

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 88-073
NPDES PERMIT NO. CA0029343

WASTE DISCHARGE REQUIREMENTS FOR:

TEXACO USA
377 MOWRY AVENUE
FREMONT, ALAMEDA COUNTY

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

1. Texaco USA (hereinafter called the discharger) operates a retail fuel service station located at 377 Mowry Avenue, Fremont, California. By application dated December 29, 1987, the discharger has applied for issuance of waste discharge requirements and a permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES).
2. Investigation shows that the groundwater beneath the site and adjacent areas have been polluted by dissolved gasoline, the constituents of which include benzene, toluene, xylene, and other petroleum hydrocarbons.
3. The plume of polluted groundwater is within 1/2 mile of the Peralta-Tyson Municipal Wellfield. Groundwater monitoring data indicates that the full extent of the pollution has not yet been determined. A proposal for investigating the extent of the pollution, and the effects of vertical gradients beneath the site, has been requested.
4. The discharger proposes to begin cleanup of polluted groundwater by operating an on-site extraction system. Based upon the design criteria and the data from the groundwater investigation, it is not clear that the proposed cleanup system will contain and remediate all polluted groundwater. The performance of the cleanup system will be evaluated to determine if any additional extraction wells will be required.
5. Waste 001 will consist of a maximum flow of 450,000 gallons per day (gpd) under initial operating conditions and following start-up of the treatment system. Under average operating conditions, the flow will be approximately 450,000 gpd. The polluted groundwater will be pumped from extraction wells, treated using an air stripping tower, and discharged into a storm drain on Mowry Avenue. This storm drain discharges into Tule Pond, which overflows into a second storm drain that discharges into Mowry Slough and the San Francisco Bay south of the

Dumbarton Bridge. Tule Pond is situated above the Newark Aquifer near the Mowry wellfield, which serves as a principal source of drinking water for the communities served by the Alameda County Water District.

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 San Francisco Bay and contains discharge prohibitions applicable to shallow water discharges in these areas.

7. The existing and potential beneficial uses of Tule Pond are:

- Wildlife Habitat
- Groundwater Recharge
- Non-contact recreation

8. The existing and potential beneficial uses of San Francisco Bay south of the Dumbarton Bridge include:

- Industrial service supply
- Contact and non-contact recreation
- Navigation
- Shellfish harvesting and commercial and sport fishing
- Preservation of rare and endangered species
- Fish spawning and migration
- Estuarine and wildlife habitat

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 affect beneficial uses.

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 dewatering 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, and best engineering judgement.

14. The issuance of waste discharge requirements for the discharge is exempt from the provisions of Chapter 3, (commencing with Section 15000), Division 6, Title 14 (Natural Resources) of the California Administrative Code (CEQA) pursuant to Section 13389 of the California Water Code.

15. The issuance of waste discharge requirements for the discharge is categorically exempt from the provisions of Chapter 3, (commencing with Section 15000), Division 6, Title 14 (Natural Resources) of the California Administrative Code (CEQA) pursuant to Section 15107 of that Chapter (Class 8: Actions by Regulatory Agencies for Protection of the Environment).

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 effluent at the point of discharge to the Mowry Avenue storm drain shall not contain constituents in excess of the following limit:

<u>Constituent</u>	<u>Unit</u>	<u>Instantaneous Maximum</u>
Benzene	ug/l	0.5
Toluene	ug/l	0.5
Xylenes	ug/l	0.5
Ethylbenzene	ug/l	0.5
Total Petroleum Hydrocarbons identified as gasoline	ug/l	50
Lead	ug/l	5.6
Copper	ug/l	20
Zinc	ug/l	58

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

3. TOXICITY:

The survival of test fishes in 96-hour static renewal bioassays of the discharge of waste 001 shall be a median of 90 percent survival and a 90 percentile value of not less than 70 percent survival.

Compliance of the bioassays shall be performed using two test species in parallel tests. One shall be three spined stickleback, and the other shall be either rainbow trout or fathead minnow.

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 water fowl, 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. 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. Un-ionized Ammonia: The concentration of un-ionized ammonia shall not exceed a maximum at any time of 0.4 mg/l as N and an annual median of 0.025 mg/l as N.

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

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.

Provisions

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

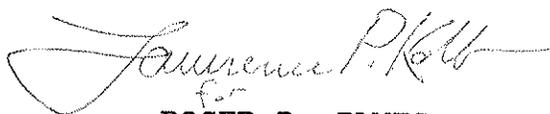
4. The discharger shall submit an operation and maintenance plan acceptable to the Executive Officer if chemical additions are added to the waste stream for the control of scaling or biological growth.

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

6. This Order expires March 16, 1993 and the discharger must file a report of Waste Discharge in accordance with Title 23, California Administrative Code, not 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 at the end of ten days from date of hearing provided the Regional Administrator, U.S. Environmental Protection Agency, has no objection.

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 May 18, 1988.

A handwritten signature in cursive script that reads "Lawrence P. Kelly".

for
ROGER B. JAMES
Executive Officer

Attachments:

Standard Provisions & Reporting Requirements, December 1986.
Self-Monitoring Program
Location Map

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

TEXACO USA SERVICE STATION
377 MOWRY AVENUE
FREMONT, ALAMEDA COUNTY

NPDES NO. CA 0029343
ORDER NO. 88-073

CONSISTS OF:

- 1) PART A, DATED DECEMBER, 1986
- 2) PART B

Part B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT

Station

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

B. EFFLUENT

Station

E-1 At a point in the groundwater extraction/
treatment system immediately following
treatment at a point before discharging into
the storm drain.

C. RECEIVING WATERS

Station

C-1 At a point in Tule Pond at least 100 feet but
no more than 200 feet down stream from the
point the storm drain discharges into Tule
Pond. If, due to low flow conditions, it is
not possible to obtain a water sample 100 to
200 feet downstream from the point of
discharge, then the sample shall be taken
from water ponding at the point of discharge.
This condition shall be noted in the periodic
reports submitted to the Board.

II. MISCELLANEOUS REPORTING

At least 30 days before any chemicals are utilized in or
added to the treatment system, they shall be reported to
the Executive Officer for review and approval.

III. START-UP PHASE REPORTING

During the start-up phase for a continuous flow-through
system, sampling must occur daily for the first five days.
All samples must be submitted to a certified laboratory for
24 hour analyses. On the first day of the start-up phase,

the system should be allowed to run for two hours or until stabilized; then, the influent and effluent should be sampled, and these samples should be submitted for 24 hr RUSH analyses. Prior to receipt of the results of the initial samples, any effluent should be discharged into a holding tank (ie, batched; not discharged into the storm drain) until the results of the analyses show the discharge to be within the effluent limits established in the NPDES permit. Discharge into the storm drain can only commence after confirmation that the discharge is in compliance with the NPDES discharge limitations. The discharge can continue UNLESS any lab results indicate a violation, in which case the discharge should be batched or the system should be turned off, the problem corrected, and in some cases a new start-up phase of daily sampling (for 5 days) using 24 hour turn around should be initiated.

After the 5 day start-up phase a report shall be submitted to the RWQCB that presents the results of the lab analyses, flow rates, chain of custody forms, and describes any changes or modifications of the treatment system. This report should be submitted to the RWQCB no more than fifteen days after the end of the start-up phase.

IV. SCHEDULE OF SAMPLING AND ANALYSIS

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

V. SHUTDOWN PROCEDURE

The discharge must be stopped or routed to a holding tank (not discharged into the storm drain) immediately upon laboratory verification that the discharge is in violation of any of the discharge limitations established in the NPDES permit. A report should be submitted within 15 days of the date of any violation to the RWQCB that describes the violation, the estimated volume of water that was discharged in violation of discharge limits, what corrective action was taken or is planned, and how the discharger will/has verified that future discharges will not impact or threaten to impact waters of the State.

VI. MODIFICATIONS TO PART A

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

A. Delete Sections D.2.d, D.2.g, E.1.e, and E.4.

B. Add the following as Section F.4:

4. A tabulation shall be maintained showing the total

quarterly volume of spent activated carbon (in cubic feet) from each treatment unit and the disposal site location.

- C. Section G.4.b shall be changed to read as follows:

Compliance Evaluation Summary

"Each report shall be accompanied by a compliance evaluation summary sheet prepared by the discharger. The report format will be prepared similar to the example shown in APPENDIX A (attached). The discharger will prepare the format substituting for the example parameters those parameters and requirement limits for influent, effluent and receiving water constituents specified in the permit."

- D. The first paragraph of Section G.4.d. shall be changed to read as follows:

"Each report shall include tabulations of the results from each required analysis specified in Part B by date, time, type of sample, detection limit, station, and shall be signed by the laboratory director. The report format will be prepared similar to the examples shown in APPENDIX B, substituting those parameters specified in the permit for the parameters given in the example."

- E. Information requested under Section G.4.e shall be prepared in a format similar to EPA Form 3320-1 and shall be submitted only to the Regional Board.

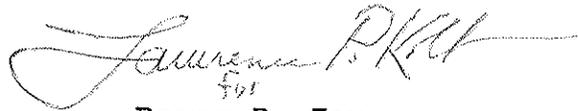
- F. Section G.5 shall be modified to read as follows:

Annual Reporting

By January 30 of each year, the discharger shall submit in place of the end of the year monthly report, an annual report to the Regional Board covering the previous calendar year. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year. In addition, the report shall contain a comprehensive discussion of the compliance record and the corrective actions taken or planned which may be needed to bring the discharger into full compliance with the waste discharge requirements. The report format will be prepared by the discharger using the examples shown in APPENDIX C (attached) substituting those parameters specified in the permit for the parameters given in the example and should be maintained and submitted with each regular self-monitoring report."

I, Roger B. James, Executive Officer, do 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 discharger requirements established in Regional Board Order No. 88-073.
2. Was adopted by the Board on May 18, 1988
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.

A handwritten signature in cursive script, appearing to read "Roger B. James".

Roger B. James
Executive Officer

Attachments: Table 1
Appendices: A,B,C,D,E

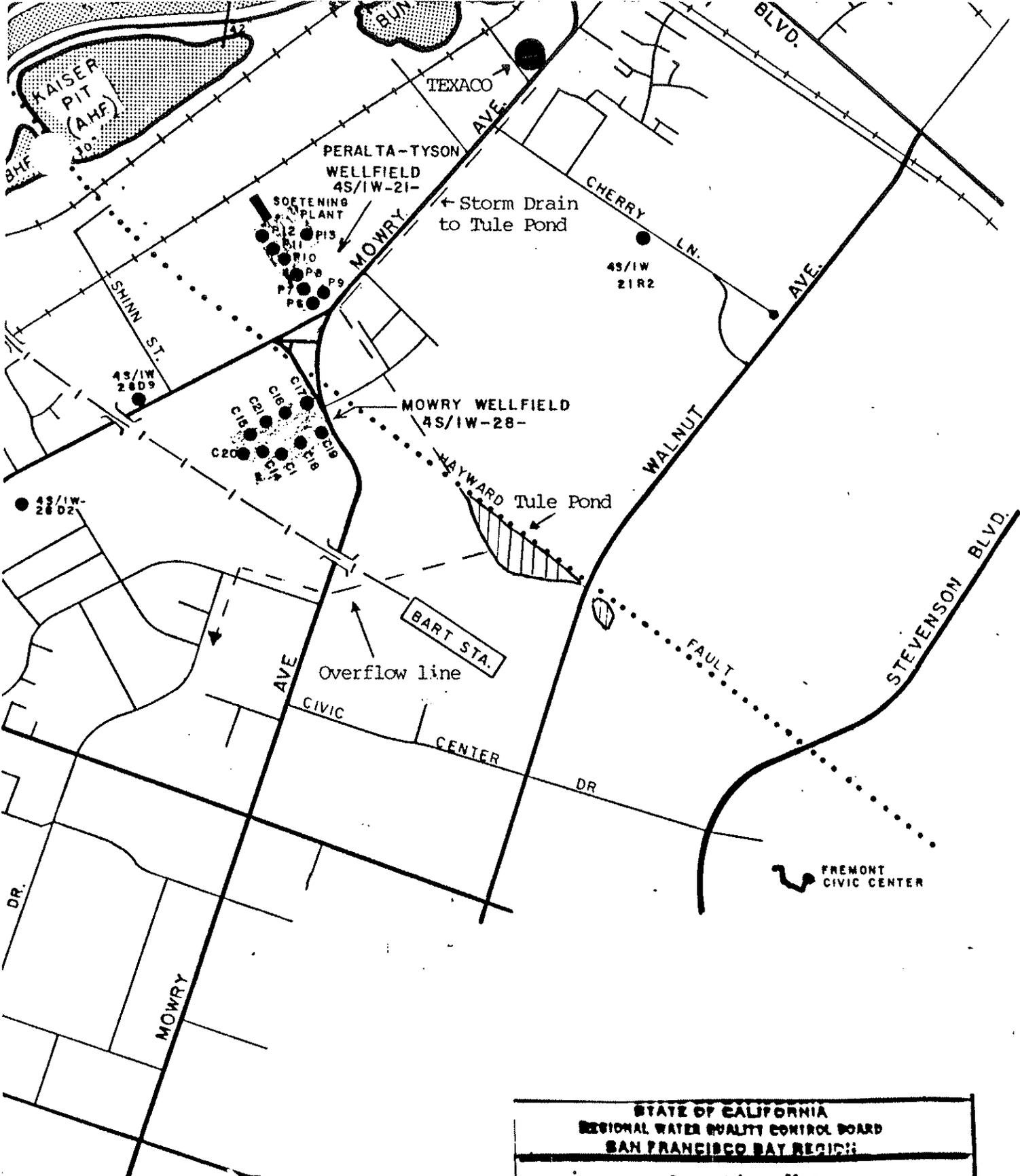
TABLE 1
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

SAMPLING STATION >>>>	I-1	E-1	C-1	
TYPE OF SAMPLE	G	G	G	
Flow Rate (gal/day)		C		
pH (units)	D/M	D/M	(1)	
Temperature (deg. C)	D/M	D/M	(1)	
Dissolved Oxygen (mg/l and % saturation)	D/M	D/M	(1)	
Electrical Conductivity	D/M	D/M	(1)	
Copper Zinc	D/W	D/W	(2)	
EPA 602 for: (4) Benzene Toluene Total Xylenes Ethyl Benzene	D/W	D/W	(3)	
Modified EPA 8015 for Total Petroleum Hydrocarbons as Gasoline as per SF Bay RWQCB Fuel Leak Guidelines	D/W	D/W	(3)	
EPA 601 (4)	BA	BA		
Toxicity		A		

LEGEND FOR TABLE 1

- G = grab sample
 C = continuous flow readings; report average daily flow based on weekly total
 M = once each month
 D/W= daily for five days during system startup; weekly thereafter
 D/M= daily for five days during system startup; monthly thereafter.
 BA= once during first day of operation; biannually thereafter.
 A= once during first week of operation; annually thereafter.

- (1) Receiving water will be sampled and analyzed for these parameters if the receiving water is sampled for Metals, EPA 8015 or EPA 602.
- (2) Receiving water will be sampled and analyzed for metals if any metal is detected in the effluent. Sampling will occur within 24 hours of the lab notification.
- (3) Receiving water will be sampled and analyzed using the modified EPA 8015 and EPA 602 if the effluent exceeds either the effluent limits for Total Petroleum Hydrocarbons, or the effluent limits for benzene, toluene, total xylenes, or ethylbenzene.
- (4) The ten largest peaks in the chromatogram, other than the priority pollutants listed in the method, shall be identified.



STATE OF CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SAN FRANCISCO BAY REGION		
Location Map		
Texaco Service Station		
377 Mowry Avenue, Fremont, Alameda Co.		
DRAWN BY:	DATE:	DRWG. NO. 001