

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION**

ORDER NO. 90-097

NPDES NO. CA0029726

**WASTE DISCHARGE REQUIREMENTS FOR:**

CHEVRON USA, INC.  
SERVICE STATION #92435  
342 WEST CALAVERAS BLVD.  
MILPITAS, SANTA CLARA COUNTY

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

1. A Chevron service station was operated at 342 West Calaveras Blvd. in Milpitas and fuel leaks were detected.
2. Chevron USA (hereinafter discharger) by application dated December 7, 1989 and supplemental application dated February 27, 1990, has applied for waste discharge requirements and a permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES).
3. The discharger reports groundwater contamination was caused by leaks in the piping and underground gasoline and waste oil tanks.
4. Site investigations show that the groundwater beneath the site has been polluted by gasoline, and dissolved petroleum hydrocarbons (oil and diesel), benzene, toluene, xylene, ethylbenzene, and 1,2-dichloroethane. In addition, cadmium and zinc were detected in water samples obtained from the site.
5. The discharger proposes to remove polluted groundwater by utilizing up to three extraction wells. Groundwater will be treated by air stripping.
6. The Board adopted Resolution No. 88-160 on October 19, 1988. The Resolution urges dischargers of extracted groundwater from groundwater clean up projects to reclaim their effluent and that when reclamation is not technically and economically

feasible to discharge to publicly owned treatment works (POTWs). If neither reclamation nor discharge to POTWs is technically and economically feasible, it is the intent of the Board to adopt NPDES permits authorizing the discharge of extracted groundwater.

7. The discharger's groundwater pollution investigation and clean up operations have not been reviewed and their effectiveness is unknown. The Board will issue the NPDES Permit so clean up can proceed, but the term of the permit shall be limited to two years so the discharger's efforts to clean up can be reviewed.
8. During dry weather, the discharger will work with Caltrans to have the treated water used for irrigation. However, reclamation of all the treated groundwater is not technically and economically feasible. The discharger does not produce a significant volume of water at the site and there is no demand for industrial process water in the immediate area. Permission to discharge the treated groundwater to the local POTW has been denied. Therefore, the unused treated groundwater will be discharged to the storm sewer.
9. The proposed air stripping system is designed to handle a flow of 5 gallons per minute, or 7200 gallons per day (gpd). Effluent will be discharged through an inlet to the storm sewer located just Northwest of the intersection of East Calaveras Blvd. and Abel Street. The storm sewer drains to Penitencia Creek at 37° 25' 38" latitude and 121° 54' 29" longitude, then to Coyote Creek and South San Francisco Bay (see Attachment A).
10. The 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 Penitencia Creek, Coyote Creek, South San Francisco Bay and contiguous surface waters, and ground water.
11. The existing and potential beneficial uses of Penitencia Creek, Coyote Creek, South San Francisco Bay, and contiguous surface waters are:
  - a. Contact and Non-Contact Recreation
  - b. Cold Fresh Water Habitat
  - c. Warm Fresh Water Habitat
  - d. Wildlife Habitat
  - e. Fish Spawning and Migration
  - f. Navigation
  - g. Commercial and Sport Fishing
  - h. Preservation of Rare and Endangered Species
  - i. Shellfish Harvesting
  - j. Estuarine Habitat
  - k. Industrial Service Supply

12. The existing and potential beneficial uses of the ground waters in the Santa Clara Valley ground water basin are:
  - a. Municipal and Domestic supply
  - b. Industrial process supply
  - c. Industrial service supply
  - d. Agricultural supply
13. The Basin Plan prohibits discharge of wastewater which has "particular characteristics of concern to beneficial uses": (a) "at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1, or into any nontidal water, dead-end slough, similar confined waters, or any immediate tributaries thereof" and (b) at any point in "San Francisco Bay south of the Dumbarton Bridge."
14. The Basin Plan allows for exceptions to the prohibitions referred to in Finding 13, above, when it can be demonstrated that a net environmental benefit can be derived as a result of the discharge.
15. Exceptions to the prohibitions referred to in Finding 13, and which apply to the discharge, are warranted because the 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 future studies indicate chronic effects, not currently anticipated, the Board will review the requirements of this order based upon Receiving Water Limitation C.1.e.
16. 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.
17. Effluent limitations of this Order are based on the Basin Plan, State plans and policies, U.S. Environmental Protection Agency guidance, and best engineering and geologic judgement as to best available technology economically achievable.
18. 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.
19. 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.

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

A. Discharge Prohibitions

1. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by Section 13050 of the California Water Code.
2. The discharge shall be limited to treated groundwater and added chemicals which do not adversely affect the environment and comply with requirements of this Order.
3. The maximum monthly average flow shall not exceed 7200 gpd. If additional units, similar to the original treatment units, are provided, additional flow may be permitted in proportion to the capacity of the additional units upon written approval of the Board's Executive Officer.

B. Metals Limitations

1. The discharger shall undertake the metals study described in B.2. below, if the effluent at the point of discharge to the storm drain contains constituents in excess of the following limits:

<u>Constituent</u>	<u>Unit</u>	<u>Instantaneous Maximum</u>
a. Arsenic	ug/l	20.0
b. Cadmium	ug/l	10.0
c. Chromium VI	ug/l	11.0
d. Copper	ug/l	20.0
e. Lead	ug/l	5.6
f. Mercury	ug/l	1.0
g. Zinc	ug/l	58.0

2. If the effluent at the point of discharge to the storm drain contains constituents in excess of the limits in B.1. above, the discharger shall submit the following reports which are acceptable to the Executive Officer:

a. Within one month of finding an exceeded limit, submit a report on the concentration of the metal exceeding the limit: (1) in the effluent, (2) in the storm sewer discharge to Penitencia Creek, (3) up stream in Penitencia Creek, and (4) down stream in Penitencia Creek;

b. Within one month of finding an exceeded limit, submit a report describing the procedures to be employed and the schedule for determining the amount of metals in the background groundwater, and the amount of metals contamination on the site;

c. Within three months of finding an exceeded limit, submit a report to evaluate the available methods of metals removal, their costs and effectiveness; and

d. Within four months of finding an exceeded limit, submit a final report that evaluates cost of treatment to achieve compliance with the effluent limitation versus potential beneficial use impacts. Board staff will review the report and make recommendations regarding appropriate effluent metal limitations.

C. Effluent Limitations

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

<u>Constituent</u>	<u>Unit</u>	<u>Instantaneous Maximum</u>
a. Benzene	ug/l	5.0
b. Ethylbenzene	ug/l	5.0
c. Toluene	ug/l	0.5
d. Xylenes	ug/l	5.0
e. 1,2-Dichloroethane	ug/l	5.0
g. Total Petroleum Hydrocarbons as gas and diesel	ug/l	50.0

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

3. TOXICITY:

The survival of test fish in 96-hour static renewal bioassays of the discharge shall be a median of 90% survival and a 90 percentile value of not less than 70% survival.

D. 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. When natural factors cause lesser concentration(s) than specified above, the discharge shall not cause further reduction in the concentration of dissolved oxygen.
- 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.

c. Un-ionized ammonia: 0.025 mg/l as N Annual Median  
0.4 mg/l as N Maximum at any time

3. The 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 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.

E. Provisions

1. The discharger shall reclaim the maximum amount of effluent that is technically and economically feasible to reclaim.

2. The discharger shall comply with all sections of this Order immediately upon adoption.

3. The discharger shall comply with the Self-Monitoring Program as adopted by the Board and as may be amended by the Executive Officer. If new groundwater extraction and treatment systems are completed, the schedule of self-monitoring specified in Part B, Table 1, of the Self-Monitoring Program will be reviewed.

4. The discharger shall notify the Regional Board if the self-monitoring program results, or if any activity has occurred or will occur which would result in a frequent or routine discharge of any toxic pollutant not limited by this Order.

5. This permit may be modified prior to the expiration of to include effluent limitations for toxic constituents determined to be present in significant amounts in discharge through the comprehensive monitoring program included as part of this order.

6. The discharger shall comply with all items of attached "Standard Provisions and Reporting Requirements" dated December 1986 except Items A.10, B.2, B.3, C.11.

7. This Order expires June 20, 1992 pursuant to Findings 7 of this Order.



8. 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 objections. 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 June 20, 1990.



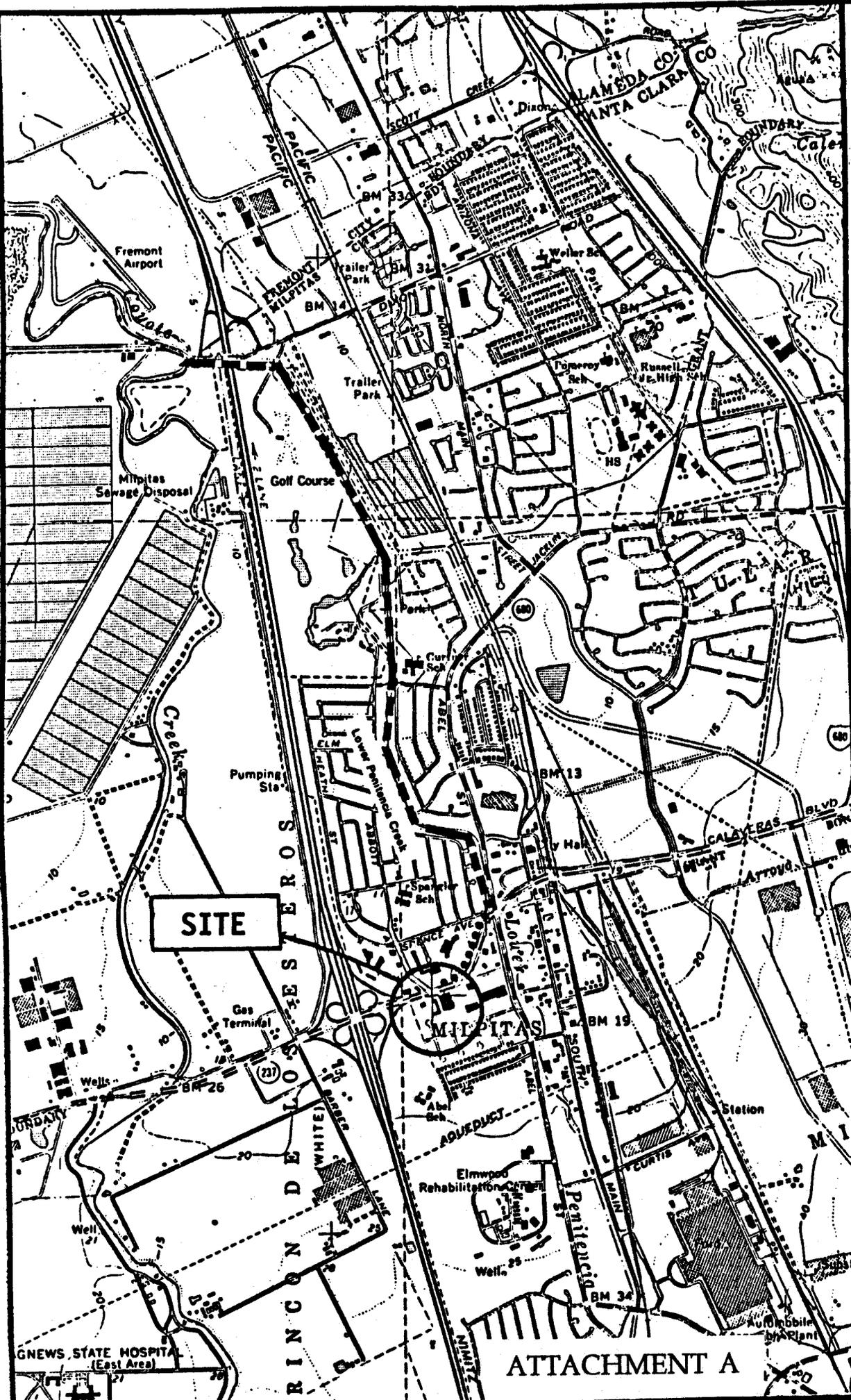
STEVEN R. RITCHIE  
EXECUTIVE OFFICER

**Attachments:**

Attachment A (Site Map)  
Standard Provisions & Reporting Requirements, December 1986.  
Self-Monitoring Program

Item XI.

Site Map of  
Chevron Station  
#92435



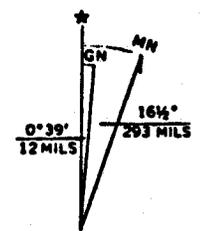
Lower Penitencia Creek



Storm Sewer



Scale 1 : 24,000



UTM GRID AND 1980 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

MILPITAS, CALIF.  
NW/4 SAN JOSE 15' QUADRANGLE  
N3722.5—W12152.5/7.5

1961  
PHOTOREVISED 1980  
DMA 1658 IV NW—SERIES V895

ATTACHMENT A

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM  
FOR

CHEVRON USA, INC.  
CHEVRON SERVICE STATION #92435  
342 WEST CALAVERAS BLVD.  
MILPITAS, SANTA CLARA COUNTY

NPDES NO. CA0029726

ORDER NO. 90-097

CONSISTS OF

PART A (dated December 1986 Mod. SBTD 1/23/87)

AND

PART B

Part B

SELF MONITORING PROGRAM FOR CHEVRON USA, INC.  
CHEVRON SERVICE STATION #92435  
MILPITAS, SANTA CLARA COUNTY

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT

Station

I-1 At a point after groundwater extraction and immediately prior to discharge to the treatment unit.

B. EFFLUENT

E-1 At a point after treatment but before discharge into the storm drain leading to Penitencia Creek.

C. RECEIVING WATERS

C-1 At a point 50 feet downstream from the point of discharge into Penitencia Creek.

II. START UP PHASE AND REPORTING

A. The Board's Executive Officer shall be notified in writing of the date of start up within 7 to 14 days before start up begins.

B. During the original start up for the treatment system, sampling of the effluent must occur on the first and fifth days. On the first day of the original start up, the system shall be allowed to run for at least two hours or until stabilized; then, influent and effluent shall be sampled and submitted for analyses. Prior to receipt of the results of the initial samples' analyses, all effluent shall be discharged into a holding tank (that is contained, not discharged into the storm sewer) until the results of the analyses show the discharge to be within the effluent limits established in the NPDES Permit. The operation may also be shut down after the first day's sampling to await the analyses results and, thereby, reduce the amount of storage needed for start up. If the results of the analyses show the discharge to be in violation, the effluent shall be disposed in accord with the provisions of Subchapter 15,

Title 23, California Administrative Code.

After the first day's sampling shows compliance, the system shall be operated a total of five days with discharge to the storm sewer, and be sampled again. While the fifth day's samples are being analyzed, the discharge may be discharged to the storm sewer as long as the analyses are received within 48 hours of sampling, and then, continue to be discharged to the storm sewer if the analyses show compliance. If a violation should occur, the discharge shall be directed to a holding tank and contained, or the system shall be shut down.

If the system is shut down during start up because of violation, the Region Board shall be notified within one day of shut down and told of the corrective measures to be taken to achieve compliance. If the system is shut down more than 48 hours during the original start up (awaiting analyses results, etc.), the original start up procedures and sampling must be started again when start up is resumed. If the system is shut down after the start up period (maintenance, repair, violations, etc.), the reasons for shut down, corrective action taken and the proposed start up procedures shall be reported to the Board within 15 days of shut down or before start up, whichever is sooner.

### III. MISCELLANEOUS REPORTING

A. A report describing the need, method of chemical application and disposal shall be submitted to the Board at least 30 days before the use of any chemicals in the treatment, or operation and maintenance of the treatment units, is to begin.

B. A report on the amount of effluent used for reclamation, name of the users, and the uses made of the reclaimed effluent shall be submitted to the Regional Board with the quarterly reports. Include an explanation of whether the amount of effluent used for reclamation during the quarter was the maximum that was technically and economically feasible to use.

### IV. SCHEDULE OF SAMPLING AND ANALYSIS

The schedule of sampling and analysis shall be that given in Table 1 (attached).

### V. BIOASSAY REQUIREMENT

The fish species to be used for compliance in the bioassay shall be rainbow trout.

VI. MODIFICATION TO PART A OF THE SELF-MONITORING PROGRAM

A. Delete Sections:

D.1.a., D.2.a., D.2.d., D.2.e., D.2.g., D.2.h., and E.4.

B. Insert Sections:

D.2.a. 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.

D.2.d. If analytical results are received showing any instantaneous maximum limit is exceeded, a confirmation sample shall be taken within 24 hours and results known within 24 hours of the sampling.

D.2.e. If any instantaneous maximum limit for a constituent, other than metals, is exceeded in the confirmation sample described in Section D.2.d., the discharge shall be terminated until the cause of the violation is found and corrected. For other violations, the discharger shall implement procedures that are acceptable to the Executive Officer on a case by case basis.

E.6. Waste Treatment Facilities

- a. Deposits, discolorations, and/or plugging in the treatment system (stripping tower, carbon filters, etc.) which could adversely affect the system reliability and performance.
- b. Operation of the float and/or pressure shut-off valves installed to prevent system overflow or bypass.

C. Modify Sections:

G.4. Written reports under G.4. shall be filed quarterly, by the 15th of January, April, July, and October.

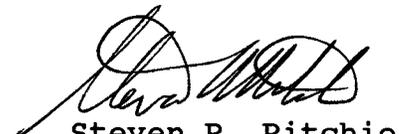
G.4.b. The report format shall be a format that is acceptable to the Executive Officer.

- G.4.d. The report format shall be a format that is acceptable to the Executive Officer.
- G.4.e. The report format shall be a format that is acceptable to the Executive Officer. NPDES Discharge Monitoring Report, EPA Form 3320-1, is provided as guidance. Influent and effluent data summary reports shall be submitted to the Regional Board and do not need to be submitted to EPA.

Address the copy to the Regional Board as follows:  
Executive Officer  
California Regional Water Quality Control Board  
San Francisco Bay Region  
1800 Harrison Street, Suite 700  
Oakland, CA 94612

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

1. Has been developed in accordance with the procedures set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 90-097.
2. Is effective on the date indicated 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 Executive Officer or Regional Board.



Steven R. Ritchie  
Executive Officer

Effective date: 6-20-90

Attachments: Table 1  
Appendices: A-E



TABLE 1 (continued)

## SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	I-1	E-1	C-1												
TYPE OF SAMPLE	G		G		G										
Mercury (mg/l & kg/day)			D/M		Y										
Nickel (mg/l & kg/day)															
Zinc (mg/l & kg/day)			D/M		Y										
Phenolic Compounds (mg/l & kg/day)															
All Applicable Standard Observations			Q		Q										
Bottom Sediment Analyses and Observations															
Total Ident. Chlor. Hydro- carbons (mg/l & kg/day)															
EPA 602 *	D/M		D/M		V										
EPA 601*	Y/V1		Y/V1		V										
EPA 8015 as gas & diesel	D/M		D/M		V										
Priority pollutant Metals			Y												
Electrical conductivity	O		O		O										

## LEGEND FOR TABLE

TYPES OF SAMPLES

- G = grab sample  
 C-24 = composite sample - 24-hour  
 C-X = composite sample - X hours  
 (used when discharge does not  
 continue for 24-hour period)  
 Cont = continuous sampling  
 DI = depth-intergrated sample  
 BS = bottom sediment sample  
 O = observation

TYPES OF STATIONS

- I = intake and/or water supply stations  
 A = treatment facility influent stations  
 E = waste effluent stations  
 C = receiving water stations  
 P = treatment facilities perimeter stations  
 L = basin and/or pond levee stations  
 B = bottom sediment stations  
 G = groundwaters stations

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 with  
 first during first week
- 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

D/M = Once during the first and the fifth day; monthly thereafter.

Y/V = Once during the first week of operation and annually thereafter; also, whenever a violation is found by EPA 602.

V = Sampling should be performed whenever E-1 is in violation.

V1 = Whenever a violation is found by EPA 602

\* Concentrations of the ten largest peaks in the chromatogram other than the priority pollutants listed in the method shall be identified.