

# EXXON COMPANY, U.S.A.

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ENVIRONMENTAL ENGINEERING

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

October 30, 1992

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

Subject: Former Exxon RAS #7-3006; 720 High Street, Oakland, California

Dear Mr. Seto:

Attached for your review and comment is the Letter Report Quarterly Groundwater Monitoring for the above referenced site. This report, prepared by RESNA Industries, Inc., of San Jose, California, details the results of the second quarter ground water monitoring events.

Exxon will be installing an interim floating product recovery system to remove floating product from monitoring wells MW-2, MW-3, and MW-4 in the near future. Hand-bailing of free product will continue until the product skimmer system is installed.

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

Sincerely,

*Marla D. Guensler*

Attachment:

c - w/attachment:

Mr. Richard Hiatt - San Francisco Bay Regional Water Quality Control  
Board

Mr. V. A. Sevier

w/o attachment:

Mr. M. A. Briggs - RESNA Industries, Inc., San Jose, California  
Mr. E. E. Villasenor

MDG/pdp  
2612E/73006.1tr



*Working To Restore Nature*

3315 Almaden Expressway, Suite 34  
San Jose, CA 95118  
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LETTER REPORT  
QUARTERLY GROUNDWATER MONITORING  
Second Quarter 1992

at  
Exxon Station No. 7-3006  
720 High Street  
Oakland, California

87042.11



Working To Restore Nature

3315 Almaden Expressway, Suite 34  
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October 21, 1992  
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Ms. Marla D. Guensler  
Exxon Company U.S.A.  
2300 Clayton Road, Suite 1250  
P.O. Box 4032  
Concord, California 94520

Subject: Letter Report on Second Quarter 1992 Groundwater Monitoring at Exxon Station No. 7-3006, 720 High Street, Oakland, California

Ms Guensler:

As requested by Exxon Company U.S.A. (Exxon), this letter report summarizes the methods and results of the second quarter 1992 groundwater monitoring performed by RESNA Industries Inc. (RESNA) at the above subject site. The site is located at 720 High Street, in a predominantly industrial area of Oakland, California. It is bound on the northwest by High Street, on the southwest by Coliseum Way, on the northeast by a former dry-cleaning facility, on the south by Alameda Avenue, and on the southeast by a vacant lot (Plate 1) Site Vicinity Map.

The objectives of this quarterly monitoring are to evaluate trends in the groundwater flow direction and gradient, and trends in concentrations of gasoline and diesel hydrocarbons in the local groundwater associated with a former used-oil and three underground gasoline storage tanks (USTs) at the site.

Prior to the present monitoring, RESNA (formerly Applied GeoSystems [AGS]) performed an environmental investigation related to the removal of four USTs in April 1987 (AGS, May 13, 1987, July 10, 1987, and October 16, 1989), and an environmental investigation between September 1987 and May 1988 that included drilling nine boreholes (B-1 through B-9) around the former UST locations and installing groundwater monitoring wells MW-1 through MW-9 in the boreholes (AGS, August 5, 1988). AGS performed a Supplemental Subsurface Investigations that included: drilling of eleven boreholes (B-10 through B-20) and the installation of groundwater monitoring wells MW-10 through MW-13 in boreholes B-10 through B-13 in November 1989 (AGS, January 30, 1990), and drilling of boreholes B-21 through B-32 and the installation of groundwater monitoring wells MW-14 and MW-15

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in boreholes B-31 and B-32 in November 1990 (AGS, May 21, 1991). Quarterly monitoring was initiated by AGS in the second quarter of 1989 (AGS, October 16, 1989) and is continuing. The locations of the borings, wells, and pertinent site facilities are shown on the Generalized Site Plan, (Plate 2). The results of these investigations are presented in the reports listed in the references section of this letter report.

### Groundwater Sampling and Gradient Evaluation

For the latest quarterly groundwater monitoring, RESNA personnel collected groundwater monitoring data from the one offsite monitoring well (MW-1) and thirteen onsite monitoring wells (MW-2 through MW-4, and MW-6 through MW-15) on June 22, 1992. Monitoring well MW-5 was destroyed in July 1989. Field work during this quarter consisted of measuring depth-to-water (DTW) levels, subjectively analyzing water from the wells for the presence of floating product, removal of any floating product encountered, and purging and sampling the groundwater from monitoring wells MW-1, MW-6, MW-7, MW-9, MW-10, MW-11, MW-14, and MW-15 for laboratory analysis. Monitoring wells MW-2 through MW-4, MW-8, MW-12, and MW-13 were not sampled due to the presence of a sheen or floating product noted during subjective analysis of the wells. Field methods used by RESNA personnel are described in Appendix A, Groundwater Sampling Protocol.

RESNA calculated groundwater elevations for each well by subtracting the measured DTW, including corrections for product thickness when necessary, from the elevation of the wellhead. The measured DTW levels, product thickness, wellhead elevations, and groundwater elevations for this and previous monitorings at the site are summarized in Table 1, Cumulative Groundwater Monitoring Data. Data from Table 1 were used to produce hydrographs which show fluctuations in local groundwater elevations. Hydrographs for the fourteen monitoring wells are included in Appendix B. During June monitoring, the groundwater elevation for monitoring well MW-9 appeared to be anomalously low. Therefore, this well was not used in the groundwater gradient interpretations for this quarter. Based on the June 22, 1992 groundwater elevation data, the interpreted local groundwater gradient and flow direction is approximately 0.03 toward the southwest. Groundwater Gradient Map (Plate 3) is RESNA's interpretation of the local groundwater gradient for this quarter. This groundwater gradient is generally consistent with previously interpreted groundwater gradients.

Groundwater samples were collected from wells one offsite well MW-1 and the thirteen onsite monitoring wells MW-2 through MW-4, and MW-6 through MW-15 for subjective analysis before the monitoring wells were purged and sampled. No evidence of floating product or noticeable hydrocarbon vapor was observed in the water samples collected from wells MW-1, MW-6, MW-7, MW-9, MW-10, MW-11, MW-14, and MW-15 for laboratory

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analysis. A sheen or floating product was observed in the groundwater samples collected from wells MW-2 through MW-4, MW-8, MW-12, and MW-13. These subjective analyses are summarized in Table 1.

The one offsite monitoring well and seven onsite monitoring wells were purged and sampled in accordance with the enclosed groundwater sampling protocol (Appendix A). Well purge data sheets and stabilization graphs for the monitored parameters temperature, turbidity, pH, and conductivity for the eight monitoring wells are included in Appendix A.

### Results of Laboratory Analysis

Groundwater samples from the monitoring wells were analyzed for gasoline constituents benzene, toluene, ethylbenzene, and total xylenes (BTEX), and total petroleum hydrocarbons as gasoline (TPHg) using modified Environmental Protection Agency (EPA) Methods 5030/8015/8020, and for total petroleum hydrocarbons as diesel (TPHd) using modified EPA Methods 3510/8015. The Chain of Custody Record and Laboratory Analysis Reports for the monitoring wells are included in Appendix C.

The chemical analyses results of this, and previous, quarterly monitoring are summarized in Table 2, Cumulative Results of Laboratory Analyses of Groundwater Samples. Graphic distributions of TPHg, benzene, and TPHd concentrations in the local groundwater for this quarterly monitoring are shown on Plate 4, TPHg Concentrations in Groundwater, Plate 5, Benzene Concentrations in Groundwater, and Plate 6, TPHd Concentrations in Groundwater. Chemical analyses data from Table 2 were used to produce histograms which show fluctuations in TPHg concentrations over time. Histograms for MW-1 through MW-4, and MW-6 through MW-15 are included on the hydrographs in Appendix B.

Results of this quarter's laboratory analyses of groundwater samples from wells MW-1, MW-6, MW-7, MW-9, MW-10, MW-11, MW-14, and MW-15 indicate that:

- o concentrations of TPHg and TPHd were nondetectable in wells MW-9 and MW-10.
- o concentrations of TPHg were detected in the groundwater from wells MW-1, MW-6, MW-7, MW-11, MW-14, and MW-15 and range from 0.084 parts per million (ppm) in MW-11 to 43 ppm in MW-6.
- o concentrations of TPHd were detected in the groundwater from wells MW-1, MW-6, MW-7, MW-11, MW-14, and MW-15 and range from 0.057 ppm in MW-11 to 1.7 ppm in MW-6.

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- o concentrations of benzene was nondetectable in wells MW-9, MW-10, and MW-14.
- o Benzene was detected in the groundwater at concentrations of 0.0015 ppm in MW-11, 0.0049 ppm in MW-1, 0.099 ppm in MW-15, 0.260 ppm in MW-7, and 11 ppm in well MW-6; which are greater than the California Department of Health Services (CDHS) Maximum Contaminant Level (MCL) of 0.001 ppm for benzene in drinking water.
- o toluene, ethylbenzene, and total xylene concentrations in wells MW-1, MW-7, MW-9, MW-10, MW-11, MW-14, and MW-15 ranged from nondetectable (<0.0005 ppm) to 0.027 ppm;
- o A concentration of toluene greater than the CDHS recommended Drinking Water Action Level (DWAL) of 0.100 ppm was present in well MW-6 (0.150 ppm);
- o A concentration of total xylenes greater than the CDHS MCL of 1.750 ppm, was present in well MW-6 (5.000 ppm);
- o A concentration of ethylbenzene greater than the CDHS MCL of 0.680 ppm was present in well MW-6 (2.100 ppm).

Copies of this report should be forwarded to:

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

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

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Exxon 7-3006, Oakland, California


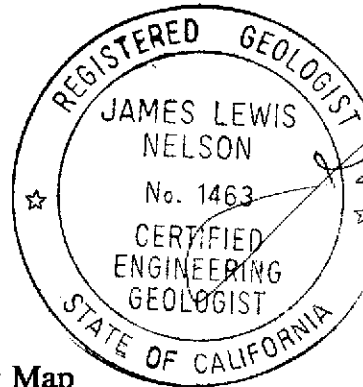
October 21, 1992  
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If you have any questions or comments, please call us at (408) 264-7723.

Sincerely,  
RESNA Industries Inc.



Marc A. Briggs  
Assistant Project Geologist



James L. Nelson  
C.E.G. No. 1463

Enclosures: References

- Plate 1, Site Vicinity Map
- Plate 2, Generalized Site Plan
- Plate 3, Groundwater Gradient Map (June 22, 1992)
- Plate 4, TPHg Concentrations in Groundwater
- Plate 5, Benzene Concentrations in Groundwater
- Plate 6, TPHd Concentrations in Groundwater
  
- Table 1, Cumulative Groundwater Monitoring Data
- Table 2, Cumulative Results of Laboratory Analyses of Groundwater Samples
  
- Appendix A: Groundwater Sampling Protocol, Well Purge Data Sheets, and Stabilization Graphs
- Appendix B: Hydrograph and TPHg Graphs
- Appendix C: Chain of Custody Records and Laboratory Analysis Reports

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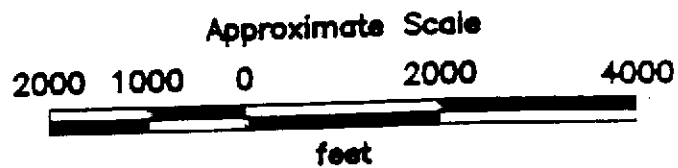
**REFERENCES**

- Applied GeoSystems. May 13, 1987. Letter Report for First Phase Soil Contamination Investigation, Exxon Station No. 7-3006, Oakland, California. Job No. 87042-1.
- Applied GeoSystems. July 10, 1987. Report of Excavation, Aeration, and Removal of Contaminated Soil Including Soil Sampling and Analyses, Exxon Station No. 7-3006, Oakland, California. Job No. 87042-2.
- Applied GeoSystems. August 5, 1988. Report of Subsurface Environmental Investigation, Exxon Station No. 7-3006, Oakland, California. Job No. 87042-5.
- Applied GeoSystems. July 8, 1989. Site Safety Plan, Exxon Station No. 7-3006, 720 High Street, Oakland, California. Job No. 87042-6S.
- Applied GeoSystems. October 16, 1989. Report on Subsurface Environmental Investigation, Exxon Station No. 7-3006, 720 High Street, Oakland, California. Job No. 87042-6.
- Applied GeoSystems. January 30, 1990. Report on Limited Environmental Investigation, Exxon Station 7-3006, 720 High Street, Oakland, California. Job No. 87042-6R.
- Applied GeoSystems. January 30, 1991. Letter Report on Ground-Water Monitoring for Fourth Quarter 1990, Exxon Station No. 7-3006, 720 High Street, Oakland, California. Job No. 87042-9.
- Applied GeoSystems. May 21, 1991. Report on Supplemental Subsurface Environmental Investigation, Exxon Station No. 7-3006, 720 High Street, Oakland, California. Job No. 87042-9R.
- Applied GeoSystems. October 10, 1991. Interim Groundwater Remediation Work Plan, Exxon Station No. 7-3006, 720 High Street, Oakland, California. Job No. 87042-9RAP.
- RESNA Industries, Inc. June 15, 1992. Letter Report on Groundwater Monitoring for First Quarter 1992, Exxon Station No. 7-3006, 720 High Street, Oakland, California. Job No. 87042-11.





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



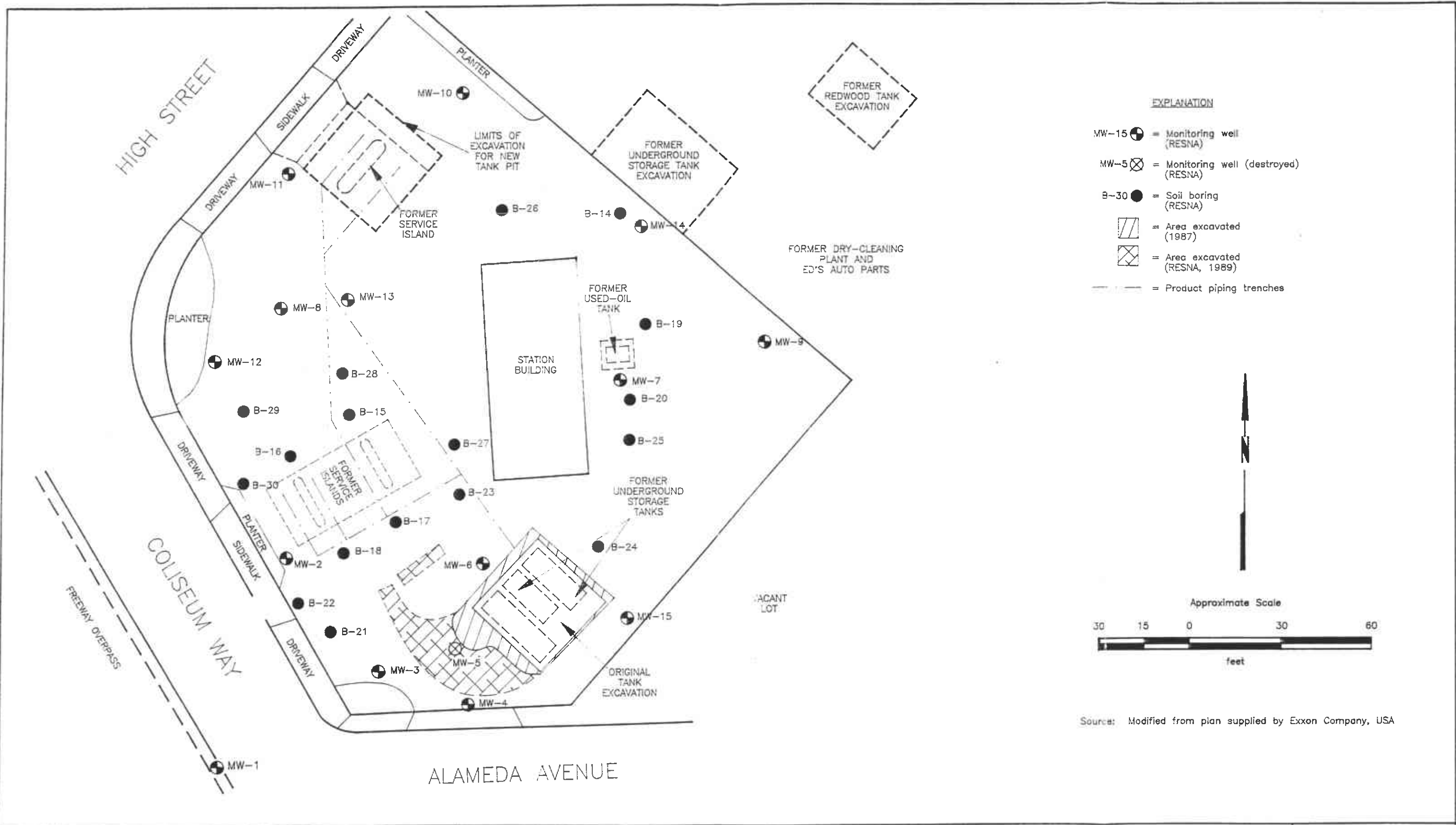
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**SITE VICINITY MAP**  
 Exxon Station No. 7-3006  
 720 High Street  
 Oakland, California

PLATE

1



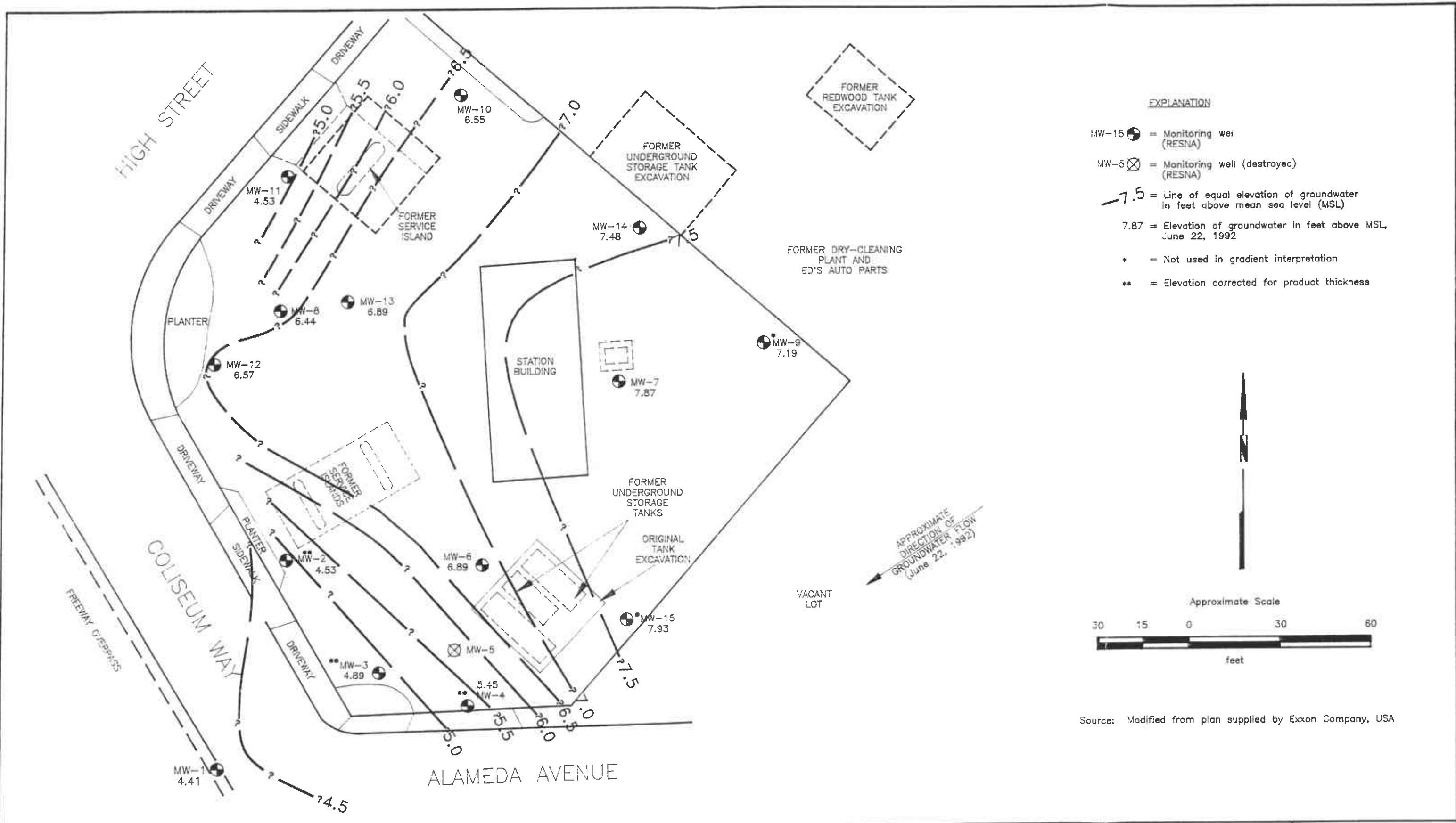
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**GENERALIZED SITE PLAN**  
Exxon Station 7-3006  
720 High Street  
Oakland, California

PLATE

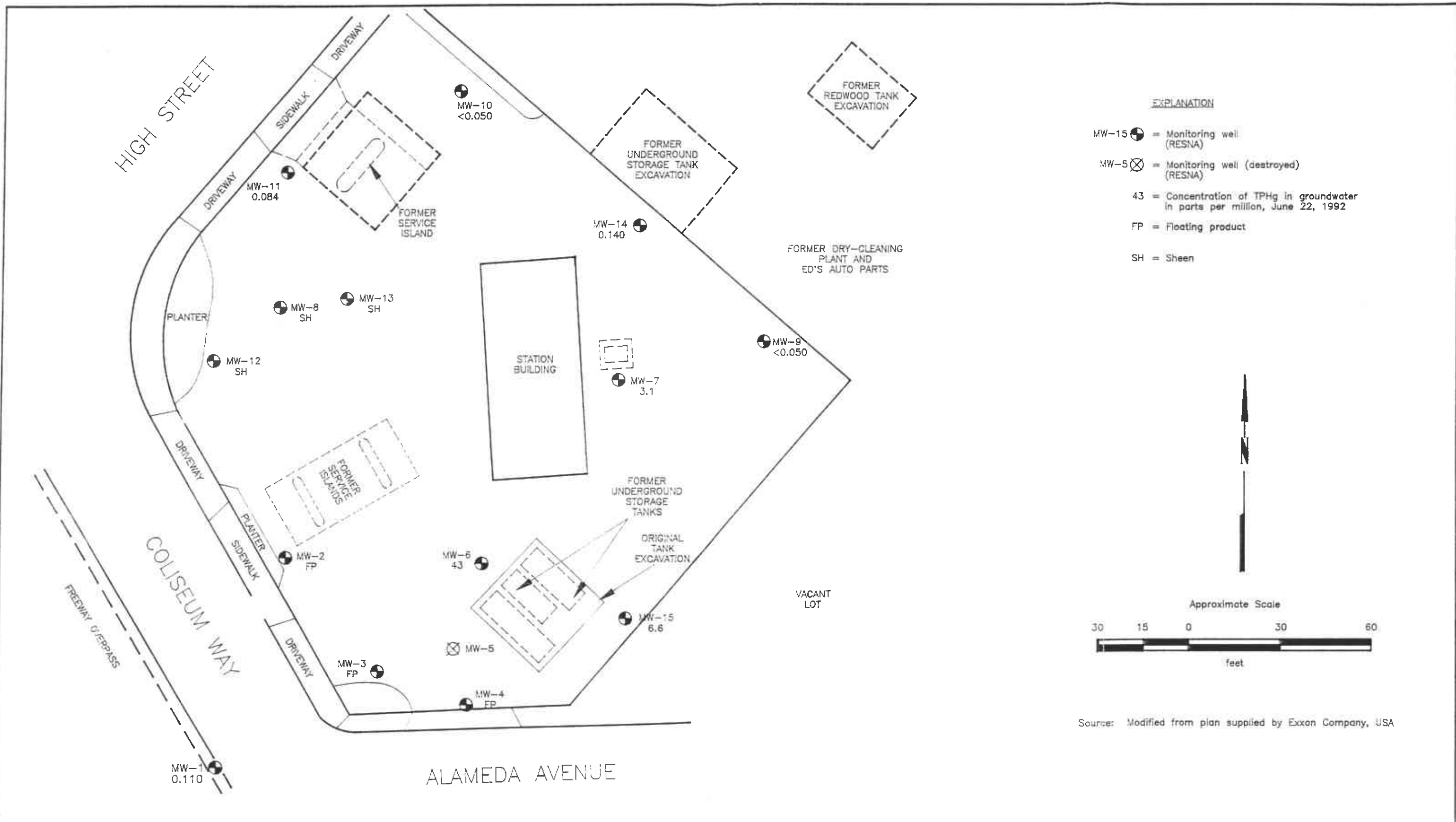
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**GROUNDWATER GRADIENT MAP  
Exxon Station 7-3006  
720 High Street  
Oakland, California**

**PLATE  
3**



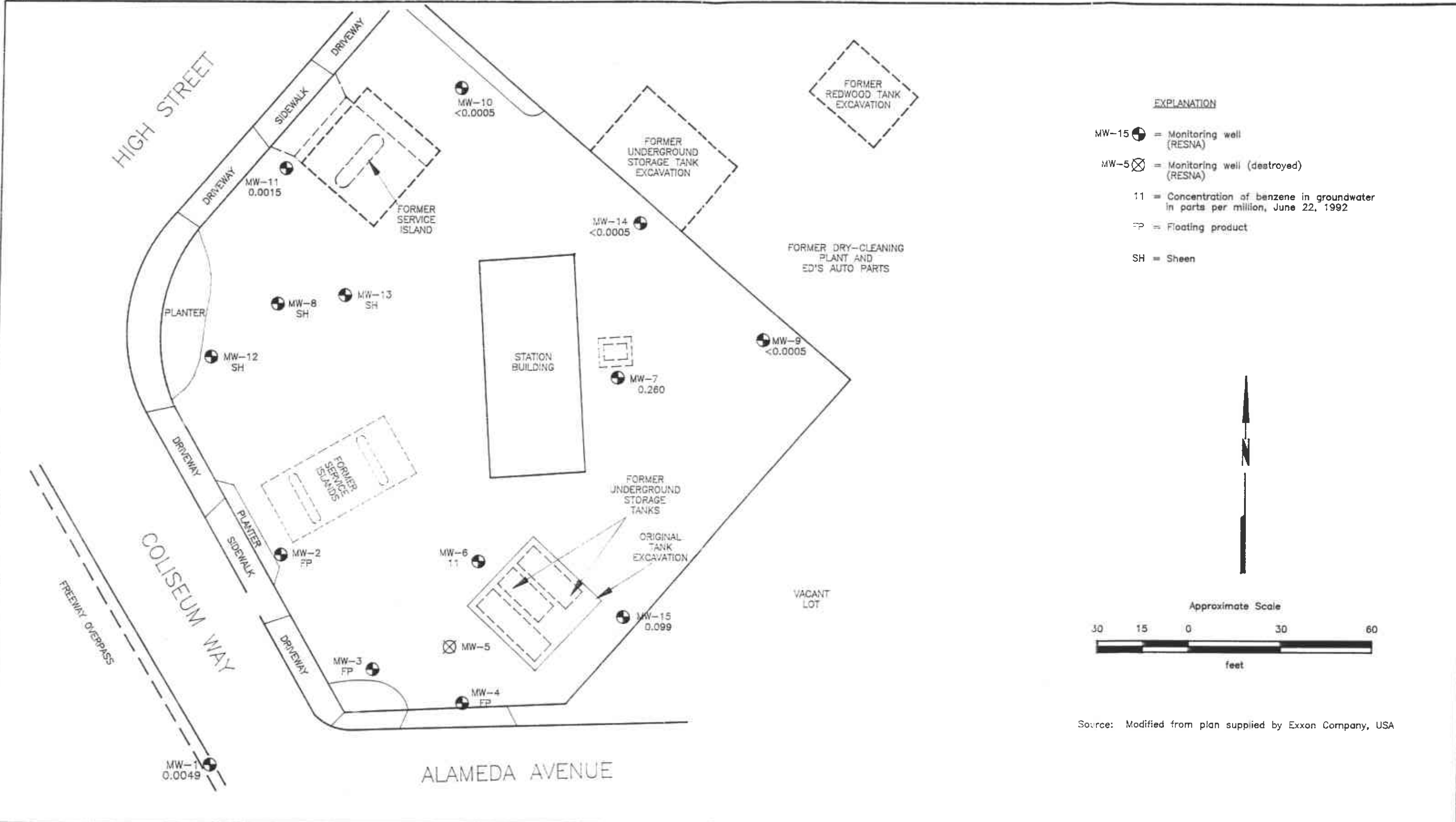
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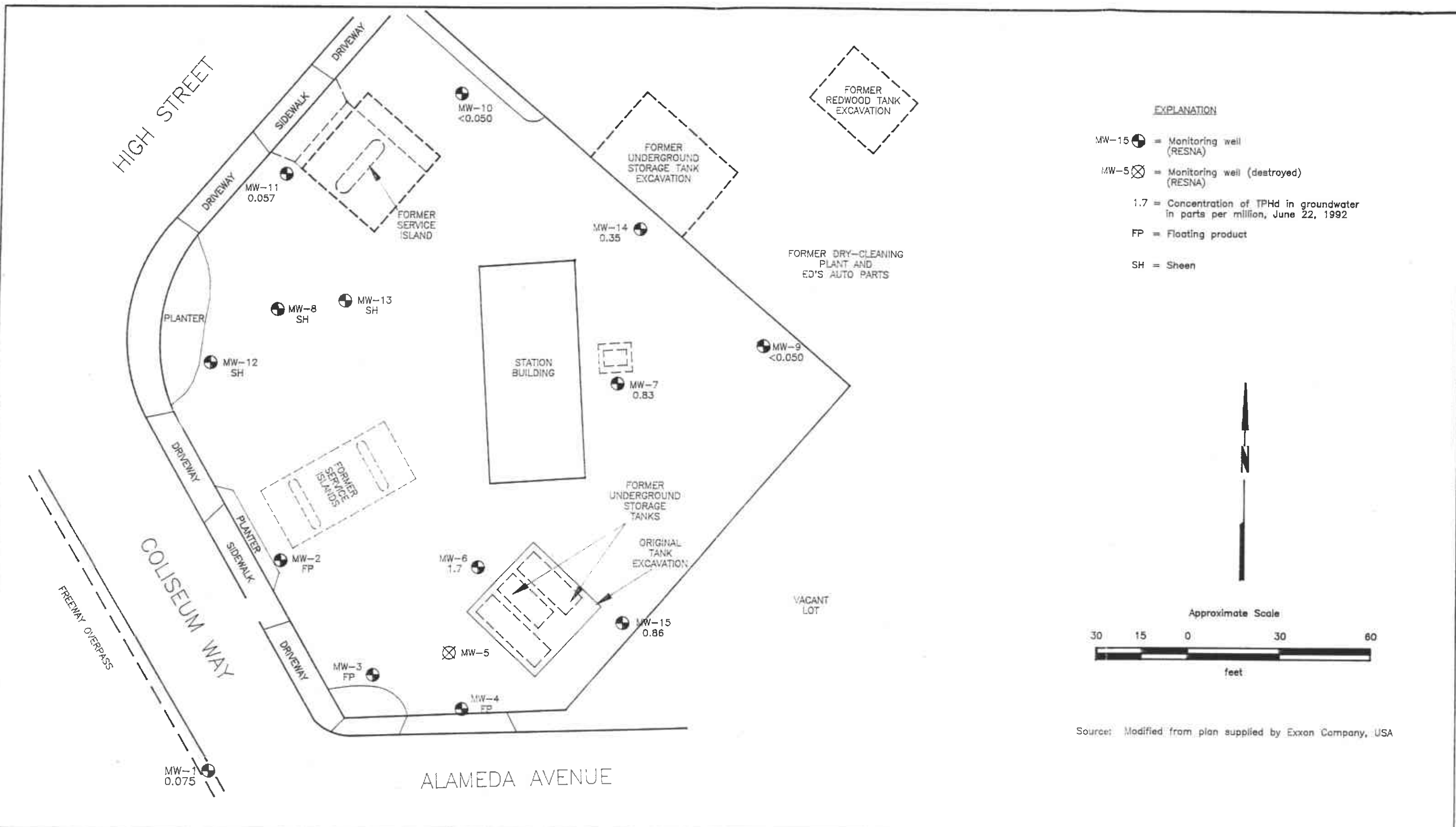
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**TPHg CONCENTRATIONS IN GROUNDWATER**  
Exxon Station 7-3006  
720 High Street  
Oakland, California

PLATE

4





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**TPHd CONCENTRATIONS IN GROUNDWATER**  
Exxon Station 7-3006  
720 High Street  
Oakland, California

PLATE

6

Quarterly Groundwater Monitoring  
Exxon 7-3006, Oakland, California

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TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Exxon Station No. 7-3006  
720 High Street  
Oakland, California  
(Page 1 of 9)

Well Date	Elevation of Wellhead	Depth to-Water	Elevation of Groundwater	Floating Product	Product Removed
<b>MW-1</b>					
04/25/89	12.87	7.55	5.32	NONE	NONE
04/27/89		10.16	2.71	SHEEN	NONE
09/06/89		10.88	1.99	SHEEN	NONE
09/22/89		11.06	1.81	NONE	NONE
11/01/89		10.82	2.05	NONE	NONE
11/15/89		11.07	1.80	NONE	NONE
12/06/89		10.33	2.54	NONE	NONE
02/20/90		8.81	4.06	NONE	NONE
04/19/90		9.33	3.54	NONE	NONE
07/03/90		8.44	4.43	NONE	NONE
07/26/90		8.99	3.88	NONE	NONE
08/20/90		9.50	3.37	NONE	NONE
09/19/90		9.99	2.88	NONE	NONE
11/27/90		10.62	2.25	NONE	NONE
01/17/91		10.31	2.56	NONE	NONE
03/26/91		7.97	4.90	NONE	NONE
05/02/91		8.88	3.99	NONE	NONE
06/20/91		9.62	3.25	NONE	NONE
08/07/91		10.20	2.67	NONE	NONE
09/17/91		10.40	2.47	NONE	NONE
11/13/91		10.20	2.67	NONE	NONE
12/10/91		10.23	2.64	NONE	NONE
01/21/92		9.32	3.55	NONE	NONE
03/25/92		9.30	3.52	NONE	NONE
06/22/92		8.46	4.41	NONE	NONE
<b>MW-2</b>					
04/25/89	12.98	9.27 (7.54)	5.44	2.16	N/A
07/19/89		10.81 (9.56)	3.42	1.56	N/A
07/27/89		10.18 (10.08)	2.90	0.13	N/A
09/06/89		10.89 (10.82)	2.16	0.09	N/A
09/22/89		11.56 (11.11)	1.87	0.56	N/A
11/01/89		10.85 (10.78)	2.20	0.09	N/A
11/15/89		11.05 (10.96)	2.02	0.07	N/A
12/06/89		10.23 (10.13)	2.85	0.13	N/A
02/20/90		8.86 (8.66)	4.32	0.29	N/A
04/19/90		9.09 (9.09)	3.97	0.10	N/A
07/03/90		8.75 (8.71)	4.27	0.05	N/A
07/26/90		8.71 (8.63)	4.35	0.10	N/A
08/20/90		9.25 (9.23)	3.75	0.02	N/A
09/19/90		9.79 (9.77)	3.21	0.02	N/A

See notes on page 9 of 9

Quarterly Groundwater Monitoring  
Exxon 7-3006, Oakland, California

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TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Exxon Station No. 7-3006  
720 High Street  
Oakland, California  
(Page 2 of 9)

Well Date	Elevation of Wellhead	Depth to-Water	Elevation of Groundwater	Floating Product	Product Removed
<b>MW-2 (cont.)</b>					
11/27/90		10.40 (10.34)	2.64	0.07	N/A
01/17/91		10.03 (9.99)	2.95	0.05	N/A
03/26/91		8.98 (8.92)	4.06	0.08	N/A
05/02/91		8.73 (8.71)	4.27	0.02	N/A
06/20/91		9.11 (9.09)	3.89	0.02	N/A
08/07/91		10.00 (9.97)	3.01	0.04	N/A
09/17/91		10.11 (10.09)	2.89	0.02	N/A
11/13/91		9.88 (9.86)	3.12	0.02	N/A
12/10/91		9.02 (9.00)	3.98	0.03	N/A
01/21/92		9.08 (9.06)	3.92	0.03	N/A
03/25/92		6.00 (5.98)	7.00	0.03	N/A
06/22/92		8.46 (8.45)	4.53	0.01	(bailed ½ cup)
<b>MW-3</b>					
04/25/89	12.94	7.57 (7.51)	5.43	0.08	N/A
07/19/89		10.33 (9.80)	3.14	0.66	N/A
07/27/89			covered by soil		
09/06/89		11.22 (11.16)	1.78	0.07	N/A
09/22/89		11.38 (11.16)	1.78	0.28	N/A
11/01/89		10.90 (10.89)	2.05	0.01	N/A
11/15/89		11.18 (11.04)	1.90	0.11	N/A
12/06/89		10.29	2.65	SHEEN	NONE
02/20/90		8.73 (8.70)	4.24	0.04	N/A
04/19/90		9.20 (9.13)	3.81	0.09	N/A
07/03/90		8.50 (8.48)	4.46	0.03	N/A
07/26/90		8.58 (8.55)	4.39	0.04	N/A
08/20/90		9.21 (9.20)	3.74	0.01	N/A
09/19/90		10.02 (9.74)	3.24	0.35	N/A
11/27/90		10.72 (10.38)	2.60	0.42	N/A
01/17/91		10.05 (9.97)	2.97	0.10	N/A
03/26/91		7.65 (7.57)	5.37	0.10	N/A
05/02/91		8.54 (8.52)	4.42	0.03	N/A
06/20/91		8.89 (8.87)	4.07	0.03	N/A
08/07/91		9.99 (9.97)	2.97	0.03	N/A
09/17/91		10.32 (10.14)	2.80	0.22	N/A
11/13/91		10.14 (9.95)	2.99	0.24	N/A
12/10/91		10.10 (10.01)	2.93	0.11	N/A
01/21/92		9.07 (9.02)	3.92	0.06	N/A
03/25/92		5.96 (5.93)	7.01	0.04	N/A
06/22/92		8.07 (8.05)	4.89	0.02	(bailed ½ cup)

See notes on page 9 of 9



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Exxon 7-3006, Oakland, California

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TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Exxon Station No. 7-3006  
720 High Street  
Oakland, California  
(Page 3 of 9)

Well Date	Elevation of Wellhead	Depth to-Water	Elevation of Groundwater	Floating Product	Product Removed
<b>MW-4</b>					
04/25/89	12.77	7.26 (7.13)	5.64	0.16	N/A
07/19/89		10.32 (9.74)	3.03	0.72	N/A
07/27/89			covered by soil		
09/06/89		11.40 (11.34)	1.43	0.07	N/A
09/22/89		11.64 (11.49)	1.28	0.19	N/A
11/01/89		11.00	1.77	SHEEN	NONE
11/15/89		11.18 (11.10)	1.67	0.10	N/A
12/06/89		10.25	2.52	SHEEN	NONE
02/20/90		8.40	4.37	NONE	NONE
04/19/90		9.04 (9.02)	3.75	0.03	N/A
07/03/90		8.00	4.77	SHEEN	NONE
07/26/90		8.57 (8.54)	4.23	0.04	N/A
08/20/90		9.08 (9.07)	3.70	0.01	N/A
09/19/90		9.76 (9.74)	3.03	0.03	N/A
11/27/90		10.83 (10.76)	2.01	0.09	N/A
01/17/91		9.96 (9.80)	2.97	0.20	N/A
03/26/91		6.20 (6.13)	6.64	0.09	N/A
05/02/91		7.50 (7.47)	5.30	0.04	N/A
06/20/91		7.79 (7.76)	5.01	0.04	N/A
08/07/91		9.81 (9.77)	3.00	0.05	N/A
09/17/91		10.02 (9.94)	2.83	0.10	N/A
11/13/91		9.90 (9.80)	2.97	0.12	N/A
12/10/91		9.92 (9.84)	2.93	0.10	N/A
01/21/92		9.50 (9.44)	3.33	0.08	N/A
03/25/92		5.01 (4.99)	7.78	0.03	N/A
06/22/92		7.34 (7.32)	5.45	0.02	(bailed 1/2 cup)
<b>MW-5</b>					
04/25/89		8.06	0.32	NONE	NONE
07/18/89			well destroyed		
<b>MW-6</b>					
04/25/89	14.27	8.02	6.25	NONE	NONE
09/06/89		13.64 (13.58)	0.69	0.08	N/A
09/22/89		13.79 (13.73)	0.54	0.07	N/A
11/01/89		12.78	1.49	SHEEN	NONE
11/15/89		12.91	1.36	SHEEN	NONE
12/06/89		11.84	2.43	NONE	NONE
02/20/90		9.08	5.19	NONE	NONE
04/19/90		9.72	4.55	NONE	NONE
07/03/90		8.00	6.27	NONE	NONE

See notes on page 9 of 9

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Exxon 7-3006, Oakland, California

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TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Exxon Station No. 7-3006  
720 High Street  
Oakland, California  
(Page 4 of 9)

Well Date	Elevation of Wellhead	Depth to-Water	Elevation of Groundwater	Floating Product	Product Removed
<u>MW-6 (cont.)</u>					
07/26/90		8.70	5.57	NONE	NONE
08/20/90		9.62	4.65	NONE	NONE
09/19/90		10.25	4.02	SHEEN	NONE
11/27/90		10.82	3.45	SHEEN	NONE
01/17/91		9.93	4.34	NONE	NONE
03/26/91		8.45	5.82	NONE	NONE
05/02/91		8.90	5.37	NONE	NONE
06/20/91		9.47	4.80	SHEEN	NONE
08/07/91		10.10	4.17	SHEEN	NONE
09/17/91		10.21	4.06	SHEEN	NONE
11/13/91		9.62	4.65	SHEEN	NONE
12/10/91		9.59	4.68	SHEEN	NONE
01/21/92		9.25	5.02	SHEEN	NONE
03/25/92		6.88	7.39	NONE	NONE
06/22/92		7.38	6.89	NONE	NONE
<u>MW-7</u>					
04/25/89	14.84	8.66	6.18	NONE	NONE
09/06/89		11.72	3.12	SHEEN	NONE
09/22/89		11.89	2.95	NONE	NONE
12/06/89		10.46	4.38	NONE	NONE
02/20/90		8.44	6.40	NONE	NONE
04/19/90		9.54	5.30	NONE	NONE
07/03/90		7.45	7.39	NONE	NONE
07/26/90		8.08	6.76	NONE	NONE
08/20/90		8.82	6.02	NONE	NONE
09/19/90		9.01	5.83	NONE	NONE
11/27/90		9.54	5.30	NONE	NONE
01/17/91		8.50	6.34	NONE	NONE
03/26/91		5.92	8.92	NONE	NONE
05/02/91		7.72	7.12	NONE	NONE
06/20/91		8.19	6.65	NONE	NONE

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Quarterly Groundwater Monitoring  
Exxon 7-3006, Oakland, California

October 21, 1992  
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TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Exxon Station No. 7-3006  
720 High Street  
Oakland, California  
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Well Date	Elevation of Wellhead	Depth to-Water	Elevation of Groundwater	Floating Product	Product Removed
<u>MW-7 (cont.)</u>					
08/07/91		8.70	6.14	NONE	NONE
09/17/91		8.77	6.07	NONE	NONE
11/13/91		8.51	6.33	NONE	NONE
12/10/91		8.58	6.26	NONE	NONE
01/21/92		8.32	8.52	NONE	NONE
03/25/92		9.27	5.57	NONE	NONE
06/22/92		6.97	7.87	NONE	NONE
<u>MW-8</u>					
04/25/89	13.45	8.31 (7.78)	5.67	0.66	N/A
07/19/89		10.97 (9.97)	3.58	1.25	N/A
07/27/89		10.34 (10.28)	3.17	0.08	N/A
09/06/89		11.09 (10.95)	2.50	0.17	N/A
09/22/89		11.58 (11.29)	2.16	0.36	N/A
11/01/89		11.03	2.42	NONE	NONE
11/15/89		11.25 (11.24)	2.21	0.01	N/A
12/06/89		10.30	3.15	SHEEN	NONE
02/20/90		8.00 (7.99)	5.46	0.01	N/A
04/19/90		8.50	4.95	NONE	NONE
07/03/90		7.55	5.90	NONE	NONE
07/26/90		7.86	5.59	NONE	NONE
08/20/90		8.92	4.53	NONE	NONE
09/19/90		9.55	3.90	NONE	NONE
11/27/90		10.29 (10.28)	3.17	0.01	N/A
01/17/91		9.97	3.48	SHEEN	NONE
03/26/91		8.45	5.00	SHEEN	NONE
05/02/91		8.85	9.60	SHEEN	NONE
06/20/91		9.45	4.00	SHEEN	NONE
08/07/91		10.00	3.45	SHEEN	NONE
09/17/91		10.11	3.34	SHEEN	NONE
11/13/91		9.63	3.82	SHEEN	NONE
12/10/91		9.66	3.79	SHEEN	NONE
01/21/92		9.35	4.10	SHEEN	NONE
03/25/92		8.02	5.43	SHEEN	NONE
06/22/92		7.01	6.44	SHEEN	NONE

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Quarterly Groundwater Monitoring  
Exxon 7-3006, Oakland, California

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TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Exxon Station No. 7-3006  
720 High Street  
Oakland, California  
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Well Date	Elevation of Wellhead	Depth to-Water	Elevation of Groundwater	Floating Product	Product Removed
<u>MW-9</u>					
04/25/89	14.64	8.25	6.39	NONE	NONE
09/06/89			covered by soil		
09/22/89			covered by soil		
12/06/89		10.12	4.52	NONE	NONE
02/20/90		9.38	5.26	NONE	NONE
04/19/90		9.40	5.24	NONE	NONE
07/03/90		8.79	5.85	NONE	NONE
07/26/90		8.70	5.94	NONE	NONE
08/20/90		9.09	5.55	NONE	NONE
09/19/90		9.52	5.12	NONE	NONE
11/27/90		9.89	4.75	NONE	NONE
01/17/91			covered by soil		
03/26/91			covered by soil		
05/02/91		9.10	5.54	NONE	NONE
06/20/91		8.76	5.88	NONE	NONE
08/07/91		9.37	5.27	NONE	NONE
09/17/91		9.57	5.07	NONE	NONE
11/13/91		9.46	5.18	NONE	NONE
12/10/91		9.30	5.34	NONE	NONE
01/21/92		9.68	4.96	NONE	NONE
03/25/92		8.93	5.71	NONE	NONE
06/22/92		7.45	7.19	NONE	NONE
<u>MW-10</u>					
12/06/89	14.05	10.46	3.59	NONE	NONE
02/20/90		8.12	5.93	NONE	NONE
04/19/90		8.54	5.51	NONE	NONE
07/03/90		7.88	6.17	NONE	NONE
07/26/90		8.19	5.86	NONE	NONE
08/20/90		10.33	3.72	NONE	NONE
09/19/90		9.49	4.56	NONE	NONE
11/27/90		9.89	4.16	NONE	NONE
01/17/91		9.19	4.86	NONE	NONE
03/26/91		7.48	6.57	NONE	NONE
05/02/91		8.16	5.84	NONE	NONE
06/20/91		8.75	5.30	NONE	NONE
08/07/91		9.53	4.52	NONE	NONE
09/17/91		9.72	4.33	NONE	NONE
11/13/91		10.02	4.03	NONE	NONE
12/10/91		9.12	4.93	NONE	NONE
01/21/92		8.31	5.74	NONE	NONE
03/25/92		5.70	8.35	NONE	NONE

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Exxon 7-3006, Oakland, California

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TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Exxon Station No. 7-3006  
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Oakland, California  
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Well Date	Elevation of Wellhead	Depth to-Water	Elevation of Groundwater	Floating Product	Product Removed
<b>MW-10 (cont.)</b>					
06/22/92		7.50	6.55	NONE	NONE
<b>MW-11</b>					
12/06/89	13.55	10.62	2.93	NONE	NONE
02/20/90		9.20	4.35	NONE	NONE
04/19/90		9.80	3.75	NONE	NONE
07/03/90		8.90	4.65	NONE	NONE
07/26/90		9.36	4.19	NONE	NONE
08/20/90		9.90	3.65	NONE	NONE
09/19/90		10.39	3.16	NONE	NONE
11/27/90		10.97	2.58	NONE	NONE
01/17/91		10.76	2.79	NONE	NONE
03/26/91		8.80	4.75	NONE	NONE
05/02/91		9.38	4.17	NONE	NONE
06/20/91		10.16	3.39	NONE	NONE
08/07/91		10.69	2.86	NONE	NONE
09/17/91		10.80	2.75	NONE	NONE
11/13/91		10.44	3.11	NONE	NONE
12/10/91		10.48	3.07	NONE	NONE
01/21/92		10.10	3.45	NONE	NONE
03/25/92		7.30	6.25	NONE	NONE
06/22/92		9.02	4.53	NONE	NONE
<b>MW-12</b>					
12/06/89	12.61	8.00	4.61	NONE	NONE
02/20/90		6.33	6.28	NONE	NONE
04/19/90		7.18	5.43	NONE	NONE
07/03/90		7.41	5.20	NONE	NONE
07/26/90		6.54	6.07	NONE	NONE
08/20/90		7.23	5.28	NONE	NONE
09/19/90		7.77	4.84	NONE	NONE
11/27/90		8.15	4.46	NONE	NONE
01/17/91		8.06	4.55	NONE	NONE
03/26/91		7.21	5.40	NONE	NONE
05/02/91		7.60	5.01	SHEEN	NONE
06/20/91		8.02	4.59	SHEEN	NONE
08/07/91		8.25	4.36	SHEEN	NONE
09/17/91		8.20	4.41	SHEEN	NONE
11/13/91		7.77	4.84	SHEEN	NONE
12/10/91		7.75	4.86	SHEEN	NONE
01/21/92		7.08	5.53	SHEEN	NONE
03/25/92		4.93	7.68	SHEEN	NONE

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Exxon 7-3006, Oakland, California

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TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Exxon Station No. 7-3006  
720 High Street  
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Well Date	Elevation of Wellhead	Depth to-Water	Elevation of Groundwater	Floating Product	Product Removed
<u>MW-12 (cont.)</u>					
06/22/92		6.04	6.57	SHEEN	NONE
<u>MW-13</u>					
12/06/89	14.20	9.35	4.86	NONE	NONE
02/20/90		7.73	6.47	NONE	NONE
04/19/90		8.68	5.52	NONE	NONE
07/03/90		8.00	6.20	NONE	NONE
07/26/90		7.95	6.25	NONE	NONE
08/20/90		8.66	5.54	NONE	NONE
09/19/90		9.13	5.07	NONE	NONE
11/27/90		9.49	4.71	NONE	NONE
01/17/91		9.61	4.59	NONE	NONE
03/26/91		9.25	4.95	NONE	NONE
05/02/91		9.31	4.89	NONE	NONE
06/20/91		9.73	4.47	NONE	NONE
08/07/91		well not accessible			
09/17/91		9.72	4.48	NONE	NONE
11/13/91		9.06	5.14	NONE	NONE
12/10/91		9.04	5.16	NONE	NONE
01/21/91		8.41	5.79	NONE	NONE
03/25/92		5.72	8.48	SHEEN	NONE
06/22/92			7.31	6.89	SHEENNONE
<u>MW-14</u>					
11/27/90	15.18	9.88	5.30	NONE	NONE
01/17/91		9.13	6.05	NONE	NONE
03/26/91		8.51	6.67	NONE	NONE
05/02/91		8.45	6.73	NONE	NONE
06/20/91		8.38	6.80	NONE	NONE
08/07/91		9.04	6.14	NONE	NONE
09/17/91		9.14	6.04	NONE	NONE
11/13/91		8.83	6.35	NONE	NONE
12/10/91		8.90	6.28	NONE	NONE
01/21/92		8.58	6.60	NONE	NONE
03/25/92		6.15	9.03	NONE	NONE
06/22/92		7.70	7.48	NONE	NONE
<u>MW-15</u>					
11/27/90	13.73	8.67	5.06	NONE	NONE
01/17/91		8.03	5.70	NONE	NONE
03/26/91			covered by soil		

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Quarterly Groundwater Monitoring  
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TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Exxon Station No. 7-3006  
720 High Street  
Oakland, California  
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<u>Well</u> Date	Elevation of Wellhead	Depth to-Water	Elevation of Groundwater	Floating Product	Product Removed
<b>MW-15 (cont.)</b>					
05/02/91		7.09	6.64	NONE	NONE
06/20/91		7.06	6.67	NONE	NONE
08/07/91		7.59	6.14	NONE	NONE
09/17/91		7.89	5.84	NONE	NONE
11/13/91		9.07	4.66	NONE	NONE
12/10/91		8.60	5.13	NONE	NONE
01/21/92		9.15	4.58	NONE	NONE
03/25/92		8.10	5.63	NONE	NONE
06/22/92		5.80	7.93	NONE	NONE

N/A : Not applicable.

Casing elevations were surveyed by a certified surveyor, Ron Archer, to mean sea level.

\* : Data not used in Groundwater Elevation Map.

(5.87) : Adjusted DTW for Floating Product

Quarterly Groundwater Monitoring  
Exxon 7-3006, Oakland, California

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TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Exxon Station No. 7-3006  
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Well Date	Elevation of Wellhead	Depth to-Water	Elevation of Groundwater	Floating Product	Product Removed
<b>MW-1</b>					
04/25/89	12.87	7.55	5.32	NONE	NONE
04/27/89		10.16	2.71	SHEEN	NONE
09/06/89		10.88	1.99	SHEEN	NONE
09/22/89		11.06	1.81	NONE	NONE
11/01/89		10.82	2.05	NONE	NONE
11/15/89		11.07	1.80	NONE	NONE
12/06/89		10.33	2.54	NONE	NONE
02/20/90		8.81	4.06	NONE	NONE
04/19/90		9.33	3.54	NONE	NONE
07/03/90		8.44	4.43	NONE	NONE
07/26/90		8.99	3.88	NONE	NONE
08/20/90		9.50	3.37	NONE	NONE
09/19/90		9.99	2.88	NONE	NONE
11/27/90		10.62	2.25	NONE	NONE
01/17/91		10.31	2.56	NONE	NONE
03/26/91		7.97	4.90	NONE	NONE
05/02/91		8.88	3.99	NONE	NONE
06/20/91		9.62	3.25	NONE	NONE
08/07/91		10.20	2.67	NONE	NONE
09/17/91		10.40	2.47	NONE	NONE
11/13/91		10.20	2.67	NONE	NONE
12/10/91		10.23	2.64	NONE	NONE
01/21/92		9.32	3.55	NONE	NONE
03/25/92		9.30	3.52	NONE	NONE
06/22/92		8.46	4.41	NONE	NONE
<b>MW-2</b>					
04/25/89	12.98	9.27 (7.54)	5.44	2.16	N/A
07/19/89		10.81 (9.56)	3.42	1.56	N/A
07/27/89		10.18 (10.08)	2.90	0.13	N/A
09/06/89		10.89 (10.82)	2.16	0.09	N/A
09/22/89		11.56 (11.11)	1.87	0.56	N/A
11/01/89		10.85 (10.78)	2.20	0.09	N/A
11/15/89		11.05 (10.96)	2.02	0.07	N/A
12/06/89		10.23 (10.13)	2.85	0.13	N/A
02/20/90		8.86 (8.66)	4.32	0.29	N/A
04/19/90		9.09 (9.09)	3.97	0.10	N/A
07/03/90		8.75 (8.71)	4.27	0.05	N/A
07/26/90		8.71 (8.63)	4.35	0.10	N/A
08/20/90		9.25 (9.23)	3.75	0.02	N/A
09/19/90		9.79 (9.77)	3.21	0.02	N/A

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TABLE 2  
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF GROUNDWATER SAMPLES  
Exxon Station No. 7-3006  
720 High Street  
Oakland, California  
(Page 1 of 9)

Date	Sample No.	TPHg ppm	B ppm	T ppm	E ppm	X ppm	TPHd ppm	TOG ppm	VOC ppm
<u>MW-1</u>									
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	--	--
06/92	W-8.5-MW1	0.110	0.0049	0.0079	0.0037	0.021	0.075	--	--
<u>MW-2</u>									
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								

See notes on page 9 of 9.

TABLE 2  
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF GROUNDWATER SAMPLES  
Exxon Station No. 7-3006  
720 High Street  
Oakland, California  
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Date	Sample No.	TPHg ppm	B ppm	T ppm	E ppm	X ppm	TPHd ppm	TOG ppm	VOC ppm
<u>MW-2 (cont.)</u>									
03/92	free product								
06/92	free product								
<u>MW-3</u>									
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								
06/92	free product								
<u>MW-4</u>									
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								

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TABLE 2  
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF GROUNDWATER SAMPLES  
Exxon Station No. 7-3006  
720 High Street  
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Date	Sample No.	TPHg ppm	B ppm	T ppm	E ppm	X ppm	TPHd ppm	TOG ppm	VOC ppm
<u>MW-4 (cont.)</u>									
11/90	free product								
03/91	free product								
06/91	free product								
09/91	free product								
12/91	free product								
03/92	free product								
06/92	free product								
<u>MW-5</u>									
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								
<u>MW-6</u>									
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	--	--

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TABLE 2  
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF GROUNDWATER SAMPLES  
Exxon Station No. 7-3006  
720 High Street  
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Date	Sample No.	TPHg ppm	B ppm	T ppm	E ppm	X ppm	TPHd ppm	TOG ppm	VOC ppm
<u>MW-6 (cont.)</u>									
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	—	—
06/92	W-7.5-MW6	43.000	11.000	0.150	2.100	5.000	1.7	—	—
<u>MW-7</u>									
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	—	—
06/92	W-7.0-MW7	3.100	0.260	0.0058	0.021	0.027	0.83	—	—
<u>MW-8</u>									
09/87	W-25-MW8	1.325	0.081	0.074	0.042	0.182	—	—	—
05/88	free product								

See notes on page 9 of 9.

TABLE 2  
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF GROUNDWATER SAMPLES  
Exxon Station No. 7-3006  
720 High Street  
Oakland, California  
(Page 5 of 9)

Date	Sample No.	TPHg ppm	B ppm	T ppm	E ppm	X ppm	TPHd ppm	TOG ppm	VOC ppm
<u>MW-8 (cont.)</u>									
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								
06/92	sheen								
<u>MW-9</u>									
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	--	--
06/92	W-7.5-MW9	<0.050	<0.0005	<0.0005	<0.0005	<0.0005	<0.050	--	--

See notes on page 9 of 9.

TABLE 2  
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF GROUNDWATER SAMPLES  
Exxon Station No. 7-3006  
720 High Street  
Oakland, California  
(Page 6 of 9)

Date	Sample No.	TPHg ppm	B ppm	T ppm	E ppm	X ppm	TPHd ppm	TOG ppm	VOC ppm
<u>MW-10</u>									
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	--	--
06/92	W-7.5-MW10	<0.050	<0.0005	0.0006	<0.0005	0.0008	<0.050	--	--
<u>MW-11</u>									
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	--	--
06/92	W-9.0-MW11	0.084	0.0015	0.0031	0.0014	0.0096	0.057	--	--

See notes on page 9 of 9.

TABLE 2  
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF GROUNDWATER SAMPLES  
Exxon Station No. 7-3006  
720 High Street  
Oakland, California  
(Page 7 of 9)

Date	Sample No.	TPHg ppm	B ppm	T ppm	E ppm	X ppm	TPHd ppm	TOG ppm	VOC ppm
<b>MW-12</b>									
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								
06/92	sheen								
<b>MW-13</b>									
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								
06/92	sheen								

See notes on page 9 of 9.

TABLE 2  
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF GROUNDWATER SAMPLES  
Exxon Station No. 7-3006  
720 High Street  
Oakland, California  
(Page 8 of 9)

Date	Sample No.	TPHg ppm	B ppm	T ppm	E ppm	X ppm	TPHd ppm	TOG ppm	VOC ppm
<b>MW-14</b>									
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	--	--
06/92	W-7.5-MW14	0.140	<0.0005	<0.0005	0.0006	0.0020	0.35	--	--
<b>MW-15</b>									
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	--	--
06/92	W-6.0-MW15	6.6	0.099	<0.0005	0.670	0.180	0.86	--	--
MCLs:		--	0.001	--	0.680	1.750	--	--	--
DWALs:		--	--	0.100	--	--	--	--	--

See notes on page 9 of 9.



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TABLE 2  
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF GROUNDWATER SAMPLES

Exxon Station No. 7-3006  
720 High Street  
Oakland, California  
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< : Less than the laboratory detection limit  
( ) : BTEX from EPA Method 624  
B: Benzene, T: Toluene, E: Ethylbenzene, X: Total Xylene isomers  
BTEX : Analyzed by EPA method 5030/8020  
TPHg : Total petroleum hydrocarbons as gasoline by EPA method 5030/8015  
TPHd : Total petroleum hydrocarbons as diesel by EPA method 3510/8015  
TOG : Total Oil and Grease by Standard Method 5520 B/F

MCL : Adopted Maximum Contaminant Levels in Drinking Water, CDHS (October 1990)  
DWAL : Recommended Drinking Water Action Levels, CDHS (October 1990)  
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)

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**APPENDIX A**

**GROUNDWATER SAMPLING PROTOCOL,  
WELL PURGE DATA SHEETS,  
AND STABILIZATION GRAPHS**

Quarterly Groundwater Monitoring  
Exxon 7-3006, Oakland, California

October 21, 1992  
87042.11

### GROUNDWATER SAMPLING PROTOCOL

The static water level in each well that contained groundwater was measured with a Solinst® water-level indicator; this instrument is accurate to the nearest 0.01 foot. To calculate the differences in groundwater elevations, these groundwater depths were subtracted from wellhead elevations measured initially on December 13, 1989, by Ron Archer, Civil Engineer, Inc., of Pleasanton, California, a licensed land surveyor.

Groundwater samples collected for subjective evaluation were collected by gently lowering approximately half the length of a clean Teflon® bailer past the air-water interface (if possible) and collecting a sample from near the surface of the water in the well. The samples were checked for measurable floating hydrocarbon product.

Before water samples were collected from the groundwater monitoring wells, the wells were purged until stabilization of the temperature, pH, and conductivity was obtained. Approximately three well casing volumes were purged before those characteristics stabilized. Turbidity measurements were collected from the purged well water. The quantity of water purged from the wells was 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 (well depth - depth to water)
- 7.48 = conversion constant from cubic feet to gallons

gallons of water purged/gallons in 1 well casing volume = well casing volumes removed.

After purging, each well was allowed to recharge to the approximate initial water level. Groundwater samples were then collected with an Environmental Protection Agency (EPA) approved Teflon® sampler which had been cleaned with Alconox® and deionized water. The water samples were carefully poured into 40-milliliter glass vials, which were filled so as to produce a positive meniscus. Each sample container was preserved with hydrochloric acid, sealed with a cap containing a Teflon® septum, and subsequently examined for air bubbles to avoid headspace which would allow volatilization to occur. The samples were promptly transported in iced storage in a thermally-insulated ice chest, accompanied by a Chain of Custody Record, to a California-certified laboratory.

**WELL PURGE DATA SHEET**

Project Name: Exxon 3006

Job No. 87042.11

Date: June 22, 1992

Page 1 of 1

Well No. MW-1

Time Started 10:25

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
10:25	Start purging MW-1				
10:25	0	67.1	7.26	850	clear
10:29	14.5	67.1	7.26	850	clear
10:35	30	66.5	6.99	830	clear
10:40	40.5	69.2	7.26	830	clear
15:00		69.2	7.26	820	clear
	Stop purging MW-1				
Notes:					
	Well Diameter (inches) : 4"				
	Depth to Bottom (feet) : 29.00				
	Depth to Water - initial (feet) : 8.46				
	Depth to Water - final (feet) : 8.46				
	% recovery : 100.0%				
	Time Sampled : 15:00				
	Gallons per Well Casing Volume : 13.41				
	Gallons Purged : 40.5				
	Well Casing Volume Purged : 3.02				
	Approximate Pumping Rate (gpm) : 2.53				

**WELL PURGE DATA SHEET**

Project Name: Exxon 3006

Job No. 87042.11

Date: June 22, 1992

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Well No. MW-6

Time Started 17:15

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
17:15	Start purging MW-6				
17:21	18	70.8	7.35	1120	clear
17:27	36	70.5	7.20	1150	clear
17:45	41	70.0	7.15	1090	sheen
	Stop purging MW-6				
Notes:					
	Well Diameter (inches) : 4"				
	Depth to Bottom (feet) : 34.80				
	Depth to Water - initial (feet) : 7.38				
	Depth to Water - final (feet) : 23.30				
	% recovery : 41.9%				
	Time Sampled : 19:00				
	Gallons per Well Casing Volume : 17.90				
	Gallons Purged : 41.0				
	Well Casing Volume Purged : 2.29				
	Approximate Pumping Rate (gpm) : 1.37				

**WELL PURGE DATA SHEET**

Project Name: Exxon 3006

Job No. 87042.11

Date: June 22, 1992

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Well No. MW-7

Time Started 15:10

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
15:10	Start purging MW-7				
15:16	18.2	72.1	7.64	450	clear
15:22	36.4	71.0	7.24	460	clear
16:02		69.8	7.32	460	clear
16:11	54.6	off			
18:00		69.5	7.42	440	clear
	Stop purging MW-7				
Notes:					
Well Diameter (inches) : 4"					
Depth to Bottom (feet) : 34.55					
Depth to Water - initial (feet) : 6.97					
Depth to Water - final (feet) : 6.97					
% recovery : 100.0%					
Time Sampled : 18:00					
Gallons per Well Casing Volume : 18.0					
Gallons Purged : 69.5					
Well Casing Volume Purged : 3.86					
Approximate Pumping Rate (gpm) : 0.91					

**WELL PURGE DATA SHEET**

Project Name: Exxon 3006

Job No. 87042.11

Date: June 22, 1992

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Well No. MW-9

Time Started 11:00

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
11:00	Start purging MW-9				
11:00	0				
11:05	16	70.7	7.22	710	clear
11:10	32	70.4	7.17	710	cloudy
11:26	48	70.2	7.01	710	cloudy
15:25		70.0	7.43	690	clear
	Stop purging MW-9				

**Notes:**

Well Diameter (inches) : 4"  
 Depth to Bottom (feet) : 31.65  
 Depth to Water - initial (feet) : 7.45  
 Depth to Water - final (feet) : 7.45  
 % recovery : 100.0%  
 Time Sampled : 15:35  
 Gallons per Well Casing Volume : 15.79  
 Gallons Purged : 48.0  
 Well Casing Volume Purged : 3.04  
 Approximate Pumping Rate (gpm) : 1.85

**WELL PURGE DATA SHEET**

Project Name: Exxon 3006

Job No. 87042.11

Date: June 22, 1992

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Well No. MW-10

Time Started 11:50

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
11:50	Start purging MW-10				
11:54	11.5	72.5	7.30	520	clear
11:58	23	70.5	7.23	500	clear
12:13	34.5	70.0	7.02	500	clear
12:14		70.8	7.39	500	clear
	Stop purging MW-10				
Notes:					
	Well Diameter (inches) : 4"				
	Depth to Bottom (feet) : 24.95				
	Depth to Water - initial (feet) : 7.50				
	Depth to Water - final (feet) : 7.50				
	% recovery : 100.0%				
	Time Sampled : 16:00				
	Gallons per Well Casing Volume : 11.39				
	Gallons Purged : 34.5				
	Well Casing Volume Purged : 3.02				
	Approximate Pumping Rate (gpm) : 1.44				



**WELL PURGE DATA SHEET**

Project Name: Exxon 3006

Job No. 87042.11

Date: June 22, 1992

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Well No. MW-11

Time Started 13:05

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
13:05	Start purging MW-11				
13:09	14	72.8	7.51	670	clear
13:14	28	71.5	7.34	670	clear
13:30	42	70.5	7.40	670	clear
13:31		69.5	7.51	620	clear
	Stop purging MW-11				

**Notes:**

Well Diameter (inches) : 4"  
 Depth to Bottom (feet) : 30.05  
 Depth to Water - initial (feet) : 9.02  
 Depth to Water - final (feet) : 9.02  
 % recovery : 100.0%  
 Time Sampled : 16:30  
 Gallons per Well Casing Volume : 13.73  
 Gallons Purged : 42.0  
 Well Casing Volume Purged : 3.06  
 Approximate Pumping Rate (gpm) : 1.61

**WELL PURGE DATA SHEET**

Project Name: Exxon 3006

Job No. 87042.11

Date: June 22, 1992

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Well No. MW-14

Time Started 13:55

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
13:55	Start purging MW-14				
13:58	6.5	73.8	7.43	710	clear
14:01	12.8	72.0	7.32	730	clear
14:23	19.2	71.0	7.11	720	clear
17:00		69.1	7.41	680	clear
	Stop purging MW-14				

**Notes:**

Well Diameter (inches) : 4"  
 Depth to Bottom (feet) : 17.35  
 Depth to Water - initial (feet) : 7.70  
 Depth to Water - final (feet) : 7.70  
 % recovery : 100.0%  
 Time Sampled : 17:00  
 Gallons per Well Casing Volume : 6.30  
 Gallons Purged : 19.2  
 Well Casing Volume Purged : 3.05  
 Approximate Pumping Rate (gpm) : 0.69

**WELL PURGE DATA SHEET**

Project Name: Exxon 3006

Job No. 87042.11

Date: June 22, 1992

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Well No. MW-15

Time Started 14:35

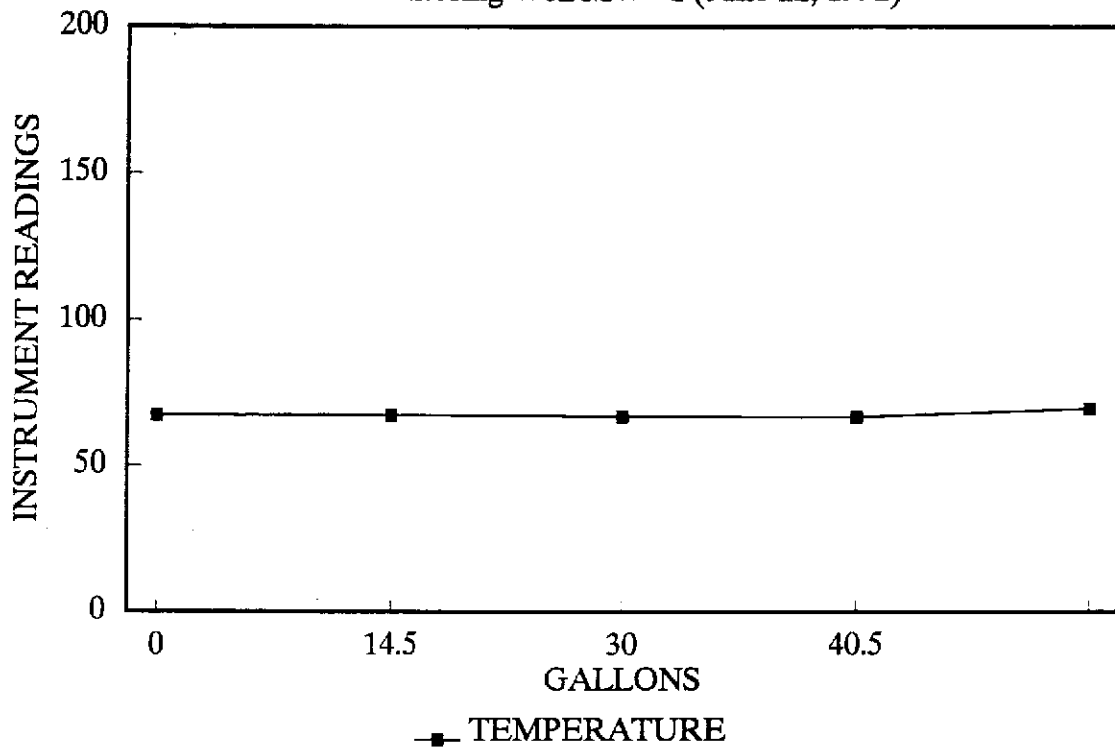
TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY (NTU)
14:35	Start purging MW-15				
14:39	7.2	70.9	7.17	1120	clear
14:43	14.4	70.5	7.07	1120	clear
14:47	21.6	70.4	7.06	1120	clear
17:30		69.5	7.10	1100	clear
	Stop purging MW-15				

**Notes:**

Well Diameter (inches) : 4"  
 Depth to Bottom (feet) : 16.70  
 Depth to Water - initial (feet) : 5.80  
 Depth to Water - final (feet) : 5.80  
 % recovery : 100.0%  
 Time Sampled : 17:30  
 Gallons per Well Casing Volume : 7.12  
 Gallons Purged : 21.6  
 Well Casing Volume Purged : 3.04  
 Approximate Pumping Rate (gpm) : 1.8

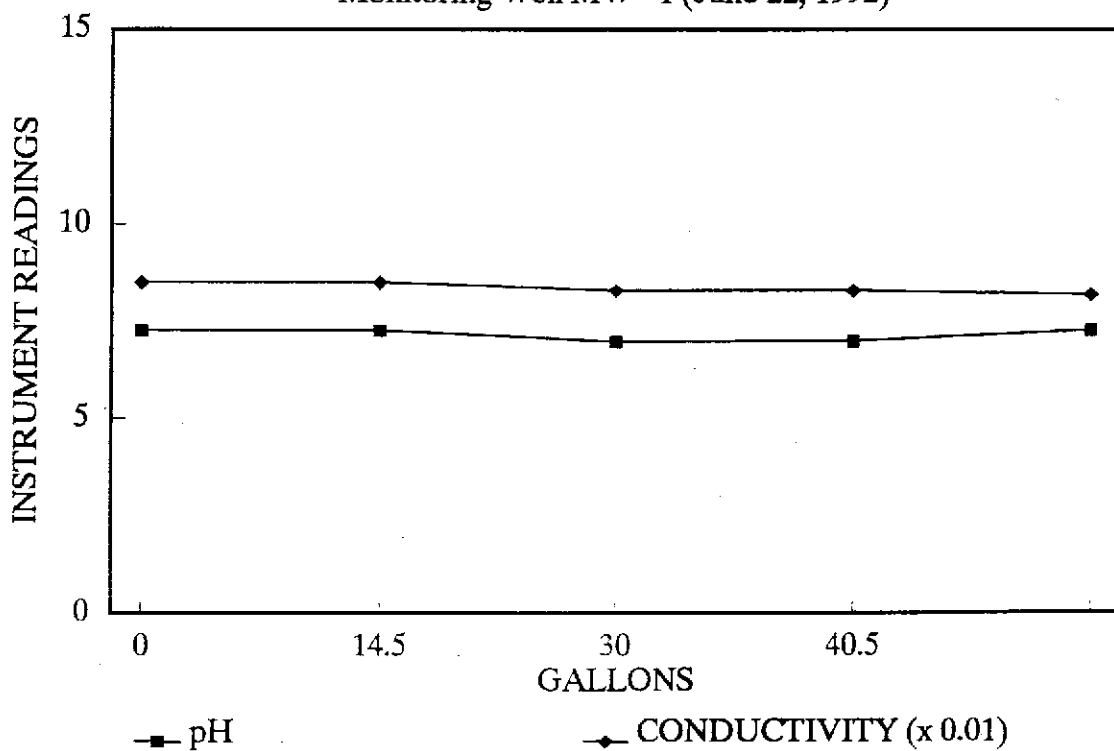
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Monitoring Well MW-1 (June 22, 1992)



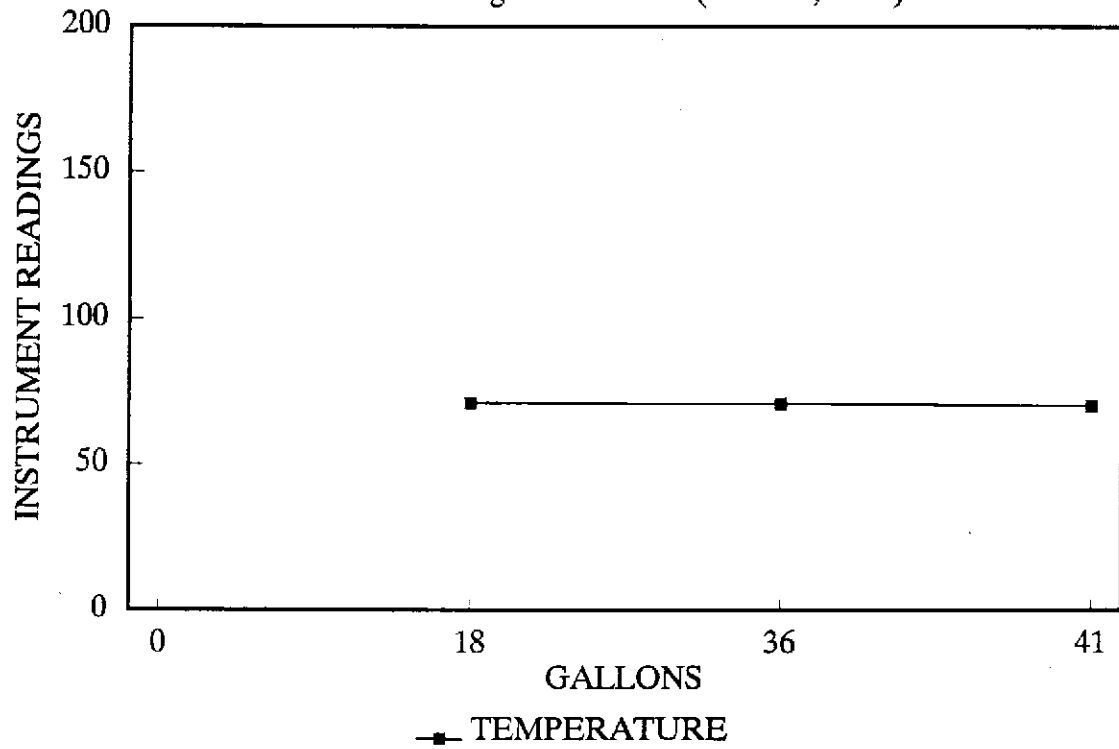
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Monitoring Well MW-1 (June 22, 1992)



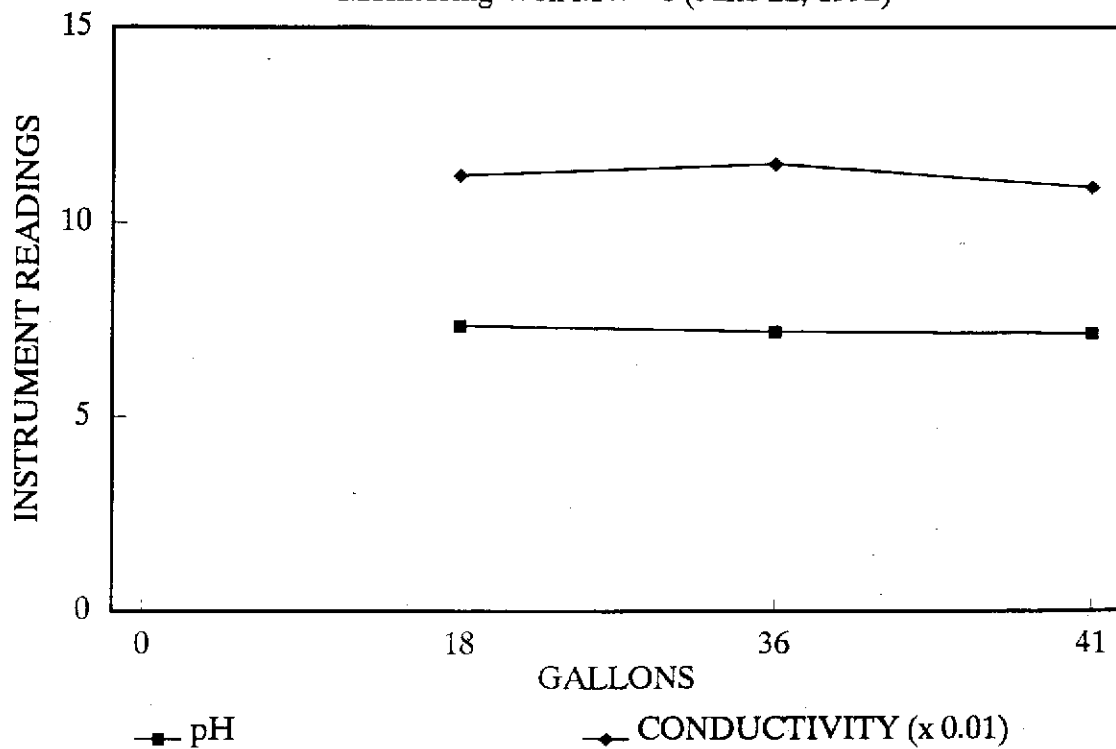
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Monitoring Well MW-6 (June 22, 1992)



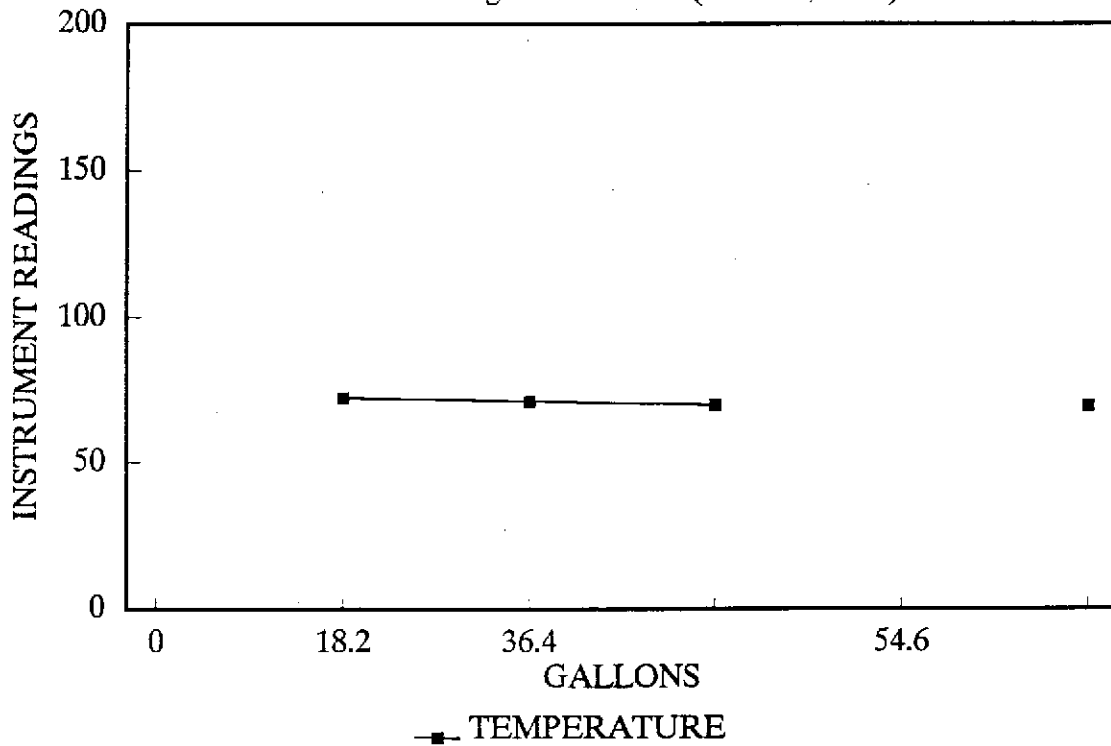
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Monitoring Well MW-6 (June 22, 1992)



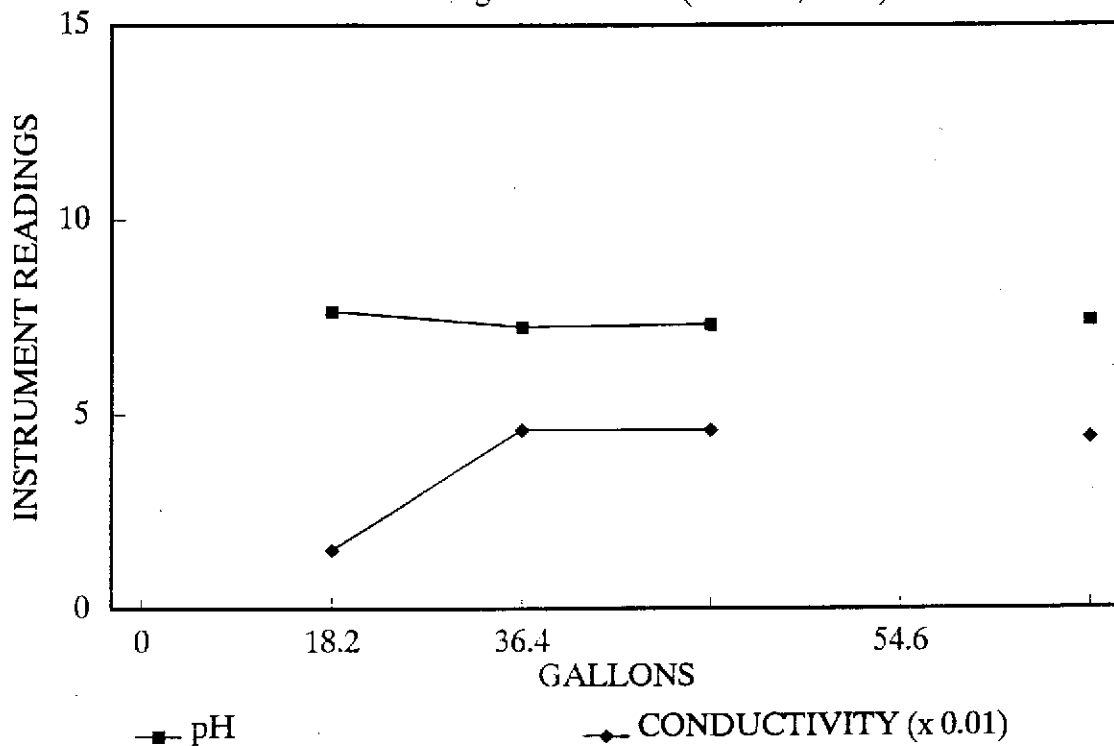
# EXXON 3006 STABILIZATION GRAPH

Monitoring Well MW-7 (June 22, 1992)



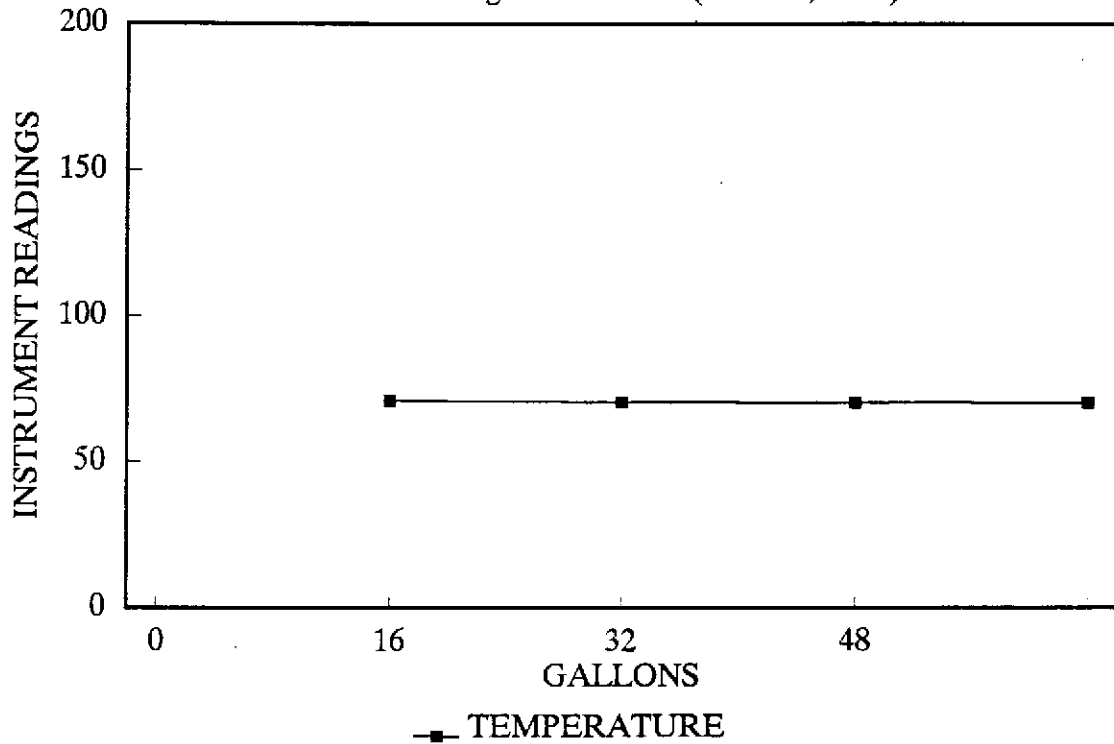
# EXXON 3006 STABILIZATION GRAPH

Monitoring Well MW-7 (June 22, 1992)



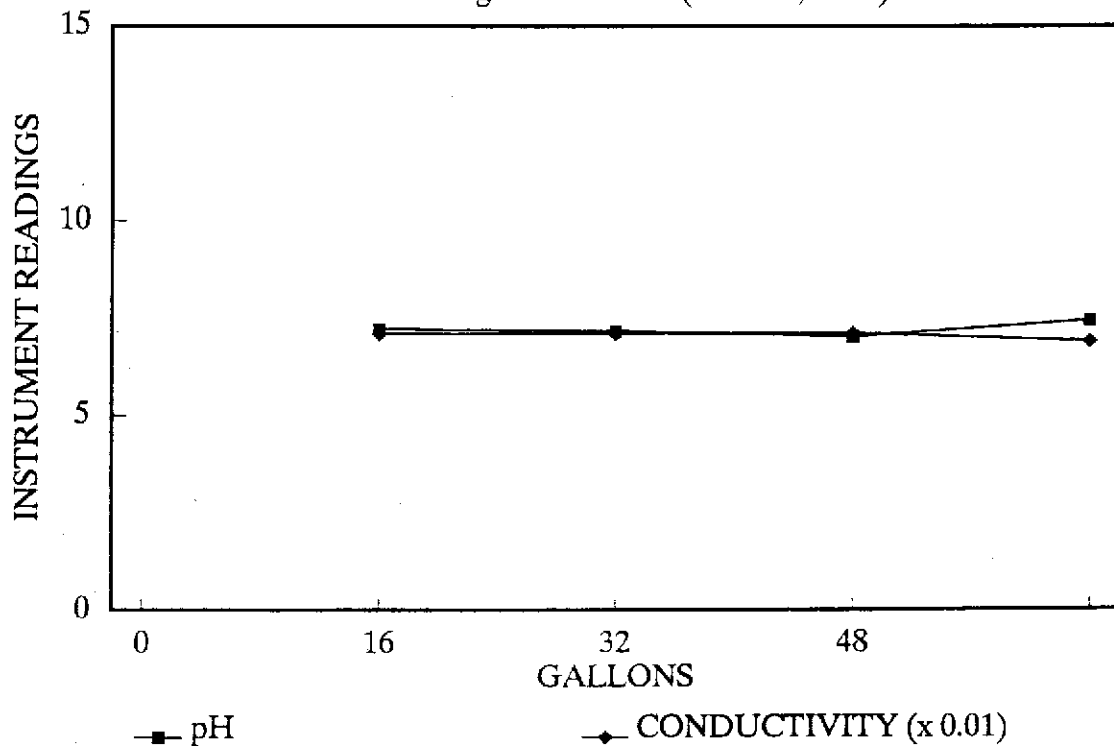
# EXXON 3006 STABILIZATION GRAPH

Monitoring Well MW-9 (June 22, 1992)



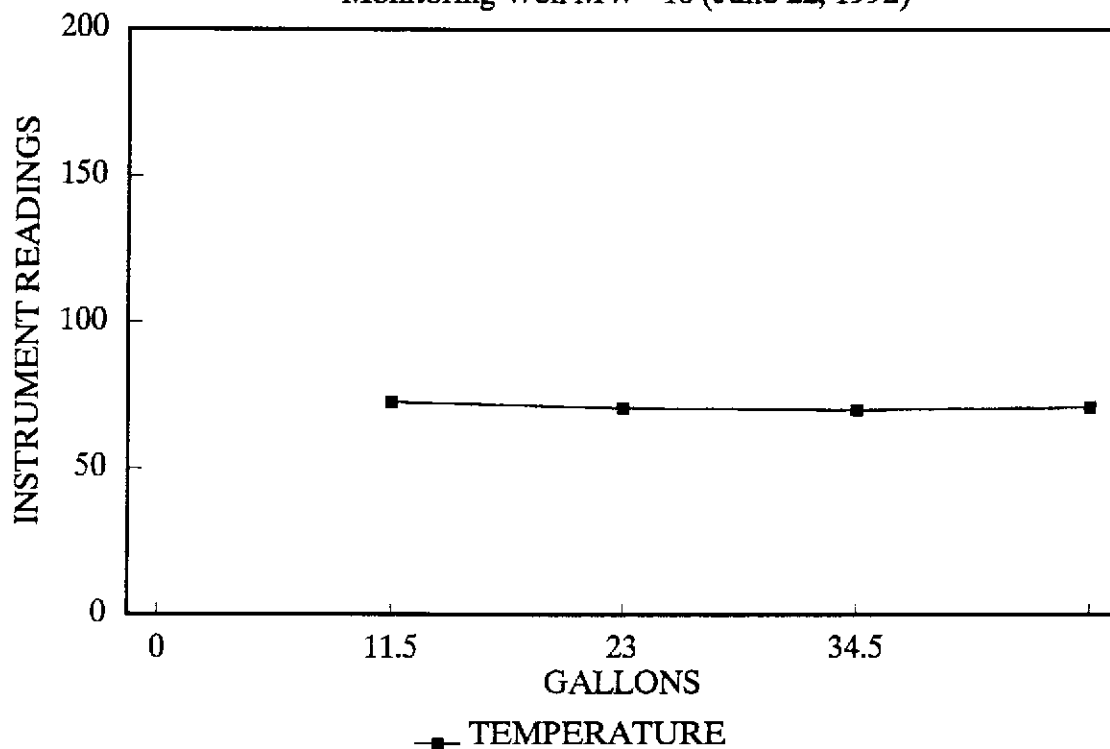
# EXXON 3006 STABILIZATION GRAPH

Monitoring Well MW-9 (June 22, 1992)



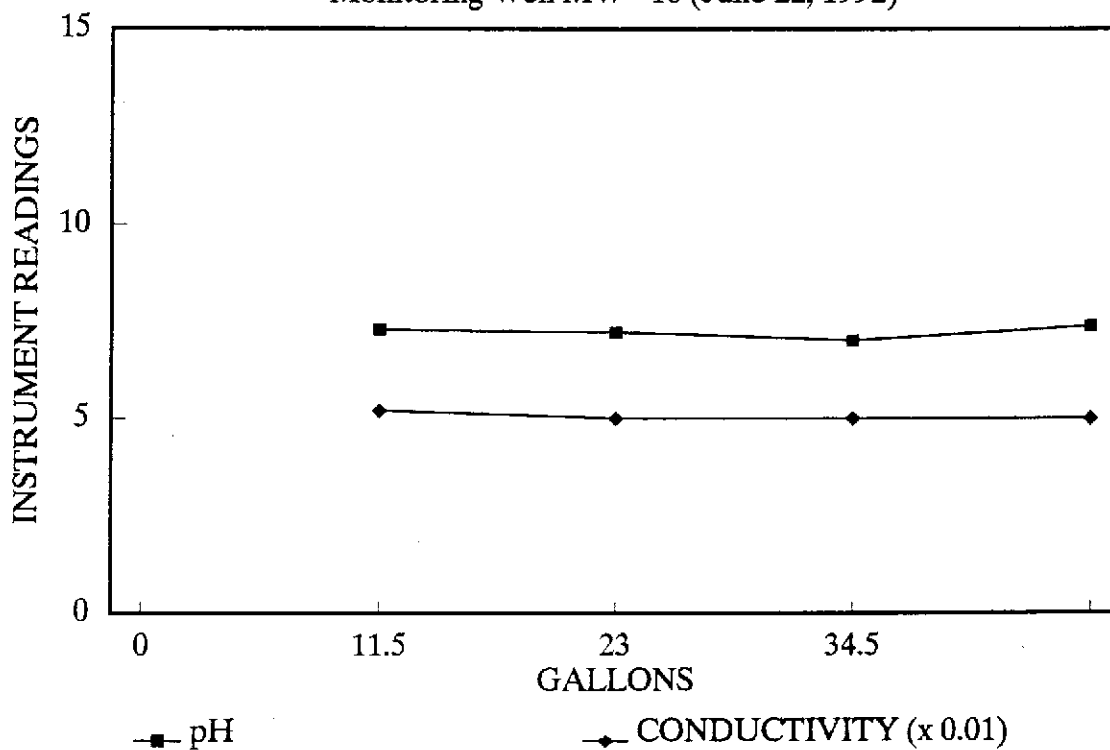
# EXXON 3006 STABILIZATION GRAPH

Monitoring Well MW-10 (June 22, 1992)



# EXXON 3006 STABILIZATION GRAPH

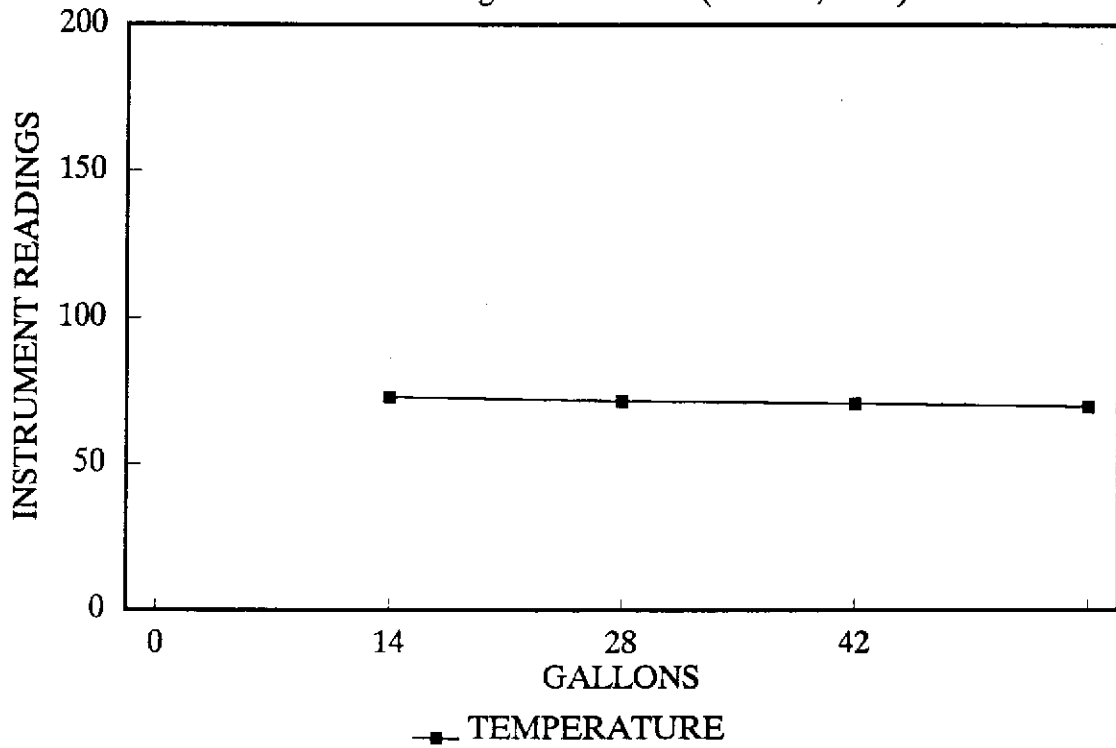
Monitoring Well MW-10 (June 22, 1992)





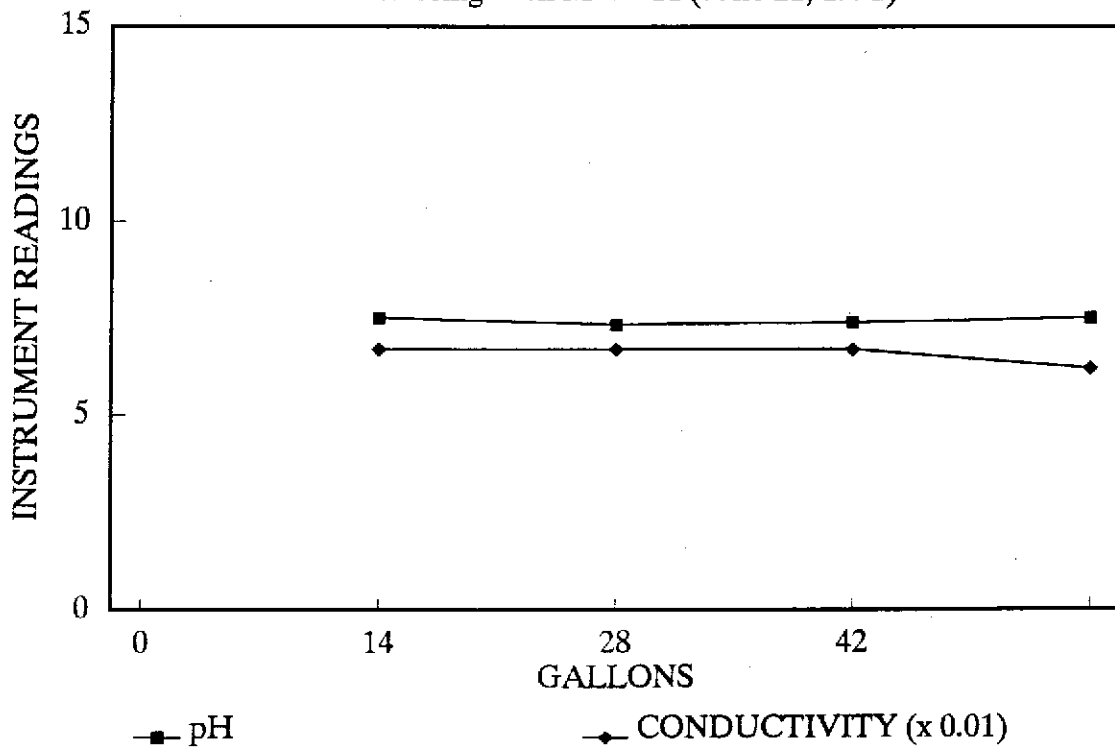
# EXXON 3006 STABILIZATION GRAPH

Monitoring Well MW-11 (June 22, 1992)



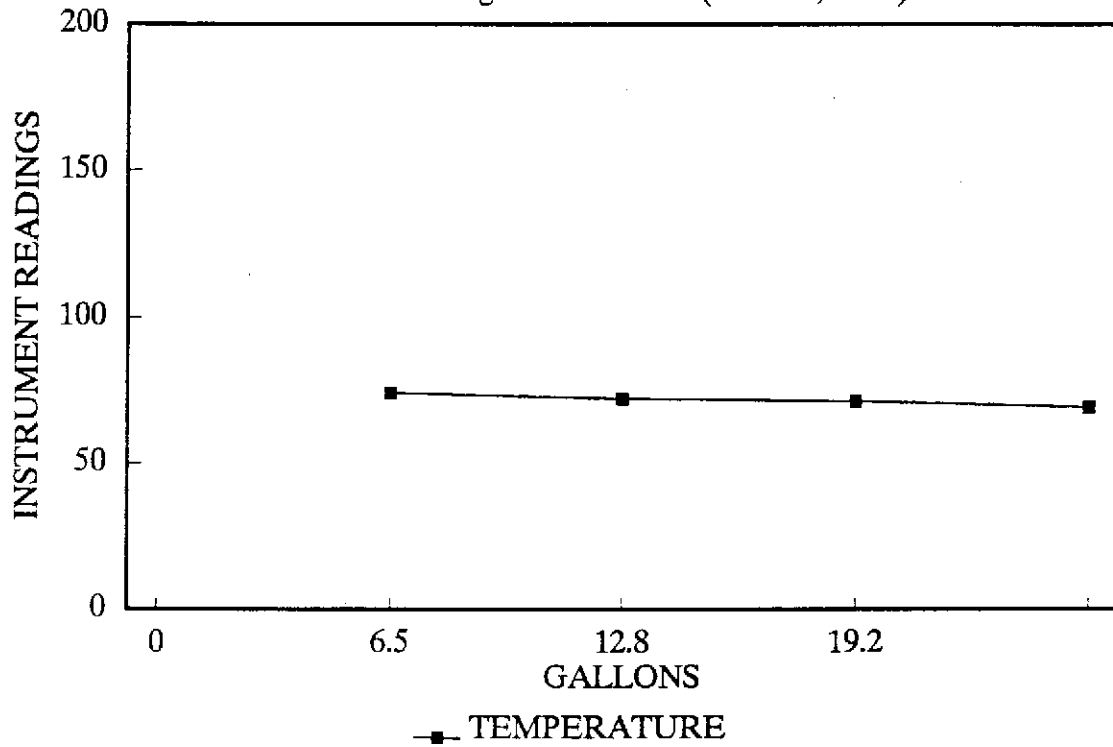
# EXXON 3006 STABILIZATION GRAPH

Monitoring Well MW-11 (June 22, 1992)



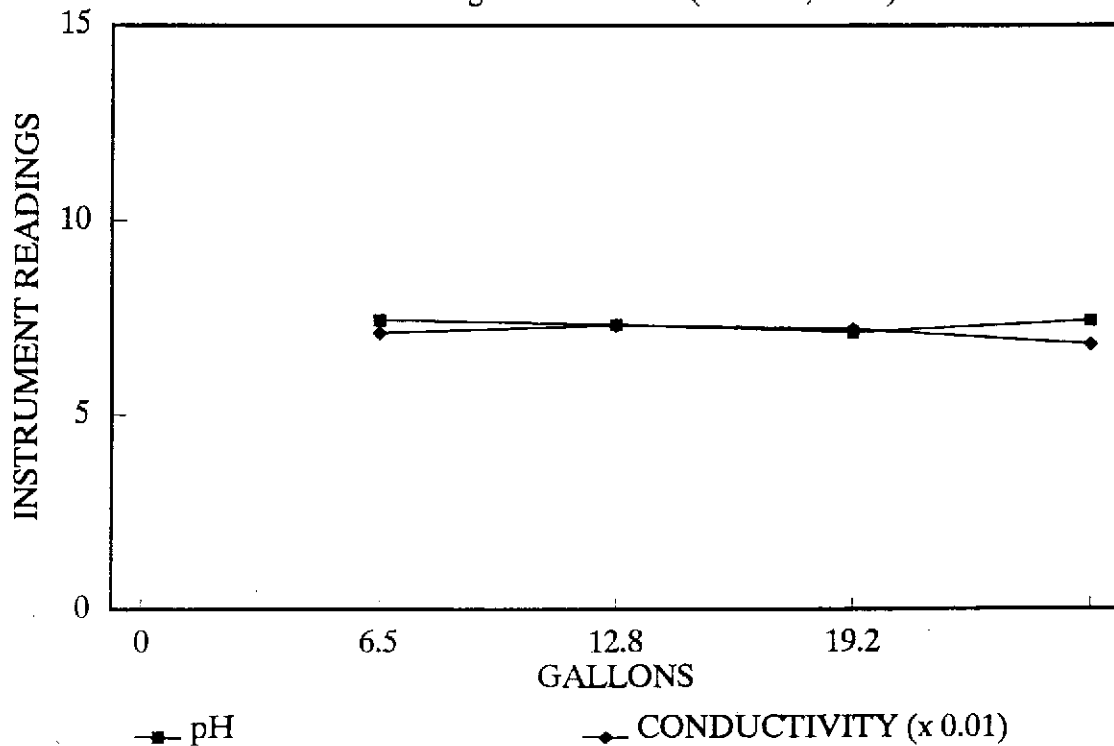
# EXXON 3006 STABILIZATION GRAPH

Monitoring Well MW-14 (June 22, 1992)



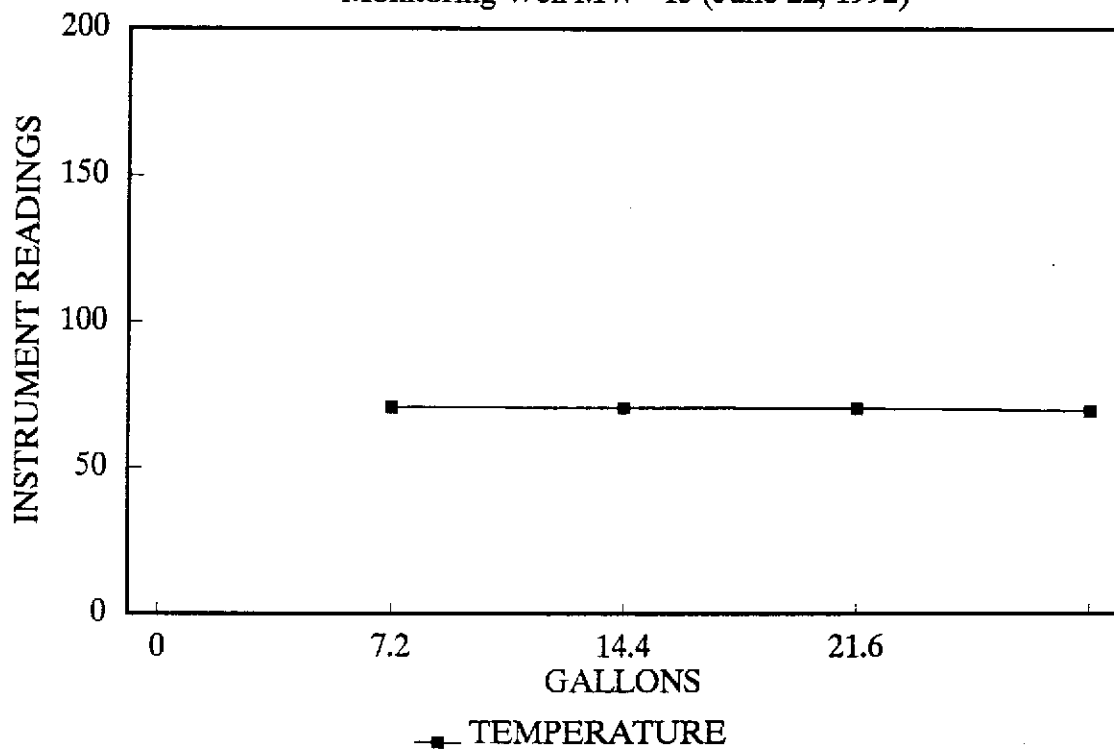
# EXXON 3006 STABILIZATION GRAPH

Monitoring Well MW-14 (June 22, 1992)



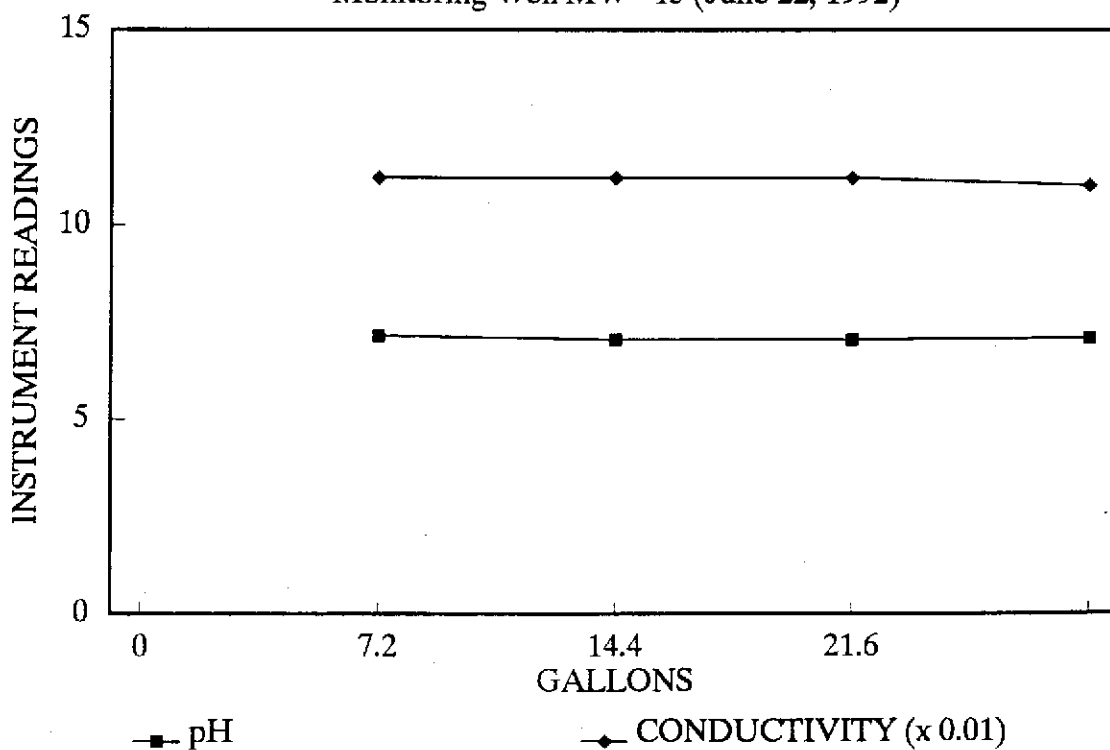
# EXXON 3006 STABILIZATION GRAPH

Monitoring Well MW-15 (June 22, 1992)



# EXXON 3006 STABILIZATION GRAPH

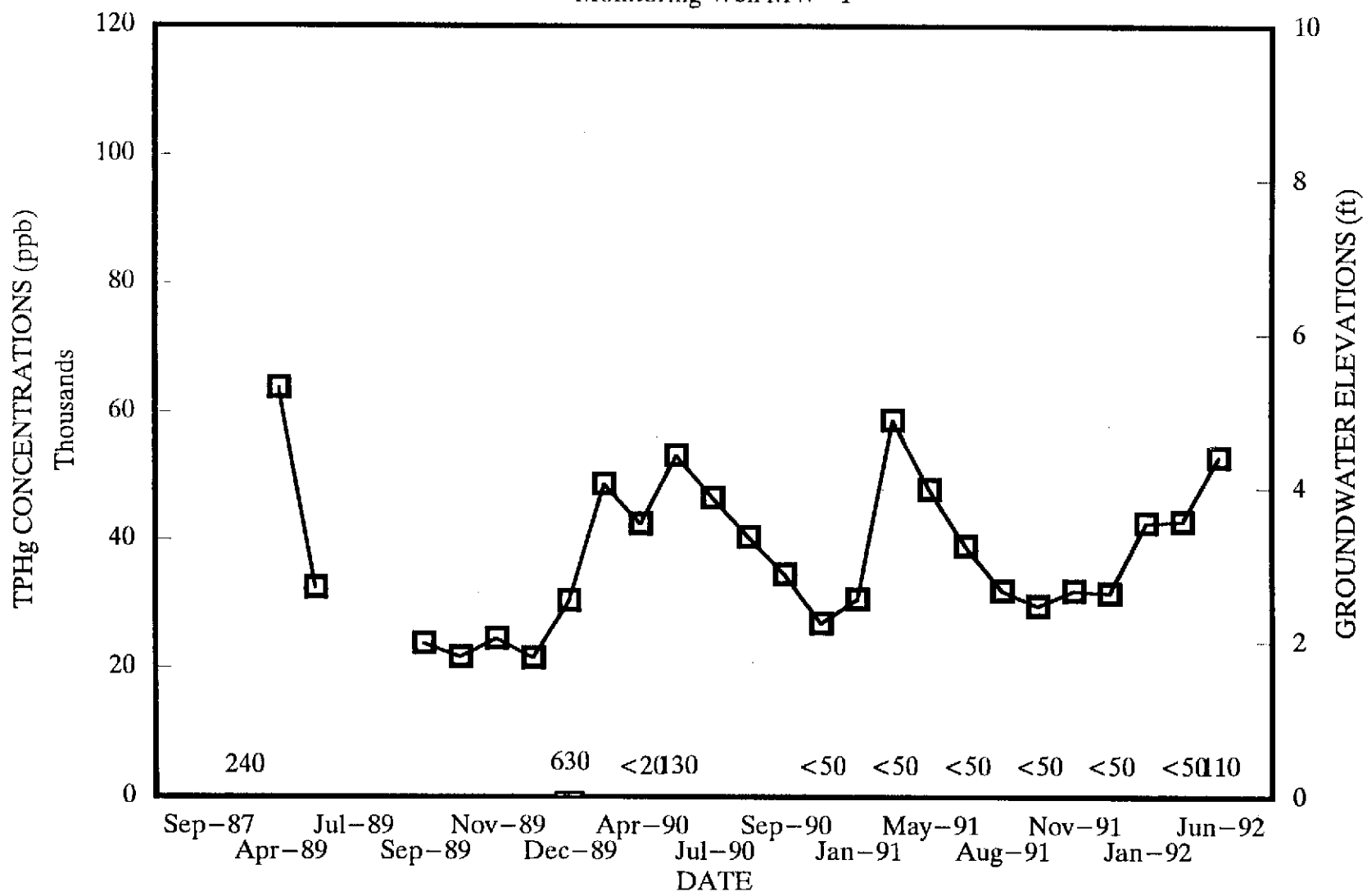
Monitoring Well MW-15 (June 22, 1992)



**APPENDIX B**

**HYDROGRAPH AND TPH<sub>g</sub> GRAPHS**

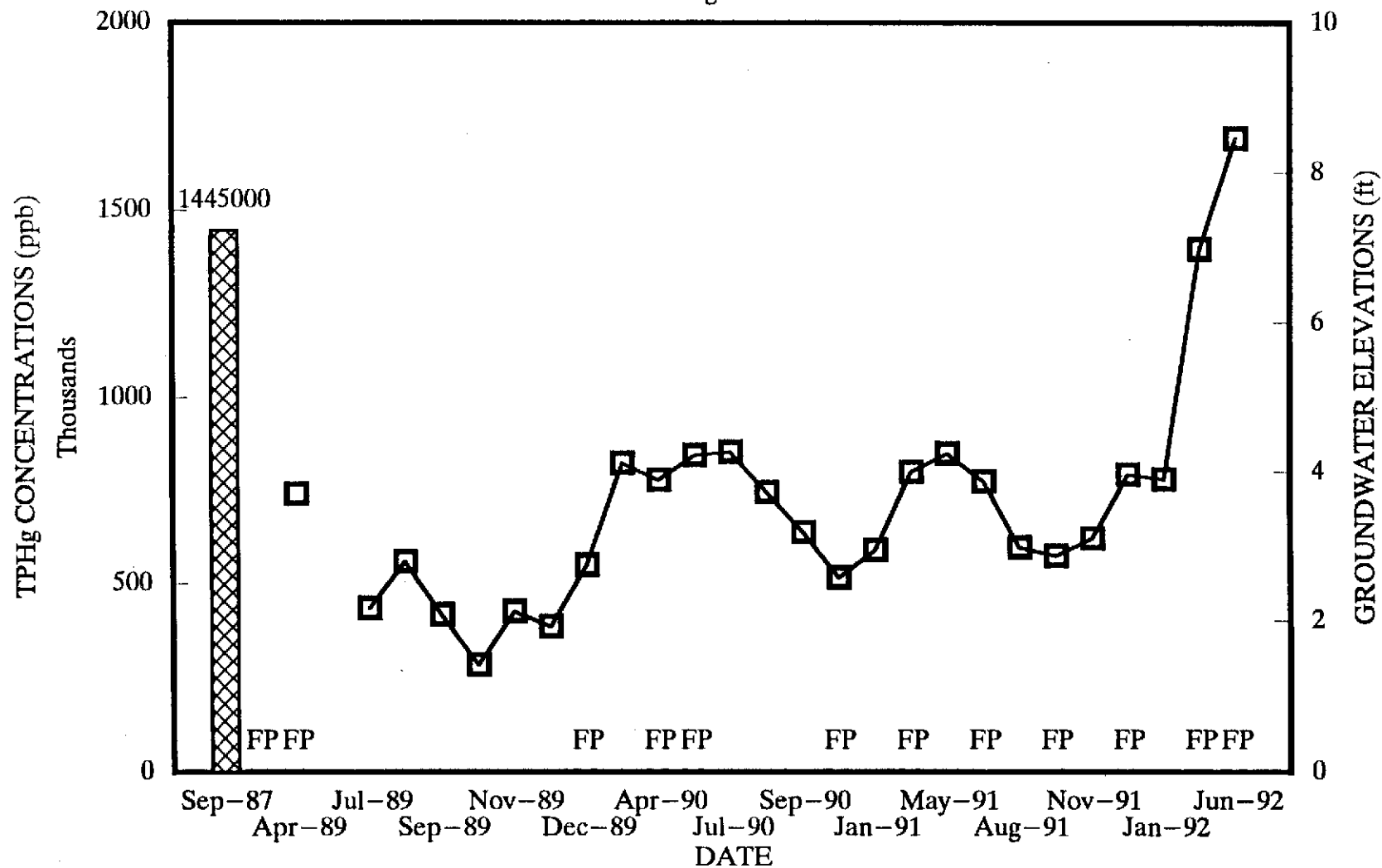
EXXON 7-3006 HYDROGRAPH AND TPHg CONCENTRATION GRAPH 1987-92  
Monitoring Well MW-1



☒ TPHg CONCENTRATIONS

☒ GROUNDWATER ELEVATIONS

EXXON 7-3006 HYDROGRAPH AND TPHg CONCENTRATION GRAPH 1987-92  
Monitoring Well MW-2

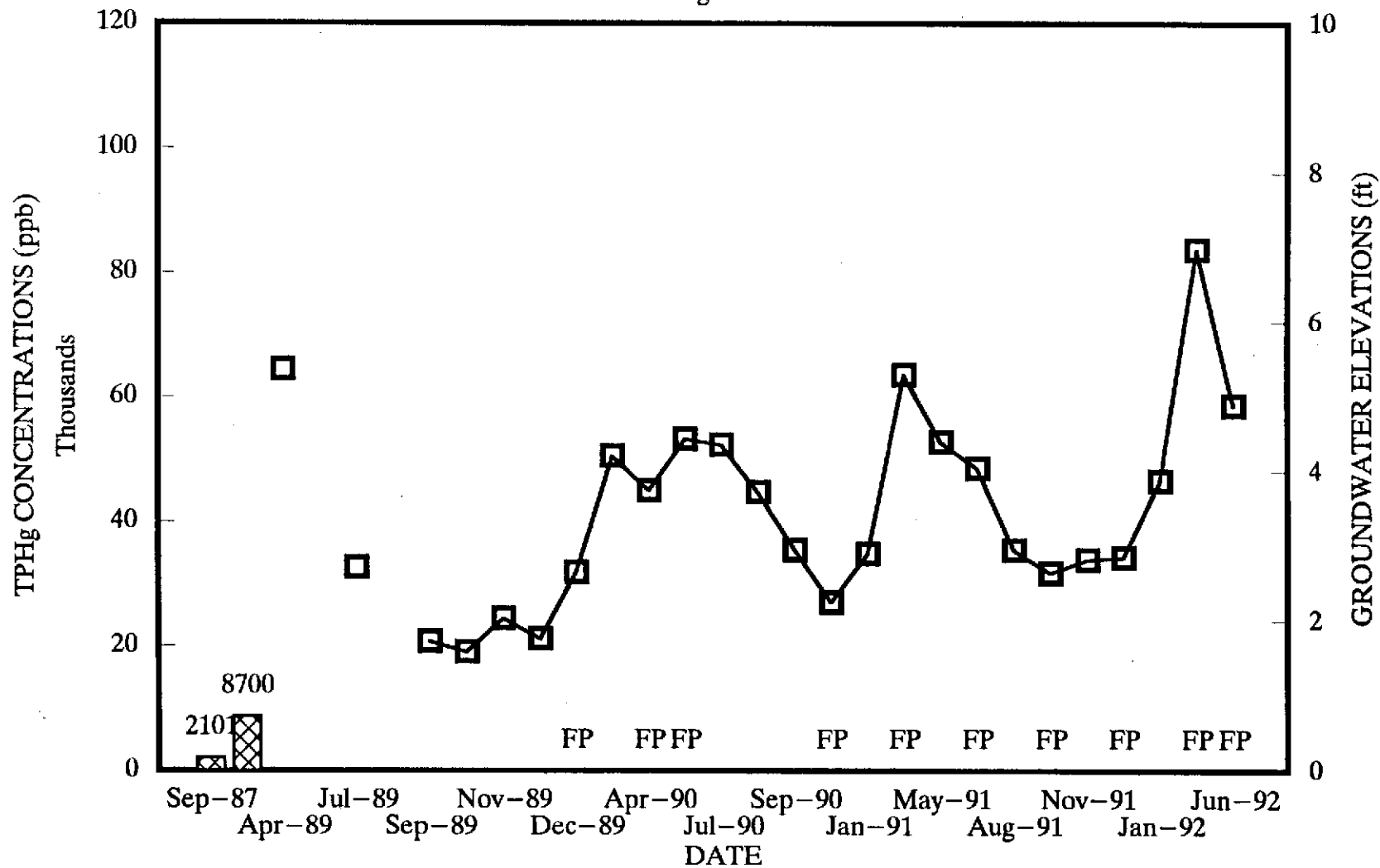


 TPHg CONCENTRATIONS

 GROUNDWATER ELEVATIONS

FP = Floating Product

EXXON 7-3006 HYDROGRAPH AND TPHg CONCENTRATION GRAPH 1987-92  
Monitoring Well MW-3

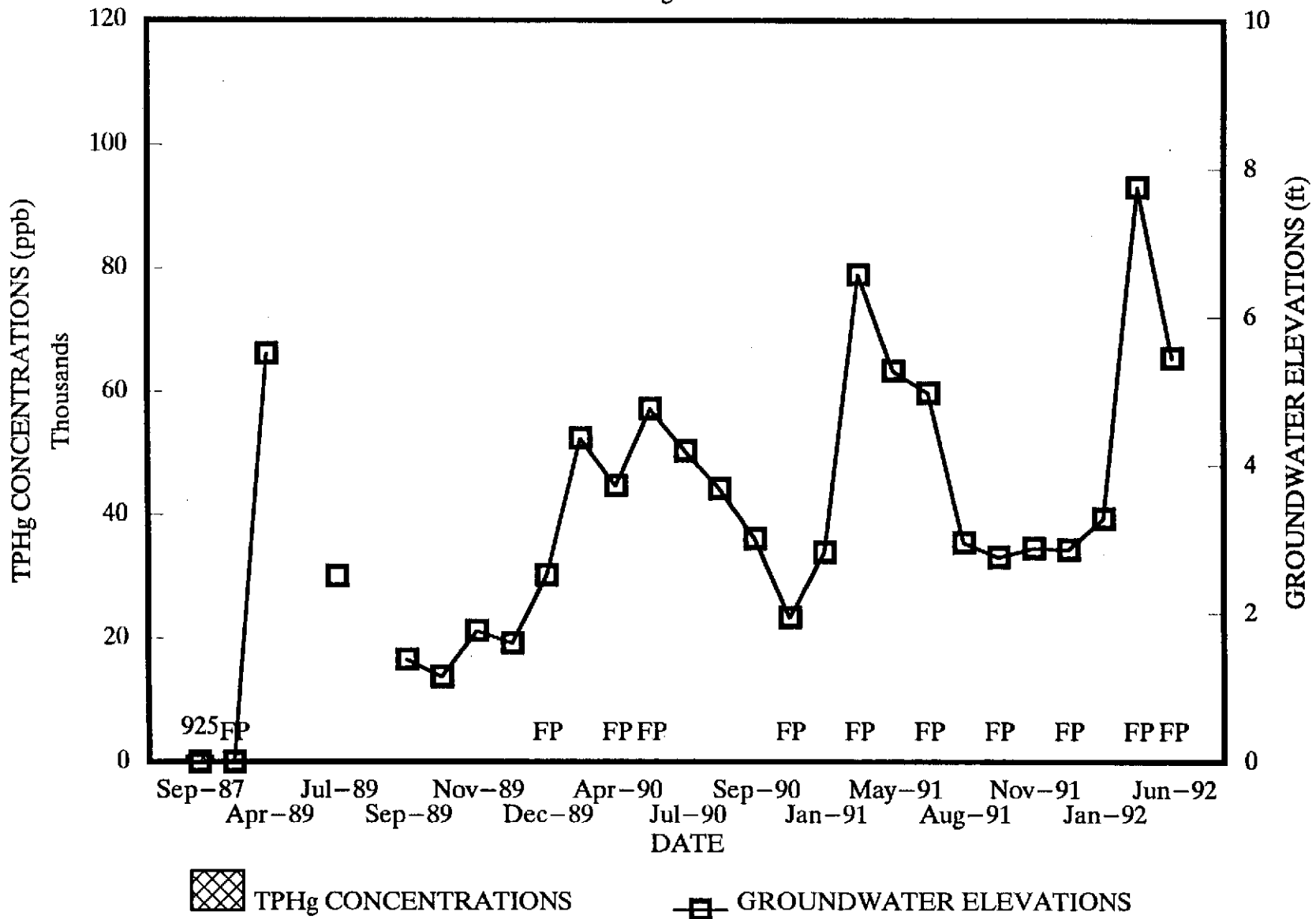


TPHg CONCENTRATIONS

GROUNDWATER ELEVATIONS

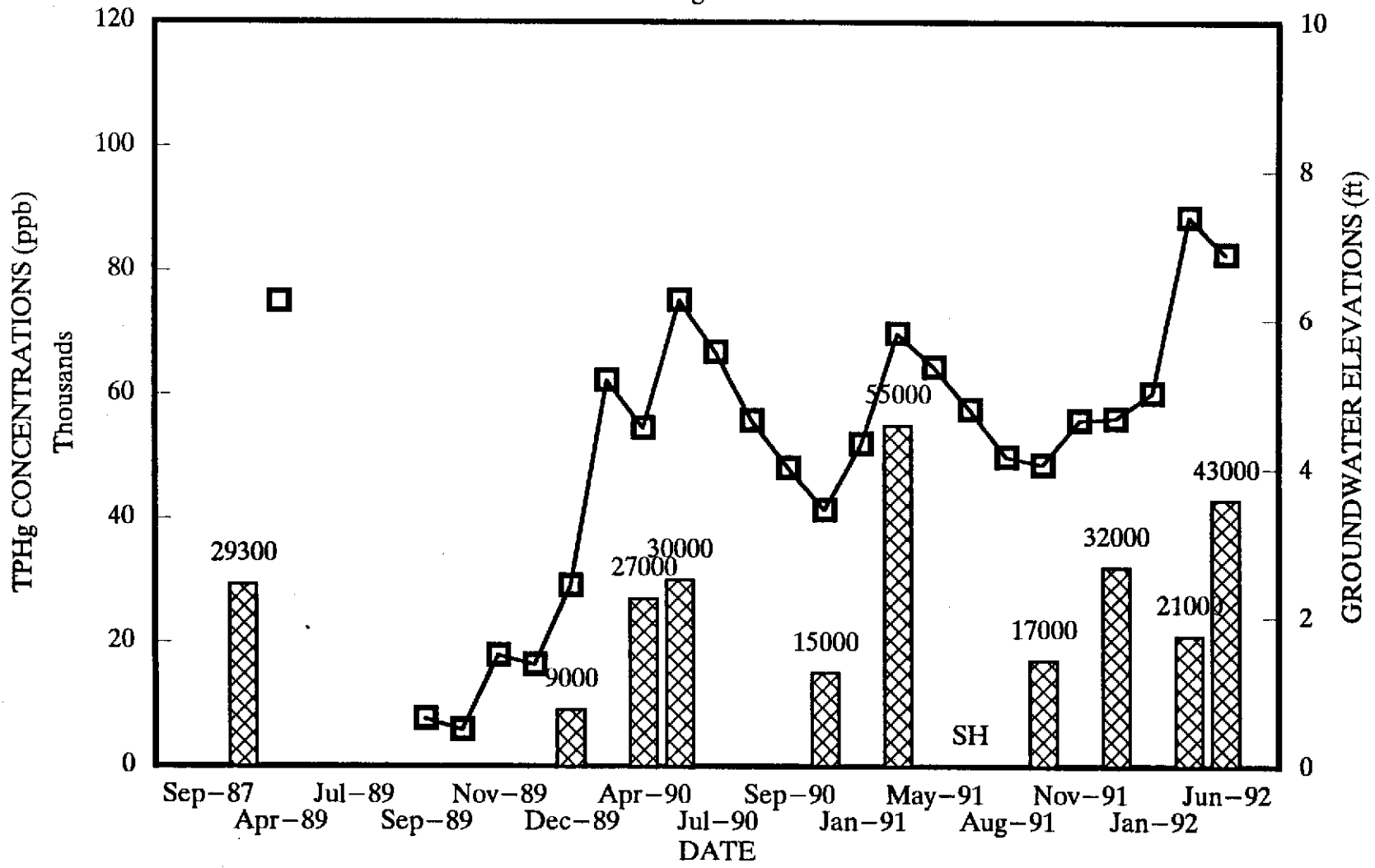
FP = Floating Product

EXXON 7-3006 HYDROGRAPH AND TPHg CONCENTRATION GRAPH 1987-92  
Monitoring Well MW-4





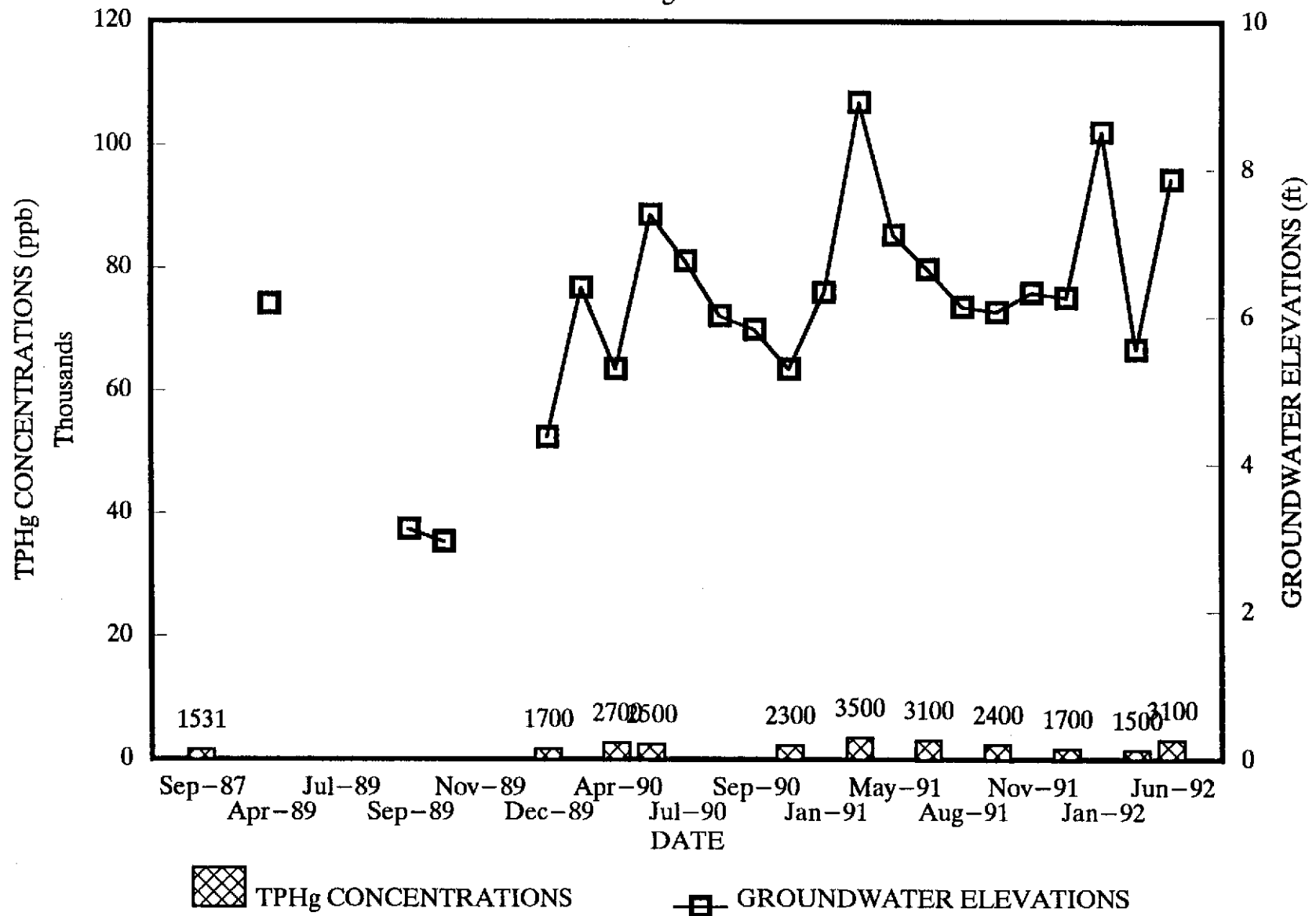
EXXON 7-3006 HYDROGRAPH AND TPHg CONCENTRATION GRAPH 1987-92  
Monitoring Well MW-6



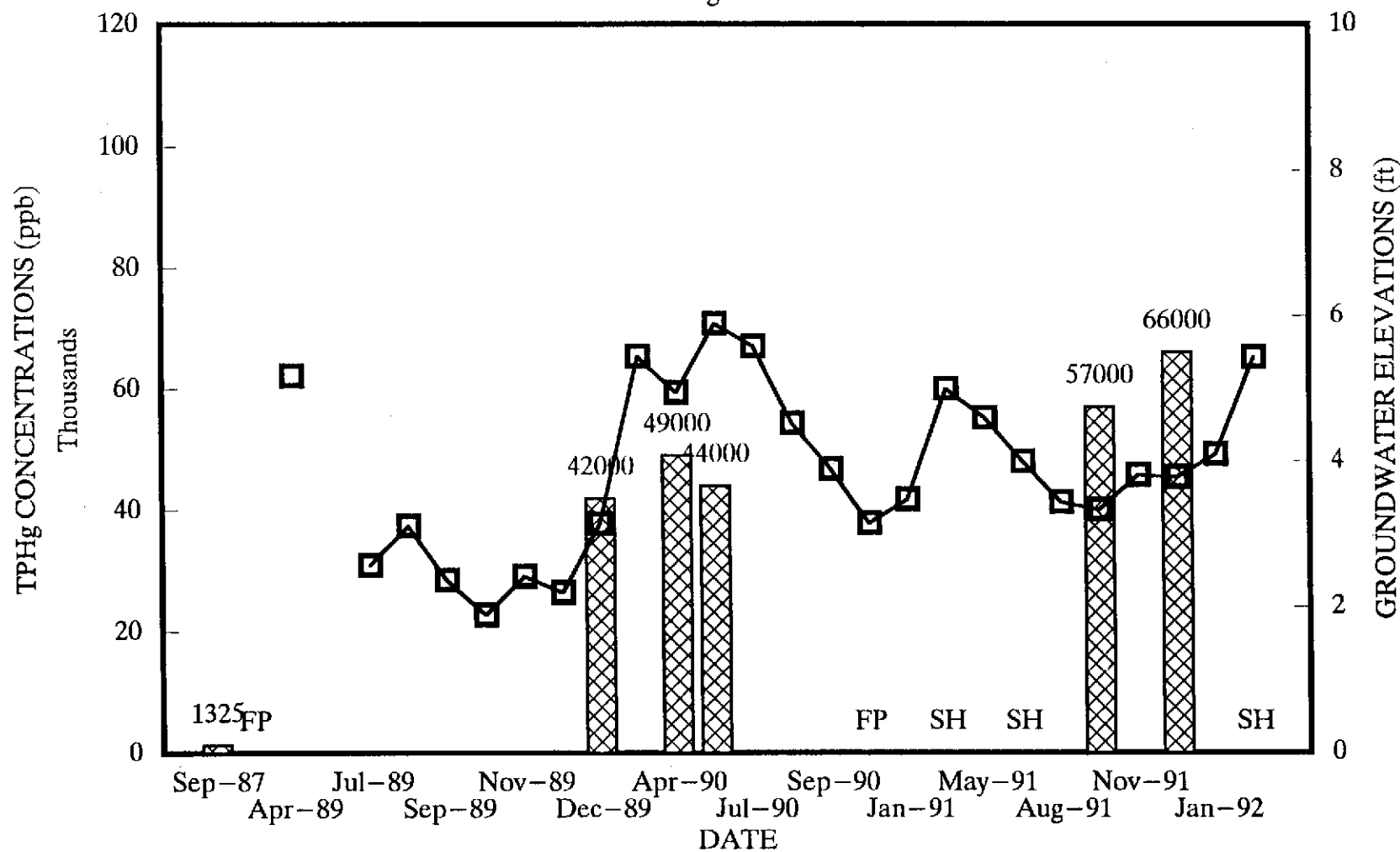
TPHg CONCENTRATIONS
     
 
 GROUNDWATER ELEVATIONS

SH = Sheen

EXXON 7-3006 HYDROGRAPH AND TPHg CONCENTRATION GRAPH 1987-92  
Monitoring Well MW-7



EXXON 7--3006 HYDROGRAPH AND TPHg CONCENTRATION GRAPH 1987-92  
Monitoring Well MW-8



TPHg CONCENTRATIONS

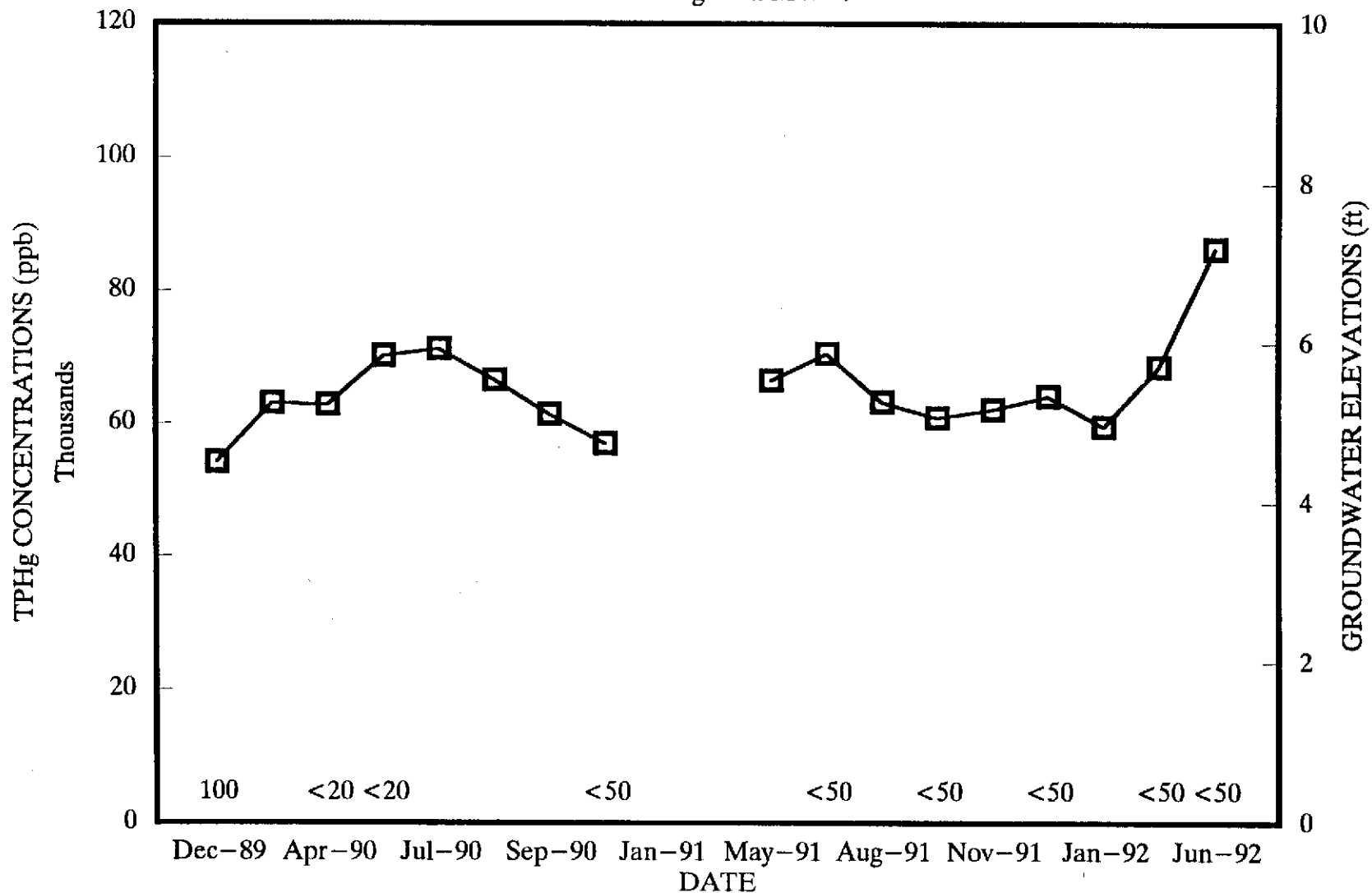


GROUNDWATER ELEVATIONS

FP = Floating Product

SH = Sheen

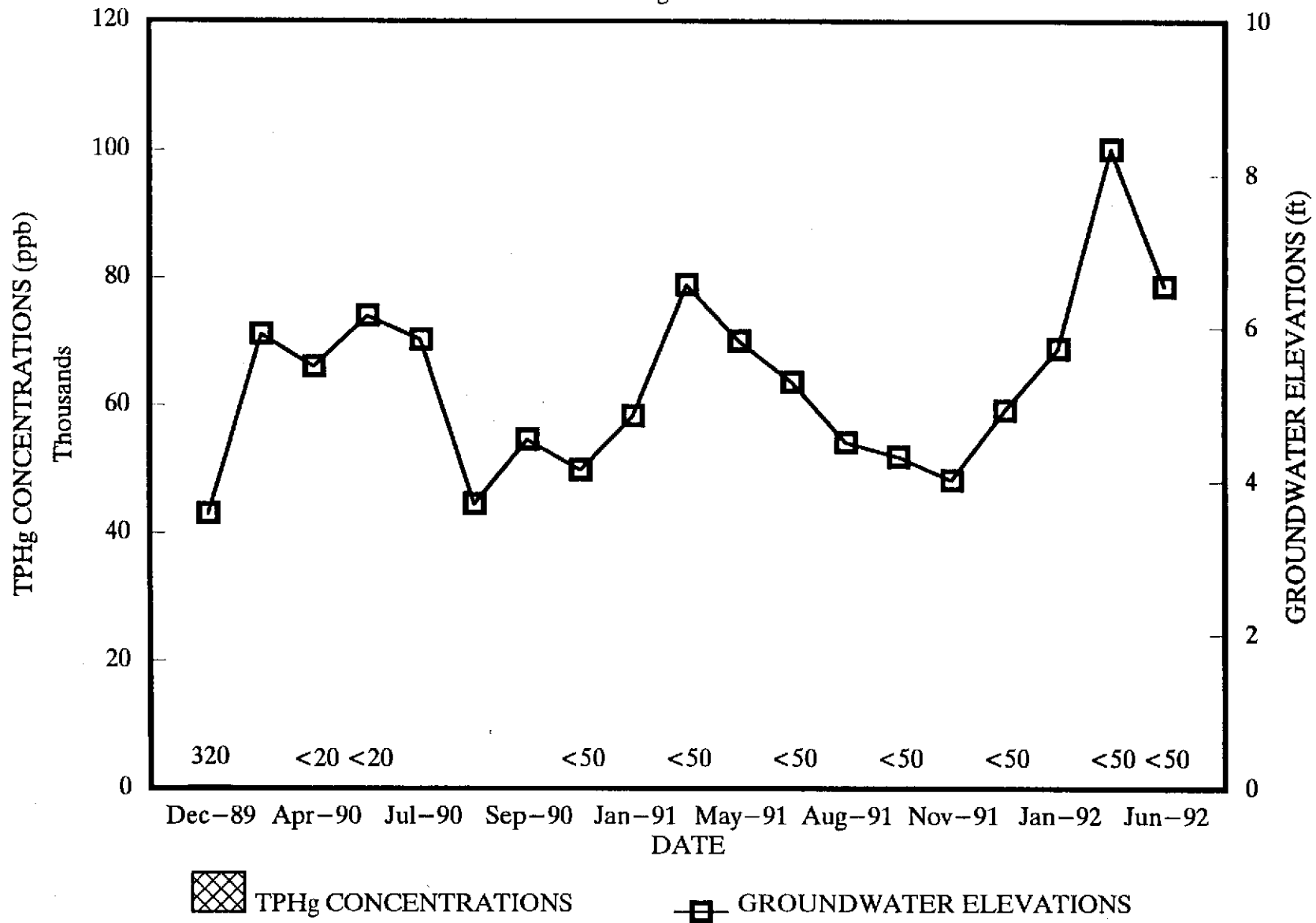
EXXON 7-3006 HYDROGRAPH AND TPHg CONCENTRATION GRAPH 1989-92  
Monitoring Well MW-9



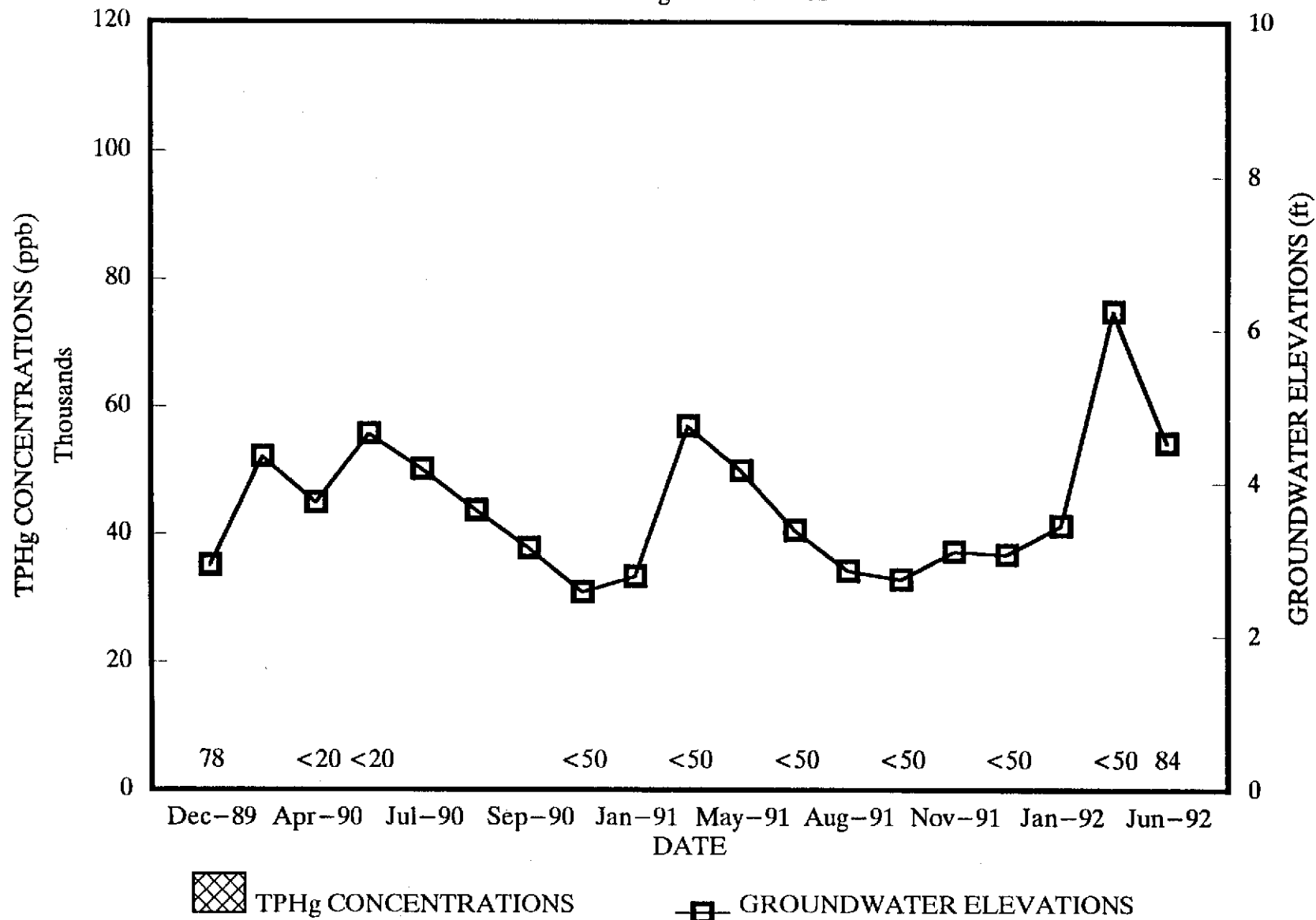
 TPHg CONCENTRATIONS

 GROUNDWATER ELEVATIONS

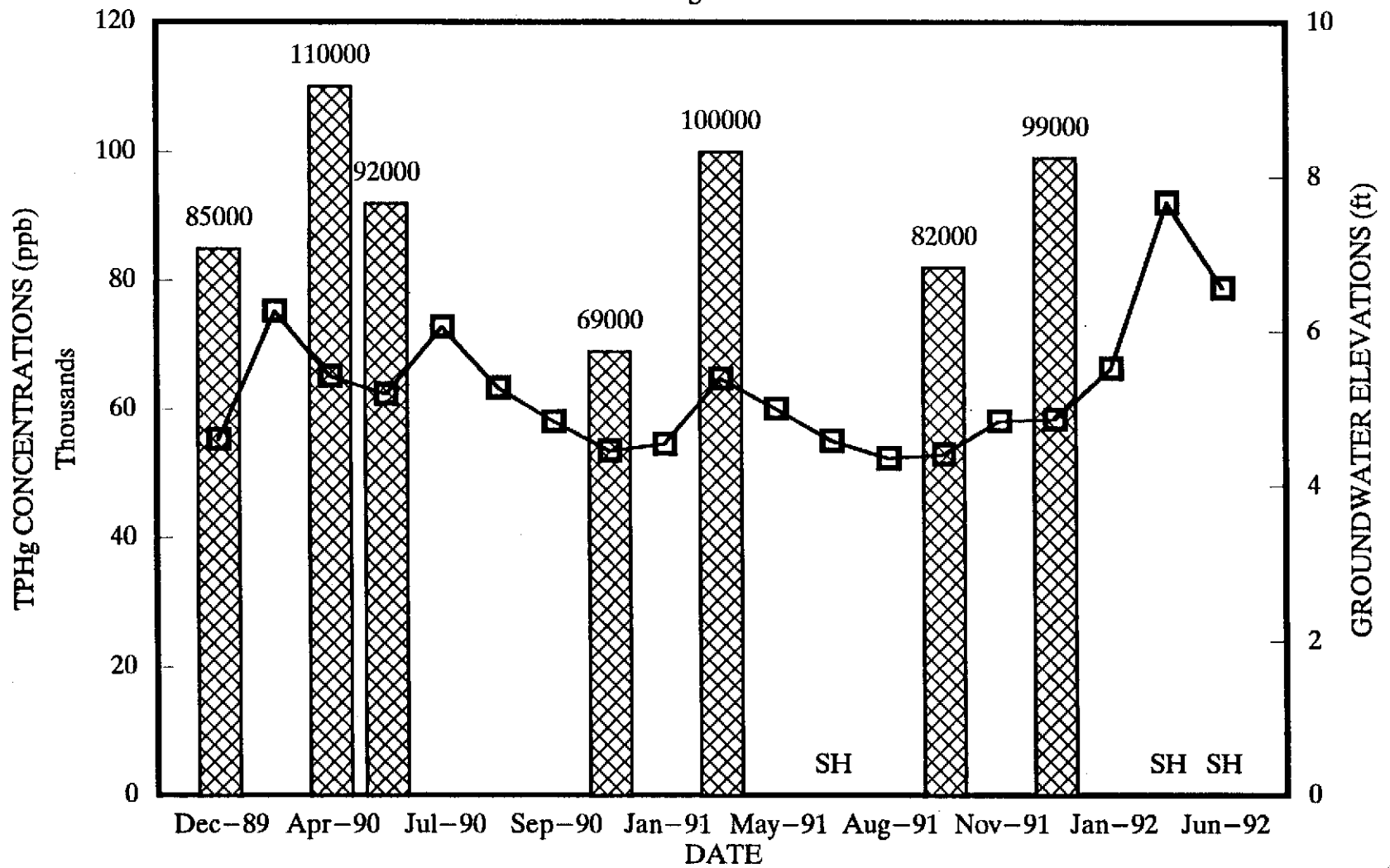
EXXON 7-3006 HYDROGRAPH AND TPHg CONCENTRATION GRAPH 1987-92  
Monitoring Well MW-10



EXXON 7-3006 HYDROGRAPH AND TPHg CONCENTRATION GRAPH 1989-92  
Monitoring Well MW-11



EXXON 7-3006 HYDROGRAPH AND TPHg CONCENTRATION GRAPH 1989-92  
Monitoring Well MW-12

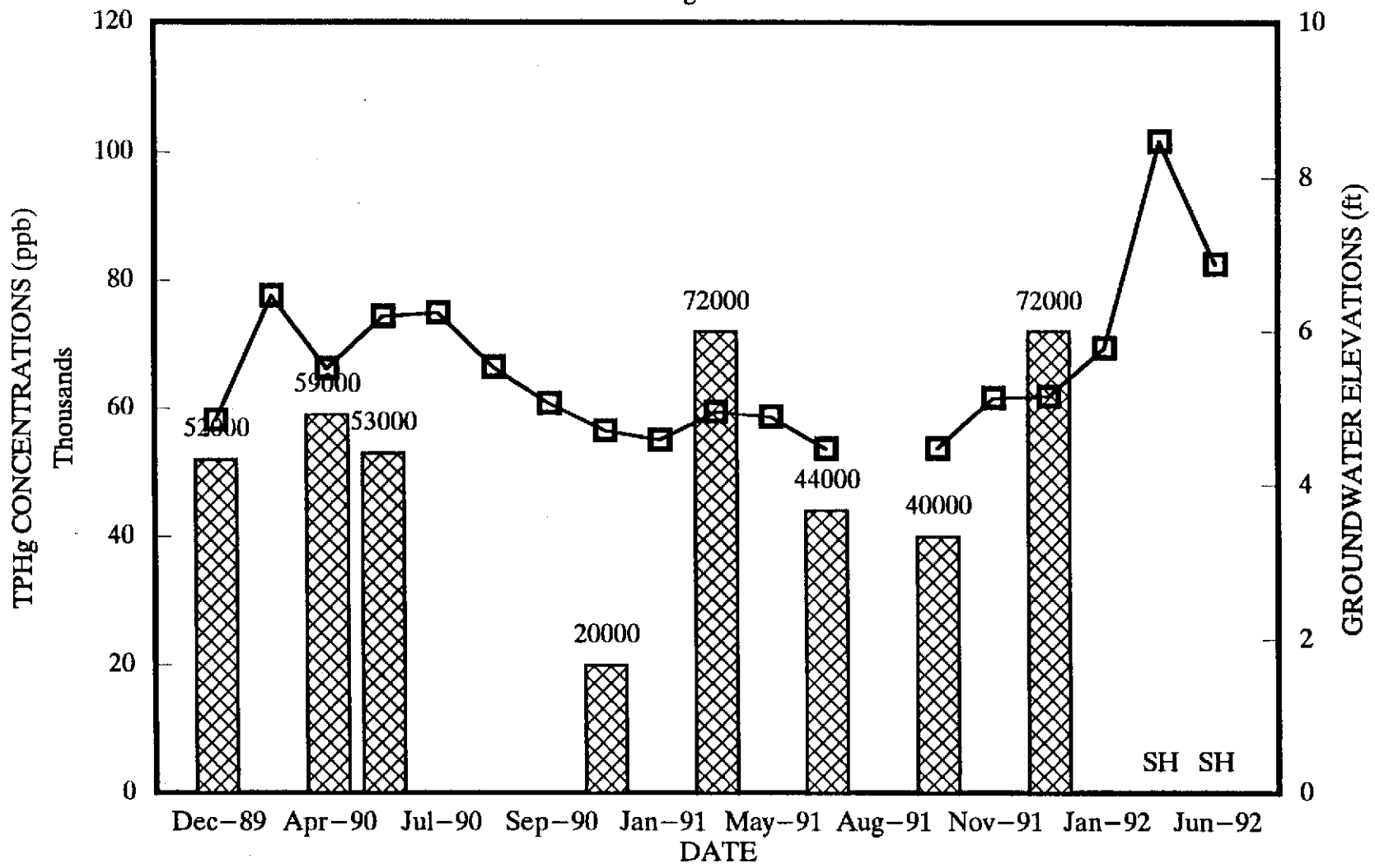


TPHg CONCENTRATIONS

GROUNDWATER ELEVATIONS

SH = Sheen

EXXON 7-3006 HYDROGRAPH AND TPHg CONCENTRATION GRAPH 1989-92  
Monitoring Well MW-13



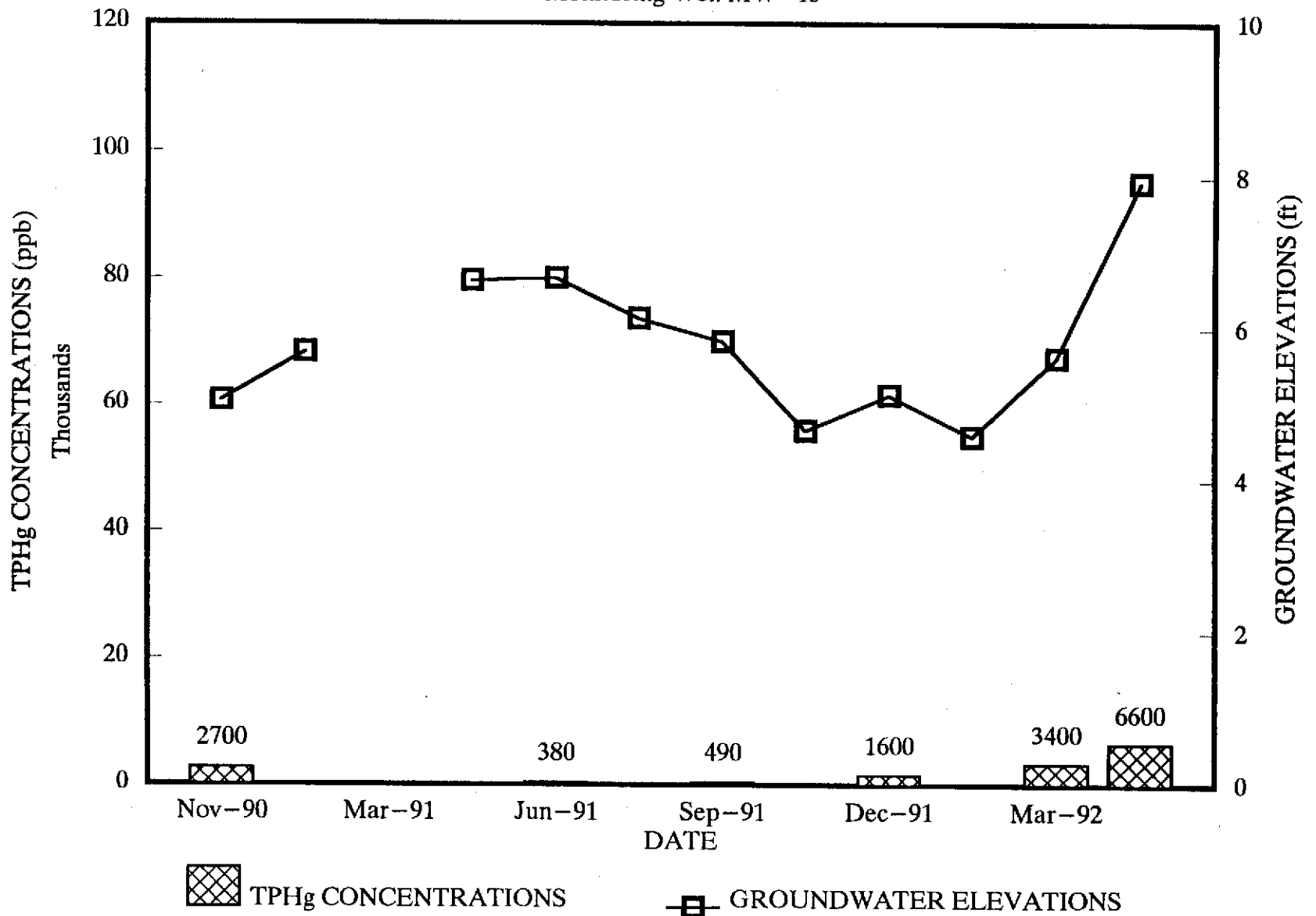
 TPHg CONCENTRATIONS

 GROUNDWATER ELEVATIONS

SH = Sheen



EXXON 7-3006 HYDROGRAPH AND TPHg CONCENTRATION GRAPH 1990-92  
Monitoring Well MW-15



**APPENDIX C**

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

July 01, 1992

Mr. Mark Detterman  
Resna  
42501 Albrae Street, Suite 100  
Fremont, CA 94538

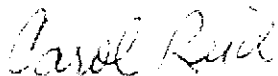
RE: PACE Project No. 420623.501  
Client Reference: Exxon 7-3006 (EE)

Dear Mr. Detterman:

Enclosed is the report of laboratory analyses for samples received  
June 23, 1992.

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

Sincerely,



Carol Reid  
Project Manager

Enclosures

Resna  
 42501 Albrae Street, Suite 100  
 Fremont, CA 94538

July 01, 1992  
 PACE Project Number: 420623501

Attn: Mr. Mark Detterman

Client Reference: Exxon 7-3006 (EE)

PACE Sample Number: 70 0168929  
 Date Collected: 06/22/92  
 Date Received: 06/23/92  
 Client Sample ID: W-8.5-MW1

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

TPH GASOLINE/BTEX

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	06/24/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	110	06/24/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-	06/24/92
Benzene	ug/L	0.5	4.9	06/24/92
Toluene	ug/L	0.5	7.9	06/24/92
Ethylbenzene	ug/L	0.5	3.7	06/24/92
Xylenes, Total	ug/L	0.5	21	06/24/92

TPH DIESEL, BY EPA METHOD 8015

Extractable Fuels, as Diesel	mg/L	0.050	0.075	06/29/92
Date Extracted			06/25/92	

MDL Method Detection Limit

Mr. Mark Detterman  
 Page 2

July 01, 1992  
 PACE Project Number: 420623501

Client Reference: Exxon 7-3006 (EE)

PACE Sample Number: 70 0168937  
 Date Collected: 06/22/92  
 Date Received: 06/23/92  
 Client Sample ID: W-7.5-MW9

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

TPH GASOLINE/BTEX

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	06/24/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	ND	06/24/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-	06/24/92
Benzene	ug/L	0.5	ND	06/24/92
Toluene	ug/L	0.5	ND	06/24/92
Ethylbenzene	ug/L	0.5	ND	06/24/92

Xylenes, Total	ug/L	0.5	ND	06/24/92
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TPH DIESEL, BY EPA METHOD 8015

Extractable Fuels, as Diesel	mg/L	0.050	ND	06/26/92
Date Extracted			06/25/92	

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

**REPORT OF LABORATORY ANALYSIS**

Mr. Mark Detterman  
 Page 3

July 01, 1992  
 PACE Project Number: 420623501

Client Reference: Exxon 7-3006 (EE)

PACE Sample Number: 70 0168945  
 Date Collected: 06/22/92  
 Date Received: 06/23/92  
 Client Sample ID: W-7.5-MW10

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

TPH GASOLINE/BTEX			
TOTAL FUEL HYDROCARBONS, (LIGHT):		-	06/26/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	ND 06/26/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):		-	06/26/92
Benzene	ug/L	0.5	ND 06/26/92
Toluene	ug/L	0.5	0.6 06/26/92
Ethylbenzene	ug/L	0.5	ND 06/26/92
Xylenes, Total	ug/L	0.5	0.8 06/26/92
TPH DIESEL, BY EPA METHOD 8015			
Extractable Fuels, as Diesel	mg/L	0.050	ND 06/26/92
Date Extracted			06/25/92

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

Mr. Mark Detterman  
 Page 4

July 01, 1992  
 PACE Project Number: 420623501

Client Reference: Exxon 7-3006 (EE)

PACE Sample Number: 70 0168953  
 Date Collected: 06/22/92  
 Date Received: 06/23/92  
 Client Sample ID: W-9.0-MW11

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

TPH GASOLINE/BTEX

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	06/25/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	84	06/25/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-	06/25/92
Benzene	ug/L	0.5	1.5	06/25/92
Toluene	ug/L	0.5	3.1	06/25/92
Ethylbenzene	ug/L	0.5	1.4	06/25/92
Xylenes, Total	ug/L	0.5	9.6	06/25/92

TPH DIESEL, BY EPA METHOD 8015

Extractable Fuels, as Diesel	mg/L	0.050	0.057	06/26/92
Date Extracted			06/25/92	

MDL Method Detection Limit

Mr. Mark Detterman  
 Page 5

July 01, 1992  
 PACE Project Number: 420623501

Client Reference: Exxon 7-3006 (EE)

PACE Sample Number: 70 0168961  
 Date Collected: 06/22/92  
 Date Received: 06/23/92  
 Client Sample ID: W-7.5-MW14

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

TPH GASOLINE/BTEX

TOTAL FUEL HYDROCARBONS, (LIGHT):		-	06/25/92	
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	140	06/25/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):		-	06/25/92	
Benzene	ug/L	0.5	ND	06/25/92
Toluene	ug/L	0.5	ND	06/25/92
Ethylbenzene	ug/L	0.5	0.6	06/25/92

Xylenes, Total	ug/L	0.5	2.0	06/25/92
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TPH DIESEL, BY EPA METHOD 8015

Extractable Fuels, as Diesel	mg/L	0.050	0.35	06/26/92
Date Extracted			06/25/92	

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



Mr. Mark Detterman  
 Page 6

July 01, 1992  
 PACE Project Number: 420623501

Client Reference: Exxon 7-3006 (EE)

PACE Sample Number: 70 0168970  
 Date Collected: 06/22/92  
 Date Received: 06/23/92  
 Client Sample ID: W-6.0-MW15

Parameter	Units	MDL		DATE ANALYZED
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ORGANIC ANALYSIS

TPH GASOLINE/BTEX

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	06/25/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	500	6600	06/25/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-	06/25/92
Benzene	ug/L	5.0	99	06/25/92
Toluene	ug/L	5.0	ND	06/25/92
Ethylbenzene	ug/L	5.0	670	06/25/92
Xylenes, Total	ug/L	5.0	180	06/25/92

TPH DIESEL, BY EPA METHOD 8015

Extractable Fuels, as Diesel	mg/L	0.050	0.86	06/26/92
Date Extracted			06/25/92	

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

Mr. Mark Detterman  
 Page 7

July 01, 1992  
 PACE Project Number: 420623501

Client Reference: Exxon 7-3006 (EE)

PACE Sample Number: 70 0168988  
 Date Collected: 06/22/92  
 Date Received: 06/23/92  
 Client Sample ID: W-7.0'-MW7

Parameter	Units	MDL		DATE ANALYZED
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ORGANIC ANALYSIS

TPH GASOLINE/BTEX

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	06/29/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	500	3100	06/29/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):			-	06/29/92
Benzene	ug/L	5.0	260	06/29/92
Toluene	ug/L	5.0	5.8	06/29/92
Ethylbenzene	ug/L	5.0	21	06/29/92
Xylenes, Total	ug/L	5.0	27	06/29/92

TPH DIESEL, BY EPA METHOD 8015

Extractable Fuels, as Diesel	mg/L	0.050	0.83	06/26/92
Date Extracted			06/25/92	

MDL Method Detection Limit

Mr. Mark Detterman  
 Page 8

July 01, 1992  
 PACE Project Number: 420623501

Client Reference: Exxon 7-3006 (EE)

PACE Sample Number: 70 0168996  
 Date Collected: 06/22/92  
 Date Received: 06/23/92  
 Client Sample ID: W-7.5'-MW6

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

TPH GASOLINE/BTEX

TOTAL FUEL HYDROCARBONS, (LIGHT):		-	06/25/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	5000	43000
PURGEABLE AROMATICS (BTXE BY EPA 8020):		-	06/25/92
Benzene	ug/L	50	11000
Toluene	ug/L	50	150
Ethylbenzene	ug/L	50	2100
Xylenes, Total	ug/L	50	5000

TPH DIESEL, BY EPA METHOD 8015

Extractable Fuels, as Diesel	mg/L	0.25	1.7	06/26/92
Date Extracted			06/25/92	

MDL Method Detection Limit

These data have been reviewed and are approved for release.

*Mark A. Valentini*

Mark A. Valentini, Ph.D.  
 Regional Director

Mr. Mark Detterman  
 Page 9

QUALITY CONTROL DATA

July 01, 1992  
 PACE Project Number: 420623501

Client Reference: Exxon 7-3006 (EE)

TPH DIESEL, BY EPA METHOD 8015

Batch: 70 13586

Samples: 70 0168929, 70 0168937, 70 0168945, 70 0168953, 70 0168961  
 70 0168970, 70 0168988, 70 0168996

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	69%	67%	2%

MDL Method Detection Limit  
 RPD Relative Percent Difference

Mr. Mark Detterman  
 Page 10

QUALITY CONTROL DATA

July 01, 1992  
 PACE Project Number: 420623501

Client Reference: Exxon 7-3006 (EE)

TPH GASOLINE/BTEX  
 Batch: 70 13500  
 Samples: 70 0168929, 70 0168937

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	428	107%	109%	1%
Benzene	ug/L	0.5	40.0	102%	101%	0%
Toluene	ug/L	0.5	40.0	112%	104%	7%
Ethylbenzene	ug/L	0.5	40.0	111%	107%	3%
Xylenes, Total	ug/L	0.5	80.0	116%	105%	9%

MDL Method Detection Limit  
 RPD Relative Percent Difference

Mr. Mark Detterman  
 Page 11

QUALITY CONTROL DATA

July 01, 1992  
 PACE Project Number: 420623501

Client Reference: Exxon 7-3006 (EE)

TPH GASOLINE/BTEX

Batch: 70 13587

Samples: 70 0168945, 70 0168953, 70 0168961, 70 0168970, 70 0168988  
 70 0168996

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	Dupl		
			Value	Recv	Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	361	95%	99%	4%
Benzene	ug/L	0.5	40.0	93%	99%	6%
Toluene	ug/L	0.5	40.0	96%	97%	1%
Ethylbenzene	ug/L	0.5	40.0	94%	96%	2%
Xylenes, Total	ug/L	0.5	80.0	97%	99%	2%

MDL Method Detection Limit  
 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  
*mark Dethmerman per mark*
- Irvine, CA  
Alton Business Park  
30 Hughes St., Suite 206, 92718  
(714) 380-9559  
*JO Dethmerman 6/23*

Consultant Name: Kesna  
 Address: 42521 Albrae, Fremont, CA  
 Project Contact: Kesna *to No. 6* Project #: 87842-9  
 Phone #: 510-659-0404 Fax #: 651-2218  
 Consultant Work Release #: 89072786 7C  
 Exxon Contact: Marla Gensler Phone #: \_\_\_\_\_  
 Site RAS #: 7-3006  
 Site Location: 820 High St. Oakland, CA.  
 Laboratory Work Release #: \_\_\_\_\_

Sampled by (please print)				SOIL			WATER			TPH	Total Oil & Grease SM 5520	Remarks
Sampler Signature		Date Sampled		TPH/GAS/BTEX EPA 8015/8020	TPH/Diesel EPA 8015	Organic Lead DHS Method	TPH/GAS/BTEX EPA 8015/602	TPH/Diesel EPA 8015	Organic Lead DHS Method			
Sample Description	Collection Date/Time	Matrix	Prsv.	# of Cont.								
W-8.5-MW1	3:00		HL	3/24			X	1689.29	X		Please preserve TPH upon receipt for all TPH samples	
W-75-MW9	3:25		HL	3/24			X	93.7	X			
W-75-MW10	4:00		HL	3/24			X	94.5	X			
W-90-MW11	4:30		HL	3/24			X	95.3	X			
W-75-MW14	5:00		HL	3/24			X	96.1	X			
W-60-MW15	5:30		HL	3/24			X	97.0	X			
W-20-MW7	6:00		HL	3/24			X	98.8	X			
W-75-MW14	7:00		HL	3/24			X	99.6	X			
-BB1	2:45		HL	3			X	900.3	X		Hold	

Cooler No. 8-60	Relinquished by/Affiliation	Accepted by/Affiliation	Date	Time
Cooler Seal Intact	Robert A. Adams	Edward M. Price	6-23-92	1pm
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Turnaround Time (circle choice)	Ed M. Price			
24 hr. 48 hr. 72 hr. 96 hr. <u>5 workday (standard)</u>	Ed M. Price			
Shipment Method	Additional Comments:			
Shipment Date	* samples received - 6/23/92 * cooler # B 76/00			
Distribution:	White - Original	Yellow - Exxon	Pink - Lab	Goldenroc - Consultant Field Staff

420675.501

6/23/92