

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 87-152

UPDATED REQUIREMENTS FOR:

INTERNATIONAL DISPOSAL CORPORATION OF CALIFORNIA  
BROWNING-FERRIS INDUSTRIES  
NEWBY ISLAND CLASS III LANDFILL  
SAN JOSE, SANTA CLARA COUNTY

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

1. International Disposal Corporation of California and Browning-Ferris Industries, the site legal owners and the landfill operators, (hereinafter referred to collectively as the discharger) by application dated July 1, 1987 has applied for revision of their current Waste Discharge Requirements (WDR), for the continued operation of the Newby Island Class III landfill on 342 acres in north San Jose in Santa Clara County. The project site, as shown on Attachment A, which is incorporated herein and made a part of this Order, is located at the western end of Dixon Landing Road in North San Jose, Santa Clara County.
2. The landfill will eventually occupy, including both fill Areas 1 and 2, approximately 342 acres. The project has an approximate remaining lifetime of 29 years, at a disposal rate of approximately 4000 tons of refuse and construction debris per day. There is currently approximately 17.2 million cubic yards of refuse in place with an overall site design capacity of 43.7 million cubic yards.
3. Newby Island was reclaimed from tidal marshland and South San Francisco Bay in the late 1800's by construction of a perimeter dike system. The island was in agricultural use as orchard and pasture land until filling commenced in 1930. The portions of the site not used for disposal operations continued to be used for pasture until 1972. The site was operated as an open burning dump until 1956, at which time the operation was converted to a modified sanitary landfill. Some of the perimeter levees of Area 2 (See Attachment A) have had waste disposed of inboard of the levee and cannery wastes have been disced in Area 2 prior to the 1970's.
4. On April 15, 1975 the Board adopted Order No. 75-22 for the entire landfill; that included both Area 1 and Area 2 as shown on the attached site map. Since Area 2 had not been filled to an elevation that would prevent the ponding of water and the establishment of wetland vegetation, and because Area 2 contained waters of the State as defined by the Clean Water Act and the California Water Code, the Board adopted Order No. 82-41, amending Order No. 75-22, on June 16, 1982 which found that all or portions of Area 2 were waters of the United States and wetlands and prohibited filling in Area 2 until the discharger provided appropriate mitigation.

5. On December 15, 1982 the Board adopted Order Nos. 82-63 (an NPDES Permit) and 82-64 prescribing waste discharge requirements for the entire landfill. Order No. 82-63 allowed the filling of the waters of the State contained in Area 2 based upon mitigation acceptable to the Board and compliance with the requirements of Order No. 82-64 regarding the construction and operation of the landfill. Order No. 82-41 was rescinded by Order No. 82-64. There is no longer a viable wetland habitat within Area 2 which has been drained of standing water and has had the wetland vegetation removed according to the site development plan previously approved by the Board. Therefore, the Board finds that the site no longer contains waters of the United States and does not require reissuance of the NPDES permit, this Board's Order No. 82-63.
6. The discharger proposes to accept at this landfill for disposal approximately 4000 tons per day of residential and commercial nonhazardous refuse. No liquid wastes (i.e. less than 50% solids) will be disposed of at this site.
7. The Newby Island Landfill is located within the Coast Range geomorphic province at the northern extent of the Santa Clara Valley and the southern portion of San Francisco Bay. Coyote Creek borders the site on the east and north sides and Mud Slough borders the site on the south and west sides. The sediments underlying the site are relatively thin sequences of alluvium composed of predominately clay, silty clay, and minor amounts of sandy clay. The blue grey clay (i.e. young Bay Mud) underlying the site extends to a depth of 20 to 30 feet below Mean Sea Level (MSL). Underlying the young bay is a complex, interbedded sequence of old bay mud and fine grained alluvium to a depth of approximately 200 feet below MSL. The laboratory permeability of the younger and older Bay Mud ranges from approximately  $1 \times 10^{-8}$  cm/sec. to  $1 \times 10^{-6}$  cm/sec and the in-situ permeability of these soils ranges from  $1 \times 10^{-7}$  cm/sec to  $1 \times 10^{-6}$  cm/sec.
8. Newby Island is located approximately 5 and 10 miles southwest of the Hayward and Calaveras faults, respectively, and 15 miles east of the San Andreas fault. The site is not located on a known Holocene fault and therefore meets the siting criteria contained in Section 2533(d) of Subchapter 15. Although the site is not shown to be in a flood plain on the Federal Insurance Administration flood map it is likely that the site is in a flood plain. However, the site is protected by a 14 foot high perimeter levee that protected the site during the 1982 (100 year event) winter storm which caused extensive flooding in the surrounding area. Therefore, the site meets the flood protection criteria for Class III landfills contained in Subchapter 15.

9. Groundwater occurs at the site in two different portions of the alluvial deposits that underly the site. The first zone of groundwater occurs in the younger bay muds and the perched lenses of silty sand within the young bay mud. This perched groundwater exists from just below the natural ground surface to a depth of approximately 85 feet. This groundwater is of brackish quality and is not a useable water supply. This first encountered groundwater occurs due to rainwater infiltration and recharge from Coyote Creek and Mud Slough. Due to the low permeability of the young bay muds, and the limited extent of the perched silty sand lenses within the young bay mud, the first encountered groundwater is of limited quantity and moves very slowly. The perched lenses of silty sand material in the young bay mud, as well as the slow movement of groundwater within the young bay muds, provide a limited connection between the groundwater beneath the site and the surrounding groundwater and with Coyote Creek and Mud Slough.
10. The second occurrence of groundwater beneath the site occurs at a depth of approximately 85 feet below the natural ground surface and extends to a depth exceeding 200 feet below the ground surface. This groundwater occurs in the more permeable silty sand, sand, and gravel alluvial deposits beneath the younger bay muds and within the older bay muds. Below a depth of approximately 85 feet the alluvial deposits beneath the site contain significant quantities of coarser grained materials that form an aquifer.
11. Due to the shallow first encountered groundwater beneath the site the site does not meet the siting criteria contained in Section 2530(c) of Subchapter 15 that requires all new landfills to be sited where there is a minimum of five feet between the wastes and the underlying groundwater. Area 2 of the landfill is considered an expansion of the disposal site and must be sited to meet the requirements of Section 2530(c). Area 1 of the site is an existing landfill and must be operated, according to Section 2530(c), to ensure that there is a minimum of five feet between the wastes and the underlying groundwater.

12. Since it would be extremely costly to remove the wastes in Area 1 and install a Leachate Collection and Removal System (LCRS) beneath the wastes, or to provide a five foot separation between the wastes and the shallow perched groundwater in both Area 1 and 2, the discharger has applied for an exception to the siting requirement of Section 2530(c) pursuant to Section 2510(b) of Subchapter 15 for both Areas 1 and 2. The discharger proposes to excavate Area 2 to a depth of 40 feet below mean sea level and install a blanket type LCRS over the entire Area 2. This engineered alternative to the five foot separation criteria is designed to drain and collect the leachate in both Areas 1 and 2 and to drain the perched shallow groundwater beneath Area 1. The design of this LCRS and the requirements of this Order will ensure that any leachate from the landfill, and any perched shallow groundwater beneath Area 1 that has become polluted, will not migrate into the surrounding surface waters or into the deeper useable groundwater. Therefore, the Board finds that it is infeasible to meet the siting requirements of Section 2530(c) of Subchapter 15 for Area 1 because it is economically infeasible to remove all the wastes already in place. The Board also finds that it is infeasible to meet the requirements of Section 2530(c) for Area 2 because the costs of the continued operation and the closure of the landfill would be unnecessarily burdensome and cost substantially more, because of the substantial costs of obtaining cover material from an off-site source, than compliance with this requirement. The Board finds that the proposed engineered alternative, Pursuant to Section 2510(b) of Subchapter 15, and compliance with the requirements of this Order will ensure the protection of the beneficial uses of the waters of the State.
13. Background water quality levels, in the two water bearing zones beneath the site, for the purpose of establishing Water Quality Protection Standards (WQPS), have not been determined according to the requirements of Subchapter 15. Compliance with this Order will provide for the establishment of WQPS according to the requirements of Subchapter 15 within one year after adoption of this Order.
14. Groundwater wells within a mile of the site are found only in the deeper groundwater aquifer at depths greater than 100 feet. These wells are used for industrial and domestic supply.
15. The beneficial use of the shallow perched groundwater found in the surficial alluvial deposits beneath the site, (Elevation MSL to -20 feet below MSL) is to recharge the surface waters surrounding the site and the deeper groundwater. 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
  - h. Fish migration and spawning

The present and potential beneficial uses of the deeper groundwater (below elevation -85 feet below MSL) are as follows:

- a. Domestic and municipal water supply
  - b. Industrial process supply
  - c. Industrial service supply
  - d. Agricultural supply
16. The discharger submitted, as a part of their Report of Waste Discharge, the following reports prepared by Purcell, Rhoades & Associates: 1) "Final Engineering Report in Conjunction with the Five Year Permit Review," December 19, 1985, 2) "Report of Waste Discharge," February 28, 1986, 3) "Response to Comments on the Report of Waste Discharge," July 1, 1987, and 4) the untitled September 2, and September 22, 1987 letter reports. The above cited reports, as modified by the requirements of this Order, propose to construct and operate the landfill in accordance with the requirements of Subchapter 15 and are hereby incorporated as a part of this Order.
  17. The Regional Board adopted a revised Water Quality Plan for the San Francisco Bay Basin on December 17, 1986 and this Order implements the water quality objectives stated in that plan.
  18. This project constitutes a minor modification to land for the continued operation of an existing landfill, with changes to meet public health and safety standards, and is therefore categorically exempt from the provisions of the California Environmental Quality Control Act (CEQA) pursuant to Section 15301 of the Resources Agency Guidelines.
  19. 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 to submit their written views and recommendations.
  20. The Board in a public meeting heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that International Disposal Corporation of California and Browning Ferris Industries, and any other persons that currently or in the future own this land or operate this facility, shall meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and shall also comply with the following:

A. PROHIBITIONS

1. The disposal of waste shall not create a pollution or nuisance as defined in Section 13050(1) of the California Water Code.
2. Wastes shall not be placed in or allowed to contact ponded water from any source whatsoever.
3. Wastes shall not be disposed of in any position where they can be carried from the disposal site and discharger into waters of the State or of the United States.

4. Hazardous and designated wastes as defined in Sections 2521 and 2522 of Subchapter 15, and high moisture content wastes, with the exception of leachate and methane gas condensate generated at the site, but including sewage sludge, septic tank waste, cannery waste, restaurant grease, and wastes containing less than 50% solids, shall not be deposited or stored at this site.
5. The discharger, or any future owner or operator of this 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
    1. Floating, suspended, or deposited macroscopic particulate matter or foam.
    2. Bottom deposits or aquatic growth.
    3. Alteration of temperature, turbidity, or apparent color beyond natural background levels.
    4. Visible, floating, suspended or deposited oil or other products of petroleum origin.
    5. 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
    1. The groundwater shall not be degraded as a result of the waste disposal operation.
6. 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.

B. SPECIFICATIONS

1. Water used during disposal 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 event.

3. Surface drainage from tributary areas, and internal site drainage from surface and subsurface sources, shall not contact or percolate through wastes during disposal operations or during the life of the site. Drainage ditches constructed over refuse fill will be underlain with a minimum 5-foot thickness of compacted earthfill. Surface drainage ditches shall be constructed to ensure that all rainwater is diverted off-site and does not contact wastes, leachate, and water extracted from the subexcavation in Area 2.
4. Permanent leachate control facilities shall be constructed according to the proposed design for the blanket type LCRS in Area 2 and leachate risers shall be installed in Area 1 as shown on Attachment A. Measures shall be taken to ensure that leachate in the leachate collection system can flow freely into the collection sump. Measures shall also be taken to assure that leachate collection sumps and extraction wells will remain operational permanently.
5. The leachate monitoring and control system, that includes both the blanket LCRS in Area 2 and leachate risers in Area 1, shall be maintained and operated to prevent the build-up of hydraulic head on the bottom of the landfill as well as the toe of the landfill. This system shall be inspected weekly, and any accumulated fluid shall be removed.
6. A geologic map of the base and sides of the excavation in Area 2 shall be continuously updated as excavation proceeds. All fracture zones and cracks and areas where there is not a 5 foot separation with a material that has a permeability of less than  $10^{-6}$  cm/sec between groundwater and the bottom of the excavation, which might allow leachate to migrate into the underlying groundwater or surface waters shall be clearly marked. Any of these areas which require artificial sealing shall be sealed with a minimum of a 5 foot barrier of earth clay fill liner, or other liner material acceptable to the Executive Officer, that has an in place permeability of less than  $10^{-6}$  cm/sec.
7. The discharger shall ensure that the foundation of the site, the levees surrounding 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.
8. As portions of the 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 4 feet of cover and meet other applicable requirements as described in Article 8 of Subchapter 15.

9. The discharger shall operate the waste management facility so as not to cause a statistically significant difference to exist between water quality at the compliance points and the following Water Quality Protection Standards. The compliance points are identified as monitoring wells MW-1 thru MW-10 and the Eastside and Westside Shallow and Deep Wells. The background monitoring well is MW-11. The discharger shall establish these WQPS according to the requirements of this Order and Article 5 of Subchapter 15 within one year of adoption of this Order.
  - a. pH=
  - b. Specific Conductivity=
  - c. Chloride=
  - d. Total Organic Carbon=
  - e. Nitrate Nitrogen=
  - f. Total Kjeldahl Nitrogen=
  - g. Total Phenol=
  - h. Total Dissolved Solids=
  - i. Arsenic=
  - j. Total Chromium=
  - k. Copper=
  - l. Nickel=
  - m. Zinc=
  - n. Lead=
10. The discharger shall install any additional groundwater and leachate monitoring devices required to fulfill the terms of any Self-Monitoring Program issued to the discharger in order that the Board may evaluate compliance with the conditions of this Order.

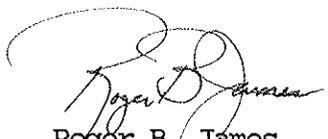
C. PROVISIONS

1. The discharger shall comply with all Prohibitions, Specifications, and Provisions of this Order immediately upon adoption of this Order. The discharger shall construct and operate the landfill according to the design plans cited in Finding No. 16 of this Order. At least 30 days 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 and certification. Filling of the area described in the report shall not commence until the Executive Officer approves this report based on its demonstration of compliance with this Order.
2. The discharger shall submit a more detailed design of the surface drainage system for the site by March 1, 1988. This redesign shall ensure that all runoff is diverted off site and does not contact wastes, leachate, and water from the subexcavation in Area 2 and to prevent the ponding of water anywhere on the site. The stormwater runoff pond in Area 2 should be eliminated to minimize infiltration of water into Area 2.

3. The discharger shall submit a more detailed leachate management plan by July 1, 1988. This plan should evaluate the quantity of leachate produced, the storage of the leachate, and the ultimate disposal of the leachate. The plan should provide more details of the leachate storage facilities on site and a more thorough evaluation of leachate disposal if the recycling of leachate into the landfill becomes infeasible and during the post closure maintenance of the site. This management plan should also provide for an annual evaluation of the leachate generated at the site and determine if recirculation of leachate into the landfill is still feasible based upon a demonstration that the quantity of leachate being recirculated will not exceed a solid to liquid disposal ratio of at least 5:1 using a moisture content of the solid waste of at least 30%.
4. The discharger shall submit, by December 1, 1988, a report on the groundwater quality at the site that proposes Water Quality Protection Standards for the constituents listed in Specification B.9 of this Order according to the requirements of Article 5 of Subchapter 15. If it is determined that the statistical comparison requirements of Article 5 are infeasible the report should include a proposal, pursuant to Section 2510(b) of Subchapter 15, for an alternative comparison procedure.
5. The discharger shall file with the Regional Board quarterly self-monitoring reports performed according to any self-monitoring program issued by the Executive Officer.
6. The discharger shall periodically submit an updated geologic map as described in Specification B.6. The discharger shall evaluate each area of the landfill, to determine the separation between wastes and underlying groundwater, the permeability and thickness of the soils separating wastes from groundwater, the location of any sand lenses or more permeable soils, that may act as migratory pathways for leachate, and recommend one of the following: 1) The potential for leachate migration is small and no further action is necessary, or 2) significant leachate migration appears likely and therefore an artificial seal should be placed over the disposal area and unsaturated zone monitoring devices installed beneath the liner to monitor the leachate migration. If the discharger recommends 2) no refuse shall be placed on the newly mapped excavation until the recommendation has been reviewed and written authorization to proceed has been granted by the Executive Officer. If the discharger recommends 1), no refuse shall be placed on the newly mapped excavation until the map and the recommendation and the as built construction certification report pursuant to Provision C.1, have been in the possession of the Regional Board staff for at least 30 working days. The Executive Officer, may, at his discretion, extend this period of review by so informing the discharger. The Executive Officer's authorization shall be based on the discharger's demonstration that there will not be leachate migration into the underlying groundwater.

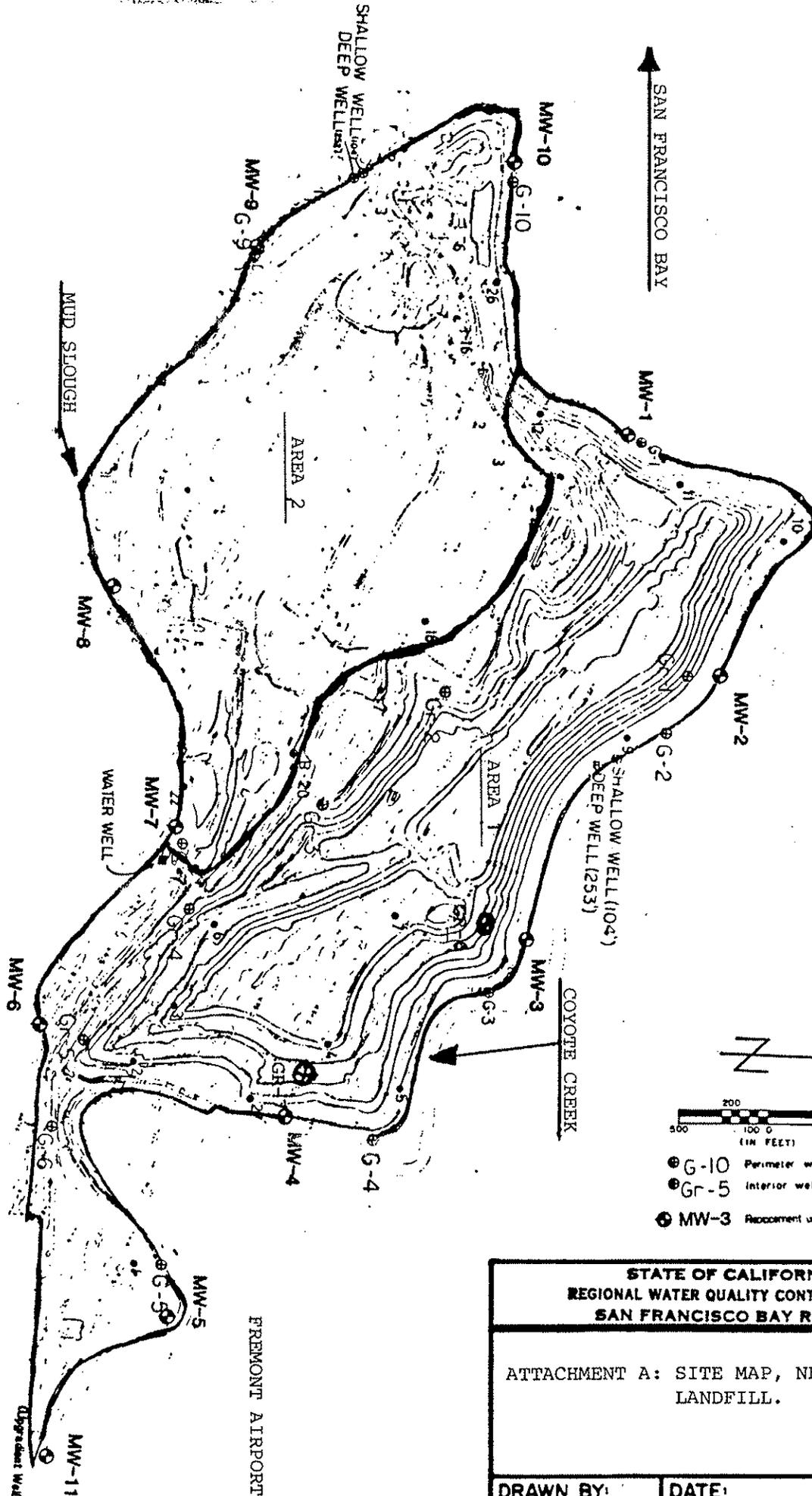
7. All reports pursuant to these Provisions shall be prepared under the supervision of a registered civil engineer or certified engineering geologist.
8. The discharger shall remove and relocate any wastes which are discharged at this site in violation of these requirements.
9. The discharger shall file 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 of the disposal areas or the ownership of the site.
10. The discharger shall maintain a copy of this Order at the site so as to be available at all time to site operating personnel.
11. This Board considers the property owner and site operator to have continuing responsibility for correcting any problems which arise in the future as a result of this waste discharge or related operations.
12. The discharger shall maintain all devices or designed features installed in accordance with this Order such that they continue to operate as intended without interruption except as a result of failures which could not have been reasonably foreseen or prevented by the discharger.
13. The discharger shall permit the Regional Board or its authorized representative, upon presentation of credentials:
  - a. Entry upon the 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 the terms and conditions of this Order.
  - c. Inspection of any treatment equipment, monitoring equipment, or monitoring method required by this Order.
  - d. Sampling of any discharge or groundwater covered by this Order.
14. This Board's Order Nos. 75-22 and 82-64 are hereby rescinded.
15. 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.

I, Roger B. James, 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 November 18, 1987.



Roger B. James  
Executive Officer

Attachments: A) Site map  
B) Self Monitoring Program



SAN FRANCISCO BAY



- ⊙ G-10 Perimeter wells
- ⊙ Gr-5 Interior wells
- ⊙ MW-3 Replacement Ground Water Monitoring Wells

<b>STATE OF CALIFORNIA</b> <b>REGIONAL WATER QUALITY CONTROL BOARD</b> <b>SAN FRANCISCO BAY REGION</b>		
ATTACHMENT A: SITE MAP, NEWBY ISLAND LANDFILL.		
DRAWN BY:	DATE:	DRWG. NO.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

INTERNATIONAL DISPOSAL CORPORATION AND  
BROWNING-FERRIS INDUSTRIES  
NEWBY ISLAND CLASS III SOLID WASTE DISPOSAL SITE

PART A

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 Self-Monitoring Program is issued in accordance with Section C.5 of Regional Board Order No. 87-152.

The principal purposes of a self-monitoring program by a waste discharger 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 effluent standards of performance, pretreatment and toxicity standards, and other standards, and (4) to prepare water and wastewater quality inventories.

B. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to most recent version of Standard Methods for the Analysis of Wastewater.

Water and waste analysis shall be performed by a laboratory approved for these analyses by the State Department of Health. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her 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. A grab sample is a discrete sample collected at any time.
2. Receiving waters(s) refers to any water which actually or potentially receives surface or groundwaters which pass over, through, or under waste materials or contaminated soils. In this case the groundwater beneath and adjacent to the landfill, Coyote Creek, and Mud Slough are considered the receiving waters.
3. Standard observations refer to:
  - a. Receiving Waters
    - 1) Discoloration and turbidity: description of color, source, and size of affected area.
    - 2) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.
    - 3) Evidence of beneficial use: presence of water associated wildlife.
    - 4) Flow rate.
    - 5) 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 and/or daylighted refuse.

4. Standard analysis and measurements refer to:

- a. pH
- b. Electrical Conductivity (EC)
- c. Total Dissolved Solids (TDS)
- d. Total Phenols
- e. Chloride
- f. Total Organic Carbon
- g. Nitrate Nitrogen
- h. Total Kjeldahl Nitrogen.
- i. Water elevation in feet above Mean Sea Level.
- j. EPA Method 601, identifying all peaks greater than 1 microgram/liter.
- k. Settleable Solids ml/l/hr
- l. Arsenic
- m. Total Chromium
- n. Copper
- o. Nickel
- p. Zinc
- q. Lead

D. SCHEDULE OF SAMPLING, ANALYSIS, AND OBSERVATIONS

The discharger is required to perform sampling, analysis, and observations according to the schedule specified in Part B, and the requirements of Article 5 of Subchapter 15.

E. RECORDS TO BE MAINTAINED

Written reports shall be maintained by the discharger, and shall be retained for a minimum of three 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. 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. A reference to a specific section of a reference required in Part A Section B is satisfactory.
5. Calculation of results.
6. Results of analyses, and detection limits for each analyses.

F. REPORTS TO BE FILED WITH THE REGIONAL BOARD

1. Written self-monitoring reports shall be filed each calendar quarter by the fifteenth day of the following month. In addition an annual report shall be filed as indicated in F.2 The reports shall be comprised of the following:

- a. Letter of Transmittal

A letter transmitting the essential points in each self-monitoring report should accompany each report. Such a letter shall include a discussion of any requirement violations found during the past quarter and actions taken or planned for correcting the violations, such as operation modifications and/or 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. If no violations have occurred in the last quarter this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting reports shall be signed by a principal executive officer at the level of vicepresident 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 report shall include a compliance evaluation summary sheet. This sheet shall contain:

1. The sample mean and the sample variance for all sample sets taken from all compliance points, and shall determine if the difference between the mean of each sample set and the water quality protection standard is significant at the 0.05 level using Cochran's Approximation to the Behrens-Fisher Student's t-testas described in Appendix II of Subchapter 15. The discharger may propose an alternative statistical procedure to be used in making this determination pursuant Section 2555(h)(3) of Subchapter 15. If a statistically significant difference is found this shall be reported as a suspected requirement violation in the letter of transmittal.

2. 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.

- c. A map or aerial photograph shall accompany each report showing observation and monitoring station locations.

- d. Laboratory statements of results of analyses specified in Part B must be included in each report. The laboratory director shall sign the laboratory statement of analytical results.
  - e. 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.
  - f. The quantity and types of wastes disposed of during the past quarter, and the locations of the disposal operations.
  - g. An evaluation of the effectiveness of the leachate monitoring/control facilities. This shall include an evaluation of compliance with Specification B.5 of Order No. 87-152.
2. By January 31 of each year the discharger shall submit an annual report to the Regional Board covering the previous calendar year. This report shall contain:
- a. Tabular and graphical summaries of the monitoring data obtained during the previous year.
  - b. 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.
  - c. A map showing the area, if any, in which filling has been completed during the previous calendar year.
  - d. A written summary of the groundwater analyses indicating any change in the quality of the groundwater.
  - e. An evaluation of the effectiveness of the leachate monitoring/control facilities. This shall include an evaluation of compliance with Specification B.5 of Order No. 87-152.
3. A well drilling log shall be submitted for each groundwater sampling and leachate monitoring well established per 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 30 days after well installation.

Part B

1. DESCRIPTION OF OBSERVATION STATIONS AND SCHEDULE OF OBSERVATIONS

A. Waste Monitoring

1. Record the total volume and weight of refuse in cubic yards and tons disposed of at the site during the month. Report this information quarterly.
2. Record the volume of fill completed, in cubic yards, showing locations and dimensions on a sketch or map. Report this information quarterly.

B. On-site Observations

STATION	DESCRIPTION	OBSERVATIONS	FREQUENCY
V-1 thru V-'n'	Located on the waste disposal area as delineated by a 500 foot grid network.	Standard observations for the waste management unit.	Weekly
P-1 thru P-'n' (perimeter)	Located at equidistant intervals not exceeding 1000 feet around the perimeter of the waste management unit.	Standard observations for the perimeter.	Weekly

A map showing visual and perimeter compliance points (V and P stations) shall be submitted by the discharger in the quarterly monitoring report.

C. Seepage Monitoring

STATION	DESCRIPTION	OBSERVATION	FREQUENCY
S-1 thru S-'n' (seepage)	At any point(s) at which seepage is found occurring from the waste management unit.	Standard observations for the perimeter, and standard analysis other than "i"	Daily until remedial action is taken and seepage ceases.

STATION	DESCRIPTION	OBSERVATION	FREQUENCY
CU-1 (receiving waters, upstream)	Located in Coyote Creek and Mud Slough 200 feet upstream from the upper-most point of seepage discharge(s)	Standard observation for receiving waters and standard analysis other than "i".	Daily, during a seepage event.
CD-1 thru CD-'n' (receiving waters down- stream)	Located in Coyote Creek and Mud Slough 200 feet downstream of seepage discharge(s).	Same as receiving waters upstream.	Daily during a seepage event.

D. Groundwater Monitoring

STATION	DESCRIPTION	OBSERVATION/ ANALYSIS	FREQUENCY
G-11	As shown on the attached site map.	Standard analysis other than "k".	Once per quarter.
(ground- water back- ground)			
G-1 thru G-10	As shown on the attached site map.	"	"
"Shallow and Deep wells on the east and west sides of the waste manage- ment unit.	"	Standard measurement "j"	"

#### E. Leachate Monitoring

STATION	DESCRIPTION	OBSERVATION	FREQUENCY
GR-1 thru GR-'n'	Leachate control facilities including sumps and wells to be installed. (As shown on the attached site map)	Depth of leachate built up at base of land-fill, and volume removed. Elevation of leachate above Mean Sea Level.	Once per week and at time of removal.

#### F. Surface Runoff Monitoring

STATION	DESCRIPTION	OBSERVATION/ ANALYSIS	FREQUENCY
SR-1 thru SR-'n'	At any point where runoff is discharged from the site.	Standard observations for receiving waters and perimeter and standard analysis other than "b, d, e, i, and j".	Once per quarter.

### 2. CONTINGENCY REPORTING

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 this Board within five days. This report shall contain the following information: 1) a map showing the location(s) of discharge, 2) approximate flow rate, 3) nature of effects; i.e. all pertinent observations and analyses, and 4) corrective measures underway or proposed.

### 3. CONTINGENCY MONITORING

A. Methane gas monitoring probes shall be installed at the site boundary nearest any structure that is constructed within 1000 feet of the Waste Management Facility. These probes shall be monitored at least once per quarter and more frequently as determined at the time of installation, and results of such monitoring reported in the quarterly self-monitoring reports.

