

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 84-7

WASTE DISCHARGE REQUIREMENTS FOR:

OAKLAND SCAVENGER COMPANY
DURHAM ROAD CLASS II-1 AND CLASS II-2 SOLID WASTE DISPOSAL SITE
FREMONT, ALAMEDA COUNTY

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

1. Waste Discharge Requirements Order No. 79-21 was adopted by the Board on February 20, 1979, for Oakland Scavenger Company's Durham Road Sanitary Landfill (hereinafter called the discharger).
2. The discharger currently disposes of group 2 and 3 wastes on approximately 108 acres (called the existing area) of their 378 acre site located at the west end of Durham Road in the City of Fremont, as shown on Attachements A and B which are incorporated herein and made part of this Order.
3. The discharger has proposed expanding the current fill area to include approximately 119 additional acres (called the expansion area) of the site, as shown on Attachment B. The expansion is in conjunction with a proposed energy/resource recovery facility now being planned for the Fremont, Newark and Union City area. The expansion will extend the life of the site for approximately 30 years.
4. The discharger has submitted a report entitled "Geotechnical Investigation and Waste Management Study, Durham Road Sanitary Landfill Expansion, Fremont, California", dated April 1982; and a report entitled "Project Design, Construction and Operating Provisions for Durham Road Sanitary Landfill", dated August 1982. The reports include a slope stability analysis, and indicate that the expansion area is suitable for development as a Class II-1 disposal site provided the design recommendations and operational considerations described in the above reports are followed.
5. Waste Discharge Requirements 79-21, Waste Disposal Specification A.2. required that all other necessary permits be obtained before the Regional Board would consider Waste Discharge Requirements for the expansion area. All other necessary permits have been obtained by the discharger.
6. The discharger proposes to operate, improve and maintain the existing area of the sanitary landfill for the disposal of Group 2 and 3 wastes, and proposes to construct and operate the expansion area of the sanitary landfill for the disposal of Group 2 and 3 wastes, and incinerator ash, a group 1 waste, from a proposed energy/resource recovery facility.

7. The California Department of Health Services, Hazardous Waste Management Branch has determined that the ash from the proposed incineration facility is not a hazardous waste.
8. The site is underlain by a 10-20 foot layer of younger bay mud, and a 14 to 40 foot layer of older bay muds. These in turn are underlain by coarse sand and gravel of the Newark Aquifer. The top of the Newark Aquifer ranges from 25 feet to 50 feet below the ground surface. The permeability of the older Bay Muds is approximately 1×10^{-7} cm/sec.

Perched ground water is present at depths of 3 to 15 feet in sand lenses in the younger bay muds. The perched ground water may be contiguous with the San Francisco Bay. The Newark Aquifer is a confined aquifer in this area, and therefore is under high piezometric pressure. This results in an upward groundwater gradient.

Due to salt water intrusion, the western portion of the Newark aquifer is not of drinking water quality. The Alameda County Water District is developing a barrier to the salt water intrusion, attempting to improve the quality of the ground water north and east of the barrier and the landfill site, within 15 years. Ground water extraction wells along the Southern Pacific Railroad track (NNW of the landfill site) will be used to create the barrier by removing saline water and creating a freshwater flow gradient to the west (Attachment B). The impervious bay mud strata overlying the Newark Aquifer, and the high upward ground water gradient will prevent downward movement of shallow ground water or leachate. Mowry Slough, Albrae Slough and the Alameda County Flood Channel are within a quarter mile of the site.

9. The existing site meets the criteria contained in the California Administrative Code, Title 23, Chapter 3, Subchapter 15, for classification as a Class II-2 disposal site suitable to receive Group 2 and 3 wastes. Subsequent to the modifications necessary to comply with this order the site expansion area will meet the criteria for classification as a Class II-1 disposal site suitable to receive incinerator ash, a Group 1 waste, and Group 2 and 3 wastes.
10. The beneficial uses of Mowry Slough, Albrae Slough and San Francisco Bay are:

- Recreation
- Commercial and Sports Fishing
- Navigation
- Wildlife Habitat
- Preservation of Rare and Endangered Species
- Fish Migration
- Fish Spawning
- Estuarine enjoyment

11. The actual or projected beneficial uses of the Newark aquifer north and east of the site are:

- Municipal Water Supply
- Industrial Process Supply

12. The beneficial use of the Newark aquifer at the site location is:
Industrial Service Supply
13. Land within 1000 feet of the site to the south and west is a part of the San Francisco Bay National Wildlife Refuge; and to the southeast is used for salt evaporation ponds and railroad transportation; land to the north and east is open space.
14. The United States Army Corps of Engineers and the California Department of Fish and Game have found that the landfill expansion does not include wetland areas.
15. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin on July 21, 1982, and this Order implements the water quality objectives stated in that plan.
16. The Board has notified the discharger and interested agencies 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.
17. The City of Fremont has approved a final Environment Impact Report in accordance with the California Environmental Quality Act (Public Resources Code Section 2100 et. seq.). The project, as approved by the City of Fremont, could cause a significant effect on the environment in that the presence of a landfill and landfill activity may degrade water quality unless appropriate mitigation measures are taken. The Prohibitions, Specifications, and Provisions of this Order will mitigate or avoid this adverse impact.
18. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Oakland Scavenger Company and any other persons that shall own the land or operate this landfill shall comply with the following:

A. Prohibitions

1. The disposal of waste shall not cause pollution or a nuisance, as defined in Section 13050(m) of the California Water Code.
2. Group 1 wastes other than the incinerator ash from the proposed energy/resource recovery facility shall not be stored or deposited in the expansion area. Group 1 waste shall not be stored or deposited in the existing area.
3. Group 1 and Group 2 wastes shall not be placed in or allowed to contact ponded water from any source whatsoever, nor shall Group 1 or Group 2 waste be deposited in any position where they can be carried from the disposal site and discharged into waters of the State.

4. Liquid wastes or high moisture content waste shall not be discharged with Group 1 waste. Liquid wastes or high moisture content waste shall not be discharged with Group 2 waste, except with the written approval of the Executive Officer and only upon demonstration by the discharger that such acceptance will not cause or contribute to violations of these requirements.
5. The discharger shall remove and relocate any wastes which are discharged at this site in violation of these requirements.
6. Leachate from Group 1 or 2 waste or ponded water containing leachate shall not be discharged to waters of the State.
7. Surface waters or ground waters shall not be degraded as a result of the solid waste disposal operation.

B. Specifications

1. Disposal area(s) shall be protected from any washout or erosion of wastes or covering material, and from inundation, which could occur as a result of floods or tides having a predicted frequency of once in 100 years.
2. Surface drainage from tributary areas, and internal site drainage from surface or subsurface sources shall not contact or percolate through Group 1 or Group 2 wastes during disposal operations and for the active life of the site.
3. Vertical and lateral hydraulic continuity with ground or surface waters shall be prevented by the presence of a natural or artificial clay barrier surrounding the area which is keyed into impermeable substrata. The clay barrier surrounding the existing portion of the landfill shall be maintained. The clay barrier surrounding the expansion area shall have a lateral thickness of at least five (5) feet and a permeability of 1×10^{-6} cm/sec or less. If such a natural condition does not exist, an artificial barrier shall be constructed to meet the above specifications. All excavations shall leave in place a minimum five (5) foot layer of younger bay mud. The older bay muds shall not be disturbed.
4. 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 precipitation and to minimize infiltration of precipitation. In addition, all completed disposal areas shall be covered with a minimum of three feet of soil one foot of which is compacted to attain a permeability no greater than 1×10^{-6} cm/sec. A lesser thickness of final cover may be allowed by the Board upon demonstration that erosion control, percolation control, and coverage of refuse will not be adversely affected.
5. The migration of methane gas from Group 1 or Group 2 waste shall be controlled as necessary to prevent creation of a nuisance.

6. The landfill expansion area as shown in Attachment B, shall be designed, constructed and operated in accordance with the report entitled "Design Construction and Operating Provisions for Durham Road Sanitary Landfill" and dated August 1982.

C. Provisions

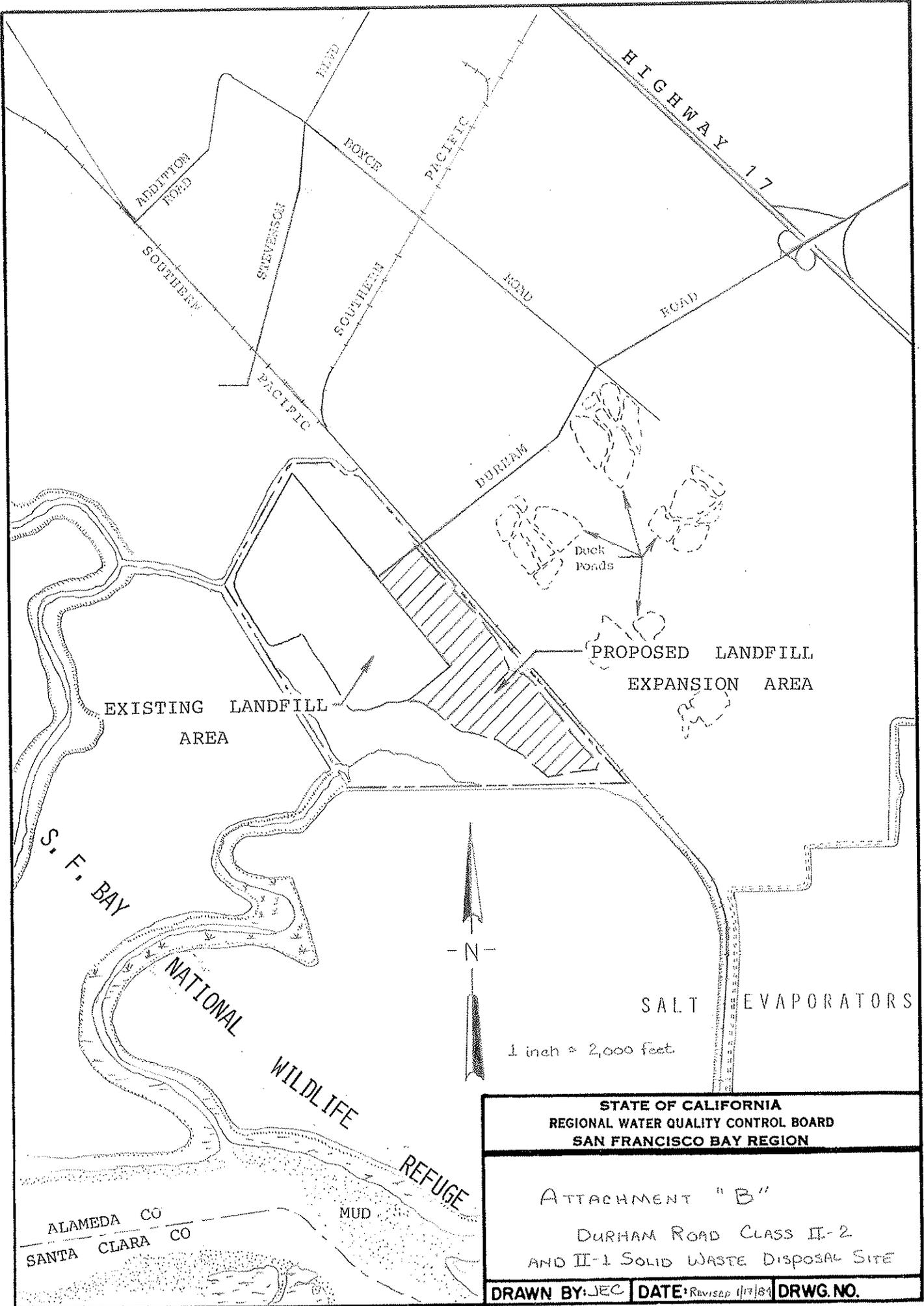
1. For the existing landfill area the discharger shall comply with all Prohibitions and Specifications of this Order except Specification B.5., immediately upon its adoption.
2. The discharger shall comply with all Prohibitions and Specifications of this Order, except Specification B.5., for the expansion area prior to the discharge of any waste into the area. At least ninety (90) days prior to the proposed commencement of waste discharge to the expansion area the discharger shall submit a report which: 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 least forty-five (45) days prior to the proposed commencement of waste discharge to the expansion area 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 filling of the expansion area may be granted by the Executive Officer.
3. The discharger shall comply with Specification B.5. by submitting a methane monitoring and control plan which shall be implemented if any buildings are constructed within 1,000 feet of the perimeter of the site. The monitoring and control plan shall be submitted for the existing area by July 1, 1984, and for the expansion area within 180 days after commencement of disposal activities in the expansion area.
4. Within 30 days after the completion of filling of any portions of the disposal areas, submit documentation that the exterior surfaces of these newly completed portions are covered and graded to properly drain all rainwater and to prevent ponding.
5. The discharger shall submit to the Board a revised site closure plan which includes the expansion area, and conforms to Resolution No. 77-7 established by the Regional Board. The plan shall clearly identify when filling will be completed in portions of the site as indicated by final grades and slopes. The revised plan for the existing area shall be submitted by July 1, 1984 and for the expansion area within 180 days after commencement of disposal activities in the expansion area.
6. Reports prepared pursuant to Provisions C.2., C.3., C.4., and C.5., shall be prepared under the supervision of and signed by a certified engineering geologist or a registered engineer.

7. Disposal of the incinerator ash shall be limited to the expansion area until the discharger has demonstrated to the satisfaction of the Board that the existing portion of the landfill meets the minimum criteria for a Class II-1 landfill, and that the disposal of the incinerator ash will not adversely effect water quality.
8. If a permit or operating authorization is denied or revoked by a local governmental agency, the Board will review this Order in the interest of protecting water quality.
9. The discharger shall maintain a copy of the Order at the site so as to be available at all times to site operating personnel.
10. 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, and any proposed change in the boundaries or ownership of the disposal area.
11. This Board considers the property owner to have a continuing responsibility for correcting any problems which may arise in the future as a result of this waste discharge or water applied in this property during subsequent use of the land for other purposes.
12. 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.
13. The discharger shall permit the Regional Board; or its authorized representatives in accordance with California Water Code Section 13267(c):
 - 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.
14. Order No. 79-21 is 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 18 January 1984.

ROGER B. JAMES
Executive Officer

Enclosure:
Attachment A and B



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

ATTACHMENT "B"

DURHAM ROAD CLASS II-2
 AND II-1 SOLID WASTE DISPOSAL SITE

DRAWN BY: JEC DATE: REVISION 1/17/84 DRWG. NO.