

EXXON COMPANY, U.S.A.

P.O. BOX 4032 . CONCORD, CA 94524-2032

ENVIRONMENTAL ENGINEERING

MARLA D. GUENSLER

SENIOR ENVIRONMENTAL ENGINEER

(510) 246-8776

(510) 246-8798 FAX

November 1, 1993

ALCO
HAZMAT

93 NOV 10 AM 11:01

Ms. Juliet Shin
Alameda County Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

RE: Exxon RAS #7-0104, 1725 Park Street, Alameda, CA

Dear Ms. Shin:

Attached for your review and comment is a report entitled Letter Report Third Quarter 1993 Groundwater Monitoring and Remediation Activities for the above referenced site. This report, prepared by RESNA Industries, Inc., of Novato, California, details the results of the Third Quarter 1993 groundwater monitoring and sampling events.

If you have any questions or comments, or require additional information, please contact me at the above listed phone number.

Sincerely,



Marla D. Guensler

Senior Environmental Engineer

MDG/mdg

enclosure: RESNA Problem Assessment Report dated October 22, 1993

cc: w/attachment:

Mr. John Margowski - Wickland Oil Co.

Mr. Richard Hiatt - San Francisco Bay RWQCB

w/o attachment:

Mr. Justin Power - RESNA - Novato

EXXON COMPANY, U.S.A.

P.O. BOX 4032 . CONCORD, CA 94524-2032

ENVIRONMENTAL ENGINEERING

MARLA D. GUENSLER

SENIOR ENVIRONMENTAL ENGINEER

(510) 246-8776

(510) 246-8798 FAX

July 16, 1993

93 JUL 22 PM 4: 18

Ms. Juliet Shin
Alameda County Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

JUN 1993

RE: Exxon RAS #7-0104, 1725 Park Street, Alameda, CA

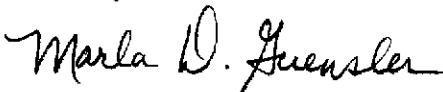
Dear Ms. Shin:

Attached for your review and comment is a report entitled **Groundwater Monitoring Status Report** for the above referenced site. This report, prepared by RESNA Industries, Inc., of Novato, California, details the results of the Second Quarter 1993 groundwater monitoring and sampling events.

As requested, the report includes details of the remedial system overflow which occurred on May 5, 1993.

If you have any questions or comments, or require additional information, please contact me at the above listed phone number.

Sincerely,



Marla D. Guensler
Senior Environmental Engineer

MDG/mdg

enclosure: RESNA Problem Assessment Report dated July 13, 1993

cc: w/attachment:

Mr. John Margowski - Wickland Oil Co.

Mr. Richard Hiatt - San Francisco Bay RWQCB

w/o attachment:

Mr. Gary Pischke - RESNA

Novato

73 Digital Drive
Novato, CA 94949
Phone: (415) 382-7400
FAX: (415) 382-7415

**GROUNDWATER MONITORING
STATUS REPORT**

Second Quarter 1993
Exxon Service Station No. 7-0104
1725 Park Street
Alameda, California

0512mgue
170077.01

June 30, 1993

Ms. Marla Guensler
Exxon Company, U.S.A.
P.O. Box 4032
2300 Clayton Road
Concord, California 94524

Subject: Groundwater Monitoring Status Report, Second Quarter 1993, Exxon Service Station No. 7-0104, 1725 Park Street, Alameda, California

Ms. Guensler:

At the request of Exxon Company, U.S.A (Exxon), RESNA Industries, Inc. (RESNA) performed the second quarter 1993 groundwater monitoring event at the subject site. The location of the site is shown on Plate 1. The purpose of quarterly monitoring is to evaluate fluctuations in hydrocarbon concentrations in groundwater below the site and to evaluate the groundwater flow direction and gradient.

BACKGROUND

Exxon acquired the subject site, formerly a Regal Service Station owned by Wickland Oil Company of Sacramento, California, in 1988. Previous work at the site includes the replacement of underground storage tanks in 1989. After the tank replacement, Harding Lawson Associates (HLA) of Novato, California drilled six soil borings and constructed six groundwater monitoring wells onsite (HLA, March 21, 1989). HLA subsequently drilled seven shallow soil borings and one deep boring, constructed one groundwater monitoring well onsite, installed five groundwater extraction wells, and conducted a series of aquifer slug tests (Harding Lawson Associates, May 1, 1990, Project No. 10495 416). Gasoline hydrocarbons were detected in soil and groundwater (HLA, May 1, 1990, Project No. 10495 416). In September 1992, per the County of Alameda's request, HLA performed an offsite groundwater survey. HLA's investigation concluded that the hydrocarbon plume was primarily limited to the site and partially off-site into the intersection of Park and Eagle (HLA, October 30, 1992, Project No. 10495 416). In October 1992, HLA performed a vapor-extraction test at the site (HLA, December 28, 1992, Project No. 10495 416). In December 1992, HLA began construction of a groundwater treatment system. HLA started the groundwater extraction and treatment system in mid-February 1993. On May 5, 1993 RESNA installed three off-site groundwater monitoring wells. Exxon initiated quarterly groundwater sampling at the site in 1988.

PRESENT GROUNDWATER MONITORING

On April 30, 1993, RESNA personnel measured depth-to-water in each well, subjectively evaluated water from the wells for separate phase product and purged and sampled the groundwater from monitoring wells MW-1 through MW-7 for laboratory analysis. On May 11, 1993, RESNA personnel developed the three newly installed monitoring wells (MW-8 through MW-10). On May 14, 1993, RESNA personnel measured depth-to-water in each well, subjectively evaluated water from the wells for separate phase product and purged and sampled the groundwater from monitoring wells MW-8 through MW-10. On May 14, 1993, MW-2 was inaccessible and was not measured. Subjective evaluations are included in Table 1. Field methods are described in Appendix A.

RESNA compiled potentiometric data to evaluate the direction of groundwater flow beneath the site. Depth-to-water measurements taken on April 30 and May 14, 1993, were used to calculate the groundwater elevation in each well. Cumulative depth-to-water and groundwater elevation data are presented in Table 1. Based on the April 30 and May 14, 1993 data, the evaluated groundwater flow direction was to the east with an approximate gradient of 0.080 to 0.011 (Plates 2 and 3). The groundwater flow direction is generally consistent with the previous groundwater flow directions interpreted for this site. Since last quarter, the groundwater elevation decreased an average of 1.96 feet in the onsite wells.

Results of Laboratory Analysis

Pace Inc., a California-certified laboratory in Novato, California analyzed the groundwater samples from monitoring wells MW-1 through MW-10. The samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) using modified Environmental Protection Agency (EPA) Methods 8015 and 8020. The Reports of Laboratory Analysis and Chain of Custody Records and are attached (Appendix B). A summary of present and historical groundwater analyses is presented in Table 1.

Results of the laboratory analyses of water samples collected during this event indicate that:

- TPHg was detected in the groundwater samples collected from wells MW-1 through MW-7 and MW-10 at concentrations ranging from 97 parts per billion (ppb) (MW-10) to 280,000 ppb (MW-2).
- Benzene was not detected in groundwater samples collected from wells MW-8 through MW-10.
- Benzene was detected in the groundwater samples collected from wells MW-1 through MW-7 at concentrations ranging from 240 ppb (MW-7) to 11,000 ppb (MW-2).

June 30, 1993
Exxon Service Station No. 7-0104, Alameda, California

**UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK)
CONTAMINATION SITE REPORT**

On May 5, 1993, the groundwater treatment system malfunctioned and caused a release of partially treated groundwater. The system is designed to automatically shut down when the biotreatment tank high level switch is activated. The system shut down is designed to turn off all extraction and transfer pumps while maintaining air sparging to the biotreatment tank. However, a solenoid switch did not activate and kept the extraction pumps operating. The condition continued from May 5 to the morning of May 6, when RESNA personnel manually turned off the extraction pumps.

The malfunction caused approximately 4,800 gallons of water from the biotreatment tank to overflow into the system's secondary containment. Approximately 2400 gallons in turn overflowed to the street and to storm drains. Upon discovery, RESNA personnel turned on the transfer pumps to prevent further overflow of the biotreatment tank. RESNA personnel utilized a sump pump to remove water from the secondary containment, and direct the water to the biotreatment tank. RESNA has replaced the malfunctioning solenoid, and the system has returned to normal operating conditions.

An un-authorized release report was completed by RESNA, and forwarded to ACDEH by Exxon on May 14, 1993.

RESNA recommends that signed copies of this report be forwarded to:

Mr. Richard Hiatt
California Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street
Oakland, California 94612

Ms. Juliatt Shin
Alameda County,
Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, California 94621

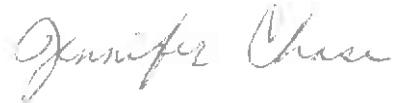
June 30, 1993
Exxon Service Station No. 7-0104, Alameda, California

RESNA
Working To Restore Nature

This report was prepared in accordance with generally accepted standards of environmental geological practice in California at the time this investigation was performed. This report has been prepared for Exxon Company, U.S.A. and any reliance on this report by third parties shall be at such party's risk.

Please call with any questions or comments regarding this letter report.

Sincerely,
RESNA Industries, Inc.



Jennifer Chase
Staff Geologist

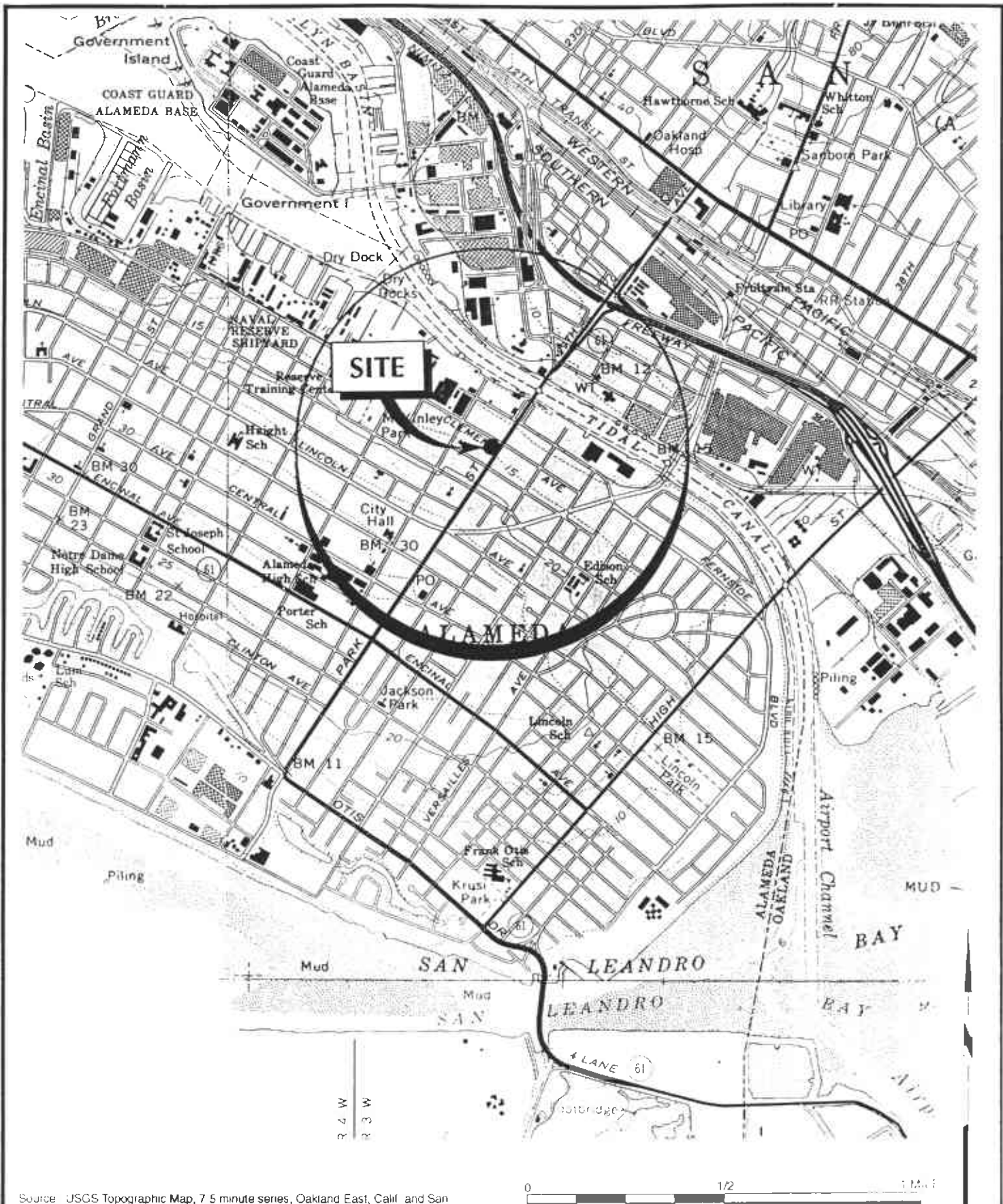


Gary Pischke, C.E.G. 1501
Senior Project Geologist

Attachments:

- Plate 1 - Site Vicinity Map
- Plate 2 - Potentiometric Surface Map (April 30, 1993)
- Plate 3 - Potentiometric Surface Map (May 14, 1993)
- Plate 4 - TPHg and Benzene Concentration Map (April 30, 1993)
- Table 1 - Cumulative Groundwater Monitoring Data
- Appendix A: Groundwater Sampling Protocol
- Appendix B: Reports of Laboratory Analysis and Chain of Custody Records

cc: Mr. Keith Romstad, RESNA, Novato



Source: USGS Topographic Map, 7.5 minute series, Oakland East, Calif and San Leandro, Calif quadrangles, 1980



RESNA

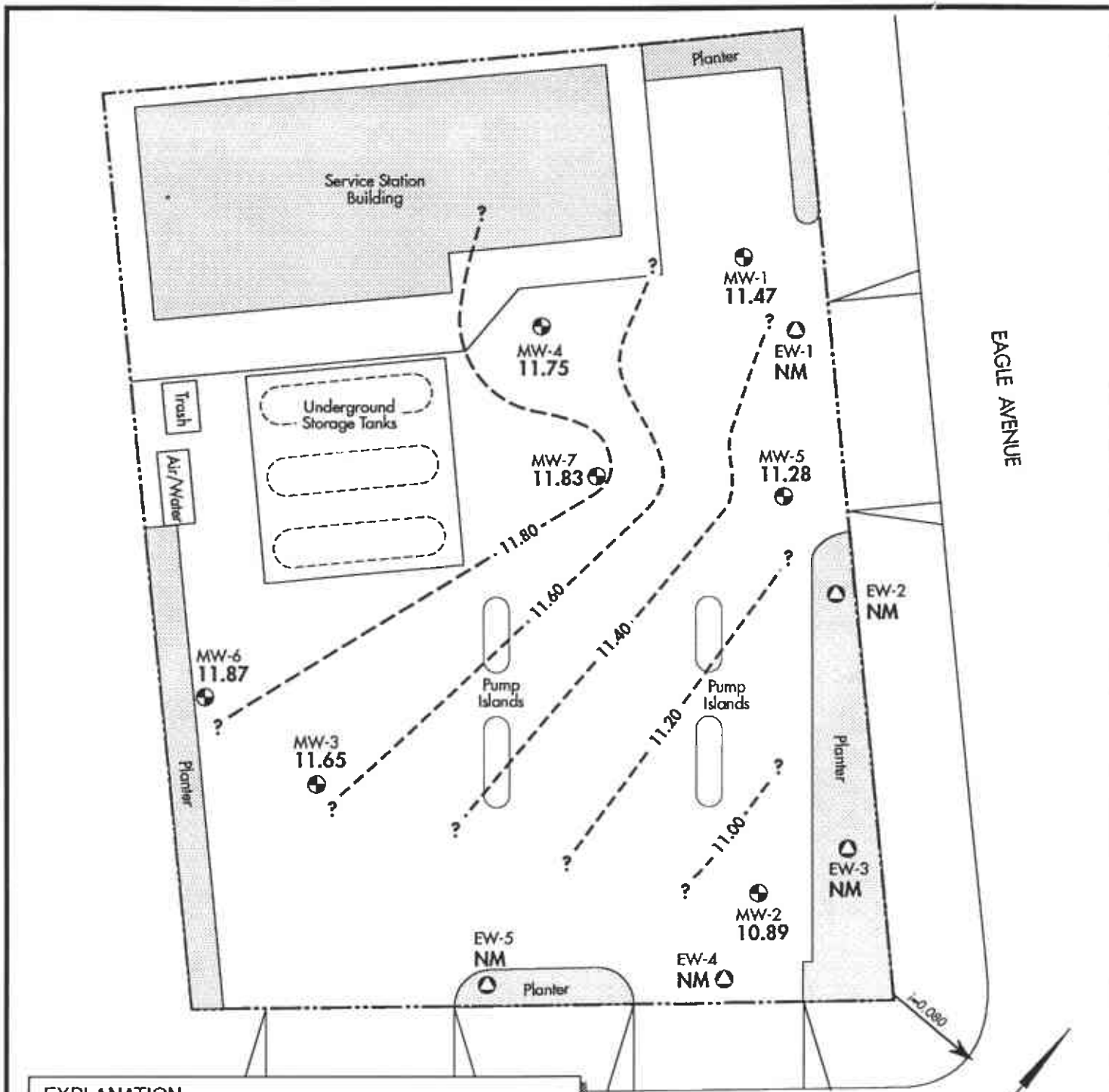
PROJECT NO. 170077.01

1/93

SITE VICINITY MAP
 Exxon Service Station No. 7-0104
 1725 Park Street
 Alameda, California

PLATE

1



EXPLANATION

- ⊕ MW-1 Monitoring well
- ⊖ EW-1 Extraction well
- 11.47 Groundwater elevation, feet above mean sea level
- NM Not measured
- 11.20 - - - ? Groundwater elevation contour, feet above mean sea level, dashed where inferred, queried where uncertain
- $i = -0.080$ ← Estimated direction of groundwater flow with evaluated gradient

Base Map Source: Site Map by Harding Lawson Associates, 1992; survey by Ron Archer, Civil Engineer, Inc., 1993

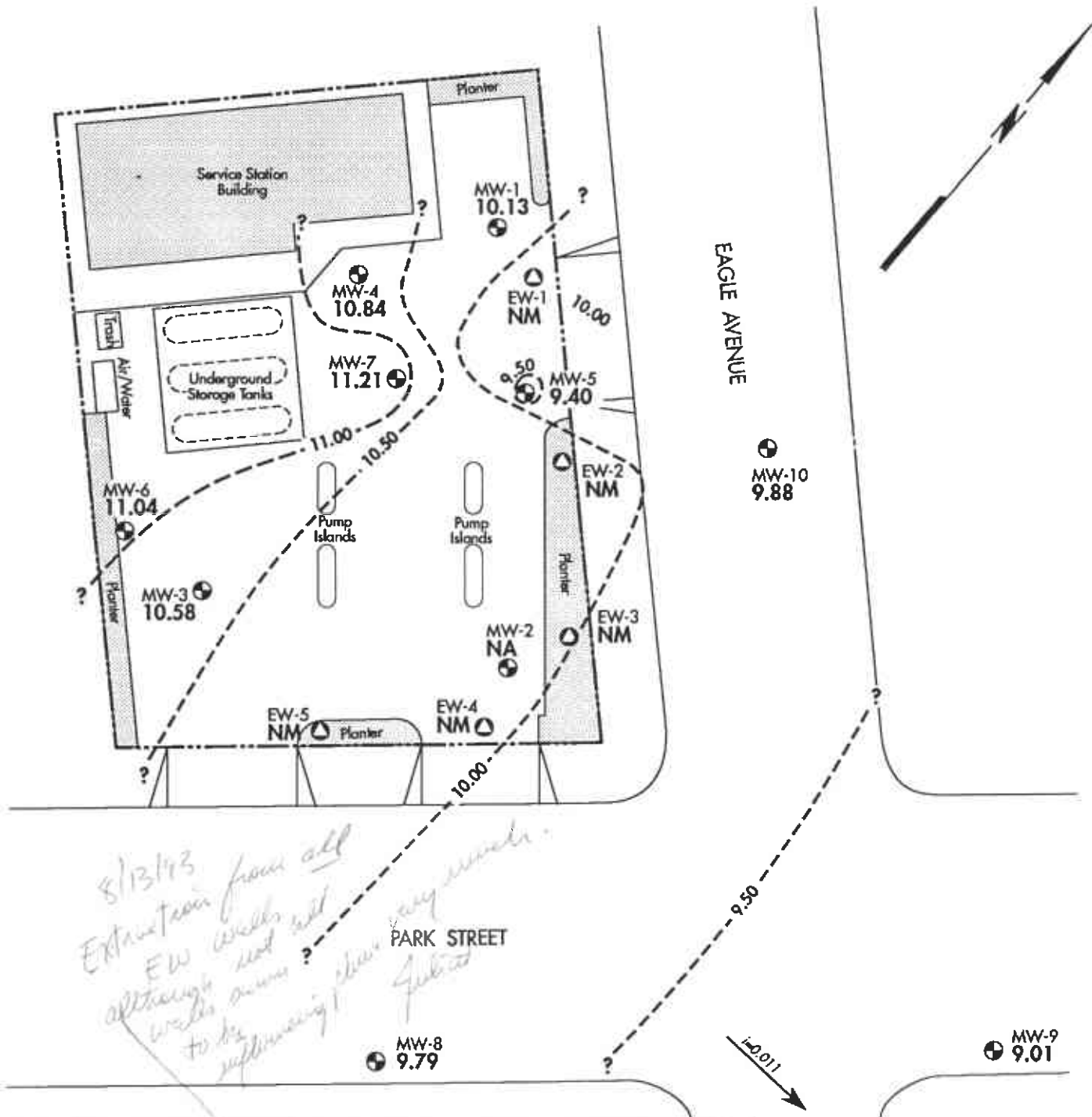


RESNA

PROJECT NO. 170077.01 6/93

POTENTIOMETRIC SURFACE MAP
APRIL 30, 1993
 Exxon Service Station No. 7-0104
 1725 Park Street
 Alameda, California

PLATE
2



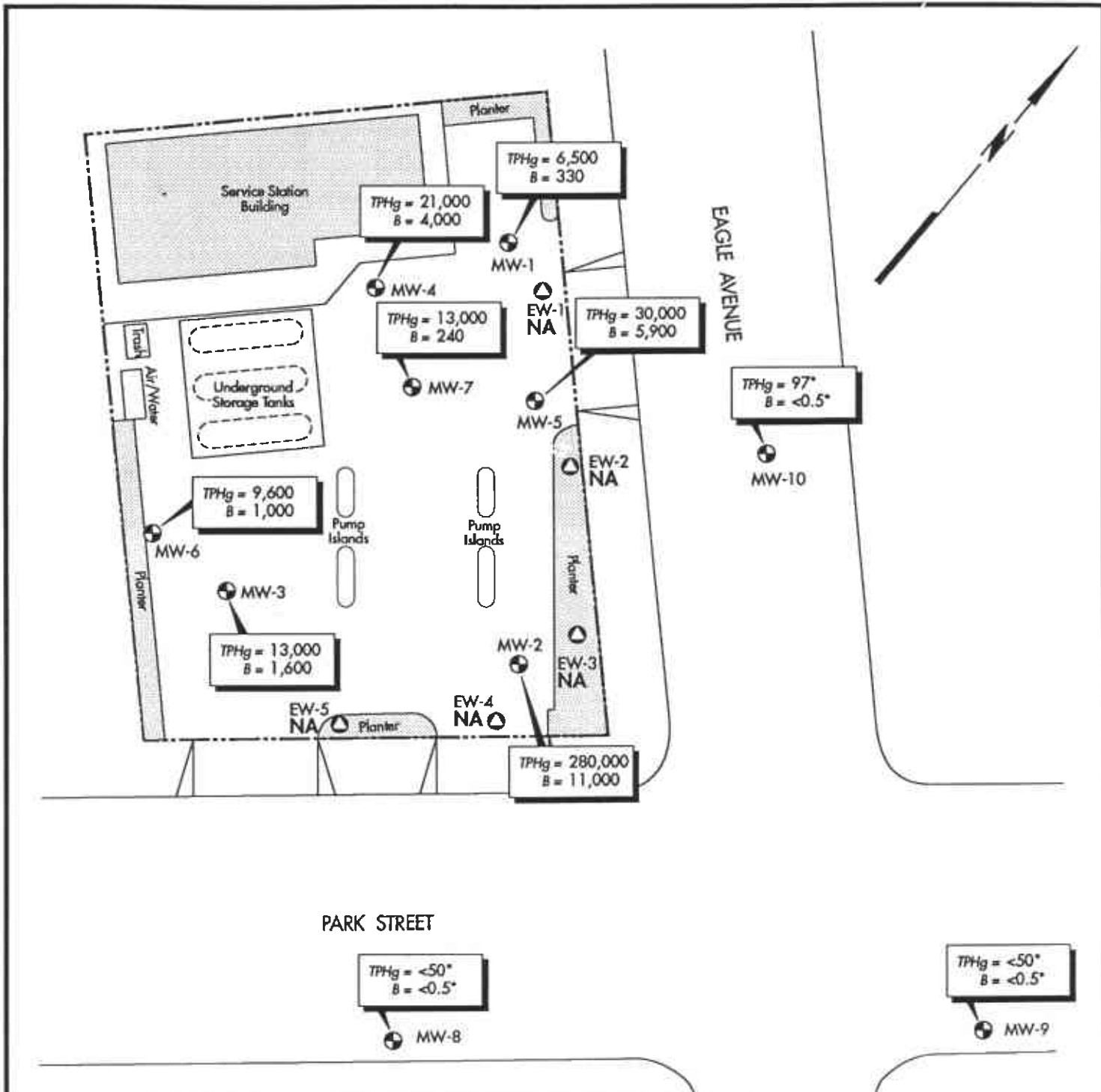
*8/13/93
 Extraction from all
 EW wells not set
 although not set
 to be sufficient to
 supply any needs.
 Subject*

EXPLANATION	
⊕ MW-1	Monitoring well
⊙ EW-1	Extraction well
10.13	Groundwater elevation, feet above mean sea level
10.50 - - ?	Groundwater elevation contour, feet above mean sea level, dashed where inferred, queried where uncertain
NM	Not measured
NA	Not measured—well not accessible
$i=0.011$	Estimated direction of groundwater flow with evaluated gradient

Base Map Source: Site Map by Harding Lawson Associates, 1992; survey by Ron Archer, Civil Engineer, Inc., 1993



	POTENTIOMETRIC SURFACE MAP MAY 14, 1993 Exxon Service Station No. 7-0104 1725 Park Street Alameda, California	PLATE 3
	PROJECT NO. 170077.01	6/93



EXPLANATION

● MW-1 Monitoring well
 ▲ EW-1 Extraction well
 TPHg = TPHg concentration in parts-per-billion (ppb)
 B = Benzene concentration in ppb

SPP Separate phase product present
 NA Not analyzed
 ← Estimated direction of groundwater flow
 * Sampled on May 14, 1993

Base Map Source: Site Map by Harding Lawson Associates, 1992; survey by Ron Archer, Civil Engineer, Inc., 1993



RESNA

PROJECT NO. 170077.01

6/93

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (TPHg) AND BENZENE CONCENTRATION MAP—April 30, 1993

Exxon Service Station No. 7-0104
1725 Park Street, Alameda, California

PLATE
4

TABLE 1
CUMULATIVE GROUNDWATER MONITORING DATA
 Exxon Service Station No. 7-0104
 1725 Park Street
 Alameda, California
 (Page 1 of 8)

Well ID # (TOC)	Sampling Date	SUBJ <----- ft ----->	DTW	Elev.-W	TPHg <----- ppb ----->	B	T	E	X
MW-1 (17.35)	06/07/88	---	---	---	27,000	5,000	77	1,100	2,700
	06/10/88	NP	6.35	11.00	---	---	---	---	---
	01/17/89	NP	5.81	11.54	6,800	2,000	91	800	1,600
	01/24/89	NP	5.16	12.19	---	---	---	---	---
	06/01/89	sheen	6.27	11.08	1,700	170	6.9	13	230
	09/18/89	NP	7.11	10.24	2,100	9.0	53	18	130
	10/20/89	NP	7.28	10.07	---	---	---	---	---
	11/22/89	NP	7.02	10.33	---	---	---	---	---
	12/11/89	NP	6.60	10.75	5,800	200	42	290	330
	02/13/90	NP	6.02	11.33	---	---	---	---	---
	03/07/90 (a)	---	---	---	---	---	---	---	---
	03/13/90	NP	5.91	11.44	2,300	430	14	16	220
	04/18/90	NP	6.18	11.17	---	---	---	---	---
	05/23/90	NP	6.29	11.06	---	---	---	---	---
	06/14/90	NP	6.19	11.28	32,000	1,400	19	<5	120
	08/21/90	NP	7.03	10.32	---	---	---	---	---
	09/19/90	NP	7.26	10.09	950	290	2.9	<0.5	27
	12/17/90	NP	6.75	10.60	2,100	550	13	350	110
	01/31/91	NP	6.78	10.57	---	---	---	---	---
	02/25/91	NP	6.59	10.76	---	---	---	---	---
	03/19/91	NP	5.85	11.50	1,400	900	45	390	150
	04/22/91	sheen	5.72	11.63	---	---	---	---	---
	05/17/91	NP	6.00	11.35	---	---	---	---	---
	07/24/91	NP	6.79	10.56	9,700	1,300	670	950	2,100
	09/10/91	NP	7.25	10.10	---	---	---	---	---
	09/23/91	NP	7.33	10.02	---	---	---	---	---
	10/21/91	NP	7.53	9.82	---	---	---	---	---
	10/22/91	---	---	---	540	220	1.8	110	7.8
	11/18/91	NP	7.13	10.22	---	---	---	---	---
	12/11/91	NP	7.25	10.10	---	---	---	---	---
	01/21/92	NP	6.54	10.81	1,800	650	23	300	64
	02/20/92	NP	4.82	12.53	---	---	---	---	---
	03/19/92	NP	5.24	12.11	---	---	---	---	---
	04/24/92	NP	5.71	11.64	4,900	1,600	78	660	250
	05/13/92	NP	5.99	11.36	---	---	---	---	---
	06/24/92	NP	6.65	10.70	---	---	---	---	---
	07/16/92	NP	6.72	10.63	3,400	1,000	11	550	100
	08/19/92	NP	7.07	10.28	---	---	---	---	---
	09/24/92	NP	7.36	9.99	3,700	1,300	21	330	<10
	02/05/93	NP	5.21	12.14	11,000	2,400	160	1,400	790
	04/30/93	NP	5.88	11.47	6,500	330	320	640	1,300
	05/14/93	NP	7.22	10.13	---	---	---	---	---

See notes on page 8 of 8

TABLE 1
CUMULATIVE GROUNDWATER MONITORING DATA
 Exxon Service Station No. 7-0104
 1725 Park Street
 Alameda, California
 (Page 2 of 8)

Well ID # (TOC)	Sampling Date	SUBJ <----->	DTW ft	Elev.-W ----->	TPHg <----->	B	T ppb	E	X
MW-2	06/07/88	---	---	---	110,000	12,000	12,000	2,100	12,000
(16.67)	06/10/88	NP	6.20	10.47	---	---	---	---	---
	01/17/89	NP	5.96	10.71	30,000	6,600	3,300	1,600	7,700
	01/24/89	NP	5.04	11.63	---	---	---	---	---
	06/01/89	sheen	6.32	10.35	8,700	330	280	680	1,200
	09/18/89	NP	6.73	9.94	17,000	580	280	570	220
	10/20/89	NP	6.87	9.80	---	---	---	---	---
	11/22/89	NP	6.80	9.87	---	---	---	---	---
	12/11/89	NP	6.57	10.10	32,000	1,000	850	310	1,200
	02/13/90	NP	6.12	10.55	---	---	---	---	---
	03/13/90	NP	6.02	10.65	39,000	3,500	1,500	2,100	3,900
	04/18/90	NP	6.35	10.32	---	---	---	---	---
	05/23/90	NP	6.28	10.39	---	---	---	---	---
	06/14/90	NP	6.14	10.53	34,000	3,800	730	1,600	3,900
	08/21/90	NP	6.70	9.97	---	---	---	---	---
	09/19/90	NP	6.84	9.83	63,000	670	180	390	1,000
	12/17/90	NP	6.46	10.21	140,000	3,700	2,500	3,000	8,300
	01/31/91	sheen	6.66	10.01	---	---	---	---	---
	02/25/91	NP	6.50	10.17	---	---	---	---	---
	03/19/91	sheen	5.76	10.91	48,000	4,500	1,600	2,100	5,500
	04/22/91	NP	5.78	10.89	---	---	---	---	---
	05/17/91	NP	6.01	10.66	---	---	---	---	---
	07/24/91	NP	6.43	10.24	49,000	3,500	2,200	2,000	6,400
	09/10/91	NP	6.81	9.86	---	---	---	---	---
	09/23/91	NP	6.82	9.85	---	---	---	---	---
	10/21/91	NP	7.01	9.66	---	---	---	---	---
	10/22/91	---	---	---	34,000	3,700	1,100	1,800	5,200
	11/18/91	NP	6.66	10.01	---	---	---	---	---
	12/11/91	NP	6.85	9.82	---	---	---	---	---
	01/21/92	NP	6.22	10.45	21,000	4,600	1,300	1,700	5,100
	02/20/92	NP	5.28	11.39	---	---	---	---	---
	03/19/92	NP	5.34	11.33	---	---	---	---	---
	04/24/92	sheen	5.75	10.92	36,000	5,000	970	2,300	5,200
	05/13/92	NP	5.95	10.72	---	---	---	---	---
	06/24/92	NP	6.39	10.28	---	---	---	---	---
	07/16/92	sheen	6.50	10.17	42,000	3,500	490	1,800	3,700
	08/19/92	NP	6.69	9.98	---	---	---	---	---
	09/24/92	sheen	6.74	9.93	26,000	3,600	670	1,700	3,300
	02/05/93	0.01	5.56	11.10	---	---	---	---	---
	04/30/93	sheen	5.78	10.89	280,000	11,000	6,500	5,500	160,000
	05/14/93(c)	---	---	---	---	---	---	---	---

See notes on page 8 of 8

TABLE 1
CUMULATIVE GROUNDWATER MONITORING DATA
 Exxon Service Station No. 7-0104
 1725 Park Street
 Alameda, California
 (Page 3 of 8)

Well ID # (TOC)	Sampling Date	SUBJ <----->	DTW ft	Elev.-W ----->	TPHg <----->	B	T ppb	E	X
MW-3	06/07/88	---	---	---	28,000	6,000	80	940	1,900
(17.11)	06/10/88	NP	6.05	11.06	---	---	---	---	---
	01/17/89	NP	5.49	11.62	5,300	2,500	230	590	1,100
	01/24/89	NP	5.38	11.73	---	---	---	---	---
	06/01/89	NP	5.96	11.15	5,400	330	300	570	680
	09/18/89	NP	6.65	10.46	12,000	680	170	350	860
	10/20/89	NP	6.88	10.23	---	---	---	---	---
	11/22/89	NP	6.74	10.37	---	---	---	---	---
	12/11/89	NP	6.37	10.74	14,000	1,100	150	670	690
	02/13/90	NP	5.58	11.53	---	---	---	---	---
	03/13/90	NP	5.48	11.63	18,000	6,300	200	1,100	1,100
	04/18/90	NP	6.01	11.10	---	---	---	---	---
	05/23/90	NP	6.14	10.97	---	---	---	---	---
	06/14/90	NP	5.83	11.28	9,500	1,300	880	310	1,800
	08/21/90	NP	6.67	10.44	---	---	---	---	---
	09/19/90	NP	6.88	10.23	16,000	5,000	65	1,500	450
	12/17/90	NP	6.46	10.65	6,700	1,500	64	650	460
	01/31/91	NP	6.24	10.87	---	---	---	---	---
	02/25/91	NP	6.18	10.93	---	---	---	---	---
	03/19/91	NP	5.35	11.76	18,000	4,200	2,100	1,100	1,200
	04/22/91	NP	5.72	11.39	---	---	---	---	---
	05/17/91	NP	5.55	11.56	---	---	---	---	---
	07/24/91	NP	6.41	10.70	38,000	6,200	990	2,900	9,600
	09/10/91	NP	6.80	10.31	---	---	---	---	---
	09/23/91	NP	6.80	10.31	---	---	---	---	---
	10/21/91	NP	7.09	10.02	---	---	---	---	---
	10/22/91	---	---	---	23,000	3,400	150	2,500	4,400
	11/18/91	NP	6.74	10.37	---	---	---	---	---
	12/11/91	NP	6.79	10.32	---	---	---	---	---
	01/21/92	NP	6.16	10.95	13,000	2,700	30	1,800	740
	02/20/92	NP	4.89	12.22	---	---	---	---	---
	03/19/92	NP	4.85	12.26	---	---	---	---	---
	04/24/92	NP	5.28	11.83	17,000	4,200	170	1,600	600
	05/13/92	NP	5.58	11.53	---	---	---	---	---
	06/24/92	NP	6.22	10.89	---	---	---	---	---
	07/16/92	NP	6.36	10.75	11,000	2,700	230	1,100	570
	08/19/92	NP	6.65	10.46	---	---	---	---	---
	09/24/92	NP	6.93	10.18	7,100	2,000	44	1,000	220
	02/05/93	NP	4.71	12.40	13,000	3,600	110	1,300	430
	04/30/93	NP	5.46	11.65	13,000	1,600	370	1,600	1,800
	05/14/93	NP	6.53	10.58	---	---	---	---	---

See notes on page 8 of 8

TABLE 1
CUMULATIVE GROUNDWATER MONITORING DATA
 Exxon Service Station No. 7-0104
 1725 Park Street
 Alameda, California
 (Page 4 of 8)

Well ID # (TOC)	Sampling Date	SUBJ	DTW		Elev.-W	TPHg			
			ft			ppb			
MW-4 (17.34)	01/17/89	NP	5.36	11.98	19,000	1,000	1,500	360	2,200
	01/24/89	NP	5.46	11.88	---	---	---	---	---
	06/01/89	NP	6.01	11.33	3,600	180	240	63	810
	09/18/89	NP	6.80	10.54	6,000	290	200	28	510
	10/20/89	NP	7.08	10.26	---	---	---	---	---
	11/22/89	NP	6.82	10.52	---	---	---	---	---
	12/11/89	NP	6.37	10.97	13,000	750	910	510	1,200
	02/13/90	NP	5.49	11.85	---	---	---	---	---
	03/07/90(a)	---	---	---	---	---	---	---	---
	03/13/90	NP	5.44	11.90	12,000	1,500	1500	470	28,000
	04/18/90	NP	6.14	11.20	---	---	---	---	---
	05/23/90	NP	6.22	11.12	---	---	---	---	---
	06/14/90	NP	5.92	11.42	12,000	5,700	400	1,300	760
	08/21/90	NP	6.83	10.51	---	---	---	---	---
	09/19/90	NP	7.07	10.27	5,500	670	180	390	1,000
	12/17/90	NP	6.50	10.84	14,000	1,400	620	540	2,100
	01/31/91	NP	6.66	10.68	---	---	---	---	---
	02/25/91	NP	6.21	11.13	---	---	---	---	---
	03/19/91	NP	5.29	12.05	11,000	1,500	740	620	2,100
	04/22/91	NP	5.26	12.08	---	---	---	---	---
	05/17/91	NP	5.60	11.74	---	---	---	---	---
	07/24/91	NP	6.54	10.80	10,000	1,200	440	410	1,200
	09/10/91	NP	7.04	10.30	---	---	---	---	---
	09/23/91	NP	7.14	10.20	---	---	---	---	---
	10/21/91	sheen	7.30	10.04	---	---	---	---	---
	10/22/91	---	---	---	4,600	750	190	350	780
	11/18/91	NP	6.90	10.44	---	---	---	---	---
	12/11/91	NP	7.01	10.33	---	---	---	---	---
	01/21/92	NP	6.25	11.09	6,000	1,300	320	510	1,200
	02/20/92	NP	4.79	12.55	---	---	---	---	---
	03/19/92	NP	4.70	12.64	---	---	---	---	---
	04/24/92	sheen	5.25	12.09	11,000	1,700	630	710	1,600
	05/13/92	sheen	5.62	11.72	---	---	---	---	---
06/24/92	sheen	6.19	11.15	---	---	---	---	---	
07/16/92	sheen	6.51	10.83	5,400	870	240	440	700	
08/19/92	NP	6.85	10.49	---	---	---	---	---	
09/24/92	NP	7.17	10.17	5,900	1,300	130	530	690	
02/05/93	NP	4.61	12.73	15,000	2,300	820	980	2,200	
04/30/93	NP	5.59	11.75	21,000	4,000	960	1,500	2,900	
05/14/93	NP	6.50	10.84	---	---	---	---	---	

See notes on page 8 of 8

TABLE 1
CUMULATIVE GROUNDWATER MONITORING DATA
 Exxon Service Station No. 7-0104
 1725 Park Street
 Alameda, California
 (Page 5 of 8)

Well ID # (TOC)	Sampling Date	SUBJ <----->	DTW		Elev.-W <----->	TPHg <----->	B	T ppb	E	X
			ft							
MW-5 (16.71)	01/17/89	NP	5.39	11.32		26,000	8,700	3,900	990	5,900
	01/24/89	NP	5.51	11.20		---	---	---	---	---
	06/01/89	sheen	5.83	10.88		5,200	240	220	130	690
	09/18/89	NP	6.52	10.19		8,000	340	150	140	460
	10/20/89	NP	6.72	9.99		---	---	---	---	---
	11/22/89	NP	6.54	10.17		---	---	---	---	---
	12/11/89	NP	6.21	10.50		15,000	720	320	450	870
	02/13/90	NP	5.60	11.11		---	---	---	---	---
	03/07/90	---	---	---		---	---	---	---	---
	03/13/90	NP	5.54	11.17		10,000	3,400	220	280	800
	04/18/90	NP	5.75	10.96		---	---	---	---	---
	05/23/90	NP	5.98	10.73		---	---	---	---	---
	06/14/90	NP	5.81	10.90		12,000	3,300	160	350	730
	08/21/90	NP	6.51	10.20		---	---	---	---	---
	09/19/90	NP	6.70	10.01		8,500	1,800	85	120	460
	12/17/90	sheen	6.24	10.47		18,000	2,300	810	430	1,400
	01/31/91	NP	6.31	10.40		---	---	---	---	---
	02/25/91	NP	6.13	10.58		---	---	---	---	---
	03/19/91	NP	5.32	11.39		17,000	2,900	610	580	1,200
	04/22/91	sheen	5.30	11.41		---	---	---	---	---
	05/17/91	NP	5.59	11.12		---	---	---	---	---
	07/24/91	NP	6.33	10.38		16,000	3,200	320	690	1,100
	09/10/91	NP	6.66	10.05		---	---	---	---	---
	09/23/91	NP	6.75	9.96		---	---	---	---	---
	10/21/91	sheen	6.92	9.79		---	---	---	---	---
	10/22/91	---	---	---		6,600	2,000	64	320	480
	11/18/91	NP	6.55	10.16		---	---	---	---	---
	12/11/91	NP	6.64	10.07		---	---	---	---	---
	01/21/92	sheen	6.07	10.64		14,000	4,000	190	630	1,300
	02/20/92	NP	4.83	11.88		---	---	---	---	---
03/19/92	sheen	4.83	11.88		---	---	---	---	---	
04/24/92	sheen	5.32	11.39		12,000	2,600	120	620	530	
05/13/92	sheen	5.61	11.10		---	---	---	---	---	
06/24/92	NP	6.17	10.54		---	---	---	---	---	
07/16/92	sheen	6.25	10.46		20,000	4,000	48	880	720	
08/19/92	sheen	6.53	10.18		---	---	---	---	---	
09/24/92	sheen	6.80	9.91		9,300	2,200	31	330	250	
02/05/93	NP(b)	4.70	12.01		---	---	---	---	---	
04/30/93	sheen	5.43	11.28		30,000	5,900	450	1,900	1,500	
05/14/93	NP	7.31	9.40		---	---	---	---	---	

See notes on page 8 of 8

TABLE 1
CUMULATIVE GROUNDWATER MONITORING DATA
 Exxon Service Station No. 7-0104
 1725 Park Street
 Alameda, California
 (Page 6 of 8)

Well ID # (TOC)	Sampling Date	SUBJ <----->	DTW		Elev.-W <----->	TPHg <----->	B	T ppb	E	X
			ft	ft						
MW-6	01/17/89	NP	5.59	11.97		38,000	7,400	9,300	2,000	9,900
(17.56)	01/24/89	NP	5.27	12.29		---	---	---	---	---
	06/01/89	sheen	6.25	11.31		23,000	1,900	2,500	2,000	6,000
	09/18/89	NP	6.95	10.61		17,000	650	410	650	320
	10/20/89	NP	7.24	10.32		---	---	---	---	---
	11/22/89	NP	7.05	10.51		---	---	---	---	---
	12/11/89	NP	6.63	10.93		29,000	1,100	810	330	1,500
	02/13/90	NP	5.70	11.86		---	---	---	---	---
	03/07/90	---	---	---		---	---	---	---	---
	03/13/90	NP	5.63	11.93		38,000	12,000	15,000	2,500	12,000
	04/18/90	NP	6.26	11.30		---	---	---	---	---
	05/23/90	NP	6.42	11.14		---	---	---	---	---
	06/14/90	NP	6.19	11.37		38,000	9,100	7,800	2,900	12,000
	08/21/90	NP	7.01	10.55		---	---	---	---	---
	09/19/90	NP	7.23	10.33		22,000	4,200	300	1,400	3,400
	12/17/90	NP	6.66	10.90		20,000	3,100	4,100	890	2,700
	01/31/91	NP	6.39	11.17		---	---	---	---	---
	02/25/91	NP	6.39	11.17		---	---	---	---	---
	03/19/91	NP	5.57	11.99		180,000	11,000	55,000	5,600	28,000
	04/22/91	NP	5.42	12.14		---	---	---	---	---
	05/17/91	NP	5.73	11.83		---	---	---	---	---
	07/24/91	NP	6.72	10.84		48,000	5,400	2,300	2,000	9,000
	09/10/91	NP	7.15	10.41		---	---	---	---	---
	09/23/91	NP	7.25	10.31		---	---	---	---	---
	10/21/91	NP	7.42	10.14		---	---	---	---	---
	10/22/91	---	---	---		18,000	3,100	700	1,400	2,900
	11/18/91	NP	7.08	10.48		---	---	---	---	---
	12/11/91	NP	7.17	10.39		---	---	---	---	---
	01/21/92	NP	6.40	11.16		9,400	2,100	370	1,000	1,100
	02/20/92	NP	5.06	12.50		---	---	---	---	---
	03/19/92	NP	4.86	12.70		---	---	---	---	---
	04/24/92	NP	5.44	12.12		42,000	3,500	8,000	2,100	8,000
	05/13/92	NP	5.83	11.73		---	---	---	---	---
	06/24/92	NP	6.50	11.06		---	---	---	---	---
	07/16/92	NP	6.68	10.88		14,000	1,600	1,000	1,000	2,500
	08/19/92	NP	7.00	10.56		---	---	---	---	---
	09/24/92	NP	7.28	10.28		4,700	790	97	640	540
	02/05/93	NP	4.84	12.72		26,000	2,500	4,300	1,700	5,300
	04/30/93	NP	5.69	11.87		9,600	1,000	410	1,100	1,600
	05/14/93	NP	6.52	11.04		---	---	---	---	---

See notes on page 8 of 8

TABLE 1
CUMULATIVE GROUNDWATER MONITORING DATA
 Exxon Service Station No. 7-0104
 1725 Park Street
 Alameda, California
 (Page 7 of 8)

Well ID # (TOC)	Sampling Date	SUBJ <----->	DTW ft	Elev.-W <----->	TPHg <----->	B	T ppb	E	X
MW-7 (17.12)	01/09/90	---	---	---	17,000	380	180	330	1,300
	02/13/90	NP	4.98	12.14	---	---	---	---	---
	03/13/90	NP	4.94	12.18	16,000	360	270	83	460
	05/23/90	NP	5.87	11.25	---	---	---	---	---
	06/14/90	NP	5.55	11.57	14,000	1,200	2,800	75	930
	09/19/90	NP	6.79	10.33	16,000	2,800	95	2,500	1,700
	12/17/90	NP	6.15	10.97	75,000	2,600	7,000	3,300	14,000
	01/31/91	NP	6.64	10.48	---	---	---	---	---
	02/25/91	NP	5.80	11.32	---	---	---	---	---
	03/19/91	NP	4.96	12.16	44,000	1,600	740	3,400	8,600
	04/22/91	NP	4.82	12.30	---	---	---	---	---
	05/17/91	NP	5.18	11.94	---	---	---	---	---
	07/24/91	NP	6.22	10.90	18,000	1,300	160	2,700	1,000
	09/10/91	NP	6.71	10.41	---	---	---	---	---
	09/23/91	NP	6.84	10.28	---	---	---	---	---
	10/21/91	NP	7.00	10.12	---	---	---	---	---
	10/22/91	---	---	---	10,000	990	26	1,900	490
	11/18/91	NP	6.56	10.56	---	---	---	---	---
	12/11/91	NP	6.68	10.44	---	---	---	---	---
	01/21/92	NP	5.99	11.13	23,000	2,200	3,000	1,800	6,100
	02/20/92	NP	4.36	12.76	---	---	---	---	---
	03/19/92	NP	4.22	12.90	---	---	---	---	---
	04/24/92	NP	4.84	12.28	25,000	1,400	220	2,100	2,600
	05/13/92	NP	5.24	11.88	---	---	---	---	---
	06/24/92	NP	6.04	11.08	---	---	---	---	---
	07/16/92	NP	6.19	10.93	8,700	470	45	970	86
	08/19/92	NP	6.55	10.57	---	---	---	---	---
09/24/92	NP	6.83	10.29	9,200	560	48	1,300	54	
02/05/93	NP	4.11	13.01	33,000	1,100	2,300	1,200	4,200	
04/30/93(b)	NP	5.29	11.83	13,000	240	85	710	320	
05/14/93	NP	5.91	11.21	---	---	---	---	---	
MW-8 (16.33)	05/14/93	NP	6.54	9.79	<50	<0.5	<1.0	<0.5	<0.5
MW-9 (15.62)	05/14/93	NP	6.61	9.01	<50	<0.5	<1.0	<0.5	<0.5
MW-10 (16.79)	05/14/93	NP	6.91	9.88	97	<0.5	<0.5	9.8	22

See notes on page 8 of 8

TABLE 1
CUMULATIVE GROUNDWATER MONITORING DATA
 Exxon Service Station No. 7-0104
 1725 Park Street
 Alameda, California
 (Page 8 of 8)

Well ID # (TOC)	Sampling Date	SUBJ <----- ft ----->	DTW <----- ft ----->	Elev.-W <----- ft ----->	TPHg <----- ppb ----->	B	T	E	X
FB	12/11/89	---	---	---	<50	0.88	0.95	0.62	1.7
	12/17/90	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
	03/19/91	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
	07/24/91	---	---	---	<50	<0.5	<0.5	<0.5	<0.6
	10/22/91	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
	01/21/92	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
	07/16/92	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
TB	06/14/90	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
	09/19/90	---	---	---	<50	0.8	<0.5	0.6	1.0
	04/24/92	---	---	---	<50	<0.5	<0.5	<0.5	<0.5
	09/24/92	---	---	---	230	<0.5	<0.5	<0.5	<0.5

Notes:

- ft = Feet
- SUBJ = Results of subjective evaluation, separate phase product thickness (PT) in feet
 NP = separate phase product not present in well
 sheen = separate phase product present as a sheen
 emulsion = separate phase product present as an emulsion
- TOC = Elevation of top of well casing; datum is mean sea level
- DTW = Depth to water
- Elev.-W = Elevation of groundwater; datum is mean sea level
 Elev.-W = TOC - (DTW + (PT * 0.8))
- ppb = Parts-per-billion
- TPHg = Total petroleum hydrocarbons as gasoline
- B = Benzene
- T = Toluene
- E = Ethylbenzene
- X = Total xylene isomers
- < = Less than the indicated detection limit shown by the laboratory
- FB = Field blank
- TB = Travel blank
- = Not sampled / not measured
- (a) = 03/07/90 sampling: Total Dissolved Solids were detected in samples from MW-1 and MW-4 at 910 parts-per-million (ppm) and 370 ppm, respectively.
- (b) = As per Pace Inc., a peak eluting before benzene was present in the groundwater samples from MW-5 and MW-7. Pace Inc. suspects this peak to be methyl tert butyl ether (MTBE).
- (c) = 05/14/93: MW-2 was inaccessible for depth-to-water measurement and subjective analysis.

APPENDIX A
GROUNDWATER SAMPLING PROTOCOL

GROUNDWATER SAMPLING PROTOCOL

The static water level and separate phase product level, if present, are measured with a ORS Interface Probe Model No. 106801, which is accurate to the nearest 0.01 foot. To calculate groundwater elevations and evaluate groundwater gradient, depth to water (DTW) levels are subtracted from wellhead elevations. When necessary, groundwater elevation is corrected for separate phase product thickness by multiplying product thickness (PT) by a correction factor 0.8 and subtracting from the DTW level (Adjusted DTW = DTW-[PT x 0.8])

For subjective evaluation, groundwater is collected by gently lowering approximately half the length of a clean Teflon[®] bailer past the air-water interface in the well. The groundwater is evaluated for the presence of separate phase hydrocarbon product or sheen. If present, separate phase product is hand bailed or pumped from the well.

Before water samples are collected from the groundwater monitoring wells, the wells are purged until stabilization of temperature, pH, and conductivity is obtained. Approximately three to four well casing volumes are purged before these characteristics stabilize. Water samples from wells that do not obtain a consistent range of temperature, pH, and conductivity parameters are considered to be "grab samples." The quantity of water purged in one well casing volume is calculated as follows:

1 well casing volume = $\pi r^2 h(7.48)$ where:

- r = radius of the well casing in feet.
- h = column of water in the well in feet (depth to bottom - depth to water)
- 7.48 = conversion constant from cubic feet to gallons

After purging, the well is allowed to recharge to at least 80% of the initial water level. Water samples from wells that do not recover to at least 80% between purging and sampling (due to slow well recharge) are considered to be "grab samples." Water samples are collected with a clean Teflon[®] bailer. Water is poured to produce a positive meniscus in 40-milliliter (ml) glass vials. Each vial is preserved with hydrochloric acid, sealed with a cap containing a Teflon[®] septum, and subsequently examined for air bubbles which allow volatilization to occur. The samples are promptly transported in iced storage in a thermally-insulated ice chest, accompanied by a Chain of Custody Record, to a California-certified laboratory.

APPENDIX B

**REPORTS OF LABORATORY ANALYSIS
AND CHAIN OF CUSTODY RECORDS**

REPORT OF LABORATORY ANALYSIS

May 10, 1993

Mr. Mark Frye
 RESNA
 73 Digital Dr.
 Novato, CA 94949

MAY 12 1993

RE: PACE Project No. 430430.518
 Client Reference: Exxon 7-0104 (EE)

Dear Mr. Frye:

Enclosed is the report of laboratory analyses for samples received April 30, 1993.

Please note when analyzing your samples MW-7 and MW-5 (PACE sample numbers 70 0061636 and 70 0061644) a peak eluting earlier than Benzene and suspected to be Methyl Tert Butyl Ether (MTBE) was present.

Footnotes are given at the end of the report.

If you have any questions concerning this report, please feel free to contact us.

Sincerely,

Carol Reid
 Stephanie Matzo *for*
 Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

RESNA
73 Digital Dr.
Novato, CA 94949

May 10, 1993
PACE Project Number: 430430518
WPPLab Number: 2408

Attn: Mr. Mark Frye

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number: 70 0061598
Date Collected: 04/30/93
Date Received: 04/30/93
MW-1

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
------------------	--------------	------------	----------------------

ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	05/04/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	500	6500	05/04/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	05/04/93
Benzene	ug/L	5.0	330	05/04/93
Toluene	ug/L	5.0	320	05/04/93
Ethylbenzene	ug/L	5.0	640	05/04/93
Xylenes, Total	ug/L	5.0	1300	05/04/93

REPORT OF LABORATORY ANALYSIS

Mr. Mark Frye
 Page 2

May 10, 1993
 PACE Project Number: 430430518

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number: 70 0061601
 Date Collected: 04/30/93
 Date Received: 04/30/93
 Client Sample ID: MW-3

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	05/04/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	1200	13000	05/04/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	05/04/93
Benzene	ug/L	12	1600	05/04/93
Toluene	ug/L	12	370	05/04/93
Ethylbenzene	ug/L	12	1600	05/04/93
Xylenes, Total	ug/L	12	1800	05/04/93



REPORT OF LABORATORY ANALYSIS

Mr. Mark Frye
Page 3

May 10, 1993
PACE Project Number: 430430518

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number: 70 0061610
Date Collected: 04/30/93
Date Received: 04/30/93
Client Sample ID: MW-4

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	05/04/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	1200	21000	05/04/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	05/04/93
Benzene	ug/L	12	4000	05/04/93
Toluene	ug/L	12	960	05/04/93
Ethylbenzene	ug/L	12	1500	05/04/93
Xylenes, Total	ug/L	12	2900	05/04/93

REPORT OF LABORATORY ANALYSIS

Mr. Mark Frye
 Page 4

May 10, 1993
 PACE Project Number: 430430518

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number: 70 0061628
 Date Collected: 04/30/93
 Date Received: 04/30/93
 Client Sample ID: MW-6

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	05/04/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	1200	9600	05/04/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	05/04/93
Benzene	ug/L	12	1000	05/04/93
Toluene	ug/L	12	410	05/04/93
Ethylbenzene	ug/L	12	1100	05/04/93
Xylenes, Total	ug/L	12	1600	05/04/93

REPORT OF LABORATORY ANALYSIS

Mr. Mark Frye
 Page 5

May 10, 1993
 PACE Project Number: 430430518

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number: 70 0061636
 Date Collected: 04/30/93
 Date Received: 04/30/93
 Client Sample ID: MW-7

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	05/04/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	1200	13000	05/04/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	05/04/93
Benzene	ug/L	12	240	05/04/93
Toluene	ug/L	12	85	05/04/93
Ethylbenzene	ug/L	12	710	05/04/93
Xylenes, Total	ug/L	12	320	05/04/93

REPORT OF LABORATORY ANALYSIS

Mr. Mark Frye
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May 10, 1993
 PACE Project Number: 430430518

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number: 70 0061652
 Date Collected: 04/30/93
 Date Received: 04/30/93
 Client Sample ID: MW-2

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	05/04/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	12000	280000	05/04/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	05/04/93
Benzene	ug/L	120	11000	05/04/93
Toluene	ug/L	120	6500	05/04/93
Ethylbenzene	ug/L	120	5500	05/04/93
Xylenes, Total	ug/L	120	16000	05/04/93

These data have been reviewed and are approved for release.

Darrell C. Cain

Darrell C. Cain
 Regional Director



REPORT OF LABORATORY ANALYSIS

Mr. Mark Frye
Page 8

FOOTNOTES
for pages 1 through 7

May 10, 1993
PACE Project Number: 430430518

Client Reference: Exxon 7-0104 (EE)

MDL Method Detection Limit

REPORT OF LABORATORY ANALYSIS

Mr. Mark Frye
 Page 9

QUALITY CONTROL DATA

May 10, 1993
 PACE Project Number: 430430518

Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS

Batch: 70 20912

Samples: 70 0061598, 70 0061601, 70 0061610, 70 0061628, 70 0061636
 70 0061644, 70 0061652

METHOD BLANK:

Parameter	Units	MDL	Method Blank
TOTAL FUEL HYDROCARBONS, (LIGHT):			
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND
PURGEABLE AROMATICS (BTXE BY EPA 8020M)			
Benzene	ug/L	0.5	ND
Toluene	ug/L	0.5	ND
Ethylbenzene	ug/L	0.5	ND
Xylenes, Total	ug/L	0.5	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference		Dupl	
			Value	Recv	Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	1000	90%	89%	1%
Benzene	ug/L	0.5	40.0	104%	100%	3%
Toluene	ug/L	0.5	40.0	104%	99%	4%
Ethylbenzene	ug/L	0.5	40.0	106%	103%	2%
Xylenes, Total	ug/L	0.5	120	105%	99%	5%

Mr. Mark Frye
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FOOTNOTES
for page 9

May 10, 1993
PACE Project Number: 430430518

Client Reference: Exxon 7-0104 (EE)

MDL Method Detection Limit
ND Not detected at or above the MDL.
RPD Relative Percent Difference



EXXON COMPANY, U.S.A.

P.O. Box 4415, Houston, TX 77210-4415

CHAIN OF CUSTODY

Novato, CA, 11 Digital Drive, 94949
(415) 883-6100

Huntington Beach, CA, 5702 Bolsa Avenue, 92649
(714) 892-2565

75079311518

Consultant's Name: RESNA Page 1 of 1
 Address: 74 DIGITAL DR. Site Location: 1725 PARK ST. PLUMEDON
 Project #: _____ Consultant Project #: 170077.01 Consultant Work Release #: 09300238
 Project Contact: MARK FLYE Phone #: 382-7400 Fax #: _____ Laboratory Work Release #: AWWDDW
 EXXON Contact: MARLA GUENZLER EE C&M Phone #: _____ Fax #: _____ EXXON RAS #: 7-0104
 Sampled by (print): STEPHEN LEACH Sampler's Signature: [Signature]
 Shipment Method: HAND DELIVER Air Bill #: _____ Shipment Date: _____

Sample Description	Collection Date/Time	Matrix Soil Water	Prsv	# of Cont	PACE Sample #	ANALYSIS REQUIRED					COMMENTS	
						TPH/GAS/BTEX EPA 8015/8020	TPH/Diesel EPA 8015	TRPH EPA 418.1	ANISENTE (HOLD)			
MW-1	4/30/11:42	WATER	HCL	4	6159.8	X			X			6166.0
MW-3	4/30/3:14	WATER	HCL	4	6160.1	X			X			6167.9
MW-4	4/30/3:35	WATER	HCL	4	6161.0	X			X			6168.7
MW-6	4/30/4:05	WATER	HCL	4	6162.8	X			X			6169.5
MW-7	4/30/4:33	WATER	HCL	4	6163.6	X			X			6170.9
MW-5	4/30/5:00	WATER	HCL	4	6164.4	X			X			6171.7
MW-2	4/30/5:25	WATER	HCL	4	6165.2	X			X			6172.5

Relinquished by/Affiliation	Date	Time	Accepted by/Affiliation	Date	Time	Additional Comments:
<u>[Signature]</u>	<u>4/30/03</u>	<u>6:40</u>	<u>[Signature]</u> - PACE	<u>4/30</u>	<u>6:40</u>	



REPORT OF LABORATORY ANALYSIS

RESNA
73 Digital Dr.
Novato, CA 94949

May 25, 1993
PACE Project Number: 430514524

Attn: Ms. Jennifer Chase

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number: 70 0072131
Date Collected: 05/14/93
Date Received: 05/14/93
Client Sample ID: MW-10

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):				05/21/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	97	05/21/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):				05/21/93
Benzene	ug/L	0.5	ND	05/21/93
Toluene	ug/L	0.5	ND	05/21/93
Ethylbenzene	ug/L	0.5	9.8	05/21/93
Xylenes, Total	ug/L	1.0	22	05/21/93



REPORT OF LABORATORY ANALYSIS

RESNA
73 Digital Dr.
Novato, CA 94949

May 25, 1993
PACE Project Number: 430514524

Attn: Ms. Jennifer Chase

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number: 70 0072131
Date Collected: 05/14/93
Date Received: 05/14/93
Client Sample ID: MW-10

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	05/21/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	97	05/21/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	05/21/93
Benzene	ug/L	0.5	ND	05/21/93
Toluene	ug/L	0.5	ND	05/21/93
Ethylbenzene	ug/L	0.5	9.8	05/21/93
Xylenes, Total	ug/L	1.0	22	05/21/93

Ms. Jennifer Chase
 Page 2

May 25, 1993
 PACE Project Number: 430514524

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number: 70 0072140
 Date Collected: 05/14/93
 Date Received: 05/14/93
 Client Sample ID: MW-9

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	05/21/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	05/21/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	05/21/93
Benzene	ug/L	0.5	ND	05/21/93
Toluene	ug/L	0.5	ND	05/21/93
Ethylbenzene	ug/L	0.5	ND	05/21/93
Xylenes, Total	ug/L	1.0	ND	05/21/93

Ms. Jennifer Chase
 Page 3

May 25, 1993
 PACE Project Number: 430514524

Client Reference: Exxon 7-0104 (EE)

PACE Sample Number: 70 0072158
 Date Collected: 05/14/93
 Date Received: 05/14/93
 Client Sample ID: MW-8

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>DATE ANALYZED</u>
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ORGANIC ANALYSIS

PURGEABLE FUELS AND AROMATICS

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	05/22/93
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	05/22/93
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	05/22/93
Benzene	ug/L	0.5	ND	05/22/93
Toluene	ug/L	0.5	ND	05/22/93
Ethylbenzene	ug/L	0.5	ND	05/22/93
Xylenes, Total	ug/L	1.0	ND	05/22/93

These data have been reviewed and are approved for release.

Darrell C. Cain
 Darrell C. Cain
 Regional Director

Ms. Jennifer Chase
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FOOTNOTES
for pages 1 through 3

May 25, 1993
PACE Project Number: 430514524

Client Reference: Exxon 7-0104 (EE)

MDL Method Detection Limit
ND Not detected at or above the MDL.

Ms. Jennifer Chase

QUALITY CONTROL DATA

May 25, 1993

Page 5

PACE Project Number: 430514524

Client Reference: Exxon 7-0104 (EE)

PURGEABLE FUELS AND AROMATICS

Batch: 70 21368

Samples: 70 0072131, 70 0072140, 70 0072158

METHOD BLANK:

Parameter	Units	MDL	Method Blank
TOTAL FUEL HYDROCARBONS, (LIGHT):			-
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND
PURGEABLE AROMATICS (BTXE BY EPA 8020M)			-
Benzene	ug/L	0.5	ND
Toluene	ug/L	0.5	ND
Ethylbenzene	ug/L	0.5	ND
Xylenes, Total	ug/L	1.0	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	1000	93%	98%	5%
Benzene	ug/L	0.5	100	100%	97%	3%
Toluene	ug/L	0.5	100	103%	99%	3%
Ethylbenzene	ug/L	0.5	100	105%	103%	1%
Xylenes, Total	ug/L	1.0	300	107%	107%	0%

Ms. Jennifer Chase
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FOOTNOTES
for page 5

May 25, 1993
PACE Project Number: 430514524

Client Reference: Exxon 7-0104 (EE)

MDL Method Detection Limit
ND Not detected at or above the MDL.
RPD Relative Percent Difference

