CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 95-055
NPDES NO. CA0037541

REISSUING WASTE DISCHARGE REQUIREMENTS FOR:

CITY OF SAN MATEO
SAN MATEO, SAN MATEO COUNTY

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

1. The City of San Mateo, hereinafter called the Discharger, submitted a report of waste discharge dated April 14, 1994 for reissuance of NPDES Permit No. CA0037541.

2. The Discharger presently discharges an average dry weather flow of about 10 million gallons per day (mgd) from its treatment plant which has a current dry weather design capacity of 13.6 mgd. The Discharger currently provides secondary treatment during the winter months (October - April) and tertiary-level treatment during the summer months (May - September). Treatment facilities consist of primary clarifiers, aeration tanks, final clarifiers, pressure filters (May - September), and chlorination and dechlorination. Sludge is thermally treated, dewatered using vacuum filters, and incinerated in multiple hearth furnace, with the ash disposed of in dedicated landfill. This plant treats domestic and commercial wastewater from the City of San Mateo, the City of Foster City, the Town of Hillsborough, and portions of the City of Belmont and unincorporated San Mateo County. The treated wastewater is discharged into the deep water channel of lower San Francisco Bay, a water of the State and United States, at a point approximately 500 feet north of the San Mateo-Haywood Bridge through a submerged diffuser about 3700 feet offshore at a depth of 41 feet below mean lower low water (Latitude 37 deg., 34 min., 50 sec.; longitude 122 deg., 14 min. 45 sec.).

3. The discharge is presently governed by Waste Discharge Requirements Order No. 89 171 which allows discharge into San Francisco Bay.

4. The United States Environmental Protection Agency (EPA) has an antidegradation policy as described in regulation 40 CFR 131.12. EPA guidance to implement 40 CFR 131.12 may require that an antidegradation analysis be made when an increas wastewater discharge is proposed. An antidegradation policy was also adopted by

State Water Resources Control Board in Resolution No. 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California"). It provides conditions under which a change in water quality is allowable.

5. The Board adopted revised Water Quality Control Plan for the San Francisco Basin (Basin Plan) on December 17, 1986. The Basin Plan identifies beneficial uses and water quality objectives for surface waters in the region, as well as effluent limitations and discharge prohibitions intended to protect beneficial uses. This Order implements the plans, policies and provisions of the Board's Basin Plan.

6. The Basin Plan contains water quality objectives for lower San Francisco Bay and contiguous waters. The beneficial uses of lower San Francisco Bay and contiguous waters are:

   a. Water Contact Recreation
   b. Non-contact Water Recreation
   c. Wildlife habitat
   d. Preservation of Rare and Endangered Species
   e. Estuarine Habitat
   f. Fish Migration and Spawning
   g. Industrial Service Supply
   h. Shellfish Harvesting
   i. Navigation
   j. Commercial and Sport Fishing

7. The Regional Board in Order No. 84-6 revised the Discharger's wastewater treatment requirements from tertiary-level requirements to advanced secondary requirements during the wet season when beneficial uses would not be compromised further than they already are by stormwater runoff.

8. In the early 1980's, the Regional Board's Shellfish Program identified major shellfish beds existing along the San Mateo - Foster City shoreline. During the summers of 1982, 1983, and 1985, some of these beds were opened for direct recreational harvesting. The stringent dry weather effluent limit 2.2 MPN/100 ml (7 day moving median) for coliform organisms was adopted to protect available beneficial uses. This effluent limit provides are an ample safety margin for the coliform objective of a median of 70 MPN/100ml for the water of shellfish bed areas.

9. Subsequent studies conducted by the Regional Board and South Bayside System Authority showed that during the wet weather period, contamination and pollution which affect shellfish beds result from non-point sources. Studies also suggested that the effluent total coliform levels of 2.2 MPN/100 ml and 23 MPN/100 ml had no

impact on the receiving waters of shellfish beds which are located more than 1000 yards from the outfall. Due to the stringent effluent total coliform requirement, for many years the discharger has experienced considerable difficulty to operate the disinfection system and dechlorination systems to meet the effluent chlorine residual requirement. According to the discharger, the chlorine residual problems are related to the operation of the pressure filter system during the summer months. The filter system causes flow "spiking" (rapid fluctuation of effluent flow), due to the operation of the filter feed pumps, which are controlled by the level in the wet well. These radical flow changes make automatic chlorination and dechlorination an operation that the controller can not always adequately compensate for. Since 1989, the discharger reported over 35 chlorine residual violations that resulted from the radical flows created by the pressure filter system.

10. In 1992 the Board approved relaxation of the Discharger's summer total coliform effluent limit to 23 MPN per 100 ml. The modified Effluent Limit allows the discharger to reduce chlorine compounds consumption by 150,000 pounds and sulfur dioxide compounds by 75,000 pounds annually. This would also reduce the discharge of chlorinated by products (chlorinated organics), which are potentially harmful to the aquatic organisms. The amendment produces substantial environmental benefits by reducing chemical uses without adversely affecting the water quality.

11. Effluent limitations in this permit are based on the plans, policies, and water quality objectives and criteria of the Basin Plan, Quality Criteria for Water (EPA 440/5-86-001, 1986; Gold Book), Applicable Federal Regulations (40 CFR Parts 122 and 131), the National Toxics Rule (57 FR 60848, 22 December 1992; NTR), and Best Professional Judgement.

12. The Board amended the Basin Plan on October 21, 1992 to adopt a site-specific water quality objective of 4.9 ug/l for copper for San Francisco Bay. The State Board did not approve this amendment on procedural grounds. In the best professional judgment of Regional Board staff, from a technical standpoint, the site-specific objective is currently the best available water quality objective that is protective of the most sensitive designated use of San Francisco Bay waters with respect to copper: habitat for aquatic organisms. The effluent concentration limit for copper in this permit is based on the site-specific objective for copper, which employed the "water effect ratio" approach developed by the EPA. This approach provides a measure of the binding capacity of natural waters (dependent on particulate matter) relative to the binding capacity of reference waters (filtered oceanic water). The study and associated staff analysis are described in a September 25, 1992 staff report entitled "Revised Report on Proposed Amendment to Establish a Site Specific Objective for Copper for San Francisco Bay."

13. In 1993, the Regional Monitoring Program (RMP) found PCB concentrations in water throughout the estuary at levels exceeding the EPA criterion. The EPA criterion indicates the potential for bioaccumulation in fish tissue to levels that exceed their Human Health criteria for a carcinogen risk level of 10^{-6}, when the fish is consumed at a rate exceeding 6.5 grams per day. Concentration of PCBs and other pollutants in fish tissue are being measured in a study currently being conducted by the Regional Board. The Regional Board and the discharger acknowledge that commercially available laboratory techniques do not allow for detection of PCBs or TCDDs in effluent at levels low enough to determine the extent of contribution of these substances by the discharger. Therefore, rather than focusing additional resources on characterizing PCB and TCDD levels in effluent, the discharger is required to participate in the Regional Monitoring Program to further define the level of contamination of fish tissue in the estuary.

14. An Operation and Maintenance Manual is maintained by the Discharger for purposes of providing plant and regulatory personnel with a source of information describing all equipment, facilities, and recommended operating strategies, process control monitoring, and maintenance activities. In order to remain a useful and relevant document, this manual should be kept updated to reflect significant changes in plant facilities or activities.

15. The Discharger has implemented and is maintaining an EPA approved Pretreatment Program for source control and application of pretreatment standards in accordance with Regional Board Order No. 89-179.

16. The City of San Mateo completed the Variability Phase of the chronic toxicity testing program in August 1993, with no pattern of toxicity found.

17. Federal Regulations for stormwater discharges were promulgated by the United States Environmental Protection Agency on November 16, 1990. The regulations [40 Code of Federal Regulations, Parts 122, 123, and 124] require specific categories of industrial activities which discharge storm water associated with industrial activity (industrial storm water) to obtain an NPDES permit and to implement Best Technology Economically Available (BAT) and Best Conventional Pollutant Control Technology (BCT) to control pollutants in industrial storm water discharges. The storm water flows from the wastewater treatment facility process areas are directed to the wastewater treatment plant headworks and are treated along with the wastewater discharged to the treatment plant. These storm water flows constitute all industrial storm water at this facility and consequently this permit regulates all industrial storm water discharge at this facility.

18. This Order serves as an NPDES Permit, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (California Environmental Quality Act) pursuant to Section 13389 of the California Water Code.

19. The Discharger and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharge and have been provided 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 the Discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act as amended and regulations and guidelines adopted thereunder, shall comply with the following:

A. DISCHARGE PROHIBITIONS

1. Discharge at any point at which the wastewater does not receive an initial dilution of at least 10:1 is prohibited.

2. The bypass or overflow of untreated or partially treated wastewater to waters of the State, either at the treatment plant or from the collection system or pump stations tributary to the treatment plant is prohibited.

3. The average dry weather flow shall not exceed 13.6 mgd. The average shall be determined every three consecutive dry weather months each year.

B. EFFLUENT LIMITATIONS

1(a). During the months of May through September the following effluent limitations shall apply:

Constituent	Units	Monthly Average	Weekly Average	Daily Maximum	Instantaneous Maximum
a. Settleable Solid	ml/l-hr	0.1	--	--	0.2
b. BOD_5	mg/l	20	30	40	--
c. Total Suspended Solids	mg/l	20	30	40	--
d. Oil & Grease	mg/l	10	--	20	--
e. Total Chlorine Residual (1)	mg/l	--	--	--	0.0
f. Turbidity	NTU	15	--	30	--

1(b). During the months of October through April, inclusive, the following limitations shall apply:

Constituent	Units	Monthly Average	Weekly Average	Daily Maximum	Instantaneous Maximum
a. Settleable Solid	ml/l-hr	0.1	--	--	0.2
b. BOD_5	mg/l	30	45	60	--
c. Total Suspended Solids	mg/l	30	45	60	--
d. Oil & Grease	mg/l	10	--	--	20
e. Total Chlorine Residual (1)	mg/l	--	--	--	0.0
f. Turbidity	NTU	15	--	30	--

(1) Requirement defined as below the limit of detection in standard test methods.

2. pH: The pH of the effluent shall not be less than 6.5, nor greater than 8.5.

3. Total Coliform Bacteria: The treated wastewater, at some place in the treatment process prior to discharge, shall meet the following limits of bacteriological quality: The moving median value for the Most Probable Number (MPN) of total coliform bacteria in any five (5) consecutive samples shall not exceed 23 MPN/100 ml; and any single sample shall not exceed 240 MPN/100 ml.

4. Effluent Toxicity

4.1 Acute Toxicity

The survival of organisms in undiluted effluent shall be an eleven (11) sample median value of not less than 90 percent survival, and an eleven (11) sample 90 percentile value of not less than 70 percent survival. The eleven sample median and 90th percentile effluent limitations are defined as follows:

11 sample median: A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit, if five or more of the past ten or less bioassay tests show less than 90 percent survival.

90th percentile: A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit, if one or more of the past ten or less bioassay tests show less than 70 percent survival.

4.2 Chronic Toxicity

The discharge is classified as a deep water discharge. The chronic toxicity effluent limitation is based on a dilution ratio of 10:1.

The combined effluent as discharged, shall meet both of the following chronic toxicity limitations.

a. an eleven sample median value[1] of 10 TUc[2]; and

b. a 90 percentile value[3] of 20 TUc[2].

Footnote:

1. A test sample showing chronic toxicity greater than 10 TUc represents consistent toxicity and a violation of this limitation, if five or more of the past ten or less tests show chronic toxicity greater than 10 TUc.

2. A TUc equals 100/NOEL. The NOEL is the no observable effect level, determined from IC, EC, or NOEL values. These terms and their usage in determining compliance with the limitations are defined in Attachment A of this Order. The NOEL shall be based on a critical life stage test using the most sensitive test species as specified, compliance shall be based on the maximum TUc value for the discharge sample based on a comparison of TUc values obtain through concurrent testing of the two species.

3. A test sample showing chronic toxicity greater than 20 TUc represents consistent toxicity and a violation of this limitation if one or more of the past ten or less samples shows toxicity greater than 20 TUc.

5. 85 Percent Removal, BOD and TSS: The arithmetic mean of the biochemical oxygen demand (five-day, 20°C) and total suspended solids values, by weight, for effluent samples collected in each calendar month shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected at approximately the same times during the same period.

6. Representative samples of the effluent E-001 shall not exceed the following limits:

6.1 Limits for Toxic Pollutants

The effluent shall not exceed the following limits (a,e):
[Units for all limits are in ug/l]

Constituent	Monthly Average(b)	Daily Average(b)
Arsenic		200
Cadmium		30
Chromium (VI) (c)		110
Copper		37
Lead(g)		53
Mercury	0.21	1
Nickel (f)		65
Selenium(f)		50
Silver		23
Zinc(f)		580
Cyanide(d,e)		10
Phenols		500

Footnotes:

a. As, Cd, Cr, and Zn are based on plant performance, all other limits are based on marine water quality objectives, and are intended to be achieved through secondary treatment and, as necessary, pretreatment and source control. Hg is based on criteria for human health.

b. Limits apply to the average concentration of all samples collected during the averaging period (Daily = 24-hour period; Monthly = Calendar month).

c. The Discharger may meet this limit as total chromium.

d. The Discharger may demonstrate compliance with this limitation by measurement of weak acid dissociable cyanide.

e. All analyses shall be performed using current EPA Methods, as specified in 40 CFR 136 (40 CFR 122.44(i)).

f. Effluent limitation may be met as a 4-day average. If compliance is to be determined based on a 4-day average, then concentrations of four 24- hour composite samples shall be reported, as well as the average of the four samples.

C. RECEIVING WATER LIMITATIONS

1. 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 to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;

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. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on wildlife, waterfowl, or aquatic biota, or which render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State at any place within one foot of the water surface:

a. Dissolved Oxygen: 5.0 mg/l, minimum

The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified above, then the discharge shall not cause further reduction in ambient dissolved oxygen concentrations.

b. Dissolved Sulfide 0.1 mg/l, maximum

c. pH: Variation from normal ambient pH by more than 0.5 pH units.

d. Un-ionized Ammonia: 0.025 mg/l as N, annual median; 0.16 mg/l as N, maximum.

e. Nutrients: Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

D. SLUDGE HANDLING AND DISPOSAL REQUIREMENTS

1. All sludge generated by the discharger must be disposed of in a municipal solid waste landfill, reused by land application, or disposed of in a sludge-only landfill in accordance with 40 CFR Part 503 and 40 CFR Part 257. If the discharger desires to dispose of sludge by a different method, a request for permit modification must be submitted to the USEPA 180 days before start-up of the alternative disposal practice. All the requirements in 40 CFR 503 7 40 CFR 257 are enforceable by USEPA whether or not they are stated in an NPDES permit or other permit issued to the discharger.

2. Sludge treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, or result in groundwater contamination.

3. Duty to mitigate: The discharger shall take all reasonable steps to prevent or minimize any sludge use or disposal which has a likelihood of adversely affecting human health or the environment.

4. The discharge of sewage sludge shall not cause waste material to be in a position where it is, or can be carried from the sludge treatment and storage site and deposited in the waters of the State.

5. The sludge treatment and storage site shall have facilities adequate to divert surface runoff from adjacent areas, to protect boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in the temporary storage site. Adequate protection is defined as protection from at least a 100-year storm and protection from the highest possible tidal stage that may occur.

6. The discharger shall submit an annual report to the USEPA and the Board containing monitoring results and pathogen and vector attraction reduction requirements as specified by 40 CFR 503, postmarked February 19 of each year, for the period covering the previous calendar year.

7. Sludge that is disposed of in a municipal solid waste landfill must meet the requirements of 40 CFR 258. In the annual self-monitoring report, the discharger shall include the amount of sludge disposed of, and the landfill(s) to which it was sent.

8. Permanent on-site sludge storage or disposal activities are not authorized by this permit. A report of Waste Discharge shall be filed and the site brought into compliance with all applicable regulations prior to commencement of any such activity by the discharger.

E. PROVISIONS

1. Requirements prescribed by this order supersede the requirements prescribed by Order No. 89-171. Order No. 89-171 is hereby rescinded.

2. Where concentration limitations in mg/l or ug/l are contained in this Permit, the following Mass Emission Limitations shall also apply:

   (Mass Emission Limit in lbs/day) = (Concentration Limit in mg/l) x Actual Flow in million gallons per day averaged over the time interval to which the limit applies) x 8.34 (conversion factor).

3. Effluent Toxicity

   Acute Toxicity

   Compliance with the acute toxicity limitation in effluent limitation B.4.1 of this order shall be evaluated by measuring survival of test fishes exposed to undiluted effluent for 96 hours. Each fish species represents a single sample. The toxicity tests will be performed according to protocols approved by the U.S. EPA or State Board or published by the American Society for Testing and Material (ASTM) or American Public Health Association. Two fish species will be tested concurrently. These shall be the most sensitive two species determined from concurrent screening(s) of the following species: three-spine stickleback, rainbow trout and fathead minnow. If concurrent screenings have been conducted prior to this permit reissuance, the existing data may be submitted to the Board. If such information is found to meet the requirements of the Basin Plan, further screenings would not be required.

   The Regional Board may consider allowing compliance monitoring with only one (the most sensitive, if known) fish species, if the following condition is met: the discharger can document that the acute toxicity limitation, specified above, has not been exceeded during the previous three years, or that acute toxicity has been observed in only one of two fish species.

   Chronic Toxicity

   The discharger shall comply with effluent limitations specified in Effluent Limitations 4.2 immediately upon adoption of this Order.

4. The discharger shall submit a technical report acceptable to the Executive Officer summarizing the results of a minimum of six (6) effluent sample analyses for the constituents listed in the Self Monitoring Report---Table 2 (three in wet season, three in dry season), with the exception of TCDD equivalents [dioxin] for which three (3) analyses shall be sufficient). The report shall include the limit of quantitation (LOQ), method detection limit (MDL) and practical quantification limit (PQL) achieved at the discharger laboratory and an evaluation of compliance with the effluent limitations for each constituent. For each constituent, the LOQ, MDL, and PQL should be less than the effluent limit, where reasonable and technically feasible. For constituents analyzed outside of the discharger laboratory, MDLs and PQLs should be provided to the discharger by outside laboratories, and included in this technical report. The technical report shall contain recommendations on effluent sampling and analysis, both with respect to type and frequency of analysis. This NPDES permit shall be subsequently modified to include effluent sampling for the subject constituents.

5. The discharger shall conduct a two year wet weather study of shoreline impacts due to operating at an effluent limit of 240 MPN/100 ml coliform median value. After review of the study, the Board may modify the current moving median value for the MPN of total coliform in any five (5) consecutive effluent samples of 23 MPN/100 ml to 240 MPN/100 ml for the wet weather condition.

6. The Board may modify, or revoke and reissue, this Order and Permit if present or future investigations demonstrate that the discharges governed by this Order are causing or significantly contributing to adverse impacts on water quality and/or beneficial uses of the receiving waters.

7. The Discharger shall review, and update as necessary, its Operations and Maintenance Manual, annually, or within 90 days of completion of any significant facility or process changes. The Discharger shall submit to the Board, by April 15th of each year, a letter describing the results of the review process including an estimated time schedule for completion of any revisions determined necessary, and a description or copy of any completed revisions.

8. Annually, the Discharger shall review and update as necessary, its contingency plan as required by Board Resolution No. 74-10. The Discharge of pollutants in violation of this Order where the Discharger has failed to develop and/or implement a contingency plan will be the basis for considering such discharge a willful and negligent violation of this order pursuant to Section 13387 of the California Water code. Plan revisions, or a letter stating that no changes are needed, shall be submitted to the Board by April 15 of each year.

9. The Discharger shall comply with all sections of this order immediately upon adoption.

10. The Discharger shall comply with the Self-Monitoring Program for this order, as adopted by the Board and as may be amended by the Executive Officer.

11. The Discharger shall comply with all applicable items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December, 1986.

12. The discharger shall implement and enforce its approved pretreatment program in accordance with Board Order 89-179 and its amendments thereafter. The discharger's responsibilities include, but are not limited to;

    a. Enforcement of National Pretreatment Standards (e.g., prohibited discharges, Categorical Standard, local limits) in accordance with 40 CFR 403.5 and Section 307 (b) and (c) of the Clean Water Act.

    b. Implementation of the pretreatment program in accordance with legal authorities, policies procedures, and financial provisions described in the General Pretreatment regulations (40 CFR 403) and the Discharger's approved pretreatment program including subsequent modifications to the program.

    c. Submission of annual and quarterly reports to EPA and the State as described in Board Order 89-179, and its amendments thereafter.

13. This Order shall serve as a National Pollutant Discharge Elimination System (NPDES) permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after the date of its adoption provided the Regional Administrator, EPA, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

14. This order expires on March 15, 2000. The Discharger must file a Report of Waste Discharge (Permit application) in accordance with Title 23, Chapter 3, Subchapter 9 of the California Code of Regulations not later than 180 days in advance of such expiration date, as application for issuance of new waste discharge requirements.

I, Steven R. Ritchie, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on March 15, 1995.

STEVEN R. RITCHIE
Executive Officer

Attachments:

A. Map of Wastewater Facilities and Effluent Discharge Locations
B. Self-Monitoring Program
C. Standard Provisions and Reporting Requirements, August 1993
D. Resolution No. 74-10

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

CITY OF SAN MATEO
SAN MATEO
SAN MATEO COUNTY

NPDES NO CA. 0037541
ORDER NO. 95-055

CONSIST OF

PART A, dated August 1993

AND

PART B

PART B

CITY OF SAN MATEO

I. **DESCRIPTION OF SAMPLING STATIONS**

A. INFLUENT AND INTAKE

Station	Description
A-001	At any point in the treatment facilities headworks at which all waste tributary to the system is present, preceding any phase of treatment, and exclusive of any return flows or process sidestreams.

B. EFFLUENT

Station	Description
E-001	At any point in the treatment facilities between the point of discharge and the point at which all waste from the treatment plant is present following dechlorination.
E-001-D	At any point in the treatment facilities at which point adequate contact with the disinfectant is assured.

C. OVERFLOW AND BYPASSES

Station	Description
OV-1	Bypass or overflows from manholes, pump stations, or collection systems.

REPORTING - Shall be submitted monthly and include date, time, quantity, and period of each overflow or bypass and measures taken or planned to prevent future occurrences (see Part A, Section G.2)

II. SCHEDULE OF SAMPLING, ANALYSIS, AND OBSERVATIONS

The schedule of sampling, analysis, and observations shall be that given as Table I.

III. REPORTING REQUIREMENTS

1. General Reporting Requirements are described in Section C of this Board's "Standard Provisions and Reporting Requirements", dated August 1993.

2. Self-Monitoring Reports for each calendar month shall be submitted monthly, by the twenty second day of the following month. The required contents of these reports are described in Section F.4 of Part A.

3. An Annual Report for each calendar year shall be submitted to the Board by February 15th of the following year. The required contents of the annual report are described in Section F.5 of Part A.

4. Any overflow and/or bypass of wastewater in excess of 1,000 gallons, or significant non-compliance incident that may endanger health or the environment, shall be reported according to the Sections F.1 and F.2 of Part A.

I, Steven R. Ritchies, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in the 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. 89-171.

2. Is effective on the date shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the Discharger and revisions will be ordered by the Executive Officer.

STEVEN R. RITCHIE
Executive Officer

Effective Date: 3/15/95

Attachments:

Table I and II and Footnotes
Part A, Dated: August 1993
Location Map

FOOTNOTES

1. During any day when bypassing occurs from any treatment unit(s) in the plant or to the emergency outfall, the monitoring program for the effluent and any nearshore discharge shall include the following in addition to the above schedule for sampling, measurement and analyses:

   a. Composite sample for BOD and Total Suspended Solids (unless regular 24-hour composite samples are available, sampling shall consist of one grab sample during the first two hours of bypassing and grab samples every four hours afterward for the duration of the bypass. The grab samples will be combined on a flow-proportioned basis and analyzed as a composite sample.)

   b. Grab samples for Total Coliform, Settleable Matter, Oil and Grease, and Chlorine Residual (continuous or every two hours).

   c. Continuous monitoring of flow.

2. The twice per month effluent oil and grease sampling shall consist of one grab sample taken at peak flow. The other effluent oil and grease value shall be determined by 3 grab samples taken at 8 hour intervals during the sampling day with each grab being collected in a glass container and analyzed separately. Results shall be expressed as a weighted average of the 3 values, based upon the instantaneous flow rates occurring at the time of each grab sample. Only the weighted average of the 3 values will be used to determine mass loading to the Bay. If the plant is not staffed 24 hours per day or if the discharge does not occur continuously, then the three grab samples may be taken at approximately equal intervals during the period that the plant is staffed or during the period that discharge is made.

   In the event that sampling for oil and grease once every two weeks or less frequently shows an apparent violation of the waste discharge permit monthly average limitation (considering the results of one or two day's sampling as a monthly average), then the sampling frequency shall be increased to weekly so that a true monthly average can be computed and compliance can be determined.

3. Grab samples shall be taken on day(s) of composite sampling.

4. If any sample is in violation of limits, sampling shall be increased for that parameter to weekly until compliance is demonstrated in two successive samples.

5. Data shall be reported using forms provided or approved equivalent. Chlorine residual analyzers shall be calibrated against grab samples as frequently as necessary to maintain accurate control and reliable operation. If an effluent violation is detected, grab samples shall be taken every 30 minutes until compliance is achieved.

6. Compliance with the effluent toxicity requirement shall be determined using two test species in parallel flow through bioassays. One shall be three-spine stickleback, and the other shall be either rainbow trout or fathead minnow.

7. These parameters shall be tested for on the same sample(s) used for the bioassay (s) prior to starting the flow-through bioassay(s) and at intervals of 24, 48, 72, and 96 hours after starting the flow-through bioassay(s).

8. Daily records shall be kept of the quantity and solids content of dewatered sludge disposed of and the location of disposal.

9. For sampling frequency refer to Provision #4 of this permit.

Order No.

TABLE 1

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS(1)

(City of San Mateo Water Pollution Control Plant)

Sampling Station	A-001	E-001			E-001-D			All OV Sta.
Type of Sample	C-24	G(3)	C-24(3)	Cont.	G(3)	C-24	Cont.	O(10)
Flow Rate (mgd)	D			D				
BOD,5-day,20 C (mg/L & kg/day)	3/W		3/W					
Chlorine Residual & Dosage (mg/L & kg/day)		H, or Cont. (5)			H, or Cont. (5)			
Settleable Matter (mg/L-hr. & cu. ft./day)		D						
Total Suspended Matter (mg/L & kg/day)	3/W		D					
Oil and Grease (mg/L & kg/day)								
Coliform (Total or Fecal) (MPN/100ml) per req't					5/W			
Fish Toxicity 96-hr. Flow-thru (6) (%survival in undiluted waste)				M				
Ammonia-N & Un-ionized NH -H (mg/L & kg/day)				(7) M				E
Nitrate Nitrogen (mg/L & kg/day)								
Nitrite Nitrogen (mg/L & kg/day)								

Order No.

TABLE 1 (continued)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS(1)

(City of San Mateo Water Pollution Control Plant)

Sampling Station	A-001	E-001			E-001-D			All OV Sta.
Type of Sample		G(3)	C-24	Cont.	G(3)	C-24	Cont.	O(10)
Turbidity, (NTU)			D					E
pH (units)		D		M(7)				
Dissolved Oxygen (mg/L and % Saturation)		D		M(7)				E
Temperature (C)		D		M(7)				
Apparent Color								
Arsenic (mg/L & kg/day)			M					
Cadmium (mg/L & kg/day)			M					
Chromium (mg/L & kg/day)			M					
Copper (mg/L & kg/day)			M					
Cyanide (mg/L & kg/day)			M					
Silver (mg/L & kg/day)			M					
Lead (mg/L & kg/day)			M					
Mercury (mg/L & kg/day)			M					
Nickel (mg/L & kg/day)			M					
Zinc (mg/L & kg/day)			M					
Selenium			M					
All Applicable Standard Observations								E
Constituents Listed in Table II			(9)					

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour
Cont. = Continuous sampling
O = Observation

TYPES OF STATIONS

A = treatment facility influent station
E = waste effluent stations
C = receiving water stations
P = treatment facilities perimeter stations

FREQUENCY OF SAMPLE

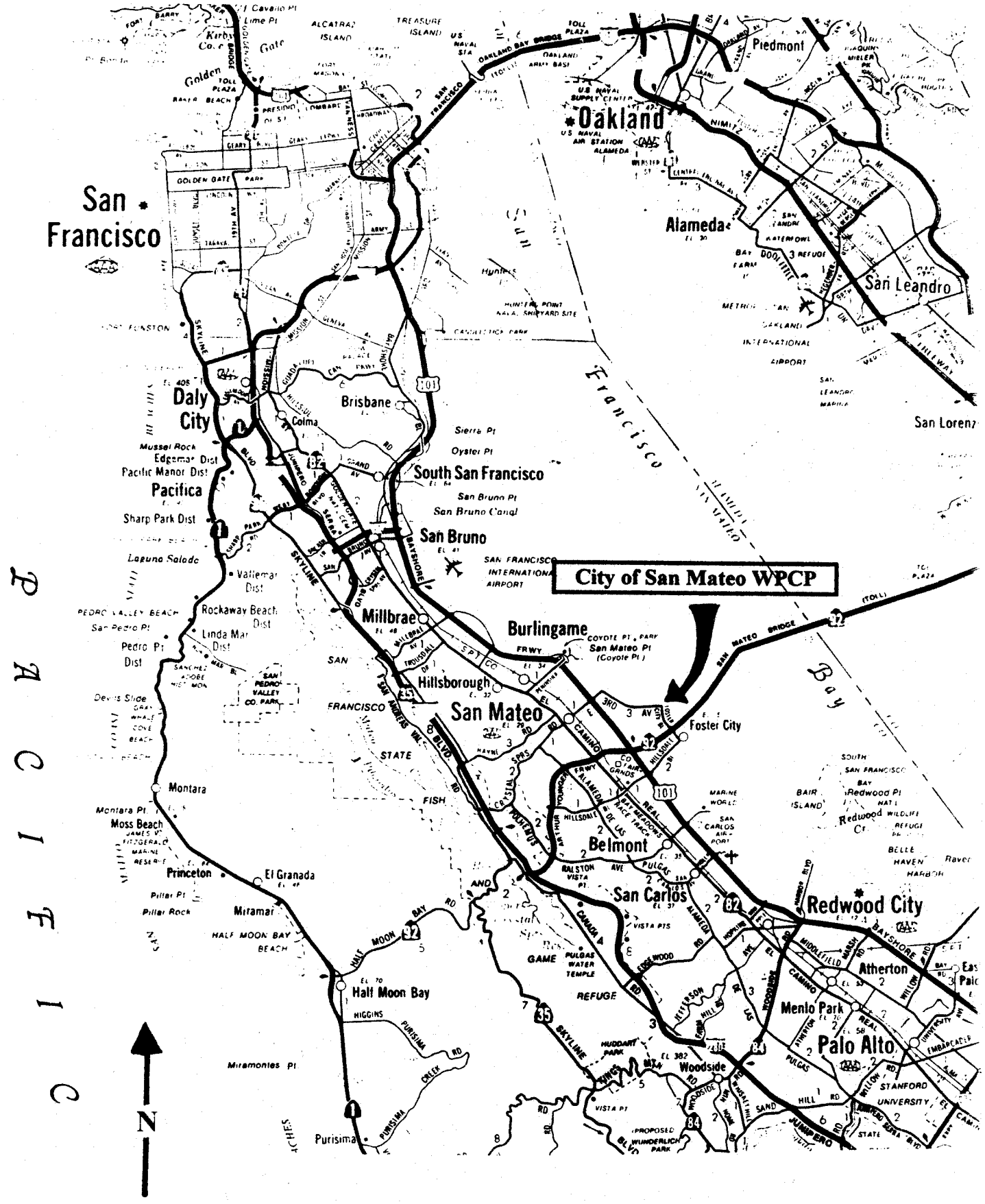
E = each occurrence
H = once each hour
D = once each day
W = once each week
Y = once each year
M = once each month

2/H = twice per hour
2/W = 2 days per week
5/W = 5 days per week
2/M = 2 days per month
2/Y = once in March and once in September

2H = every 2 hours
2D = every 2 days
2W = every 2 weeks
3M = every 3 months
Cont. = continuous

TABLE II: Toxic Pollutant Monitoring List for the City of San Mateo

Constituent
1,2 Dichlorobenzene
1,3 Dichlorobenzene
1,4 Dichlorobenzene
2,4,6 Trichlorophenol
Aldrin
A-BHC
Benzene
B-BHC
Chlordane
Chloroform
DDT
Dichloromethane
Dieldrin
Endosulfan
Endrin
Fluoranthene
G-BHC (Lindane)
Halomethanes
Heptachlor
Heptachlor Epoxide
Hexachlorobenzene
PCBS (Total)
Pentachlorophenol
TCDD Equivalents
Toluene
Toxaphene
Tributyltin



Location Map: City of San Mateo
Water Pollution Control Plant

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 95-056

UPDATED WASTE DISCHARGE REQUIREMENTS FOR;

CITY OF SAN MATEO
SAN MATEO LANDFILL-EAST THIRD AVENUE DISPOSAL SITE
SAN MATEO, CALIFORNIA

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

SITE DESCRIPTION:

1. The City of San Mateo (hereinafter referred to as the discharger), owns an inactive municipal solid waste disposal site referred to as the East Third Avenue Disposal Site.

2. The East Third Avenue Disposal Site is bounded on the north and east by San Francisco Bay, on the west by San Mateo Creek, and on the south by East Third Avenue, as shown in Figure 1, which is incorporated herein and made part of this Order. The landfill extends about 2,100 feet in an east-west direction, varying in width from 300 feet at the west end to about 900 feet at the east end. The maximum height of the closed landfill will range from 55 to 60 feet when the final cap is completed.

PURPOSE OF ORDER UPDATE:

3. The purpose of this Order is to update the site's groundwater, surface water and leachate monitoring systems, and to incorporate the requirements of the General Industrial Stormwater Runoff program. This Order requires the discharger to protect shoreline stability and to prevent waste exposure to the Bay water. Additionally, this Order requires the discharger to monitor the leachate buildup in the waste unit over time. This Order also requires the discharger to bring the site into full compliance with the current requirements of Chapter 15 of the California Code of Regulations.

SITE HISTORY:

4. The landfill was constructed by disposing of approximately 1.73 million cubic yards of garden, construction and demolition wastes, creek and channel cleaning and other non-garbage type waste into the Bay. However, there is documentation that non inert wastes, such as incinerator ash from the San Mateo sewage treatment plant and material from street sweeping has been disposed of at this landfill.

5. The landfill closed to general dumping on April 28, 1982.

6. Since 1982, the discharger has been allowed to conduct an on site composting operation to provide compost for using in the vegetative layer for the final closure cap. The discharger ceased composting operation in 1990.

7 In June of 1992, the City of San Mateo, submitted a closure plan which has been tentatively approved by the California Integrated Waste Management Board.

8. The Board adopted Resolution No. 62-404 on March 15, 1962 prescribing Waste Discharge Requirements for this landfill.

9. The Board updated Waste Discharge Requirements (WDR) Order No. 87-140 on October 21, 1987.

REGIONAL GEOLOGY:

10. The East Third Avenue Disposal Site is located on the western shore of San Francisco Bay. The bay occupies a major structural depression between the Coast Ranges and the San Andreas fault zone to the west, and the Berkeley Hills and Hayward and Calaveras faults to the east. The present day geomorphic structures of this region has been the result of downwarping movements along these faults and tectonic structures.

11. Subsurface geology is characterized by series of continental and marine sediments overlying bedrock. The bedrock is exposed in the surrounding highlands and in isolated hills on the lowlands adjacent to the bay. Most of the bedrock consisted of Jurassic to Pliocene marine sediments, serpentine, quartz diorite, and rhyolite, with rocks of the Franciscan Complex predominating. Franciscan chert and greenstone outcrop at Coyote Point Regional Park, approximately 1 mile northwest of the site.

12. The Quaternary alluvium consisting of unconsolidated sand, silt, and clay overlies the bedrock. These sediments are stream, alluvial fan, and outwash plain deposits that occur as interfingering layers. In addition to these continental deposits, there is a blue-gray clay layer that represents marine deposits during interglacial periods. This unit commonly referred to as bay mud. The regional geology map is shown in Figure 2.

SITE GEOLOGY:

13. The surficial geology of the Third Avenue Disposal Site area is dominated by artificial fill material and recent alluvium. The peninsula on which the landfill is located consists of fill placed on former tidal flats. The fill is composed of poorly-to well-consolidated gravel, sand, silt and clay. Alluvial sequences are found in the site vicinity. These alluvial sequences provided sediments to form the Bay Mud. The soft impermeable clays know as the Younger Bay Mud are underlain by stiff impermeable clay of unknown thickness, generally referred as the Older Bay Mud.

HYDROGEOLOGIC SETTING OF THE SITE:

14. According to the California Department of Water Resources (1967), the site is in the Belmont Subarea of the San Mateo groundwater basin. The Belmont subarea includes the small alluvial fans on the eastern side of the Santa Cruz mountains, as well as much of the bay plain on the western side of San Francisco Bay between San Francisco and Redwood City. Groundwater is recharged from infiltration along the small streams in the uplands to the west. Groundwater flow is reportedly eastward toward the bay. The Belmont subarea is considered an important groundwater basin because the water-bearing sequences are generally fine-grained and less than 300 feet thick. Aquifer thickness is reported to decrease toward the Bay.

15. The groundwater beneath the site is confined by layers of bay mud above sand layers. The groundwater is interconnected with the bay waters, and water levels in wells will vary due to tidal influences. The water levels represent similar fluctuations as the San Francisco Bay tides, with water levels in the wells changing 20-40 percent of the bay's elevation change.

16. The groundwater chemical composition in the site vicinity is similar to that of San Francisco Bay. High electrical conductivities, total dissolved solids, and chlorides, frequently appear in the quarterly self monitoring reports.

BENEFICIAL USES:

17. The beneficial uses of San Francisco Bay surrounding the landfill are:

    a. Navigation
    b. Water contact recreation
    c. Non-water contact water recreation
    d. Ocean Commercial and Sport Fishing
    e. Commercial and sport fishing
    f. Wildlife Habitat
    g. Preservation of rare and endangered species
    h. Fish migration and spawning

i Shellfish Harvesting
j. Esturaine habitat

18. The present and potential beneficial uses of the deeper groundwater are as follows:
    a. Domestic and municipal water supply
    b. Industrial process supply
    c. Industrial service supply
    d. Agricultural supply

MONITORING PROGRAM:

19. Nine monitoring wells monitor the groundwater quality of the site. Four of these wells which are labeled as MW1, MW2, MW3, and MW4 are 4-inch diameter groundwater wells, and are located outside the perimeter of the refuse. These wells were installed in October of 1987 and are 30 to 60 feet deep. The remaining five wells are 2-inch diameter leachate monitoring wells. These wells are labeled as LW1, LW2, LW3, LW4 and LW5 and are located within the refuse limit. The leachate wells were installed in 1987, but three of the wells were replaced in 1991 as the refuse settlement caused the well casings damage. The leachate wells are each approximately 75 feet deep, with the exception of LW2 which is 40 feet deep.

20. This landfill is an existing Class III facility pursuant to Section 2510(d) of Chapter 15, but it does not meet the siting criteria for a Class III landfill as cited in Sections 2530(c) and 2533.

21. Federal Regulations [40 Code of Federal Regulations (CFR) Parts 122, 123, and 124] require specific categories of industrial activities, including landfills, to obtain a NPDES permit for storm water discharges. The State Water Resources Control Board has issued a General Permit for Storm Water Discharges Associated with Industrial Activities (NPDES Permit No. CAS000001). This facility is subject to these requirements. Pursuant to the Stormwater Discharge Program, this facility is required to submit a Notice of Intent for coverage under the General Permit; to prepare and implement a monitoring program; and to submit an annual report. Compliance with the monitoring and reporting requirements of this Order are intended to assure compliance with the requirements of the General Permit.

CALIFORNIA ENVIRONMENTAL QUALITY ACT:

22. This action is exempt from the provision of the California Environmental Quality Act pursuant to Section 15308, Title 14 of the California Code of Regulations.

23. Sanitary landfills could potentially impact groundwater if not properly designed maintain

and/or operated. Groundwater can also be affected by water that percolates through waste materials and extracts or dissolves substances from it and carries them into the groundwater.

24. Since its closure to public in 1982, no solid waste has been disposed of at this site, and the site is considered an inactive facility.

25. 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.

26. The Board in a public meeting heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the City of San Mateo, their agents, successors and assigns shall meet the applicable provisions contained in Title 23, Division 3 of Chapter 15, and Division 7 of California Water Code, and shall comply with the following:

A. PROHIBITIONS

1. Wastes shall not be in contact with ponded water.

2. Leachate from wastes and ponded water containing leachate or in contact with refuse shall not be discharged to waters of the State or of the United States.

3. The site is regulated as a closed facility. Therefore, no additional wastes of any origin or type shall be allowed to be deposited or stored within or upon this site.

4. 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. <u>Surface Waters</u>

      1. Floating, suspended, or deposited macroscopic particulate matter or foam.

      2. Bottom deposits or aquatic growth.

      3. Adversely alter 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

The groundwater shall not be degraded as a result of the waste maintained at the facility.

B. SPECIFICATIONS

1. All reports pursuant to this Order shall be prepared under the supervision of a registered civil engineer, California registered geologist or certified engineering geologist.

2. Waste shall not be exposed to the surface.

3. The site shall be protected from any washout or erosion of wastes from inundation which could occur as a result of a 100-year 24-hour precipitation event, or as the result of flooding with a return frequency of 100 years.

4. The discharger is required to monitor leachate build up over time, and implement a leachate management plan acceptable to executive officer to contain leachate with the waste management unit. If a leachate build up is detected within the waste management unit, a leachate collection and recovery system be installed.

REPORT DUE DATE: WITHIN 90 DAYS OF CONFIRMED LEACHATE BUILDUP

5. The discharger shall assure 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.

6. The landfill's cap shall be graded to a minimum slope of 3 percent in order to promote lateral runoff of precipitation.

7. The discharger shall maintain and monitor the waste unit so as not to cause a statistically significant difference to exist between water quality parameters at the compliance point and Water Quality Protection Standards as defined in Section 2550.2 of Article 5. The point of compliance as per Section 2550.5, Article 5 of Chapter 15 is a vertical surface

located at the hydraulically downgradient limit of the waste management unit that extends through the uppermost aquifer underlying the unit.

8. In the event of a release of a constituent of concern beyond the Point of Compliance, the site will begin a Compliance Period pursuant to Section 2550.6(a) of Chapter 15. During the Compliance Period, the discharger shall perform an Evaluation Monitoring Program and a Corrective Action Program.

9. The discharger shall install any reasonable additional groundwater and leachate monitoring devices required to fulfill the terms of any Discharge Monitoring Program issued by the Executive Officer.

10. Methane and other landfill gases shall be adequately vented, removed from the landfill units, or otherwise controlled to minimize the danger of explosion, adverse health effects, nuisance conditions, or the impairment of beneficial uses of water due to migration.

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 during the post-closure maintenance period.

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 as provided for by the performance standards adopted by the California Integrated Waste Management Board.

13. The discharger shall provide and maintain a minimum of two permanent surveyed monuments near the landfill from which the location and elevation of wastes, containment structures, and monitoring facilities can be determined throughout the post-closure and maintenance periods. These monuments shall be installed by a licensed land surveyor or registered civil engineer.

14. The Regional Board shall be notified immediately of any failure occurring in the waste management unit. Any failure which threatens the integrity of containment features or the landfill shall be promptly corrected after approval of the method and schedule by the Executive Officer.

15. The discharger shall maintain the facility so as to prevent a statistically significant increase in water quality parameters at the point of compliance as provided in Section 2550.5. According to Sections 2550.2 and 2550.3 of Chapter 15, the discharger is also required to establish a Water Quality Protection Standards (WQPS) and a list of Constituents of Concern (COCs) . The discharger shall meet the following schedule in implementing the requirements of this Provision. The discharger shall monitor a minimum of four quarters (one year) for the parameters listed in Table 2. Based upon the results of the monitoring, the discharger shall propose a revised list of COC's and

monitoring parameters in accordance with the requirements of this Order and Article 5 of Chapter 15. Within 15 months following the adoption of this Order, the discharger shall submit a monitoring program to include a statistical analysis method to the Board for approval by the Executive Officer. A non statistical method (e.g., concentration trend analysis and comparison to practical quantitation limits) will be utilized to evaluate the significance of groundwater data until the proposed statistical methods are approved by the Board.

16. Following the establishment of the COC's list, the discharger is required to monitor the chemical quality of leachate on a semi-annual basis for the parameters listed in Table 2.

17. The discharger must comply with all applicable provisions of Chapter 15 that are not specifically referred to in this Order.

18. The proposed sampling analysis program submitted by the discharger in August 1992, must be revised to include the monitoring requirements of this Order for approval by the executive officer.

REPORT DUE DATE: SIX MONTHS AFTER THE ADOPTION 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 or as provided below.

2. The discharger shall submit a detailed **Post Earthquake Inspection and Corrective Action Plan** acceptable to the Executive Officer to be implemented in the event of any earthquake generating ground shaking of Richter Magnitude 7 or greater at or within 30 miles of the landfill. The report shall describe the containment features, and ground water monitoring and leachate control facilities potentially impacted by the static and seismic deformations of the landfill. The plan shall provide for reporting results of the post earthquake inspection to the Board within 72 hours of the occurrence of the earthquake. Immediately after an earthquake event causing damage to the landfill structures, the corrective action plan shall be implemented and this Board shall be notified of any damage.

NOTIFICATION: IMMEDIATELY
REPORT DUE DATE: WITHIN THREE MONTHS OF ADOPTION OF THIS ORDER

3. The discharger shall submit a **Contingency Plan** to be instituted in the event of a leak or spill from the leachate facilities. The discharger shall give immediate notification to the San Francisco Bay Regional Water Quality Control Board, the Local Enforcement Agency (LEA), and the California Department of Toxic Substance Control. The discharger shall initiate its corrective action plan to stop and contain the migration of pollutants from the site.

NOTIFICATION: IMMEDIATELY
REPORT DUE DATE: WITHIN 7 DAYS AFTER THE INCIDENT

4. The discharger shall file with the Regional Board Discharge Monitoring Reports prepared under the supervision of a registered civil engineer or California registered geologist performed according to any **Discharge Monitoring Program** issued by the Executive Officer.

REPORT DUE DATE: July 1, 1995

5. The reports pursuant to these Provisions shall be prepared under the supervision of a registered civil engineer, registered geologist, or California certified engineering geologist.

6. The discharger shall comply with the Self Monitoring Program which is attached to and made part of this order and/or any amendments thereafter.

7. The discharger shall immediately notify the Board of any flooding, equipment failure, slope failure, or other change in site conditions which could impair the integrity of waste or leachate containment facilities or precipitation and drainage control structures.

NOTIFICATION: IMMEDIATELY
REPORT DUE DATE: WITHIN 7 DAYS AFTER THE INCIDENT

8. The discharger shall prepare, implement and submit a Storm Water Pollution Prevention Plan in accordance with requirements specified in State Water Resources Control Board General Permit for Storm Water Discharges Associated with Industrial Activities (NPDES Permit No. CAS000001).

REPORT DUE DATE: July 1, 1995

9. The discharger must reconstruct those portions of the landfill's cap which have settled such as to prevent ponding of water or exposure of waste.

10. The discharger shall prepare and submit an updated site topographic map prepared based on aerial photography of the site. The age of the aerial photography shall not be older than December 1, 1994. The map shall be annotated to show all groundwater, surface

water and leachate monitoring stations.

REPORT DUE DATE: WITHIN THREE MONTHS OF ADOPTION OF THIS ORDER

11. In the event of release of leachate from the waste unit into the environment, the discharger shall develop and implement a leachate management plan. This plan must include detailed information regarding leachate collection, recovery, treatment and disposal system. The implementation of this plan shall prevent leachate migration offsite.

REPORT DUE DATE: WITHIN 60 DAYS FROM EVENT

12. The discharger shall maintain a copy of this Order at its office with the environmental compliance staff who are responsible for related operation of this site.

13. This Board considers the property owner to have continuing responsibility for correcting any problems which may arise in the future as result of this waste discharge or related operations.

14. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office. To assume operation of this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. (Refer to Standard Provisions referenced above). The request must contain the requesting entity's full legal name, the address and telephone number of the persons responsible for contract with the Board and a statement. The statement shall comply with the signatory paragraph described in Standard Provisions and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code.

15. The discharger shall permit the Board or its authorized representative, upon presentation of credentials:

    a. Immediate 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 or by any other California State Agency.

d. Sampling of any discharge or ground water governed by this Order.

16. 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.

17. 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 Board's Basin Plan; or changes in the discharge characteristics.

18. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications and Provisions of this Order, shall also be provided to the Environmental Health Services Division of San Mateo Country.

19. This Order rescinds WDR Order No. 87-140

20. The shoreline protection project, which is to protect the landfill's toe berm against erosion and destruction resulting from the wave actions, must be implemented as approved. The discharger shall submit technical reports upon completion of the project to include as-built plans and Construction Quality Assurance (CQA) documents.

REPORT DUE DATE: SEPTEMBER 1, 1996

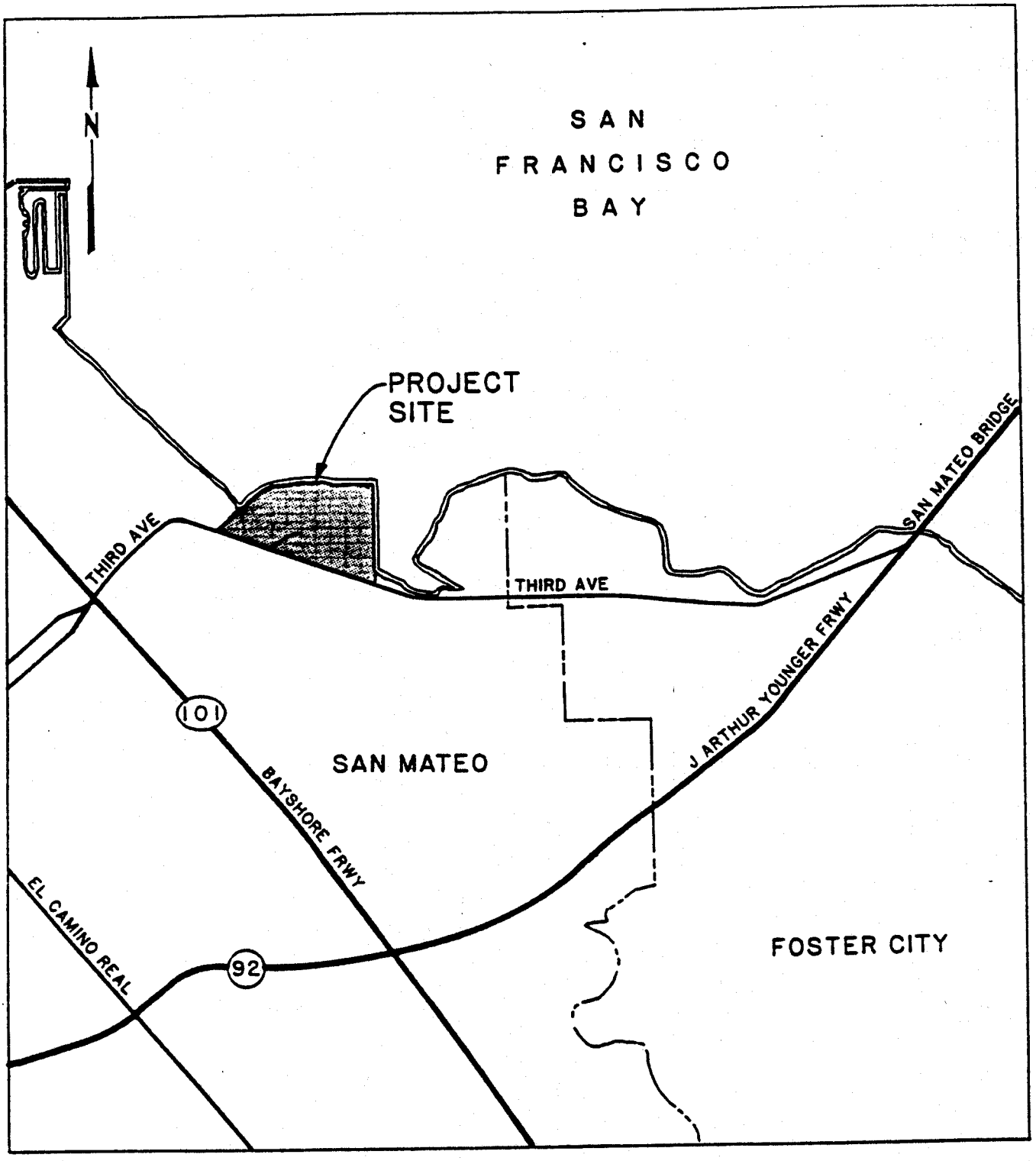
I, Steven R. Ritchie Executive Officer, do hereby certify that the foregoing is a full, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on March 15, 1995.

Steven R. Ritchie
Executive Officer

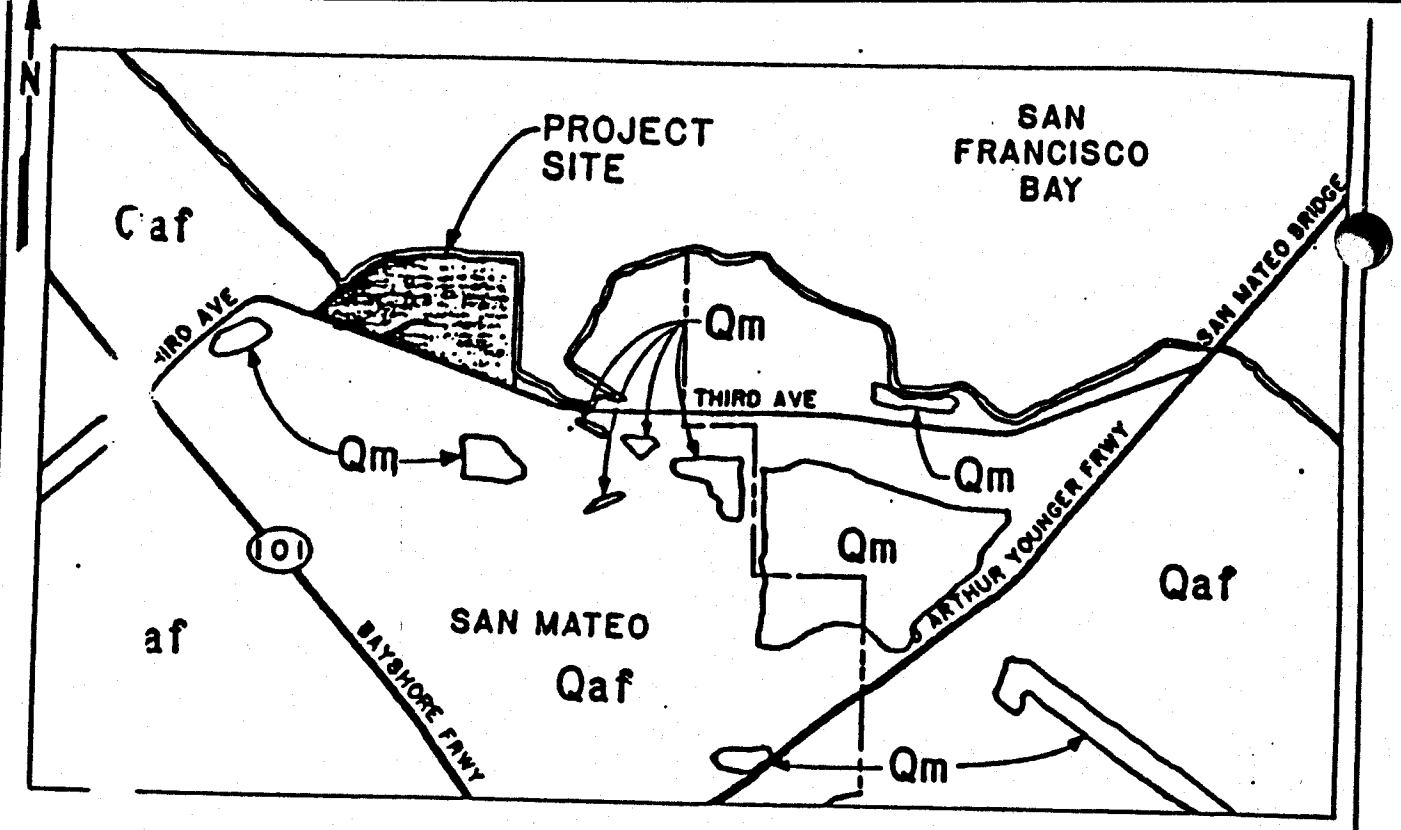
Attachments:

A. Figures:
   1. Site Location Map
   2. Regional geologic map

B. Discharge Monitoring Program



	DATE 07/01/90	EGC	ENVIRONMENTAL GEOTECHNICAL CONSULTANTS, INC.
	JOB NO. E056-02		CONSULTANTS IN APPLIED EARTH SCIENCE
	DWG NO. E056-02/4	PROJECT SITE LOCATION MAP	FIGURE NO. 1
	DRAWN J VALLAN	SAN MATEO LANDFILL	
	CHK'D L HUCKINS	EAST THIRD AVENUE DISPOSAL SITE	
	APP'D J HICKS	CITY OF SAN MATEO	REV NO.



NO S

1. G .OGY TAKEN FROM BRABB, E.E. AND EYAN 1983 GEOLOGIC MAP OF MATEO COUNTY, CALIFORNIA. ED STATES GEOLOGICAL SURVEY I-1257-A.

rence:
ronmental Geotechnical Consultants, Inc.
ional Geologic Map,
y 1990.

EXPLANATION

Qaf — ARTIFICIAL FILL

Qm — SAN FRANCISCO BAY MUD: SOFT CLAY AND SILT WITH SOME LENSES OF SAND, SHELL AND PLANT MATERIAL.

0.0 1.0 MI
GRAPHIC SCALE

Harding Lawson Associates
Engineering and Environmental Services

Regional Geology Map
City of San Mateo
East Third Avenue Disposal Site
San Mateo, California

FIGURE No. 2

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
JZ	17968,012.13		4/92	

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

DISCHARGE MONITORING PROGRAM

FOR

CITY OF SAN MATEO
SAN MATEO LANDFILL-EAST THIRD AVENUE
SAN MATEO COUNTY

ORDER NO. 95-056

CONSISTS OF

PART A

AND

PART B

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 Discharge Monitoring Program is issued in accordance with Provision C.4 of Regional Board Order No. 95-056.

The principal purposes of a discharge monitoring program 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 standards of performance, and toxicity standards,

(4) to assist the discharger in complying with the requirements of Article 5, Chapter 15 as revised July 1, 1991.

B. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to the most recent version of EPA Standard Methods and in accordance with an approved sampling and analysis plan.

Water and waste analysis shall be performed by a laboratory approved for these analyses by the State of California. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and he/she or their authorized representative 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 refers to any surface water which actually or potentially receives surface or groundwater which pass over, through, or under waste materials or

contaminated soils. In this case, the groundwater beneath and adjacent to the landfill areas and the surface runoff from the site are considered receiving waters.

3. Standard observations refer to:

   a. Receiving Waters

      1) Floating and suspended materials of waste origin: presence or absence, source, and size of affected area.
      2) Discoloration and turbidity: description of color, source, and size of affected area.
      3) Evidence of odors, presence or absence, characterization, source, and distance of travel from source.
      4) Evidence of beneficial use: presence of water associated wildlife.
      5) Flow rate.
      6) 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 a 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 (SA) and measurements are listed on Table 2 (attached).

D. SAMPLING, ANALYSIS, AND OBSERVATIONS

The discharger is required to perform sampling, analyses, and observations in the following media:

1. Groundwater per Section 2550.7(b)
2. Surface water per Section 2550.7(c) and per the general requirements specified in Section 2550.7(e) of Article 5, Chapter 15 and
3. Vadose zone per Section 2550.7(d). This item is neither feasible nor applicable for this landfill.

E. RECORDS TO BE MAINTAINED

Written reports shall be maintained by the discharger or laboratory, and shall be retained for a minimum of five years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the 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 of analyses, and name of the personal performing the analyses.

4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used where applicable; or reference to standard EPA methods.

5. Calculation of results.

6. Results of analyses, and detection limits for each analysis.

F. REPORTS TO BE FILED WITH THE BOARD

1. Written detection monitoring reports shall be filed by the 15th day of the month following the report period. In addition, an annual report shall be filed as indicated in F.3 below. The reports shall be comprised of the following:

   a. Letter of Transmittal

      A letter transmitting the essential points in each report should accompany each report. Such a letter shall include a discussion of any requirement violations found during the last report period, and actions taken or planned for correcting the violations. 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 report period, this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting the monitoring 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 monitoring report shall include a compliance evaluation summary. The

summary shall contain:

1) 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. A statistical evaluation of the water quality monitoring data for all groundwater compliance points (As required under Part B.Table 1).

2) The method and time of water level measurement, the type of pump used for purging, pump placement in the well; method of purging, pumping rate, equipment and methods used to monitor field PH, temperature, and conductivity during purging, calibration of the field equipment, results of the PH, temperature conductivity and turbidity testing, well recovery time, and method of disposing of the purge water.

3) Type of pump used, pump placement for sampling, a detailed description of the sampling procedure; number and description of equipment, field and travel blanks; number and description of duplicate samples; type of sample containers and preservatives used, the date and time of sampling, the name and qualification of the person actually taking the samples, and any other 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 director of the laboratory whose name appears on the laboratory certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Board.

1) The methods of analyses and detection limits must be appropriate for the expected concentrations. Specific methods of analyses must be identified. If methods other than EPA approved methods or Standard Methods are used, the exact methodology must be submitted for review and approval by the Executive Officer prior to use.

2) In addition to the results of the analyses, laboratory quality assurance/quality control (QA/QC) information must be included in the monitoring report. The laboratory QA/QC information should include the method, equipment and analytical detection limits; the recovery rates; and explanation for any recovery rate that is outside of the normal range specified by the EPA for that method; the results of equipment and method blanks; the results of spiked and surrogate samples; the frequency of quality control analysis; and the name of the person(s) performing the analyses.

e. An evaluation of the effectiveness of the leachate monitoring or control facilities, which includes an evaluation of leachate buildup within the disposal units, a summary of leachate volumes removed from the units, and a discussion of the leachate disposal methods utilized.

f. 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.

g. The quantity and types of wastes disposed of during the past quarter, and the locations of the disposal operations. [Not applicable for this site]

2. CONTINGENCY REPORTING

a. 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 the Board within five days thereafter. 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.

b. A report shall be made in writing to the Board within seven days of determining that a statistically significant increase occurred at a point of compliance (between a down gradient sample and a WQPS). Notification shall indicate what WQPS(s) has/have been exceeded. The discharger shall immediately re-sample at the compliance point where this difference has been found and reanalyze.

c. If re-sampling and analysis confirms the earlier finding of a statistically significant increase between monitoring results and WQPS(s), the discharger must submit to the Board an amended Report of Waste Discharge as specified in Section 2550.8(k)(5) for establishment of an Evaluation Monitoring Program (EMP) meeting the requirements of Section 2550.9 of Chapter 15.

d. Within 180 days of determining statistically significant evidence of a release, submit to the regional board an engineering feasibility study for a Corrective Action Program (CAP) necessary to meet the requirements of Section 2550.10. At a minimum, the feasibility study shall contain a detailed description of the corrective action measures that could be taken to achieve background concentrations for all constituents of concern.

3. REPORTING

By January 31 of each year, the discharger shall submit an annual report to the Board covering the previous calendar year. This report shall contain:

a. Tabular and graphical summaries of the monitoring data obtained during the previous year; the report should be accompanied by a 5-1/4" or 3-1/2" computer data disk, MS-DOS ASCII format, tabulating the year's data.

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 written summary of the groundwater analyses indicating any change in the quality of the groundwater

d. An evaluation of the effectiveness of the leachate monitoring/control facilities, which includes an evaluation of leachate buildup within the disposal units, a summary of leachate volumes removed from the units, and a discussion of the leachate disposal methods utilized.

4. WELL LOGS

A boring log and a monitoring well construction log shall be submitted for each new sampling well established for 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. ON-SITE OBSERVATIONS - Report Semi-annually

STATION	DESCRIPTION	OBSERVATIONS	FREQUENCY
V-1 thru V-'n'	Located on the waste disposal area as deli-neated by a 500 foot grid network.	Standard observations for the waste management unit.	monthly
P-1 thru P-'n' (perim-eter)	Located at equidistant intervals not exceeding 1000 feet around the perimeter of the waste management unit.	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 semi-annually monitoring report.

B. GROUNDWATER, LEACHATE AND SURFACE WATER MONITORING

Report Semi-annually

Groundwater, surface water, Leachate and seepage monitoring points shall be monitored as outlined below on Table 1 and Table 2 and shown on Figure 1 (Attached).

During the wet season (October through April), estimate or calculate the volume of

storm water discharge from each outfall and collect and analyze samples of storm water discharge from two storm events during each wet season which produce significant storm water discharge as defined in State Water Resources Control Board Order No. 92-12-DWQ (General Permit for Storm Water Discharges). The samples must be analyzed for:

- pH, total suspended solids (TSS), specific conductance, and total organic carbon (TOC);

- Toxic chemicals and other pollutants that are likely to be present in storm water discharge in significant quantities.

TABLE 1

Monitoring Points For Each Monitoring Medium.:

MONITORING MEDIA	COMPLIANCE POINTS	UPGRADIENT POINTS
Surface Water	SW1, SW2	SW3
Groundwater	MW-1, MW-2, MW-3, MW-4	MW-4
Leachate	LW-1, LW-2, LW-3, LW-4, LW-4, LW-5	Not Applicable
Seepage	S-1 through S-n	

C. FACILITIES MONITORING

The discharger shall inspect all facilities to ensure proper and safe operation once per quarter and report quarterly. The facilities to be monitored shall include, but not be limited to:

a. Leachate collection and removal systems;
b. Surface water monitoring points;
c. Shallow and deep groundwater monitoring wells;
d. Perimeter diversion channels;

e. Leachate wells;

I, Steven Ritchie Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in this Board's Order No. 95-056
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.

Steven R. Ritchie
Executive Officer

Date Ordered: March 15, 1995
Figure 1 - Monitoring Points Location map
Table 2 - Discharge Monitoring Plan

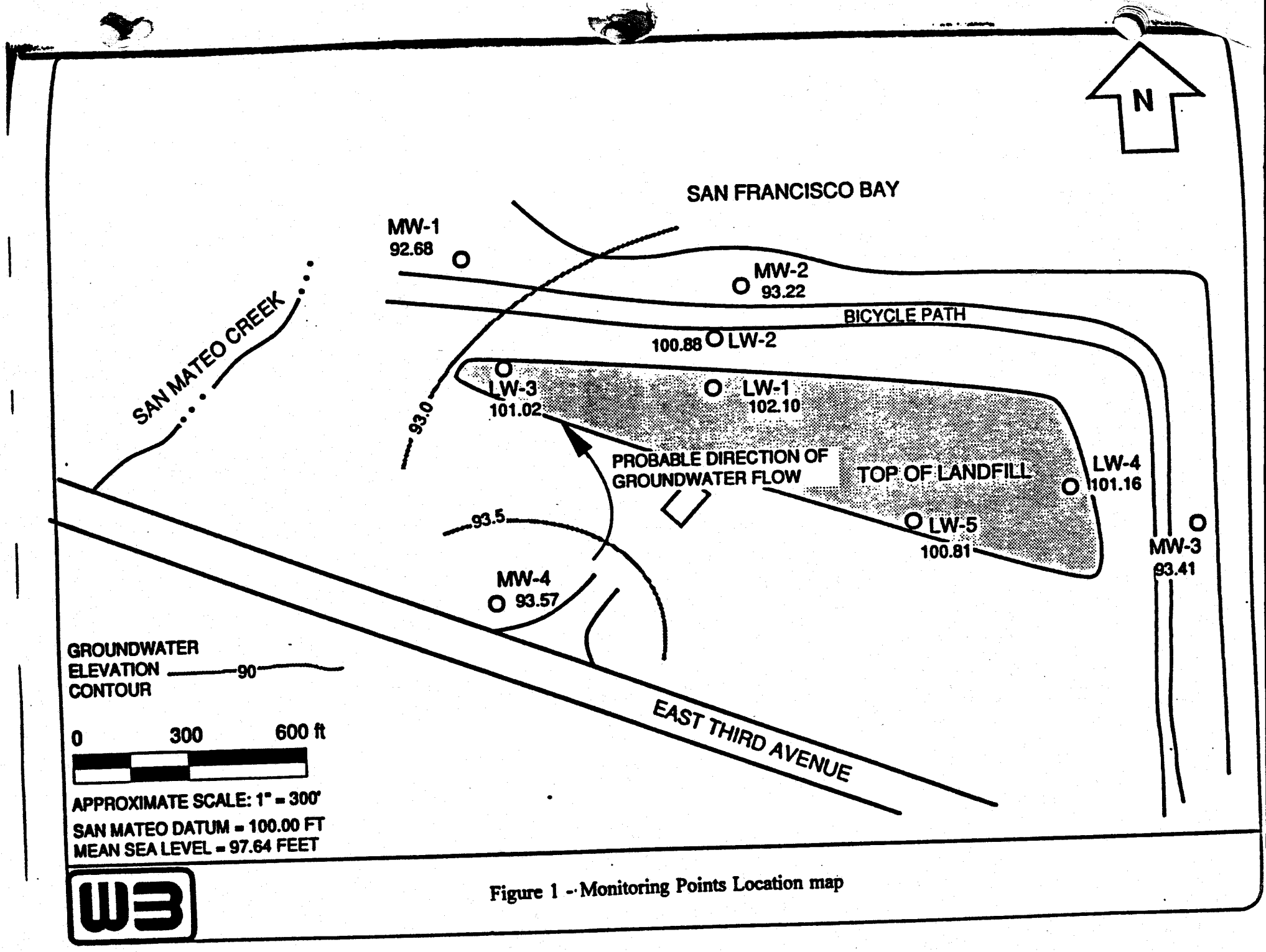


Figure 1 -- Monitoring Points Location map

Table 2 - Discharge Monitoring Plan, List of Analytical Parameters

Parameters	Method (USEPA)	Frequency	Reference
Leachate Level Measurements	Field	Semi-annual	1
Water Level Measurements	Field	Semi-annual	1
Temperature Measurements	Field	Semi-annual	1
Electrical Conductivity	Field	Semi-annual	3
pH	Field	Semi-annual	3
Total Organic Carbon	415.1	Semi-annual	2
Total Nitrogen (the sum of Nitrate Nitrogen and Kjeldahl Nitrogen)	351.2	Semi-annual	2
Turbidity	Field	Semi-annual	1 ,4
Alkalinity, bicarbonate	310.1	Semi-annual	2
Alkalinity, hydroxide	310.1	Semi-annual	2
Biological Oxygen Demand	410.4	Semi-annual	4
Amonia as N (nonionized)	350.1	Semi-annual	4
Chemical Oxygen Demand	410.2	Semi-annaul	2 ,4
Total Dissolved Solids	160.1	Semi-annual	2 ,4
Total Suspended Solids	160.2	Semi-annual	2 ,4
Volatile Organic Compounds (Appendix I)	8260 w/ capillary column	Once in 5 yrs	3
Volatile Organic Compounds (Appendix I&II)	8260/w capillary column	Once in 5 yrs	3
Appendix II Semi-volatile Organics Compounds	8270	Once in 5 yrs	3
Organophosphorus Pesticides & PCB's	8140 w/ capillary column	Once in 5 yrs	3

Chlorinated Herbicides	8150 w/ capillary column	Once in 5 yr	3
Arsenic	7061	Semi-annual	3
Cadmium	7131	Semi-annual	3
Chromium	6010	Semi-annual	3
Copper	6010	Semi-annual	3
Lead	7421	Semi-annual	3
Mercury	7470	Semi-annual	3
Nickel	6010	Semi-anual	3
Selenium	7740	Semi-annual	3
Silver	6010	Semi-annual	3
Zinc	6010	Semi-annual	3

1. Not Applicable
2. Methods for Chemical Analysis of Water and Wastes, EPA600/4/79/029, revised March 1983
3. EPA SW-846
4. Only for surface water monitoring