0.46g at the site (Blake, 2004). The above were compiled using an attenuation relationship from Campbell and Bozorgnia (1997, Revised) for alluvial soils.

Based on a historical search of recorded earthquake magnitudes and locations (Blake, 2004) over the last 200 years, the site was subjected to an acceleration of approximately 0.15g from a Magnitude 6.8 event on the Hayward Fault at a distance of 18.7 miles from the site in 1868. Earlier, the site was subjected to an acceleration of 0.46g from a Magnitude 6.1 event on the Hayward Fault at a distance of 3.8 miles from the site in 1858.

Based on the above, the design earthquake acceleration at the site was selected as 0.46g.

36. The PRA Group, Inc. in their November 1, 1993 submittal, Revised Appendix D, included information related to the stability of the interim refuse slope and final refuse slope under static and dynamic conditions. According to the submittal, the factor of safety for the critical failure surface of the currently proposed composite cap was found to be 3.3 under static and 2.1 under the pseudostatic conditions. Based on the results of the analysis, the interim refuse slopes and the currently proposed cap at Newby Island Sanitary Landfill are considered to be stable according to the requirements of Title 27 for Class III landfills. For the static condition, the Spencer's method combined with the computer program TSLOPE was used. For the dynamic conditions, the pseudo-static method and Equivalent Acceleration Method were used.
37. A Subarea 10 expansion may be proposed in the future. Subsequent analyses completed to support the expansion proposal, conducted by Geologic Associates in 2004, are generally consistent with PRA's earlier conclusions.

J. STORMWATER

38. Runoff within the active portion of the facility is diverted and channeled within a series of drainage ditches and berms to retention ponds. In a June 15, 1998 letter, the Water Board authorized the discharger to pump storm water to an off-site location, provided analyses show that no constituents of concern are present. The pond sampling program was proposed in an April 4, 1998 plan. The discharger monitors all storm water leaving the site as required by the Industrial Storm Water General Permit, and as required by additional requirements outlined in this Order in the Specifications section.

Provision 5 of this Order requires the discharger to prepare a plan to divert all waste-contact storm water from the active fill face to the leachate collection and removal tankage for subsequent offsite disposal.

Storm water from the composting area is also collected in the storm water retention ponds. Provision 7 of this order requires the discharger to augment the site Storm Water Pollution Prevention Plan to address storm water emanating from the composting area. Storm water from the co-composting area is kept separate from clean storm water and reapplied to the compost piles.

K. GROUNDWATER AND SURFACE WATER MONITORING PROGRAM

39. The detection monitoring program complies with Title 27 requirements and is detailed in the attached "Self Monitoring Program" (Figures 4, 5, 10, and 11).

L. BASIN PLAN

40. The Water Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Water Board's master water quality control planning document. The State Water Resources Control Board and the Office of Administrative Law approved the revised Basin Plan on July 20 and November 13, respectively, of 1995. A summary of regulatory provisions is contained in Title 23 of the California Code of Regulations at Section 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater.
41. The Basin Plan provides that all groundwater are considered suitable, or potentially suitable, for municipal or domestic water supply (MUN) and that, in making any exceptions, the Water Board will consider the criteria referenced in Water Board Resolution No. 89-39, "Sources of Drinking Water", where: 1) the total dissolved solids exceed 3,000 mg/l (5,000 μ S/cm, electrical conductivity), and it is not reasonably expected by the Water Board that the groundwater could supply a public water system; 2) there is contamination, either by natural processes or human activity (unrelated to the specific pollution incident), that cannot reasonably be treated for domestic use using best management practices or best economically achievable treatment practices; and 3) the water source does not provide sufficient water to supply a single well capable of producing an average, sustained yield of 200 gallons per day.

M. BENEFICIAL USES OF SURFACE AND GROUNDWATER

42. The beneficial uses of Coyote Creek, Mud slough, and South San Francisco Bay are as follows:
- a) Wildlife habitat;
 - b) Brackish and salt water marshes;
 - c) Water contact recreation;
 - d) Non-water contact water recreation;
 - e) Commercial and sport fishing;
 - f) Preservation of rare and endangered species;
 - g) Estuarine habitat; and
 - h) Fish migration and spawning,
43. The present and potential beneficial uses of the deeper groundwater (below elevation -85 MSL) are as follows:
- i) Domestic and municipal water supply;
 - j) Industrial process supply;
 - k) Industrial service supply; and
 - l) Agricultural supply.

N. CALIFORNIA ENVIRONMENTAL QUALITY ACT

44. This action relates to permitting existing waste management units and is thus exempt from provisions of the California Environmental Quality Act pursuant to Section 15301, Title 14 of the California Code of Regulations

O. NOTIFICATIONS AND MEETINGS

45. The Water Board has notified the discharger and interested agencies and persons of its intent to update waste discharge requirements and has provided them with an opportunity to submit their written views and recommendations.
46. The Water Board, in a public meeting, heard and considered all comments pertaining to the proposed waste discharge requirements for the site.

IT IS HEREBY ORDERED that the discharger, its agents, successors and assigns shall meet the applicable provisions contained in Title 27, Division 2, Subdivision 1 of the California Code of Regulations and Division 7 of the California Water Code and shall comply with the following:

II. PROHIBITIONS

A. WASTE MANAGEMENT

1. The relocation of wastes to or from any waste management unit shall not create a condition of pollution or nuisance as defined in Section 13050 (l) and (m) of the California Water Code. Any relocated waste shall not be placed in or allowed to contact ponded water from any source whatsoever. Wastes shall not be relocated to any location where they can be discharged into waters of the State or of the United States.
2. Wastes shall not be disposed of in any position where they can be carried from the disposal site and discharged into waters of the State or of the United States.
3. The discharge or storage of hazardous waste, as defined in Sections 2521 and 2522 of Chapter 15, at the facility is prohibited. For the purpose of this Order, the term hazardous waste is as defined in Title 23, Article 2 of Chapter 15.
4. Contaminated soils are disposed at the site and are screened based on concentration limit acceptance criteria, which was developed based on contaminant transport attenuation from the landfill liner (Attachment A).
5. High moisture content wastes (including restaurant grease) containing less than 50% solids shall not be deposited or stored at this site except as provided in an approved sludge management plan. Wastes containing at least 50% solids and defined by Section 2523 of Chapter 15 as Non-hazardous Solid Waste may be deposited at this site.
6. This Order prohibits the discharge of wastes which have the potential to reduce or impair the integrity of the containment structures or which, if commingled with other wastes in the unit could produce chemical reactions that create heat, pressure, fire, explosion, toxic by-products, or reaction products.

B. LEACHATE MANAGEMENT

7. Leachate from wastes and ponded water in contact with refuse shall not be discharged to waters of the State or of the United States unless specifically authorized under a NPDES permit.
8. Buildup or mounding of leachate levels within the landfill is prohibited and shall be prevented by operation of a leachate extraction system. The depth of

leachate shall be kept at levels at or below 0 feet msl or sufficient to create an inward gradient for unlined areas and 12-inches above the bottom liner of lined areas.

C. WASTE MANAGEMENT UNIT CONSTRUCTION, OPERATION, AND MAINTENANCE

9. Construction of the containment features of all future waste management units must be in compliance with this Order and Title 27. Wastes shall not be placed in any area of a new unit until the Executive Officer has received an approved construction quality assurance report(s) certified by a California - registered civil engineer or California - certified engineering geologist.
10. The creation of any new waste management units is prohibited without prior Water Board approval.
11. The relocation of wastes is prohibited without prior Water Board staff concurrence.
12. Excavation within or reconfiguration of any existing waste management unit is prohibited without prior concurrence of Water Board staff. Minor excavation or reconfiguration activities such as for installation of signs or landscaping, or for routine maintenance and repair, do not require prior staff concurrence.
13. No additional waste shall be deposited or stored at this site after closure is completed.
14. The discharger shall not disc the landfill cap. Alternate methods of controlling vegetative growth, which do not affect the integrity of the landfill cap, shall be utilized.
15. Waste shall not be exposed at the surface of any WMU.
16. Activities associated with subsurface investigations and cleanup that will cause significant adverse migration of pollutants are prohibited.

D. GROUNDWATER AND SURFACE WATER PROTECTION

17. The discharger, or any future owner or operator of the site, shall not cause the following conditions to exist in waters of the State at any place outside the waste management facility:
 - a) Surface Waters:
 - Floating, suspended, or deposited macroscopic particulate matter or foam;
 - Bottom deposits or aquatic growths;
 - Alteration of temperature, turbidity, or apparent color beyond natural background levels;
 - Visible, floating, suspended or deposited oil or other products of petroleum origin; or
 - Toxic or other deleterious substances to be present in concentrations or quantities which may cause deleterious effects on aquatic biota, wildlife or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentrations.
 - b) Groundwater:
 - Further degradation of groundwater quality; or
 - Substantial worsening of existing groundwater impacts.
18. Migration of pollutants through subsurface transport to waters of the State is prohibited.
19. The groundwater shall not be degraded as a result of the waste disposal operation.
20. The treatment, discharge or storage of materials which may impact the beneficial uses of ground or surface water shall not be allowed to create a condition of pollution or nuisance as defined in Sections 13050 (l) and (m), respectively, of the California Water Code.

III. **SPECIFICATIONS**

A. REPORTING SPECIFICATIONS

1. All reports submitted pursuant to this Order shall be prepared under the supervision of and signed by a California – certified registered civil engineer, professional geologist, or certified engineering geologist.

2. The discharger shall implement Corrective Action Programs, pursuant to 27CCR, Section 20430 to remediate releases from waste management units and to achieve compliance with the Water Quality Protection Standard (WQPS) established by the Water Board. The WQPS includes the following:
 - a) A list of Constituents of Concern (COCs) established for the waste management units that includes all organic and inorganic compounds in the Self Monitoring Program attached to this Order, or any future amendments thereof (Table 2).
 - b) Concentration limits (CLs) for all COCs detected at the specified points of compliance. CLs must be based on evaluation of background concentrations or intrawell statistical methods for each COC, pursuant to 27 CCR, Section 20400.
 - c) Points of Compliance (POC) along the perimeter of the waste management unit where waste exists. The point of compliance extends vertically through the uppermost aquifer beneath the landfill. Each monitoring well and sampling point located along the downgradient waste management unit perimeter, specified in this Order or the attached SMP to this Order, or any future amendments thereof, shall represent a point of compliance.
3. The landfill shall be designed and constructed in conformance with the requirements of Title 27 and this Order. The final design plans shall be submitted to the Executive Officer for review and approval and shall include, but not be limited to, the engineered design plans for the fill cell, the construction specifications, a construction quality assurance (QA/QC) plan, and a revised discharge monitoring program. The final construction report shall include, but not be limited to, construction record drawings (as-built drawings) for the waste management unit, a QA/QC report with a written summary of the QA/QC program and all test results and analyses.
4. The discharger shall maintain a copy of these waste discharge requirements and these requirements shall be available to operating personnel at the facility at all times [CWC Section 13263].
5. At any time, the discharger may file a written request (including supporting documentation) with the Executive Officer, proposing modifications to the attached SMP. If the proposed modifications are acceptable, the Executive Officer may issue a letter of approval that incorporates the proposed revisions into the SMP.
6. In addition to a hard copy, an electronic copy of all reports shall be submitted as one PDF file. It is preferred that reports be converted from their original format (e.g. Microsoft Word) rather than scanned except for signature pages and perjury statements which must be scanned and included. Each page in the PDF

file should be rotated in the direction that facilitates reading on a computer. The electronic document will then be copied into the Board's electronic document management system, which will be the formal Board secured record for the site. A PDF copy of the report shall also be uploaded to the state Geotracker database at www.geotracker.ca.gov

B. TITLE 27 COMPLIANCE SPECIFICATIONS

7. The dischargers shall comply with all applicable provisions of Title 27 that are not specifically referred to in this Order.
8. To ensure containment; all new waste management units must meet or exceed the construction specifications outlined in Title 27, Chapter 3, Subchapter 2, Article 4.

C. WASTE MANAGEMENT SPECIFICATIONS

9. Hazardous wastes shall not be disposed of at this facility. Designated, asbestos, non-hazardous, inert and infectious wastes may be allowed to be disposed of at the facility provided that all Federal regulations, Subtitle D, and provisions of the California Integrated Waste Management Board, California Department of Toxic Substance Control, Local Health Agencies, and Local Land use Permit requirements are complied with.
10. This provision applies only to treated wood waste that is a hazardous waste, solely due to the presence of a preservative in the wood, and is not subject to regulation as a hazardous waste under the federal act.

Treated wood wastes may be discharged 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 250150.7. "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 and following). 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).

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 cell 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.

11. Contaminated soils shall be disposed at the site based on meeting the waste acceptance criteria presented in Attachment A.

D. LEACHATE MANAGEMENT SPECIFICATIONS

12. Permanent leachate control facilities shall be constructed. Temporary leachate collection sumps may be used to convey leachate to the permanent leachate control facilities. Measures shall be taken to ensure that the leachate extraction system will remain operational permanently. All leachate collection and conveyance facilities shall be constructed in compliance with the requirements of Title 27 and to ensure free flow of leachate through the conveyance system.
13. All conveyance control facilities and hydraulic structures shall be constructed to ensure normal flow of liquid and to prevent hydraulic pressure buildup within the pipeline. All hydraulic structures shall be constructed according to the design and construction specifications as well as in accordance with Section 20340 of Title 27 and shall be completed prior to the placement of any refuse in the specified fill area.
14. The leachate collection and removal system (LCRS) shall be maintained and operated to prevent the buildup of hydraulic head on the bottom of the landfill. The maximum permissible leachate level buildup above the liner must not be greater than one foot (0.3048 M). The LCRS shall be inspected monthly or more frequently as necessary, and any accumulated fluid shall be removed.
15. The leachate collected in the unlined landfill area shall be removed and managed as follows:
 - a) Leachate extraction wells, either leachate-only or dual purpose landfill gas/leachate wells shall be installed through the full vertical waste extent, if feasible, and shall be equipped with leachate extraction pumps. The system shall be augmented each year until a consistent decrease in leachate volume can be empirically verified. The empirical verification shall consist of a combination of the following approaches:
 - Demonstrate, using a refined water balance, that less leachate is entering the landfill than is being extracted;
 - Demonstrate that leachate elevations within the landfill are declining using leachate elevation measurements from either monitoring or extraction wells located in the interior of the landfill;
 - b) Once it has been established that the leachate collection and removal system size and pumping rate is sufficient to reduce the leachate volume, the system shall be maintained and operated such that leachate volume is steadily reduced. The Discharger shall make reasonable efforts to reduce the leachate level each year, as demonstrated by the methods outlined in a)

above. The goal of this specification is to reduce leachate to an acceptable level over a period of 5-years.

- c) As a final performance criteria, leachate levels shall be reduced until at least one of the following three criteria has been satisfied:
- It can be demonstrated that leachate exists at no more than 0 ft/msl;
 - It can be demonstrated that an inward gradient has been achieved such that leachate flows from the perimeter of the landfill towards the center of the landfill;
 - It can be demonstrated that the fluids being removed from the landfill are chemically indistinguishable from the groundwater in the vicinity of the landfill.

E. WASTE MANAGEMENT CONSTRUCTION, OPERATION, CLOSURE, AND MAINTENANCE

16. The discharger shall maintain the waste management units so as to prevent a statistically significant increase in water quality parameters at points of compliance as provided in 27CCR, Section 20420.
17. The discharger shall maintain the waste units to prevent discharges, such that the units do not constitute a pollution source.
18. The discharger shall comply with all applicable provisions of Title 27 that apply to the closure and post-closure of WMUs and the design and maintenance of surface impoundments.
19. Waste management units shall be closed according to a closure plan prepared according to all applicable requirements of Title 27, and approved by the Executive Officer.
20. The site shall be protected from any washout or erosion of wastes or cover material and from inundation that could occur as a result of a 100-year, 24-hour precipitation event, or as the result of flooding with a return frequency of 100 years.
21. All geotextile and geomembrane used in construction of the cells must meet the requirements of Title 27.
22. Eighty millimeter-thick geomembrane shall be utilized for all new liner construction.

23. A geologic map of the base of the excavation shall be prepared for each waste management unit as it is developed. Pathways that might allow leachate to migrate into deeper geologic strata shall be clearly marked and removed, modified, or engineered to prevent leachate migration.
24. The discharger shall assure that the foundation of the site, the refuse fill, and the structures which control leachate, surface drainage, erosion and gas for this site are constructed and maintained to withstand conditions generated during the maximum probable earthquake. Specifically, the gas system shall include automatic earthquake shut off mechanisms.
25. As portions of the landfill are closed, the exterior surfaces shall be graded to a minimum slope of 3 percent in order to promote lateral runoff of precipitation. In addition, all completed disposal areas shall be covered with a Title 27 compliant cover.
26. Interim cover shall be maintained over all waste, at all times, except for the active face area of the disposal as approved by the California Integrated Waste Management Board.
27. Methane and other landfill gases shall be adequately vented, removed from the landfill units, or otherwise controlled to minimize the danger of explosion, adverse health effects, nuisance conditions, or the impairment of beneficial uses of water.
28. The discharger shall provide a minimum of two permanent surveyed monuments near the landfill from which the location and elevation of wastes, containment structures, and monitoring facilities can be determined throughout the operation and post-closure maintenance period. A licensed land surveyor or registered civil engineer shall install these monuments.

F. REMEDATION FACILITY MAINTENANCE SPECIFICATIONS

29. The discharger shall **annually demonstrate** (include results in the Annual Report) that all installed groundwater remedial systems including, but not limited to, groundwater containment, treatment, and/or extraction systems are functioning as intended and designed.
30. Containment, collection, drainage, and monitoring systems at the facility, shall be maintained as long as contaminated waste, soil, or water is present and poses a threat to water quality.
31. The discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, adequate

funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Order [CWC Section 13263(f)].

G. REMEDIATION FACILITY AUGMENTATION SPECIFICATIONS

32. If the Executive Officer determines the existence of an imminent threat to the beneficial uses of surface or subsurface waters of the State, the discharger shall be required to install additional groundwater monitoring wells and/or undertake corrective action measures.
33. If it is determined by the Executive Officer, based on groundwater monitoring information, that water quality impairment immediately outside the boundary of any waste management unit continues to degrade, the discharger will be required to submit and implement a site specific groundwater corrective action proposal.

H. GROUNDWATER AND SURFACE WATER PROTECTION SPECIFICATIONS

34. The discharger shall conduct monitoring activities according to the SMP attached to this Order and as may be amended by the Executive Officer, to verify the effectiveness of groundwater remediation and containment systems and waste management unit closure systems.
35. The discharger shall maintain the facility so as to prevent a statistically significant increase in water quality parameters at points of compliance as provided in Section 20420 of Title 27.
36. The discharger shall provide reasonable access to any property they own or lease at the site to allow for installation, sampling, monitoring, etc., of all devices and equipment necessary for compliance with the requirements of this Order.
37. The discharger shall conduct monitoring activities as specified in this Order. Should monitoring results show evidence of plume migration, additional plume characterization of pollutant extent shall be required.
38. Discharger shall submit photographic documentation of any soil or groundwater corrective action features installed at the facility.
39. All monitoring wells shall be constructed in a manner that maintains the integrity of the drill hole, prevents cross-contamination of saturated zones, and

produces representative groundwater samples from discrete zones within the groundwater zone each well is intended to monitor.

40. The discharger shall install any reasonable additional groundwater and leachate monitoring devices required to fulfill the terms of any future Discharge Monitoring Program issued by the Executive Officer.
41. All borings shall be logged during drilling under the direct supervision of a registered geologist whose signature appears on the corresponding well log. Logs of monitoring wells shall be filed with the Department of Water Resources. All information used to construct the wells shall be submitted to the Water Board upon completion of the wells.
42. All monitoring instruments and devices used by the discharger to fulfill the approved self-monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year, or more frequently, to ensure continued accuracy of the devices. Annually, the discharger shall submit to the Executive Officer a written statement signed by a registered professional engineer certifying that all flow measurement devices have been calibrated and will reliably achieve the accuracy required.
43. All analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. The Water Board Executive Officer may allow use of an uncertified laboratory under exceptional circumstances, such as when the closest laboratory to the monitoring location is outside the State boundaries and therefore not subject to certification. All analyses shall be required to be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants" (40 CFR Part 136) promulgated by the U.S. Environmental Protection Agency.
44. The groundwater sampling and analysis program shall ensure that groundwater quality data are representative of the groundwater in the area that is monitored.
45. The discharger shall monitor for all constituents of concern (COC) **once every five years** and for each Constituent of Concern at intervals determined in the Self Monitoring Plan (SMP).
46. The discharger shall operate the waste management facility so as to prevent a statistically significant increase to exist between water quality at the point of compliance and Water Quality Protection Standards (WQPS) to be established. The discharger shall establish these WQPS and a statistical methodology to evaluate water quality monitoring data according to the requirements of this Order and Title 27 Sections 20390 - 20435. If an inward gradient is achieved by leachate and ground water extraction from the center of the landfill, the point

of compliance shall only be utilized to verify the groundwater flow gradients and direction.

47. The discharger shall analyze for the parameters as presented in Table 2 of the Discharge Monitoring Program for the Newby Island Sanitary Landfill.

I. SURFACE IMPOUNDMENT SPECIFICATIONS

48. If it is determined by the Executive Officer that any surface impoundment is degrading beneficial uses, there shall be no discharges to the surface impoundment, and residual liquids and sludges shall be removed expeditiously.
49. The impoundments will be operated such that scouring at points of discharge and by wave action at the water line will not degrade the pond containment features.
50. Pipeline discharge to surface impoundments shall be either equipped with devices, or fail-safe operating procedures, to prevent overfilling. The surface impoundments shall always maintain at least two-feet of freeboard.
51. Discharger shall operate the surface impoundments according to a detailed operating, maintenance, and contingency plan, which will include at a minimum, procedures for routine inspection of the surface impoundments, discharge into a pond, discharge out of a pond, contingency measures if problems with the containment structures are found, and notification of agencies.
52. The discharger must maintain through regular depth gauging and removal of sediment retention pond(s) to have sufficient capacity to handle a 100 year 24 hour storm event in addition to any groundwater seepage and it must also be in compliance with the requirements of Title 27. The retention ponds must be equipped with an emergency spillway. Any mechanical pump inlets shall be located at the surface of the impoundment, and must be able to adjust elevation as the pond surface elevation changes.

J. NOTIFICATION SPECIFICATIONS

53. The discharger shall notify the Water Board immediately of any failure that threatens the integrity of any containment and control facilities, structures, or devices. Any such failure shall be promptly corrected after approval of the method and schedule by the Executive Officer.
54. The discharger shall notify the Water Board at least 180 days prior to beginning any intermediate or final closure activities. This notice shall include a statement that all closure activities will conform to the most recently approved closure

plan and that the plan provides for site closure in compliance with all applicable regulations.

55. Except for a discharge which is in compliance with these waste discharge requirements, any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) that person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the office of Emergency Services of the discharge in accordance with the spill reporting provision of the state toxic disaster contingency plan adopted pursuant to Article 3.7 (commencing with Section 8574.7) of Chapter 7 of Division 1 of Title 2 of the Government Code, and immediately notify the State Board or the appropriate Water Board of the discharge. This provision does not require reporting of any discharge of less than a reportable quantity as provided for under subdivisions (f) and (g) of Section 13271 of the Water Code unless the discharger is in violation of a prohibition in the applicable water Quality Control Plan [CWC Section 13271(a)].

K. RESPONSIBILITIES

56. The Water Board considers the property owner and site operator to have continuing responsibility for correcting any problems that arise in the future as a result of waste discharge or related operations or site use.
57. Upon presentation of credentials, the discharger shall permit the Water Board or its authorized representative:
- a) Immediate entry upon the premises on which wastes are located or in which any required records are kept;
 - b) Access to copy any records required under the terms and conditions of this Order;
 - c) Inspection of any treatment equipment, monitoring equipment, or monitoring methods required by this Order or by any other California State Agency; and
 - d) Sampling of any discharge or groundwater governed by this Order.
58. These requirements do not authorize commission of any act causing injury to the property of another or of the public; do not convey any property rights; do not remove liability under federal, state or local laws; and do not authorize the discharge of wastes without appropriate permits from other agencies or

organizations, nor do they create a vested right to continue the waste discharge [CWC Section 13263(g)].

59. This Order is subject to Water Board review and updating, as necessary, to comply with changing state or Federal laws, regulations, policies, or guidelines; changes in the Water Board's Basin Plan; or changes in the discharge characteristics [CWC Section 13263].

IV. PROVISIONS

1. The discharger shall comply immediately, or as prescribed by the time schedule below, with all Prohibitions, Specifications and Provisions of this Order. All required submittals must be acceptable to the Executive Officer. The discharger must also comply with all conditions of these Waste Discharge Requirements. Violations may result in enforcement actions, including Water Board Orders or court Orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Water Board. [CWC Section 13261, 13263, 13265, 13267, 13268, 13300, 13301, 13304, 13340, 13350].
2. All technical and monitoring reports required pursuant to this Order are being requested pursuant to Section 13267 of the California Water Code. Failure to submit reports in accordance with schedules established by this Order or failure to submit a report of sufficient technical quality acceptable to the Executive Officer may subject the discharger to enforcement action pursuant to Section 13268 of the California Water Code.
3. **Leachate Removal Progress Report:** The discharger shall submit an initial technical report documenting the establishment of an inward hydraulic gradient from perimeter of the landfill toward the center of the landfill. The inward hydraulic gradient shall be sufficient to prevent off-site migration of leachate or contaminants. The technical report shall describe the methods utilized to determine the optimum pumping rates and the leachate elevations. If an inward hydraulic gradient has not been established and leachate elevation levels have not been minimized, the discharger shall prepare the workplan and schedule for actions necessary to establish and inward gradient (see Provision No. 4).

Submittal Due Date: August 26, 2005

4. **Establishment of Inward Gradient Workplan:** The discharger shall submit a workplan presenting actions necessary to achieve an inward hydraulic gradient as described in Provision 3. The leachate collected in the unlined landfill area shall be removed and managed as follows:
- a) Existing and future landfill gas wells shall be installed through the full vertical waste extent, if feasible, and shall be equipped with leachate extraction pumps. The system shall be augmented each year until a consistent decrease in leachate volume can be empirically verified. The empirical verification shall consist of a combination of the following approaches:
 - Demonstrate, using a refined water balance, that less leachate is entering the landfill than is being extracted;
 - Demonstrate that leachate elevations within the landfill are declining using leachate elevation measurements from either monitoring or extraction wells located in the interior of the landfill;
 - b) Once it has been established that the leachate collection and removal system size and pumping rate is sufficient to reduce the leachate volume, the system shall be maintained and operated such that leachate volume is steadily reduced. The leachate level shall be reduced to an acceptable level over a period of 5-years.
 - c) As a final performance criteria, leachate levels shall be reduced until at least one of the following three criteria has been satisfied:
 - It can be demonstrated that leachate exists at no more than 0 ft/msl;
 - It can be demonstrated that an inward gradient has been achieved such that leachate flows from the perimeter of the landfill towards the center of the landfill;
 - It can be demonstrated that the fluids being removed from the landfill are chemically indistinguishable from the groundwater in the vicinity of the landfill.

Submittal Due Date: September 23, 2005

5. **Active Face Storm Water Diversion:** The discharger shall prepare and submit a workplan describing actions necessary to divert all waste-contact storm water from the active fill area to the LCRS tankage.

Submittal Due Date: September 23, 2005

6. **Piezometer Installation Workplan:** The discharger shall prepare and submit a workplan to install additional piezometers in the unlined area. Leachate elevations collected from the piezometers shall be used to verify gradients within the landfill footprint and to verify leachate mound reduction.

Submittal Due Date: May 27, 2005

7. **Storm Water Pollution Prevention Plan:** Discharger shall augment the existing Storm Water Pollution Prevention Plan and submit a revised version for the facility. The augmentations shall include: 1) additional sampling locations to ensure that **all** storm water leaving the site is monitored; 2) increased monitoring frequency from twice per year to four times per year for total suspended solids; 3) the facility shall maintain 70% vegetative coverage or equivalent using stabilization techniques; as is specified in the NPDES General Storm Water Permit for Construction Activities, Order Number 99-08-DWQ. More than 70 % vegetative cover is a minimum acceptable vegetation density. Slopes that are at final grade must have a greater vegetative density; and 4) the plan shall be augmented to assess impacts to storm water from the composting area. Should impacts be identified, storm water from this area shall be diverted from the storm water sedimentation basin and treated as leachate.

Submittal Due Date: June 24, 2005

8. **Final Closure Report:** The discharger shall submit, within 90 days after the closure of any portion of the landfill, a closure certification report that documents that the area has been closed according to the requirements of this Order and Title 27. The discharger shall certify under penalty of perjury that all closure activities were performed in accordance with the most recently approved closure plan and in accordance with all applicable regulations.

Submittal Due Date: 90 days after closure

9. **Annual Monitoring Report:** The discharger shall submit an Annual Monitoring Report, acceptable to the Executive Officer, by January 31 of each year in accordance with the attached Discharge Monitoring Program (Attachment A). The annual report to the Water Board shall cover the previous calendar year as described in Part A of the Monitoring Program. In addition to the requirements outlined in Attachment A, this report shall also include the following: location and operational condition of all leachate and groundwater monitoring wells; and a site map delineating groundwater and leachate levels for each monitoring event.

Submittal Due Date: January 31 of each year

10. **Semi-annual Monitoring Report:** The discharger shall submit semi-annual monitoring reports, no later than July 31 and January 31 of each year in accordance with the attached Discharge Monitoring Program (Attachment A). The January 31 semi-annual report may be combined with the annual report. This report shall include a discussion of the establishment, or lack thereof, an inward gradient beneath the landfill, and shall describe future efforts to maintain or establish this gradient. In addition, this report shall include a section describing storm water sampling results and BMPs that shall be augmented in the future.

Submittal Due Date: July 31 and January 31 of each year

11. **Annual Maintenance Report:** The discharger shall submit a technical report to the Board, acceptable to the Executive Officer, detailing the repair and maintenance activities that need to be completed prior to the commencement of the next rainy season (starting October 15 of each year). This letter report shall also include a description and schedule for repair and maintenance activities, and a cost analysis detailing the anticipated expense for all repairs, maintenance and monitoring during the next 12 months. Repair and maintenance estimates shall be based on rainy season inspections conducted throughout the winter as required in the Discharge Monitoring Program.

Submittal Due Date: July 31 of each year

12. **Well Installation Report:** The discharger shall submit a technical report, acceptable to the Executive Officer, that provides well construction details, geologic boring logs, and well development logs for all new wells installed as part of the Discharge Monitoring Program (Attachment A).

Submittal Due Date: 45 days following completion of well installation activities

13. **Changes to Post-closure Development Design:** The discharger shall prepare and submit a technical report, acceptable to the Executive Officer, describing any material proposed changes to site development, redevelopment projects, site features, or site operations for the landfill. The technical report shall describe the project, identify key changes to the design, which may impact the landfill, and specify components of the design necessary to maintain integrity of the landfill cap and prevent water quality impacts. No material changes to the site shall be made without approval by the Executive Officer.

Submittal Due Date: 120 days prior to any material change in site operations or features

14. **Change in Site Conditions:** The discharger shall immediately notify the Board of any flooding, ponding, settlement, equipment failure, slope failure, exposure of waste, or other change in site conditions that could impair the integrity of the landfill cap, waste or leachate containment facilities, and/or drainage control structures and shall immediately make repairs. Within 30 days, the discharger shall prepare and submit a technical report, acceptable to the Executive Officer, documenting the corrective measures taken.

Notification Due Date: Immediately upon occurrence

Submittal Due Date: 30 days after initial notification

15. In the event of any change in control/operator or ownership of land or parcel of land, or waste discharge facilities presently owned or controlled by the discharger, the discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office. The discharger must notify the Executive Officer, in writing at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage to a new discharger. The notice must include a written agreement between the existing and new discharger containing a specific date for the transfer of this Order's responsibility and coverage between the current discharger and the new discharger. This agreement shall include an acknowledgment that the existing dischargers are liable for violations up to the transfer date and that the new discharger is liable from the transfer date on. [CWC Sections 13267 and 13263]. The request must contain the requesting entity's full legal name, the address and telephone number of the persons responsible for contact with the Water Board and statement. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code.
16. Where the discharger becomes aware of a failure to submit any relevant facts in a Report of Waste Discharge or submitted incorrect information in a Report of Waste Discharge or in any report to the Water Board, they shall promptly submit such facts or information [CWC Sections 13260 and 13267].
17. Provisions of these waste discharge requirements are severable. If any provision of these requirements is found invalid, the remainder of these requirements shall not be affected.
18. The discharger shall report any noncompliance that may endanger public health or the environment. Any such information shall be provided orally to the Executive Officer within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within five days of the time the discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its

cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Executive Officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours [CWC Sections 13263 and 13267].

19. Prior to commencement of filling of a specific area of the site the discharger shall submit a report indicating compliance with all Prohibitions, Specifications, and Provisions of this Order. This shall include as-built construction diagrams. Filling of the area described in the report shall not commence until Water Board staff approves this report based on its demonstration of compliance with this Order.

Submittal Report Due Date: 15 Business days prior to fill commencement

20. **Earthquake Inspection:** Discharger shall submit a detailed Post Earthquake Inspection Report acceptable to the Executive Officer, in the event of any earthquake generating ground shaking of Richter Magnitude 7 or greater at or within 30 miles of the facility. The report shall describe the containment features, groundwater monitoring, and control facilities potentially impacted by the static and seismic deformations of any waste management unit. Damage to any waste containment facility, which may impact State waters, must be reported immediately to the Executive Officer.

Submittal Due Date: Within 2 weeks of Earthquake

21. **Financial Assurance:** The discharger shall obtain and maintain three Financial Assurance Instruments acceptable to the Executive Officer until the end of the Post-Closure Maintenance Period for each waste management unit (California Code of Regulations Title 27, Chapter 6, Subchapter 2, Articles 1,2, and 4 specifies which units shall require each specific financial assurance). The Financial Assurances shall assure waste management unit: 1) closure (the closure fund financial assurance is required to be maintained only until the completion of closure construction); 2) post-closure maintenance; and 3) corrective action for a foreseeable release. The discharger shall submit a report every five years that either validates the Instrument's ongoing viability or proposes and substantiates any needed changes (e.g., a documented increase in the monitoring systems' ability to provide reliable early detection of a release can cause a decrease in the Instrument's financial coverage). For the purposes of planning the amount of the fund, the discharger shall assume a post-closure period of at least 30 years. However, the post-closure maintenance period shall extend as long as the wastes pose a threat to water quality.

Submittal Due Date: Within Three Months of Adoption of this order

22. The discharger shall submit Final Construction Details acceptable to the Executive Officer pursuant to the specifications of this Order. The proposal should provide work plans for development of the various components of the landfill, including detailed specifications for construction of composite liners and leachate collection and removal systems and should include Quality Assurance & Quality Control Procedures, (QA/QC), for all aspects of construction and installation. The work plans for construction of the liners and the leachate collection and recovery system should include detailed specifications regarding the sequence of construction of the various segments of the project, and provide sufficient detail about how the various cells and modules of the landfill areas will interface structurally. The Final Construction Details must be determined to be consistent with this Order by the Executive Officer prior to acceptance of waste.
23. The discharger shall submit an updated geologic map as described in Specification B.16 as new waste management units are constructed. Prior to the placement of refuse in the unit, a detailed written description of the mapping procedure must be submitted and approved by the Executive Officer. The discharger shall evaluate shear zones and other macro or micro geologic deformations.

Submittal Due Date: 30 Business days after the subgrade preparation is completed

24. The discharger shall submit a Contingency Plan to be instituted in the event of a leak or spill from the leachate facilities. The discharger shall give immediate notification of any such leak or spill to the San Francisco Bay Regional Water Quality Control Board, the Local Enforcement Agency (LEA), and the California Department of Toxic Substance Control. The discharger shall initiate its corrective action plan to stop and contain the migration of pollutants from the site.

Submittal Due Date: Within three months of adoption of this order

25. **Change in Discharge:** In the event of a material change in the character, location, or volume of a discharge, the discharger shall file with this Water Board a new Report of Waste Discharge. [CWC Section 13260(c)]. A material change includes, but is not limited to, the following:
- a) Addition of a major industrial waste discharge to discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste;

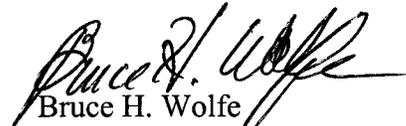
- b) Significant change in disposal method, e.g., change from a land disposal to a direct discharge to water, or change in the method of treatment, which would significantly alter the characteristics of the waste;
 - c) Significant change in the disposal area, e.g., moving the discharge to another drainage area, to a different water body, or to a disposal area significantly removed from the original area potentially causing different water quality or nuisance problems;
 - d) Increase in flow beyond that specified in the waste discharge requirements; and
 - e) Increase in area or depth to be used for solid waste disposal beyond that specified in the waste discharge requirements.
26. The discharger shall immediately notify the Water Board of any flooding, equipment failure, slope failure, or other change in site conditions that could impair the integrity of waste or leachate containment facilities or precipitation and drainage control structures.

NOTIFICATION: Immediately

Submittal Due Date: Within 7 days after the incident

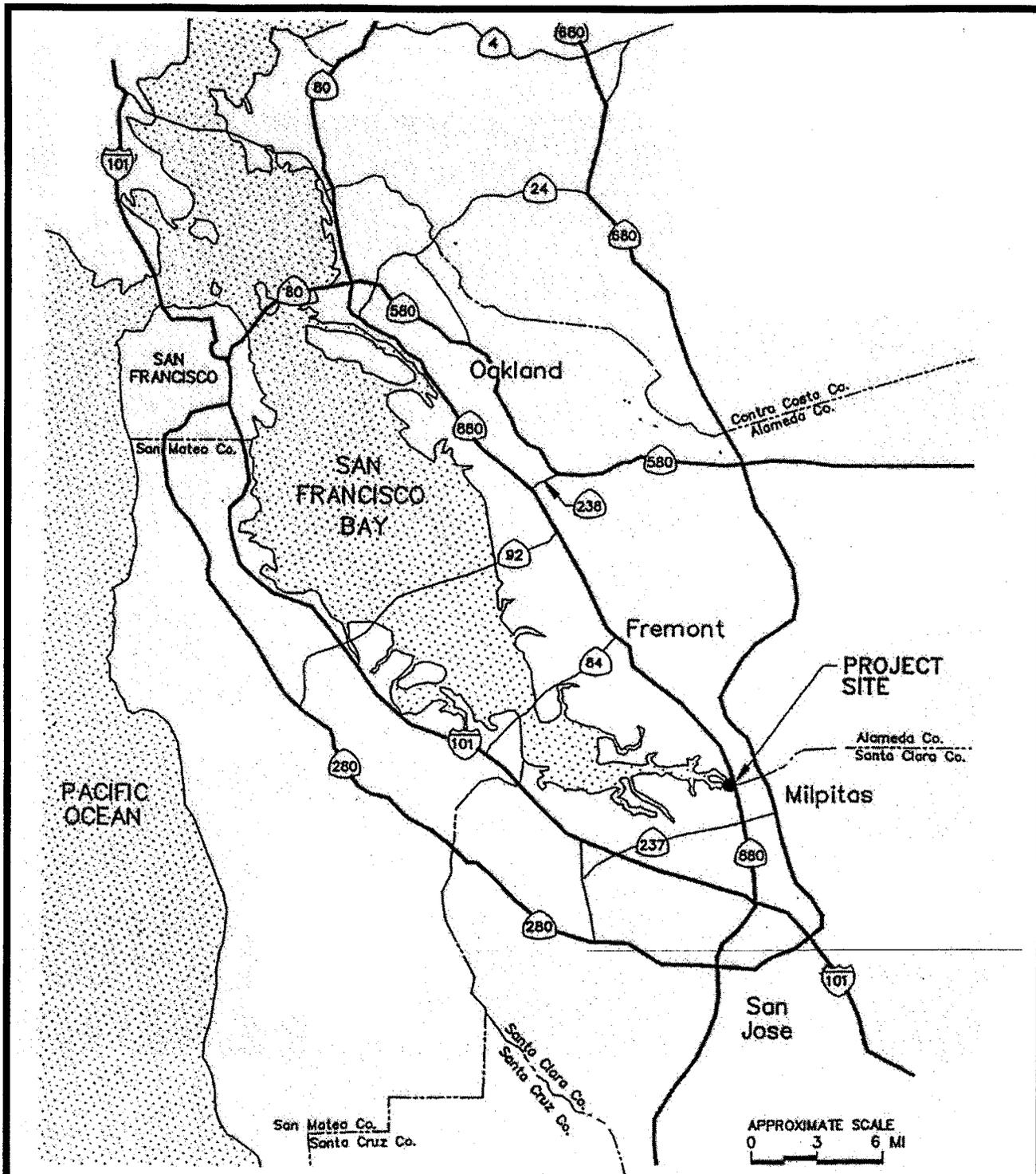
27. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications and Provisions of this Order, shall also be provided to the Santa Clara Valley Water District.
28. Order No. 94-025 is herewith rescinded.
29. **Water Board Review:** This Order is subject to Water Board review and updating, as necessary, to comply with changing State or Federal laws, regulations or policies, or guidelines; changes in the Water Board's Basin Plan; or changes in discharge characteristics.

I, Bruce H. Wolfe, Executive officer, do hereby certify that the foregoing is a full, complete, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on May 18, 2005.


Bruce H. Wolfe
Executive Officer

- Figures:
- Figure 1 – Site Location Map
 - Figure 2 – Surface Water Bodies
 - Figure 3 – Liner As-Built Summary Map
 - Figure 4 – Storm Water Surface Impoundments
 - Figure 5 – Ground Water Flow Direction
 - Figure 6 – Leachate Extraction System
 - Figure 7 – Subareas 1-8 Liner Design
 - Figure 8 – Subarea 9 Liner Design
 - Figure 9 – Prescriptive Final Cover
 - Figure 10 – Site Monitoring Points Location Map
 - Figure 11 – Observation Points Location Map

- Attachments: A - Contaminated Soil Acceptance Criteria
B - Self Monitoring Program



SOURCE: EMCOM/OWT, INC., 2002



FIGURE 1

SITE LOCATION MAP		
WASTE DISCHARGE REQUIREMENTS NEWBY ISLAND SANITARY LANDFILL SAN JOSE, CALIFORNIA		
GeoLogic Associates Geologists, Hydrogeologists, and Engineers		
DRAWN BY: VL	DATE: MARCH 2005	JOB NO. 2003-020

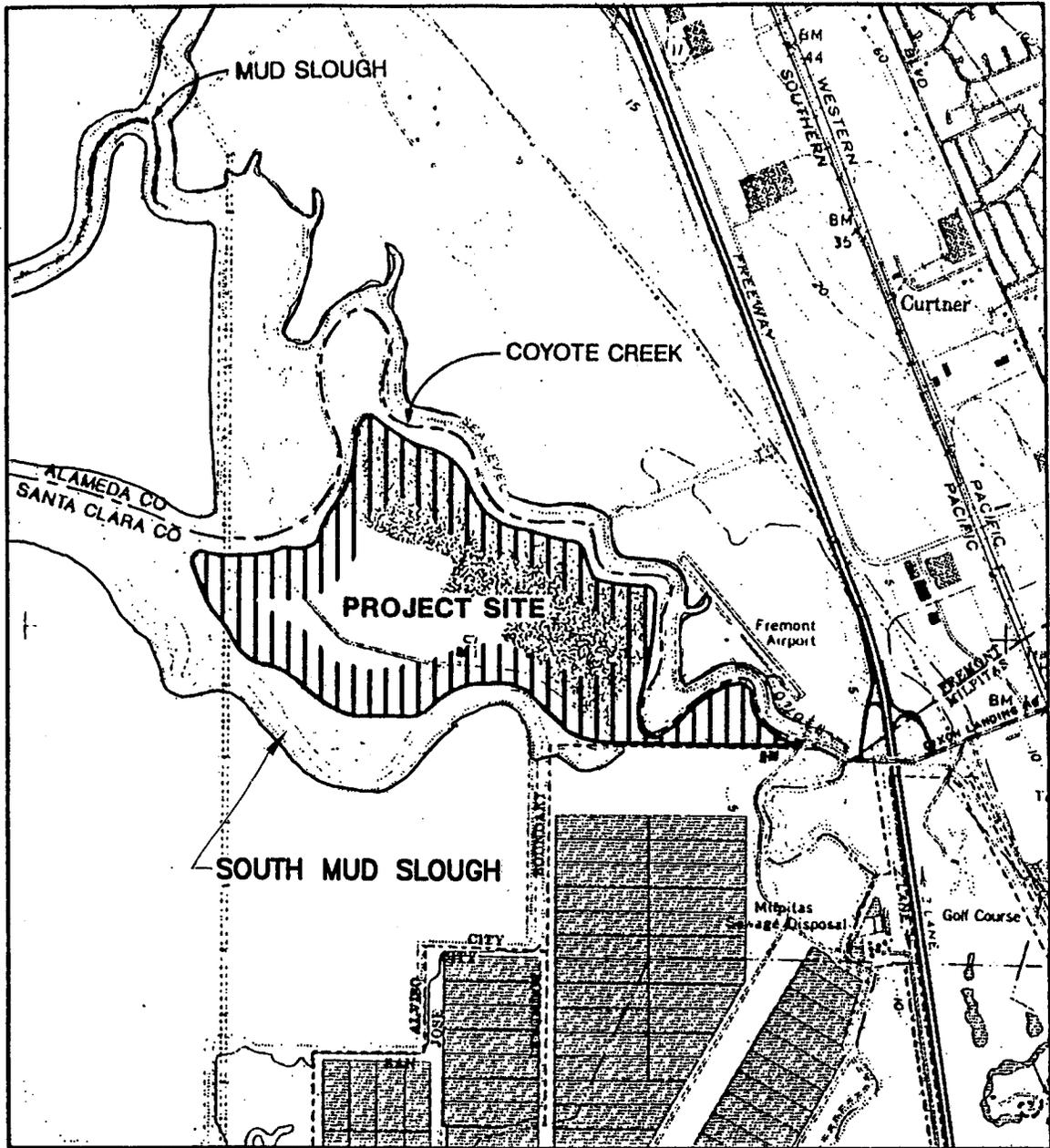


FIGURE 2

SURFACE WATER BODIES		
WASTE DISCHARGE REQUIREMENTS NEWBY ISLAND SANITARY LANDFILL SAN JOSE, CALIFORNIA		
GeoLogic Associates Geologists, Hydrogeologists, and Engineers		
DRAWN BY: VL	DATE: MARCH 2005	JOB NO. 2003-020

REFERENCE:
 TOPOGRAPHIC MAP (as of 2/11/05)
 PROVIDED BY H&W GEOSPATIAL, INC.

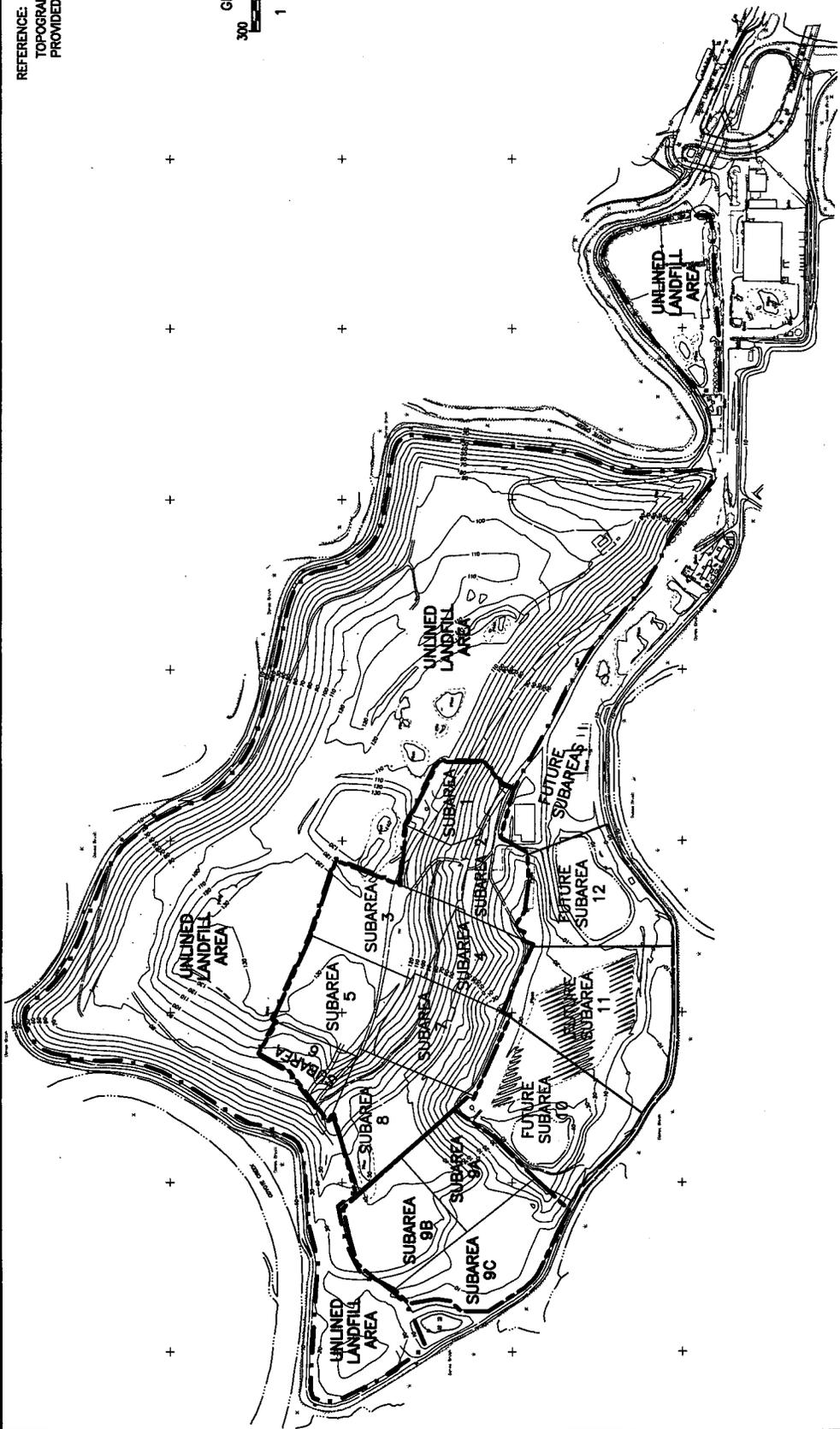


FIGURE 3

LINER AS-BUILT SUMMARY MAP
WASTE DISCHARGE REQUIREMENTS
NEWBY ISLAND SANITARY LANDFILL
SAN JOSE, CALIFORNIA

Geologic Associates
 Geologists, Hydrogeologists, and Engineers

DRAWN BY: M. DATE: MARCH 2005 JOB NO. 2003-020

- EXPLANATION:**
- CHAPTER 15 AREA LIMIT
 - SUBTITLE D AREA LIMIT
 - LIMIT OF UNLINED LANDFILL AREA

REFERENCE:
 TOPOGRAPHIC MAP (as of 2/11/05)
 PROVIDED BY H.W. GEOSPATIAL, INC.

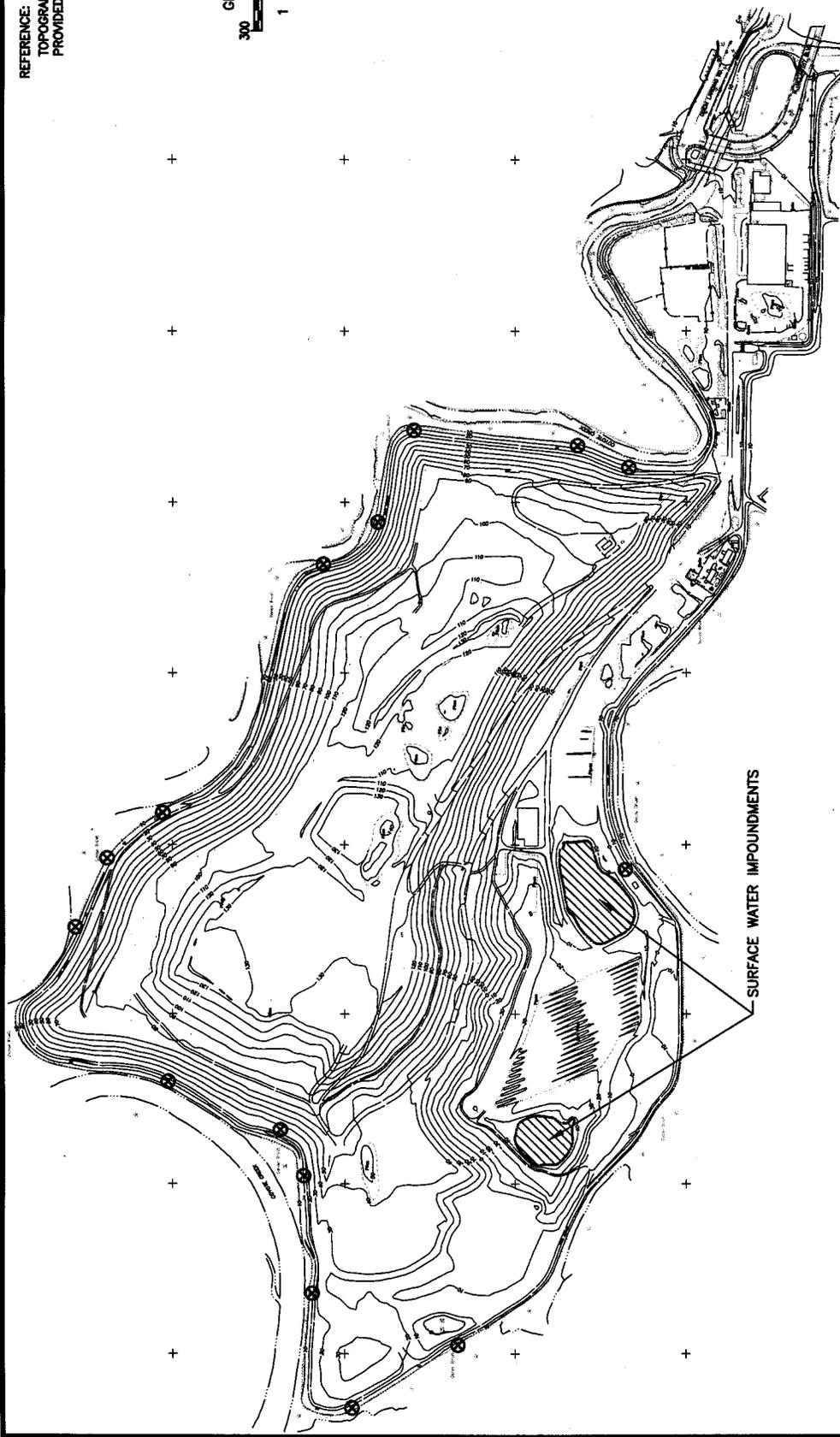


FIGURE 4

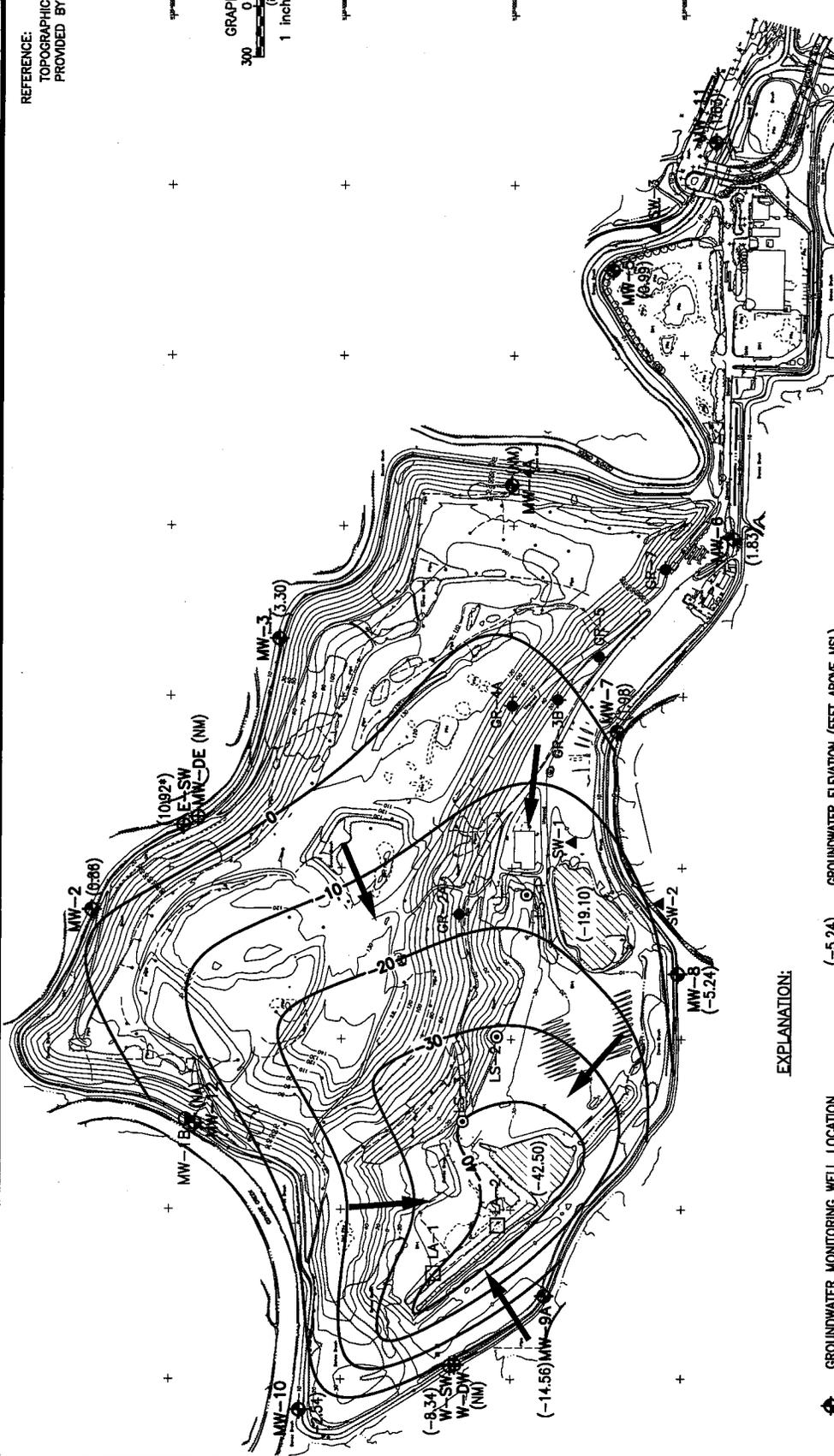
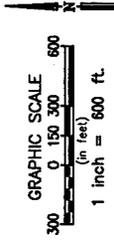
STORM WATER MONITORING LOCATION MAP
 WASTE DISCHARGE REQUIREMENTS
 NEWBY ISLAND SANITARY LANDFILL
 SAN JOSE, CALIFORNIA

	GeoLogic Associates Geologists, Hydrogeologists, and Engineers	JOB NO. 2003-020
	DRAWN BY: VL	DATE: MARCH 2005

- EXPLANATION:
- ⊗ STORM WATER SAMPLING LOCATION
 - ▨ SURFACE WATER IMPOUNDMENT

SURFACE WATER IMPOUNDMENTS

REFERENCE:
 TOPOGRAPHIC MAP (as of 5/09/03)
 PROVIDED BY H.W. GEOSPATIAL, INC.



- EXPLANATION:
- ◆ GROUNDWATER MONITORING WELL LOCATION
 - ◇ PIEZOMETER LOCATION
 - LEACHATE MONITORING WELL LOCATION
 - TEMPORARY LEACHATE COLLECTION SUMP
 - TEMPORARY LEACHATE COLLECTION AREA
 - ▲ SURFACE WATER SAMPLING LOCATION
 - ABANDONED GROUNDWATER MONITORING WELL
- (-5.24) GROUNDWATER ELEVATION (FEET ABOVE MSL)
 - - - - - POTENTIOMETRIC SURFACE ELEVATIONS (CONTOUR INTERVAL = 10 FEET)
 - DIRECTION OF GROUNDWATER FLOW
 - (10.92*) DATA NOT USED TO CONSTRUCT CONTOURS
 - (NM) GROUNDWATER ELEVATION NOT MEASURED
 - (NA) NOT APPLICABLE

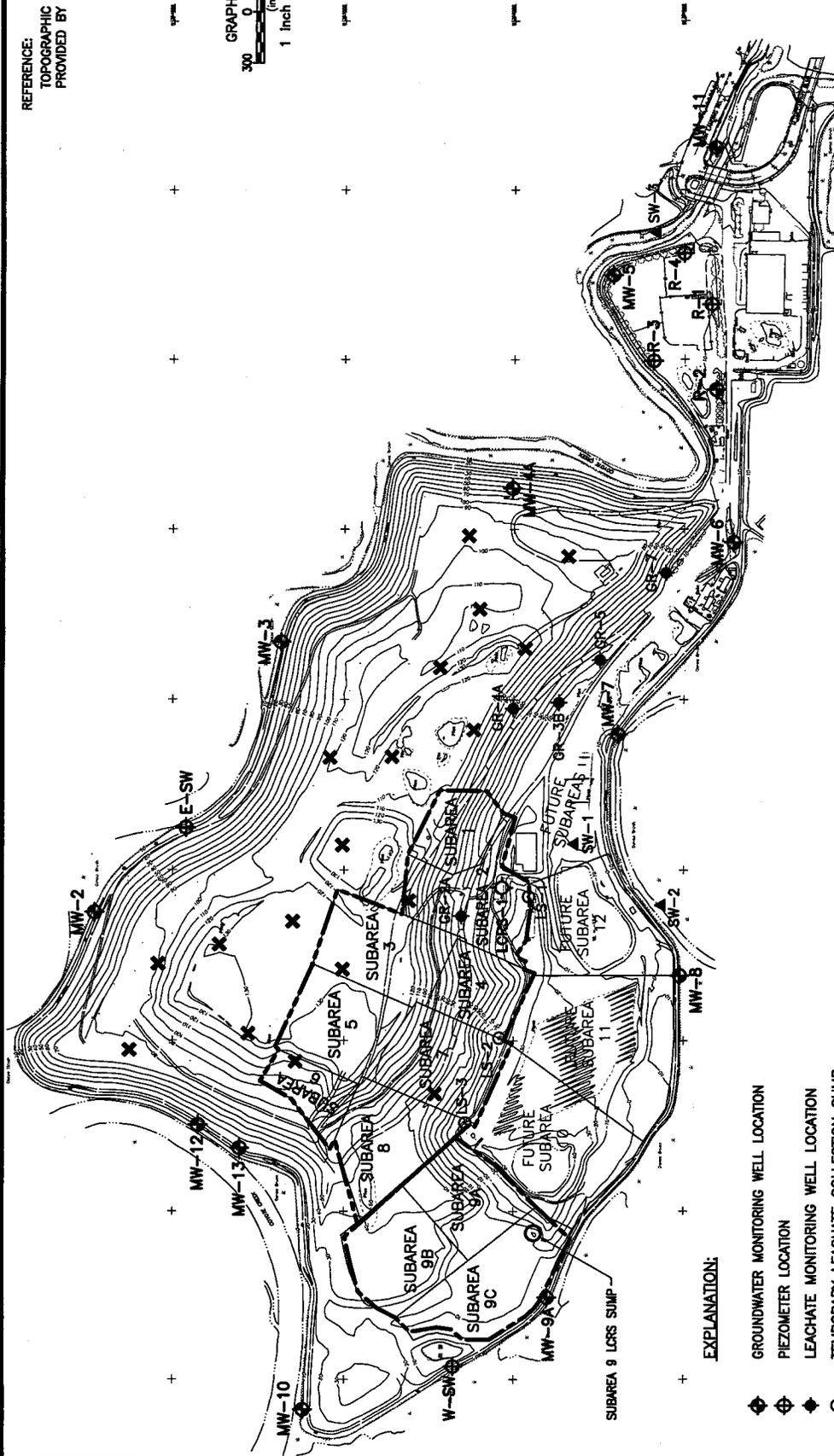
FIGURE 5

GROUNDWATER FLOW DIRECTION UNDER PUMPING CONDITION
 WASTE DISCHARGE REQUIREMENTS
 NEWBY ISLAND SANITARY LANDFILL
 SAN JOSE, CALIFORNIA

GeoLogic Associates
 Geologists, Hydrogeologists, and Engineers

DRAWN BY: M. DATE: MARCH 2005 JOB NO. 2003-020

REFERENCE:
TOPOGRAPHIC MAP (as of 2/11/05)
PROVIDED BY H.J.W. GEOSPATIAL, INC.



EXPLANATION:

- ◆ GROUNDWATER MONITORING WELL LOCATION
- ⊕ PIEZOMETER LOCATION
- ◆ LEACHATE MONITORING WELL LOCATION
- ⊙ TEMPORARY LEACHATE COLLECTION SUMP
- SUBAREA 9 LEACHATE COLLECTION SUMP
- ◇ LCRS TANK
- ✕ GAS/LEACHATE EXTRACTION WELL LOCATION
- ▲ SURFACE WATER SAMPLING LOCATION
- CHAPTER 15 AREA LIMIT
- SUBTITLE D AREA LIMIT

FIGURE 6

LEACHATE EXTRACTION SYSTEM
WASTE DISCHARGE REQUIREMENTS
NEWBY ISLAND SANITARY LANDFILL
SAN JOSE, CALIFORNIA



GeoLogic Associates
Geologists, Hydrogeologists, and Engineers
DRAWN BY: ML DATE: MARCH 2005
JOB NO. 2003-020

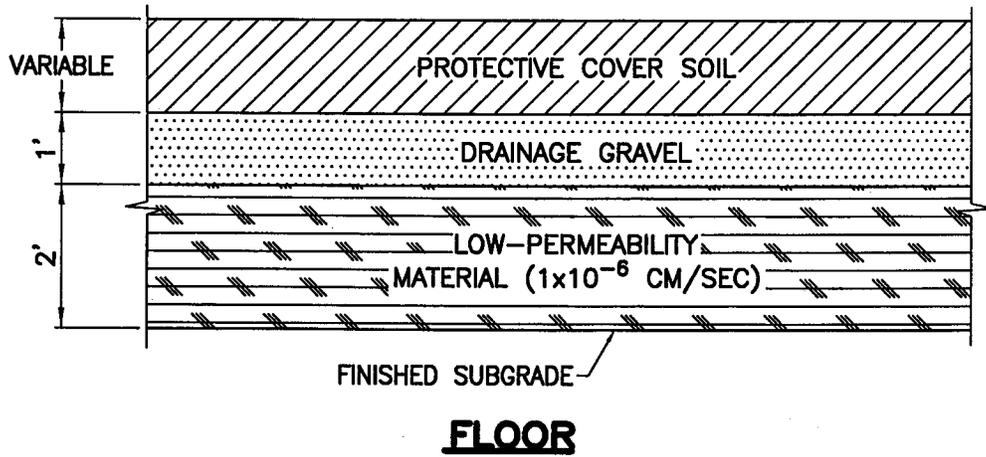
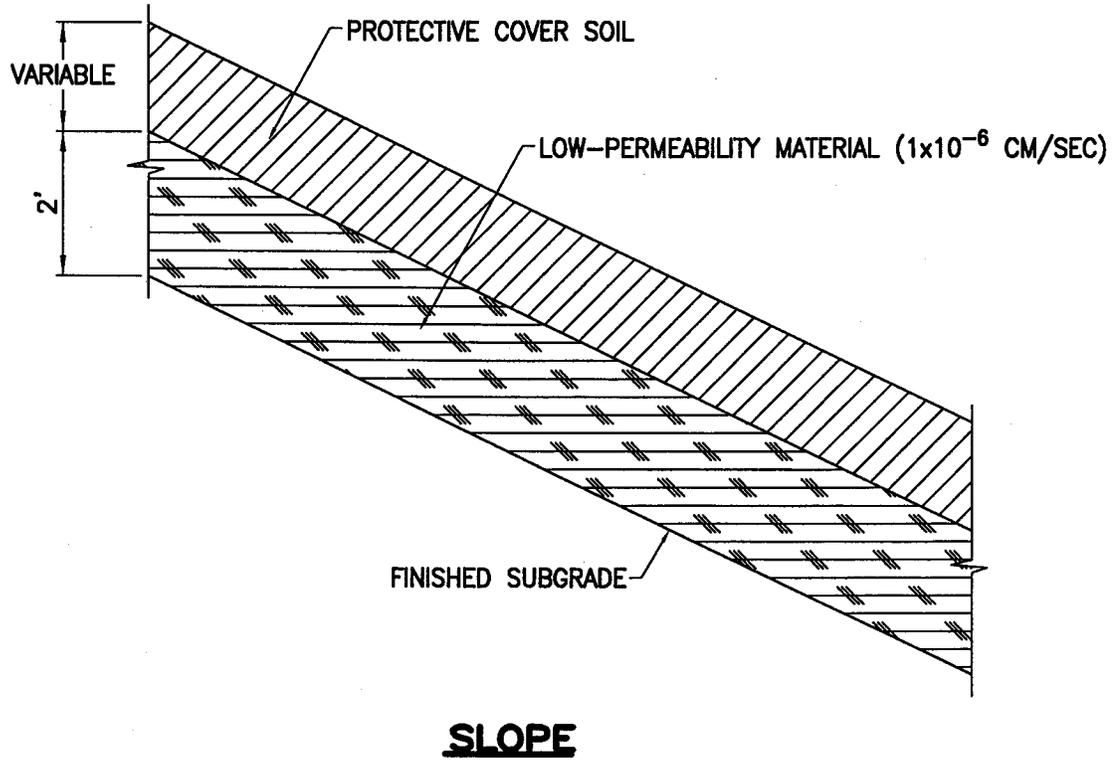


FIGURE 7

SUBAREAS 1 THROUGH 8 LINER DESIGN		
WASTE DISCHARGE REQUIREMENTS		
NEWBY ISLAND SANITARY LANDFILL		
SAN JOSE, CALIFORNIA		
 GeoLogic Associates Geologists, Hydrogeologists, and Engineers		
DRAWN BY:	DATE:	JOB NO.
VL	MARCH 2005	2003-020

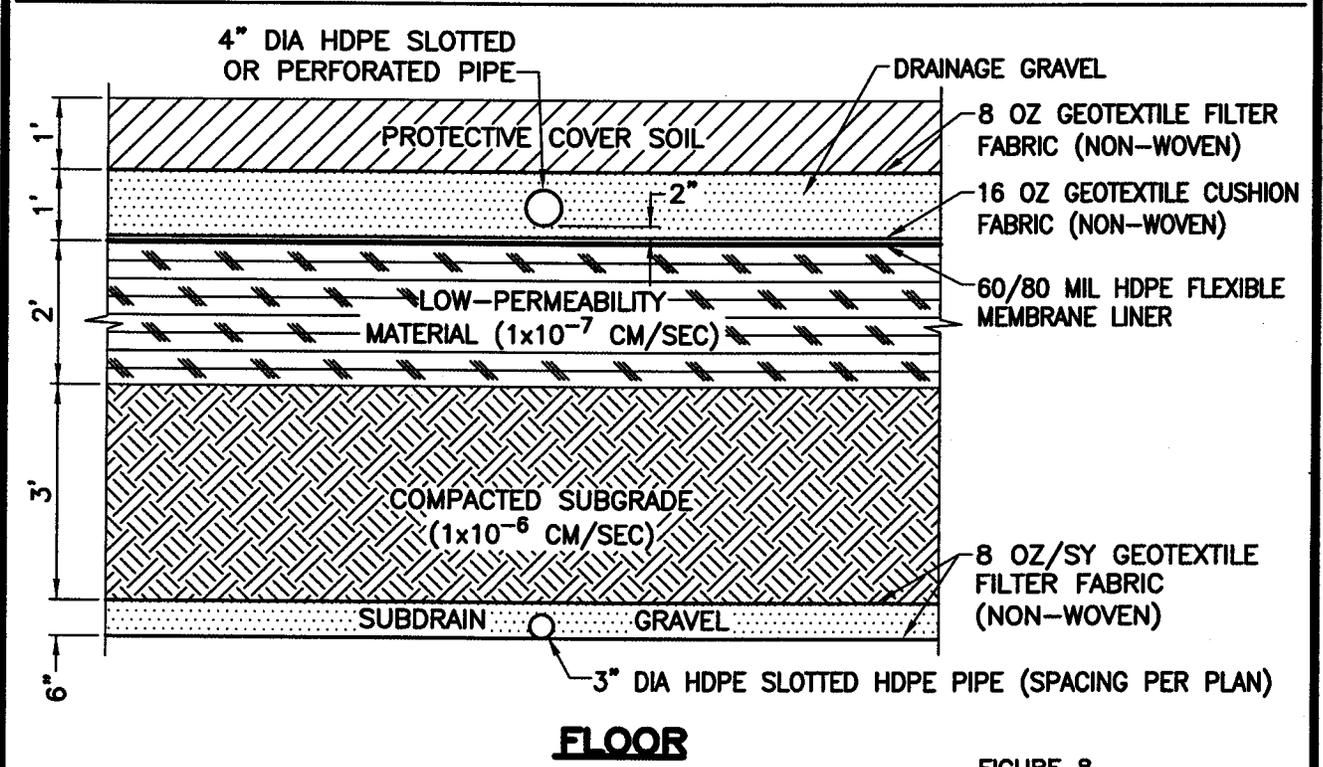
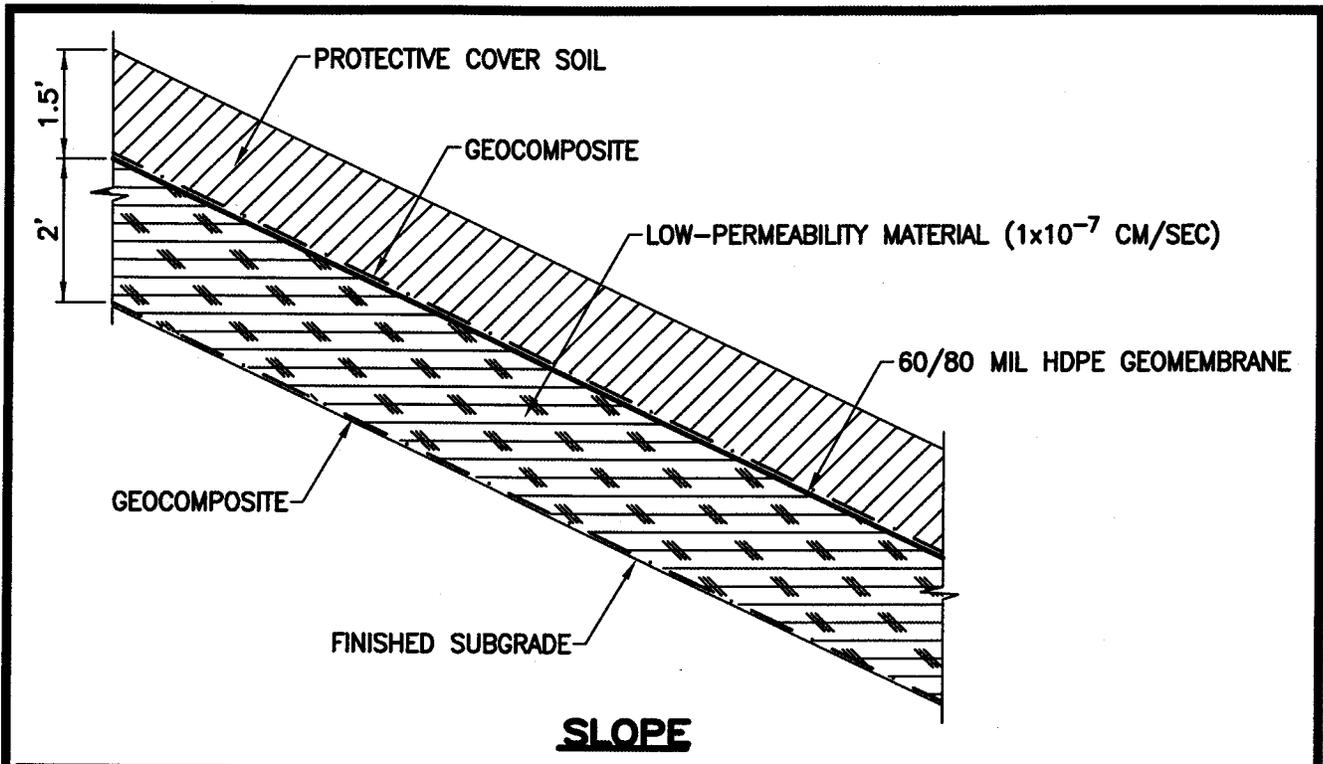


FIGURE 8

SUBAREA 9 LINER DESIGN		
WASTE DISCHARGE REQUIREMENTS NEWBY ISLAND SANITARY LANDFILL SAN JOSE, CALIFORNIA		
GeoLogic Associates Geologists, Hydrogeologists, and Engineers		
DRAWN BY: VL	DATE: MARCH 2005	JOB NO. 2003-020

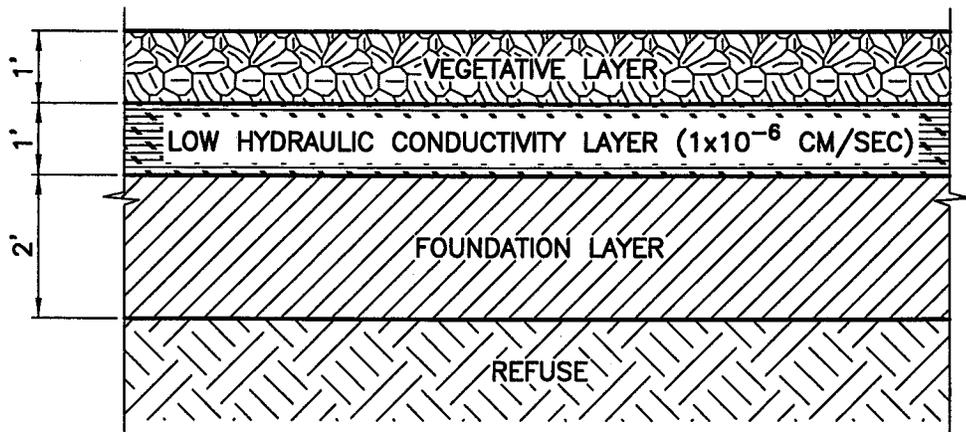
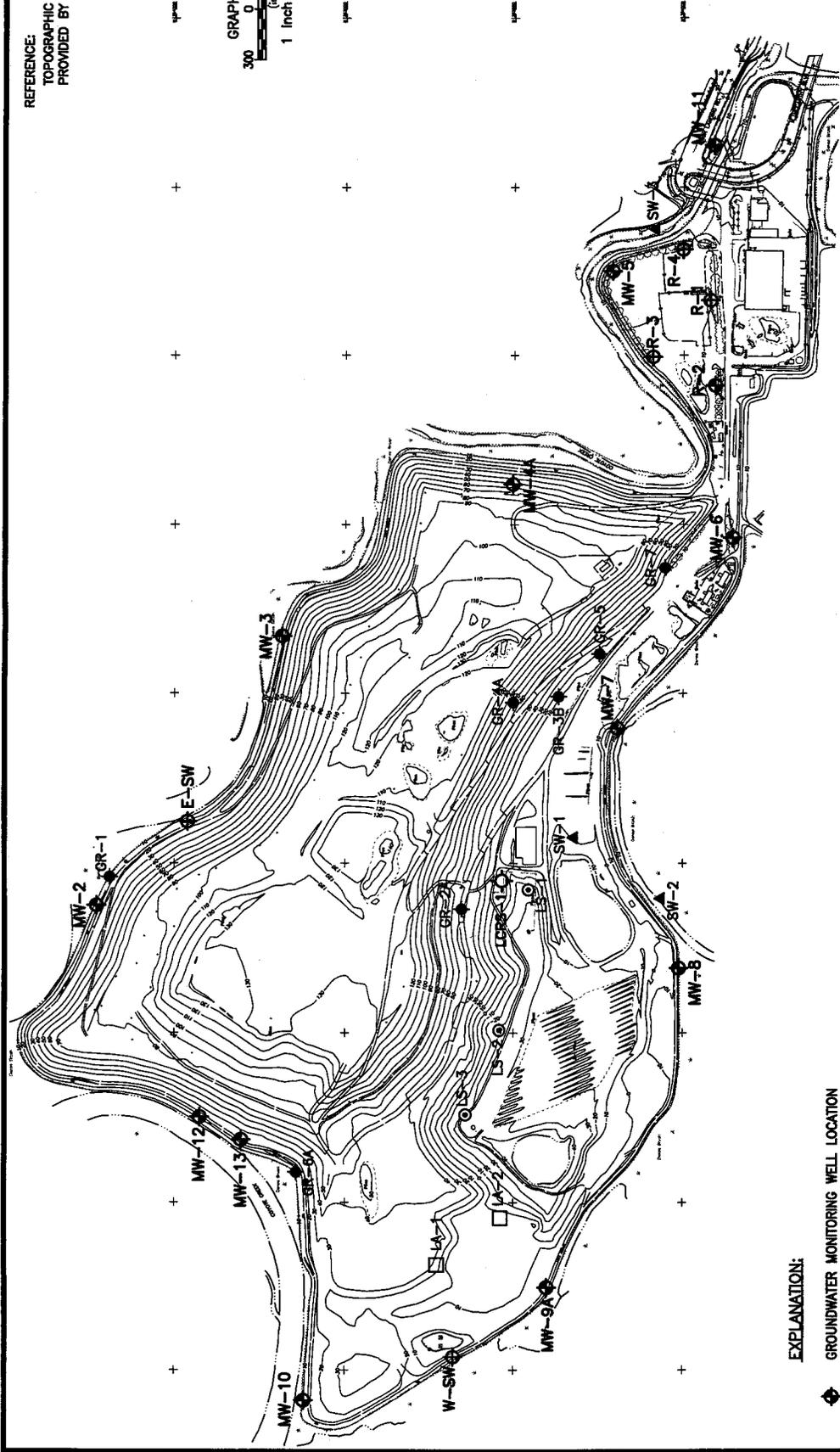
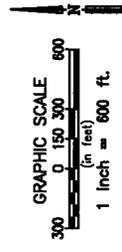


FIGURE 9

PRESCRIPTIVE FINAL COVER		
WASTE DISCHARGE REQUIREMENTS NEWBY ISLAND SANITARY LANDFILL SAN JOSE, CALIFORNIA		
 GeoLogic Associates Geologists, Hydrogeologists, and Engineers		
DRAWN BY: VL	DATE: MARCH 2005	JOB NO. 2003-020

REFERENCE:
 TOPOGRAPHIC MAP (as of 2/11/05)
 PROVIDED BY HJW GEOSPATIAL, INC.



- EXPLANATION:**
- ◆ GROUNDWATER MONITORING WELL LOCATION
 - ⊕ PIEZOMETER LOCATION
 - ◆ LEACHATE MONITORING WELL LOCATION
 - TEMPORARY LEACHATE COLLECTION SUMP
 - TEMPORARY LEACHATE COLLECTION AREA
 - ▲ SURFACE WATER SAMPLING LOCATION
 - ⊙ LORS TANK

FIGURE 10

SITE MONITORING POINTS LOCATION MAP
 WASTE DISCHARGE REQUIREMENTS
 NEWBY ISLAND SANITARY LANDFILL
 SAN JOSE, CALIFORNIA



GeoLogic Associates
 Geologists, Hydrogeologists, and Engineers

DRAWN BY:	VL	DATE:	MARCH 2005	JOB NO.:	2003-020
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NOTES

1. TOPOGRAPHIC BASE MAP PREPARED BY HAMMON JENSEN WALLEN AND ASSOCIATES FROM AERIAL PHOTOGRAPHY OF 1/3/96.
2. ELEVATION CONTOURS INDICATED IN 10-FT INTERVALS.

EXPLANATION

P-15  PERIMETER OBSERVATION POINT

V-13  VISUAL OBSERVATION POINT

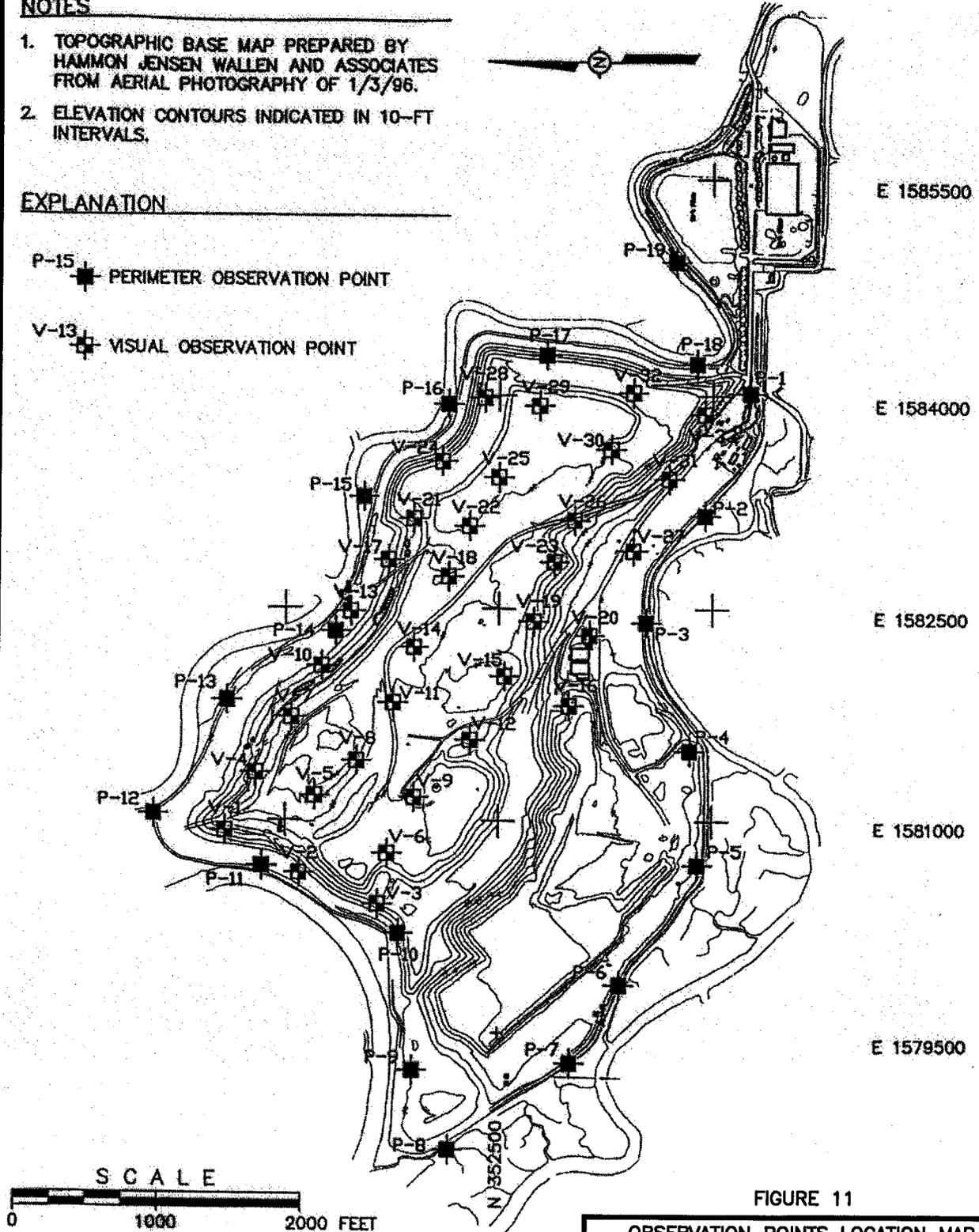


FIGURE 11

OBSERVATION POINTS LOCATION MAP		
WASTE DISCHARGE REQUIREMENTS NEWBY ISLAND SANITARY LANDFILL SAN JOSE, CALIFORNIA		
GeoLogic Associates Geologists, Hydrogeologists, and Engineers		
DRAWN BY: VL	DATE: MARCH 2005	JOB NO. 2003-020

SOURCE: EMCOM/OWT, INC., 2002

ATTACHMENT – A

Contaminated Soil Waste Acceptance Criteria

CLIENT: IDC
 PROJECT: NEWBY ISLAND
 JOB NO. G111-10

TABLE 1
WASTE ACCEPTANCE CRITERIA

ATTENUATION FACTOR - INORGANICS		
CRITERIA	ATTENUATION FACTOR * TITLE 23 LINER AND LCRS AREA (CURRENT)	ATTENUATION FACTOR * SUBTITLE D LINER AND LCRS AREA (UPDATED)
NATURAL GROUNDWATER		
Separation 0 to 10 Feet	0	0
NATIVE SEDIMENTS		
Bay Muds	200	200
LINERS		
Composite w/ Underdrain	-	500
2 Feet of Clay	100	-
LCRS		
Blanket w/ Pipe Collection	-	200
Sump w/ Trench Drains	100	-
LOCATION		
Adjacent to Surface Water	0	0
TOTAL ATTENUATION FACTOR	400	900
ATTENUATION FACTOR - ORGANICS		
CRITERIA	ATTENUATION FACTOR * TITLE 23 LINER AND LCRS AREA (CURRENT)	ATTENUATION FACTOR * SUBTITLE D LINER AND LCRS AREA (UPDATED)
NATURAL GROUNDWATER		
Separation 0 to 10 Feet	0	0
NATIVE SEDIMENTS		
Bay Muds	100	100
LINERS		
Composite w/ Underdrain	-	300
2 Feet of Clay	50	-
LCRS		
Blanket w/ Pipe Collection	-	200
Sump w/ Trench Drains	100	-
LOCATION		
Adjacent to Surface Water	0	0
TOTAL ATTENUATION FACTOR	250	600
* RWQCB, Region 2, SF Bay (Internal Memo), "Designated Waste Acceptance at Class III Landfills," December 2, 1992.		
Q:\PRAG\NEWBY\G111-10\G11110-A.XLS		

CLIENT: IDC
 PROJECT: NEWBY ISLAND
 JOB NO. G111-10

TABLE 2
ACCEPTABLE WASTE
CONTAMINANT LEVELS

ACCEPTANCE LIMITS * - INORGANICS			
CONSTITUENT	WATER QUALITY OBJECTIVE (ug/l)	TITLE 23 LINER AND LCRS AREA	SUBTITLE D LINER AND LCRS AREA
		(CURRENT ATTENUATION FACTOR = 400) ACCEPTANCE LIMIT (mg/l)	(UPDATED ATTENUATION FACTOR = 900) ACCEPTANCE LIMIT (mg/l)
Aluminum	200	8	18
Arsenic	5	0.2	0.45
Barium	1000	40	90
Beryllium	1	0.04	0.09
Cadmium	5	0.2	0.45
Chloride	250000	10000	22500
Chromium, VI	50	2	4.5
Cobalt	50	2	4.5
Copper	200	8	18
Lead	15	0.6	1.35
Manganese	50	2	4.5
Mercury	0.012	0.00048	0.00108
Molybdenum	10	0.4	0.9
Nickel	100	4	9
Nitrate	10000	400	900
Nitrite	1000	40	90
Selenium	10	0.4	0.9
Silver	50	2	4.5
Sulfate	250000	10000	22500
Thallium	2	0.08	0.18
Vanadium	20	0.8	1.8
Zinc	2000	80	180
Note: CAM Wet Test Result Concentration times 10 must be less than Acceptance Limit for relevant Attenuation Factor			
Inorganic attenuation, using CAM Wet Extraction Method. Calculated as follows: (Objective x Attenuation Factor) / Dilution Factor of 10 = Acceptance Limit			
ACCEPTANCE LIMITS * - ORGANICS			
CONSTITUENT	WATER QUALITY OBJECTIVE (ug/l)	TITLE 23 LINER AND LCRS AREA	SUBTITLE D LINER AND LCRS AREA
		(CURRENT ATTENUATION FACTOR = 400) ACCEPTANCE LIMIT (mg/l)	(UPDATED ATTENUATION FACTOR = 900) ACCEPTANCE LIMIT (mg/l)
Benzene	1	0.0125	0.03
Dichloromethane	5	0.0625	0.15
Diesel (TPH)	10	0.125	0.3
Ethylbenzene	30	0.375	0.9
MEK	200	2.5	6
PCB's	0.5	0.00625	0.015
Perchloroethylene (PCE)	5	0.0625	0.15
Phenol	5	0.0625	0.15
Styrene	10	0.125	0.3
Toluene	40	0.5	1.2
Trichloroethylene (TCE)	5	0.0625	0.15
Vinyl Chloride	2	0.025	0.06
Xylenes	20	0.25	0.6
Note: TCLP Result Concentration times 20 must be less than Acceptance Limit for relevant Attenuation Factor			
Organic attenuation, using TCLP Extraction Method. Calculated as follows: (Objective x Attenuation Factor) / Dilution Factor of 20 = Acceptance Limit			
* RWQCB, Region 2, SF Bay (Internal Memo), 'Designated Waste Acceptance at Class III Landfills,' December 2, 1992.			
G:\PRAG\NEWBY\G111-10\G11110-B.XLS			

ATTACHMENT – B

Self Monitoring Program

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SAN
FRANCISCO BAY REGION**

SELF MONITORING PROGRAM

FOR

**INTERNATIONAL DISPOSAL CORPORATION OF CALIFORNIA
NEWBY ISLAND CLASS III LANDFILL**

SANTA CLARA COUNTY

ORDER NO. R2-2005-0020

CONSISTS OF

PART A

AND

PART B

A. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No. 73-16. This Discharge Monitoring Program is issued in accordance with Title 27 of the California Code of Regulations.

The principal purposes of a discharge monitoring program are: 1) to document compliance with waste discharge requirements and prohibitions established by the Board; 2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge; 3) to develop or assist in the development of standards of performance, and toxicity standards; and 4) to assist the discharger in complying with the requirements of Title 27.

B. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to the most recent version of EPA Standard Methods and in accordance with an approved sampling and analysis plan.

Water and waste analysis shall be performed by a laboratory approved for these analyses by the State of California. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and all reports of such work submitted to the Regional Board shall be signed by a duly authorized representative of the laboratory.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. DEFINITION OF TERMS

1. A grab sample is a discrete sample collected at any time.
2. Receiving waters refers to any surface water that actually or potentially receives surface or groundwaters that pass over, through, or under waste materials or contaminated soils. In this case the groundwater beneath and adjacent to the landfill areas, the storm water runoff from the site, and the San Francisco Bay are considered receiving waters.

3. The discharger shall complete standard facility observations to identify existing and potential sources of surface and groundwater contamination. The standard observation stations shall address the following:

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

b. Perimeter of the waste management unit.

- 1) Evidence of liquid leaving or entering the waste management unit, estimated size of affected area and flow rate (Show affected area on map).
- 2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.
- 3) Evidence of erosion and/or daylighted refuse.

c. The waste management unit.

- 1) Evidence of ponded water at any point on the waste management facility.
- 2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.
- 3) Evidence of erosion, slope or ground movement, and/or daylighted refuse.
- 4) Adequacy of access road.
- 5) Condition of site drains and silt basin capacity

D. SAMPLING, ANALYSIS, AND OBSERVATIONS

The discharger is required to perform sampling, analyses, and observations in the following media:

1. Storm water discharges per Section 20415
2. Groundwater and leachate per Section 20415 and per the general requirements specified in Section 20415(e) of Title 27.

E. RECORDS TO BE MAINTAINED

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

1. Identity of sample and sample station number;
2. Date and time of sampling;
3. Date and time that analyses are started and completed, and name of the personnel performing the analyses;
4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used;
5. Calculation of results; and
6. Results of analyses, and detection limits for each analysis.

F. REPORTS TO BE FILED WITH THE BOARD

1. **Monitoring Reports**

Written detection monitoring reports shall be filed by January 31 and July 31 of each year. In addition an annual report shall be filed by January 31 of each year. The reports shall be comprised of the following:

a. Letter of Transmittal

A letter transmitting the essential points in each report should accompany each report. Such a letter shall include a discussion of any requirement violations found during the last report period, and actions taken or planned for correcting the violations. If the discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred in the last report period 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 his 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 monitoring report shall include a compliance evaluation summary. The summary shall contain:
- 1) A graphic description of the velocity and direction of groundwater flow under/around the waste management unit, based upon the past and present water level elevations and pertinent visual observations;
 - 2) The method and time of water level measurement, the type of pump used for purging, pump placement in the well; method of purging, pumping rate, equipment and methods used to monitor field pH, temperature, and conductivity during purging, calibration of the field equipment, results of the pH, temperature conductivity and turbidity testing, well recovery time, and method of disposing of the purge water;
 - 3) Type of pump used, pump placement for sampling, a detailed description of the sampling procedure; number and description of equipment, field and travel blanks; number and description of duplicate samples; type of sample 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; and
 - 4) A written discussion of the groundwater analyses indicating any change in the quality or characteristics of the groundwater.
- c. A comprehensive discussion of the compliance record and status, as well as any corrective actions taken or planned which may be needed to bring the discharger into full compliance with the Waste Discharge Requirements and 27CCR
- d. A map or aerial photograph shall accompany each report showing observation and monitoring station locations.
- e. Laboratory statements with the results of analyses specified in Part B must be included in each report. The director of the laboratory whose name appears on the laboratory certification shall supervise all analytical work in his/her laboratory and all reports of such work submitted to the Board shall be signed by a duly authorized representative of the laboratory.
- 1) The methods of analyses and detection limits must be appropriate for the expected concentrations. Specific methods of analyses must be identified. If methods other than EPA approved methods or Standard Methods are used, the exact methodology must be

submitted for review and approved by the Executive Officer prior to use.

- 2) In addition to the results of the analyses, laboratory quality assurance/quality control (QA/QC) information must be included in the monitoring report. The laboratory QA/QC information should include the method, equipment and analytical detection limits; the recovery rates; an explanation for any recovery rate that are outside laboratory control limits; 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.
- f. An evaluation of the effectiveness of the leachate monitoring facilities, which includes an evaluation of leachate buildup within the disposal units and sump areas, a summary of leachate volumes removed from the units, and a discussion of the leachate disposal/treatment methods utilized.
 - g. A summary and certification of completion of all standard observations for the waste management unit, the perimeter of the waste management unit, and the receiving waters.
 - h. The quantity and types of waste disposed of during the reporting period, and the locations of the disposal operations. Locations of the waste placement shall be depicted on a map showing the area, if any, in which the filling has been completed during the monitoring period.
 - i. A summary statement describing the findings from the discharger's periodic load checking/screening program, waste characterization program, and any other observational/inspection programs.
 - j. Tabular and graphical summaries of the monitoring data obtained during the previous year; the annual report should be accompanied by a compact disc, MS-EXCEL format, tabulating the year's data.
 - k. In addition to a hard copy, an electronic copy of the report shall be submitted as one PDF file. It is preferred that reports be converted from their original format (e.g. Microsoft Word) rather than scanned except for signature pages and perjury statements which must be scanned and included. Each page in the PDF file should be rotated in the direction that facilitates reading on a computer. The electronic document will then be copied into the Board's electronic document management system, which will be the formal Board secured record for the site.
 - l. A PDF copy of the report shall also be uploaded to the state Geotracker database at www.geotracker.ca.gov.

- m. The Annual Monitoring Report shall be submitted to the Board covering the previous year. The Report shall include, but is not limited to, the following:
 - i. A graphical presentation of the analytical data [RWQCB-approved alternate procedure per 27CCR, Section 20415(e)(14)] for monitoring locations that have shown detectable concentrations during two consecutive monitoring events, or greater than ten percent detection frequency for any organic compound. Graphical representation must be provided for monitoring locations with metals and general chemistry analytical parameters that have an increasing trend for three consecutive monitoring events;
 - ii. A tabular summary of all the monitoring data obtained during the previous year;
 - iii. A comprehensive discussion of the compliance record, and the corrective actions taken or planned which may be needed to bring the discharger into full compliance with the waste discharge requirements;
 - iv. A written summary of the groundwater analyses indicating any change in the quality of the groundwater; and
 - v. An evaluation of the effectiveness of the leachate monitoring/control facilities, which includes an evaluation of leachate buildup within the disposal units, a summary of leachate control volumes removed from the units, and a discussion of the leachate disposal methods utilized.

2. **Contingency Reporting**

- a. A report shall be made by telephone of any seepage from the disposal area immediately after it is discovered. A written report shall be filed with the Board within five days thereafter. This report shall contain the following information:
 - 1) a map showing the location(s) of discharge if any;
 - 2) approximate flow rate;
 - 3) nature of effects; i.e. all pertinent observations and analyses; and
 - 4) corrective measures underway, proposed, or as specified in the Waste Discharge Requirements.

- b. Following determination that groundwater analytical results or a monitoring location exceed the WQPS concentration limits (CLs), the discharger shall follow the decision sequence outlined in Title 27.

3. **Well Logs**

A boring log and a monitoring well construction log shall be submitted for each new sampling well established for this monitoring program, as well as a report of inspection or certification that each well has been constructed in accordance with the construction standards of the Department of Water Resources. These shall be submitted within 45 days after well installation.

G. WATER QUALITY PROTECTION STANDARDS

Constituents of Concern: The Constituents of Concern (COC) for groundwater are those listed in Table 2 of this Self-Monitoring Program.

Concentration Limits: Concentration Limits (CLs) are established each sampling event using control charts and prediction intervals intrawell statistical methods for each COC listed in Table 2.

Monitoring Points: Monitoring Points are identified in Table 1 of this Self-Monitoring Program. Because landfill operations predate collection of groundwater chemistry data at this site, background water quality monitoring locations do not exist; therefore, intra-well comparisons will be used for evaluating monitoring data. For those areas where COCs greater than the CLs existed prior to corrective measures, monitoring will be conducted to demonstrate that the levels of COCs have either stabilized or are decreasing.

Point of Compliance: The Point of Compliance for this facility is the vertical surface that extends from the outside edge of the lateral containment structures through the uppermost aquifer underlying the unit.

Part B

DESCRIPTION OF OBSERVATION STATIONS AND SCHEDULE OF OBSERVATIONS

- A. **GROUNDWATER, LEACHATE, AND STORMWATER MONITORING: Report Semi-Annually (groundwater) and Annually (Leachate and Surface Water)**
- i. **Groundwater:** Groundwater shall be sampled and analyzed as detailed in Table 1. Monitoring well locations are shown in Figure 1.
 - ii. **Leachate:** Leachate and seeps shall be sampled and analyzed as detailed in Table 2. Leachate monitoring locations are shown in Figure 1. The discharger shall analyze for all Subtitle D, Appendix II compounds, once every five years, as listed in Table 2.
 - iii. **Surface Water:** Surface water monitoring data collected under the SWRCB's Industrial Activities Storm Water General Permit or for discharge of surface water runoff from retention basins shall be submitted with the winter/spring (wet) season semi-annual monitoring report due each July 31. The report shall include the standard storm water annual report forms, a map of the storm water monitoring locations, and any summary data tables or attachments, as appropriate. Analytical laboratory data reports need not be included.
- B. **WASTE MONITORING - Observe monthly unless otherwise noted, report semi-annually**
- i. Record the total volume and weight of waste in cubic yards and tons disposed of at the site during each monitoring period, and show locations and dimensions on a map.
 - ii. Record a description of waste stream to include percentage of waste type (i.e. municipal solid waste, construction and demolition waste, asbestos-containing waste, medical waste, and industrial waste including: (i) asbestos, (ii) ash, (iii) treated auto-shredder waste (TASW), (iv) petroleum contaminated soil, (v) lead contaminated soils, (vi) sewage and wastewater treated sludges with metal content, (vii) industrial sludges, and (viii) industrial filters.
 - iii. Remaining landfill capacity/waste volume in place at the end of the reporting period.

- iv. TASW accepted for disposal shall be sampled and analyzed quarterly for: PCBs (EPA Method 8080) and for soluble lead, mercury, cadmium, trivalent and hexavalent chromium copper, nickel, and zinc (by WET Method).

C. **FACILITIES MONITORING - Observe Quarterly, report Semi-annually**

The Discharger shall inspect all facilities to ensure proper and safe operation once per quarter and report semi-annually. The facilities to be monitored shall include, but not be limited to:

1. Leachate collection and removal/pumping system
2. Surface water impoundments/retention basins
3. Leachate management facilities and secondary containment
4. Perimeter diversion channels and run-on/run-off control features
5. Final cover system
6. Re-use areas including the composting and soil recycling locations

D. **PHOTO DOCUMENTATION OF FACILITIES MONITORING - Observe quarterly, report annually**

The discharger shall provide photo documentation of conditions at locations that include, but are not limited to the landfill facilities listed in Part C above. Locations from which photographs are taken should be permanent stations such that they can be used in successive reports.

E. ON-SITE OBSERVATIONS

<u>Station</u>	<u>Description</u>	<u>Observations</u>	<u>Frequency</u>
V-1 to V-'n'	Located on the waste disposal area as delineated by a 500 foot grid network.	Standard observations for the waste management unit	Bi-monthly observations (rainy season) Monthly observations (dry season) Report Semi-annually
P-1 thru P-'n'	Located at equidistant intervals not exceeding 1000 feet around the perimeter of the waste management unit.	Standard observations for the perimeter	Bi-monthly observations (rainy season) Monthly observations (dry season) Report Semi-annually

F. SEEPAGE MONITORING

Seepage monitoring stations include any point at which seepage is found occurring from the disposal area. The landfill perimeter shall **be monitored quarterly and the results reported semi-annually.**

<u>Station</u>	<u>Description</u>	<u>Observations</u>	<u>Frequency</u>
S-1 thru S-'n'	At any point(s) at which seepage is found occurring from the disposal area	Standard observations for the perimeter and standard analyses (Table 3, perform analyses once per seep	Daily until remedial action is taken and seepage ceases

G. PIEZOMETER/LEACHATE ELEVATION MONITORING

1. Groundwater piezometric elevation monitoring shall be conducted at the following locations on a quarterly basis:

MW-2, MW-3, MW-4A, MW-5, MW-6, MW-7, MW-8, MW-9A, MW-10, MW-11, MW-13, E-SW, W-SW, R-1, R-2, R-3, and R-4.

2. Leachate elevation monitoring shall be conducted at the following locations on a quarterly basis:

Leachate Wells: GR- 2A, and 7.

H. LEACHATE EXTRACTION MONITORING

1. The discharger shall report daily, weekly, monthly, and average rates for pumping/removal of leachate from the total system and monthly and average daily rates for each pump area, if possible. This information will be provided with the semi-annual monitoring report.
2. Included with each semi-annual report will be an evaluation of the effectiveness of pumping on reduction of leachate levels throughout the landfill.
3. All surface leachate extraction lines outside the landfill waste footprint and storage structures shall be double contained.

I. LANDFILL GAS CONDENSATE

Landfill gas condensate removed from the landfill's gas collection system shall be transported for disposal at a wastewater treatment or leachate treatment facility. For each condensate monitoring point, the discharger shall include in the **semi-annual monitoring report** a measurement of the estimated volume of condensate collected, and the **monthly and average daily condensate volumes** for each condensate collection point.

I, Bruce H. Wolfe, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in this Board's Order No. R2-2005-0020.
2. Is effective on the date shown below.
3. May be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer.


Bruce H. Wolfe
Executive Officer

Date Ordered: May 18, 2005

Attachment: Table 1 – Monitoring Points for Each Monitoring Media
Table 2 – Analytical Parameters and Methods

Table 1
Monitoring Points for Each Monitoring Media

Monitoring Point	Monitoring Point I.D.
Groundwater Monitoring Well – Background	MW-11
Groundwater Monitoring Wells – Compliance	MW-2, MW-3, MW-4A, MW-5, MW-6, MW-7, MW-8, MW-9A, MW-10, MW-13, R-2
Piezometers**	E-SW, W-SW, R-1, R-3, R-4
Surface Water Stations	SW-1 (Upper Pond), SW-2, SW-3
Leachate Collection Stations*	LCRS-1
Leachate Monitoring Wells**	GR-1, GR-2A, GR-3B, GR-4A, GR-5, GR-6A, GR-7

Notes: * Annual Sampling (October – March Monitoring Period) , and Retesting, as necessary (April – September Monitoring Period) .

** Water level measurements only.

**TABLE 2
ANALYTICAL PARAMETERS AND METHODS
NEWBY ISLAND SANITARY LANDFILL**

Parameter	Media	Typical USEPA Method	Frequency	Reference
Liquid Level	GW, L	Field	Semiannual	-
pH	GW, SW	Field	Semiannual	-
Electrical Conductivity (EC)	GW, SW	Field	Semiannual	-
Temperature	GW, SW	Field	Semiannual	-
Turbidity	GW, SW	Field	Semiannual	-
Ammonia-N	GW, SW	310.1	Semiannual	3
Chemical Oxygen Demand (COD)	GW, SW	410.2	Semiannual	3
Nitrate Nitrogen	GW, SW	300.0	Semiannual	3
Total Kjeldahl Nitrogen (TKN)	GW, SW	351.4	Semiannual	3
Volatile Organic Compounds (Appendix I)	GW, SW	8260	Semiannual	3
Leachate Extraction Rate	L	Field	Weekly	1
Ammonia-N	L	310.1	Annual	3
Chemical Oxygen Demand (COD)	L	410.2	Annual	3
Nitrate Nitrogen	L	300.0	Annual	3
Total Kjeldahl Nitrogen (TKN)	L	351.4	Annual	3
Volatile Organic Compounds (Appendix I & II)	L	8260	Annual	3
Semivolatile Organic Compounds	L	8270C	Annual	3
Organochlorine Pesticides & PCBs	L	8081/8082	Annual	3
Organophosphorus Pesticides	L	8141A	Annual	3
Chlorinated Herbicides	L	8151	Annual	3
Cyanide	GW, SW, L	9010	Every 5 years	2,3
Sulfide	GW, SW, L	9030	Every 5 years	2,3
Total Organic Carbon (TOC)	GW, SW, L	415.1	Every 5 years	2,3
Total Phenolics	GW, SW, L	420.1	Every 5 years	2,3
Antimony	GW, SW, L	7041	Every 5 years	2,3,4
Arsenic	GW, SW, L	7061	Every 5 years	2,3,4
Barium	GW, SW, L	6010B	Every 5 years	2,3,4
Beryllium	GW, SW, L	6010B	Every 5 years	2,3,4
Cadmium	GW, SW, L	7131A	Every 5 years	2,3,4
Chromium	GW, SW, L	6010B	Every 5 years	2,3,4
Cobalt	GW, SW, L	6010B	Every 5 years	2,3,4
Copper	GW, SW, L	6010B	Every 5 years	2,3,4
Iron	GW, SW, L	6010B	Every 5 years	2,3,4
Lead	GW, SW, L	7421	Every 5 years	2,3,4
Mercury	GW, SW, L	7470	Every 5 years	2,3,4
Nickel	GW, SW, L	6010B	Every 5 years	2,3,4
Selenium	GW, SW, L	7741	Every 5 years	2,3,4
Silver	GW, SW, L	6010B	Every 5 years	2,3,4
Thallium	GW, SW, L	6010B	Every 5 years	2,3,4
Tin	GW, SW, L	6010B	Every 5 years	2,3,4
Vanadium	GW, SW, L	6010B	Every 5 years	2,3,4
Zinc	GW, SW, L	6010B	Every 5 years	2,3,4
Semivolatile Organic Compounds	GW	8270C	Every 5 years	2,3
Organochlorine Pesticides & PCBs	GW	8081/8082	Every 5 years	2,3
Organophosphorus Pesticides	GW	8141A	Every 5 years	2,3
Chlorinated Herbicides	GW	8151	Every 5 years	2,3

Notes:

GW = Groundwater Samples

SW = Surfacewater Samples

L = Leachate Sample - Leachate analysis to be conducted on a composite sample collected from the manifold pipe at LCRS-1.

1 = The leachate extraction rates shall be recorded weekly and reported as follows:

* Total weekly flow (gallons per week)

* Total quarterly flow (gallons)

2 = Once every five years. Testing was last completed during the 2003 Summer/Fall reporting period.

Therefore, the next five year testing shall be completed during the 2009 Winter/Spring monitoring period.

with testing to continue alternating between Summer/Fall and Winter/Spring every 5 years.

3 = Alternative EPA-approved methods may be substituted for the above methods provided that the alternative methods provide detection limits that are equal to or less than those attainable by the indicated method.

4 = Metals samples shall be filtered in the laboratory.