

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 85-15

WASTE DISCHARGE REQUIREMENTS FOR:

REDWOOD SANITARY LANDFILL INC.
CLASS III LANDFILL AND CLASS II WASTE MANAGEMENT UNIT
NOVATO, MARIN COUNTY

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

1. Redwood Sanitary Landfill Inc. (hereinafter called the discharger), owns and operates a Class III landfill located east of Highway 101, south and west of San Antonio creek, and approximately 1 mile north of the Marin County Airport. The existing site, as shown in Attachment A, which is incorporated herein and made a part of this Order, consists of 420 acres of tidelands with perimeter levees and contains 46 acres of active refuse disposal area, 6 acres of sludge storage area (3 ponds), and a leachate containment pond.
2. The discharger is currently governed by this Board's Order No. 75-68 as amended by Order No. 80-19, prescribing waste discharge requirements for specific portions of the disposal site. On November 30, 1983, the discharger filed an Application for expansion of the refuse disposal area from 46 acres to 52 acres, and for expansion of the sludge disposal area from 6 acres to 42 acres, and has subsequently amended the Application.
3. The landfill and expansion area, shown in Attachment B, which is incorporated and made a part of this Order, consists of:
 - Expanded Refuse Disposal Area
 - Sludge Storage Pond A
 - Sludge Storage Pond B
 - Sludge Storage Pond C
 - Expanded Sludge Storage and Drying Area
 - Leachate and Runoff Containment Pond
 - Field Area
4. The discharger accepts approximately 780,000 cubic yards of refuse per year and 162,000 cubic yards of sewage sludge per year. The processing capacity of the expanded sludge storage

and drying area and sludge storage ponds is 165,000 cubic yards of sludge per year. The discharger accepts sludge from industrial urbanized areas, including all Marin County Sanitary Districts, East Bay Municipal Utility District (EBMUD), and Union Sanitary District. Sludge containing approximately 20% solids is discharged into the three ponds and is later spread out in the drying area for further evaporation of moisture. The dried sludge is utilized as fill and/or daily cover for the landfill area. During the summer months the sludge is disced into the field area, east of the sludge storage and drying area.

5. This site must be modified to comply with the requirements of Articles 2, 3, and 4 of Title 23, Chapter 23, Subchapter 15 of the California Administrative Code which became effective on November 26, 1984 (Subchapter 15). Because of the moisture content of the sludge, the sludge storage ponds, leachate containment pond, and the expanded sludge storage and drying area must meet the requirements of Subchapter 15 for Class II waste management units.
6. The disposal site, subsequent to modifications required to comply with this Order, will meet the criteria contained in Subchapter 15, for classification of the site as a Class III landfill to receive non-hazardous solid waste, and as a Class II waste management unit to receive designated waste.
7. The discharger submitted a site evaluation report on July 29, 1974 entitled "Analysis of Levee Strength and Permeability", an Area 5 pond water balance on April 6, 1984, and a May 9, 1984 landfill contingency plan. These reports must be updated utilizing the new Subchapter 15 criteria.
8. The entire 420 acre site is underlain by moderately weak, compressible, silty 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, and fine gravel lenses, are found at the site. Surface water is limited to rain falling on the site. No known useable groundwater exists beneath the site. The bay mud which underlies the site is generally saturated. In addition, minor faults exist west of the landfill, and the Rogers Creek fault is located 10 miles east of the landfill.
9. The Department of Fish and Game has determined that the landfill expansion does not contain wetland areas.

10. The Regional Board adopted a revised Water Quality 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 local beneficial uses of San Antonio Creek are:
 - a. Estuarine habitat
 - b. Wildlife habitat
12. The action to revise waste discharge requirements and continue operation of an existing landfill is exempt from the California Environmental Quality Act (Public Resources Section 2100 et. seq.) in accordance with Section 15301 of the Public Resources Code.
13. The Board notified the discharger and interested agency and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
14. The Board, in a public hearing held on February 20, 1985, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, that the discharger and any other persons that own the land or operate this site, shall meet the provisions contained in Division 7 of the California Water Code and regulations 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(1) (m), respectively, of the California Water Code.
2. Wastes shall not be placed in or allowed to contact ponded water from any source whatsoever, except for sludge while contained in Ponds A, B, or C.
3. Waste 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 the United States which are outside the authorized disposal area.
4. Hazardous wastes shall not be deposited or stored at this site.
5. No sludge with a moisture content of greater than 50

percent may be discharged to the disposal site after September 1, 1985 unless approved liners and a leachate collection and removal system are installed and fully operational.

6. Wastes shall not be placed in the Class III landfill unless it contains at least 50 percent solids.
7. The discharger of waste shall not cause the following conditions to exist in waters of the State at any place outside the disposal area:

- 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 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

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

8. Leachate from wastes and ponded water containing leachate or in contact with refuse shall not be discharged to waters of the State or the United States outside of the authorized disposal area.
9. No sludges other than those listed in Finding 4 of this Order may be disposed at the site without prior approval from the Executive Officer. Such approval shall be granted only if there is adequate sludge handling capacity at the site and adequate moisture capacity in the landfill.

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

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 site 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 24 hour precipitation for the Class III landfill, or a 1000 year 24 hour precipitation for the Class II waste management units.
3. Surface drainage from tributary areas, and internal site drainage for surface or subsurface sources shall not contact or percolate through 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. The site shall be modified with a liner or liners according to the specifications and standards under Section 2542 of Subchapter 15, after approval of the proposed modifications by the Executive Officer. An exception to this may be granted by the Board based on a demonstration submitted by the discharger pursuant to Section 2510(b) and (c) of Subchapter 15.
5. The site shall be modified with a leachate collection and removal system, according to the specifications and standards under Section 2543 of Subchapter 15, after approval of the proposed modifications by the Executive Officer. An exemption to this may be granted by the Board based on a demonstration submitted by the discharger pursuant to Section 2510(b) and (c) of Subchapter 15.
6. The site shall be operated to ensure that wastes will be a minimum of 5 feet above the highest anticipated elevation of underlying ground water.
7. The discharger shall assure that the foundation of the site and the structures which control leachate, surface drainage, erosion and gas for this site are maintained

under conditions generated during the maximum credible earthquake for the Class II units and the maximum probable earthquake for the Class III units.

8. Surface impoundments (Class II waste management units) shall contain a minimum of 2 feet of freeboard at all times.
9. As portions of the Class III landfill are closed, the exterior surfaces shall be graded to a minimum slope of three percent in order to promote lateral runoff 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 1×10^{-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.

C. Provisions

1. The discharger shall comply with all prohibitions specifications, and provisions of this Order immediately upon adoption, except for B.2, B.3, B.4, B.5, and B.7. The discharger shall comply with these specifications in accordance with the following time schedule:
 - a. Specification B.2, B.3. and B.7
 1. Submit report demonstrating that compliance is being achieved or submit plan and time schedule for achieving compliance by March 15, 1985
 2. Achieve compliance if not demonstrated above by Sept. 15, 1985
 - b. Specification B.4. and B.5.
 1. Submit report proposing necessary site modifications or submit demonstration for exception by June 1, 1985
 2. Achieve compliance by Sept. 1, 1985

2. Reports pursuant to Provision C.1 shall be prepared under the supervision of a registered engineer or certified engineering geologist.
3. A revised site closure plan which includes a detailed description of site closure actions already implemented shall be submitted by September 1, 1985, in compliance with the provisions set forth in Article 8 of Subchapter 15.
4. 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.9.
5. The discharger shall remove and relocate any wastes which are discharged at this site in violations of these requirements.
6. 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).
7. The discharger shall maintain a copy of this Order at the site so as to be available at all times to site operating personnel.
8. 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.
9. The discharge is required to develop a monitoring program which will comply with the requirements of Article 5, Subchapter 15 and shall submit said program to the Regional Board by May 26, 1985.
10. 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.

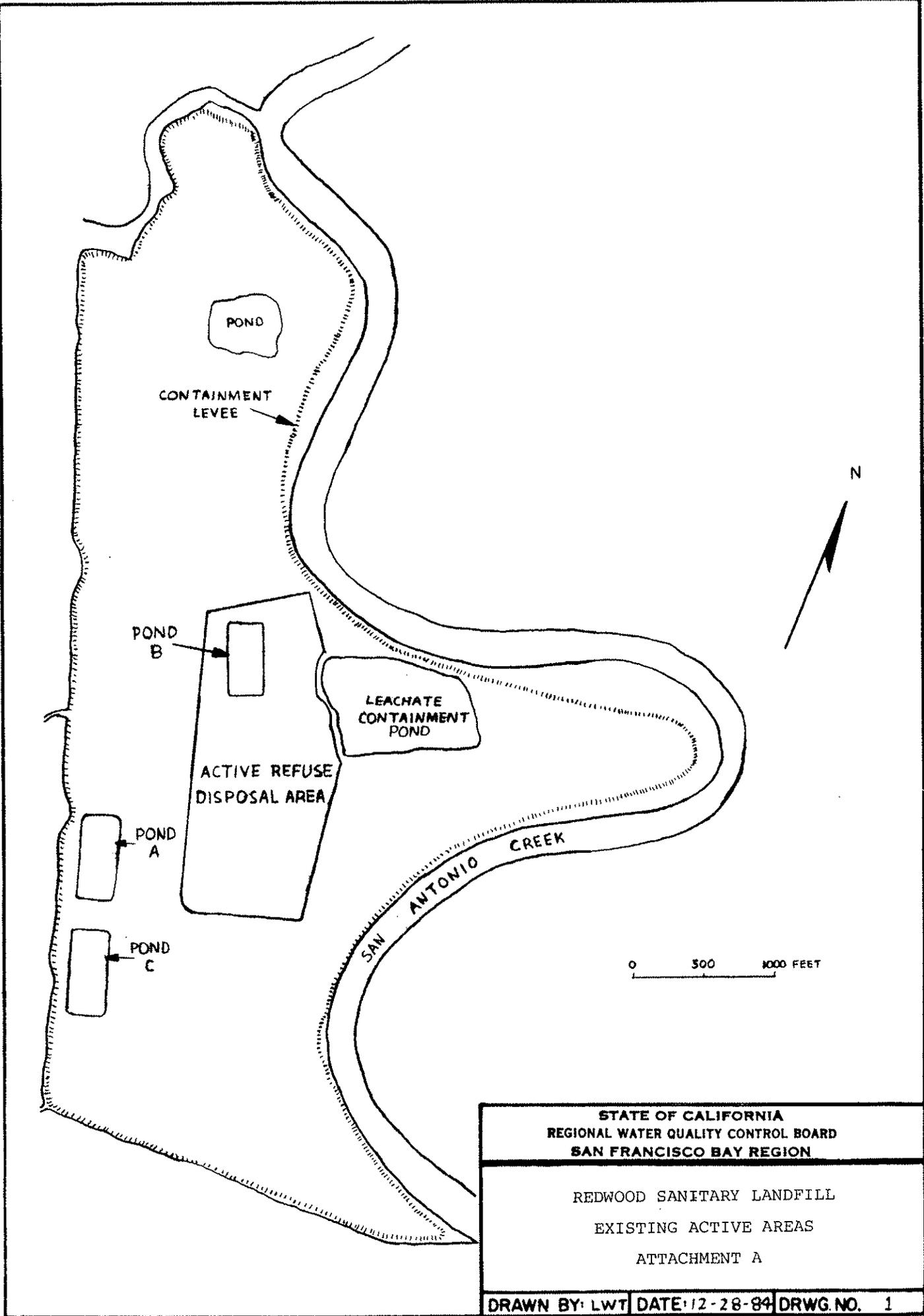
11. These requirements do not authorize commission of any act causing injury to the property, of another or of the public, do not convey any property rights, does not remove liability under federal, state or local laws and does not authorize the discharge or waste without appropriate federal, state or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

12. Orders No. 75-68 and 80-19 are hereby rescinded.

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 February 20, 1985.

ROGER B. JAMES
Executive Officer

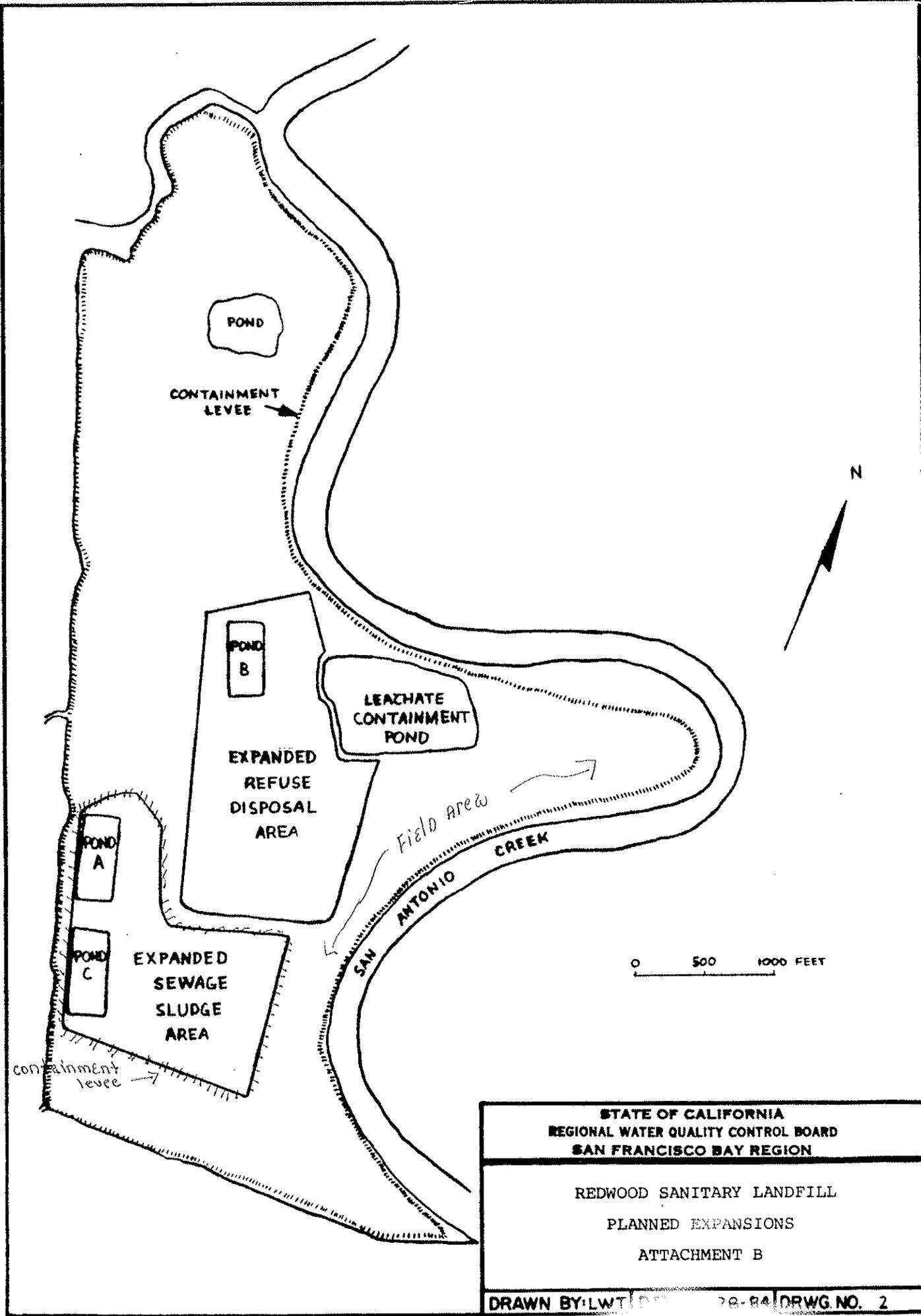
Attachments:
A and B



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

REDWOOD SANITARY LANDFILL
 EXISTING ACTIVE AREAS
 ATTACHMENT A

DRAWN BY: LWT DATE: 12-28-84 DRWG. NO. 1



CONTAINMENT LEVEE

POND

POND B

LEACHATE CONTAINMENT POND

EXPANDED REFUSE DISPOSAL AREA

Field Area

SAN ANTONIO CREEK

POND A

POND C

EXPANDED SEWAGE SLUDGE AREA

containment levee

0 500 1000 FEET

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

REDWOOD SANITARY LANDFILL
 PLANNED EXPANSIONS
 ATTACHMENT B

DRAWN BY: LWT 78-84 DRWG. NO. 2