

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 87-13

NPDES NO. CA0029173

WASTE DISCHARGE REQUIREMENTS FOR:

NEC ELECTRONICS INC.  
501 ELLIS STREET FACILITY  
CITY OF MOUNTAIN VIEW, SANTA CLARA COUNTY

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

1. NEC Electronics Inc., (hereinafter called the discharger), by application dated September 4, 1986, has applied for issuance of waste discharge requirements and a permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES).
2. The discharger occupies approximately one acre of land in the City of Mountain View, Santa Clara County (See Site Map, Attachment 1). The discharger was, until April 1984, principally involved in electrical semiconductor manufacturing. No such operations are currently taking place at this site. The discharger has reported a total of two underground tanks and sumps on-site used to store and/or treat raw and waste product hazardous materials. The hazardous materials used on-site included trichlorobenzene (TCB), 1,1,1-trichloroethane (TCA), and freon.
3. Subsurface investigations were initiated by the discharger in September 1982. The investigations revealed organic chemical pollution, principally trichloroethene (TCE), TCB, and freon, in both soil and groundwater.
4. Remedial measures implemented by the discharger include the excavation of 86 cubic yards of soil and both of the underground tanks and sumps used to store and/or treat hazardous materials. No groundwater extraction wells have been installed to date.
5. The discharger proposes to conduct a long-term, single well aquifer test on NEC monitoring well 3A. The purpose of the test is to gain additional data to assess the hydraulic characteristics of the shallow aquifer and aquitard.
6. Waste 001 will consist of the effluent from the groundwater extraction and treatment system. The system may produce up to 14,400 gallons per day (gpd) of polluted groundwater. The

extracted groundwater will be treated by carbon adsorption prior to discharge to the storm drain system tributary to Stevens Creek, Whisman Slough, and South San Francisco Bay.

7. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on July 21, 1982. The Basin Plan contains water quality objectives for Stevens Creek, South San Francisco Bay, and contiguous surface and groundwaters.
8. The existing and potential beneficial uses of Stevens Creek include:
  - . Contact and non-contact water recreation
  - . Wildlife habitat
  - . Warm fresh water and cold fresh water habitat
  - . Fish spawning and migration
  - . Fresh water replenishment

The existing and potential beneficial uses of 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

The existing and potential beneficial uses of the groundwater underlying and in the vicinity of the site include:

- . Municipal and domestic supply
- . Industrial process and service supply
- . Agricultural supply

9. 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, deadend slough, similar confined water, or any immediate tributary thereof."
10. The Basin Plan allows for exceptions to the prohibitions referred to in Finding 9 above when it can be demonstrated that a net environmental benefit can be derived as a result of the discharge.
11. Exceptions to the prohibitions referred to in Finding 9 are warranted because the discharge is an integral part of a program to

cleanup contaminated groundwater and thereby produce an environmental benefit, and because receiving water concentrations are expected to be below levels that would effect 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 of this Order.

12. 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 groundwater extraction and treatment system and associated operation, maintenance, and monitoring plan constitutes an acceptable control program for minimizing the discharge of toxicants to waters of the State.
13. Effluent limitations of this Order are based on the Basin Plan, State plans and policies, this Board's "Discharge of Polluted Groundwater to Surface Waters: Guidance Document, September 1985," and best engineering judgment.
14. The September 1985 Guidance Document referred to in Finding 13 recommended an effluent limit of 100 ppb total volatile organic compounds (VOCs) for discharge to surface waters which do not provide groundwater recharge. A technical report submitted to the Board indicates that the receiving stream is not recharging shallow aquifers beneath its course. Regional Board, State Board, and Santa Clara Valley Water District staff concur that the stream appears not to provide recharge. Therefore, this Order's effluent limit of 100 ppb total VOCs is consistent with the Board's Guidance Document.
15. 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.
16. 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 an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
17. 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 discharge of waste 001 containing constituents in excess of the following limits is prohibited:

<u>Constituent</u>	<u>Units</u>	<u>Instantaneous Maximum</u>
Total concentration of all synthetic volatile organic compounds*	mg/l	0.100

\*Defined as the following volatile organic compounds and associated isomers: 1,1,1-trichloroethane, trichloroethene, 1,1-dichloroethane, 1,1-dichloroethene, 1,2-dichloroethene, tetrachloroethene, methylene chloride, vinyl chloride, chloroform, phenols, dichlorobenzenes, trichlorobenzenes, freon 113, and xylenes.

2. The pH of the discharge shall not exceed 8.5 nor be less than 6.5.
3. In any representative set of samples, the discharge of waste shall meet the following limit of quality:

TOXICITY: The survival of rainbow trout 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.

B. 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;
  - 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 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. The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation.
  - b. 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.
3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the 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.

#### Provisions

1. The discharger shall comply with all sections of this order immediately upon adoption.
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 also 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. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December 1986, except items B.2, B.3, C.8, and C.11.
5. This Order expires February 18, 1992. 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.
6. 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

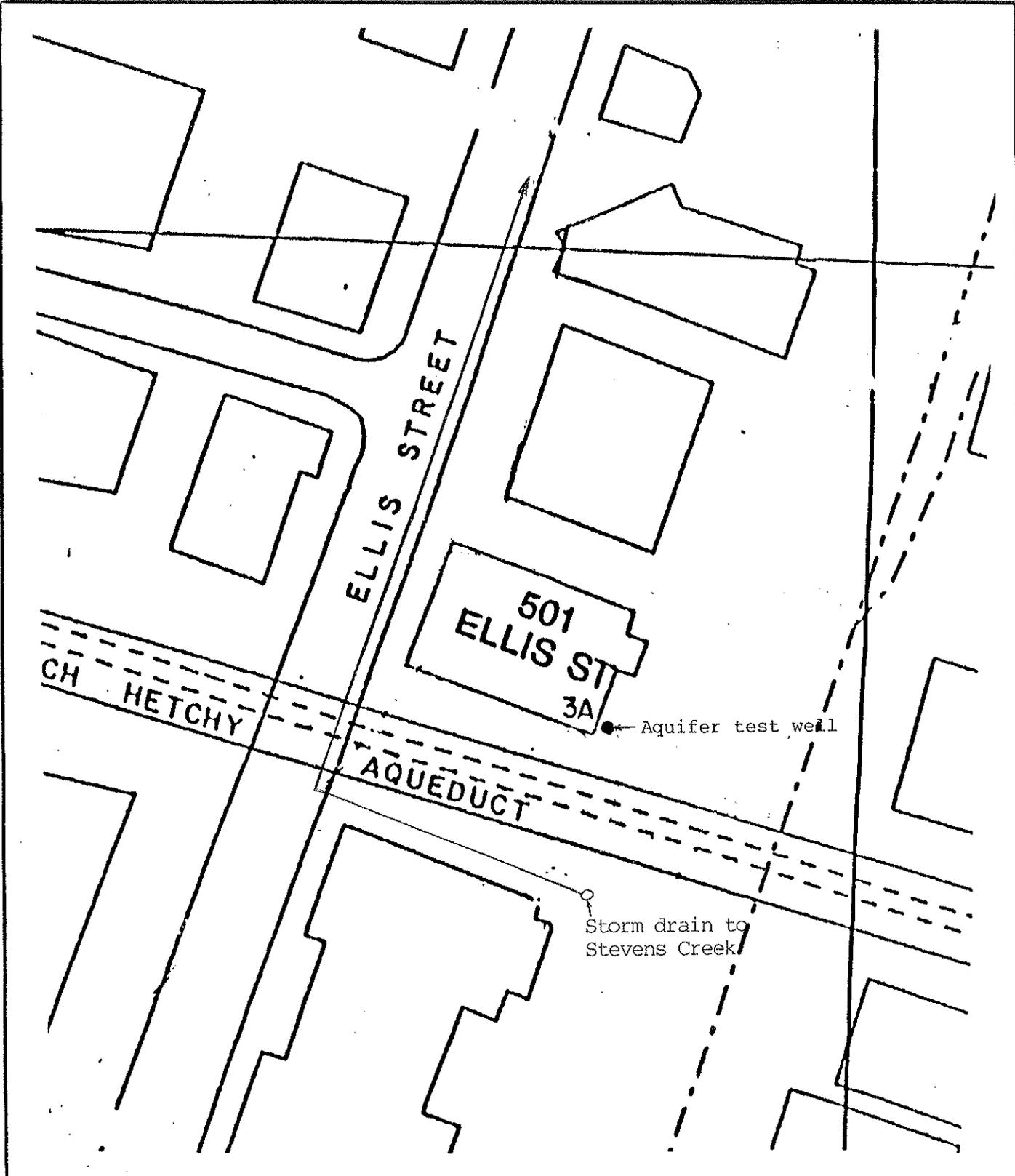
the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

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



ROGER B. JAMES  
Executive Officer

Attachments: Site Map  
Self Monitoring Program  
Standard Provisions & Reporting Requirements, December 1986



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<b>STATE OF CALIFORNIA</b> <b>REGIONAL WATER QUALITY CONTROL BOARD</b> <b>SAN FRANCISCO BAY REGION</b>		
ATTACHMENT 1 - SITE MAP  NEC ELECTRONICS INC., 501 ELLIS STREET SITE  MOUNTAIN VIEW, SANTA CLARA COUNTY		
DRAWN BY: TJB	DATE: 1-12-87	DRWG NO. 001

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM  
FOR

NEC ELECTRONICS INC.

501 ELLIS STREET FACILITY

CITY OF MOUNTAIN VIEW, SANTA CLARA COUNTY

NPDES NO. CA0029173

ORDER NO. 87-13

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

A. GENERAL

Basis

Reporting responsibilities of waste dischargers are specified in Sections 13225(a), 13267(b), 13268, 13383, and 13387(b) of the California Water Code and this Regional Board's Resolution No. 73-16.

Purpose

The principal purposes of a monitoring program by a waste discharger, also referred to as self-monitoring program, are: (1) to document compliance with waste discharge requirements and prohibitions established by this Regional Board, (2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge, (3) to develop or assist in the development of effluent or other limitations, discharger prohibitions national standards of performance, pretreatment and toxicity standards, and other standards, and (4) to prepare water and wastewater quality inventories.

B. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to the latest edition of Standard Methods for the Examination of Water and Wastewater prepared and published jointly by the American Public Health Association, American Water Works Association, and Water Pollution Control Federation, EPA Standard Methods, 40 CFR Part 136, Vol 40, No. 209, dated October 26, 1984, or other methods approved and specified by the Executive Officer of this Regional Board.

Water and waste analyses shall be performed by a laboratory approved for these analyses by the State Department of Health Service (DOHS) or a laboratory waived by the Executive Officer from obtaining a certification for these analyses by the DOHS. The director of the laboratory supervisor who is directly responsible for analytical work performed shall supervise all analytical work including appropriate quality assurance/quality control procedures in his or her laboratory and shall sign all reports of such work submitted to the Regional Board.

All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

C. REPORTS TO BE FILED WITH THE REGIONAL BOARD

1. Violations of Requirements

In the event the discharger is unable to comply with the conditions of the waste discharge requirements and prohibitions due to:

- (a) maintenance work, power failures, or breakdown of waste treatment equipment, or
- (b) accidents caused by human error or negligence, or
- (c) other causes such as acts of nature,
- (d) poor operation or inadequate system design,

The discharger shall notify the Regional Board office by telephone as soon as he or his agents have knowledge of the incident and confirm this notification in writing within two weeks of the telephone notification. The written report shall include pertinent information explaining reasons for the noncompliance and shall indicate what steps were taken to prevent the problem from recurring.

The discharger shall file a written technical report at least 15 days prior to advertising for bid on any construction project which would cause or aggravate the discharge of waste in violation of requirements; said report shall describe the nature, costs and scheduling of all action necessary to preclude such discharge.

In addition, if the noncompliance caused by items (a), (b), (c) or (d) above is with respect to any of the effluent limits, the waste discharger shall promptly accelerate his monitoring program to weekly or as required by the Board's Executive Officer for those constituents which have been violated. Such analysis shall continue until such time as the effluent limits have been attained, or until such time as the Executive Officer determines to be appropriate. The results of such monitoring shall be included in the regular Self-Monitoring Report.

2. Bypass Reports

Bypassing reporting shall be an integral part of regular monitoring program reporting. A report on bypassing of untreated units shall be made which will include cause, time and date, duration and estimated volume bypassed, method used in estimating volume, and persons and agencies notified. Notification to the Regional Board shall be made immediately by telephone (415-464-1255), followed by a written account within 15 days.

3. Self-Monitoring Reports

a. Reporting Period:

Written reports shall be filed regularly for each calendar quarter by the fifteenth day of the following month.

b. Letter of Transmittal:

A letter transmitting self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period and actions taken or planned for correcting any requirement violation. If the discharger has previously submitted a detailed time schedule for correcting requirement violations, a reference to this correspondence will be satisfactory.

Monitoring reports and the letter transmitting reports shall be signed by either a principal executive officer or his duly authorized employee. 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 and correct.

c. Data Results:

- (1) Results from each required analysis and observation shall be submitted in the quarterly self-monitoring report. Results shall also be submitted for any additional analyses performed by the discharger for parameters for which limits have been established by the Board.
- (2) The report shall include a discussion of unexpected operational changes which could affect performance of the treatment system, such as flow fluctuations, maintenance shutdown, etc.
- (3) The report shall also identify a table identifying by method number the analytical procedures used for analyses. Any special methods shall be identified and should have prior approval of the Board's Executive Officer.
- (4) Lab results should be copied and submitted as an appendix to the regular report.
- (5) A map shall accompany the report, showing sampling locations and flow path of receiving waters as appropriate.

- (6) The report shall include an annual waste summary for the current year for each parameter of the attached Table I, showing the minimum, maximum, and average value for the month. The report for December shall include minimum, maximum and average for the year. all monitoring results shall be presented in a tabular format.

D. DESCRIPTION OF SAMPLING STATIONS

WASTE STREAM 001

1. INFLUENT

Stations

Description

I-1 At a point in the groundwater extraction system immediately prior to treatment.

2. EFFLUENT

Stations

Description

E-1 At a point in the groundwater extraction/treatment system immediately following treatment.

3. RECEIVING WATERS

Station

Description

C-1 At a point in Stevens Creek at least 100 yards but no more than 200 yards downstream from the storm sewer discharge point.

E. SCHEDULE OF SAMPLING AND ANALYSIS

The schedule of sampling and analysis shall be that given in Table I.

F. MISCELLANEOUS REPORTING

If any chemical additives are proposed to be used in the operation of the treatment system it shall be reported prior to their use.

I, Roger B. James, 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. 87-13.

2. Was adopted by the Board on February 18, 1987.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or upon request from the discharger, and revisions will be ordered by the Executive Officer.

A handwritten signature in black ink, appearing to read "Roger B. James". The signature is stylized with a large, looping initial "R" and "J".

ROGER B. JAMES  
Executive Officer

Attachments: Table I

TABLE 1

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	I-1	E-1	C-1
Type of Sample	G	G	G
Flow Rate (gal/day)		W	
pH (units)	M	2/M	Q
Temperature (°C)		Q	
Dissolved Oxygen (mg/l)		Q	Q
Total Suspended Matter (mg/l)		Q	
Fish Tox'y 96-hr. TL % Surv'l in Undiluted Waste		Y	
Total VOCs (ug/l) (See Note 1)	M	2/M	Q
Phenols, Trichlorobenzenes, Dichlorobenzenes, and Xylenes (ug/l) (See Note 2)	Q	Q	Q
GC/MS Scan (EPA 624/625) (ug/l) (See Note 3)	Y	Y	

1. Defined as the following volatile organic compounds and associated isomers: 1-1-1-trichloroethane, trichloroethene, 1,1-dichloroethane, 1,1-dichloroethene, 1,2-dichloroethene, tetrachloroethene, methylene chloride, vinyl chloride, chloroform, and freon 113.
2. Sampling at Stations I-1 and E-1 for phenols, trichlorobenzenes, dichlorobenzenes, and xylenes shall be conducted twice each month for the first three months after startup of operation and reduced to quarterly thereafter provided these chemicals are not detected during the first three months of sampling.
3. Includes priority pollutant metals.

LEGEND

- G = Grab sample  
Y = Yearly  
2/M = Twice each month; weekly for first three months after startup of operation  
Q = Quarterly, once in January, April, July, and October coincident with sampling at station E-1  
M = Monthly  
2/Y = Twice each year (March and September)  
W = Weekly