EXXON COMPANY, U.S.A.

POST OFFICE BOX 4032 . CONCORD, CA 94524-2032

ENVIRONMENTAL ENGINEERING

MARLA D. GUENSLER
ENVIRONMENTAL ENGINEER
(510) 246-8776

June 22, 1992

Former Exxon RAS 7-3006
720 High Street
Oakland, California

Mr. Larry Seto
Alameda County Health Agency
Division of Hazardous Materials
80 Swan Way, Suite 200
Oakland, California 94621

Dear Mr. Seto:

Attached for your review and comment is the **Letter Report on Groundwater Monitoring for First Quarter 1992** for the above referenced site. The report, prepared by RESNA Industries, Incorporated, of Fremont, California, details the results of the first quarter groundwater monitoring events.

Exxon continues to hand-bail free phase product as an interim migration control measure for the site.

Should you have any questions or comments, or require additional information please do not hesitate to contact me at the above listed phone number.

Sincerely,

Marla D. Guensler

Attachment

c - w/attachment:
Mr. L. Feldman - San Francisco Bay RWQCB
Mr. V. A. Sevier

w/o attachment:
Mr. P. J. Brininstool
Mr. L. W. Lindeen
Mr. M. E. Detterman - RESNA - Fremont

MDG:sd
2612E/73007LTR

RESNA
Working to Restore Nature

42501 Albrae Street
Fremont, California 94538
Phone: (510) 440-3300
FAX: (510) 651-2233

6/15/92

LETTER REPORT
on
GROUNDWATER MONITORING
FOR FIRST QUARTER 1992
at
Exxon Station No. 7-3006
720 High Street
Oakland, California

RESNA Job No. 87042-11

SITE CONTACTS

Site Name: Exxon Station No. 7-3006
Site Address: 720 High Street
Oakland, California 94601
(415) 533-6066

Owner: Victor Chu

Exxon Environmental Engineer:

Marla D. Guensler
Environmental Engineer
Environmental Engineering, Marketing Department
Exxon Company, U.S.A.
2300 Clayton Road, Suite 1250
Concord, California 94520
(415) 246-8768

Consultant: RESNA Industries (RESNA)
42501 Albrae Street, Suite 100
Fremont, California 94538
(415) 651-1906

SITE BACKGROUND

The site is located at 720 High Street, in a predominantly industrial area of Oakland, California (Site Vicinity Map, Plate P-1). It is bound on the northwest by High Street, on the southwest by Coliseum Way, on the northeast by a former dry-cleaning facility, and on the south by Alameda Avenue. RESNA, formerly Applied GeoSystems (AGS), drilled borings B-14 through B-20 in November 1989 and drilled borings B-21 through B-30 in November 1990. AGS installed groundwater monitoring wells MW-2 through MW-9 in September 1987, MW-1 in May 1988, MW-10 through MW-13 in November 1989, and MW-14 and MW-15 in November 1990. The locations of the borings, wells, and pertinent site facilities are shown on the Generalized Site Plan, Plate P-2.

SITE ACTIVITIES JANUARY THROUGH MARCH 1992

Activities conducted at the site during the past quarter were monthly groundwater monitoring and quarterly sampling and analyses (see Attachment I: Field Procedures):

- Depths to groundwater were measured and subjective evaluations were performed on the initial water samples from each well on January 21 and March 25, 1992.
- Free-phase product was bailed when encountered on January 21 and March 25, 1992.
- On March 25 and 26, 1992, each well without free-phase product or sheen was purged and groundwater samples were collected (MW-1, MW-6, MW-7, MW-9, MW-10, MW-11, MW-14, and MW-15) and submitted for analysis.

SITE ACTIVITIES PLANNED FOR APRIL THROUGH JULY 1992

Activities planned for the next quarter:

- Continue monthly groundwater monitoring and product removal.
- Conduct quarterly groundwater sampling and analysis in June 1992.
- Report monthly monitoring and quarterly analytical results.

RESULTS OF SUBJECTIVE EVALUATIONS

.36" .72" .96"

In January 1992, free-phase product thicknesses of 0.03, 0.06, and 0.08 foot were observed in initial water samples collected from wells MW-2, MW-3, and MW-4, respectively. In March 1992, product thickness for the same wells were 0.03, 0.04, and 0.03 foot, respectively. Product thicknesses is relatively similar when compared to previous data. Depth to groundwater dropped an average of 0.37 foot between December 1991 and January 1992. In general, depths to water in monitoring wells dropped approximately 2 feet between the January and March 1992 monitoring events. Cumulative results of subjective evaluations and water-level data are presented in Table 1. A copy of Well Purge Data Sheets are included in Attachment II

GROUNDWATER GRADIENT AND FLOW DIRECTION

The monitoring wells at this site are constructed in several permeable zones. For continuity, the groundwater elevation data from wells constructed in the shallow gravel zone were used to estimate the difference in groundwater elevation across the site on January 21 and March

25, 1992 (Table 2). The groundwater elevation contours are shown on the Groundwater Elevation Maps, Plates P-3 and P-4. Plates P-3 and P-4 suggest that groundwater flowed toward the southwest at an estimated gradient of 0.02. This is consistent with the previous flow direction and gradient results.

ANALYTICAL METHODS AND RESULTS OF GROUNDWATER SAMPLES

Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by Environmental Protection Agency (EPA) modified Method 8015; total petroleum hydrocarbons as diesel (TPHd) by EPA Method 8015; and for benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 602. Samples were analyzed at Pace, Inc. in Novato, California (Hazardous Waste Testing Laboratory Certification No. 148). Copies of Chain of Custody Records and Analysis Reports are found in Attachment III.

In wells with detectable hydrocarbons, concentrations of TPHg ranged from 0.061 to 21 parts per million (ppm), and benzene concentrations ranged from 0.0015 to 8 ppm. Concentration of TPHd were detected at concentration ranging from less than 0.05 to 2.7 ppb. In general, concentrations of gasoline hydrocarbons increased compared to the December 1991 results (Table 3). To illustrate the distribution of hydrocarbons, concentration maps were prepared for TPHg and benzene (Plates P-5 and P-6, respectively).

REMEDIATION OF GROUNDWATER

Groundwater wells with free-phase product have been periodically bailed. A groundwater recovery system is being evaluated for construction.

RECOMMENDATIONS

We recommend that copies of this report be sent to the following:

- Mr. Larry Seto, Alameda County Health Agency, Department of Environmental Health, 80 Swan Way, Room 200, Oakland, California 94621, and

- Mr. Lester Feldman, California Regional Water Quality Control Board, San Francisco Bay Region, 2101 Webster Street, Suite 500, Oakland, California 94612.

Please call if you have any questions.

Sincerely,
Applied GeoSystems

Rasmi El-Jurf
Project Engineer

Mark E. Detterman, R.G.
Project Manager

Enclosures:
Table 1: Results of Subjective Evaluation of Water Samples.
Table 2: Summary of Groundwater Elevations.
Table 3: Results of Groundwater Analyses.
Plate P-1: Site Vicinity Map.
Plate P-2: Generalized Site Plan.
Plate P-3: Groundwater Elevation Map (January 21, 1992).
Plate P-4: Groundwater Elevation Map (March 25, 1992).
Plate P-5: Concentration of TPHg in Groundwater (March 25, 1992).
Plate P-6: Concentration of Benzene in Groundwater (March 25, 1992).
Attachment I: Field Procedures
Attachment II: Well Purge Data Sheets
Attachment III: Chain of Custody Records and Certified Analysis Reports

TABLE 1
RESULTS OF SUBJECTIVE EVALUATION OF WATER SAMPLES
(page 1 of 6)

Date	Depth to Water (ft)	Floating Product (ft)	Sheen	Emulsion
MW-1				
04/25/89	7.55	NONE	NONE	NONE
04/27/89	10.16	NONE	SLIGHT	NONE
09/06/89	10.88	NONE	SLIGHT	NONE
09/22/89	11.06	NONE	NONE	NONE
11/01/89	10.82	NONE	NONE	NONE
11/15/89	11.07	NONE	NONE	NONE
12/06/89	10.33	NONE	NONE	NONE
02/20/90	8.81	NONE	NONE	NONE
04/19/90	9.33	NONE	NONE	NONE
07/03/90	8.44	NONE	NONE	NONE
07/26/90	8.99	NONE	NONE	NONE
08/20/90	9.50	NONE	NONE	NONE
09/19/90	9.99	NONE	NONE	NONE
11/27/90	10.62	NONE	NONE	NONE
01/17/91	10.31	NONE	NONE	NONE
03/26/91	7.97	NONE	NONE	NONE
05/02/91	8.88	NONE	NONE	NONE
06/20/91	9.62	NONE	NONE	NONE
08/07/91	10.20	NONE	NONE	NONE
09/17/91	10.40	NONE	NONE	NONE
11/13/91	10.20	NONE	NONE	NONE
12/10/91	10.23	NONE	NONE	NONE
01/21/91	9.32	NONE	NONE	NONE
03/25/92	9.30	NONE	NONE	NONE
MW-2				
04/25/89	9.27	2.16	N/A	NONE
07/19/89	10.81	1.56	N/A	NONE
07/27/89	10.18	0.13	N/A	HEAVY
09/06/89	10.89	0.09	N/A	SLIGHT
09/22/89	11.56	0.56	N/A	SLIGHT
11/01/89	10.85	0.09	N/A	NONE
11/15/89	11.05	0.07	N/A	NONE
12/06/89	10.23	0.13	N/A	NONE
02/20/90	8.86	0.29	N/A	NONE
04/19/90	9.09	0.10	N/A	NONE
07/03/90	8.75	0.05	N/A	NONE
07/26/90	8.71	0.10	N/A	NONE
08/20/90	9.25	0.02	N/A	NONE
09/19/90	9.79	0.02	N/A	NONE
11/27/90	10.40	0.07	N/A	NONE
01/17/91	10.03	0.05	N/A	NONE
03/26/91	8.98	0.08	N/A	NONE
05/02/91	8.73	0.02	N/A	NONE
06/20/91	9.11	0.02	N/A	NONE
08/07/91	10.00	0.04	N/A	NONE
09/17/91	10.11	0.02	N/A	NONE
11/13/91	9.88	0.02	N/A	NONE
12/10/91	9.02	0.03	N/A	NONE
01/21/92	9.08	0.03	N/A	NONE
03/25/92	6.0	0.03	N/A	NONE

TABLE 1
RESULTS OF SUBJECTIVE EVALUATION OF WATER SAMPLES
(page 2 of 6)

Date	Depth to Water (ft)	Floating Product (ft)	Sheen	Emulsion
MW-3				
04/25/89	7.57	0.08	N/A	NONE
07/19/89	10.33	0.66	N/A	NONE
07/27/89		covered by soil		
09/06/89	11.22	0.07	N/A	SLIGHT
09/22/89	11.38	0.28	N/A	SLIGHT
11/01/89	10.90	0.01	N/A	NONE
11/15/89	11.18	0.11	N/A	NONE
12/06/89	10.29	NONE	SLIGHT	NONE
02/20/90	8.73	0.04	N/A	NONE
04/19/90	9.20	0.09	N/A	NONE
07/03/90	8.50	0.03	N/A	NONE
07/26/90	8.58	0.04	N/A	NONE
08/20/90	9.21	0.01	N/A	NONE
09/19/90	10.02	0.35	N/A	NONE
11/27/90	10.72	0.42	N/A	NONE
01/17/91	10.05	0.10	N/A	NONE
03/26/91	7.65	0.10	N/A	NONE
05/02/91	8.54	0.03	N/A	NONE
06/20/91	8.89	0.03	N/A	NONE
08/07/91	9.99	0.03	N/A	NONE
09/17/91	10.32	0.22	N/A	NONE
11/13/91	10.14	0.24	N/A	NONE
12/10/91	10.10	0.11	N/A	NONE
01/21/92	9.07	0.06	N/A	NONE
03/25/92	5.96	0.04	N/A	NONE
MW-4				
04/25/89	7.26	0.16	N/A	NONE
07/19/89	10.32	0.72	N/A	NONE
07/27/89		covered by soil		
09/06/89	11.40	0.07	N/A	SLIGHT
09/22/89	11.64	0.19	N/A	SLIGHT
11/01/89	11.00	NONE	SLIGHT	NONE
11/15/89	11.18	0.10	N/A	NONE
12/06/89	10.25	NONE	SLIGHT	NONE
02/20/90	8.40	NONE	N/A	NONE
04/19/90	9.04	0.03	N/A	NONE
07/03/90	8.00	—	N/A	MODERATE
07/26/90	8.57	0.04	N/A	NONE
08/20/90	9.08	0.01	N/A	NONE
09/19/90	9.76	0.03	N/A	NONE
11/27/90	10.83	0.09	N/A	NONE
01/17/91	9.96	0.20	N/A	NONE
03/26/91	6.20	0.09	N/A	NONE
05/02/91	7.50	0.04	N/A	NONE
06/20/91	7.79	0.04	N/A	NONE
08/07/91	9.81	0.05	N/A	NONE
09/17/91	10.02	0.10	N/A	NONE
11/13/91	9.90	0.12	N/A	NONE
12/10/91	9.92	0.10	N/A	NONE
01/21/92	9.50	0.08	N/A	NONE
03/25/92	5.01	0.03	N/A	NONE

RESNA

TABLE 1
RESULTS OF SUBJECTIVE EVALUATION OF WATER SAMPLES
(page 3 of 6)

Date	Depth to Water (ft)	Floating Product (ft)	Sheen	Emulsion
MW-5				
04/25/89	8.06	0.32	NONE	NONE
07/18/89		well destroyed		
MW-6				
04/25/89	8.02	NONE	NONE	NONE
09/06/89	13.64	0.08	N/A	SLIGHT
09/22/89	13.79	0.07	N/A	SLIGHT
11/01/89	12.78	NONE	SLIGHT	NONE
11/15/89	12.91	NONE	SLIGHT	NONE
12/06/89	11.84	NONE	NONE	NONE
02/20/90	9.08	NONE	NONE	NONE
04/19/90	9.72	NONE	NONE	NONE
07/03/90	8.00	NONE	NONE	NONE
07/26/90	8.70	NONE	NONE	NONE
08/20/90	9.62	NONE	NONE	NONE
09/19/90	10.25	NONE	MODERATE	NONE
11/27/90	10.82	NONE	SLIGHT	NONE
01/17/91	9.93	NONE	NONE	NONE
03/26/91	8.45	NONE	NONE	NONE
05/02/91	8.90	NONE	NONE	NONE
06/20/91	9.47	NONE	SLIGHT	NONE
08/07/91	10.10	NONE	SLIGHT	NONE
09/17/91	10.21	NONE	SLIGHT	NONE
11/13/91	9.62	NONE	SLIGHT	NONE
12/10/91	9.59	NONE	SLIGHT	NONE
01/21/92	9.25	NONE	SLIGHT	NONE
03/25/92	6.88	NONE	NONE	NONE
MW-7	near w/o pit			
~~04/25/89~~	8.66	NONE	NONE	NONE
09/06/89	11.72	NONE	SLIGHT	NONE
09/22/89	11.89	NONE	NONE	NONE
12/06/89	10.46	NONE	NONE	NONE
02/20/90	8.44	NONE	NONE	NONE
04/19/90	9.54	NONE	NONE	NONE
07/03/90	7.45	NONE	NONE	NONE
07/26/90	8.08	NONE	NONE	NONE
08/20/90	8.82	NONE	NONE	NONE
09/19/90	9.01	NONE	NONE	NONE
11/27/90	9.54	NONE	NONE	NONE
01/17/91	8.50	NONE	NONE	NONE
03/26/91	5.92	NONE	NONE	NONE
05/02/91	7.72	NONE	NONE	NONE
06/20/91	8.19	NONE	NONE	NONE
08/07/91	8.70	NONE	NONE	NONE
09/17/91	8.77	NONE	NONE	NONE
11/13/91	8.51	NONE	NONE	NONE
12/10/91	8.58	NONE	NONE	NONE
01/21/92	8.32	NONE	NONE	NONE
03/25/92	9.27	NONE	NONE	NONE

TABLE 1
RESULTS OF SUBJECTIVE EVALUATION OF WATER SAMPLES
(page 4 of 6)

Date	Depth to Water (ft)	Floating Product (ft)	Sheen	Emulsion
MW-8				
04/25/89	8.31	0.66	N/A	NONE
07/19/89	10.97	1.25	N/A	NONE
07/27/89	10.34	0.08	N/A	HEAVY
09/06/89	11.09	0.17	N/A	SLIGHT
09/22/89	11.58	0.36	N/A	SLIGHT
11/01/89	11.03	NONE	NONE	NONE
11/15/89	11.25	0.01	N/A	NONE
12/06/89	10.30	NONE	SLIGHT	NONE
02/20/90	8.00	0.01	N/A	NONE
04/19/90	8.50	NONE	NONE	NONE
07/03/90	7.55	NONE	NONE	NONE
07/26/90	7.86	NONE	NONE	NONE
08/20/90	8.92	NONE	NONE	NONE
09/19/90	9.55	NONE	NONE	NONE
11/27/90	10.29	0.01	N/A	NONE
01/17/91	9.97	NONE	HEAVY	NONE
03/26/91	8.45	NONE	MODERATE	NONE
05/02/91	8.85	NONE	LIGHT	NONE
06/20/91	9.45	NONE	SLIGHT	NONE
08/07/91	10.00	NONE	SLIGHT	NONE
09/17/91	10.11	NONE	SLIGHT	NONE
11/13/91	9.63	NONE	SLIGHT	NONE
12/10/91	9.66	NONE	SLIGHT	NONE
01/21/92	9.35	NONE	MODERATE	NONE
03/25/92	8.02	NONE	HEAVEY	NONE
MW-9				
04/25/89	8.25	NONE	NONE	NONE
09/06/89		covered by soil		
09/22/89		covered by soil		
12/06/89	10.12	NONE	NONE	NONE
02/20/90	9.38	NONE	NONE	NONE
04/19/90	9.40	NONE	NONE	NONE
07/03/90	8.79	NONE	NONE	NONE
07/26/90	8.70	NONE	NONE	NONE
08/20/90	9.09	NONE	NONE	NONE
09/19/90	9.52	NONE	NONE	NONE
11/27/90	9.89	NONE	NONE	NONE
01/17/91		covered by soil		
03/26/91		covered by soil		
05/02/91	9.10	NONE	NONE	NONE
06/20/91	8.76	NONE	NONE	NONE
08/07/91	9.37	NONE	NONE	NONE
09/17/91	9.57	NONE	NONE	NONE
11/13/91	9.46	NONE	NONE	NONE
12/10/91	9.30	NONE	NONE	NONE
01/21/92	9.68	NONE	NONE	NONE
03/25/92	8.93	NONE	NONE	NONE

TABLE 1
RESULTS OF SUBJECTIVE EVALUATION OF WATER SAMPLES
(page 5 of 6)

Date	Depth to Water (ft)	Floating Product (ft)	Sheen	Emulsion
MW-10				
12/06/89	10.46	NONE	NONE	NONE
02/20/90	8.12	NONE	NONE	NONE
04/19/90	8.54	NONE	NONE	NONE
07/03/90	7.88	NONE	NONE	NONE
07/26/90	8.19	NONE	NONE	NONE
08/20/90	10.33	NONE	NONE	NONE
09/19/90	9.49	NONE	NONE	NONE
11/27/90	9.89	NONE	NONE	NONE
01/17/91	9.19	NONE	NONE	NONE
03/26/91	7.48	NONE	NONE	NONE
05/02/91	8.16	NONE	NONE	NONE
06/20/91	8.75	NONE	NONE	NONE
08/07/91	9.53	NONE	NONE	NONE
09/17/91	9.72	NONE	NONE	NONE
11/13/91	10.02	NONE	NONE	NONE
12/10/91	9.12	NONE	NONE	NONE
01/21/92	8.31	NONE	NONE	NONE
03/25/92	5.70	NONE	NONE	NONE
MW-11				
12/06/89	10.62	NONE	NONE	NONE
02/20/90	9.20	NONE	NONE	NONE
04/19/90	9.80	NONE	NONE	NONE
07/03/90	8.90	NONE	NONE	NONE
07/26/90	9.36	NONE	NONE	NONE
08/20/90	9.90	NONE	NONE	NONE
09/19/90	10.39	NONE	NONE	NONE
11/27/90	10.97	NONE	NONE	NONE
01/17/91	10.76	NONE	NONE	NONE
03/26/91	8.80	NONE	NONE	NONE
05/02/91	9.38	NONE	NONE	NONE
06/20/91	10.16	NONE	NONE	NONE
08/07/91	10.69	NONE	NONE	NONE
09/17/91	10.80	NONE	NONE	NONE
11/13/91	10.44	NONE	NONE	NONE
12/10/91	10.48	NONE	NONE	NONE
01/21/92	10.10	NONE	NONE	NONE
03/25/92	7.30	NONE	NONE	NONE
MW-12				
12/06/89	8.00	NONE	NONE	NONE
02/20/90	6.33	NONE	NONE	NONE
04/19/90	7.18	NONE	NONE	NONE
07/03/90	7.41	NONE	NONE	NONE
07/26/90	6.54	NONE	NONE	NONE
08/20/90	7.23	NONE	NONE	NONE
09/19/90	7.77	NONE	NONE	NONE
11/27/90	8.15	NONE	NONE	NONE
01/17/91	8.06	NONE	NONE	NONE
03/26/91	7.21	NONE	NONE	NONE
05/02/91	7.60	NONE	SLIGHT	NONE
06/20/91	8.02	NONE	SLIGHT	NONE
08/07/91	8.25	NONE	SLIGHT	NONE
09/17/91	8.20	NONE	SLIGHT	NONE
11/13/91	7.77	NONE	SLIGHT	NONE
12/10/91	7.75	NONE	SLIGHT	NONE
01/21/92	7.08	NONE	SLIGHT	NONE
03/25/92	4.93	NONE	HEAVEY	NONE

TABLE 1
RESULTS OF SUBJECTIVE EVALUATION OF WATER SAMPLES
(page 6 of 6)

Date	Depth to Water (ft)	Floating Product (ft)	Sheen	Emulsion
MW-13				
12/06/89	9.35	NONE	NONE	NONE
02/20/90	7.73	NONE	NONE	NONE
04/19/90	8.68	NONE	NONE	NONE
07/03/90	8.00	NONE	NONE	NONE
07/26/90	7.95	NONE	NONE	NONE
08/20/90	8.66	NONE	NONE	NONE
09/19/90	9.13	NONE	NONE	NONE
11/27/90	9.49	NONE	NONE	NONE
01/17/91	9.61	NONE	NONE	NONE
03/26/91	9.25	NONE	NONE	NONE
05/02/91	9.31	NONE	NONE	NONE
06/20/91	9.73	NONE	NONE	NONE
08/07/91		well not accessible		
09/17/91	9.72	NONE	NONE	NONE
11/13/91	9.06	NONE	NONE	NONE
12/10/91	9.04	NONE	NONE	NONE
01/21/91	8.41	NONE	NONE	NONE
03/25/92	5.72	NONE	SLIGHT	NONE
MW-14				
11/27/90	9.88	NONE	NONE	NONE
01/17/91	9.13	NONE	NONE	NONE
03/26/91	8.51	NONE	NONE	NONE
05/02/91	8.45	NONE	NONE	NONE
06/20/91	8.38	NONE	NONE	NONE
08/07/91	9.04	NONE	NONE	NONE
09/17/91	9.14	NONE	NONE	NONE
11/13/91	8.83	NONE	NONE	NONE
12/10/91	8.90	NONE	NONE	NONE
01/21/92	8.58	NONE	NONE	NONE
03/25/92	6.15	NONE	NONE	NONE
MW-15				
11/27/90	8.67	NONE	NONE	NONE
01/17/91	8.03	NONE	NONE	NONE
03/26/91		covered by soil		
05/02/91	7.09	NONE	NONE	NONE
06/20/91	7.06	NONE	NONE	NONE
08/07/91	7.59	NONE	NONE	NONE
09/17/91	7.89	NONE	NONE	NONE
11/13/91	9.07	NONE	NONE	NONE
12/10/91	8.60	NONE	NONE	NONE
01/21/92	9.15	NONE	NONE	NONE
03/25/92	8.10	NONE	NONE	NONE

N/A = Not applicable.

TABLE 2
SUMMARY OF GROUNDWATER ELEVATIONS

Well Number	Casing Elevation (ft)	Depth to Water (ft)	Ground-Water Elevation (ft)
January 21, 1992			
MW-1	12.87	9.32	3.55
MW-6*	14.27	9.25	5.02
MW-7	14.84	8.32	6.52
MW-9*	14.64	9.68	4.96
MW-10	14.05	8.31	5.74
MW-11*	13.55	10.10	3.45
MW-12	12.61	7.08	5.53
MW-13	14.20	8.41	5.79
MW-14	15.18	8.58	6.60
MW-15	13.73	9.15	4.58
March 25, 1992			
MW-1	12.87	9.30	3.57
MW-6*	14.27	6.88	7.39
MW-7	14.84	9.27	5.57
MW-9*	14.64	8.93	5.71
MW-10	14.05	5.70	8.35
MW-11*	13.55	7.30	6.25
MW-12	12.61	4.93	7.68
MW-13	14.20	5.72	8.48
MW-14	15.18	6.15	9.03
MW-15	13.73	8.10	5.63

Casing elevations were surveyed by a certified surveyor, Ron Archer, to mean sea level.
* Data not used in Groundwater Elevation Map.

TABLE 3
RESULTS OF GROUNDWATER ANALYSES
(page 1 of 5)

Date	Sample No.	TPHg ppm	B ppm	T ppm	E ppm	X ppm	TPHd ppm	TOG ppm	VOC ppm
MW-1									
05/88	W-11-MW1*	0.240	0.090	0.005	0.015	0.025	--	--	ND
12/89	W-11-MW1	0.63	0.012	0.0056	0.0037	0.025	0.24	--	--
04/90	W-09-MW1	<0.020	<0.0005	<0.00050	<0.00050	<0.00050	<0.10	--	--
07/90	W-11-MW1	0.13	0.006	<0.00050	<0.00050	<0.00050	0.16	--	--
11/90	W-10-MW1	<0.050	0.0007	<0.00050	<0.00050	<0.00050	<0.10	--	--
03/91	W-07-MW1	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	--	--
06/91	W-10-MW1	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	--	--
09/91	W-10-MW1	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
12/91	W-10-MW1	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	<0.050	--	--
03/92	W-9.3-MW1	<0.050	0.0015	<0.0005	<0.0005	<0.0005	<0.050	--	--
MW-2									
09/87	W-25-MW2	1.445	0.233	0.81	0.056	0.209	--	--	--
05/88	free product								
12/89	free product								
04/90	free product								
07/90	free product								
11/90	free product								
03/91	free product								
06/91	free product								
09/91	free product								
12/91	free product								
03/92	free product								
MW-3									
09/87	W-25-MW3	2.101	0.360	1.062	0.068	0.298	0.66	--	--
05/88	W-14-MW3	8.7	3.98	0.28	0.24	0.6	--	--	--
12/89	free product								
04/90	free product								
07/90	free product								
11/90	free product								
03/91	free product								
06/91	free product								
09/91	free product								
12/91	free product								
03/92	free product								

See notes on page 5 of 5.

TABLE 3
RESULTS OF GROUNDWATER ANALYSES
(page 2 of 5)

Date	Sample No.	TPHg ppm	B ppm	T ppm	E ppm	X ppm	TPHd ppm	TOG ppm	VOC ppm
MW-4									
09/87	W-25-MW4	0.925	0.070	0.007	0.010	0.016	0.74	--	--
05/88	free product								
12/89	free product								
04/90	free product								
07/90	emulsion								
11/90	free product								
03/91	free product								
06/91	free product								
09/91	free product								
12/91	free product								
03/92	free product								
MW-5									
09/87	W-25-MW5	26.66	0.56	1.71	1.58	7.15	37.22	--	--
05/88	free product								
07/89	well destroyed								
MW-6									
05/88	W-15-MW6	29.3	12.82	0.55	1.44	5.50	--	--	--
12/89	W-18-MW6	9.0	0.37	0.013	0.0026	0.43	4.8	--	--
04/90	W-30-MW6	27	3.0	0.12	0.49	2.1	26	--	--
07/90	W-30-MW6	30	5.5	1.4	1.2	3.1	13	--	--
11/90	W-10-MW6	15	4.4	0.12	0.8	2.3	7.6	--	--
03/91	W-08-MW6	55	10	0.38	1.6	6.9	<0.10	--	--
06/91	sheen								
09/91	W-10-MW6	17	4.5	0.16	0.89	3.1	--	--	--
12/91	W-09-MW6	32.0	6.0	0.29	1.4	4.7	1.2	--	--
03/92	W-6.8-MW6	21.0	8.0	0.25	1.7	5.0	2.7	--	--

See notes on page 5 of 5.

TABLE 3
RESULTS OF GROUNDWATER ANALYSES
(page 3 of 5)

Date	Sample No.	TPHg ppm	B ppm	T ppm	E ppm	X ppm	TPHd ppm	TOG ppm	VOC ppm
MW-7									
09/87	W-25-MW7	1.531	0.258	0.002	<0.002	0.042	2.79	--	ND
05/88	W-15-MW7	--	0.300**	<0.010**	<0.010**	<0.010**	0.190	--	ND
12/89	W-11-MW7	1.70	0.22	0.0053	0.0050	0.0086	2.5	<5	ND
04/90	W-10-MW7	2.7	0.22	0.0086	0.0070	0.020	3.5	--	ND
07/90	W-17-MW7	2.5	0.38	0.013	0.016	0.035	0.91	--	ND
11/90	W-09-MW7	2.3	0.63	0.016	0.032	0.029	1.3	--	0.0024■
03/91	W-06-MW7	3.5	0.42	0.018	0.017	0.027	<0.10	--	ND
06/91	W-08-MW7	3.1	0.27	0.0088	0.033	0.019	<0.10	--	--
09/91	W-09-MW7	2.4	0.39	0.01	0.015	0.018	--	--	--
12/91	W-08-MW7	1.7	0.29	0.0053	0.0071	<0.0005	0.53	--	--
03/92	W-9.2-MW-7	1.5	0.32	0.0072	0.016	0.019	0.76	--	--
MW-8									
09/87	W-25-MW8	1.325	0.081	0.074	0.042	0.182	--	--	--
05/88	free product								
12/89	W-11-MW8	42	2.6	0.63	0.21	3.7	34	--	--
04/90	W-14-MW8	49	2.1	0.82	1.1	4.8	53	--	--
07/90	W-23-MW8	44	4.0	1.5	2.0	6.3	32	--	--
11/90	free product								
03/91	sheen								
06/91	sheen								
09/91	W-10-MW8	57	14	7.8	3.1	12	--	--	--
12/91	W-09-MW8	66	9.5	5.0	3.1	12	1.4	--	--
03/92	sheen								
MW-9									
05/88	W-14-MW9	<0.05	<0.0005	0.001	<0.001	<0.001	--	--	ND
12/89	W-14-MW9	0.1	0.0018	0.0037	0.0014	0.0088	0.11	<5	ND
04/90	W-10-MW9	<0.020	<0.00050	<0.00050	<0.00050	<0.00050	<0.10	--	ND
07/90	W-10-MW9	<0.020	<0.00050	<0.00050	<0.00050	<0.00050	<0.10	--	ND
11/90	W-09-MW9	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	--	ND
03/91	covered by soil								
06/91	W-09-MW9	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	--	--
09/91	W-10-MW9	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--
12/91	W-09-MW9	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	0.052	--	--
03/92	W-8.9-MW9	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	<0.050	--	--

See notes on page 5 of 5.

TABLE 3
RESULTS OF GROUNDWATER ANALYSES
(page 4 of 5)

Date	Sample No.	TPHg ppm	B ppm	T ppm	E ppm	X ppm	TPHd ppm	TOG ppm	VOC ppm
MW-10									
12/89	W-12-MW10	0.32	0.0037	0.014	0.0056	0.032	<0.10	--	--
04/90	W-09-MW10	<0.020	<0.00050	<0.00050	<0.00050	<0.00050	<0.10	--	ND
07/90	W-11-MW10	<0.020	<0.00050	<0.00050	<0.00050	<0.00050	<0.10	--	--
11/90	W-09-MW10	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	--	--
03/91	W-07-MW10	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	--	--
06/91	W-09-MW10	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	--	--
09/91	W-10-MW10	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	--	--
12/91	W-9-MW10	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	<0.050	--	--
03/92	W-5.7-MW10	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	<0.050	--	--
MW-11									
12/89	W-11-MW11	0.078	0.0059	0.00063	<0.0005	48	<0.10	--	--
04/90	W-12-MW11	<0.020	<0.00050	<0.00050	<0.00050	<0.00050	<0.10	--	--
07/90	W-12-MW11	<0.020	<0.00050	<0.00050	<0.00050	<0.00050	<0.10	--	--
11/90	W-10-MW11	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	--	--
03/91	W-08-MW11	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	--	--
06/91	W-10-MW11	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	--	--
09/91	W-11-MW11	<0.050	<0.0005	0.0007	<0.0005	<0.0005	--	--	--
12/91	W-10-MW11	<0.050	0.0007	<0.0005	<0.0005	<0.0005	<0.050	--	--
03/92	W-7.3-MW11	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	<0.050	--	--
MW-12									
12/89	W-08-MW12	85	6.7	6.3	1.8	7.8	40	--	--
04/90	W-07-MW12	110	6.6	7.4	1.8	11	97	--	--
07/90	W-08-MW12	92	11	11	3.1	13	50	--	--
11/90	W-08-MW12	69	11	10	3.1	12	31	--	--
03/91	W-08-MW12	100	15	16	2.4	11	<0.10	--	--
06/91	sheen								
09/91	W-08-MW12	82	22	18	3.9	16	--	--	--
12/91	W-07-MW12	99	18	16	3	11	1.7	--	--
03/92	sheen								

See notes on page 5 of 5.

TABLE 3
RESULTS OF GROUNDWATER ANALYSES
(page 5 of 5)

Date	Sample No.	TPHg ppm	B ppm	T ppm	E ppm	X ppm	TPHd ppm	TOG ppm	VOC ppm
MW-13									
12/89	W-10-MW13	52	2.1	2.0	1.4	6.1	31	--	--
04/90	W-09-MW13	59	1.8	1.5	1.4	7.2	54	--	--
07/90	W-10-MW13	53	4.5	3.1	2.2	7.8	26	--	--
11/90	W-09-MW13	20	4.5	1.1	0.88	3.3	1.6	--	--
03/91	W-09-MW13	72	10	8.3	1.7	6.9	<0.10	--	--
06/91	W-10-MW13	44	5.6	3.1	0.75	2.6	<0.10	--	--
09/91	W-10-MW13	40	11	6.5	2.4	8.1	--	--	--
12/91	W-09-MW13	72	11	7.4	2.5	9.4	3.7	--	--
03/92	sheen								
MW14									
11/90	W-09-MW14	0.39	<0.0005	<0.0005	0.0036	0.0037	0.12	--	--
03/91	W-07-MW14	0.20	<0.0005	0.0015	0.0008	0.0036	<0.10	--	--
06/91	W-08-MW14	0.11	<0.0005	<0.0005	<0.0005	<0.0005	<0.10	--	--
09/91	W-09-MW14	0.45	<0.0005	<0.0005	0.0032	0.0023	--	--	--
12/91	W-08-MW14	0.071	0.0005	<0.0005	<0.0005	<0.0005	0.28	--	--
03/92	W-6.1-MW14	0.061	<0.0005	<0.0005	<0.0011	<0.0005	0.64	--	--
MW-15									
11/90	W-08-MW15	2.7	0.21	0.0055	0.6	0.25	0.34	--	--
03/91	covered by soil								
06/91	W-07-MW15	0.38	<0.0005	<0.0005	<0.0005	0.0013	<0.10	--	--
09/91	W-08-MW15	0.49	0.0029	0.0017	0.033	0.0013	--	--	--
12/91	W-08-MW15	1.6	0.014	0.0011	0.066	0.0098	0.30	--	--
03/92	W-8.1-MW15	3.4	0.15	0.013	0.69	0.25	1.4	--	--

TPHg = Total petroleum hydrocarbons as gasoline
BTEX = Benzene, toluene, ethylebenzene, and total xylenes constituents
TPHd = Total petroleum hydrocarbons as diesel
TOG = Total oil and grease
< = Not detected at method detection limit (stated); ND = No VOC detected other than BTEX
■ = Chloromethane
* = W-08-MW15 = water sample - depth - well number
** = Analyzed by Environmental Protection Agency Method 624 (volatile organic compounds)

Source: U.S. Geological Survey
7.5–Minute Quadrangle
Oakland East, California

N

Approximate Scale
2000 1000 0 2000 4000
feet

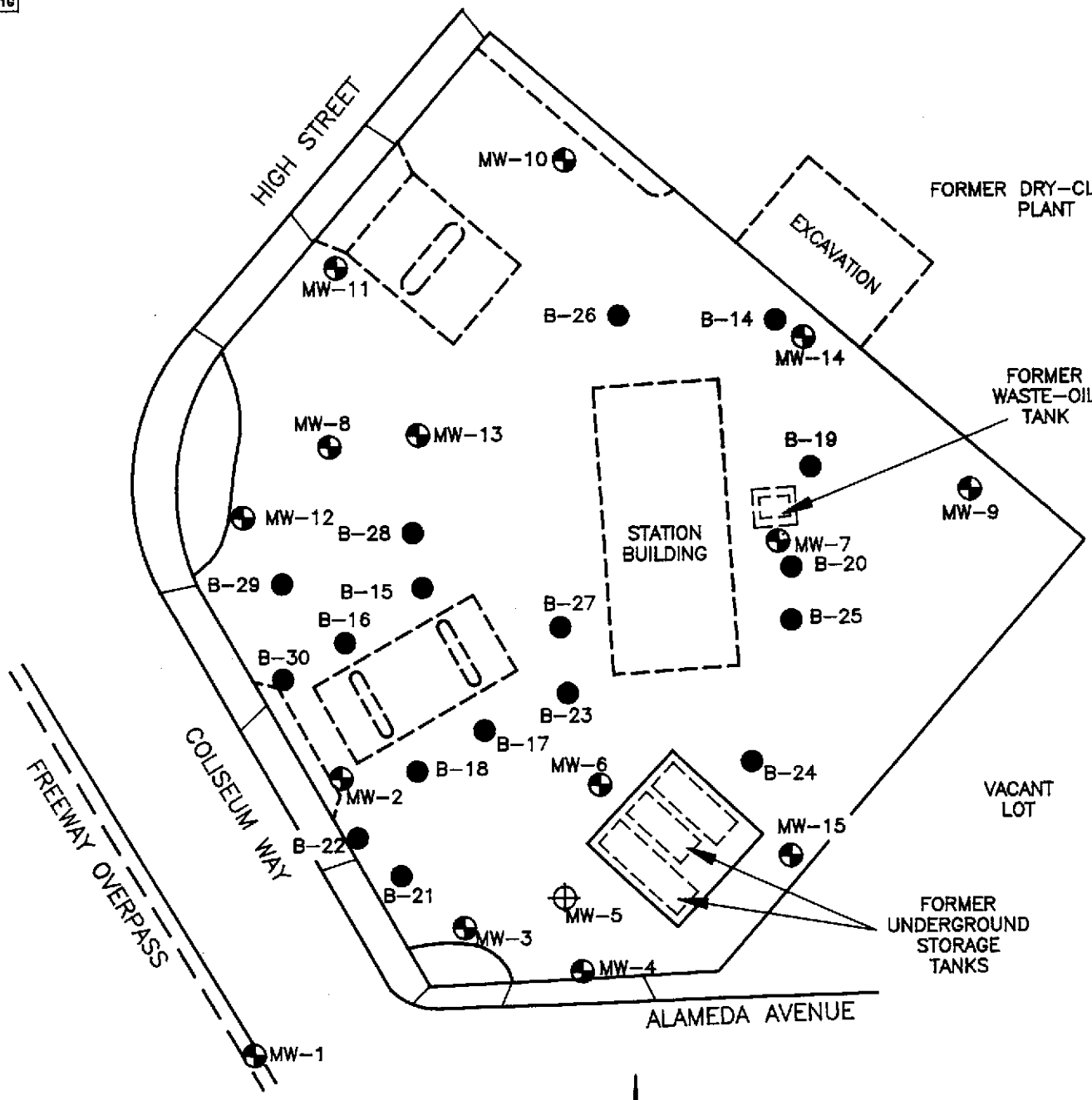
RESNA

PROJECT NO. 87042-11

SITE VICINITY MAP
Exxon Station No. 7-3006
720 High Street
Oakland, California

PLATE
1

87042116



B-20 ● = Soil boring drilled by Applied GeoSystems

MW-9 ◒ = Monitoring well installed by Applied GeoSystems

MW-5 ⊕ = Monitoring well (destroyed) installed by Applied GeoSystems

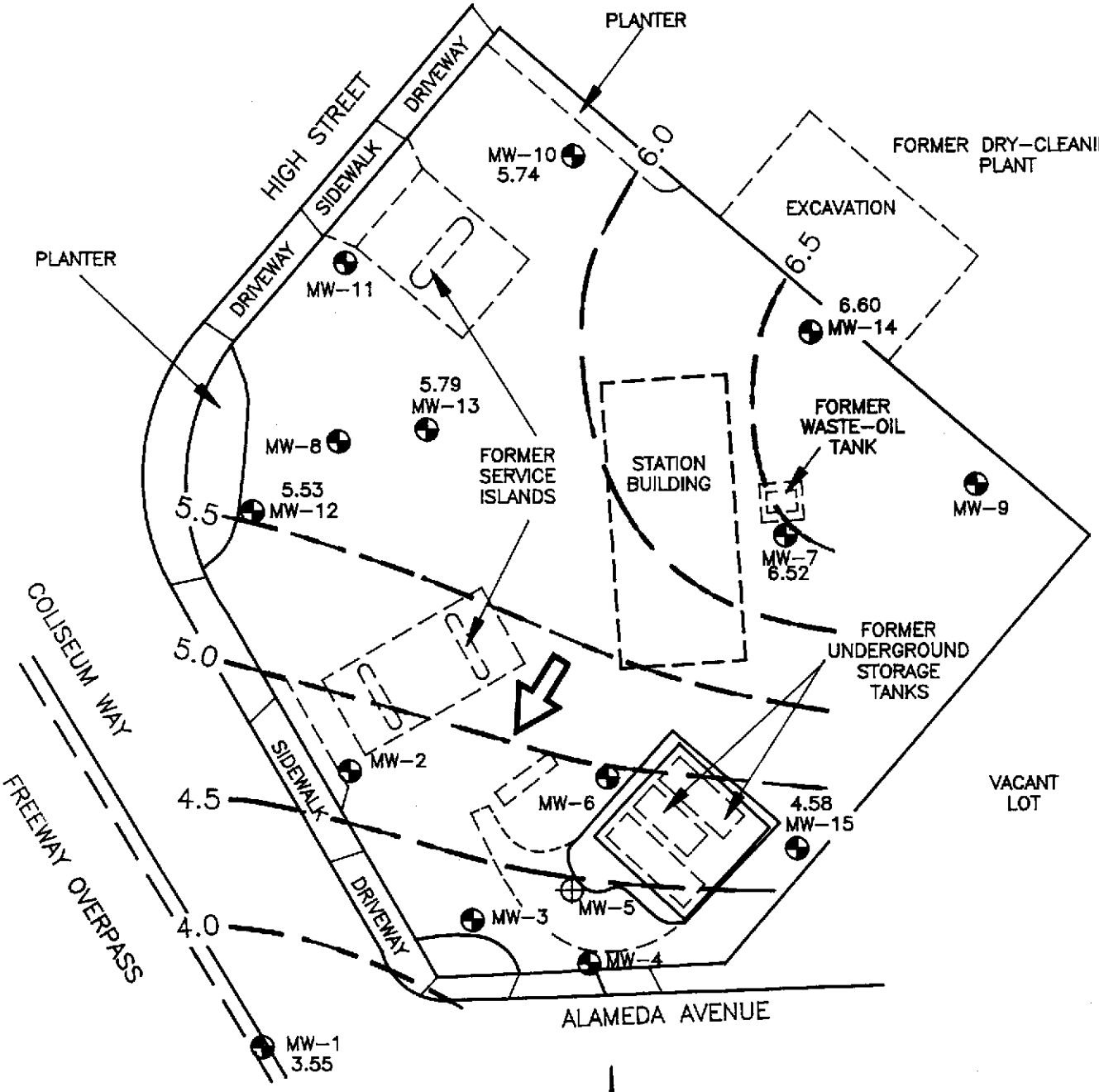
Source: Modified from plan supplied by Exxon Company, USA

RESNA

PROJECT NO. 87042-11

GENERALIZED SITE PLAN
Exxon Station No. 7-3006
720 High Street
Oakland, California

PLATE
P-2



6.5 = Line of equal elevation of groundwater in feet above mean sea level

= Approximate direction of groundwater flow (January 21, 1992)

= Area excavated

MW-15 = Monitoring well installed by Applied GeoSystems

MW-5 = Monitoring well (destroyed) installed by Applied GeoSystems

Approximate Scale

40 20 0 40 80

feet

Source: Modified from plan supplied by Exxon Company, USA

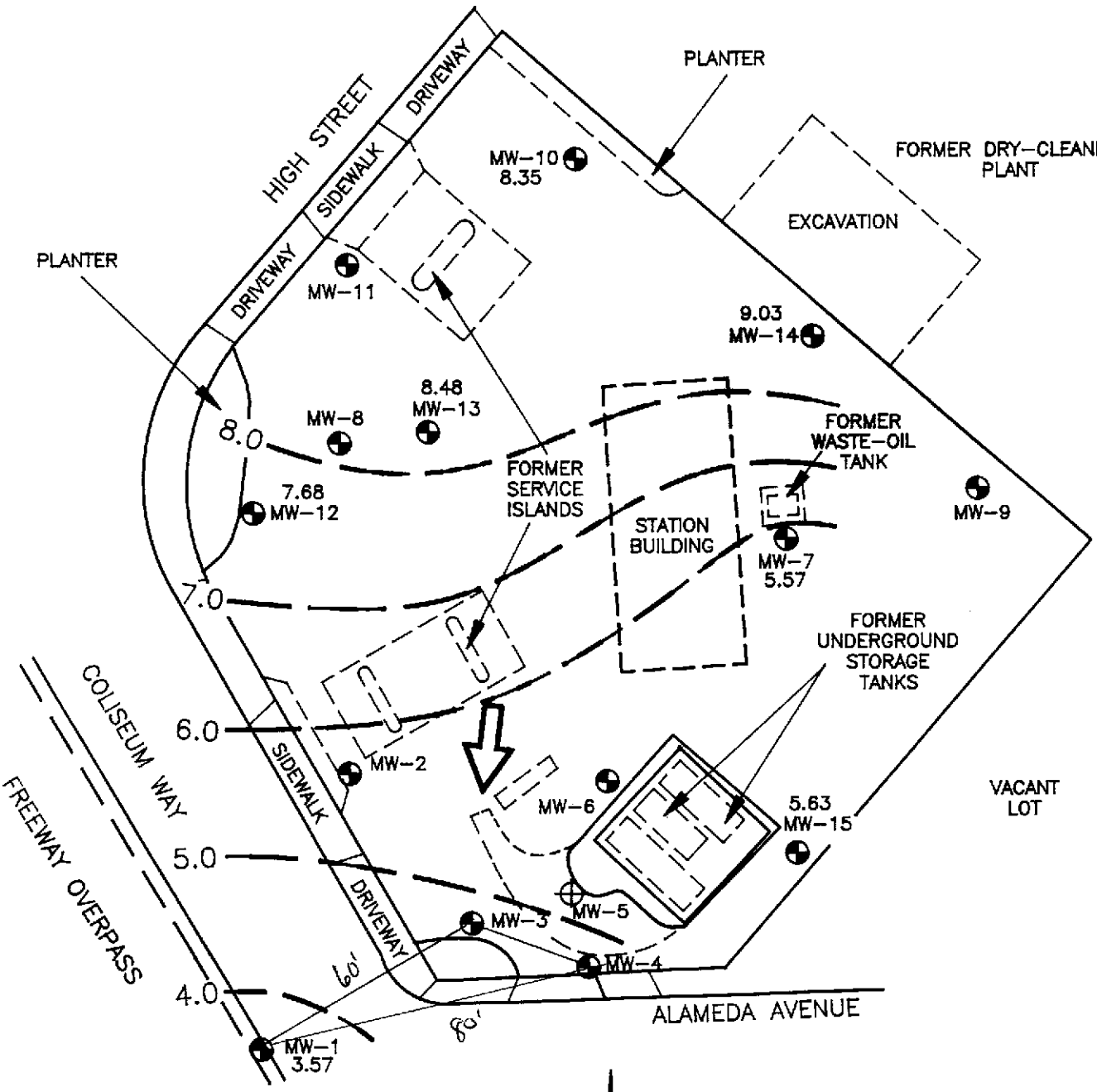
NOTE: Contours are based on interpretation of available data, and are not intended to imply certainty.

RESNA

PROJECT NO. 87042-11

GROUNDWATER ELEVATION MAP
January 21, 1992
Exxon Station No. 7-3006
720 High Street
Oakland, California

PLATE
P-3



8.0 = Line of equal elevation of groundwater in feet above mean sea level

= Approximate direction of groundwater flow (March 25, 1992)

= Area excavated

MW-15 = Monitoring well installed by Applied GeoSystems

MW-5 = Monitoring well (destroyed) installed by Applied GeoSystems

N

Approximate Scale

40 20 0 40 80

feet

Source: Modified from plan supplied by Exxon Company, USA

NOTE: Contours are based on interpretation of available data, and are not intended to imply certainty.

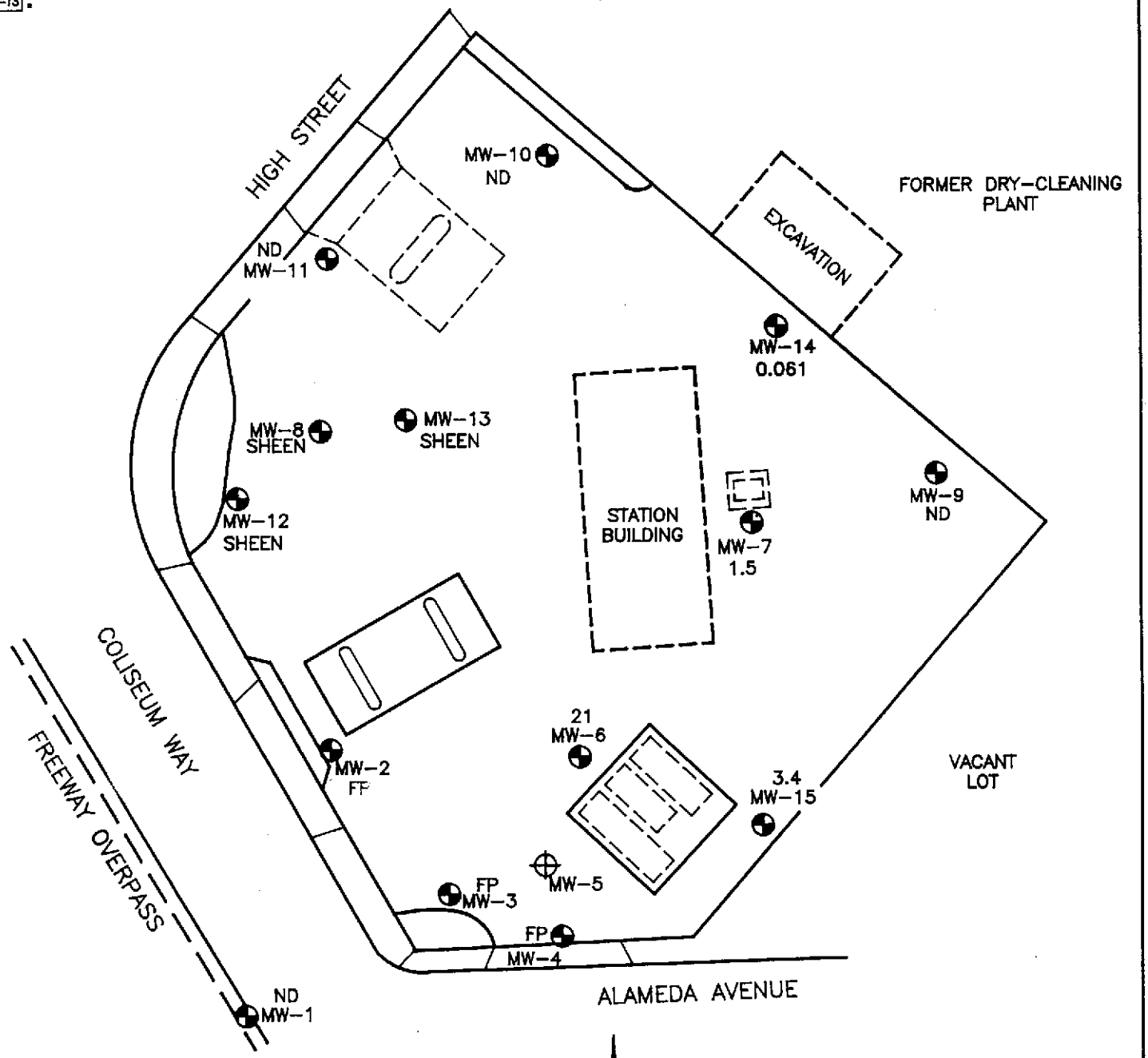
RESNA

PROJECT NO. 87042-11

GROUNDWATER ELEVATION MAP
March 25, 1992
Exxon Station No. 7-3006
720 High Street
Oakland, California

PLATE
P-4

87042-T3



21 = Concentration in parts per million
FP = Free product
ND = Nondetectable
MW-9 = Monitoring well installed by Applied GeoSystems
MW-5 = Monitoring well (destroyed) installed by Applied GeoSystems

Source: Modified from plan supplied by Exxon Company, USA

TPHg = Total petroleum hydrocarbons as gasoline

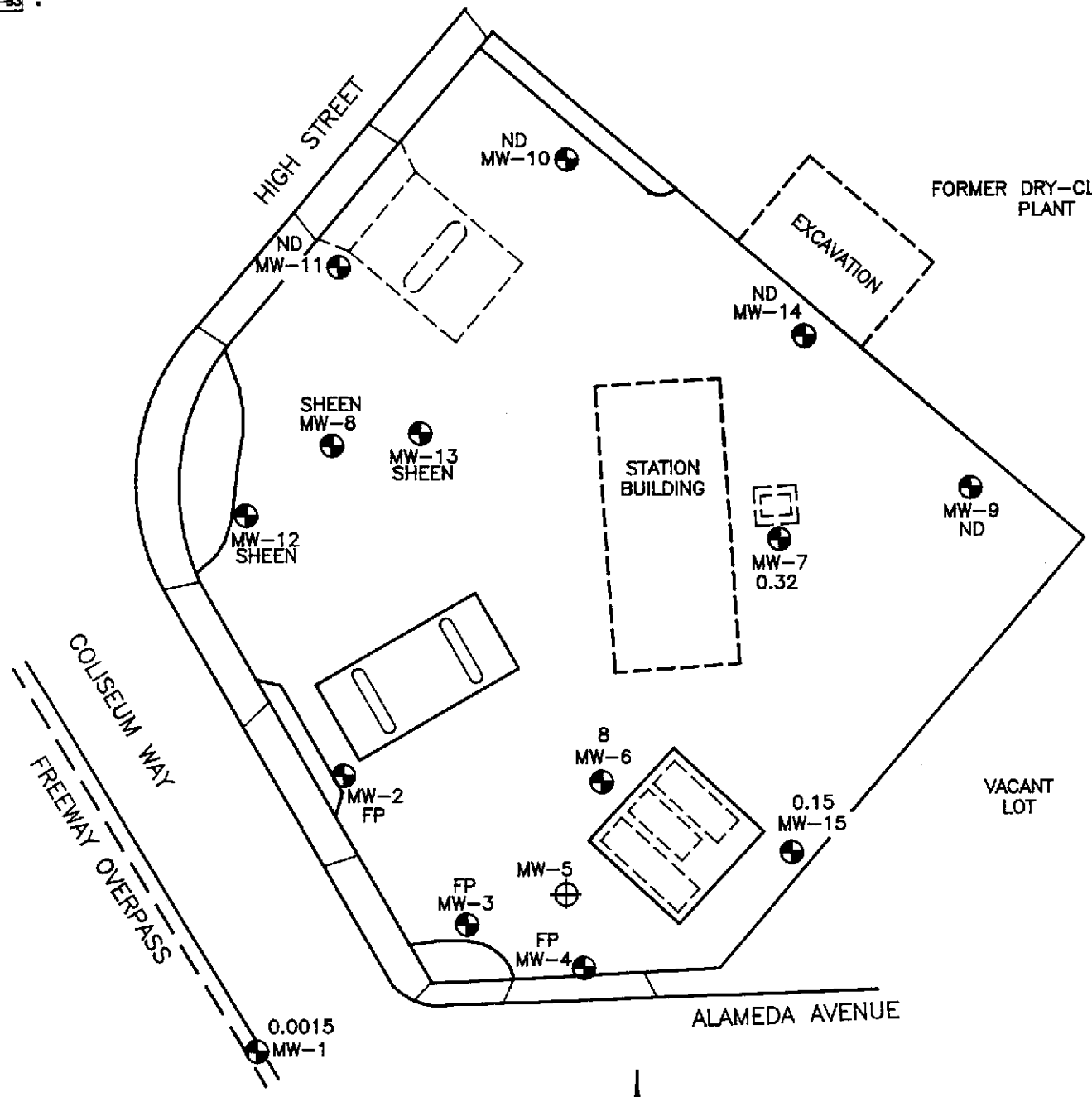
RESNA

PROJECT NO. 87042-11

CONCENTRATION OF TPHg IN GROUNDWATER (March 25, 1992)
Exxon Station No. 7-3006
720 High Street
Oakland, California

PLATE
P-5

87042-B3



22 = Concentration in parts per million
FP = Free product
ND = Nondetectable
MW-9 = Monitoring well installed by Applied GeoSystems
MW-5 = Monitoring well (destroyed) installed by Applied GeoSystems

N

Approximate Scale

40 20 0 40 80

feet

Source: Modified from plan supplied by Exxon Company, USA

RESNA

PROJECT NO. 87042-11

CONCENTRATION OF BENZENE IN GROUNDWATER (March 25, 1992)
Exxon Station No. 7-3006
720 High Street
Oakland, California

PLATE
P-6

RESNA

ATTACHMENT I

FIELD PROCEDURES

FIELD PROCEDURES

Monitoring and Subjective Analysis of Groundwater

The depth to static water level was measured to the nearest 0.01 foot with a Solinst electronic water-level indicator. In wells with free product, an Oil Recovery Systems oil-water interface probe was used to measure the depth of the product and the depth of the product-water interface. Groundwater samples were then collected for subjective analysis from each well by gently lowering approximately half the length of a Teflon bailer past the air-water interface. The bailer was washed with Alconox (a commercial biodegradable detergent) and rinsed with deionized water before each use. The samples were retrieved and examined for evidence of floating product, sheen, and emulsion.

Groundwater Sampling for Laboratory Analyses

Before collecting groundwater samples, the wells were purged of approximately 3 well volumes of water or until temperature, pH, and conductivity stabilized. A water sample was collected from each well after the well had recharged to more than 80 percent of the static level, see attached well purge data sheets. A clean bailer was used for collecting each water sample. Half the length of the bailer was lowered past the air-water interface to retrieve the water sample. The bailer was retrieved and the water samples slowly decanted into laboratory-cleaned sample containers. For TPHg and BTEX analyses, 40-milliliter, volatile organic analysis glass sample vials with Teflon-lined caps were used. Hydrochloric acid was added to the samples as a preservative. The sample vials were promptly capped, labeled, and placed in iced storage for transport to a State-certified analytical laboratory for testing. A Chain of Custody Record was initiated in the field and chain-of-custody protocol was observed throughout subsequent handling of the samples.

The purged ground water and product were stored onsite in sealed, properly labeled, 17E, 55-gallon, liquid-waste drums approved for this use by the Department of Transportation. The water is scheduled for removal from the site in May 1992.

RESNA

ATTACHMENT II

WELL PURGE DATA SHEETS

Applied GeoSystems — 43255 Mission Boulevard, Fremont, CA 94539

● FREMONT ● COSTA MESA ● SACRAMENTO ● HOUSTON

GROUND-WATER SAMPLING

EXXON OAKLAND

Project No. ______
Date 1/21/92
Page 1 of 1

SUBJECTIVE ANALYSIS

WELL NO.	INITIAL DEPTH TO WATER	DEPTH TO PRODUCT	PRODUCT THICKNESS	TOTAL DEPTH	SHEEN	EMULSION	PRODUCT ~~COLOR/~~ ODOR CONSISTENCY
MW 1	9.32				no	no	no
MW 11	10.10				no	no	no
MW 10	8.31				no	no	no
MW 9	9.68				no	no	no
MW 14	8.58				no	no	yes
MW 7	8.32				no	no	yes
MW 15	9.15				no	no	yes
MW 6	9.25				no	no	yes
MW 13	8.41				no	no	yes
MW 12	7.08				no	no	yes
MW 8	9.35				yes	no	yes

Product wells

RECOVERY

WELL	Depth to H2O	Depth to Prod	total Prod.	DATE	TIME	CYCLES CONTROL BOX 1	CONTROL BOX 2
MW 2	9.08	9.05	.03				
MW 3	9.07	9.01	.06				
MW 4	9.50	9.42	.08				

Applied GeoSystems
1055 Mission Boulevard, Fremont, [illegible]
● FREMONT ● COSTA MESA ● SACRAMENTO ● HOUSTON

GROUND-WATER SAMPLING

Project No. EXXON 87042-9
Date 3-25-92
Page 1 of 1

SUBJECTIVE ANALYSIS

WELL NO.	INITIAL DEPTH TO WATER	DEPTH TO PRODUCT	PRODUCT THICKNESS	TOTAL DEPTH	SHEEN	EMULSION	PRODUCT COLOR/ CONSISTENCY
MW 1	9.30'			28.95'	NO		
MW 2	6.0	5.97	.03				Brown Black Tar Like
MW 3	5.96	5.92	.04				" " "
MW 4	5.01	4.89	.03				" " "
MW 6	6.88			34.77'			
MW 7	9.67			34.55'			
MW 8	8.02'			31.70'			Sheen
MW 9	8.93'			31.50'			
MW 10	5.70'			24.95'			
MW 11	7.30'			30.10			
MW 12	4.93'			14.70'			Sheen
MW 13	5.72			15.28'			Sheen
MW 14	6.15			17.35			
MW 15	8.10			16.70'			

RECOVERY

WELL	DISCHARGE PER CYCLE PRODUCT	WATER	TOTAL	CYCLES DATE	TIME	CONTROL BOX 1	CONTROL BOX 2

Applied GeoSystems

WELL PURGE DATA SHEET

Project Name: Exxon
Job Number: 87042-9 **Date:** 3-26-92
Sampler: R. Adair **Page** 1 **of** 8

Wellhead Type 4" Locking Plug Locked? Yes ID #? 4" Casing Size 4"
Comments: Wellhead Condition Good

WELL NUMBER 1

SUBJECTIVE DATA

TIME	DEPTH TO WATER (ft)	DEPTH TO PRODUCT (ft)	PRODUCT THICKNESS (ft)	SHEEN	COMMENTS
10:30	9.30'	N/A	N/A	NONE	

PURGE VOLUME COMPUTATION

TOTAL DEPTH (ft)	WATER COLUMN (ft)	CONVERSION FACTOR	CASING VOLUME (gal)	NUMBER OF VOLUMES	GALLONS TO BE PURGED
28.95'	19.65	0.66'	13	3	39

PURGE DATA

TIME	CUMULATIVE GALLONS PURGED	PUMP ON/OFF	TEMPERATURE °F / °C	pH	CONDUCTIVITY	SUBJECTIVE TURBIDITY
10:45	13	ON	65.0	6.97	1130	clear cloudy
10:52	26	ON	65.5	7.04	1158	No odor
10:58	39	ON	66.0	7.08	1172	
11:00		OFF				
1:30			70.8	7.10	12.56	

Pump type/# GeoSrvc #1 Total gallons purged 39 Method of measurement Control Box GPM 2.3
55 gal D 250 ft

RECOVERY/SAMPLE DATA

DATE	TIME	DEPTH TO WATER (ft)	PERCENT RECOVERY	SAMPLED YES/NO	COMMENTS
	1:25	9.92'	97%	Yes	

NA = Data not available or not applicable.

Applied GeoSystems

WELL PURGE DATA SHEET

Project Name: Exxon
Job Number: 87042-9 **Date:** 3.26.92
Sampler: R. Adair **Page** 2 **of** 8

Wellhead Type 4" Locking Plug Locked? Yes ID #? 4" Casing Size 4"
Comments: Wellhead Condition Good

WELL NUMBER 6

SUBJECTIVE DATA

TIME	DEPTH TO WATER (ft)	DEPTH TO PRODUCT (ft)	PRODUCT THICKNESS (ft)	SHEEN	COMMENTS
10:40	6.88'	N/A	N/A	NONE	

PURGE VOLUME COMPUTATION

TOTAL DEPTH (ft)	WATER COLUMN (ft)	CONVERSION FACTOR	CASING VOLUME (gal)	NUMBER OF VOLUMES	GALLONS TO BE PURGED
34.77'	27.89'	0.66	18.4	3	56

PURGE DATA

TIME	CUMULATIVE GALLONS PURGED	PUMP ON/OFF	TEMPERATURE °F ✓ °C	pH	CONDUCTIVITY	SUBJECTIVE TURBIDITY
1:15	18.5	ON	75.0	7.18	1885	Clear
1:30	37	ON	70.5	6.84	1823	No Odor
1:45	56	ON	70.5	7.00	1836	
3:00			73.2	7.22	1797	

Pump type/# Grunfroz #1 Total gallons purged 56 Method of measurement Control Box GPM 2.3
55 gal D
250 Hz

RECOVERY/SAMPLE DATA

DATE	TIME	DEPTH TO WATER (ft)	PERCENT RECOVERY	SAMPLED YES/NO	COMMENTS
	2:45	23.75'	40%	YES	Rec. rate exceeds 2 Hrs.

NA = Data not available or not applicable.

Applied GeoSystems

WELL PURGE DATA SHEET

Project Name: EXXON
Job Number: 97042-9 Date: 3.26.92
Sampler: R. Adair Page 3 of 8

Wellhead Type 4" Locking Cap Locked? YES ID #? 4" Casing Size 4"
Comments: Wellhead Condition Good

WELL NUMBER 7

SUBJECTIVE DATA

TIME	DEPTH TO WATER (ft)	DEPTH TO PRODUCT (ft)	PRODUCT THICKNESS (ft)	SHEEN	COMMENTS
10:35	9.27	N/A	N/A	NONE	

PURGE VOLUME COMPUTATION

TOTAL DEPTH (ft)	WATER COLUMN (ft)	CONVERSION FACTOR	CASING VOLUME (gal)	NUMBER OF VOLUMES	GALLONS TO BE PURGED
34.70'	25.28	0.66	16.7	3	51

PURGE DATA

TIME	CUMULATIVE GALLONS PURGED	PUMP ON/OFF	TEMPERATURE °F / °C	pH	CONDUCTIVITY	SUBJECTIVE TURBIDITY
12:35	16.7	ON	74.2	7.71	874	Clear
12:45	34	ON	74.0	7.20	805	No Odor
12:55	51	ON	76.0	7.41	839	
2:40			72.4	8.29	799	

Pump type/# Grundfos #1 Total gallons purged 51 Method of measurement Control Box GPM 2.3
55 g Drum 25 1/2

RECOVERY/SAMPLE DATA

DATE	TIME	DEPTH TO WATER (ft)	PERCENT RECOVERY	SAMPLED YES/NO	COMMENTS
	2:30	6.75'	100%	YES	

NA = Data not available or not applicable.

Applied GeoSystems

WELL PURGE DATA SHEET

Project Name: EXXON
Job Number: 87042-9 Date: 3-25-92
Sampler: R. Adair Page 4 of 8

Wellhead Type 4" Locking CAP Locked? Yes ID #? 4" Casing Size 4"
Comments: Wellhead Condition Good

WELL NUMBER 9

SUBJECTIVE DATA

TIME	DEPTH TO WATER (ft)	DEPTH TO PRODUCT (ft)	PRODUCT THICKNESS (ft)	SHEEN	COMMENTS
10:05	8.93'	N/A	N/A	NO	

PURGE VOLUME COMPUTATION

TOTAL DEPTH (ft)	WATER COLUMN (ft)	CONVERSION FACTOR	CASING VOLUME (gal)	NUMBER OF VOLUMES	GALLONS TO BE PURGED
31.50'	22.57'	0.66	15	3	45

PURGE DATA

TIME	CUMULATIVE GALLONS PURGED	PUMP ON/OFF	TEMPERATURE °F / °C	pH	CONDUCTIVITY	SUBJECTIVE TURBIDITY
11:30	15	ON	69.8	7.03	777	clear/cloudy
11:40	30	ON	69.0	7.02	857	No Odor
11:50	45	ON	71.0	7.06	797	
11:51		OFF				
12:55			67.5	7.52	853	

Pump type/# GeoSub 2 #1 Total gallons purged 45 Method of measurement Control Box GPM 3
300 #2

RECOVERY/SAMPLE DATA

DATE	TIME	DEPTH TO WATER (ft)	PERCENT RECOVERY	SAMPLED YES/NO	COMMENTS
3-25-92	12.50	11.50'	89%	Yes	

NA = Data not available or not applicable.

Applied GeoSystems

WELL PURGE DATA SHEET

Project Name: Exxon
Job Number: 87042-9 Date: 3.25.92
Sampler: R. Adair Page 5 of 8

Wellhead Type 4" Locking Cap Locked? Yes ID #? 4" Casing Size 4"
Comments: Wellhead Condition Good

WELL NUMBER 10

SUBJECTIVE DATA

TIME	DEPTH TO WATER (ft)	DEPTH TO PRODUCT (ft)	PRODUCT THICKNESS (ft)	SHEEN	COMMENTS
10:10	5.70'	N/A	N/A	NO	

PURGE VOLUME COMPUTATION

TOTAL DEPTH (ft)	WATER COLUMN (ft)	CONVERSION FACTOR	CASING VOLUME (gal)	NUMBER OF VOLUMES	GALLONS TO BE PURGED
24.95	19.25	0.66	13	3	39

PURGE DATA

TIME	CUMULATIVE GALLONS PURGED	PUMP ON/OFF	TEMPERATURE °F / °C	pH	CONDUCTIVITY	SUBJECTIVE TURBIDITY
12:10	13	ON	71.0	7.12	594	clear/clear No odor
12:16	26	ON	73.8	7.05	610	
12:17		OFF				well went Dry
12:30						Let well re-charge 10-15 min
12:35	39	ON	76.0	7.65	626	
12:36		OFF				
1:45			66.2	7.72	565	

Pump type/# Grundfos #1 Total gallons purged 39 Method of measurement Control Box GPM 2-3
55 gal Drum
250 ft

RECOVERY/SAMPLE DATA

DATE	TIME	DEPTH TO WATER (ft)	PERCENT RECOVERY	SAMPLED YES/NO	COMMENTS
3.25.92	1:40	7.0	93%	Yes	
	12:25 PM	20.62'	12:35 PM	17.82' DTW	

NA = Data not available or not applicable.

Applied GeoSystems

WELL PURGE DATA SHEET

Project Name: EXXON
Job Number: 87042-9 Date: 3-25-92
Sampler: R. Adair Page 6 of 8

Wellhead Type 4" Locking Cap Locked? Yes ID #? 4" Casing Size 4"
Comments: Wellhead Condition Good

WELL NUMBER 11

SUBJECTIVE DATA

TIME	DEPTH TO WATER (ft)	DEPTH TO PRODUCT (ft)	PRODUCT THICKNESS (ft)	SHEEN	COMMENTS
10 15	7.30'	N/A	N/A	NO	

PURGE VOLUME COMPUTATION

TOTAL DEPTH (ft)	WATER COLUMN (ft)	CONVERSION FACTOR	CASING VOLUME (gal)	NUMBER OF VOLUMES	GALLONS TO BE PURGED
30.10	22.8	0.66	15	3	45

PURGE DATA

TIME	CUMULATIVE GALLONS PURGED	PUMP ON/OFF	TEMPERATURE °F / °C	pH	CONDUCTIVITY	SUBJECTIVE TURBIDITY
1:00	15	ON	74.0	6.93	792	clear-cloudy
1:08	30	ON	74.0	6.99	786	No odor
1:15	45	ON	74.6	7.01	821	
1:16		OFF				
2:35			68.2	7.10	722	

Pump type/# Grundfos #1 Total gallons purged 45 Method of measurement Control Box GPM 2.3
55 gal Drum
250 ft

RECOVERY/SAMPLE DATA

DATE	TIME	DEPTH TO WATER (ft)	PERCENT RECOVERY	SAMPLED YES/NO	COMMENTS
3-25-92	2:30	8.70'	94%	Yes	

NA = Data not available or not applicable.

Applied GeoSystems

WELL PURGE DATA SHEET

Project Name: Exxon
Job Number: 87042-9 Date: 3-25-92
Sampler: R. Adair Page 7 of 8

Wellhead Type 4" Locking Plug Locked? Yes ID #? 4" Casing Size 4"
Comments: Wellhead Condition Good

WELL NUMBER 14

SUBJECTIVE DATA

TIME	DEPTH TO WATER (ft)	DEPTH TO PRODUCT (ft)	PRODUCT THICKNESS (ft)	SHEEN	COMMENTS
10:25	6.15	N/A	N/A	NO	

PURGE VOLUME COMPUTATION

TOTAL DEPTH (ft)	WATER COLUMN (ft)	CONVERSION FACTOR	CASING VOLUME (gal)	NUMBER OF VOLUMES	GALLONS TO BE PURGED
17.35	11.20	0.66	7.4	3	23

PURGE DATA

TIME	CUMULATIVE GALLONS PURGED	PUMP ON/OFF	TEMPERATURE °F / °C	pH	CONDUCTIVITY	SUBJECTIVE TURBIDITY
1:50	7.4	ON	69.6	7.63	884	clear-cloudy
1:56	15	ON	69.8	7.45	905	No Odor
2:02		OFF				well went dry
2:30	23	ON	68.7	7.62	920	Let Recharge
						20 min.
3:40			64.0	7.42	832	

Pump type/# Grundfos #1 Total gallons purged 23 Method of measurement Control Box GPM 1-2
55 gal D. 200 Hz

RECOVERY/SAMPLE DATA

DATE	TIME	DEPTH TO WATER (ft)	PERCENT RECOVERY	SAMPLED YES/NO	COMMENTS
3-25-92	3:30	10.50	61%		
	2:07PM	15.60'	2:25PM	12:80'	

NA = Data not available or not applicable.

Applied GeoSystems

WELL PURGE DATA SHEET

Project Name: EXXON
Job Number: 87429 Date: 3-26-92
Sampler: RAdaux Page 8 of 8

Wellhead Type 4" Locking Cap Locked? Yes ID #? 4" Casing Size 4"
Comments: Wellhead Condition Good

WELL NUMBER 15

SUBJECTIVE DATA

TIME	DEPTH TO WATER (ft)	DEPTH TO PRODUCT (ft)	PRODUCT THICKNESS (ft)	SHEEN	COMMENTS
	8.10'	N/A	N/A	NONE	

PURGE VOLUME COMPUTATION

TOTAL DEPTH (ft)	WATER COLUMN (ft)	CONVERSION FACTOR	CASING VOLUME (gal)	NUMBER OF VOLUMES	GALLONS TO BE PURGED
16.70'	8.60'	0.66	6.0	3	18

PURGE DATA

TIME	CUMULATIVE GALLONS PURGED	PUMP ON/OFF	TEMPERATURE °F / °C	pH	CONDUCTIVITY	SUBJECTIVE TURBIDITY
11:30	6.0	ON	65.7	7.14	1680	clear
11:35	12.0	ON	66.7	6.98	1595	Noodor
11:41	18.0	ON	68.0	7.00	1620	
2:00			70.2	7.41	1656	

Pump type/# GeoSquz #1 Total gallons purged 18 Method of measurement Control Box GPM 1-2
55% ↓
200 Hz

RECOVERY/SAMPLE DATA

DATE	TIME	DEPTH TO WATER (ft)	PERCENT RECOVERY	SAMPLED YES/NO	COMMENTS
	2:00	8.15'	99%	Yes	

NA = Data not available or not applicable.

RESNA

ATTACHMENT III

CHAIN OF CUSTODY RECORDS
AND
CERTIFIED ANALYSIS REPORTS

pace INCORPORATED
THE ASSURANCE OF QUALITY

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

☐ Irvine, CA
Alton Business Park
30 Hughes St., Suite 206, 92718
(714) 380-9559

EXXON COMPANY, U.S.A.

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

CHAIN OF CUSTODY

Consultant Name: Rosna
Address: 42501 Albrae Fremont, CA
Project Contact: Rosmi Project #: 87042-9
Phone #: 510 659-0404 Fax #:
Consultant Work Release #: 89072786 7C

Exxon Contact: Marla Guensler Phone #:
Site RAS #: 7-3006
Site Location: High St. Oakland (Coast)
Laboratory Work Release #:

Sampled by (please print): Robin A. Adair
Sampler Signature: Robin A. Adair Date Sampled: 3-25-26-92

Sample Description	Collection Date/Time	Matrix	Prsv.	# of Cont.	SOIL TPH/GAS/BTEX EPA 8015/8020	SOIL TPH/Diesel EPA 8015	SOIL Organic Lead DHS Method	WATER TPH/GAS/BTEX EPA 8015/602	WATER TPH/Diesel EPA 8015	WATER Organic Lead DHS Method	TRPH EPA 418.1	Total Oil & Grease SM 5520					Remarks
W-9.30' MW1	3-26-92 1:25		HCl	3	60334.6			X									
MW1				2L					X								TPHd
W-6.88' MW6	3-26-92 2:45			3	60335.4			X									Preserve upon
MW6				2L					X								Receipt
W-9.27' MW7	3-26-92 2:30			3	60336.2			X									
MW7				2L					X								
W-8.93' MW9	3-25-92 12:50			3	60337.0			X									
MW9				2L					X								
W-5.70' MW10	3-25-92 1:40			3	60338.9			X									
MW10				2L					X								

Cooler No.: 5/2, B/2

Cooler Seal Intact ☐ Yes ☐ No

Turnaround Time (circle choice): 24 hr. / 48 hr. / 72 hr. / 96 hr. / (5 workday (standard)) — circled

Relinquished by/Affiliation	Accepted by/Affiliation	Date	Time
Robin A. Adair (Rosna)	Aiicha Rosna	3/27/92	9:10
[illegible] (Rosna)	Ed Laltz - Pace	3/27/92	1550
Ed Laltz - Pace	Tina Meyers / Pace	3/27	1750

Shipment Method:

Shipment Date:

Additional Comments:

Distribution: White - Original Yellow - Exxon Pink - Lab Goldenrod - Consultant Field Staff

420327.514

pace INCORPORATED
THE ASSURANCE OF QUALITY

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

☐ Irvine, CA
Alton Business Park
30 Hughes St., Suite 206, 92718
(714) 380-9559

EXXON COMPANY, U.S.A.
P.O. Box 4415, Houston, TX 77210-4415
CHAIN OF CUSTODY

Consultant Name: Resna
Address: 42501 Albrae St. Fremont CA
Project Contact: Rasmi   Project #: 87042-9
Phone #: 510-659-0404   Fax #:
Consultant Work Release #: 89072786 7C

Exxon Contact: Marla Guensler   Phone #:
Site RAS #: 7-3006
Site Location: High St, Oakland (Coast)
Laboratory Work Release #:

Sampled by (please print): Robin A. Adair
Sampler Signature: Robin A. Adair   Date Sampled: 3-25-26-92

Sample Description	Collection Date/Time	Matrix	Prsv.	# of Cont.	SOIL: TPH/GAS/BTEX EPA 8015/8020	SOIL: TPH/Diesel EPA 8015	SOIL: Organic Lead DHS Method	WATER: TPH/GAS/BTEX EPA 8015/602	WATER: TPH/Diesel EPA 8015	WATER: Organic Lead DHS Method	TRPH EPA 418.1	Total Oil & Grease SM 5520					Remarks
W-7.30-MW11	3-25-92 2:30		HCl	3	6039.7			X									
MW11				2L					X								
W-6.15'-MW14	3-25-92 3:30		HCl	3				X									
MW14				2L	6040.0				X								
W-8.10'-MW15	3-25-92 2:00		HCl	3				X									
MW15				2L	6041.9				X								
BB1	3-25-92 12:40			3	6042.7												Hold

Cooler No.	Relinquished by/Affiliation	Accepted by/Affiliation	Date	Time
Cooler Seal Intact ☐ Yes ☐ No	Robin A. Adair (Resna)	[illegible] Resna/A.	3-27-92	9:10
	[illegible] Resna	Ed [illegible] Pace	3-27-92	1550
Turnaround Time (circle choice): 24 hr. 48 hr. 72 hr. ~~96 hr.~~ (5 workday (standard) circled)	Ed [illegible] - Pace	Tina Meyers/Pace	3/27	1750

Shipment Method:
Shipment Date:

Additional Comments:

Distribution: White - Original   Yellow - Exxon   Pink - Lab   Goldenrod - Consultant Field Staff

4203 27.514

pace®
INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

April 06, 1992

Mr. Rasmi Aljurf
Resna/Applied Geosystems
42501 Albrae Street,Suite 100
Fremont, CA 94538

RE: PACE Project No. 420327.519
Client Reference: Exxon 7-3006

Dear Mr. Aljurf:

Enclosed is the report of laboratory analyses for samples received March 27, 1992.

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

Sincerely,

Carol Reid

Carol Reid
Project Manager

Enclosures

11 Digital Drive
Novato, CA 94949
TEL: 415-883-6100
FAX: 415-883-2673

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

Resna/Applied Geosystems
42501 Albrae Street,Suite 100
Fremont, CA 94538

April 06, 1992
PACE Project Number: 420327519

Attn: Mr. Rasmi Aljurf

Client Reference: Exxon 7-3006

PACE Sample Number:			70 0060346	
Date Collected:			03/26/92	
Date Received:			03/27/92	
Client Sample ID:			W-9.30	
Parameter	Units	MDL	MW1	DATE ANALYZED
ORGANIC ANALYSIS				
TPH GASOLINE/BTEX				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/03/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	ND	04/03/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-	04/03/92
Benzene	ug/L	0.5	1.5	04/03/92
Toluene	ug/L	0.5	ND	04/03/92
Ethylbenzene	ug/L	0.5	ND	04/03/92
Xylenes, Total	ug/L	0.5	ND	04/03/92
TPH DIESEL, BY EPA METHOD 8015				
Extractable Fuels, as Diesel	mg/L	0.050	ND	04/02/92
Date Extracted			03/31/92	

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

11 Digital Drive
Novato, CA 94949
TEL: 415-883-6100
FAX: 415-883-2673

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

Mr. Rasmi Aljurf
Page 2

April 06, 1992
PACE Project Number: 420327519

Client Reference: Exxon 7-3006

PACE Sample Number:			70 0060354	
Date Collected:			03/26/92	
Date Received:			03/27/92	
Client Sample ID:			W-6.88	
Parameter	Units	MDL	MW6	DATE ANALYZED
ORGANIC ANALYSIS				
TPH GASOLINE/BTEX				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/01/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	6200	21000	04/01/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-	04/01/92
Benzene	ug/L	62	8000	04/01/92
Toluene	ug/L	62	250	04/01/92
Ethylbenzene	ug/L	62	1700	04/01/92
Xylenes, Total	ug/L	62	5000	04/01/92
TPH DIESEL, BY EPA METHOD 8015				
Extractable Fuels, as Diesel	mg/L	0.050	2.7	04/02/92
Date Extracted			03/31/92	

MDL Method Detection Limit

11 Digital Drive
Novato, CA 94949
TEL: 415-883-6100
FAX: 415-883-2673

REPORT OF LABORATORY ANALYSIS

April 06, 1992
PACE Project Number: 420327519

Client Reference: Exxon 7-3006

PACE Sample Number:			70 0060362	
Date Collected:			03/26/92	
Date Received:			03/27/92	
Client Sample ID:			W-9.27	
Parameter	Units	MDL	MW7	DATE ANALYZED
ORGANIC ANALYSIS				
TPH GASOLINE/BTEX				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/01/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	250	1500	04/01/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-	04/01/92
Benzene	ug/L	2.5	320	04/01/92
Toluene	ug/L	2.5	7.2	04/01/92
Ethylbenzene	ug/L	2.5	16	04/01/92
Xylenes, Total	ug/L	2.5	19	04/01/92
TPH DIESEL, BY EPA METHOD 8015				
Extractable Fuels, as Diesel	mg/L	0.050	0.76	04/02/92
Date Extracted			03/31/92	

MDL Method Detection Limit

11 Digital Drive
Novato, CA 94949
TEL: 415-883-6100
FAX: 415-883-2673

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

Mr. Rasmi Aljurf
Page 4

April 06, 1992
PACE Project Number: 420327519

Client Reference: Exxon 7-3006

Parameter	Units	MDL	70 0060370 03/25/92 03/27/92 W-8.93 MW9	DATE ANALYZED
PACE Sample Number:				
Date Collected:				
Date Received:				
Client Sample ID:				
ORGANIC ANALYSIS				
TPH GASOLINE/BTEX				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/01/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	ND	04/01/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-	04/01/92
Benzene	ug/L	0.5	ND	04/01/92
Toluene	ug/L	0.5	ND	04/01/92
Ethylbenzene	ug/L	0.5	ND	04/01/92
Xylenes, Total	ug/L	0.5	ND	04/01/92
TPH DIESEL, BY EPA METHOD 8015				
Extractable Fuels, as Diesel	mg/L	0.050	ND	04/02/92
Date Extracted			03/31/92	

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

11 Digital Drive
Novato, CA 94949
TEL: 415-883-6100
FAX: 415-883-2673

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

Mr. Rasmi Aljurf
Page 5

April 06, 1992
PACE Project Number: 420327519

Client Reference: Exxon 7-3006

Parameter	Units	MDL	MW10	DATE ANALYZED
PACE Sample Number:			70 0060389	
Date Collected:			03/25/92	
Date Received:			03/27/92	
Client Sample ID:			W-5.70	
ORGANIC ANALYSIS				
TPH GASOLINE/BTEX				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/01/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	ND	04/01/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-	04/01/92
Benzene	ug/L	0.5	ND	04/01/92
Toluene	ug/L	0.5	ND	04/01/92
Ethylbenzene	ug/L	0.5	ND	04/01/92
Xylenes, Total	ug/L	0.5	ND	04/01/92
TPH DIESEL, BY EPA METHOD 8015				
Extractable Fuels, as Diesel	mg/L	0.050	ND	04/02/92
Date Extracted			03/31/92	

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

11 Digital Drive
Novato, CA 94949
TEL: 415-883-6100
FAX: 415-883-2673

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

Mr. Rasmi Aljurf
Page 6

April 06, 1992
PACE Project Number: 420327519

Client Reference: Exxon 7-3006

Parameter	Units	MDL	MW11	DATE ANALYZED
PACE Sample Number:			70 0060397	
Date Collected:			03/25/92	
Date Received:			03/27/92	
Client Sample ID:			W-7.30	
ORGANIC ANALYSIS				
TPH GASOLINE/BTEX				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/01/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	ND	04/01/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-	04/01/92
Benzene	ug/L	0.5	ND	04/01/92
Toluene	ug/L	0.5	ND	04/01/92
Ethylbenzene	ug/L	0.5	ND	04/01/92
Xylenes, Total	ug/L	0.5	ND	04/01/92
TPH DIESEL, BY EPA METHOD 8015				
Extractable Fuels, as Diesel	mg/L	0.050	ND	04/02/92
Date Extracted			03/31/92	

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

11 Digital Drive
Novato, CA 94949
TEL: 415-883-6100
FAX: 415-883-2673

REPORT OF LABORATORY ANALYSIS

April 06, 1992
PACE Project Number: 420327519

Client Reference: Exxon 7-3006

Parameter	Units	MDL	MW14	DATE ANALYZED
PACE Sample Number:			70 0060400	
Date Collected:			03/25/92	
Date Received:			03/27/92	
Client Sample ID:			W-6.15	
ORGANIC ANALYSIS				
TPH GASOLINE/BTEX				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/01/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	61	04/01/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-	04/01/92
Benzene	ug/L	0.5	ND	04/01/92
Toluene	ug/L	0.5	ND	04/01/92
Ethylbenzene	ug/L	0.5	1.1	04/01/92
Xylenes, Total	ug/L	0.5	ND	04/01/92
TPH DIESEL, BY EPA METHOD 8015				
Extractable Fuels, as Diesel	mg/L	0.050	0.64	04/02/92
Date Extracted			03/31/92	

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

11 Digital Drive
Novato, CA 94949
TEL: 415-883-6100
FAX: 415-883-2673

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

Mr. Rasmi Aljurf
Page 8

April 06, 1992
PACE Project Number: 420327519

Client Reference: Exxon 7-3006

PACE Sample Number:			70 0060419	
Date Collected:			03/25/92	
Date Received:			03/27/92	
Client Sample ID:			W-8.10	
Parameter	Units	MDL	MW15	DATE ANALYZED
ORGANIC ANALYSIS				
TPH GASOLINE/BTEX				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/01/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	500	3400	04/01/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-	04/01/92
Benzene	ug/L	5.0	150	04/01/92
Toluene	ug/L	5.0	13	04/01/92
Ethylbenzene	ug/L	5.0	690	04/01/92
Xylenes, Total	ug/L	5.0	250	04/01/92
TPH DIESEL, BY EPA METHOD 8015				
Extractable Fuels, as Diesel	mg/L	0.050	1.4	04/02/92
Date Extracted			03/31/92	

MDL Method Detection Limit

11 Digital Drive
Novato, CA 94949
TEL: 415-883-6100
FAX: 415-883-2673

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

Mr. Rasmi Aljurf
Page 9

April 06, 1992
PACE Project Number: 420327519

Client Reference: Exxon 7-3006

PACE Sample Number:			70 0060427	
Date Collected:			03/25/92	
Date Received:			03/27/92	
Client Sample ID:			BB1	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
TPH GASOLINE/BTEX				
TOTAL FUEL HYDROCARBONS, (LIGHT):			-	04/01/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	ND	04/01/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-	04/01/92
Benzene	ug/L	0.5	ND	04/01/92
Toluene	ug/L	0.5	ND	04/01/92
Ethylbenzene	ug/L	0.5	ND	04/01/92
Xylenes, Total	ug/L	0.5	ND	04/01/92

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

These data have been reviewed and are approved for release.

Darrell Cain for
Mark A. Valentini, Ph.D.
Regional Director

11 Digital Drive
Novato, CA 94949
TEL: 415-883-6100
FAX: 415-883-2673

REPORT OF LABORATORY ANALYSIS

Mr. Rasmi Aljurf
Page 10

QUALITY CONTROL DATA

April 06, 1992
PACE Project Number: 420327519

Client Reference: Exxon 7-3006

TPH DIESEL, BY EPA METHOD 8015
Batch: 70 11245
Samples: 70 0060346, 70 0060354, 70 0060362, 70 0060370, 70 0060389
70 0060397, 70 0060400, 70 0060419

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Extractable Fuels, as Diesel	mg/L	0.050	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Extractable Fuels, as Diesel	mg/L	0.050	1.00	78%	71%	9%

MDL Method Detection Limit
RPD Relative Percent Difference

11 Digital Drive
Novato, CA 94949
TEL: 415-883-6100
FAX: 415-883-2673

REPORT OF LABORATORY ANALYSIS

Mr. Rasmi Aljurf
Page 11

QUALITY CONTROL DATA

April 06, 1992
PACE Project Number: 420327519

Client Reference: Exxon 7-3006

TPH GASOLINE/BTEX
Batch: 70 11210
Samples: 70 0060346, 70 0060354, 70 0060362, 70 0060370, 70 0060389
70 0060397, 70 0060400, 70 0060419, 70 0060427

METHOD BLANK:

Parameter	Units	MDL	Method Blank
TOTAL FUEL HYDROCARBONS, (LIGHT):			-
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	ND
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-
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 Value	Recv	Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	276	110%	108%	1%
Benzene	ug/L	0.5	40.0	113%	114%	0%
Toluene	ug/L	0.5	40.0	113%	114%	0%
Ethylbenzene	ug/L	0.5	40.0	118%	120%	1%
Xylenes, Total	ug/L	0.5	80.0	106%	106%	0%

MDL Method Detection Limit
RPD Relative Percent Difference

11 Digital Drive
Novato, CA 94949
TEL: 415-883-6100
FAX: 415-883-2673