

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 78-11

CITY OF MOUNTAIN VIEW
SHORELINE REGIONAL PARK
CLASS II-2 SOLID WASTE DISPOSAL SITE
SANTA CLARA COUNTY

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

1. The City of Mountain View (hereinafter the discharger) currently disposes of group 2 and 3 wastes at a site which it owns located within city limits between Charleston Slough and Stevens Creek, as shown in Attachment A which is incorporated herein and made part of this Order.
2. The existing sanitary landfill consists of 293 acres out of the total 544 acre site. The entire site is gradually being converted into shoreline Regional Park. The Park area is largely low-lying flood plain which is being raised from the flood zone using municipal refuse (group 2 and 3 wastes) generated by the Cities of San Francisco and Mountain View. The discharger proposes to expand the existing 544 acre site to a total of about 700 acres as shown in Attachment A.
3. The site is underlain by a series of poorly-cemented conglomerates, sandstones, siltstones, and claystones. There are no active faults crossing the site. The San Andreas Fault lies about nine miles to southwest of the site and the San Jose Fault lies about one-half mile northwest of the site. Three water-bearing zones, perched, shallow and deep, underlie the site. The perched groundwater, which exists at depths of four to 20 feet, is of poor quality. Shallow water pockets exist at a depth of from 20 to 80 feet below the ground surface and the water quality varies with location. The deep useable ground water table is protected by a massive clay layer extending from 60 to 100 feet below the ground surface. No hydraulic continuity exists between the shallow and deep water tables.
4. The beneficial uses of Stevens Creek, Charleston Slough and San Francisco Bay are:
 - a. Habitat and resting for waterfowl
 - b. Fish habitat
 - c. Recreation
 - d. Esthetic enjoyment
5. The Board adopted a Water Quality Control Plan for the San Francisco Bay Basin in April 1975 and this Order implements the water quality objectives stated in that Plan.

6. This disposal site 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 as a Class II-2 Disposal Site suitable to receive Group 2 and Group 3 wastes.
7. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this site.
8. The Board in a public meeting heard and considered all comments pertaining to the site.
9. The City of Mountain View has prepared a final Environmental Impact Report for a 150 acre expansion of the Shoreline Park Solid Waste Disposal Site, in accordance with the California Environmental Quality Act (Public Resources Code, Section 21000 et. seq.) and the State Guidelines.
10. The project as approved by the City of Mountain View will have the following minor adverse effects on the environment.
 - a. Geology and soil - seismic hazard could cause cracking of sealant and escape of leachate
 - b. Hydrology and flooding - Potential flooding on adjacent lands
 - c. Land use - displacement of households and business establishments.
 - d. Water Quality - Potential pollution of ground water and surface water.
11. The following changes in the project mitigate the above described minor effects:
 - a. For geology and soil - The City will perform a seismic study for design of landfill cells.
 - b. For hydrology and flooding - construction of earthen channel and raising of the levee.
 - c. For land use - Provide relocation assistance.
 - d. For water quality - compliance with the specifications of this Order.

IT IS HEREBY ORDERED, that the City of Mountain View and any other person(s) that operates this site shall comply with the following:

A. Waste Disposal Specifications

1. The disposal of waste shall not cause pollution or a nuisance.
2. The waste shall not be disposed of at any position where it can be carried from the disposal site and discharged into waters of the State.
3. Group 2 wastes shall not be placed in or allowed to contact ponded water from any source whatsoever.
4. Group 1 wastes shall not be stored or deposited at this site.
5. The discharger shall remove and relocate any wastes which are discharged at this site in violation of these requirements.

B. Leachate and Drainage Specifications

1. Leachate from Group 2 wastes and ponded water containing leachate or in contact with refuse shall not be discharged to waters of the State.
2. Water used during disposal site operation shall be limited to a minimal amount reasonably necessary for dust control and fire suppression.
3. 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 floods having a predicted frequency of one in 100 years.
4. Vertical and lateral hydraulic continuity with usable ground waters shall be prevented by the presence of a soil barrier above the groundwater at least five feet in thickness with the top eighteen inches of soil to be compacted to ninety percent compaction or attain a permeability of 1×10^{-6} cm/sec or less.
5. Surface drainage from tributary areas, and internal site drainage from surface or subsurface sources shall not contact or percolate through group 2 wastes during the disposal operation and for the active life of the site. The perimeter drainage ditches and all other facilities shall be designed to convey the maximum anticipated rainfall runoff, and withstand differential settlement. These facilities shall be constructed over a natural ground or through lined channel or pipes.
6. Leachate volumes contained by liquid control barriers or ponds shall be maintained below a volume equal to 75 percent of the total liquid storage capacity of the barrier.
7. All abandoned wells located within the disposal area shall be sealed to the satisfaction of the California Department of Water Resources and the County Department of Public Health prior to discharging Group 2 wastes within 100 feet of any such wells.

8. The migration of methane gas from the landfill area shall be controlled as necessary to prevent the creation of a nuisance.
9. Useable groundwaters shall not be degraded as a result of the solid waste disposal operation.
10. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
 - b. Bottom deposits or aquatic growths;
 - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended or deposited oil or other products of petroleum origin;
 - e. Dissolved sulfide shall not be above natural background levels.

C. Provisions

1. For the existing disposal area, the discharger shall comply with all portions of this Order except specification B.3 immediately upon adoption.
2. For the existing disposal area, the discharger shall comply with the following time schedule to assure compliance with Specification B.3:

<u>Task</u>	<u>Report of Compliance Due</u>
Status of compliance	May 1, 1978
If compliance is not achieved, submit conceptual plan	September 1, 1978
Progress Report	March 1, 1979
Full Compliance	December 31, 1979

3. The use of the additional 150 acre area outside of the existing active disposal area shall not commence without the written approval of the Executive Officer. This approval shall be based on a demonstration that the area will comply with all applicable specifications of this Order.
4. All plans and technical reports described in Provisions C.2 and C.3 above shall be prepared by a certified engineering geologist or a registered engineer.

5. The discharger shall maintain a copy of the Order at the site or office so as to be available at all times to site operating personnel.
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.
7. The discharger shall submit a site closure plan to the Board which shall conform to Resolution No. 77-7 established by the Regional Board. The site closure plan shall be prepared by or under the supervision of a registered engineer or a certified engineering geologist and shall be submitted no later than January 1, 1979.
8. 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 to this property during subsequent use of the land for other purposes.
9. 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.
10. The discharger shall permit the Regional Board:
 - (a) Entry upon premises on which waste 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. This Board's Order No. 70-67 and Order No. 71-50 are hereby rescinded.

I Fred H. Dierker, Executive Officer, do hereby certify that 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 21, 1978.

FRED H. DIERKER
Executive Officer

Attachments:

- A - Map
- Resolution No. 77-7

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

RESOLUTION NO. 17-1

MINIMUM CRITERIA FOR PROPER CLOSURE OF
CLASS II SOLID WASTE DISPOSAL SITES

- I. WHEREAS, experience has shown that Class II solid waste disposal sites can be sources of various water pollution problems even after their use has been terminated, unless properly closed, and
- II. WHEREAS, these problems may include: odors, discharge of leachate, exposed refuse due to inadequate cover, and pooling of surface-polluted water on the site, and
- III. WHEREAS, Section 2525 of the California Administrative Code provides as follows:

Completion of Disposal Operations. (a) Prior to cessation of disposal operations at a waste disposal site, the operator shall submit a technical report to the appropriate regional board describing the methods and controls to be used to assure protection of the quality of surface and groundwater of the area during final operations and with any proposed subsequent use of the land. This report shall be prepared by or under the supervision of a registered engineer or a certified engineering geologist.

(b) The methods used to close a site and assure continuous protection of the quality of surface and groundwater shall comply with waste discharge requirements established by the regional board.

(c) The owner of the waste disposal site shall have a continuing responsibility to assure protection of usable waters from the waste discharge, and from gases and leachate that are caused by infiltration of precipitation or drainage waters into the waste disposal areas or by infiltration of water applied to the waste disposal areas during subsequent use of the property for other purposes, and

- IV. WHEREAS, the establishment of minimum criteria for proper closure of Class II solid waste disposal sites is desirable to protect the quality of waters of the State and to alert site owners and operators as to their specific responsibilities, and

- V. WHEREAS, pursuant to Section 15104 of the California Environmental Quality Act Guidelines, this Resolution applies to minor alterations to land which do not have significant adverse effects on the environment and is therefore exempt from the provisions of the Act.
- VI. THEREFORE BE IT RESOLVED that this Regional Board establishes the following minimum criteria for proper closure and subsequent maintenance of Class II solid waste disposal site:
1. All completed disposal areas shall be compacted and provided with a final cover of at least three feet of clean soil. A lesser thickness of final cover may be allowed upon a demonstration that, due to thorough compaction of refuse or other factors, differential settlement is likely to be minimal. At least one foot of the final cover shall be compacted to attain a permeability no greater than 10^{-6} cm/sec. Exceptions to this requirement may be granted upon a demonstration that equivalent protection against water penetration may be provided by other means.
 2. Completed disposal areas shall be graded and maintained to prevent ponding and to provide slopes of at least three percent. Lesser slopes may be allowed if a sewer system or other equivalent means of carrying off surface drainage is provided. Steep areas, surface drainage courses, or other areas subject to erosion shall be provided with a lining, or planted with vegetation, or otherwise designed to prevent such erosion.
 3. Slopes shall be designed to minimize the potential for sliding by control of grades, drainage, or other means. Any slides observed within the disposal area shall be promptly stabilized, and the Executive Officer shall be notified immediately upon discovery of a slide.
 4. All necessary facilities shall be provided to ensure that leachate from group 2 waste and ponded water containing leachate or in contact with refuse is not discharged to surface waters of the State.
 5. The disposal area(s) shall be protected from any washout or erosion and from inundation, which could occur as a result of tides or of floods having a predicted frequency of once in 100 years.
 6. All necessary facilities shall be provided to protect usable groundwaters from degradation as a result of leachate discharges or carbon dioxide migration.
 7. The migration of methane gas from group 2 waste shall be controlled as necessary to prevent creation of a nuisance.

VII. BE IT FURTHER RESOLVED that this Board's Executive Officer will request that closure plans be submitted by operators of all Class II sites at the earliest practicable date. Closure plans will be approved by this Board by inclusion in waste discharge requirements. The Board will amend closure plans as necessary to provide for conformance with the above minimum criteria. Site closure plans shall include the following:

- a. The boundaries of areas used for waste disposal.
- b. Method of control of surface drainage flow from the site.
- c. Evaluation of the anticipated settlement due to decomposition and consolidation of the wastes.
- d. Thickness of cover and physical properties including permeability, expansion characteristics and erodibility.
- e. Relationship of waste disposal area to underlying ground-water quality.
- f. Location of groundwater monitoring points.
- g. Method for control of methane.
- h. Proposed subsequent use of the land.

VIII. BE IT FURTHER RESOLVED that this Board will normally require implementation of the site closure plan as rapidly as possible after completion of group 2 waste disposal operations at a site or portion thereof. The Board may authorize delays of specified duration in meeting final slope requirements pending determination of subsequent land use, provided interim measures are taken to protect water quality.

IX. BE IT FURTHER RESOLVED that it is the intention of this Board to take all measures practicable to ensure that subsequent owners of sites are made aware of site closure requirements.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on July 19, 1977.

FRED H. DIERKER
Executive Officer