

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 88-019

Updated Waste Discharge Requirements For:

AMLOC COMPANIES, INCORPORATED,
CYPRESS ABBEY COMPANY AND
HILLSIDE LANDFILL COMPANY
HILLSIDE CLASS III DISPOSAL SITE
COLMA, SAN MATEO COUNTY

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

1. Cypress Abbey Company, the site legal owner, and AMLOC Companies, Inc., the landfill operator, by application dated July 24, 1987 has applied for updated waste discharge requirements to operate and expand the Hillside Class III Disposal Site, formerly classified as a Class II-2 landfill. The site is located in the City of Colma, San Mateo County, surrounded by the Cypress Hills Golf Course to the southwest, a mobile home park to the northwest, and San Bruno Mountain State and County Park to the north and east as shown in Attachment A, which is incorporated herein and made part of this Order.
2. The Board previously adopted Waste Discharge Requirements as Order No. 80-7 for AMLOC Companies, Inc. and Cypress Abbey Company, Hillside Class II-2 Solid Waste Disposal Site, Colma, San Mateo County.
3. By letter dated November 5, 1987, the Board was notified that the landfill ownership structure changed; whereby, a new corporation named Hillside Landfill Company was formed. This company is owned equally by Cypress Abbey Company and AMLOC Companies, Inc. for the purpose of acting as operator of the existing landfill.
4. The existing site has an area of 23.6 acres and is expected to reach its capacity by April 1988. To meet the disposal needs of the surrounding communities, Cypress Abbey Company and AMLOC Companies, Inc. propose to expand to an adjacent 19.2 acre parcel. This 19.2 acre parcel was purchased by AMLOC Companies, Inc. and they are the site legal owner of the 19.2 acre parcel. The expansionary area is east of the current landfill and together with the current landfill will be operated by the Hillside Landfill Company. Cypress Abbey Company, AMLOC Companies, Inc. and the Hillside Landfill Company are hereinafter collectively referred to as the discharger. See Attachment A for the location of the expansionary area.
5. The site including the expansionary area is projected to close in November 1995. Total site capacity is 1,770,000 cubic yards.
6. The discharger proposes to accept for disposal dry, essentially inert waste, consisting mostly of construction debris, wood, paper, cardboard, and yard trimmings. The waste flow into the site ranges

from 250 to 400 tons per day. The area will be filled in five consecutive stages, pursuant to submitted plans.

7. The discharger submitted two reports entitled "Geologic/Hydrogeologic Report and Ground-Water Monitoring Program, Hillside Disposal Site, San Mateo County, California (May 1987)" and "Design, Construction and Operations Report, Hillside Class III Disposal Site, San Mateo, California (July 1987)" prepared by Emcon Associates. 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.
8. The landfill and expansionary area lies along the southwest base of San Bruno Mountain. Two major drainages originate from San Bruno Mountain in the vicinity of the landfill site. Surface water from the northernmost drainage has been diverted around the western perimeter of the site by means of interceptor ditches. The other drainage discharges into a siltation basin in the southeastern area of the site.
9. Lithologic units in the site vicinity include, from oldest to youngest, the Cretaceous Franciscan Formation, Upper Cretaceous San Bruno Sandstone, and Colma Formation. The Franciscan Formation in the vicinity of the landfill consists of highly recrystallized metagreywacke with minor interbedded black shale, serpentinite, and greenstone. The metagreywacke and shale are highly jointed and fractured in outcrop. These fractures are partially clay-filled and mineralized.

The San Bruno Sandstone consists predominately of fine to medium grained, slightly recrystallized sandstone that forms San Bruno Mountain. This sandstone is also highly fractured. The San Bruno Sandstone and the Franciscan Formation are subject to landsliding.

The Colma Formation consists of fine to medium grained sands, silts, and clays deposited within estuarine, stream, and aeolian environments. The Colma Formation was the source of the sand for sand quarry operations that existed prior to landfilling. This unit is very permeable. Data generated from rising and falling head permeability tests in two wells at the site indicate permeabilities ranging from 5.7×10^{-3} to 1.1×10^{-2} cm/sec. Three springs have been identified in the Colma Formation in the area of the proposed expansion. The flow rate of these springs was estimated during September to be approximately 0.5 gallons per minute. There is no information regarding their flow rate in the winter months.

10. There are three faults in the vicinity of the site, the San Andreas Fault, the San Bruno Fault, and the Hillside Fault. The San Andreas Fault is located approximately 2.5 miles southwest of the site. This fault is designated as a historically active fault by the California Division of Mines and Geology. The maximum probable earthquake generated by this fault for the site has been estimated by the Discharger's consultant to be 8.3 on the Richter scale. They also estimate a mean peak horizontal ground acceleration at the site of 0.63g. A landslide 2,000 feet west of the site was generated during

the 1906 earthquake.

The San Bruno Fault is located at the southwestern base of San Bruno Mountain, approximately 2000 feet from the boundaries of the site. It marks the contact between the Cretaceous San Bruno Sandstone (older) and the Pleistocene Merced Formation (younger rocks, not exposed at the site). The California Division of Mines and Geology has concluded that this fault is not potentially active.

The Hillside Fault cuts through the northeast section of the site. This fault appears to be covered by the Pleistocene Colma Formation. Mapping by the Discharger's consultant found no displacement along the inferred trace of the fault. A sense of movement has not been established. The Discharger has not conducted any trenching along the fault trace to determine if it has been active during Holocene time. Any conclusion about the activity of this fault by the Division of Mines and Geology is unknown.

11. Regionally, the Hillside Disposal site is located along the northwestern edge of the Daly City Aquifer. This aquifer is approximately 2 miles wide and 9 miles long and extends northwest to southeast from Lake Merced to San Bruno. The aquifer is within the Colma and Merced Formations and is as deep as -600 feet below MSL. The Discharger's consultant has identified 19 irrigation wells within a one mile radius of the site. The consultant, based on conversations with the two water supply companies in the area, maintains that there are no drinking water supply wells within a one mile radius. There is no information in the geologic report as to the amount of groundwater that is extracted and how the gradients induced by these wells may effect potential contaminant transport from the site.

Groundwater at the site occurs in perched lenses above the water table and is found from 2 to 8 feet below the ground surface in the shallowest occurrences. The water table has been measured in existing groundwater monitoring wells at 10 feet below the ground surface in its shallowest occurrences. The general direction of groundwater flow is to the southwest. The gradient, calculated between two existing wells, is 0.145. Groundwater velocity beneath the site has been calculated to be approximately 3725 feet per year.

12. The Discharger has proposed a groundwater monitoring program for the landfill. This program includes one upgradient and four downgradient wells. Upgradient well E-5 is screened from 20 to 25 feet below ground surface in the first encountered sand layer greater than a couple of feet thick. The water table is found at approximately 25 feet. This well is located in the proposed expansion area and will be replaced when fill in the area begins.

Groundwater monitoring well E-2 is located southwest of the proposed expansion area. It is screened from 63 to 103 feet. The water table is found at approximately 90 feet. This well will monitor the water table and the Colma/Franciscan Formation interface downgradient of the landfill.

Groundwater monitoring well E-8 is located at the southern toe of the

eastern edge of the existing fill. It is screened from 85 to 125 feet. The water table is found at approximately 95 feet. This well will monitor the water table and Colma/Franciscan Formation interface downgradient of the landfill.

Groundwater monitoring well E-4 is located 500 feet south of the toe of the existing fill. It is screened from 171 to 321 feet and is designed to monitor the entire saturated thickness of the Colma Formation downgradient of the landfill. The water table is found at approximately 171 feet. This well screen is too long to sample discrete intervals at depth, and significant dilution of constituents of concern may occur during sampling. Trace amounts of metals, total organic carbon (TOC), and volatile organic compounds have been detected in this well.

Proposed groundwater monitoring well E-9 will be located south of the northwestern toe of the existing fill. This well has been proposed to be designed with a long screen similarly to E-4, to monitor the entire saturated thickness of the Colma Formation downgradient of the landfill.

13. Background water quality data for several indicator parameters have been collected from analyses of water samples taken from upgradient monitoring well E-5. Pursuant to Section 2595 (g)(7)(D) of the California Administrative Code, Title 23, Chapter 3, Subchapter 15, "Discharges of Waste to Land," (Subchapter 15), the Water Quality Protection Standards (WQPS) to be established for each indicator parameter, if there is only one background well, are determined by sampling the one background well and splitting the sample from the one well into four aliquots, then conducting separate analyses for each aliquot. The WQPS for an indicator parameter shall be based on data from quarterly sampling of wells upgradient from the waste management unit for one year. The discharger has submitted four rounds of quarterly monitoring data from well E-5; however, only one of the rounds contained analyses on a water sample split into four aliquots. Therefore, the WQPS cannot be determined at this time and should be determined after one year's worth of quarterly monitoring pursuant to Section 2595 (g)(7)(D).
14. Section 2559 of Subchapter 15 states that Class III landfills with liners (which is the case with the Hillside Landfill) shall have an unsaturated zone (vadose zone) monitoring program whenever feasible. The discharger did not address this issue in the two reports cited in finding 7.
15. Based on the separation of the waste disposal operation from the groundwater found in the Colma Formation and the proposed operations plan for the landfill, as described in this Order, this landfill meets the geologic siting standards of Subchapter 15. These standards require adequate separation between the waste disposal operation and waters of the State so as to not impact beneficial uses of these waters.
16. The existing landfill has been partially closed pursuant to a Board approved closure plan entitled, "Final Closure Plan and Solid Waste

Management Plan for AMLOC Companies, Inc., Hillside Solid Waste Disposal Site, Colma, San Mateo County," dated November 1979. The portion of the landfill which has not yet been closed, as well as the expansionary portion of the landfill, are both subject to the updated closure and post-closure maintenance requirements pursuant to Subchapter 15. A closure plan pursuant to Subchapter 15 is included within the Design, Construction and Operations Report.

17. Section 2596 (b) (1) (B) of Subchapter 15 requires a discharger to have contingency plans for the failure or breakdown of waste handling facilities or containment systems, including notice of any failure or of waste or leachate in monitoring facilities, to the Board, local governments, and water users downgradient of the waste management unit. The Design, Construction and Operations Report does not contain a contingency plan.
18. Beneficial uses of the usable groundwater found beneath the site and surrounding areas and of Colma Creek are:
 - a. Groundwater Recharge
 - b. Domestic supply
 - c. Agricultural supply
19. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986, and this Order implements the water quality objectives stated in that plan.
20. The County of San Mateo, as lead agency, adopted a Final Environmental Impact Report on November 12, 1987 for the expansion of this landfill as required under the California Environmental Quality Act (CEQA). This report identifies the following adverse impacts relative to water quality:
 - a. Leachate could enter groundwater and cause degradation.
 - b. Ground shaking from an earthquake could cause slope failure and disruption of leachate control/monitoring devices.
 - c. Surface water erosion and infiltration into refuse to create leachate.

The following measures will mitigate the identified adverse impacts:

- a. Groundwater Degradation

The site will not be accepting any liquid waste and will be operated to prevent infiltration of surface runoff to prevent the generation of leachate. The site will also be lined with both a clay and synthetic liner.

Design and operation of the landfill in accordance with Subchapter 15 will ensure containment of landfill waste, minimize leachate production, and prevent adverse impacts on surface and groundwater quality.

Installation of a leachate collection and removal system. This system will include monitoring and removal of leachate, should any be produced.

Monitoring of downgradient water with wells to insure the integrity of containment structures and leachate monitoring and control facilities.

b. Seismic Impacts

The site will be designed and constructed to withstand the maximum probable earthquake of an 8.3 magnitude.

c. Leachate Generation

Construction of drainage improvements to direct surface runoff from refuse disposal operations.

Compliance with the regulations and standards contained in Subchapter 15 and waste discharge requirements adopted by the Board.

21. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge.

22. The Board in a public hearing heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that AMLOC Companies, Incorporated, Cypress Abbey Company and Hillside Landfill Company, 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 Sections 13050(1) and 13050(m) 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 discharged into waters of the State or of the United States.
4. Hazardous and designated waste as defined in Sections 2521 and 2522 of Subchapter 15, shall not be deposited or stored at this site.
5. The discharger, or any future owner or operator of the 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 result of biological concentrations.

b. Ground Water

1. The ground water shall not be degraded as a result of the solid waste disposal operation.
6. Leachate from wastes and ponded waste containing leachate or in contact with refuse shall not be discharged to waters of the State or 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. Surface drainage from tributary areas, and internal site drainage from surface or subsurface drainage 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 as shown in the Design, Construction, and Operations Report (July 1987).
3. The discharger shall divert any groundwater which surfaces, e.g., springs, or may surface as a result of the proposed excavation in the expansionary area from contacting or percolating through wastes during disposal operations or during the life of the site.
4. Permanent leachate control facilities shall be constructed at the toe of the expansionary fill area as shown in the Design, Construction and Operations Report (July 1987). 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 the leachate collection sump and extraction wells will remain operational permanently.

5. The leachate monitoring and control system 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 quarterly, and any accumulated fluid shall be removed and disposed of in an authorized manner.
6. The site shall be operated to ensure that all wastes will be a minimum of 5 feet above the highest anticipated elevation of underlying ground water.
7. The discharger shall ensure that the foundation of 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. 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.
9. The discharger shall operate the waste management unit so as not to cause a statistically significant difference to exist between water quality at the compliance points and the WQPS to be established within one year of adoption of this Order. The compliance points for this landfill are identified as monitoring wells E-2, E-4, E-8 and E-9. The background well is identified as monitoring well E-5. The discharger shall establish WQPS according to the requirements of this Order. WQPS shall be established for, at a minimum, the following constituents:
 - 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

C. PROVISIONS

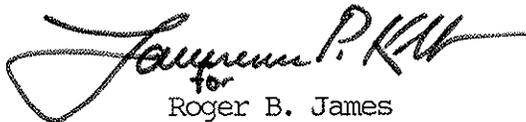
1. The discharger shall comply with all Prohibitions, Specifications, and Provisions of this Order, immediately upon adoption. The discharger shall construct, operate and close the landfill according to the report cited in Finding 7.
2. The discharger shall further investigate the Hillside fault trace in the northeastern region of the expansionary area before disposal operations in the expansionary area begin. This investigation shall determine if the Hillside fault is a Holocene fault. If the discharger determines that the fault is Holocene, the discharger shall submit an amended Report of Waste Discharge that will modify the construction and operation of the landfill to assure that no waste will be disposed of on the fault. Waste disposal shall not commence in the expansionary area until the Executive Officer approves the report of this investigation.
3. The discharger shall design and construct the landfill to withstand the maximum probable earthquake of an 8.3 magnitude. In addition, the landfill shall be designed to withstand a rapid geologic change due to landslides pursuant to Section 2533 (e) of Subchapter 15.
4. The discharger shall proceed to install proposed monitoring well E-9 located as shown in the Geologic/Hydrogeologic Report and Ground-Water Monitoring Program (Finding 7). The installation of well E-9 shall be completed by July 1, 1988. The well drilling log for well E-9 shall be submitted to the Board as well as a report of inspection or certification in accordance with the construction standards of the Department of Water Resources. The log and report shall be submitted within 30 days after well installation.
5. The discharger shall design a sampling program for wells E-4 and E-9 to sample both the water table and the water at the bottom of the well, discretely. If this discrete sampling can't be done, then the wells shall be replaced with short screens to monitor the top and bottom of the Colma Formation. The proposed program shall be submitted by April 1, 1988.
6. The discharger shall install leachate monitoring wells in the closed portion of the landfill to determine if there are any localized leachate mounds within the landfill. A report showing the proposed location and depths of the leachate monitoring wells shall be submitted by April 1, 1988.
7. The discharger shall design and submit a report proposing an unsaturated zone monitoring program for the site. This report shall be submitted by April 1, 1988.
8. The discharger shall submit a report, satisfactory to the Executive Officer, providing evidence that an irrevocable closure fund, or other means, pursuant to Section 2580(f) of Subchapter

15, has been established to ensure closure and post-closure maintenance and monitoring of the site. This report shall be submitted by June 1, 1988.

9. The discharger shall submit a report detailing the contingency plans for the failure or breakdown of waste handling facilities or containment systems, including notice of any such failure, or any detection of waste or leachate in monitoring facilities, to the Board, local governments, and water users downgradient of the waste management unit. This report shall be submitted by July 1, 1988.
10. The discharger shall file with the Regional Board quarterly self-monitoring reports performed according to any self-monitoring program issued by the Executive Officer.
11. All reports pursuant to these Provisions shall be prepared under the supervision of a registered civil engineer or certified engineering geologist.
12. The discharger shall remove and relocate any wastes which are discharged at this site in violation of these requirements.
13. 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.
14. The discharger shall maintain a copy of this Order at the site so as to be available at all times to site operating personnel.
15. This Board considers the property owners 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.
16. 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.
17. The discharger shall permit the Board or its authorized representative, upon presentation of credentials:
 - 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 the terms and conditions of this Order.
 - c. Inspection of any treatment equipment, monitoring equipment, or monitoring method required by this Order.

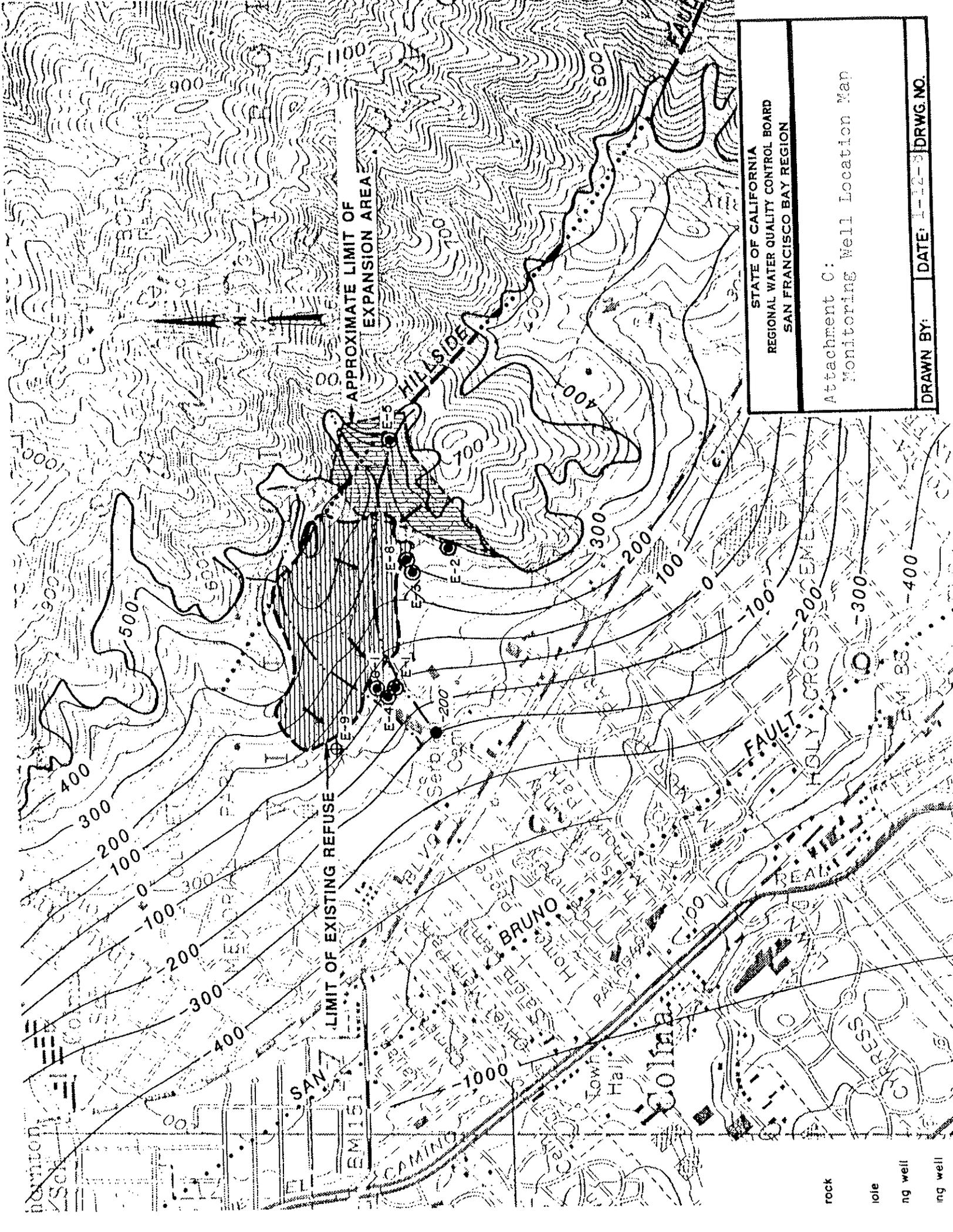
- d. Sampling of any discharge or ground water covered by this Order.
18. This Board's Order No. 80-7 is hereby rescinded.
19. These requirements do not authorize commission of any act causing injury to the property of another or of the public; do not convey any property rights; do not remove the liability under federal, state or local laws; and do not authorize the discharge of wastes without appropriate permits from other agencies or organizations.
20. This Order is subject to Board review and updating, as necessary, to comply with changing State or Federal laws, regulations, policies, or guidelines; changes in the Regional Board Basin Plan; or changes in the discharge characteristics, in ten (10) year increments from the effective date of this Order.

I, Roger B. James, Executive Officer, do hereby certify that the foregoing is full, complete, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on February 17, 1988.



Roger B. James
Executive Officer

- Attachments: A) Site Map
B) Self-Monitoring Program
C) Monitoring Well Location Map



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

Attachment C:
 Monitoring Well Location Map

DRAWN BY: DATE: 1-12-93 DRWG. NO.

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

Amloc Companies, Inc., Cypress Abbey Co. and
Hillside Landfill Co., Hillside Class III Disposal
Site, Colma, San Mateo County

ORDER NO. 88-019

CONSISTS OF

PART A

AND

PART B

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

AMLOC COMPANIES INCORPORATED,
CYPRESS ABBEY COMPANY AND
HILLSIDE LANDFILL COMPANY
HILLSIDE CLASS III DISPOSAL SITE
COLMA, SAN MATEO COUNTY

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.4 of Regional Board Order No. 87-019.

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 the 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 and 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) 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. Chloride
- e. Total Organic Carbon
- f. Nitrate Nitrogen
- g. Total Kjeldahl Nitrogen.
- h. Water elevation in feet above Mean Sea Level.
- i. EPA Method 624, identifying all peaks greater than 1 microgram/liter

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 vice-president 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-test as 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 groundwater elevation contour map with determinations graphic description of the velocity of groundwater flow under/around the waste management unit.
 - c. A topographic map shall accompany each report showing observation and monitoring station locations with elevations using mean sea level as the datum.
 - 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.
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.
3. A well drilling log shall be submitted for each sampling 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.	Monthly
P-1 thru P-'n' (perimeter)	Located at equidistant intervals not exceeding 1000 feet around the perimeter of the disposal area.	Standard observations for the perimeter.	Monthly

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

C. Groundwater Monitoring:

STATION	DESCRIPTION	OBSERVATION/ ANALYSIS	FREQUENCY
E-2, E-4, E-8, E-9	As shown on Attachment C.	Standard analysis	Once per quarter.
E-2, E-4, E-5, E-8 E-9	"	water level	Monthly

D. Groundwater Collection System Monitoring

STATION	DESCRIPTION	OBSERVATION/ ANALYSIS	FREQUENCY
G-1	Riser pipe to the ground water sump	Standard analysis	Monthly

E. Leachate Monitoring:

STATION	DESCRIPTION	OBSERVATION	FREQUENCY
L-1 thru L-'n'	Leachate control facilities including sumps and any wells to be installed.	Depth of leachate built up at the base of the landfill, and volume removed. Standard analysis.	Monthly Once per quarter.

2. CONTINGENCY REPORTING

- A. A report shall be made in writing to the Regional Board within seven days if a statistically significant difference is found between a self-monitoring sample set and a WQPS. Notification shall indicate what WQPS(s) have been exceeded. The discharger shall immediately resample at the compliance point(s) where this difference has been found and analyze another sample set of at least four portions split in the laboratory from the source sample.
- B. If resampling and analysis confirms the earlier finding of a statistically significant difference between self-monitoring results and WQPS(s) the discharger must submit to the Regional Board within 90 days an amended Report of Waste Discharge for establishment of a verification monitoring program meeting the requirements of Section 2557 of Subchapter 15. This submittal shall include the information required in Section 2556(b)(2) of Subchapter 15.
- C. The discharger must notify the Regional Board within seven days if the verification monitoring program finds a statistically significant difference between samples from the verification monitoring program point of compliance and the WQPS(s).
- D. If such a difference or differences are found by the verification monitoring program it will be concluded that the landfill is out of compliance with this Order. In this event the discharger shall submit within 180 days an amended Report of Waste Discharge requesting authorization to establish a corrective action program meeting the requirements of Section 2558 of Subchapter 15. This submittal shall include the information required in Section

2557(g)(3) of Subchapter 15.

- E. 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.

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

- 1. Has been developed in accordance with the procedures set forth in this 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. 88-019.
- 2. Is effective on the date shown below.
- 3. May be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer, or request from the discharger.

2/25/88
Date Ordered

for 
Roger B. James
Executive Officer