CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 90-155
NPDES NO. CA0029785

WASTE DISCHARGE REQUIREMENTS FOR:

DATA GENERAL CORPORATION
433 NORTH MATHILDA AVENUE FACILITY
SUNNYVALE, SANTA CLARA COUNTY

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

1. Data General Corporation, hereinafter called the discharger, by application dated July 14, 1988, has applied for issuance of waste discharge requirements under the National Pollutant Discharge Elimination System (NPDES).

2. Data General formerly owned the facility located at 433 North Mathilda Avenue, Sunnyvale, Santa Clara County, near the intersection of North Mathilda Avenue and Maude Avenue. Data General operated the facility for semiconductor design , research and development from 1972 to 1989. In 1989, Rohm U.S.A. Inc. purchased the facility from Data General.

3. Subsurface investigations by Data General, since 1982, have revealed that the soil and ground water beneath and downgradient of the site are polluted with trichloroethene, trans-1,2-dichloroethene, ethyl benzene, xylenes, and toluene. It is believed that the source of these pollutants were spills from a vaulted tank complex and/or the trench distribution system, operated and owned by Data General. Ground water beneath the site has also been polluted by other organic solvents such as tetrahydrofuran, methylene chloride, 1,1,1-trichloroethane, and 1,1-dichloroethane which are migrating onto the property from up-gradient sources.

4. Board Order No. 88-081, which was issued to Data General May 1988, contains provisions for the cleanup and abatement of the soil and ground water pollution described in Finding #3.

5. The discharger seeks to minimize further migration of VOCs and contain affected ground water by installing a ground water extraction and treatment system onsite. This system will consist of two extraction wells and an air stripper to reduce VOCs in the ground water.

   The discharger proposes to discharge from this treatment system an average of 34,560 gallons per day (gpd) and a maximum of 36,000 gpd of treated ground water to a storm

drain on Mathilda Avenue which is tributary to Santa Clara Valley Flood District Channel #1, Moffett Channel, Guadalupe Slough, and South San Francisco Bay.

The discharger has considered the feasibility of reclamation, reuse, or discharge to a publicly owned treatment works (POTW), as specified in Board Resolution No. 88-160. Because no manufacturing is presently occurring at the facility, onsite reclamation of ground water for facility production or landscape irrigation are considered infeasible at this time. Also, the City of Sunnyvale does not allow any discharges of treated ground water into their sewer system on a permanent basis.

6. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986. The Basin Plan contains water quality objectives for Calabazas Creek and South San Francisco Bay.

7. The existing and potential beneficial uses of Guadalupe Slough and South San Francisco Bay include:

   - Contact and non-contact water recreation
   - Wildlife habitat
   - Preservation of rare and endangered species
   - Estuarine habitat
   - Fish spawning and migration
   - Industrial service supply
   - Shellfishing
   - Navigation
   - Ocean commercial and sport fishing

8. The Basin Plan prohibits discharge of wastewater which has "particular characteristics of concern to beneficial uses" (a) "at any point in San Francisco Bay south of the Dumbarton Bridge" and (b) "at any point where the wastewater does not receive a minimum initial dilution of at least 10:1 or into any nontidal water, dead-end slough, similar confined water, or any immediate tributary thereof".

9. The Basin Plan allows for exceptions to the prohibitions referred to in Finding #8 above when it can be demonstrated that a net environmental benefit can be derived as a result of the discharge.

10. Exceptions to the prohibitions referred to in Finding #8 are warranted because this discharge is an integral part of a program to clean up polluted ground water and thereby produce an environmental benefit, and because receiving water concentrations are expected to be below levels that would affect beneficial uses. Should studies indicate chronic effects, not currently anticipated, the Board will review the requirements of this Order based upon Section B.1.e.

11. The Basin Plan prohibits discharge of "all conservative toxic and deleterious substances, above those levels which can be achieved by a program acceptable to the Board, to waters of the Basin". The discharger's ground water extraction and treatment systems and

associated operation, maintenance, and monitoring plans constitute an acceptable control program for minimizing the discharge of toxicants to waters of the State.

12. Effluent limitations of this Order are based on the Clean Water Act, Basin Plan, State and U. S. Environmental Protection Agency (EPA) plans and policies, and best engineering and geologic judgement. EPA Region IX draft guidance "NPDES Permit Limitations for Discharge of Contaminated Groundwater: Guidance Document" was also considered in the determination of effluent limits.

13. The issuance of waste discharge requirements for this discharge 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.

14. The Board has notified the discharger and interested agencies and persons of its intent to issue waste discharge requirements for the discharge and has provided them with the opportunity for a public hearing and an opportunity to submit their written views and recommendations.

15. 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 and regulations and guidelines adopted thereunder, shall comply with the following:

A. EFFLUENT LIMITATIONS

1. The effluent, at the discharge point to the storm drain, shall not contain constituents in excess of the limits contained in Table 1:

Table 1

Constituent	Instantaneous Maximum (µg/l)
VOCs	
trichloroethene	5.0
1,1,1-trichloroethane	5.0
1,1-dichloroethane	5.0
1,1-dichloroethene	5.0
(cis + trans)-1,2-dichloroethene	5.0
1,2-dichloroethane	0.5
dichloromethane	5.0
tetrachloroethene	5.0
vinyl chloride	0.5
chloroform	5.0
total VOCs	100.0
Aromatics	
ethyl benzene	5.0
toluene	5.0
xylenes	5.0
Metals	
arsenic	20.0
cadmium	10.0
chromium (VI)	11.0
copper	20.0
cyanide	25.0
lead	5.6
mercury	1.0
nickel	7.1
silver	2.3
zinc	58.0

2. The pH of the discharges shall not exceed 8.5 nor be less than 6.5.

3. In any representative set of samples, the discharges shall meet the following limit of quality:

   Toxicity: The survival of test fishes in 96-hour bioassays of the effluent as discharged shall be a median of 90% survival and a 90 percentile value of not less than 70% survival. The bioassays shall be performed using two test fish species in parallel tests. One test fish shall be rainbow trout and the other shall be fathead minnow.

B. RECEIVING WATER LIMITATIONS

1. The discharge of wastes shall not cause the following conditions to exist in waters of the State at any place:

   a. floating, suspended, or deposited macroscopic particulate matter or foam;

   b. bottom deposits or aquatic growths;

   c. alteration of temperature 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 concentrations.

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. pH: The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH levels by more than 0.5 units.

   b. 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 lesser concentration(s) than specified above, the discharge shall not cause further reduction in the concentration of dissolved oxygen.

   c. Un-ionized ammonia (as N): 0.025 mg/l annual mean
      0.4 mg/l maximum

3. This discharge 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 Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

C. PROVISIONS

1. The discharger shall comply with all sections of this order immediately upon adoption by the Board and upon starting any discharge.

2. The discharger shall comply with the self-monitoring program as adopted by the Board and as may be amended by the Executive Officer.

3. The discharger shall notify the Regional Board if any activity has occurred or will occur which would result in the discharge, on a frequent or routine basis, of any toxic pollutant which is not limited by this Order.

4. Any discharge to a location other than the discharge point(s) specified in this Order will require a modification to this Order or submission of a second NPDES application.

5. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December 1986 and modified January 1987, except items A.10, B.2, B.3, C.8 and C.11.

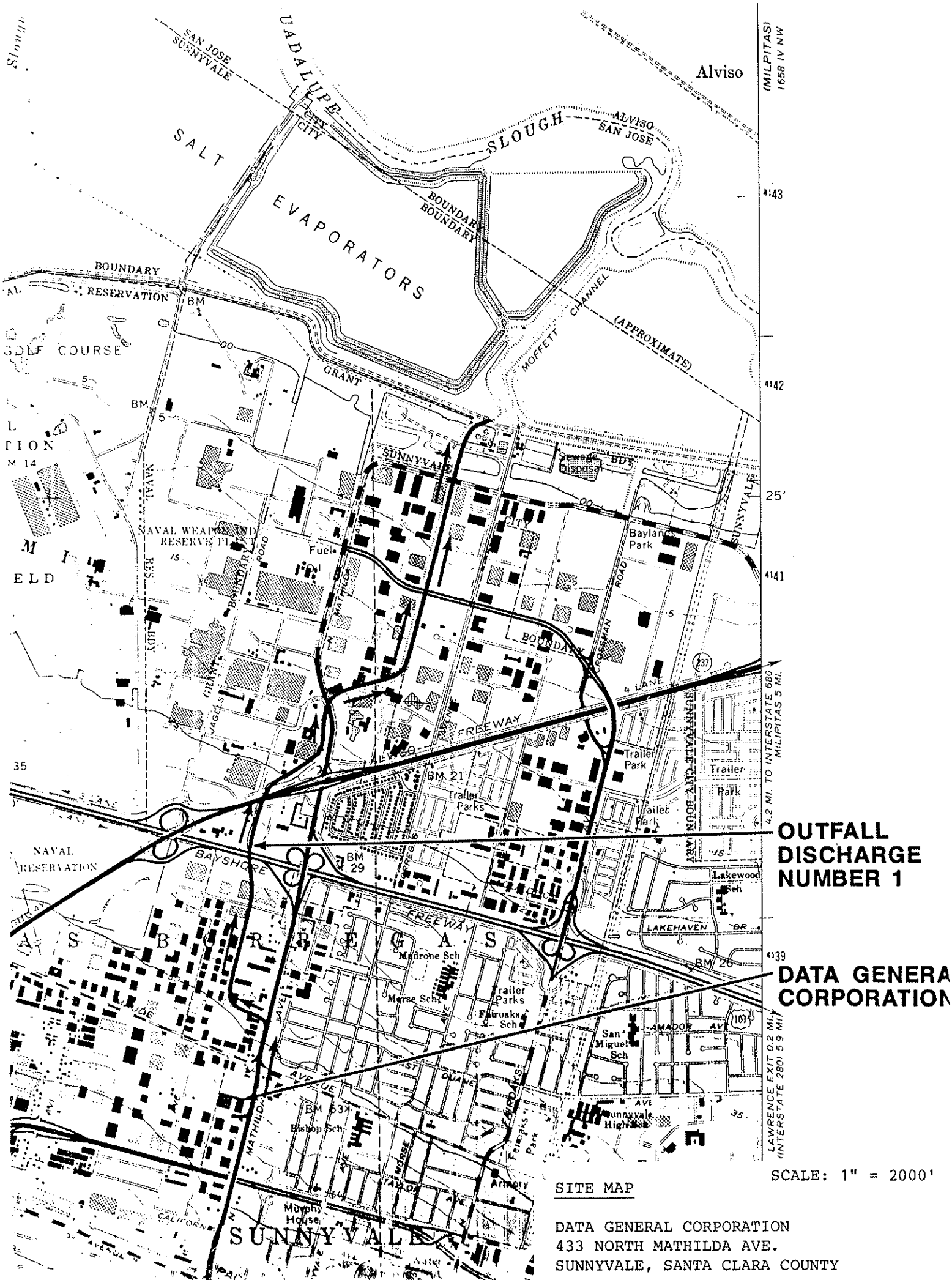
6. This Order expires December 12, 1995. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code no later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

7. 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 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 that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on December 12, 1990.

STEVEN R. RITCHIE
Executive Officer

Attachments:
Self-Monitoring Program
Site Map



SCALE: 1" = 2000'

SITE MAP

DATA GENERAL CORPORATION
433 NORTH MATHILDA AVE.
SUNNYVALE, SANTA CLARA COUNTY

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR:

DATA GENERAL CORPORATION
433 North Mathilda Avenue Facility
Sunnyvale, Santa Clara County

NPDES NO. CA0029785

ORDER NO. 90-155

CONSISTS OF:

PART A Dated December 1986 and modified January 1987

PART B Adopted December 12, 1990

PART B

DATA GENERAL CORPORATION
433 North Mathilda Avenue Site
Sunnyvale, Santa Clara County

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT

Station	Description
I-001	At a point in the ground water extraction system immediately prior to treatment in the air stripper.

B. EFFLUENT

Station	Description
E-001	At a point immediately following treatment in the air stripper.

C. RECEIVING WATERS

Station	Description
R-001	At a point in the Santa Clara Valley Flood District Channel #1, downstream of the storm drain outfall and south of Highway 101.

II. SCHEDULE OF SAMPLING AND ANALYSIS

The schedule of sampling and analysis is provided in the attached Table A.

III. MODIFICATIONS TO PART A, DATED DEC. 1986 AND MODIFIED JANUARY 1987

All items of Self-Monitoring Program Part A, dated December 1986 and as modified January 1987 shall be complied with except for the following:

A. Additions to Part A: Section G.4.d.5: "Results from each required analysis and observation shall be submitted as laboratory originated data summary sheets in the quarterly self-monitoring reports. All chromatographic peaks for purgeable halocarbons and/or volatile organics shall be identified and quantified for all effluent samples. If previously unquantified peaks are identified in any effluent sample, then these peaks shall be confirmed based on analyses using chemical standards necessary to achieve proper identification and quantification. Results shall also be submitted for any additional analyses performed by the discharger at the specific request of the Board for parameters for which effluent limits have been established and provided to the discharger by the Board."

B. Deletions from Part A: Sections D.2.b., D.2.g., D.3.b., E.1.e.1, E.1.f., E.2.b., E.3., E.4., E.5., F.2.b., G.2., G.4.b., and G.4.f.

C. Modifications to Part A: For the following, the discharger shall comply with the Sections as changed and reported herein:

1. Section D.2.a. is changed to read:

   "Samples of effluent and receiving waters shall be collected at times coincident with influent sampling unless otherwise stipulated. The Regional Board or Executive Officer may approve an alternative sampling plan if it is demonstrated that expected operating conditions warrant a deviation from the standard sampling plan."

2. Section D.2.d. is changed to read:

   "If two consecutive samples of any one constituent or parameter monitored on a weekly or monthly basis in a 30-day period exceed the effluent limit or are otherwise out of compliance, or if the required sampling frequency is once per month or less (quarterly, annually or other) and the sample or parameter exceeds the limit or is otherwise out of compliance, the discharger shall implement procedure(s) acceptable to or approved by the Board's Executive Officer, on a case by case basis."

3. Section D.2.e. is changed to read:

   "If any instantaneous maximum limit is exceeded, within 24 hours of receiving the analytical results indicating the violation, a confirmation sample shall be taken and analyzed with 24 hour turn-around time. If the instantaneous maximum is violated in the second sample, the discharge shall notify Regional Board staff immediately. The Executive Officer may order the discharge to be terminated, on a case-by-case basis."

4. In Section F.1, the phrase "(at the waste treatment plant)" is changed to read, "(at the location of the extraction and treatment system).

5. Monthly written reports required in Section G.4 shall be filed monthly by the thirtieth day of the following month.

6. Section G.4.e is changed to read:

   "Summary tabulations of the data shall include, for each constituent, total number of analyses, maximum, minimum, and average values for each period. Total flow data shall also be included. This information shall be prepared in a format similar to EPA Form 3320-1. This information shall be submitted only to the Regional Board:

   Executive Officer
   California Regional Water Quality Control Board
   1800 Harrison Street, Suite 700
   Oakland, CA 94612

7. The Annual Report required in Section G.5. shall be submitted by January 30 of each year in place of the monthly report due on the same day.

IV. MISCELLANEOUS REPORTING

If any chemicals or additives are proposed to be used in the operation and/or maintenance of the ground water extraction/treatment system, the discharger shall obtain the Executive Officer's concurrence prior to use. The details concerning such approved use shall be reported in the next periodic report submitted to the Board.

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 this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 90-155.

2. Was adopted by the Board on December 12, 1990.

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 or Regional Board.

STEVEN R. RITCHIE
Executive Officer

Attachment: Table A

TABLE A
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	I-1	E-1	R-1			
TYPE OF SAMPLE	G	G	G			
Flow Rate (mgd)	cont	cont				
BOD, 5-day 20°, or COD (mg/l & kg/day)		Y				
Total Dissolved Solids (mg/l)	Q	Q	Q			
Bio-assay 96-hr % survival (flow-through or static)		M/Q/Y				
Ammonia Nitrogen (mg/l & kg/day)		V				
Turbidity (NTU's)	W/Q	W/Q				
pH (units)	W/M	W/M	Q			
Dissolved Oxygen (mg/l and % saturation)		Q	Q			
Temperature (°C)	M	M	Q			
Arsenic (mg/l)	Q	W/Q	Q			
Cadmium (mg/l)	Q	W/Q	Q			
Chromium (hexavalent) (mg/l)	Q	W/Q	Q			
Copper (mg/l)	Q	W/Q	Q			
Cyanide (mg/l)	Q	W/Q	Q			
Lead (mg/l)	Q	W/Q	Q			
Mercury (mg/l)	Q	W/Q	Q			
Nickel (mg/l)	Q	W/Q	Q			
Silver (mg/l)	Q	W/Q	Q			
Zinc (mg/l)	Q	W/Q	Q			
EPA Method 601 with Freon 113	M/Q	W/M	Q			
EPA 602	M/Q	W/M	Q			
EPA 624* with tetrahydrofuran	Y	M/Y	Y			
Tetrahydrofuran **	M/Q	W/M	Q			
DAI/FID (direct aqueous injection (GC) with flame ionization detector)	M/Q	W/M	Q			

Adopted: December 12, 1990

LEGEND FOR TABLE A

TYPES OF SAMPLES

G = grab sample
C-24 = 24 hr. composite
Cont. = continuous sampling
DI = depth integrated sample
BS = bottom sediment sample
O = observation

TYPES OF STATIONS

I = intake or influent stations
E =effluent sampling stations
D = discharge point sampling stations
R = receiving water sample stations
L = basin and/or pond levee stations
B = bottom sediment station
G = groundwater station

FREQUENCY OF SAMPLING

H = once each hour
D = once each day
W = once each week
M = once each month

Y = once each year

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, September, and December

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

V = varies; total ammonia nitrogen shall be analyzed and unionized ammonia calculated whenever fish bioassay test results fail to meet the specified percent survival

W/M = weekly for first three months after startup of operations and reduced to monthly thereafter

M/Q/Y = monthly for first three months after startup of operations, reduced to quarterly for remainder of first year of operations, and reduced to annually thereafter

W/Y = weekly for first three months after startup of operations and reduced to annually thereafter

W/Q = weekly for first three months after startup of operations and reduced to quarterly thereafter

M/Y = monthly for first six months after startup of operations and reduced to annually thereafter

M/Q = monthly for first three months after startup of operations and reduced to quarterly thereafter

* When water samples are tested by EPA Method 624, it is not necessary to test the samples by EPA Methods 601 and 602.

** Tetrahydrofuran shall be quantified by gas chromatography and mass spectrophotometry (GC/MS).

Adopted: December 12, 1990