

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 90-005  
NPDES NO. CA0038318

REISSUING WASTE DISCHARGE REQUIREMENTS FOR

CITY AND COUNTY OF SAN FRANCISCO  
(SAN FRANCISCO INTERNATIONAL AIRPORT, WATER QUALITY CONTROL PLANT)  
AND NORTH BAYSIDE SYSTEM UNIT  
SAN MATEO COUNTY

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

1. The City and County of San Francisco, hereinafter Discharger, submitted a report of waste discharge dated June 30, 1989 for reissuance of NPDES Permit No. CA0038318. The North Bayside System Unit (NBSU) is the Joint Powers Authority responsible for operation of certain shared transport and disposal facilities (the NBSU combined forcemain-outfall). The NBSU includes the Cities of Millbrae, Burlingame, South San Francisco and San Bruno, San Francisco International Airport, and Marine Magnesium Company. The joint effluent is dechlorinated prior to discharge into San Francisco Bay. The Airport's Water Quality Control Plant contributes about 4% of the NBSU flow.
2. During 1988 the Discharger discharged an average dry weather flow of about 0.8 million gallons per day (mgd) from its secondary treatment plant, the Water Quality Control Plant (WQCP), which has a current dry weather design capacity of 2.2 mgd. Treatment facilities consist of bar screens, grit chambers, one primary clarifier, aeration tanks, one final clarifier, and chlorination. This plant treats domestic wastewater from the various facilities at the Airport. The treated wastewater is discharged into the combined NBSU forcemain and outfall with final disposal into the deep water channel of lower San Francisco Bay, a water of the State and United States, northeast of Point San Bruno through a submerged diffuser about 5300 feet offshore at a depth of 20 feet below mean lower low water (Latitude 37 deg., 39 min., 55 sec.; Longitude 122 deg., 21 min., 41 sec.).
3. The discharge is presently subject to NPDES Permit No. CA0038318 (Order No. 85-9, adopted on January 16, 1985) which allows discharge into San Francisco Bay.
4. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986, and the State Water Resources Control Board (SWRCB) approved it on May 21, 1987.
5. 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:

Water Contact Recreation  
Non-contact Water Recreation  
Wildlife Habitat

Preservation of Rare and Endangered Species  
Estuarine Habitat  
Fish Migration and Spawning  
Industrial Service Supply  
Shellfish Harvesting  
Navigation  
Commercial and Sport Fishing

6. The NBSU joint outfall is located about six and one-half miles north of major shellfish beds along the San Mateo - Foster City shoreline. The Basin Plan sets stringent coliform limitations near shellfishing beds, specifying that a seven sample median shall not exceed 2.2 MPN/100 ml nor a maximum of 240 MPN/100 ml. Exceptions to these requirements may be granted by the Board where it is demonstrated that beneficial uses will not be compromised by such an exception. Dischargers receiving such exceptions shall not exceed a five sample median of 23 MPN/100 ml nor a maximum of 240 MPN/100 ml during dry weather. The Discharger's WQCP and the NBSU has qualified for this exception.

The Board may also consider establishing less stringent requirements for discharges during wet weather. Protection of shellfish harvesting in the vicinity of the NBSU outfall will not often be possible during wet weather unless significant resources are devoted to improved control and/or treatment of contaminated runoff. Shellfish beds in this area are not legally open for recreational harvesting during wet weather because of the lack of progress to date by EPA, State, City, and other agencies in controlling non-point sources of pollution. Until such improvements are achieved, the quality of water overlying the shellfish beds during wet weather will most often be controlled by the amount and type of runoff present. Therefore, the Discharger qualifies for less stringent coliform requirements during wet weather.

7. The Discharger submitted a technical report titled "Effluent Toxicity Study, San Francisco International Airport, Water Quality Control Plant" (dated December 1985) to the Board. The report concluded that high concentrations of un-ionized ammonia was the source of effluent toxicity observed in the past. The report recommended controlling the pH or combining the WQCP's effluent with effluent from the Discharger's Industrial Wastewater Treatment Plant in order to eliminate toxicity caused by un-ionized ammonia. The Discharger has proposed and Board staff approve of controlling the pH of the WQCP's effluent during toxicity testing.
8. 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, recommended operation strategies, process control monitoring, and maintenance activities. In order to remain a useful and relevant document, the manual should be kept updated to reflect significant changes in treatment facilities or operational procedures.
9. 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 (CEQA) pursuant to Section 13389 of the California Water Code.

10. 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 with the opportunity for a public hearing and opportunity to submit their written views and recommendations.
11. 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. Bypass or overflow of untreated or partially treated wastewater to waters of the State either at the treatment plant or from any of the collection or transport system or pump stations tributary to the treatment plant or outfall is prohibited.
3. The average dry weather flow shall not exceed 2.2 mgd. This average shall be determined over three consecutive dry weather months each year.

B. Effluent Limitations

1. Effluent discharged into the combined forcemain-outfall shall not exceed the following limits:

| <u>Constituents</u>            | <u>Units</u> | <u>Monthly Average</u> | <u>Weekly Average</u> | <u>Maximum Daily</u> | <u>Instantaneous Maximum</u> |
|--------------------------------|--------------|------------------------|-----------------------|----------------------|------------------------------|
| a. Settleable Matter           | ml/l-hr      | 0.1                    | ---                   | ---                  | 0.2                          |
| b. CBOD <sub>5</sub>           | mg/l         | 25                     | 40                    | 50                   | ---                          |
| 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                          |

- (1) Requirement defined as below the limit of detection in standard test methods. Compliance with this limitation will normally be demonstrated at the NBSU joint dechlorination facility.
2. The arithmetic mean of the carbonaceous biochemical oxygen demand (5-day, 20°C) and suspended solids values, by weight for effluent samples collected in a 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 (85 percent removal).

3. The pH of the discharge shall not exceed 9.0 nor be less than 6.0.
4. The survival of test organisms acceptable to the Executive Officer in 96-hour bioassays of the effluent shall achieve a 90 percentile value of not less than 50% survival based on the ten most recent consecutive samples. Compliance with this limitation may be demonstrated after the effluent pH has been adjusted to minimize the concentration of un-ionized ammonia.
5. Representative samples of the effluent shall not exceed the following limits (1):

| <u>Constituents</u>                         | <u>Units</u> | <u>Daily<br/>Maximum</u> |
|---|--------------|--------------------------|
| a. Arsenic                                  | ug/l         | 200                      |
| b. Cadmium                                  | ug/l         | 30                       |
| c. Chromium(VI) (2)                         | ug/l         | 110                      |
| d. Copper                                   | ug/l         | 200                      |
| e. Lead                                     | ug/l         | 56                       |
| f. Mercury                                  | ug/l         | 1                        |
| g. Nickel                                   | ug/l         | 71                       |
| h. Silver                                   | ug/l         | 23                       |
| i. Zinc                                     | ug/l         | 580                      |
| j. Cyanide                                  | ug/l         | 25                       |
| k. Phenols                                  | ug/l         | 500                      |
| l. Polynuclear Aromatic<br>Hydrocarbons (3) | ug/l         | 150                      |
| m. Selenium (4)                             | ug/l         | ---                      |

- (1) These limits are based on a combination of fresh and salt water quality objectives, technological achievability, limits of detection, and limited allowance for dilution. These limits are intended to be achieved through a combination of Best Available Technology, secondary treatment, source control, and application of pretreatment standards.
  - (2) The Discharger, at its option, may meet this limit as total chromium.
  - (3) As identified by EPA Method 610. If a discharge exceeds the limit for PAHs, concentrations of individual constituents should be reported.
  - (4) Selenium limitation to be established.
6. During the months of May through September inclusive, the moving median value for the Most Probable Number (MPN) of total coliform in any five (5) consecutive effluent samples shall not exceed 23 coliform organisms per 100 milliliters. Any single sample shall not exceed 240 MPN/100 ml. During the wet weather months of October through April inclusive, the moving median value for the Most Probable Number (MPN) of total coliform in any five (5) consecutive effluent samples shall not exceed 240 coliform organisms per 100 milliliters. Any single sample shall not exceed 2400 MPN/100 ml.

### 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 particulated matter or foam;
  - b. Bottom deposits or aquatic growths;
  - c. Alteration of temperature, turbidity, taste, odor, 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 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 concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:
  - a. Dissolved oxygen                      5.0 mg/l minimum. Median of any three consecutive months shall not be less than 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
  - b. Dissolved sulfide                      0.1 mg/l maximum
  - c. pH    Variation from natural ambient pH by more than 0.5 pH units.
  - d. Un-ionized ammonia                      0.025 mg/l as N Annual Median  
    0.4 mg/l as N Maximum
3. The Discharger shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

### D. Sludge Requirements

1. Permanent 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 commencing any such activity.

2. The treatment, disposal, storage, or processing of sludge shall not create a condition of pollution or nuisance as defined in Section 13050(1) and (m) of the California Water Code.
3. The treatment, disposal, storage, or processing of sewage sludge shall not cause waste material to be in any position where it is, or can be, carried from the sludge treatment, disposal, storage, or processing site and be deposited in waters of the State.
4. Any sludge treatment, disposal, storage, or processing 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 disposal site to escape from the site. Adequate protection is defined as protected from at least a 100-year storm and from the highest tidal stage that may occur.
5. The direct or indirect discharge of sludge waste to waters of the State is prohibited.
6. Sludge management and disposal practices shall comply with all current state and EPA regulations, including 40 CFR 257.
7. This permit may be reopened to include sludge management requirements promulgated under Section 405(d)(2) of the Clean Water Act, provided that the existing permit contains less stringent sludge management requirements.
8. The Discharger shall provide written notice to the Regional Board at least 90 days prior to making any significant changes in sludge disposal practices.

#### E. Provisions

1. The requirements prescribed by this Order supersede the requirements prescribed by Order No. 85-9. Order No. 85-9 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:  
  
$$\text{Mass Emission Limit (in lbs/day or kg/day)} = \text{Concentration Limit in mg/l} \times (8.34 \text{ or } 3.79) \times \text{Actual Flow in mgd averaged over the time interval to which the limit applies.}$$
3. The Discharger shall comply with all sections of this Order immediately upon adoption.
4. The Discharger shall review and update its Operations and Maintenance Manual annually, or in the event of significant facility or process changes, shortly after such changes have occurred. Annual revisions, or letters stating that no changes are needed, shall be submitted to the Regional Board by April 15 of each year. Documentation of operator input and review should accompany each annual update.

5. The Discharger shall review and update annually its contingency plan as required by Board Resolution No. 74-10. Annual revisions, or letters stating that no changes are needed, shall be submitted to the Regional Board by April 15 of each year. The discharge of pollutants in violation of this Order where the Discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.
6. The Discharger shall comply with the attached self-monitoring program. The Executive Officer may make minor amendments to it pursuant to federal regulations (40 CFR 122.63).
7. The Discharger shall comply with all applicable items of the attached "Standard Provisions and Reporting Requirements," dated December, 1986.
8. This Order expires on January 17, 1995. The Discharger must file a Report of Waste Discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.
9. This Order shall serve as a National Pollutant Discharge Elimination System 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, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

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 January 17, 1990.

  
STEVEN R. RITCHIE  
Executive Officer

Attachments:

Standard Provisions & Reporting  
Requirements, December 1986  
Self-Monitoring Program  
Resolution 74-10

[File No. 2179.7032]  
[Originator/JMJ]  
[Reviewer/SAH]

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM  
FOR

SAN FRANCISCO INTERNATIONAL AIRPORT - WQCP

AND NORTH BAYSIDE SYSTEM UNIT

SAN MATEO COUNTY

NPDES NO. CA 0038318

ORDER NO. 90-005

CONSISTS OF

PART A, dated December 1986

AND

PART B

PART B

SAN FRANCISCO INTERNATIONAL AIRPORT WQCP AND NBSU

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT AND INTAKE

| <u>Station</u> | <u>Description</u>  |
|----------------|---|
| 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

| <u>Station</u> | <u>Description</u>  |
|----------------|---|
| E-001          | At any point in the plant after disinfection between the point of discharge into the combined forcemain-outfall and the point at which all waste from the treatment plant is present.           |
| E-002          | At any point in the combined outfall after dechlorination between the point of discharge into San Francisco Bay and the point at which all waste tributary to that combined outfall is present. |

C. RECEIVING WATERS

| <u>Station</u> | <u>Description</u>   |
|----------------|--|
| C-1            | At a point in San Francisco Bay located over the geometric center of the outfall's discharge ports.                |
| C-2            | At a point in San Francisco Bay located midway between C-1 and C-3.  |
| C-3            | At a point in San Francisco Bay located in the center of the waste plume.  |
| C-50-SW        | At a point in San Francisco Bay, located 50 feet southwesterly, along the outfall line shoreward from Station C-1. |
| C-50-NW        | At a point in San Francisco Bay, located 50 feet northwesterly from Station C-1, normal to the outfall line.       |

- C-50-NE At a point in San Francisco Bay, located 50 feet northeasterly from Station C-1, along the outfall line extended.
- C-50-SE At a point in San Francisco Bay, located 50 feet southeasterly from Station C-1, normal to the outfall.
- C-300-N  
through  
C-300-NW  
(8 stations) At a point in San Francisco Bay located on a 300 foot radius from the geometric center of the outfall diffuser, at equidistant intervals, with Station C-300-SW located shoreward from Station C-1 at the outfall line.
- C-R-NW At a point in San Francisco Bay located approximately 1500 feet northerly from the point of discharge.
- C-R-SE At a point in San Francisco Bay located approximately 1500 feet southeasterly from the point of discharge.

D. LAND OBSERVATIONS

| <u>Station</u>       | <u>Description</u>  |
|----------------------|---|
| P-1 through<br>P-'n' | Located along the periphery of the waste treatment or disposal facilities, at equidistant intervals, not to exceed 500 feet. (A sketch showing the locations of these stations will accompany each report.) |

E. OVERFLOWS AND BYPASSES

| <u>Station</u>            | <u>Description</u>   |
|---------------------------|--|
| OV-1<br>through<br>OV-'n' | 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.

I, Steven R. Ritchie, 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. 90-005.
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

1/17/90

**Attachments:**

Table I and Footnotes  
Part A, December 1986

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

| Sampling Station  | A-001 | E-001            |                          | E-002              |                 |                          | All C Sta | All P Sta        |   |
|---|-------|------------------|--------------------------|--------------------|-----------------|--------------------------|-----------|------------------|---|
| TYPE OF SAMPLE  | C-24  | G <sup>3)</sup>  | C-24                     | Cont               | G <sup>3)</sup> | C-24 <sup>9)</sup>       | Cont      | G <sup>10)</sup> | O |
| Flow Rate (mgd)   |       |                  |                          | Cont               |                 |                          | Cont      |                  |   |
| C BOD, 5-day, 20°C, or COD (mg/l & kg/day)                | 2/W   |                  | 3/W                      |                    |                 | 5/W                      |           |                  |   |
| Chlorine Residual & Dosage (mg/l & kg/day)                |       |                  | 2H or Cont <sup>5)</sup> |                    |                 | 2H or Cont <sup>5)</sup> |           |                  |   |
| Settleable Matter (ml/1-hr. & cu. ft./day)                |       | D                |                          |                    | D               |                          |           |                  |   |
| Total Suspended Matter (mg/l & kg/day)                    | 2/W   |                  | 5/W                      |                    |                 | 5/W                      |           |                  |   |
| Oil and Grease (mg/l & kg/day)                            | 2) M  | 2) M             |                          |                    | 2) M            |                          |           |                  |   |
| Coliform (Total or Fecal) (MPN/100 ml) per req't          |       | 3/W              |                          |                    | 5/W             |                          |           | M <sup>4)</sup>  |   |
| Fish Tox'y 96-hr. TL % Surv'l in undiluted waste          |       |                  |                          | 2) M <sup>8)</sup> |                 | M <sup>9)</sup>          |           |                  |   |
| Ammonia-N & Un-ionized NH <sub>3</sub> -N (mg/l & kg/day) | 2/M   |                  |                          | 2) M <sup>7)</sup> |                 | M <sup>6)</sup>          |           | M                |   |
| Nitrate Nitrogen (mg/l & kg/day)                          |       |                  |                          | 2) M <sup>7)</sup> |                 | M <sup>6)</sup>          |           |                  |   |
| Nitrite Nitrogen (mg/l & kg/day)                          |       |                  |                          | 2) M <sup>7)</sup> |                 | M <sup>6)</sup>          |           |                  |   |
| Total Organic Nitrogen (mg/l & kg/day)                    | 2/M   |                  |                          |                    |                 |                          |           |                  |   |
| Total Phosphate (mg/l & kg/day)                           |       |                  |                          |                    |                 |                          |           |                  |   |
| Turbidity (NTU)   |       |                  | D                        |                    |                 | M                        |           | M                |   |
| pH (units)  |       | D <sup>11)</sup> |                          |                    | D               |                          |           | M                |   |
| Dissolved Oxygen (mg/l and % Saturation)                  |       | D <sup>11)</sup> |                          |                    | D               |                          |           | M                |   |
| Temperature (°C)  |       | D <sup>11)</sup> |                          |                    | D               |                          |           | M                |   |
| Apparent Color (color units)                              |       |                  |                          |                    |                 |                          |           |                  |   |
| Secchi Disc (inches)                                      |       |                  |                          |                    |                 |                          |           | M                |   |
| Sulfides (if DO < 5.0 mg/l) Total & Dissolved (mg/l)      |       | D                |                          |                    | D               |                          |           | M                |   |
| Arsenic (mg/l & kg/day)                                   |       |                  | M <sup>12)</sup>         |                    |                 |                          |           |                  |   |
| Cadmium (mg/l & kg/day)                                   |       |                  | M <sup>12)</sup>         |                    |                 |                          |           |                  |   |
| Chromium, Total (mg/l & kg/day)                           |       |                  | M <sup>12)</sup>         |                    |                 |                          |           |                  |   |
| Copper (mg/l & kg/day)                                    |       |                  | M <sup>12)</sup>         |                    |                 |                          |           |                  |   |
| Cyanide (mg/l & kg/day)                                   |       |                  | M <sup>12)</sup>         |                    |                 |                          |           |                  |   |
| Silver (mg/l & kg/day)                                    |       |                  | M <sup>12)</sup>         |                    |                 |                          |           |                  |   |
| Lead (mg/l & kg/day)                                      |       |                  | M <sup>12)</sup>         |                    |                 |                          |           |                  |   |

TABLE I (continued)

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

| Sampling Station                                  | A-001 |   | E-001            |      | E-002 |      | All C Sta | All P Sta | All OV Sta       |   |  |  |  |  |
|---|-------|---|------------------|------|-------|------|-----------|-----------|------------------|---|--|--|--|--|
|   | C-24  | G | C-24             | Cont | G     | C-24 | Cont      | G         | O                |   |  |  |  |  |
| Mercury (mg/l & kg/day)                           |       |   | M <sup>12)</sup> |      |       |      |           |           |                  |   |  |  |  |  |
| Nickel (mg/l & kg/day)                            |       |   | M <sup>12)</sup> |      |       |      |           |           |                  |   |  |  |  |  |
| Zinc (mg/l & kg/day)                              |       |   | M <sup>12)</sup> |      |       |      |           |           |                  |   |  |  |  |  |
| Phenolic Compounds (mg/l & kg/day)                |       |   | Q <sup>12)</sup> |      |       |      |           |           |                  |   |  |  |  |  |
| All Applicable Standard Observations              |       | D |                  |      | D     |      |           | M         | E                | E |  |  |  |  |
| Bottom Sediment Analyses and Observations         |       |   |                  |      |       |      |           |           |                  |   |  |  |  |  |
| Total Ident. Chlor. Hydrocarbons (mg/l & kg/day)  |       |   |                  |      |       |      |           |           |                  |   |  |  |  |  |
| Dewatered Sludge                                  |       |   |                  |      |       |      |           |           | D <sup>13)</sup> |   |  |  |  |  |
| Daily Rainfall                                    |       |   |                  |      |       |      |           |           | D                |   |  |  |  |  |
| Polynuclear Aromatic Hydrocarbons (mg/l & kg/day) |       |   | Q <sup>12)</sup> |      |       |      |           |           |                  |   |  |  |  |  |
| Selenium (mg/l & kg/day)                          |       |   | M                |      |       |      |           |           |                  |   |  |  |  |  |

LEGEND FOR TABLE

TYPES OF SAMPLES

- G = grab sample
- C-24 = composite sample - 24-hour
- Cont = continuous sampling
- O = observation

FREQUENCY OF SAMPLING

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

TYPES OF STATIONS

- A = treatment facility influent stations
- E = waste effluent stations
- C = receiving water stations
- P = treatment facilities perimeter stations
- OV = overflows and bypasses

- 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
- Q = quarterly, once in March, June, Sept. and December

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

### 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:
  1. 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.)
  2. Grab samples for Total Coliform, Settleable Matter, Oil and Grease, and chlorine residual (continuous every two hours).
  3. Continuous monitoring of flow.
  
- 2/ Oil and Grease sampling shall consist of 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 for stations A-001 and E-001 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. Results for station E-002 shall be expressed as a simple average of the three values. 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.

The 3 grab samples may be combined and analyzed as a composite sample after submittal of data acceptable to the Executive Officer that the two techniques are equivalent. 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/ 5 samples per station at Stations C-1, 2, 3, CR-NW, and CR-SE only.
  
- 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/ These parameters shall be tested for on the same composite sample used for the bioassay.
  
- 7/ These parameters shall be tested for in the effluent when the flow-through bioassay test is in progress.

- 8/ 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. The sample may be taken from E-001 prior to disinfection instead of continuously dechlorinating E-001 effluent. Compliance with the toxicity limitation may be demonstrated after adjusting the effluent pH through the addition of concentrated sulfuric acid to minimize the concentration of unionized ammonia.
- 9/ Sample date for bioassay and for one of all other specified parameters at E-002 shall coincide with date and times of Marine Magnesium Company's E-001 composite sample.
- 10/ Sampling shall be coordinated to be on the same date and approximate time as for the City of San Mateo and the South Bayside System Authority.
- 11/ These parameters shall also 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).
- 12/ 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.
- 13/ Daily records shall be kept of the quantity and solids content of dewatered sludge disposed of and the location of disposal.