

**Pacific Gas and Electric Company**

Hunters Point/Potrero/  
Oakland Power Plants  
Steam Generation  
1000 Evans Avenue  
San Francisco, CA 94124  
415/695-2200

Jack A. Fusco  
Manager

February 2, 1995



Ms. Jennifer Eberle  
Hazardous Materials Specialist  
Alameda County Department of Environmental Health  
UST Local Oversight Program  
1131 Harbor Way Parkway, 2nd Floor  
Alameda, CA 94502-6577

Dear Ms. Eberle:

Please find attached herewith a copy of the Subsurface Investigation Report for Pacific Gas and Electric Company, Oakland Power Plant at 50 Martin Luther King Jr. Way, Oakland, California, 94621. This report is submitted to your office as requested in your letter dated April 23, 1993.

Results of the quarterly sampling show that total petroleum hydrocarbons as diesel (TPH-D) were not detected in all three wells. We will continue to monitor these wells on a quarterly basis.

Well No. MW-2-3 was sampled and tested for Benzene, Toluene, Ethyl benzene, and Xylenes (BTEX), BTEX were not detected in this well. We will continue to monitor this well for BTEX on a quarterly basis.

Should you have any questions regarding this matter, please contact Mr. Avtar S. Virdee of my staff at (415) 695-2205.

Sincerely,

A handwritten signature in cursive script that reads 'Craig Chaney'. The signature is written in black ink and is positioned above the typed name.

Craig E. Chaney  
Plant Manager (Acting)

ASV:dms

Attachment

no QR

**APPENDIX A**

**FIELD PROCEDURES FOR  
GROUNDWATER MONITORING WELL SAMPLING  
AND WATER SAMPLING FIELD SURVEY FORMS**

**FIELD PROCEDURES  
FOR  
GROUNDWATER MONITORING WELL SAMPLING**

Groundwater Level Measurement

Before commencing groundwater sampling, the groundwater level in each well was measured from the marked survey reference point at the top of the well casing. Groundwater in each well was monitored for free product or sheen. The depth to groundwater was measured to an accuracy of 0.01 foot from the top of the PVC well casing using an electronic sounder.

Groundwater Monitoring Well Sampling

To ensure that the groundwater samples were representative of the aquifer, the wells were purged of 3 well casing volumes or until indicator parameters stabilized, before sample collection. This purging was accomplished using a clean bailer or pump.

The samples were collected using a disposable bailer and then transferred into laboratory-supplied containers. Care was taken to avoid turbulence when transferring the water samples, and all volatile analysis vials were filled so that no air bubbles were trapped. The sampling technician wore nitrile gloves at all times during purging and well sampling. The samples were clearly labeled with the well number, site identification, date and time of sample collection, and sampler's initials, and transported in an iced cooler maintained at 4 degrees Centigrade to a state-certified laboratory following proper preservation and chain of custody protocol.

# ALISTO

ENGINEERING GROUP

## Field Report / Sampling Data Sheet

Date: 1/3/95 Project No. 10-179-02-002  
 Day: M W T H F Facility No. 0530-EC  
 Temp. 59°F Address 50 Machine King St WY  
 SAMPLER: DC

Groundwater Sampling Barometric pres. Na  
 1777 OAKLAND BLVD, STE 200  
 WALNUT CREEK CA 94596 (510) 295-1650 FAX 295-1823

Well ID	SAMPLE #	WATER	WATER/ time	Well ID	SAMPLE #	WATER/ time	Well ID	SAMPLE	WATER / time
MW-1-3	-	4.62/1140							
MW-1-2	-	4.11/1143							
MW-2-3	-	4.11/1147							

### FIELD INSTRUMENT CALIBRATION DATA

Ph METER Hydra 4.00 7.00 10.00 TEMPERATURE COMPENSATED (Y) N  
 TURBIDITY METER Hach 5.0 NTU STANDARD OTHER 10.00 to standard  
 CONDUCTIVITY METER Hach 10,000 OTHER

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	EPA 601	TPH-GIBTEX	TPH Diesel	TOG 5520	Time/Sample
MW-1-3	4.42	4"	DL	4	Y (N)	2	1227	63.8	6.63	2.60					1240
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge =															
7.24 - 4.62 = 2.62 x .65 = 1.70 x 3 = 5.11															
Purge Method: <input checked="" type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Bailers <input type="checkbox"/> OSys Port															
Comments: <u>dry 3 4 GALS</u>															

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	EPA 601	TPH-GIBTEX	TPH Diesel	TOG 5520	Time/Sample
MW-1-2	4.11	4"	DL	4	Y (N)	4	1300	62.9	6.64	2.49					1323
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge =															
13.62 - 4.11 = 9.51 x .65 = 6.18 x 3 = 18.55															
Purge Method: <input type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Bailers <input type="checkbox"/> OSys Port															
Comments: <u>dry 2 10 GALS</u>															

Well ID	Depth to Water	Diam	Cap/Lock	Depth to prod.	Iridescence	Gal.	Time	Temp *F	pH	E.C.	EPA 601	TPH-GIBTEX	TPH Diesel	TOG 5520	Time/Sample
MW-2-3	4.11	4"	DL	4	Y (N)	3	1332	63.7	7.44	2.11					1351
Total Depth - Water Level = x Well Vol. Factor = x#vol. to Purge =															
13.30 - 4.11 = 9.19 x .65 = 5.97 x 3 = 17.92															
Purge Method: <input type="checkbox"/> Surface Pump <input type="checkbox"/> Disp. Tube <input type="checkbox"/> Winch <input type="checkbox"/> Bailers <input type="checkbox"/> OSys Port															
Comments: <u>dry 2 8.5 GALS</u>															

**APPENDIX B**

**FIELD PROCEDURES FOR CHAIN OF CUSTODY DOCUMENTATION,  
LABORATORY REPORTS, AND CHAIN OF CUSTODY RECORDS**

**FIELD PROCEDURES  
FOR  
CHAIN OF CUSTODY DOCUMENTATION**

The samples collected were handled in accordance with the California Department of Health Services guidelines. The samples were labeled in the field and immediately stored in coolers and preserved with blue ice for transport to a state-certified laboratory for analysis.

A chain of custody record accompanied the samples, and included the site and sample identification, date and time of collection, analysis requested, and the name and signature of the sampling technician. When transferring possession of the samples, the transferee signed and dated the chain of custody record.

# CHROMALAB, INC.

Environmental Services (SDB)

January 12, 1995

Submission #: 9501064

ALISTO ENGINEERING GROUP INC

Atten: Bill Howell

Project: PGE-OAKLAND POWER PLANT Project #: 10-179-02-0012  
Received: January 9, 1995

re: Three samples for Diesel analysis

Matrix: WATER  
Sampled: January 3, 1995 ✓  
Method: EPA 3510/8015  
Extracted: January 11, 1995  
Analyzed: January 11, 1995

Sample #	Client Sample ID	Diesel ( $\mu\text{g/L}$ )
74740	MW-1-2	N.D. <sup>a</sup> ✓
74741	MW-1-3	N.D. <sup>b</sup> ✓
74742	MW-2-3	N.D. <sup>c</sup> ✓
Blank		N.D.
Spike Recovery		87%
Dup Spike Recovery		91%
Reporting Limit		50

- a - Unknown compounds were found in the Diesel range in the estimated amount of 650  $\mu\text{g/L}$  compared with the Diesel Standard.
- b - Unknown compounds were found in the Diesel range in the estimated amount of 160  $\mu\text{g/L}$  compared with the Diesel Standard.
- c - Unknown compounds were found in the Diesel range in the estimated amount of 190  $\mu\text{g/L}$  compared with the Diesel Standard.

ChromaLab, Inc.

*Sirirat Chullakorn*

Sirirat Chullakorn  
Analytical Chemist

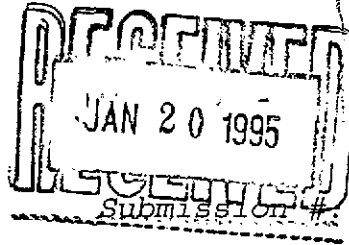
*Ali Khayrasi*

Ali Khayrasi  
Organic Manager

sc

# CHROMALAB, INC.

Environmental Services (SDB)



January 12, 1995

ALISTO ENGINEERING GROUP INC

Atten: Bill Howell

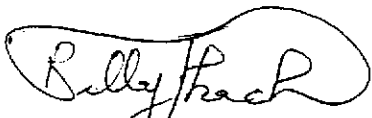
Project: PGE-OAKLAND POWER PLANT  
Received: January 9, 1995


Project#: 10-179-02-0012

re: 1 sample for BTEX analysis.

Sampled: January 3, 1995      Matrix: WATER      Analyzed: January 10, 1995  
Method: EPA 602/8020      Run#: 5092

Spl # CLIENT SMPL ID	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
74742 MW-2-3 ✓	N.D.	N.D.	N.D.	N.D.
Reporting Limits	0.5	0.5	0.5	0.5
Blank Result	N.D.	N.D.	N.D.	N.D.
Blank Spike Result (%)	104	105	109	111

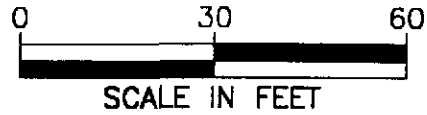
  
Billy Thach  
Chemist

  
Ali Kharrazi  
Organic Manager





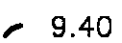
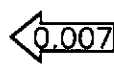


MARTIN LUTHER KING, JR. WAY



**LEGEND**

DIESEL DUMP  
TANK #1

-  GROUNDWATER MONITORING WELL
-  (9.39) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
-  9.40 GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL (CONTOUR INTERVAL-0.10 FOOT)
-  ← 0.007 CALCULATED GROUNDWATER GRADIENT DIRECTION AND MAGNITUDE IN FOOT PER FOOT



5,000-GA  
GROUNDW.  
COLLECT  
TANK

10,000-GA  
OILY WA  
WASTE T

**FIGURE 2**

**POTENTIOMETRIC GROUNDWATER  
ELEVATION CONTOUR MAP**

**JANUARY 3, 1995**

**PACIFIC GAS AND ELECTRIC COMPANY  
OAKLAND POWER PLANT  
50 MARTIN LUTHER KING, JR. WAY  
OAKLAND, CALIFORNIA**

**PROJECT NO. 10-179**



**ALISTO ENGINEERING GROUP**  
WALNUT CREEK, CALIFORNIA

**GROUNDWATER MONITORING AND  
SAMPLING REPORT**

Pacific Gas and Electric Company  
Oakland Power Plant  
50 Martin Luther King, Jr. Way  
Oakland, California

PG&E Project No. 0530-EC  
Alisto Project No. 10-179

JANUARY 1995

55 FEB -8 10 24 95

HEALTH  
COUNCIL



**GROUNDWATER MONITORING AND SAMPLING REPORT**

**Pacific Gas and Electric Company  
Oakland Power Plant  
50 Martin Luther King, Jr. Way  
Oakland, California**

**PG&E Project No. 0530-EC  
Alisto Project No. 10-179-02-002**


**Prepared for:**

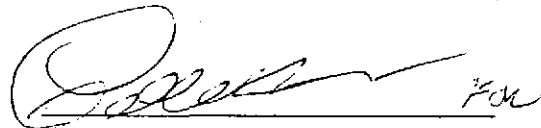
**Pacific Gas and Electric Company  
3400 Crow Canyon Road  
San Ramon, California**

**Prepared by:**

**Alisto Engineering Group  
1777 Oakland Boulevard, Suite 200  
Walnut Creek, California**

**January 26, 1995**

  
\_\_\_\_\_  
**Brady Nagle  
Project Manager**

  
\_\_\_\_\_  
**Al Sevilla, P.E.  
Principal**



# GROUNDWATER MONITORING AND SAMPLING REPORT

Pacific Gas and Electric Company  
Oakland Power Plant  
50 Martin Luther King, Jr. Way  
Oakland, California

TESA Project No. 0530-EC  
Alisto Project No. 10-179-02-002

January 26, 1995

## INTRODUCTION

This report presents the results and findings of the January 3, 1995 groundwater monitoring and sampling conducted by Alisto Engineering Group at Pacific Gas and Electric Company's Oakland Power Plant, 50 Martin Luther King Jr. Way, Oakland, California. A site vicinity map is shown in Figure 1.

## FIELD PROCEDURES

Field activities were performed in accordance with the procedures and guidelines of the Alameda County Health Care Services Agency and the California Regional Water Quality Control Board, San Francisco Bay Region.

Before purging and sampling, the groundwater level in each well was measured from a permanent mark on top of the casing to the nearest 0.01 foot using an electronic sounder. The depth to groundwater and top of casing elevation data were used to calculate the groundwater elevation in each well. The survey data and groundwater elevation measurements collected to date are presented in Table 1. The field procedures for groundwater monitoring well sampling are presented in Appendix A.

## SAMPLING AND ANALYTICAL RESULTS

The results of monitoring and laboratory analysis of the groundwater samples for this and previous quarters are summarized in Table 1. The potentiometric groundwater elevations as interpreted from the results of this monitoring event are shown in Figure 2. The field procedures for chain of custody documentation, laboratory reports, and chain of custody records are presented in Appendix B.



## SUMMARY OF FINDINGS

The findings of the January 3, 1995 groundwater monitoring and sampling event are summarized as follows:

- Free product was not observed in any of the groundwater monitoring wells.
- Groundwater elevation data indicated a northwesterly flow direction with a hydraulic gradient of 0.007 foot per foot.
- Total petroleum hydrocarbons as diesel were not detected from any of the samples collected from the groundwater monitoring wells.
- Benzene, toluene, ethylbenzene, and total xylenes were not detected in the sample collected from well MW-2-3.



TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING  
 PACIFIC GAS AND ELECTRIC COMPANY'S OAKLAND POWER PLANT  
 50 MARTIN LUTHER KING, JR. WAY, OAKLAND, CALIFORNIA

ALISTO PROJECT NUMBER 10-179

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-D (ppb)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	LAB
MW-1-2	06/22/93	13.95	5.05	8.90	1500 (c)	ND<0.5	ND<0.5	ND<0.5	ND<0.5	CHR
MW-1-2	09/22/93	13.95	5.91	8.04	240	ND<0.5	ND<0.5	ND<0.5	ND<0.5	CHR
QC-1	09/22/93	13.95	—	—	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	CHR
MW-1-2	12/28/93	13.95	4.77	9.18	200	ND<0.5	ND<0.5	ND<0.5	ND<0.5	CHR
QC-1	12/28/93	13.95	—	—	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	CHR
MW-1-2	04/11/94	13.95	4.66	9.29	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	CHR
QC-1	04/11/94	13.95	—	—	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	CHR
MW-1-2	04/20/94	13.95	4.86	9.09	600	—	—	—	—	CHR
MW-1-2	06/29/94	13.95	5.18	8.77	520	—	—	—	—	CHR
MW-1-2	10/07/94	13.95	4.55	9.40	590	—	—	—	—	CHR
MW-1-2	01/03/95	13.95	4.11	9.84	ND<50 (d)	—	—	—	—	CHR
					650					
MW-1-3	06/22/93	14.01	5.15	8.86	160 (c)	ND<0.5	ND<0.5	ND<0.5	ND<0.5	CHR
MW-1-3	09/22/93	14.01	5.57	8.44	430	ND<0.5	ND<0.5	ND<0.5	ND<0.5	CHR
MW-1-3	12/28/93	14.01	5.13	8.88	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	CHR
MW-1-3	04/11/94	14.01	5.01	9.00	—	ND<0.5	ND<0.5	ND<0.5	0.50	CHR
MW-1-3	04/20/94	14.01	5.09	8.92	ND<50	—	—	—	—	CHR
MW-1-3	06/29/94	14.01	5.30	8.71	280 (c)	—	—	—	—	CHR
MW-1-3	10/07/94	14.01	5.69	8.32	ND<50	—	—	—	—	CHR
MW-1-3	01/03/95	14.01	4.62	9.39	ND<50 (d)	—	—	—	—	CHR
					160					
MW-2-3	06/22/93	13.91	5.00	8.91	960 (e)	3.1	ND<0.5	ND<0.5	ND<0.5	CHR
MW-2-3	09/22/93	13.91	5.50	8.41	460	ND<0.5	ND<0.5	ND<0.5	ND<0.5	CHR
MW-2-3	12/28/93	13.91	4.74	9.17	ND<50 (f)	ND<0.5	ND<0.5	ND<0.5	ND<0.5	CHR
MW-2-3	04/11/94	13.91	4.62	9.29	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	CHR
MW-2-3	04/20/94	13.91	4.83	9.08	ND<50	—	—	—	—	CHR
MW-2-3	06/29/94	13.91	5.14	8.77	920 (g)	ND<0.5	ND<0.5	ND<0.5	ND<0.5	CHR
MW-2-3	10/07/94	13.91	5.50	8.41	ND<50	16	13	5.9	24	CHR
MW-2-3	01/03/95	13.91	4.11	9.80	ND<50 (d)	ND<0.5	ND<0.5	ND<0.5	ND<0.5	CHR
					190					

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER SAMPLING  
 PACIFIC GAS AND ELECTRIC COMPANY'S OAKLAND POWER PLANT  
 50 MARTIN LUTHER KING, JR. WAY, OAKLAND, CALIFORNIA

ALISTO PROJECT NUMBER 10-179

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-D (b) (ppb)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	LAB
QC-2	(h) 06/22/93	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	CHR
QC-2	(h) 09/22/93	--	--	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	CHR
QC-2	(h) 12/28/93	--	--	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	CHR
QC-2	(h) 04/11/94	--	--	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	CHR
QC-2	(h) 01/03/95	--	--	--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	CHR

ABBREVIATIONS:

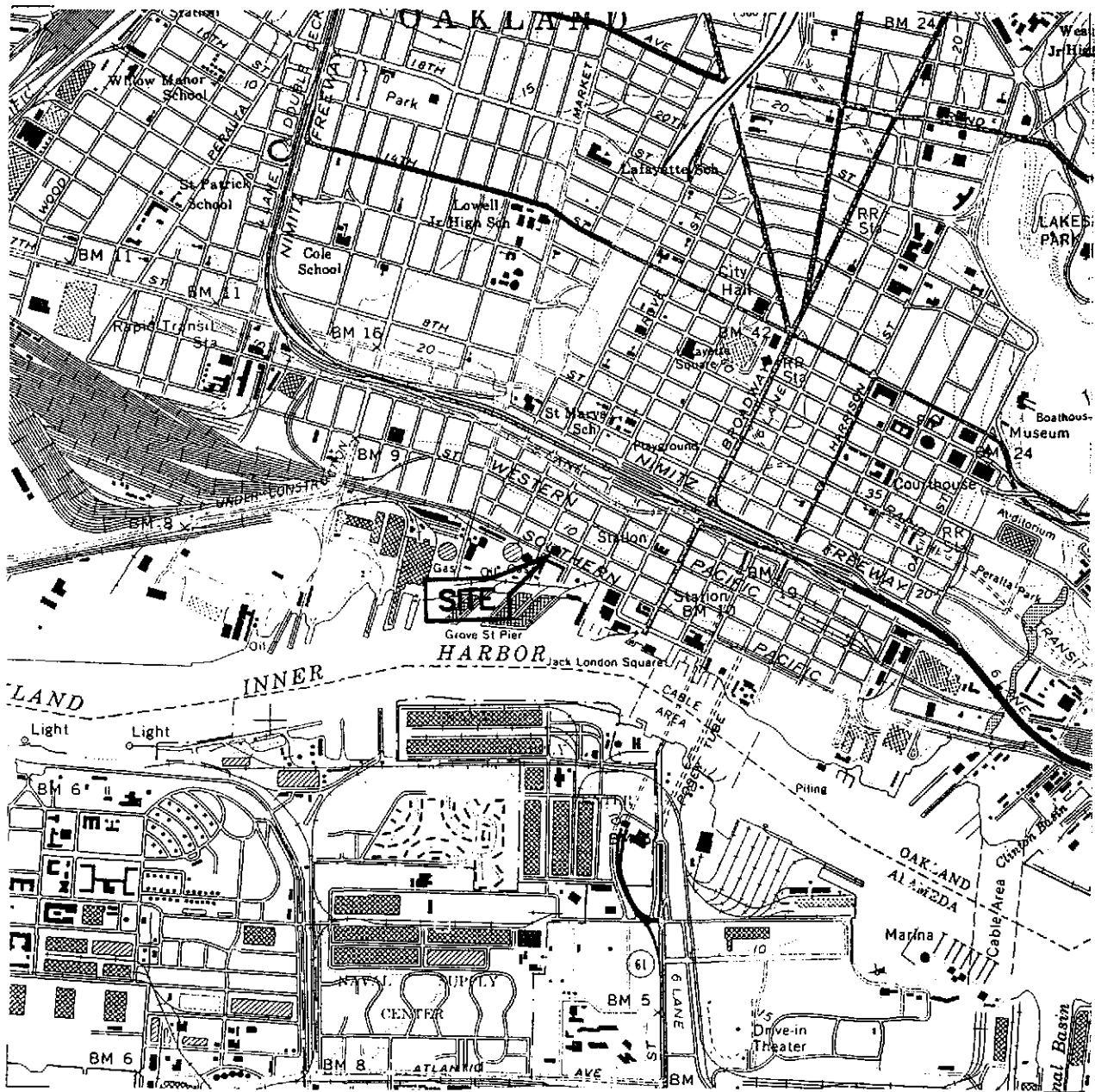
TPH-D Total petroleum hydrocarbons as diesel  
 B Benzene  
 T Toluene  
 E Ethylbenzene  
 X Total xylenes  
 ug/L Micrograms per liter  
 --- Not analyzed/applicable  
 ND Not detected above reported detection limit  
 CHR Chromalab, Inc.

NOTES:

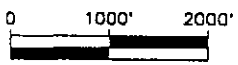
- (a) Top of casing elevations surveyed relative to mean sea level.
- (b) Groundwater elevations in feet above mean sea level.
- (c) Unknown hydrocarbon in diesel range quantified as diesel.
- (d) Blind duplicate.
- (e) Motor oil at a concentration of 3.1 mg/L detected in sample.
- (f) Motor oil at a concentration of 2.9 mg/L detected in sample.
- (g) Unknown hydrocarbon in motor oil range was also observed in sample.
- (h) Travel blank.

E:\010-179\179-2-1\WQ1





SOURCE:  
 USGS MAP, OAKLAND WEST QUADRANGLE,  
 CALIFORNIA, 7.5 MINUTE SERIES, 1959.  
 PHOTOREVISED 1980.



**FIGURE 1**  
**SITE VICINITY MAP**

**PACIFIC GAS AND ELECTRIC COMPANY**  
**OAKLAND POWER PLANT**  
**50 MARTIN LUTHER KING, JR. WAY**  
**OAKLAND, CALIFORNIA**  
**PROJECT NO. 10-179**

