CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 84-18

NPDES NO. CA0028754

WASTE DISCHARGE REQUIREMENTS FOR:

ACME FILL CORPORATION
ACME CLASS II-2 SOLID WASTE DISPOSAL SITE
MARTINEZ, CONTRA COSTA COUNTY

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

1. Acme Fill Corporation, hereinafter called the discharger, owns and operates the Acme Sanitary Landfill. This landfill site is located at the end of Waterbird Way near Martinez, and is bounded by Waterfront Road to the north, rolling hills to the west, and Pacheco Creek and Walnut Creek to the south and east, as shown in Attachments A and B which are incorporated herein and made a part of this Order. The site consists of 536 acres and is divided into north and south parcels separated by lands not owned by the discharger. As shown in Attachment B, the north parcel is composed of four sections: the presently active portion of the landfill (area #1), the 97.6 acre area into which the discharger currently proposes to expand landfill operations (area #2), the area where the discharger does not currently propose to expand landfill operations (area #3), and the inactive Class I disposal site (area #4).

2. On April 20, 1976, the Board adopted Order No. 76-37 for the Acme Sanitary Landfill. The Order was adopted with the assumption that the U. S. Army Corps of Engineers would address the issue of filling the wetlands in area #2 under Section 404 of the federal Clean Water Act, but the Corps has not taken such action.

3. The Board finds that 36.0 acres in area #2 are waters of the United States and wetlands and are subject to an NPDES Permit pursuant to Section 402 of the Clean Water Act. These 36.0 acres are hereinafter identified as area #2A, as shown in attachment B.

4. On February 28, 1984, the discharger filed an application for an NPDES Permit for the discharge into area #2A.

5 Area #2 was partially reclaimed from tidal marshland in the early 1900's by construction of perimeter levees. Levees built by the U. S. Army Corps of Engineers in the 1960's now exclude all tidal flows. Portions of area #2 were in agricultural production before 1960. Ponded surface runoff currently drains from area #2 to the northeast porton of area #3 and then into Pacheco Creek via a ditch and flapgate.

6. A site evaluation for area #2 has been submitted in the form of a Harding Lawson Associates report: "Sanitary Landfill and Dredged Material Disposal Pond Development, Acme Landfill, Martinez, California," dated January 12, 1984.

7. Area #2 is essentially level and is underlain by 68 to 91 feet of moderately weak, compressible, silty marsh deposits of low permeability, commonly known as bay mud. The bay mud is underlain by relatively incompressible, moderately strong silts and clays of low permeability interbedded with a layer of clayey gravels and clayey sands. Minor, localized peat layers, as well as sand lenses are found at the site. The western branch of the Concord fault is inferred to underlie area #2. However, there is no conclusive evidence that an active fault trace underlies area #2. Surface water is limited to rain falling on the site. No useable groundwater exists beneath the site. The bay mud which underlies the site is generally saturated.

8. The beneficial uses of the wetlands in area #2A are:

    Wildlife habitat
    Resting for waterfowl and migratory birds

    The beneficial uses of the waters of Pacheco and Walnut Creeks are:

    Warm and cold fresh water habitat
    Wildlife habitat
    Resting for waterfowl and migratory birds
    Fish migration and spawning

9. Area #2A, subsequent to modifications required to comply with this Order, will meet the criteria contained in the California Administrative Code, Title 23, Chapter 3, Subchapter 15, for classification of the site as a Class II-2 disposal site to receive Group 2 waste and Group 3 wastes.

10. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on July 21, 1982 and this Order implements the water quality objectives stated in that plan.

11. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge into area #2A and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

12. The Board, in a public hearing held on April 18, 1984, heard and considered all comments pertaining to the discharge.

13. The Contra Costa County Board of Supervisors and the U. S. Army Corps of Engineers, as lead agencies, adopted a Final Environmental Impact Report/Environmental Impact Statement (FEIR/EIS), dated June 1983, titled "Proposed Expansion of Acme Landfill Operations", in accordance with the National Environmental Policy Act and California Environmental Quality Act. Among the significant impacts on the environment that could be caused by the proposal to expand landfill operations are degradation of water quality and loss of wetland vegetation unless appropriate mitigation measures are taken. The Prohibitions, Specifications, and Provisions of this Order and the changes or alterations incorporated into the project as described in Finding #17 herin will avoid or substantially lessen these significant environmental effects.

14. Since release of the FEIR/EIS the discharger has modified its proposal to expand landfill operations, by reducing the area into which landfill operations are proposed to be expanded to the 97.6 acre area #2. Therefore, the U. S. Army Corps of Engineers prepared an Environmental Evaluation, dated January 1984, to determine whether the environmental effects of the discharger's modified proposal are significantly different from those described in the FEIR/EIS. The Environmental Evaluation concluded that the modified proposal would not have any significant effects that were not adequately addressed by the FEIR/EIS, and, consequently, no supplement to the FEIR/EIS was required.

15. The U. S. Army Corps of Engineers has determined that approximately 88.0 acres of area #2 are navigable waters of the United States and therefore subject to a Corps Permit, pursuant to Section 10 of the River and Harbor Act of 1899. The Corps has further determined that the proposed discharge of solid waste to area #2A does not require a Corps Permit under Section 404 of the federal Clean Water Act, as the waste does not constitute "fill material". That portion of area #2 that is wetlands and will not be used for solid waste discharge (e.g., perimeter levee) is subject to a Corps Permit under Section 404. Area #2A is part of the 88.0 acres subject to a Corps Permit under Section 10.

16. The San Francisco Bay Conservation and Development Commission (BCDC) held public hearings on January 19 and February 2, 1984 to consider whether the discharger's proposed expansion of landfill operations into area #2 was consistent with the Bay Plan. BCDC determined on February 2, 1984 that the proposed expansion is not consistent with the Bay Plan designation of the site for water-related industry because the proposed landfill is not a water-related industry, and cannot be considered an appropriate interim use of a water-related industrial site.

17. As part of the discharger's NPDES permit application, the discharger has submitted a proposal to mitigate the adverse impacts of filling Area #2A. The discharger has acquired and proposes to dedicate to a suitable public agency, a 58 acre parcel in the western portion of Suisun Marsh in Solano County, known as Club 401. This parcel consists of some upland areas, very little tidal area, and some areas of seasonal ponding. The discharger proposes to enhance the site by constructing sloughs, ponds, levees, and/or other water control structures.

    The Board has received and reviewed comments on this proposal from the California Department of Fish and Game, the U. S. Fish and Wildlife Service and other interested persons and public agencies.

    This proposal is acceptable to the Board as appropriate mitigation of the adverse impacts on water quality and beneficial uses incident to this project, provided that the 58-acre parcel and funds to be used and/or the contractual agreements necessary to complete the mitigation proposal have been irrevocably committed prior to the start of filling of area #2A.

18. The amount of mitigation accepted by the Board for the loss of 36.0 acres of wetlands, is based on all the evidence presented in this particular case and shall not be considered precedent for other projects.

19. This permit is for a sanitary landfill which is a non-guideline industry. The prohibitions, specifications, and provisions of this permit are based on best professional judgement in order to implement the federal Clean Water Act, the Water Quality Control Plan for the San Francisco Bay Basin, and the California Administrative Code regulations pertaining to sanitary landfills. The prohibitions, specifications, and provisions apply only to the discharger's proposal to utilize a specific area as a sanitary landfill. Therefore this permit implements Best Available Technology Economically Achievable for area 2A.

20. The disposal areas covered by this Order are partially surrounded by other disposal areas regulated by a separate Order. The Board finds that the discharger may demonstrate compliance with the Prohibitions and Specifications of this Order by providing appropriate facilities around area #2A or around the entire area #2 covered by this Order and Order No. 76-37. Such demonstration shall be made prior to any waste disposal into area #2A.

21. The Board hereby finds that a public need currently exists for the filling of wetlands in Area #2A which cannot feasibly be met by the use of an upland disposal site. The Board further finds that the disposal capacity provided by its authorization for the filling of area #2A is sufficient to allow time for the responsible agencies of local government to locate or establish an alternative upland site for future solid waste disposal. In light of the above findings, it is the intent of this Board not to permit the filling of additional wetlands at the Acme site beyond that provided for in this Order.

IT IS HEREBY ORDERED, that the discharger and any other persons that own the land or operate area #2A of this landfill, shall meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the federal Clean Water Act and regulations and guidelines adopted thereunder, and shall comply with the following:

A. Prohibitions

1. The disposal of wastes shall not create a pollution or nuisance as defined in Section 13050(l) and (m), respectively of the California Water Code.

2. Group 2 wastes shall not be placed in or allowed to contact ponded water from any source whatsoever, nor shall Group 2 wastes be disposed of in any position where they can be carried from the disposal site and discharged into waters of the State or the United States which are outside the authorized disposal area.

3. Group 1 wastes and hazardous wastes shall not be deposited or stored at this site.

4. Liquid Group 2 wastes or high moisture content Group 2 wastes shall not be discharged, except at the express written approval of the Executive Officer, and then only upon demonstration by the discharger that such disposal will not adversely affect the ability of the site to contain wastes and leachate.

5. The discharger shall remove and relocate any wastes which are discharged at this site in violation of these requirements.

6. Leachate from Group 2 wastes and ponded water containing leachate or in contact with refuse shall not be discharged to waters of the State or and the United States outside of the authorized disposal area.

7. Surface waters or groundwaters shall not be degraded as a result of the solid waste disposal.

8. The discharge of wastes to those areas identified by the U. S. Army Corps of Engineers as subject to a Section 10 permit is prohibited until the Corps issues such a permit.

9. The disposal of wastes into area #2A is prohibited until the Executive Officer approves, in writing, a report submitted by the discharger that documents to the Executive Officer's satisfaction compliance with Findings 17 and 20 of this Order.

10. Truck wash water or oil shall not be discharged to the landfill, unless approved in writing by the Executive Officer or to waters of the United States.

B. Specifications

1. Water used during disposal site operations shall be limited to a minimal amount necessary for dust control and fire suppression.

2. The disposal area shall be protected from any washout or erosion of wastes or covering material, and from inundation, which could occur as a result of a 100 year storm.

3. Surface drainage from tributary areas, and internal site drainage from surface or subsurface sources shall not contact or percolate through Group 2 wastes during disposal operation and for the active life of the site. The perimeter drainage ditches and all other facilities shall be designed to convey the 100 year storm runoff, and withstand differential settlement.

4. For waste placed above the maximum level of regional groundwater, vertical hydraulic continuity with groundwater shall be prevented by the presence of a natural barrier of at least 5 feet in thickness and a permeability of $1X10^{-6}$ cm/sec or less. Lateral hydraulic continuity with groundwater shall be prevented by the construction of an artificial barrier at least 5 feet in depth and 5 feet in width with a horizontal permeability of $1x10^{-6}$ cm/sec or less. This barrier shall be keyed into natural material having permeability of $1x10^{-6}$ cm/sec or less.

5 All Group 2 wastes shall be placed a minimum of 1 foot above the maximum level of regional groundwater. Group 3 wastes may be placed less than 1 foot above the maximum level of regional groundwater. No waste shall be placed at an elevation lower than the maximum regional ground water level.

6. As portions of the site are closed, the exterior surfaces shall be graded to a minimum slope of three percent in order to promote lateral runoff of precipitaion and to minimize infiltration of precipitation. In addition, all completed disposal areas shall be covered with a minimum of three feet of uncontaminated material one foot of which is compacted to attain a permeability no greater than $1X10^{-6}$ cm/sec. A lesser slope, thickness of final cover or permeability may be allowed by the Board upon demonstration that erosion control, percolation control, and coverage of refuse will not be adversely affected. This demonstration shall be part of a site closure plan.

7. The migration of methane gas from the landfill area shall be controlled as necessary to prevent the creation of a nuisance.

8. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place outside of area #2A:

   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 present natural background levels;

      . Visible, floating, suspended or deposited oil or other products of petroleum origin;

      . Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife or waterfol, 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

      The groundwater shall not be degraded as a result of the solid waste disposal operation.

9. The discharger shall assure that slope stability of this site is maintained under conditions generated during maximum probable earthquake. Slopes and heights of the landfill shall be maintained as described in the report referenced in Finding 6.

C. Provisions

1. The discharger shall comply with all Prohibitions and Specifications of this Order, except Specification B.7, for area #2A, prior to the discharge of any waste into the area.

2. The discharger shall comply with specification B.7. by submitting a plan with a time schedule by May 31, 1984 or commencement of waste filling, which ever is later, to monitor the migration of methane gas from this disposal site.

3. At least 30 days prior to the commencement of discharge of any waste into area #2A, the discharger shall submit a leachate management plan which fully describes the operational procedures to be used to minimize the generation of leachate; evaluates the leachate levels that may be generated and compares them to the effectiveness of the leachate collection and extraction system; evaluates the necessary frequency of monitoring the leachate collection system; and describes the methods the discharger will use to dispose of leachate which is extracted. At the same time, the discharger shall submit a report documenting compliance with all prohibitions and specifications of this Order. Once these reports and any amendments thereto are satisfactory to the Executive Officer, approval to commence discharge of waste into area #2A will be granted by the Executive Officer

4. The discharger shall submit to the Board a site closure plan for area #2A within one year of commencing fill operations. These plans shall conform to this Board's Resolution 77-7 and the State Water Resources Control Board closure requirements contained in Section 2553.1 and 2553.2 of the California Administrative Code. The plan shall include a slope stability analysis demonstrating that, during filling operations and after it is closed, the site will comply with Specification B.9.

5. Within 30 days after the completion of filling of any portions of the disposal areas, submit documentations that the exterior surfaces of these newly completed portions are covered and graded in accordance with Specification B.6.

6. Reports submitted pursuant to Provisions C.2., C.3., C.4., and C.5. shall be prepared under the supervision of a registered engineer or certified engineering geologist.

7. The discharger shall file with this Board a report of any material change or proposed change in the character, location or quantity of this waste discharge. For the purpose of these requirements, this includes any proposed change in the boundaries, contours or ownership of the disposal area(s).

8. The discharger shall maintain a copy of this Order at the site so as to be available at all times to site operating personnel.

9. This Board considers the property owner and site operator to have a continuing responsibility for correcting any problems within their reasonable control which arise in the future as a result of this waste discharge or water applied to this property during subsequent use of the land for other purposes.

10. The discharger shall file with the Board technical reports on self-monitoring work performed according to the detailed specifications contained in any Monitoring and Reporting Program which may be directed by the Executive Officer.

11. The discharger shall permit the Regional Board:

    (a) Entry upon premises on which wastes are located or in which any required records are kept,

    (b) Access to copy any records required to be kept under terms and conditions of this Order,

    (c) Inspection of monitoring equipment or records, and

    (d) Sampling of any discharge.

12. This Order expires on April 17, 1989, and the discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9, of the California Administrative Code not later than 180 days in advance of such expiration date as application for requirements.

13. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

14. The discharger shall implement the mitigation proposal described in Finding 17.

15. This permit does not authorize commission of any act causing injury to the property of another or of the public, does not convey any property rights, does not remove liability under federal, state or local laws and does not authorize the discharge of waste without appropriate federal, state or local permits, authorization or determinations.

I, Roger B. James, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on April 18, 1984.

ROGER B. JAMES
Executive Officer

Attachments:
A and B

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

Acme Fill Corporation

Acme Class II-2 Solid Waste Disposal Site

Martinez, Contra Costa County

NPDES NO. CA 0028754

ORDER NO. 84-18

CONSISTS OF

PART A

AND

PART B

PART A

I. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13268, 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No. 73-16.

The principal purposes of a monitoring program by a waste discharger, also referred to as self-monitoring program, are:

(1) To document compliance with waste discharge requirements and prohibitions established by this Regional Board.

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

B. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be perfomed according to the latest edition of Standard Methods for the Examination of Water and Wastewater prepared and published jointly by the American Public Health Association, American Water Works Association, and Water Pollution Control Federation, or other methods approved and specified by the Executive Officer of this Regional Board including the methods specified in attached APPENDIX E.

Water and waste analyses shall be perfomed by a laboratory approved for these analayses by the State Department of Health or a laboratory approved by the Executive Officer. The director of the laboaratory whose name appears on the certification shall supervise all analytical work in his laboratory and shall sign all reports of such work submitted to the Regional Board.

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

C. DEFINITION OF TERMS

1. Grab sample means a sample collected at any time.

2. Standard Observations

a. Disposal Area and Periphery of Disposal Facilities

This applies to solid wastes confined or unconfined, including high moisture content group 2 wastes.

(1) Evidence of leaching liquid from area of confinement and estimated size of affected area. (Show affected area on a sketch.)

(2) Odor: presence or absence, characterization, source, and distance of travel.

(3) Estimated number of waterfowl and other water-associated birds in the disposal area and vicinity.

(4) Cover material: Depth of inert material over the inactive areas.

(5) Evidence of erosion and/or day-lighted refuse.

D. SCHEDULE OF SAMPLING, ANALYSES, AND OBSERVATIONS

The discharger is required to perform observations, sampling, and analyses according to the schedule in Part B.

E. RECORDS TO BE MAINTAINED

1. Written records shall be maintained at the landfill site or office and shall be retained for a minimum of 3 years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board or Regional Administrator of the U. S. Environmental Protection Agency, Region IX. Such records shall show the following for each sample:

a. Identity of sampling and observation stations by number.

b. Date and time of sampling and/or observations.

c. Date and time that analyses are started and completed, and name of personnel performing the analyses.

d. Complete procedure used, including method of preserving sample and identity and volumes of reagents used. A reference to specific section of Standard Methods is satisfactory.

e. Calculations of results.

f. Results of analyses and/or observations.

F. REPORTS TO BE FILED WITH THE REGIONAL BOARD

1. Writtens reports shall be filed for each calendar month (unless specified otherwise in Part B) by the fifteenth day of the following month. In addition, an annual report shall be filed as indicated in F-1-f. The reports shall be comprised of the following:

a. Letter of Transmittal

A letter transmitting self-monitoring reports should accompany ecah report. Such a letter shall include a discussion of requirement violations found during the past month and actions taken or planned for correcting violations, such as plant operation modifications and/or plant facilities expansion. 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. 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 and correct.

Monitoring reports shall be signed as follows:

(1) In the case of corporations, 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 facilitiy from which the discharge originates,

(2) In the case of a partnership, by a general partner, or

(3) In the case of a sole proprietorship, by the proprietor,

(4) In the case of a municipal, State, or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

b. Compliance Evaluation Summary

Each report shall be accompanied by a compliance evaluation summary sheet prepared by the discharger. The report format will be specified by the Regional Board.

c. Map or Aerial Photograph

A map or aerial photograph shall accompany the report showing sampling and observation station locations.

d. Results of Analyses and Observations

Tabulations of the results from each required analysis specified in Part B by date, time, type of sample, and station, signed by the laboratory director. The report format will be specified by the Regional Board.

e. List of Approved Analyses

(1) Listing of analyses for which the discharger is approved by the State Department of Health.

(2) List of analyses perfonmed for the discharger by another approved laboratory (and copies of reports signed by the laboratory director of that laboratory shall also be submitted as part of the report).

f. Annual Reporting

By March 30 of each year, the discharger shall submit an annual report to the Regional Board covering the previous calendar year. The report shall contain:

1. Tabular and graphical summaries of the monitoring data obtained during the previous year.

2. 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.

3. A map showing the area in which filling has been completed during prior calendar year.

4. Summary of the groundwater analyses indicating any change in the quality of the groundwater.

PART B

I. DESCRIPTION OF SAMPLING STATIONS & SCHEDULE OF SAMPLING, ANALYSES & OBSERVATIONS

A. WASTE MONITORING

1. Monthly, record the total volume and weight of a refuse (in cubic yards and tons) deposited on the site during the month, and the daily average. Report quarterly.

2. Monthly, record the volume of fill completed, in cubic yards, showing the location(s) and dimensions on a sketch or a map. Report quarterly.

3. Monthly, using the information from A.2, record the cumulative volume of fill completed, in cubic yards, and use this figure to determine the percentage of the projected total site capacity that has been filled. Report quarterly.

The monthly records shall be maintained at the landfill office. The weight of the refuse shall be estimated.

B. ON SITE OBSERVATION

Station	Description
S-1 thru S-'n'	Observation stations located on any past or presently active portion of the waste site at grid squares delineated by a 1000 foot grid network.
P-1 thru P-'n'	These stations shall be located at equidistant intervals not exceeding 1000 feet around the perimeter of the active and formerly active portion of the disposal, excluding the area described by the 'S' stations.

Station	Frequency of Observation	Observations
All S Stations	Weekly throughout the year	1. Evidence of ponded water at any point on the disposal site. 2. Evidence of refuse not confined within disposal site or cell. 3. Evidence of erosion and/or daylighted refuse.

Station	Frequency of Observation	Observations
		4. Evidence of waste in contact with pools of surface water.
All P Stations	Weekly throughout the year	1. Evidence of refuse not confined within a cell or parcel.
		2. Evidence of odors: presence or absence, characteristics, intensity, source, and distance of travel.
		3. Evidence of leachate or water entering or leaving the disposal site, and estimated size of affected area.

All "P" and "S" stations must be monitored according to the above described frequency. Report quarterly.

C. SEEPAGE AND/OR LEACHATE MONITORING

Station	Description
L-1 thru L-'n'	At a point at which each discharge occurs from the disposal area. Include a map indicating locations of discharge(s).

Station	Type of Sample and Frequency	Analyses	Units
All L Stations	Daily, grab sample at each occurrence.	COD	mg/l
		D.O.	mg/l
		Dissolved sulfide	mg/l
		Odors	description
		Color	description
		pH	electrometric units
		Conductivity	micronhos/cm

A report shall be made by telephone of any seepage or leachate leaving the disposal area immediately after occurrence. A written report shall be filed with this Board within five days and shall contain the following information: (1) Map showing location(s) of discharge or leachate (2) Approximate flow rate (3) Nature of effect (description of color, source, and size of affected area of discoloration and turbidity of receiving water; and presence or absence and characterization of odors); and (4) Corrective measures undertaken.

D. GROUNDWATER AND PEIZOMETRIC GRADIENT MONITORING

Station*	Description
G-13	A well located mid-way along, and five feet outside of the north perimeter levee.
G-14	A well located approximately 500 feet southeast from the northeast corner of the perimeter levee, along, and five feet outside of, the northeast perimeter levee.
G-15	A well located approximately 1200 feet southeast from the northeast corner of the perimeter levee, along, and five feet outside of, the northeast perimeter levee.
G-16	A well located mid-way along, and five feet outside of, the southeast perimeter levee.
G-17	A well located approximately 1500 feet northeast from the southwest corner of the perimeter levee, along, and five feet outside of, the south perimeter levee.
G-18	A well located approximately 500 feet northeast from the southwest corner of the perimeter levee, along, and five feet outside of , the south perimeter levee.
G-19	A well located along, and five feet outside of, the west perimeter levee at the extension of the northern boundary of the inactive Class I ponds owned by Acme.
G-20	A well located at the northerly intersection of cell A-1 and the existing fill area of the north parcel.
G-21	A well located immediately south of well G-13 and within the perimeter levee.
G-22	A well located immediately west of well G-15 and within the perimeter levee.
G-23	A well located immediately north of well G-17 and within the perimeter levee.

G-24	A well located immediately east of well G-19 and within the perimeter levee.
G-25	A well located immediately west of well G-20 and within the perimeter levee.
G-26	A well located at the intersection of the internal levees separating cells A, B, and C.
G-27	A well located at the intersection of the internal levees separating cells B, C, D and E.
G-28	A well which will monitor the water in the deep clayey gravel and clayey sand deposit (approximately 100 feet depth) upgradient of the landfill.
G-29, 30	Two wells which will monitor the water in the deep clayey gravel and clayey sand deposit (approximately 100 foot depth) down gradient of the site. These wells will be evenly spaced on the downgradient side.

*Well Construction Methods:

All G wells shall be constructed using an auger (hollow or solid stem) and completed with 4-inch minimum casing. Wells G-28, G-29 and G-30 may be constructed using rotary wash. The wells shall be screened as described below and the annular space opposite the screened interval shall be gravel packed with clean, washed pea gravel. The wells shall be cemented from the top of the screened zone to the ground surface, and an appropriate surface grout seal installed. No solvent glues may be used in the casing. Well logs shall be submitted with the results of the first analysis.

Wells	Depth	Screened Intervals
G-13 thru G-20	10' below adjacent keyed barrier	lower 10'
G-21 thru G-25	bottom of keyed barrier	bottom of keyed barrier to 4' from the top of barrier
G-26 and G-27	15' below base of waste fill	lower 10'
G-28 thru G-30	bottom of the deep clayey gravel and clayey sand layer	entire deep clayey gravel and clayey sand layer

The discharger shall submit by July 1, 1984 a proposal for the location of wells G-28 through G-30. This proposal shall be based on a review of all data available on the gradient of water in this gravel/sand layer. These three wells may be sited such that they can also be used to monitor the possible impacts from the existing north parcel and the south parcel.

Station	Description
GR-7	in cell A-1*
GR-8	in cell A*
GR-9	in cell B*
GR-10	in cell C*
GR-11	in cell D*
GR-12	in cell E*

*All GR wells shall be located at the lowest point in each cell at which waste is placed. These wells shall utilize 4 inch minimum casings and shall be screened along the entire depth of waste. A one foot solid casing may be utilized below the screened interval; however, it shall be placed below the lowest level of waste fill.

Station	Type of Sample and Frequency	Analyses	Units
All "GR" Stations	Observed quarterly throughout the year.	Leachate level	feet[1]
All "G"	Grab sample quarterly throughout the year.	water level	feet[2]
		Color	description
		Chloride	mg/l
		COD	mg/l
		TOC	mg/l
		TDS	mg/l
		Nitrate Nitrogen	mg/l
		Total Kjeldahl Nitrogen (as N)	mg/l
		Conductivity	micromhos/cm
		pH	electrometric

1 - Feet of leachate, as measured from lowest point in cell.
2 - Depth of water, based on datum of 0.0 foot elevation.

Prior to taking samples from the "G" wells, the well to be sampled shall be bailed until a minimum of 3 well casing volumes have been removed. If the well is evacuated before 3 well volumes have been removed, the well will be allowed to recover to approximately 80% of its initial water elevation before sampling.

E. MISCELLANEOUS REPORTING

1. Semi-annually, the discharger shall determine the remaining capacity in tons, cubic yards, and years. All data used in the determination and the determined capacity shall be submitted by November 1 and May 1 of each year.

2. Quarterly, the discharger shall submit a report on landfill slope stability. This report should include both an analysis of slope stability monitoring data, and the monitoring data itself. This data shall be collected in accordance with and at the frequency specified in the compliance documentation report submitted pursuant to Provison C.3. of Order No. 84-18. Reports shall be submitted February 1, May 1, August 1 and November 1 of each year.

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in his Regional Board's Resolution No.73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 84-18.

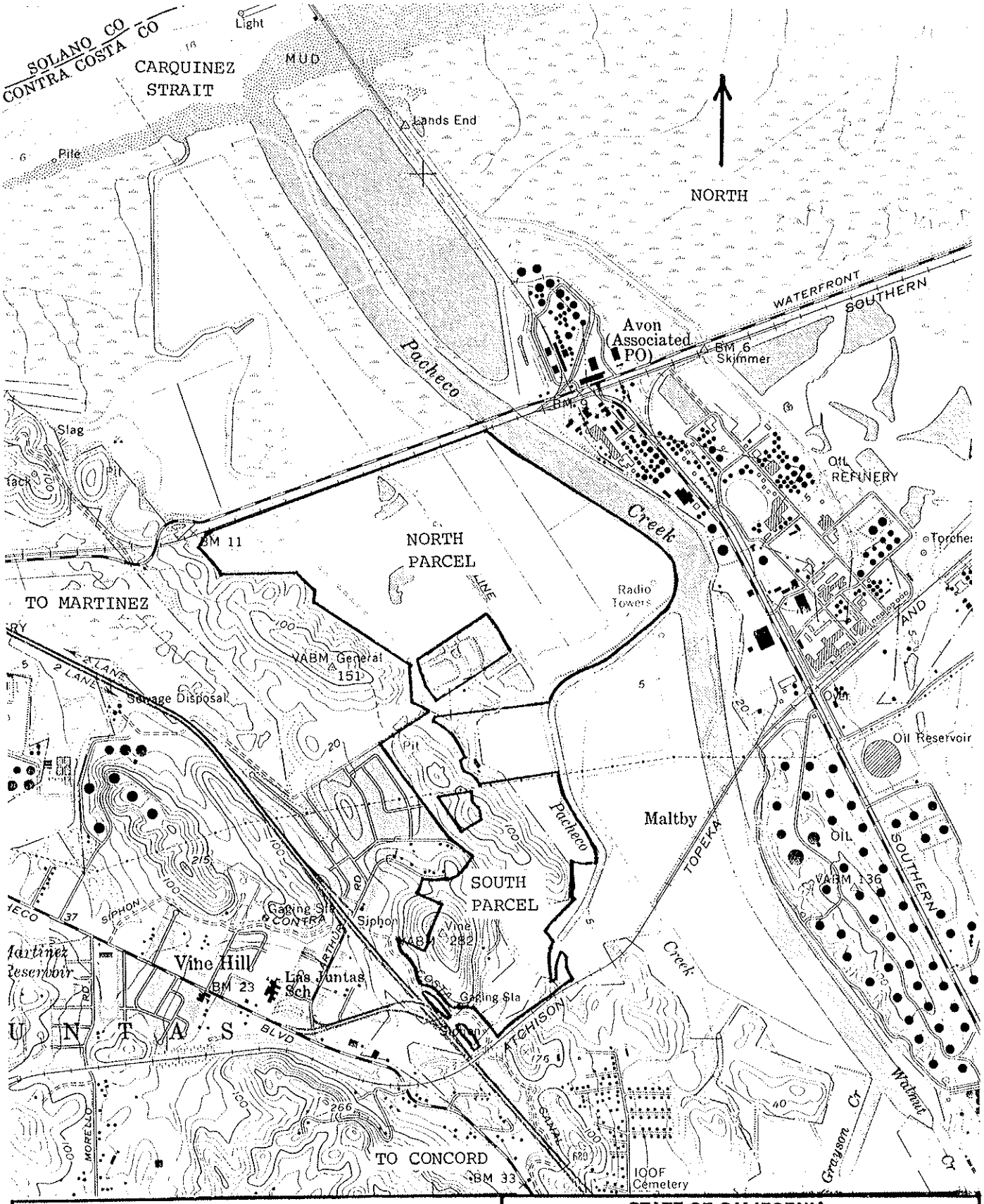
2. Is effective on the date shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Offier or request from the discharger and revisions will be ordered by the Executive Officer.

ROGER B. JAMES
Executive Officer

Attachment: C - Ground Water Well Locations

Effective Date July 10, 1984

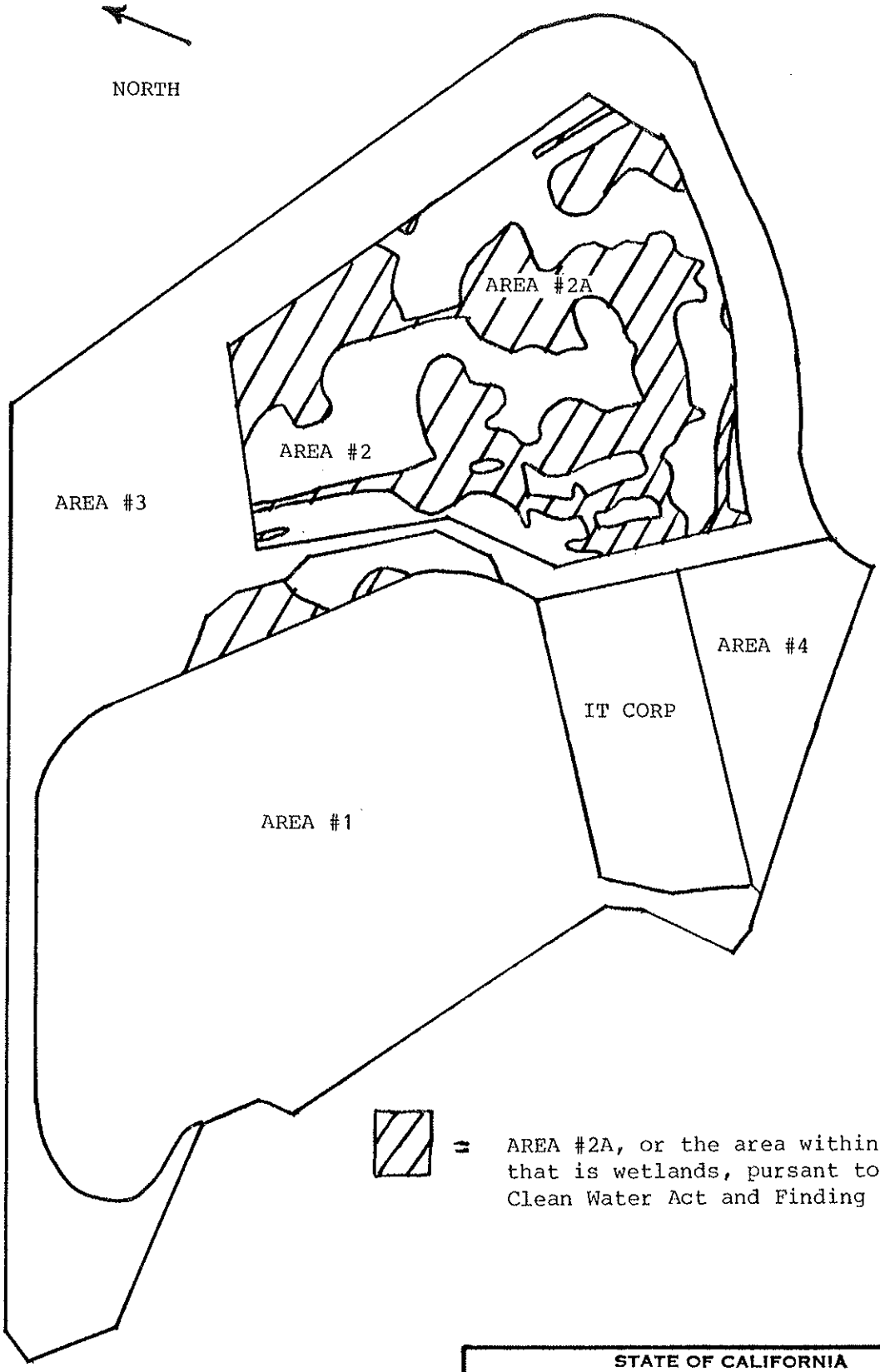


STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ACME SANITARY LANDFILL
NORTH AND SOUTH PARCELS

ATTACHMENT A

BHW 3/84



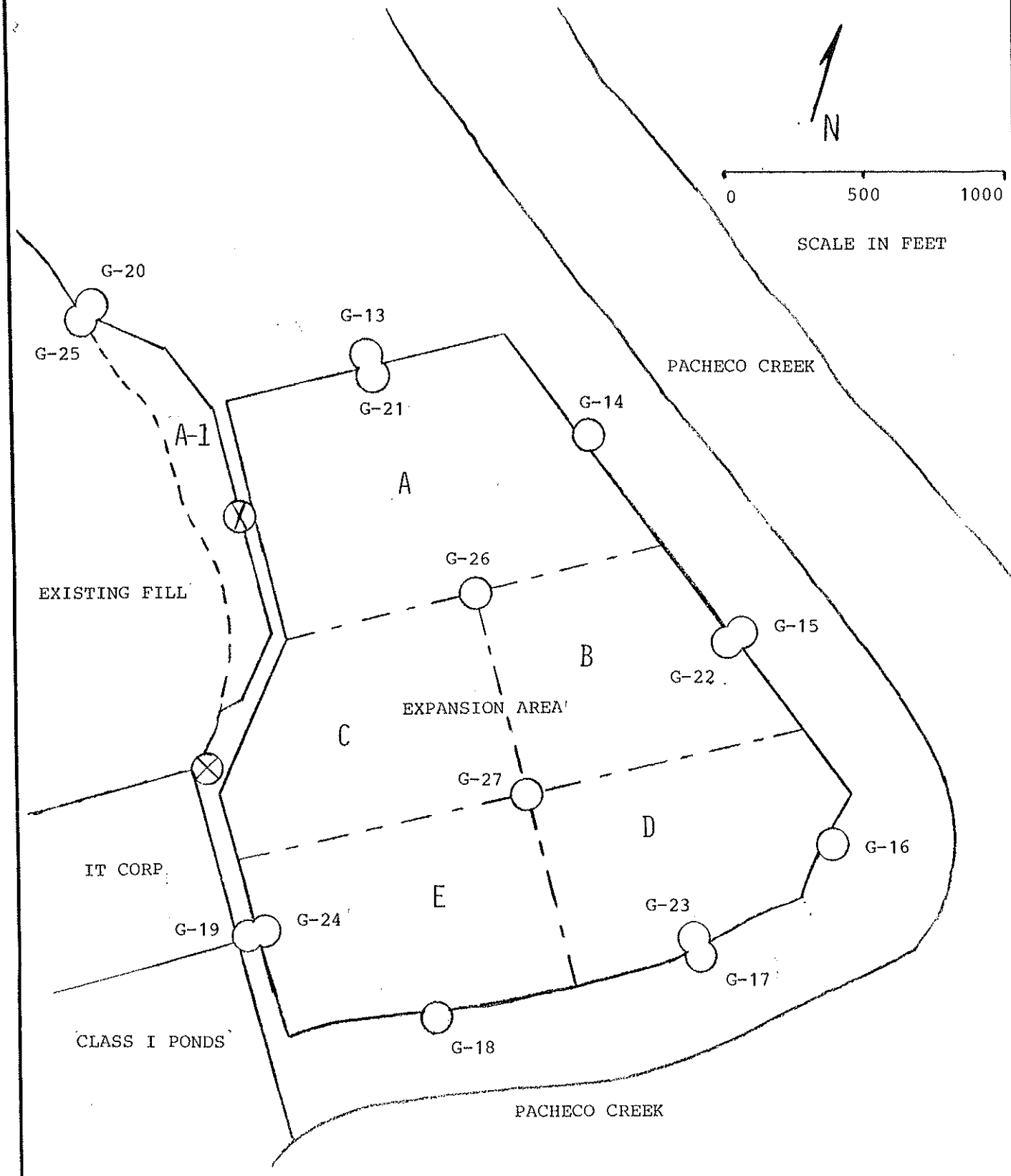
= AREA #2A, or the area within AREA #2 that is wetlands, pursant to the Clean Water Act and Finding 3

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ACME SANITARY LANDFILL
AREAS #1 - 4 OF NORTH PARCEL

ATTACHMENT B

DRAWN BY: BHW	DATE: 3/84	DRWG. NO.



— — = LIMIT OF EXISTING FILL

– — – = INTERNAL LEVEE

◯ = LOCATION OF G-X WELLS

⊗ = LOCATION OF WELLS G-4 AND G-5, ORDER NO. 76-37

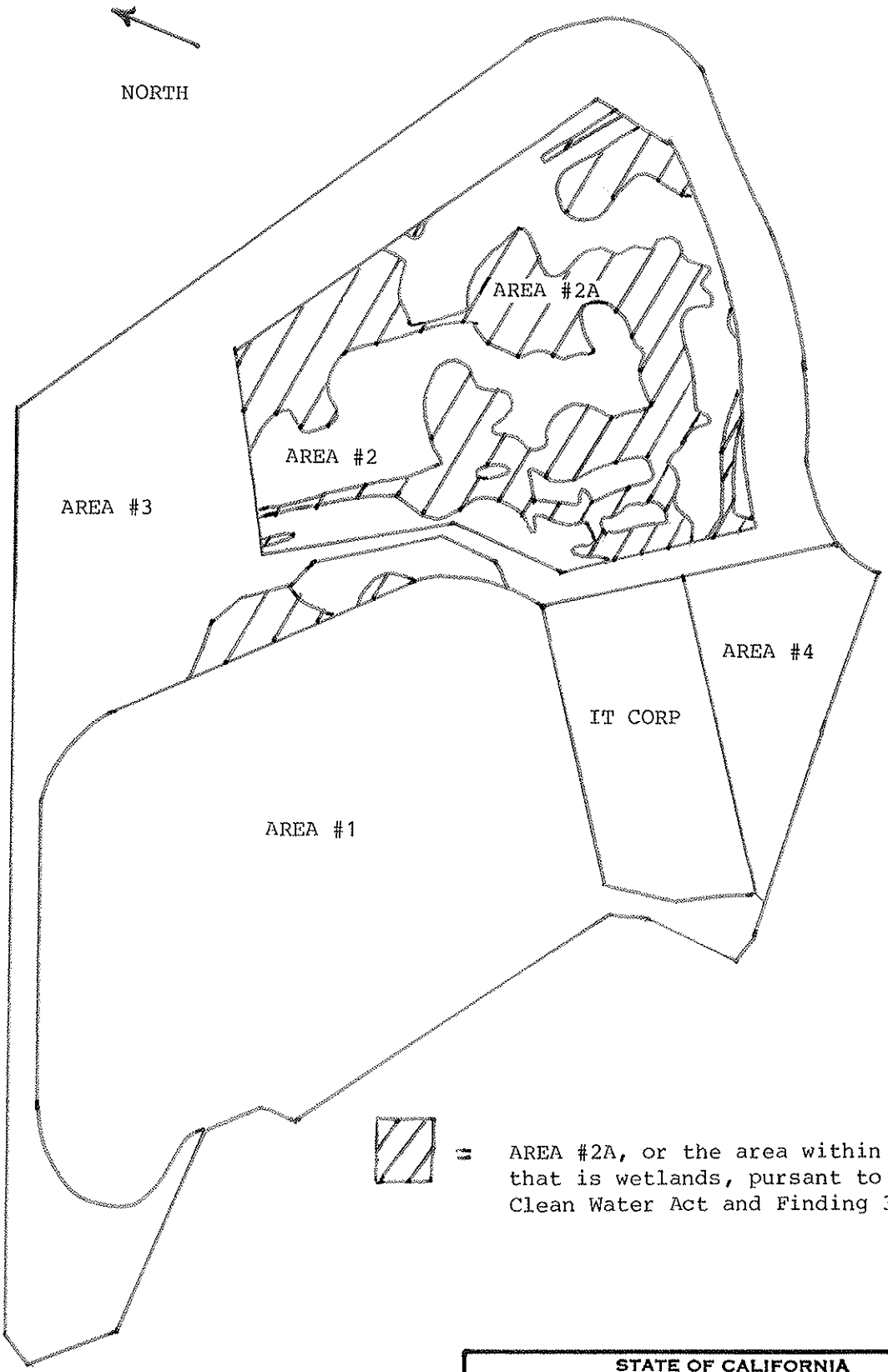
A = IDENTIFICATION OF CELLS

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ACME SANITARY LANDFILL
GROUND WATER WELL LOCATIONS

ATTACHMENT C

DRAWN BY: BHW	DATE: 4/84	DRWG. NO.



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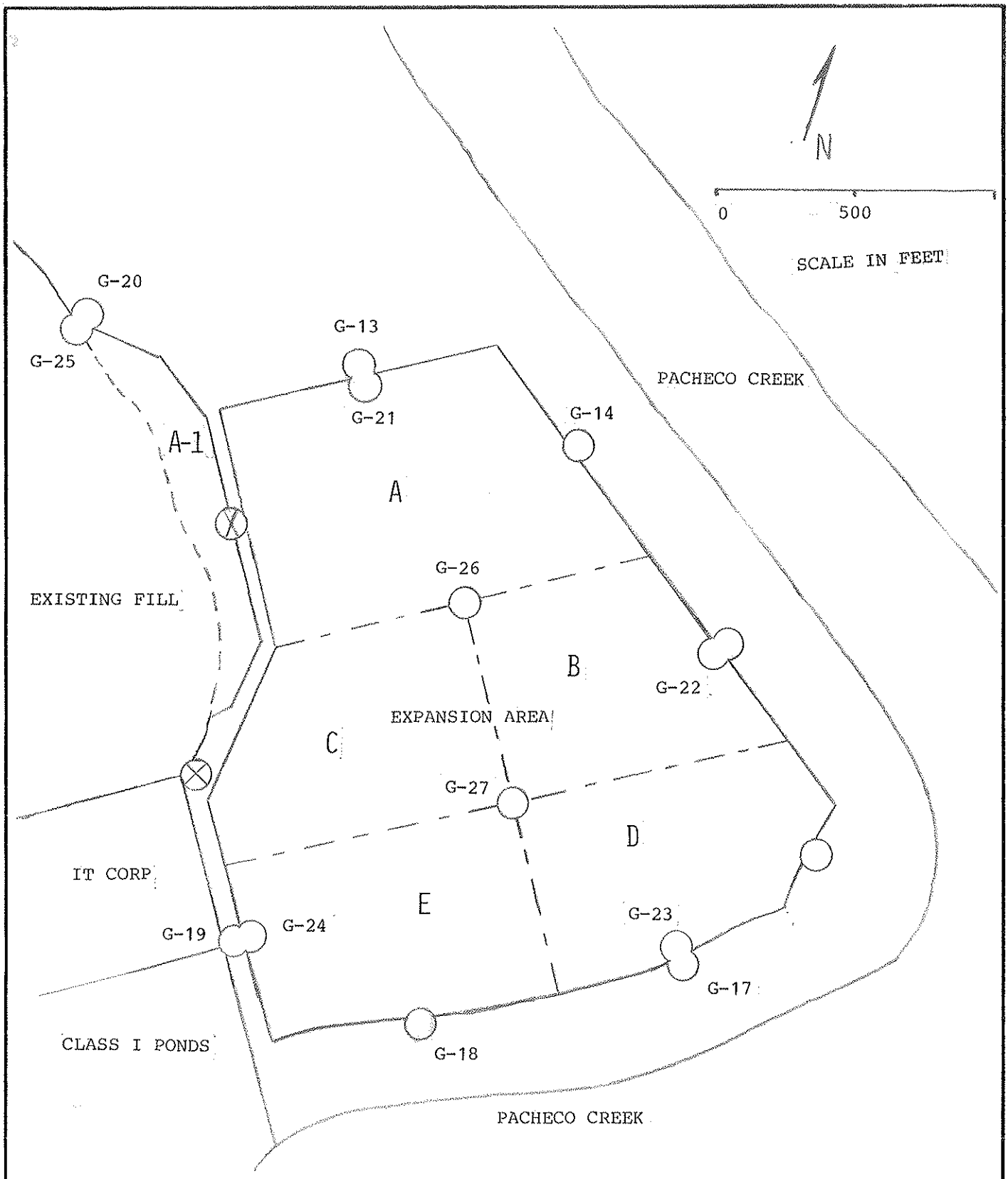
STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ACME SANITARY LANDFILL
AREAS #1 - 4 OF NORTH PARCEL

ATTACHMENT B

DRAWN BY:	DATE:	DRWG. NO.



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STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ACME SANITARY LANDFILL
GROUND WATER WELL LOCATIONS

ATTACHMENT C

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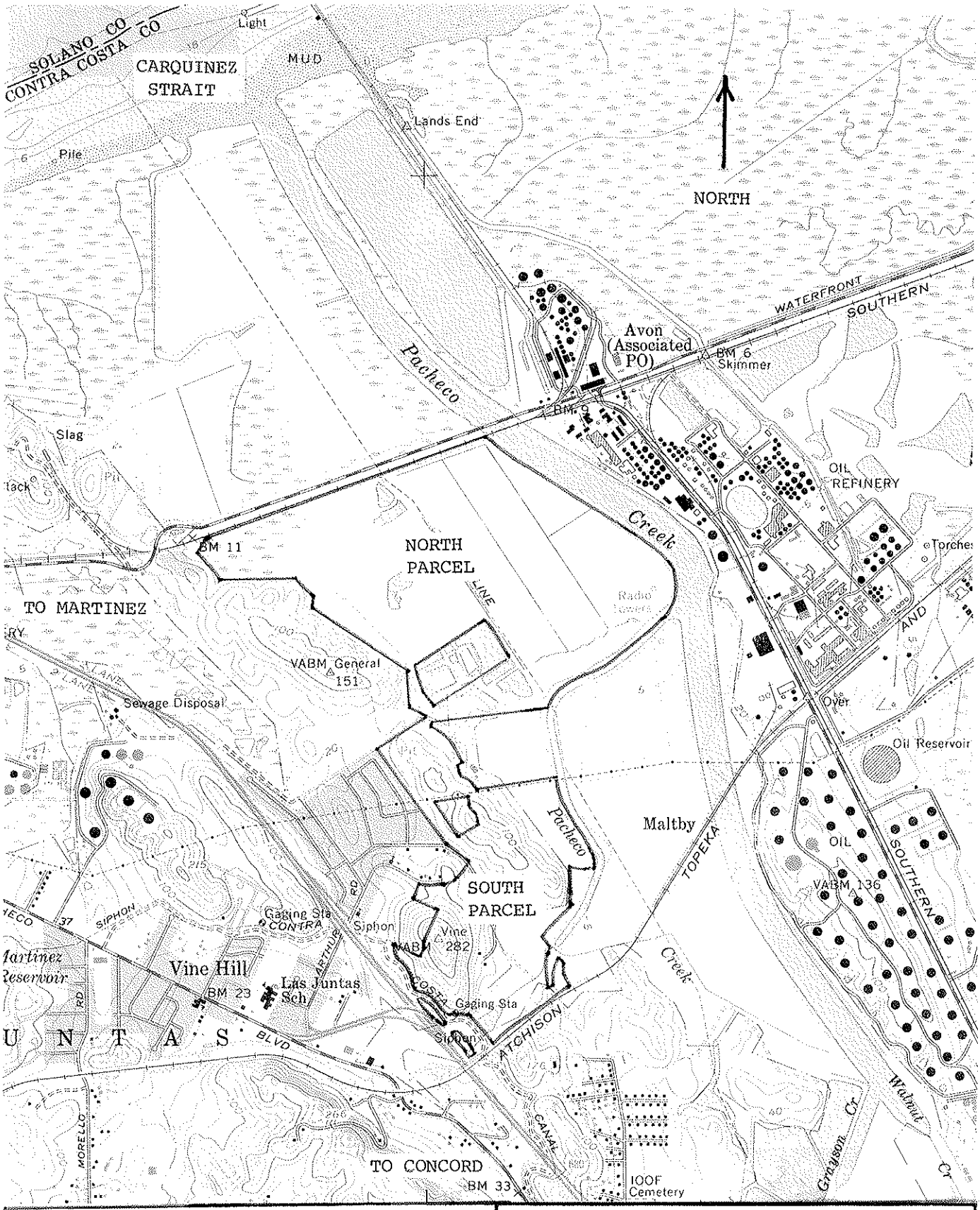

0 1000 2000 3000 4000 5000

SCALE IN FEET

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ACME SANITARY LANDFILL
NORTH AND SOUTH PARCELS

ATTACHMENT A

BHW 3/84