

**EXXON** COMPANY, U.S.A.

POST OFFICE BOX 4032 . CONCORD, CA 94524-2032

ENVIRONMENTAL ENGINEERING

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

February 3, 1993

Mr. Rick Mueller  
City of Pleasanton Fire Department  
4444 Railroad Street  
Pleasanton, California 94566

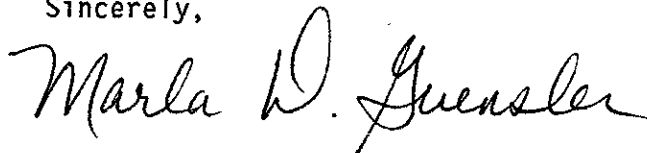
RE: EXXON RAS #7-7003, 349 MAIN ST., PLEASANTON, CA

Dear Mr. Mueller:

Attached for your review and comment is the letter report for quarterly groundwater monitoring at the above referenced site. This report, prepared by RESNA Industries, Inc., San Jose, California, details the results of the third quarter 1992 monitoring event.

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  
Senior Environmental Engineer

MDG/pdp

3038E

Attachment

cc: w/attachment  
Ms. L. Spencer - San Francisco Regional WQCB

w/o attachment  
Mr. M. Briggs - RESNA Industries, San Jose



*Working To Restore Nature*

3315 Almaden Expressway, Suite 34  
San Jose, CA 95118  
Phone: (408) 264-7723  
Fax: (408) 264-2345

**LETTER REPORT  
QUARTERLY GROUNDWATER MONITORING  
Third Quarter 1992  
at  
Exxon Station 7-7003  
349 Main Street  
Pleasanton, California**

19025.05



Working To Restore Nature

3315 Almaden Expressway, Suite 34  
San Jose, CA 95118  
Phone: (408) 264-7723  
Fax: (408) 264-2345

November 30, 1992  
00901MGUE  
19025.05

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 Third Quarter 1992 Groundwater Monitoring at Exxon Station  
7-7003, 349 Main Street, Pleasanton, California

Ms. Guensler:

As requested by Exxon Company U.S.A. (Exxon), this letter report summarizes the methods and results of the third quarter 1992 groundwater monitoring performed by RESNA Industries Inc. (RESNA) at the above-subject site. The Exxon site is located at 349 Main Street on the southwestern corner of Angela and Main Streets in Pleasanton, California, as shown on 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 hydrocarbons in the local groundwater associated with former and existing 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 and replacement of three USTs and one used-oil UST in August 1989 (AGS, October 1, 1989), and an environmental investigation between January and June 1990 that included drilling 13 boreholes around the former gasoline UST location and adjacent to the used-oil UST, installing groundwater monitoring wells MW-1 through MW-5 in five of the boreholes, and directing analyses of soil and groundwater samples (AGS, August 1, 1990). AGS drilled six boreholes north and northwest of the former gasoline USTs and installed groundwater monitoring wells MW-6 and MW-7, and vapor extraction well VE-1 between February and March 1991 (AGS, October 24, 1991). Quarterly monitoring at the site began in the first quarter of 1990 (AGS, August 1, 1990) and is continuing. Pertinent site features include a service station building, two dispenser islands, two USTs located in the northeastern portion of the site, and a used-

Quarterly Groundwater Monitoring  
Exxon Station 7-7003, Pleasanton, California

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oil UST located northeast of the station building (Plate 2). The results of previous environmental investigations performed at the site are presented in the reports listed in the references section. The locations of the groundwater monitoring wells and pertinent site features are shown on the Generalized Site Plan (Plate 2).

### Groundwater Sampling and Gradient Evaluation

For the latest quarterly groundwater monitoring, RESNA personnel collected groundwater monitoring data from the five onsite monitoring wells (MW-1 through MW-5) and two offsite monitoring wells (MW-6 and MW-7) on September 28 and 29, 1992. During field work at the site, RESNA personnel measured depth to water (DTW) levels in the groundwater monitoring wells, subjectively analyzed water from the wells for the presence of floating product, and purged and sampled the groundwater from the five onsite monitoring wells and the two offsite monitoring 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 from the elevation of the wellhead. The measured DTW levels, wellhead elevations, and groundwater elevations for this and previous quarterly monitoring 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 seven monitoring wells are included in Appendix B. Based on the September 28, 1992, groundwater elevation data, the interpreted local groundwater gradient and flow direction approximately 0.18 toward the northwest. Groundwater Gradient Map (Plate 3) shows the interpreted local groundwater gradient for this quarter, which is generally consistent with previously interpreted groundwater gradients.

No evidence of floating product or noticeable hydrocarbon vapor was observed in the water samples collected for subjective analysis from the seven wells. Results of the subjective analyses are summarized in Table 1.

The five onsite monitoring wells and two offsite 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, subjective evidence of turbidity, pH, and conductivity for monitoring wells MW-1 through MW-7 are included on the Well Purge Data Sheets in Appendix A.

### Results of Laboratory Analysis

Groundwater samples from the monitoring wells were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and the gasoline constituents benzene, toluene, ethylbenzene, and total xylenes (BTEX) by modified Environmental Protection Agency (EPA) Methods 5030/8015/8020 and volatile organic compounds (VOCs) by EPA Method 601. In addition, groundwater from wells MW-1 and MW-3 were analyzed for total oil and grease (TOG) by Standard Method 5520B/F. The samples were analyzed by Pace Incorporated laboratories (California State Certification Number 1282) in Novato, California. The Chain of Custody Record and Laboratory Analysis sheets for the monitoring wells included in Appendix C.

The chemical analyses results of this and previous, quarterly monitoring events are summarized in Table 2, Cumulative Results of Laboratory Analyses of Groundwater Samples for Gasoline Hydrocarbon Compounds; and Table 3, Cumulative Results of Laboratory Analyses of Groundwater Samples for Lead, TOG, and VOCs. Graphic representations of TPHg and benzene concentrations in the local groundwater for this quarterly monitoring are shown on Plate 4, TPHg/Benzene 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-7 are included on the hydrographs in Appendix B.

Results of this quarter's laboratory analyses of groundwater samples from wells MW-1 through MW-7 indicate that:

- o TPHg was nondetectable in wells MW-3 through MW-7.
- o TPHg was detected in the groundwater at concentrations of 60 parts per billion (ppb) in MW-1 and 71 ppb in MW-2.
- o Benzene was nondetectable in wells MW-1 through MW-7.
- o Except for 0.9 ppb toluene in MW-1, concentrations of the other purgeable gasoline constituents (toluene, ethylbenzene, and total xylenes) were nondetectable in all the wells sampled.
- o TOG was nondetectable in wells MW-1 and MW-3.
- o VOCs were nondetectable in all wells sampled.

Quarterly Groundwater Monitoring  
Exxon Station 7-7003, Pleasanton, California

Copies of this report should be forwarded to:

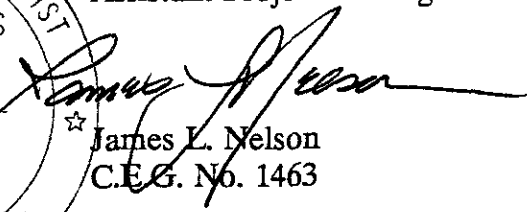
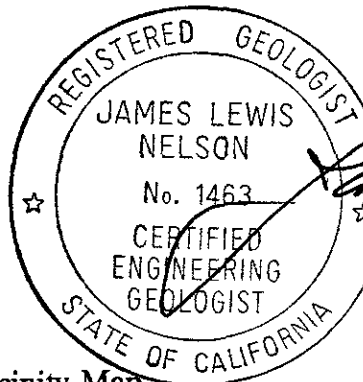
Mr Lester Feldman  
California Regional Water Quality Control Board  
San Francisco Bay Region  
2101 Webster Street, Suite 500  
Oakland, California 94612

If you have any questions or comments, please call us at (408) 264-7723 or (800) 926-0815.

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
- Plate 4, TPHg/Benzene Concentrations in Groundwater
  
- Table 1, Cumulative Groundwater Monitoring Data
- Table 2, Cumulative Results of Laboratory Analyses of Groundwater Samples for Gasoline Hydrocarbon Compounds
- Table 3, Cumulative Results of Laboratory Analyses of Groundwater Samples for Lead, TOG, and VOCs
  
- Appendix A: Groundwater Sampling Protocol, Well Purge Data Sheets, and Stabilization Graphs
- Appendix B: Hydrograph and TPHg Concentration Graphs
- Appendix C: Chain of Custody Records and Laboratory Analysis Reports

Quarterly Groundwater Monitoring  
Exxon Station 7-7003, Pleasanton, California

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#### REFERENCES

- Alameda County Flood Control and Water Conservation District (Zone 7). 1986. Water Level Contours Map. Water Resources Engineering.
- Alameda County Flood Control and Water Conservation District - Zone 7, January 16, 1991. Fall 1990 Groundwater Level Report.
- Applied GeoSystems. July 20, 1989. Report on Soil Vapor Survey at Exxon Station No. 7-7003, 349 Main Street, Pleasanton, California. Job No. 19025-1V.
- Applied GeoSystems. October 1, 1989. Report on Limited Subsurface Environmental Investigation at Exxon Station No. 7-7003, 349 Main Street, Pleasanton, California. Job No. 19025-1.
- Applied GeoSystems. August 1, 1990. Report on Supplemental Subsurface Environmental Investigation at Exxon Station No. 7-7003, 349 Main Street, Pleasanton, California. Job No. 19025-2.
- Applied GeoSystems. February 26, 1991. Letter Report Fourth Quarter 1990 Groundwater Monitoring at Exxon Station No. 7-7003, 349 Main Street, Pleasanton, California. Job No. 19025-3.
- Applied GeoSystems. October 24, 1991. Report on Supplemental Subsurface Environmental Investigation and Quarterly Monitoring at Exxon Station No. 7-7003, 349 Main Street, Pleasanton, California. Job No. 19025-3.
- Applied GeoSystems. October 31, 1991. Letter Report Second Quarter 1991 Groundwater Monitoring at Exxon Station No. 7-7003, 349 Main Street, Pleasanton, California. Job No. 19025.03.
- Applied GeoSystems. December 5, 1991. Letter Report Third Quarter 1991 Groundwater Monitoring at Exxon Station No. 7-7003, 349 Main Street, Pleasanton, California. Job No. 19025.03.
- California Department of Water Resources. 1966. Evaluation of Groundwater Resources, Livermore and Sunol Valleys, Appendix A: Geology. Bulletin No. 118-2.

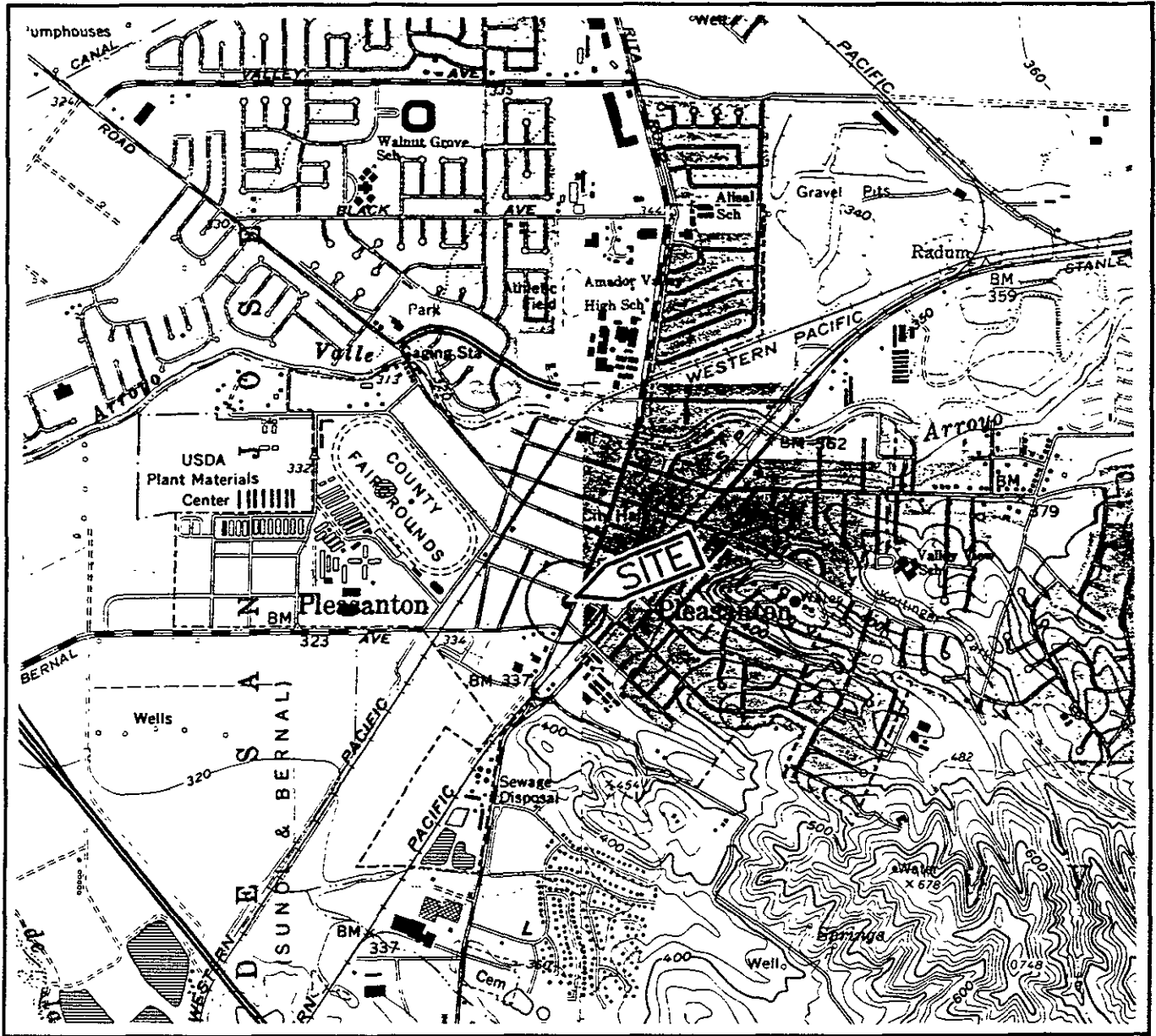
Quarterly Groundwater Monitoring  
Exxon Station 7-7003, Pleasanton, California

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#### REFERENCES

- California Department of Water Resources. 1974. Evaluation of Groundwater Resources, Livermore and Sunol Valleys. Bulletin No. 118-2, page 153.
- RESNA Industries Inc. March 30, 1992. Letter Report Fourth Quarter 1991 Groundwater Monitoring at Exxon Station No. 7-7003, 349 Main Street, Pleasanton, California. Job No. 19025.03.
- RESNA Industries Inc. May 28, 1992. Letter Report First Quarter 1992 Groundwater Monitoring at Exxon Station No. 7-7003, 349 Main Street, Pleasanton, California. Job No. 19025.05.
- RESNA Industries Inc. September 10, 1992. Letter Report Second Quarter 1992 Groundwater Monitoring at Exxon Station No. 7-7003, 349 Main Street, Pleasanton, California. Job No. 19025.05.





Base: U.S. Geological Survey  
 7.5-Minute Quadrangles  
 Dublin/Livermore, California.  
 Photorevised 1980

**LEGEND**

● = Site Location

Approximate Scale



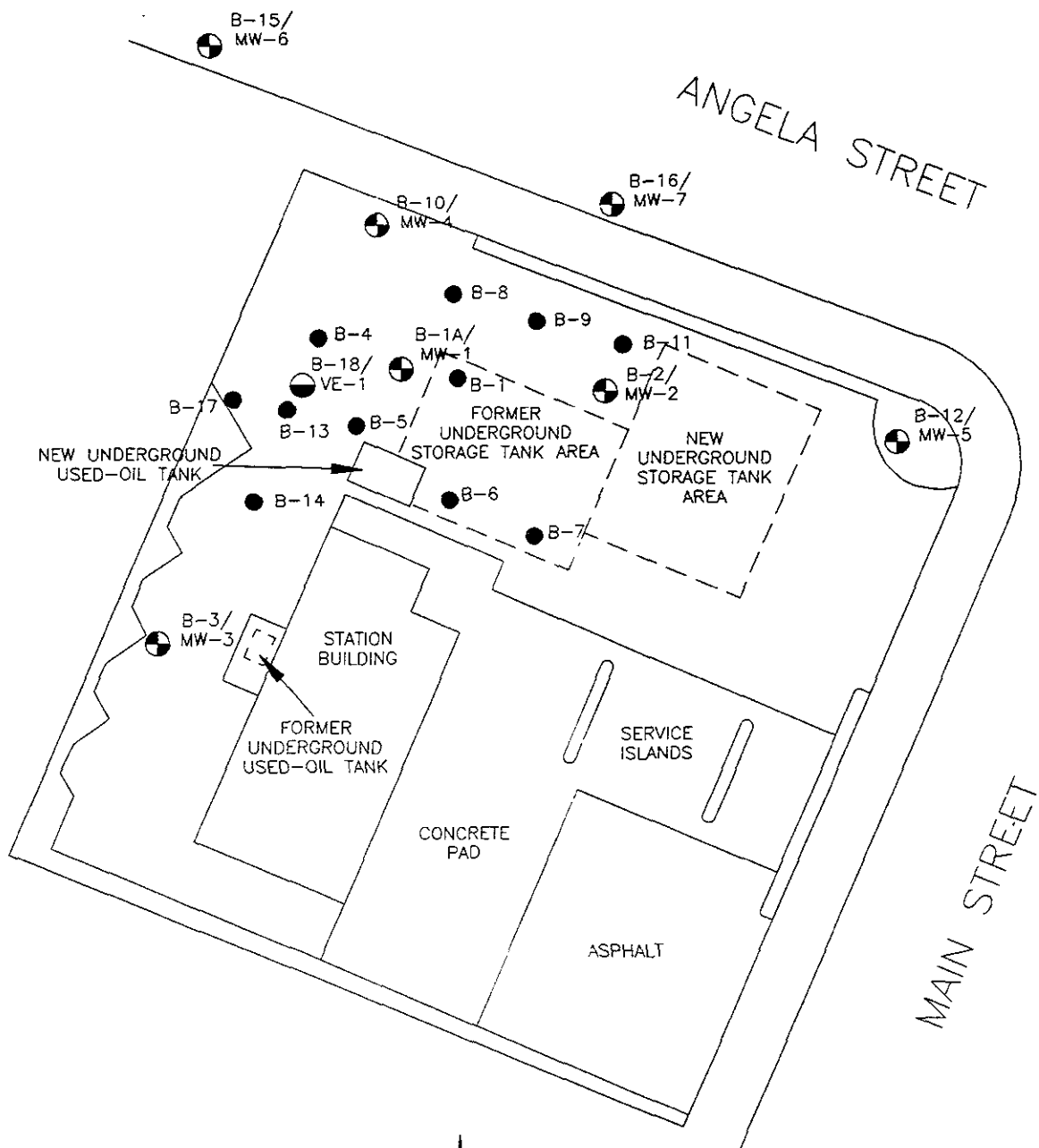
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**SITE VICINITY MAP**  
**Exxon Service Station 7-7003**  
**349 Main Street**  
**Pleasanton, California**

**PLATE**

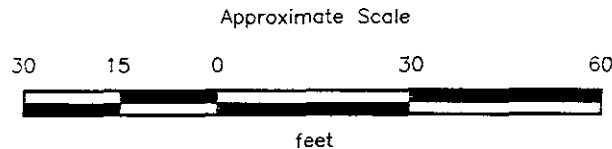
**1**

**PROJECT 19025.05**



EXPLANATION

- B-16/  
MW-7 = Monitoring well
- B-18/  
VE-1 = Vapor extraction well
- B-17 = Soil boring



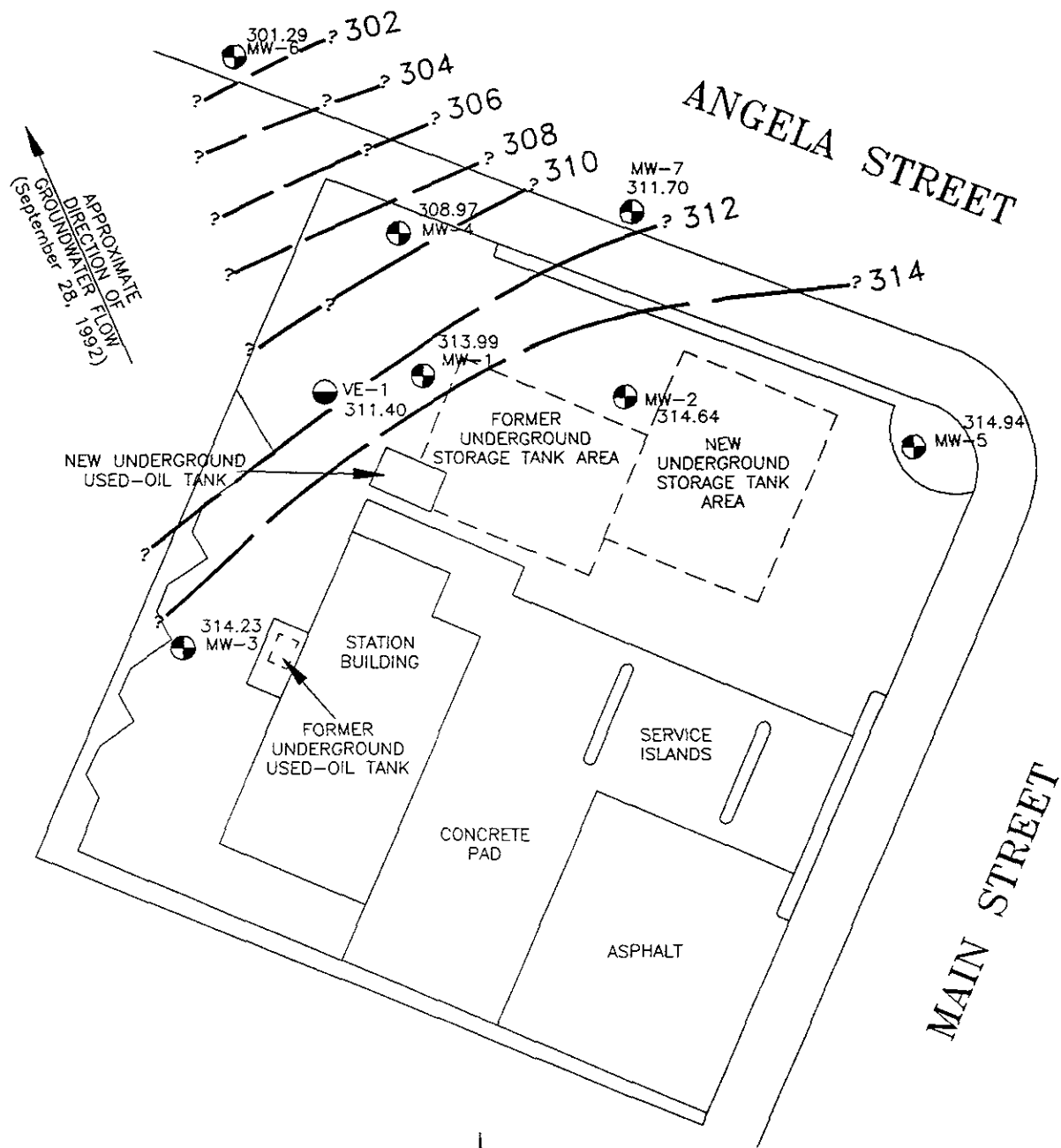
Source: Surveyed by Ron Archer Civil Engineer, Inc.,  
June 1990 and April 1991.

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**GENERALIZED SITE PLAN**  
**Exxon Service Station 7-7003**  
**349 Main Street**  
**Pleasanton, California**

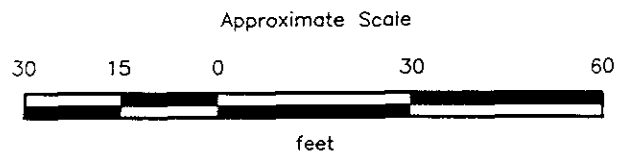
**PLATE**  
**2**

**PROJECT 19025.05**



**EXPLANATION**

- 314 = Line of equal elevation of groundwater in feet above mean sea level (MSL)
- 314.94 = Elevation of groundwater in feet above MSL, September 28, 1992
- MW-7  = Monitoring well
- VE-1  = Vapor extraction well



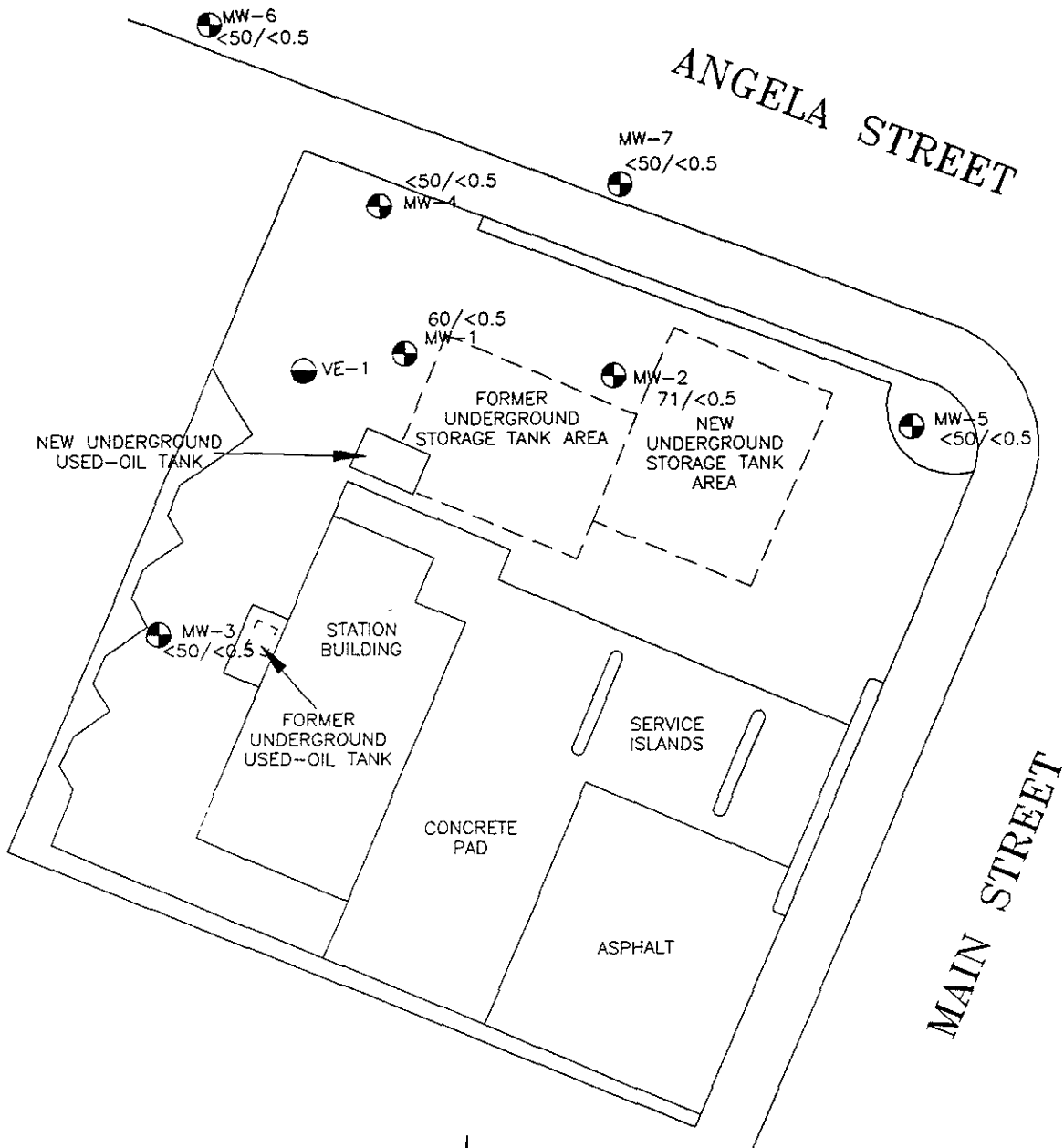
Source: Surveyed by Ron Archer Civil Engineer, Inc., June 1990 and April 1991.



**GROUNDWATER GRADIENT MAP**  
**Exxon Service Station 7-7003**  
**349 Main Street**  
**Pleasanton, California**


**PLATE**  
**3**

**PROJECT 19025.05**

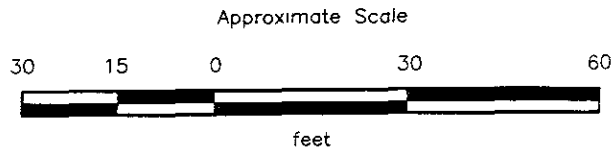


EXPLANATION

71/<0.5 = Concentration of TPHg/Benzene in groundwater in ppb, September 28-29, 1992

MW-7  = Monitoring well

VE-1  = Vapor extraction well



Source: Surveyed by Ron Archer Civil Engineer, Inc., June 1990 and April 1991.



**TPHg/BENZENE CONCENTRATIONS  
IN GROUNDWATER**  
**Exxon Service Station 7-7003**  
**349 Main Street**  
**Pleasanton, California**

**PLATE**  
**4**

**PROJECT 19025.05**

Quarterly Groundwater Monitoring  
Exxon Station 7-7003, Pleasanton, CaliforniaTABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Exxon Service Station 7-7003  
Pleasanton, California  
(Page 1 of 3)

Date	Depth to Water (ft)	Groundwater Elevation (ft)	Product Thickness (ft)	Sheen
<u>MW-1 (Wellhead Elevation = 343.83 ft)</u>				
02/23/90	26.08	317.75	None	None
06/15/90	26.49	317.34	None	None
08/90	26.47	317.36	None	None
12/18/90	28.00	315.83	None	None
03/19/91	23.63	320.20	None	None
06/27/91	22.11	321.72	None	None
09/26/91	27.75	316.08	None	None
01/10/92	25.61	318.22	None	None
03/12/92	22.52	321.31	None	None
06/09/92	21.53	322.30	None	None
09/28/92	29.84	313.99	None	None
<u>MW-2 (Wellhead Elevation = 344.22 ft)</u>				
02/23/90	26.31	317.31	None	None
06/15/90	26.25	317.97	None	None
08/90	26.15	318.07	None	None
12/18/90	27.94	316.28	None	None
03/19/91	23.41	320.81	None	None
06/27/91	21.63	322.59	None	None
09/26/91	27.19	317.03	None	None
01/10/92	25.67	318.55	None	None
03/12/92	22.28	321.94	None	None
06/09/92	21.17	323.05	None	None
09/28/92	29.58	314.64	None	None
<u>MW-3 (Wellhead Elevation = 342.90 ft)</u>				
02/23/90	24.78	318.12	None	None
06/15/90	25.29	317.61	None	None
08/90	25.40	317.50	None	None
12/18/90	26.84	316.06	None	None
03/19/91	22.13	320.77	None	None
06/27/91	21.04	322.86	None	None
09/26/91	26.63	316.27	None	None
01/10/92	24.26	318.64	None	None
03/12/92	21.60	321.30	None	None
06/09/92	20.88	322.02	None	None
09/28/92	28.67	314.23	None	None

See notes on page 3 of 3

Quarterly Groundwater Monitoring  
 Exxon Station 7-7003, Pleasanton, California

TABLE 1  
 CUMULATIVE GROUNDWATER MONITORING DATA  
 Exxon Service Station 7-7003  
 Pleasanton, California  
 (Page 2 of 3)

Date	Depth to Water (ft)	Groundwater Elevation (ft)	Product Thickness (ft)	Sheen
<u>MW-4 (Wellhead Elevation = 343.38 ft)</u>				
06/15/90	30.94	312.44	None	None
08/90	31.21	312.17	None	None
12/18/90	32.86	310.52	None	None
03/19/91	26.76	316.62	None	None
06/27/91	25.91	317.47	None	None
09/26/91	32.29	311.09	None	None
01/10/92	29.06	314.32	None	None
03/12/92	24.25	319.13	None	None
06/09/92	25.00	318.38	None	None
09/28/92	34.41	308.97	None	None
<u>MW-5 (Wellhead Elevation = 345.20 ft)</u>				
06/15/90	26.94	318.26	None	None
08/90	26.90	318.30	None	None
12/18/90	28.31	316.89	None	None
03/19/91	23.98	321.22	None	None
06/27/91	22.41	322.79	None	None
09/26/91	27.77	317.43	None	None
01/10/92	26.38	318.82	None	None
03/12/92	22.08	323.12	None	None
06/09/92	31.98	313.22	None	None
09/28/92	30.26	314.94	None	None
<u>MW-6 (Wellhead Elevation = 342.25 ft)</u>				
03/19/91	34.42	307.83	None	None
06/27/91	35.01	307.24	None	None
09/26/91	40.34	301.91	None	None
01/10/92	36.20	306.05	None	None
03/12/92	31.95	310.30	None	None
06/09/92	33.22	309.03	None	None
09/28/92	40.96	301.29	None	None
<u>MW-7 (Wellhead Elevation = 343.62 ft)</u>				
03/19/91	24.68	318.94	None	None
06/27/91	23.10	320.52	None	None
09/26/91	Not accessible			
01/10/92	26.98	316.64	None	None
03/12/92	21.85	321.77	None	None
06/09/92	22.32	321.30	None	None
09/28/92	31.92	311.70	None	None

See notes on page 3 of 3

Quarterly Groundwater Monitoring  
 Exxon Station 7-7003, Pleasanton, California

TABLE 1  
 CUMULATIVE GROUNDWATER MONITORING DATA  
 Exxon Service Station 7-7003  
 Pleasanton, California  
 (Page 3 of 3)

Date	Depth to Water (ft)	Groundwater Elevation (ft)	Product Thickness (ft)	Sheen
<u>VE-1 (Wellhead Elevation = 343.38 ft)</u> 09/28/92	31.92	311.40	None	None

Elevations relative to mean sea level datum. (Surveyed by Ron Archer Civil Engineer, Inc.)  
 Depth to water measured from top of wellhead casing

Quarterly Groundwater Monitoring  
 Exxon Station 7-7003, Pleasanton, California

TABLE 2  
 CUMULATIVE RESULTS OF LABORATORY ANALYSES OF GROUNDWATER  
 SAMPLES FOR GASOLINE HYDROCARBON COMPOUNDS  
 Exxon Service Station 7-7003  
 Pleasanton, California  
 (Page 1 of 3)

Well/ Sample Number	Date	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes
<b>MW-1</b>						
W-28-MW1	02/23/90	3,300	21	9.2	59	19
W-27-MW1	06/15/90	1,300	7.9	5.9	32	58
W-29-MW1	08/90	2,500	77	280	50	250
W-28-MW1	12/18/90	390	9	2	43	400
W-23-MW1	03/19/91	4,500	45	12	240	300
W-22-MW1	06/27/91	710	5.4	2.6	29	34
W-28-MW1	09/26/91	290	1.9	<0.5	0.6	0.6
W-25-MW1	01/10/92*	5,400	52	15	690	496
MW1	03/13/92	14,000	87	22	1200	1000
W-21.5-MW1	06/09/92	4,500	27	5.9	400	300
Exx MW1	09/29/92	60	<0.5	0.9	<0.5	<0.5
<b>MW-2</b>						
W-29-MW2	02/23/90	650	3	2	0.98	6.5
W-27-MW2	06/15/90	670	<0.5	2.6	<0.5	<0.5
W-28-MW2	08/90	1,300	24	130	37	170
W-28-MW2	12/18/90	470	<0.3	0.5	1	3
W-23-MW2	03/19/91	700	10	3.4	6.1	3.8
W-21-MW2	06/27/91	1,400	8.7	2.1	8.8	33
W-27-MW2	09/26/91	300	<0.5	0.6	0.6	3.9
W-25-MW2	01/10/92*	800	9.3	1.0	2.4	3.2
MW2	03/13/92	350	<0.5	0.6	3.0	1.0
W-21-MW2	06/09/92	150	1.9	2.5	1.1	5.1
Exx MW2	09/29/92	71	<0.5	<0.5	<0.5	<0.5
<b>MW-3</b>						
W-27-MW3	02/23/90	<20	<0.5	<0.5	<0.5	<0.5
W-27-MW3	06/15/90	200	<0.5	<0.5	<0.5	<0.5
W-27-MW3	08/90	3,200	54	380	23	400
W-27-MW3	12/18/90	200	8	12	6	24
W-22-MW3	03/19/91	<50	<0.5	<0.5	<0.5	<0.5
W-21-MW3	06/27/91	<50	<0.5	<0.5	<0.5	<0.5
W-27-MW3	09/26/91	<50	<0.5	<0.5	<0.5	<0.5
W-24-MW3	01/10/92*	<50	<0.5	<0.5	<0.5	<0.5
MW3	03/13/92	<50	<0.5	<0.5	<0.5	<0.5
W-21-MW3	06/09/92	<50	<0.5	<0.5	<0.5	<0.5
Exx MW3	09/28/92	<50	<0.5	<0.5	<0.5	<0.5

See notes on page 3 of 3



Quarterly Groundwater Monitoring  
 Exxon Station 7-7003, Pleasanton, California

 TABLE 2  
 CUMULATIVE RESULTS OF LABORATORY ANALYSES OF GROUNDWATER  
 SAMPLES FOR GASOLINE HYDROCARBON COMPOUNDS

Exxon Service Station 7-7003

Pleasanton, California

(Page 2 of 3)

Well/ Sample Number	Date	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes	
<b>MW-4</b>							
W-34-MW4	06/15/90	<20	<0.5	<0.5	<0.5	<0.5	
W-33-MW4	08/90	120	5.2	5.4	5.4	9.9	
W-33-MW4	12/18/90	50	7	1	<0.3	2	
W-26-MW4	03/19/91	160	1.8	0.8	2.2	11	
W-25-MW4	06/27/91	<50	<0.5	<0.5	<0.5	<0.5	
W-32-MW4	09/26/91	<50	<0.5	<0.5	<0.5	<0.5	
W-29-MW4	01/10/92*	98	0.9	<0.5	7.6	4.4	
MW4	03/13/92	82	1.2	<0.5	5.3	4.3	
W-25-MW4	06/09/92	<50	0.6	1.0	<0.5	2.5	
Exx MW4	09/29/92	<50	<0.5	<0.5	<0.5	<0.5	
<b>MW-5</b>							
W-26-MW5	06/15/90	<20	<0.5	<0.5	<0.5	<0.5	
W-28-MW5	08/90	210	9.7	12	7.6	17	
W-28-MW5	12/18/90	190	2	3.5	2	8	
W-23-MW5	03/19/91	<50	<0.5	<0.5	<0.5	<0.5	
W-22-MW5	06/27/91	<50	<0.5	<0.5	<0.5	<0.5	
W-28-MW5	09/26/91	<50	<0.5	<0.5	<0.5	<0.5	
W-26-MW5	01/10/92*	<50	<0.5	<0.5	<0.5	0.6	
MW5	03/13/92	<50	<0.5	<0.5	<0.5	<0.5	
	06/09/92	Not Sampled-Insufficient Water					
Exx MW5	09/28/92	<50	<0.5	<0.5	<0.5	<0.5	
<b>MW-6</b>							
W-34-MW6	03/19/91	<50	<0.5	<0.5	<0.5	<0.5	
W-35-MW6	06/27/91	<50	2.6	1.8	0.8	<0.30	
W-40-MW6	09/26/91	<50	<0.5	<0.5	<0.5	<0.5	
W-36-MW6	01/10/92*	<50	<0.5	<0.5	<0.5	<0.5	
MW6	03/13/92	<50	<0.5	<0.5	<0.5	<0.5	
W-33-MW6	06/09/92	<50	<0.5	<0.5	<0.5	<0.5	
Exx MW6	09/28/92	<50	<0.5	<0.5	<0.5	<0.5	

See notes on page 3 of 3

Quarterly Groundwater Monitoring  
Exxon Station 7-7003, Pleasanton, California

TABLE 2  
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF GROUNDWATER  
SAMPLES FOR GASOLINE HYDROCARBON COMPOUNDS  
Exxon Service Station 7-7003  
Pleasanton, California  
(Page 3 of 3)

Well/ Sample Number	Date	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes
MW-7						
W-24-MW7	03/19/91	140	<0.5	<0.5	<0.5	<0.5
W-23-MW7	06/27/91	100	5.2	5.6	3.9	16
	09/26/91		Well Inaccessible			
W-26-MW7	01/10/92*	<50	<0.5	<0.5	<0.5	<0.5
MW7	03/13/92	120	<0.5	<0.5	<0.5	<0.5
W-22-MW7	06/09/92	81	<0.5	0.5	<0.5	<0.5
Exx MW7	09/28/92	<50	<0.5	<0.5	<0.5	<0.5

TPHg : total petroleum hydrocarbons as gasoline.

ppb : parts per billion

< : below the detection limits of the analysis

(No. following < indicates applicable detection limit)

\* : sample collected for fourth quarter 1991 monitoring

Sample identification:

W-22-MW7

┌───┐  
├───┤ Well number  
├───┤ Sample Depth in feet  
└───┘ Water sample

Quarterly Groundwater Monitoring  
Exxon Station 7-7003, Pleasanton, California

TABLE 3  
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF GROUNDWATER  
SAMPLES FOR LEAD, TOG, AND VOCs  
Exxon Service Station 7-7003  
Pleasanton, California  
(Page 1 of 3)

Sample Number	Date	Lead ppm	TOG ppm	VOCs ppb
MW-1				
W-28-MW1	02/23/90	0.01	NA	NA
W-27-MW1	06/15/90	<0.05	NA	NA
W-29-MW1	08/90	<0.05	NA	NA
W-28-MW1	12/18/90	<0.1*	NA	NA
W-23-MW1	03/19/91	<0.1*	NA	12.0 <sup>d</sup>
W-22-MW1	06/27/91	<0.1*	NA	ND
W-28-MW1	09/26/91	<0.1*	NA	ND
W-25-MW1	01/10/92	<0.1*	NA	6.1 <sup>1</sup>
MW1	03/13/92			2.1 <sup>5</sup>
				14 <sup>1</sup>
				1.2 <sup>4</sup>
				0.5 <sup>6</sup>
				0.8 <sup>3</sup>
W-21.5-MW1	06/09/92	<0.1*	<5.0	ND
Exx MW1	09/29/92	NA	<5.0	ND
MW-2				
W-29-MW2	02/23/90	0.008	NA	NA
W-27-MW2	06/15/90	<0.05	NA	NA
W-28-MW2	08/90	<0.05	NA	NA
W-28-MW2	12/18/90	<0.1*	NA	NA
W-23-MW2	03/19/91	<0.1*	NA	ND
W-21-MW2	06/27/91	<0.1*	NA	ND
W-27-MW2	09/26/91	<0.1*	NA	ND
W-25-MW2	01/10/92	<0.1*	NA	ND
MW2	03/13/92		NA	ND
W-21-MW2	06/09/92	<0.1*	NA	ND
Exx MW2	09/29/92	NA	NA	ND
MW-3				
W-27-MW3	02/23/90	0.01	NA	NA
W-27-MW3	06/15/90	<0.05	NA	NA
W-27-MW3	08/90	<0.05	NA	NA
W-27-MW3	12/18/90	<0.1*	<5.0	4.1 <sup>3</sup>
W-22-MW3	03/19/91	<0.1*	<5.0	ND
W-21-MW3	06/27/91	<0.1*	<5.0	ND
W-27-MW3	09/26/91	<0.1*	<5.0	ND
W-24-MW3	01/10/92	<0.1*	5.1	ND
MW3	03/13/92		5.0	ND
W-21-MW3	06/09/92	<0.1*	<5.0	ND
Exx MW3	09/28/92	NA	<5.0	ND

See notes on page 3 of 3

Quarterly Groundwater Monitoring  
Exxon Station 7-7003, Pleasanton, California

TABLE 3  
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF GROUNDWATER  
SAMPLES FOR LEAD, TOG, AND VOCs  
Exxon Service Station 7-7003  
Pleasanton, California  
(Page 2 of 3)

Sample Number	Date	Lead ppm	TOG ppm	VOCs ppb
MW-4				
W-34-MW4	06/15/90	<0.05	NA	NA
W-33-MW4	08/90	<0.05	NA	NA
W-33-MW4	12/18/90	<0.1*	NA	NA
W-26-MW4	03/19/91	<0.1*	NA	ND
W-25-MW4	06/27/91	<0.1*	NA	ND
W-32-MW4	09/26/91	<0.1*	NA	1.0 <sup>4</sup>
W-29-MW4	01/10/92	<0.1*	NA	1.0 <sup>4</sup>
MW4	03/13/92		NA	ND
W-25-MW4	06/09/92	<0.1*	NA	0.7 <sup>7</sup>
Exx MW4	09/29/92	NA	NA	ND
MW-5				
W-26-MW5	06/15/90	0.06	NA	NA
W-28-MW5	08/90	<0.05	NA	NA
W-28-MW5	12/18/90	<0.1*	NA	NA
W-23-MW5	03/19/91	<0.1*	NA	0.5 <sup>1</sup>
				1.0 <sup>2</sup>
W-22-MW5	06/27/91	<0.1*	NA	ND
W-28-MW5	09/26/91	<0.1*	NA	ND
W-26-MW5	01/10/92	<0.1*	NA	ND
MW5	03/13/92		NA	ND
	06/09/92	Not Sampled-Insufficient Water		
Exx MW5	09/28/92	NA	NA	ND
MW-6				
W-34-MW6	03/19/91	<0.1*	NA	ND
W-35-MW6	06/27/91	<0.1*	NA	ND
W-40-MW6	09/26/91	<0.1*	NA	ND
W-36-MW6	01/10/92	<0.1*	NA	ND
MW6	03/13/92		NA	ND
W-33-MW6	06/09/92	<0.1*	NA	ND
Exx MW6	09/28/92	NA	NA	ND

See notes on page 3 of 3

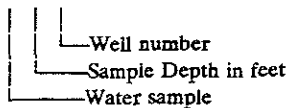
TABLE 3  
 CUMULATIVE RESULTS OF LABORATORY ANALYSES OF GROUNDWATER  
 SAMPLES FOR LEAD, TOG, AND VOCs  
 Exxon Service Station 7-7003  
 Pleasanton, California  
 (Page 3 of 3)

Sample Number	Date	Lead ppm	TOG ppm	VOCs ppb
MW-7				
W-24-MW7	03/19/91	<0.1*	NA	0.7 <sup>1</sup> 0.8 <sup>2</sup>
W-23-MW7	06/27/91	<0.1*	NA	ND
	09/26/91	Well Inaccessible		
W-26-MW7	01/10/92	<0.1*	NA	ND
MW7	03/13/92		NA	ND
W-22-MW7	06/09/92	<0.1*	NA	ND
Exx MW7	09/28/92	NA	NA	ND

ppm : parts per million  
 ppb : parts per billion  
 TOG : Total oil and grease  
 VOCs : Volatile organic compounds (EPA Method 601)  
 \* : Organic lead  
 1 : Chloroform  
 2 : Bromodichloromethane  
 3 : Tetrachloroethene  
 4 : 1,2-Dichloroethane  
 5 : Methylene Chloride  
 6 : Trichloroethene  
 ND : Compounds not detected; see laboratory report for method detection limit  
 < : Below the detection limits of the analysis.  
 NA : Not analyzed

Sample identification:

W-22-MW7



**APPENDIX A**

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

## GROUNDWATER SAMPLING PROTOCOL

The static water level and floating product level, if present, in each well that contained water and/or floating product were measured with an ORS Interphase Probe Model No. 1068018; which is accurate to the nearest 0.01 foot. These groundwater depths were subtracted from wellhead elevations (measured in February 22, 1990, and revised June 5, 1990, and April 9, 1991, by a licensed land surveyor, Ron Archer, Civil Engineer, Inc., of Pleasanton, California, to calculate the differences in groundwater elevations.

Water 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. Any floating product is removed from the well.

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 four to six well casing volumes were purged before those characteristics stabilized. Water samples from the wells that do not obtain stability of the temperature, pH, and conductivity are considered to be "grab samples". Subjective turbidity observations were noted 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. Water samples were then collected with an Environmental Protection Agency (EPA) approved Teflon® sampler which had been cleaned with Alconox® and deionized water. Water samples from the wells that do not recover to approximately 80% (due to slow recharging of the well) of the initial water level within the time between purging and sampling are considered to be "grab samples". The water samples were carefully poured into 40-milliliter glass vials or one-liter glass amber bottles, which were filled so as to

Quarterly Groundwater Monitoring  
Exxon Station 7-7003, Pleasanton, California

November 30, 1992  
19025.05

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produce a positive meniscus. Each sample container was preserved with hydrochloric acid, when applicable, 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 7-7003

Job No. 19025.05

Date: September 29, 1992

Page 1 of 1

Well No. MW-1

Time Started 11:00

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY
11:00	Start purging MW-1				
11:00	0	71.6	6.49	1110	clear
11:06		71.4	6.47	1085	clear
11:12		73.2	6.70	1102	clear
11:15		DRY			
	RECOVER				
12:20		71.8	6.53	1123	clear
12:25		71.8	7.52	1101	clear
12:33	34.0	76.0	7.91	1112	clear
	Stop purging MW-1				
Notes:					
	Well Diameter (inches)	:	4"		
	Depth to Bottom (feet)	:	39.25		
	Depth to Water - initial (feet)	:	29.84		
	Time Sampled	:	14:45		
	Gallons per Well Casing Volume	:	6.13		
	Gallons Purged	:	34.0		
	Well Casing Volume Purged	:	5.53		
	Approximate Pumping Rate (gpm)	:	1.32		

**WELL PURGE DATA SHEET**

Project Name: Exxon 7-7003

Job No. 19025.05

Date: September 29, 1992

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Well No. MW-2

Time Started 10:10

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY
10:10	Start purging MW-2				
10:10	0	71.2	6.40	1128	silty
10:18					silty
10:20		71.6	6.66	1133	silty
10:26		71.2	6.85	1152	silty
10:33		70.7	6.57	1160	silty
10:43		71.6	6.50	1155	clear
10:46	26	71.6	6.52	1150	clear
	Stop purging MW-2				
Notes:					
		Well Diameter (inches) :	4"		
		Depth to Bottom (feet) :	39.35		
		Depth to Water - initial (feet) :	29.58		
		Time Sampled :	12:10		
		Gallons per Well Casing Volume :	6.38		
		Gallons Purged :	26.0		
		Well Casing Volume Purged :	4.08		
		Approximate Pumping Rate (gpm) :	0.72		

**WELL PURGE DATA SHEET**

Project Name: Exxon 7-7003

Job No. 19025.05

Date: September 28, 1992

Page 1 of 1

Well No. MW-3

Time Started 11:40

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY
11:40	Start purging MW-3				
11:40	0	68.7	6.25	1019	silty
11:52		68.7	6.36	931	clear
11:58		68.9	6.32	990	clear
12:02					
12:06		68.9	7.44	1047	clear
12:12	31	69.6	7.56	1031	clear
12:12	Stop purging MW-3				
Notes:					
Well Diameter (inches) : 4"					
Depth to Bottom (feet) : 39.04					
Depth to Water - initial (feet) : 28.67					
Time Sampled : 15:45					
Gallons per Well Casing Volume : 6.77					
Gallons Purged : 31.0					
Well Casing Volume Purged : 4.58					
Approximate Pumping Rate (gpm) : 0.96					

**WELL PURGE DATA SHEET**

Project Name: Exxon 7-7003

Job No. 19025.05

Date: September 29, 1992

Page 1 of 1

Well No. MW-4

Time Started 9:35

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY
9:35	Start purging MW-4				
9:35	0	69.8	6.51	1089	silty
9:40		69.4	6.54	1074	clear
9:45		69.2	6.53	1077	clear
9:49		69.6	6.68	1039	silty
9:55		69.6	6.76	1037	clear
	DRY				
11:30		70.7	6.76	1052	clear
11:37		71.6	6.83	1035	clear
11:40		70.7	7.00	1056	clear
11:45		71.1	7.33	1041	clear
11:48	43	71.2	7.45	1042	clear
	Stop purging MW-4				
Notes:					
Well Diameter (inches) : 4"					
Depth to Bottom (feet) : 47.62					
Depth to Water - initial (feet) : 34.41					
Time Sampled : 14:30					
Gallons per Well Casing Volume : 8.62					
Gallons Purged : 43.0					
Well Casing Volume Purged : 4.99					
Approximate Pumping Rate (gpm) : 1.13					

**WELL PURGE DATA SHEET**

Project Name: Exxon 7-7003

Job No. 19025.05

Date: September 28, 1992

Page 1 of 1

Well No. MW-5

Time Started 14:20

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY
14:20	Start purging MW-5				
14:20	0	71.1	6.42	997	silty
14:25		69.9	6.42	977	silty
14:28		69.9	6.48	968	silty
14:33		70.3	6.55	968	silty
14:36		69.9	6.52	967	silty
14:39		69.8	6.61	990	silty
14:47		70.9	6.54	971	silty
14:55	8.5	71.4	6.59	980	silty
	Stop purging MW-5				
Notes:					
	Well Diameter (inches)	:	4"		
	Depth to Bottom (feet)	:	33.44		
	Depth to Water - initial (feet)	:	30.26		
	Time Sampled	:	16:45		
	Gallons per Well Casing Volume	:	2.08		
	Gallons Purged	:	8.5		
	Well Casing Volume Purged	:	4.09		
	Approximate Pumping Rate (gpm)	:	0.24		

**WELL PURGE DATA SHEET**

Project Name: Exxon 7-7003

Job No. 19025.05

Date: September 28, 1992

Page 1 of 1

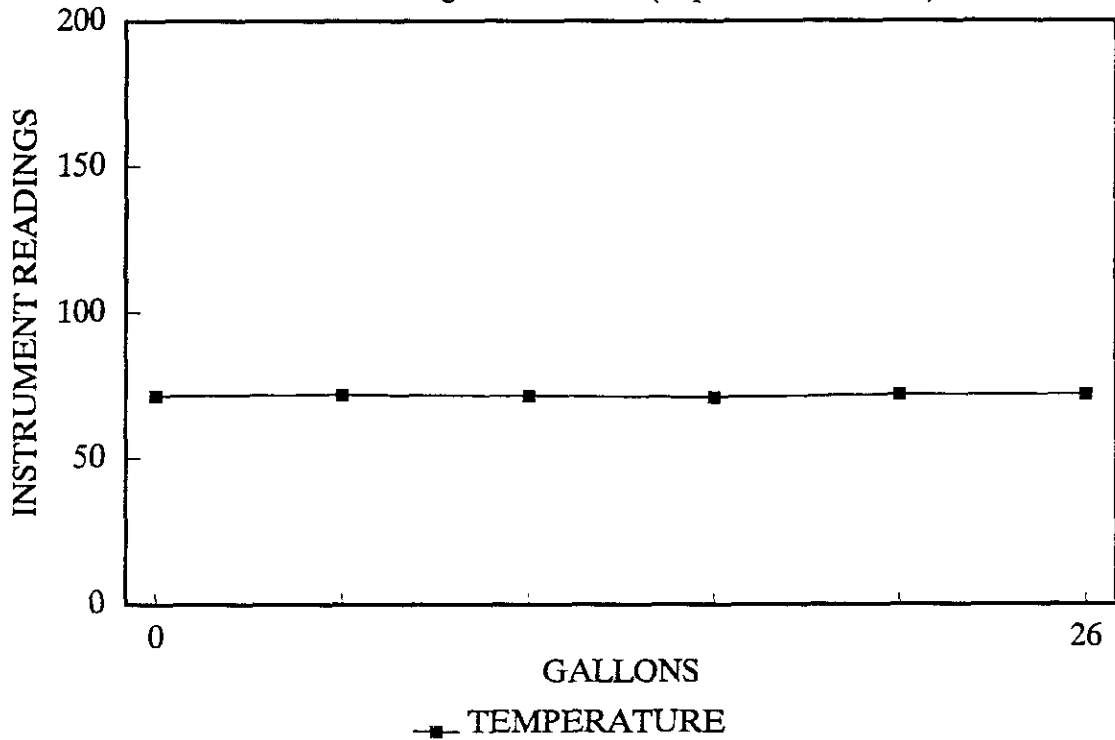
Well No. MW-6

Time Started 12:40

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY
12:40	Start purging MW-6				
12:40	0	83.8	6.64	1021	silty
12:50		70.9	6.75	793	silty
12:55		70.9	6.59	790	silty
13:00		70.7	6.56	843	clear
13:05		71.1	6.56	833	clear
13:14		70.1	6.53	848	clear
13:20		70.1	6.65	877	clear
13:25	47	70.3	6.68	866	
	Stop purging MW-6				
Notes:					
	Well Diameter (inches) :	4"			
	Depth to Bottom (feet) :	58.12			
	Depth to Water - initial (feet) :	40.96			
	Time Sampled :	16:15			
	Gallons per Well Casing Volume :	11.20			
	Gallons Purged :	47.0			
	Well Casing Volume Purged :	4.19			
	Approximate Pumping Rate (gpm) :	1.04			

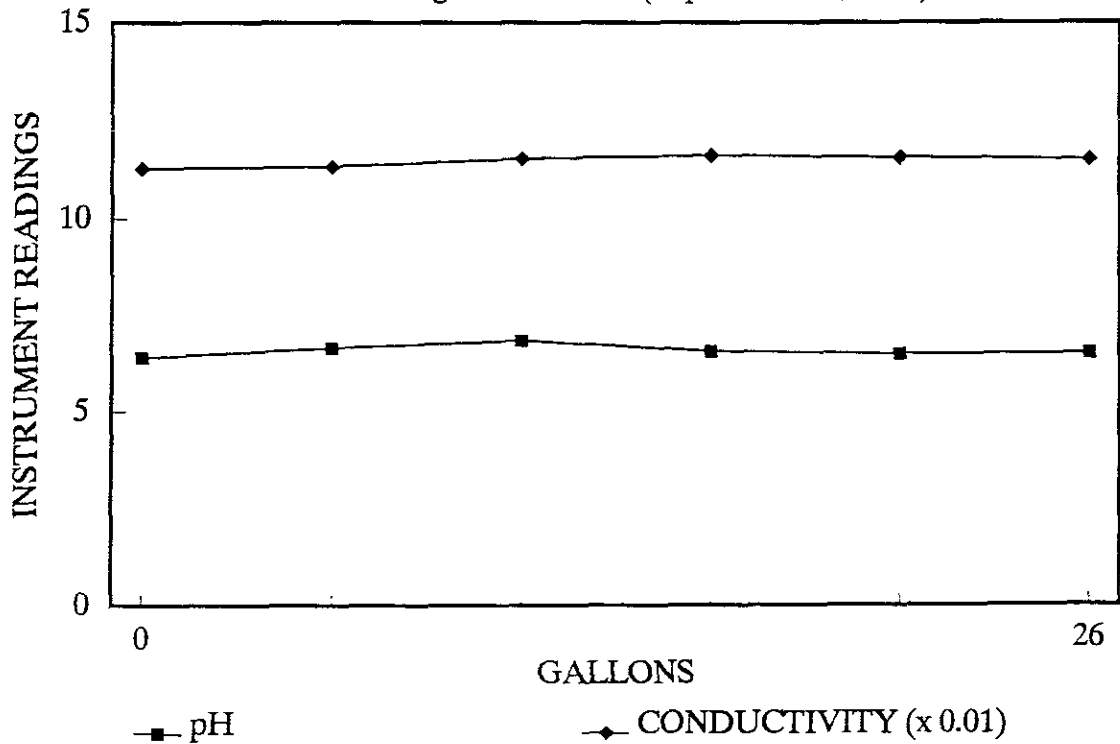
# EXXON 7003 STABILIZATION GRAPH

Monitoring Well MW-2 (September 29, 1992)



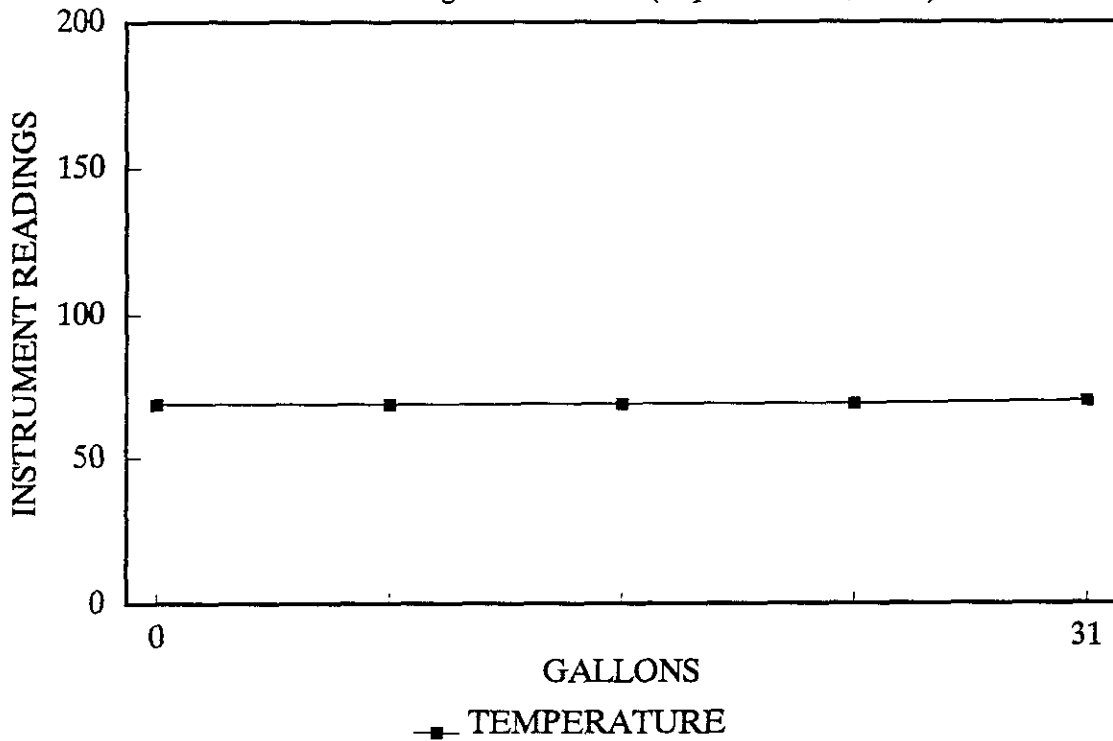
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Monitoring Well MW-2 (September 29, 1992)



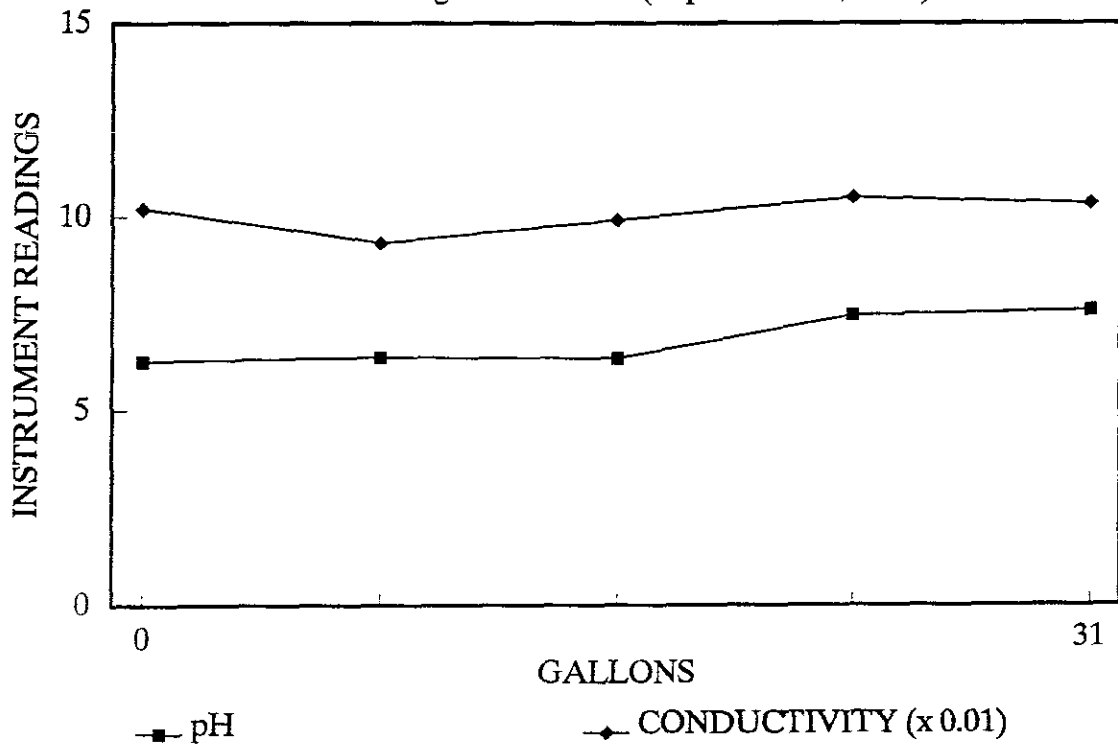
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Monitoring Well MW-3 (September 28, 1992)



# EXXON 7003 STABILIZATION GRAPH

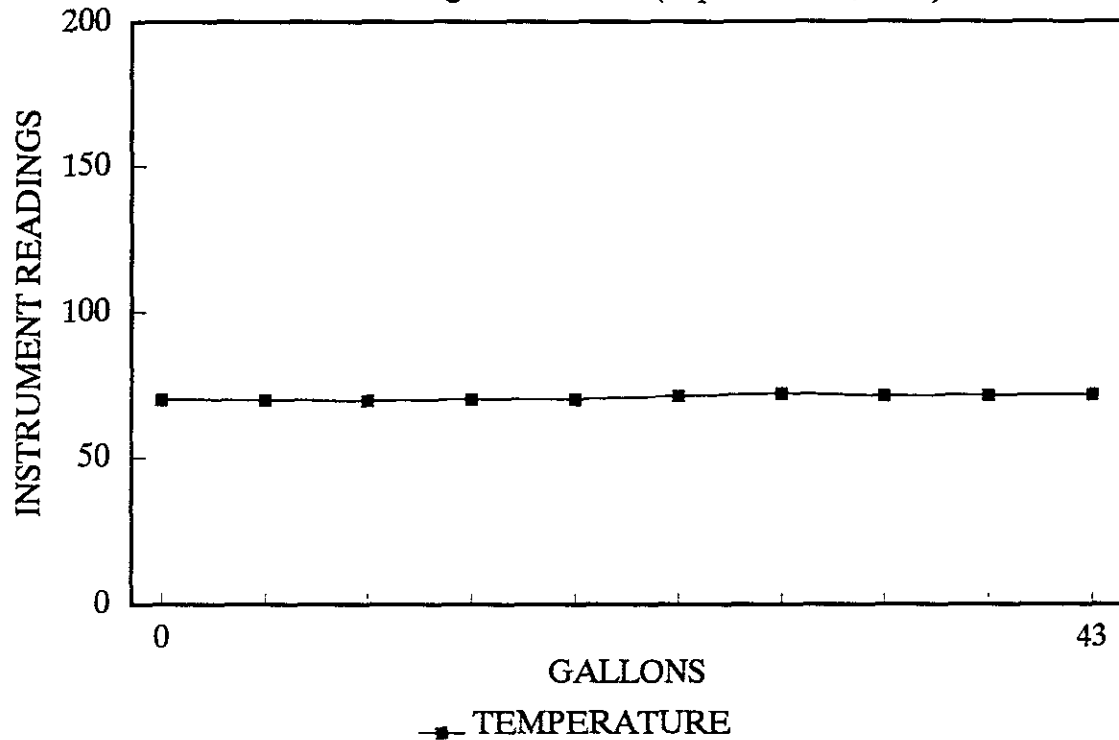
Monitoring Well MW-3 (September 28, 1992)





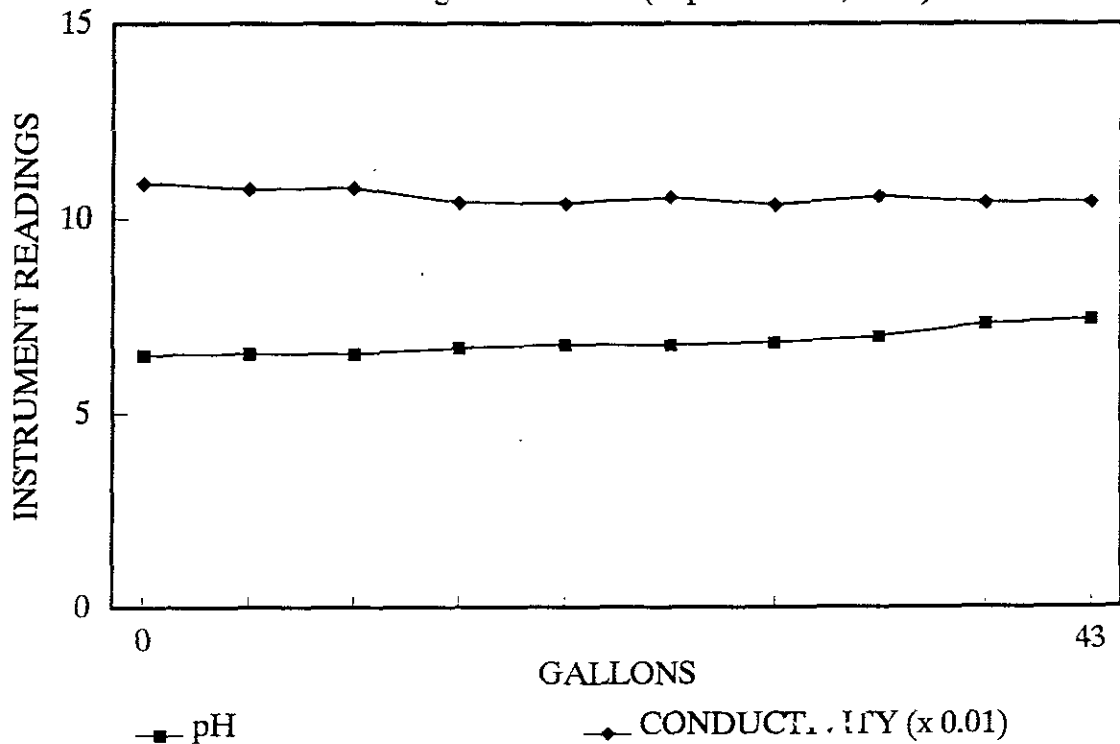
# EXXON 7003 STABILIZATION GRAPH

Monitoring Well MW-4 (September 29, 1992)



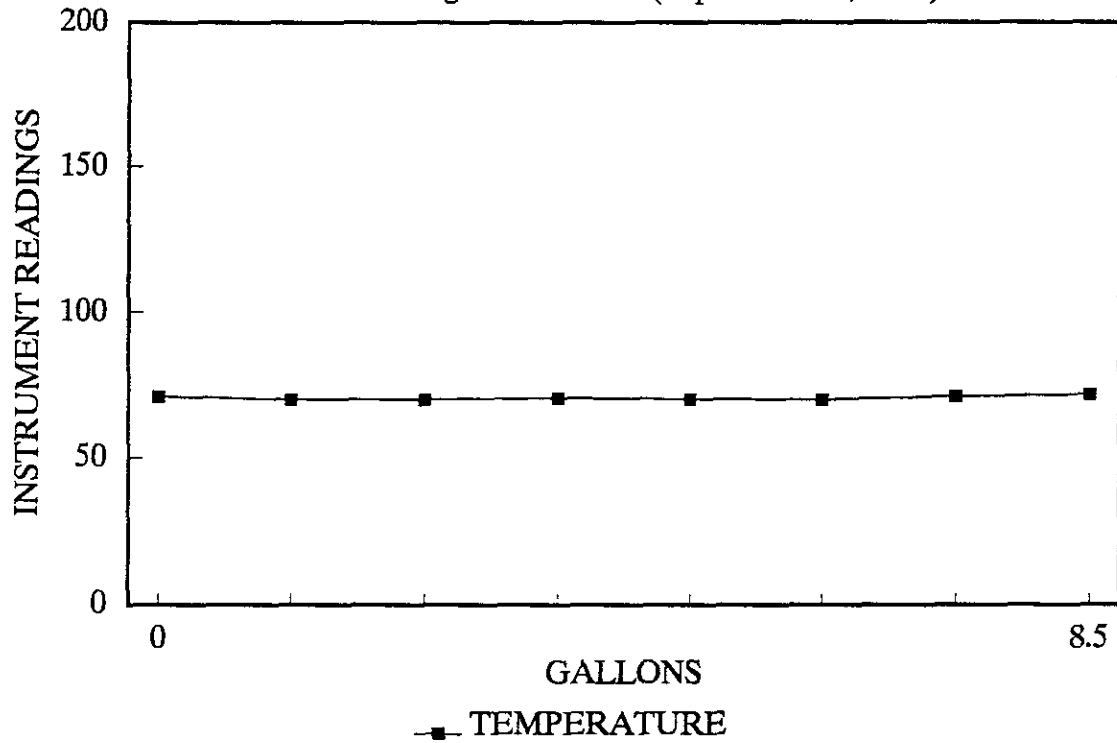
# EXXON 7003 STABILIZATION GRAPH

Monitoring Well MW-4 (September 29, 1992)



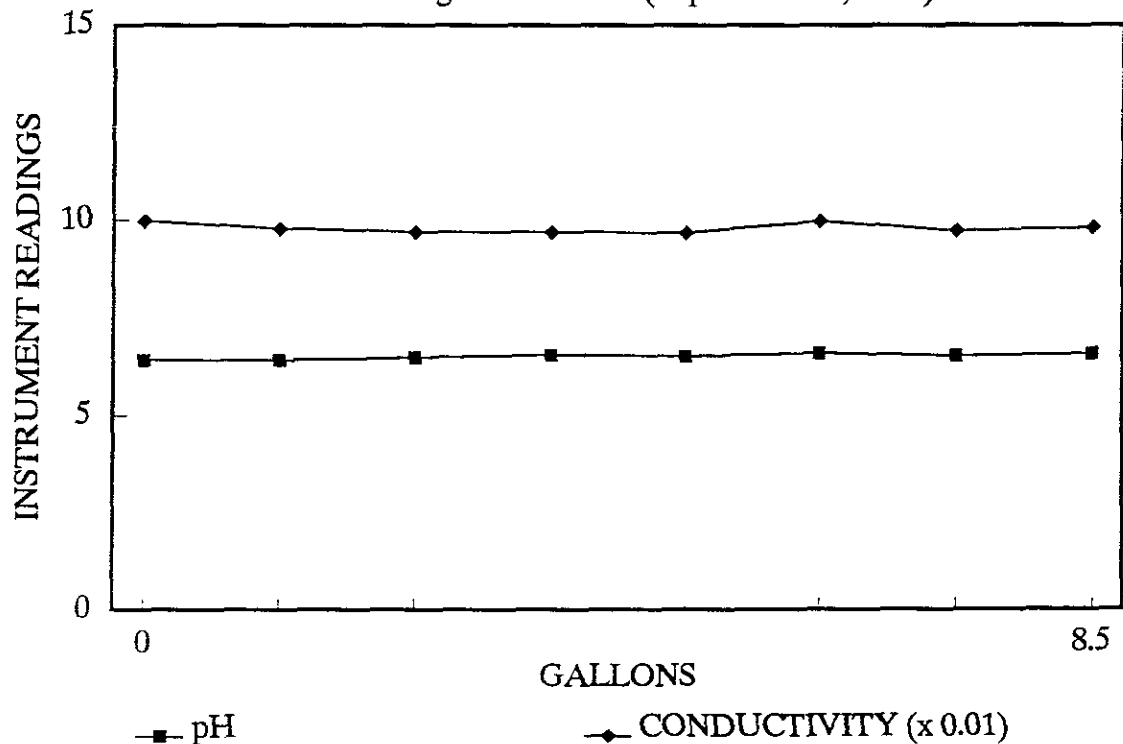
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Monitoring Well MW-5 (September 28, 1992)



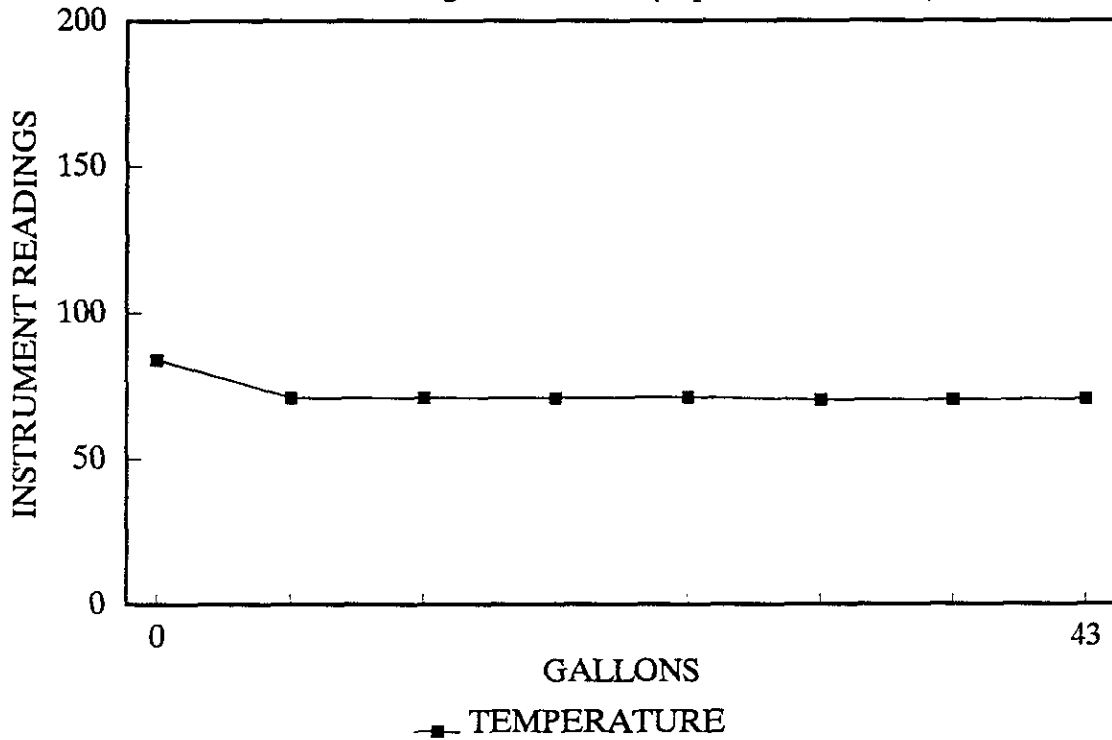
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Monitoring Well MW-5 (September 28, 1992)



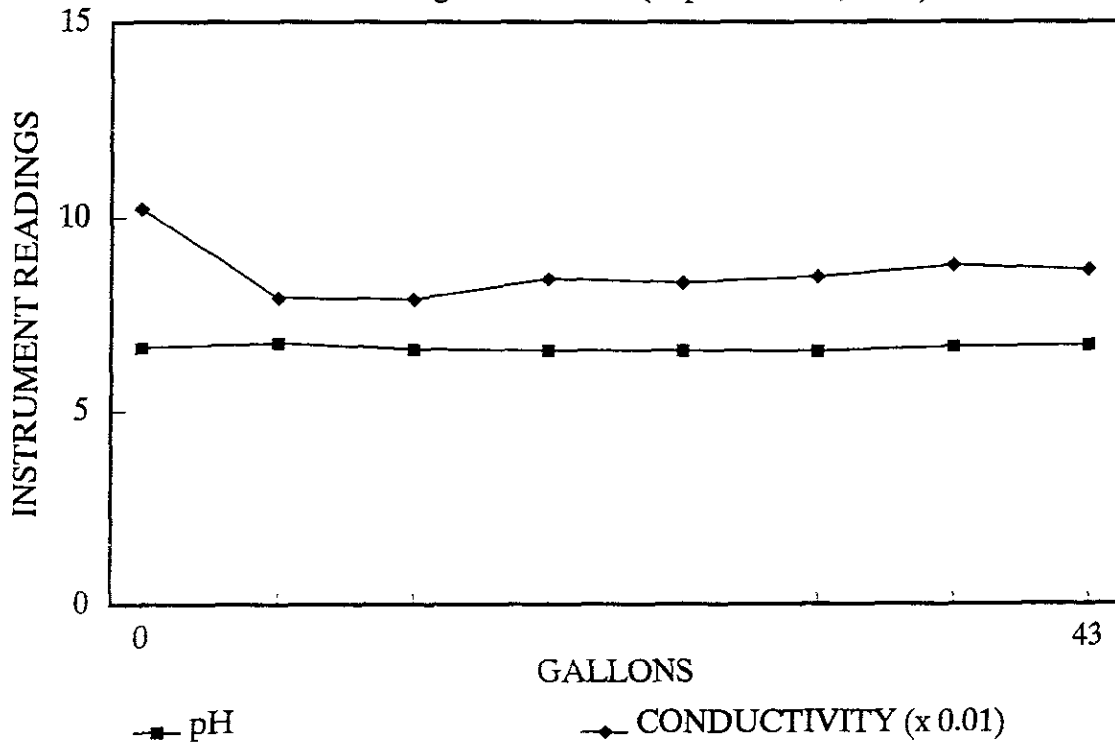
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Monitoring Well MW-6 (September 28, 1992)



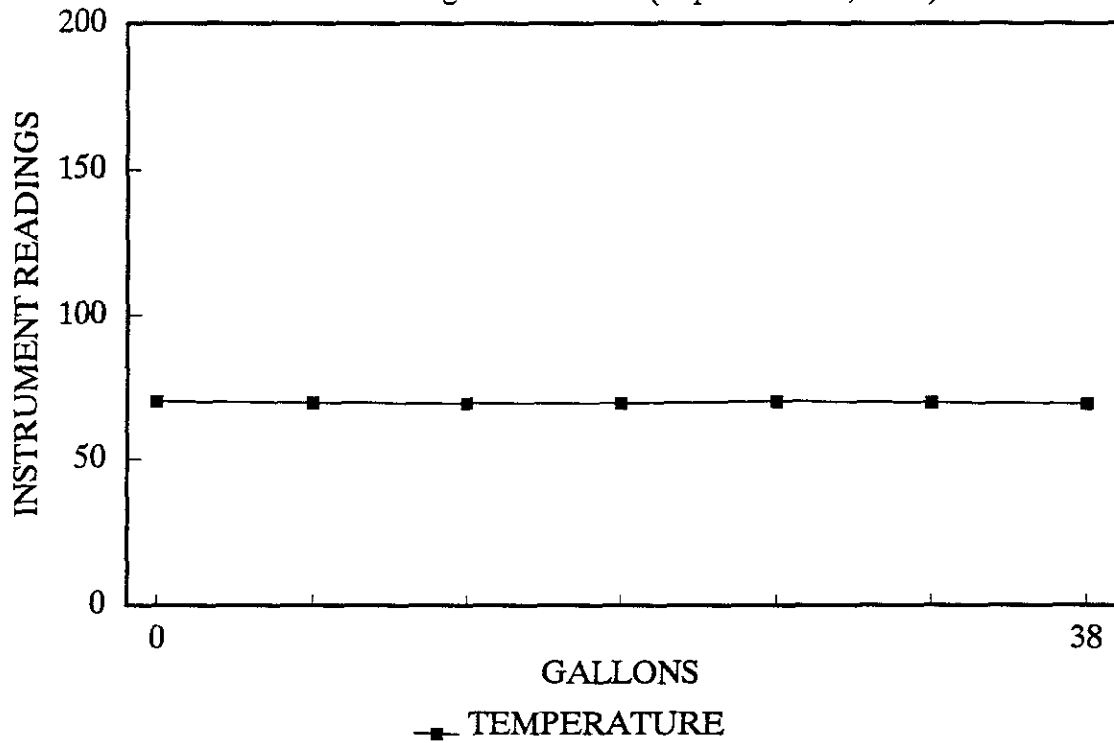
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Monitoring Well MW-6 (September 28, 1992)



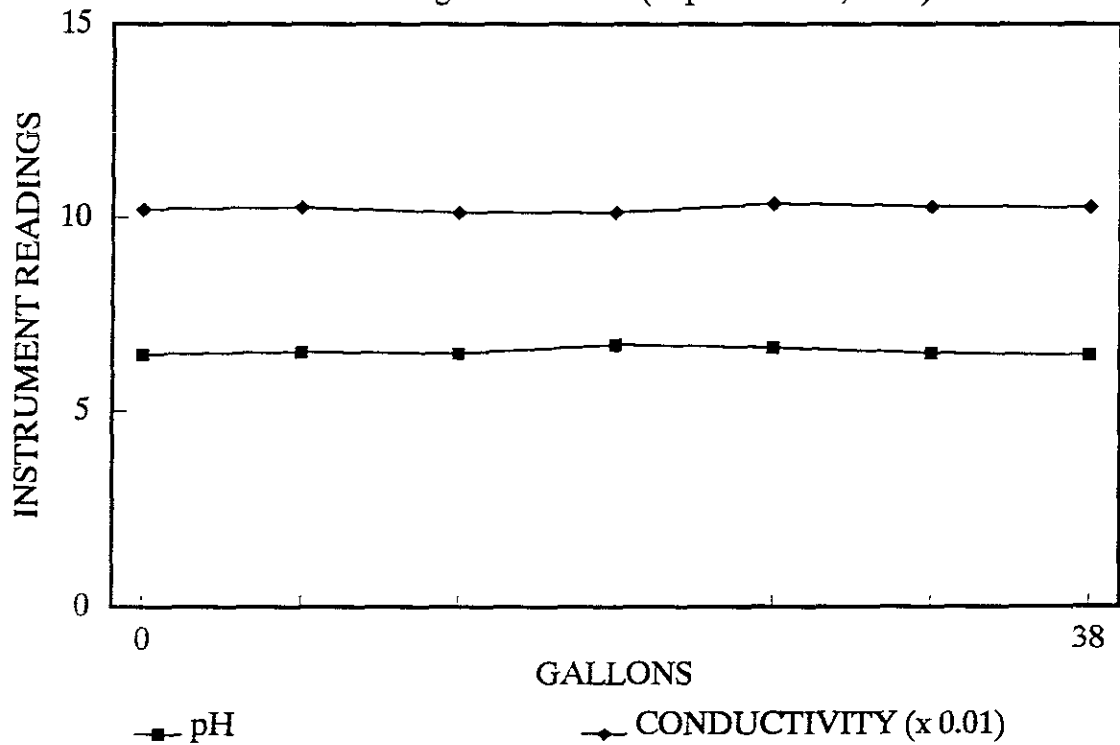
# EXXON 7003 STABILIZATION GRAPH

Monitoring Well MW-7 (September 28, 1992)



# EXXON 7003 STABILIZATION GRAPH

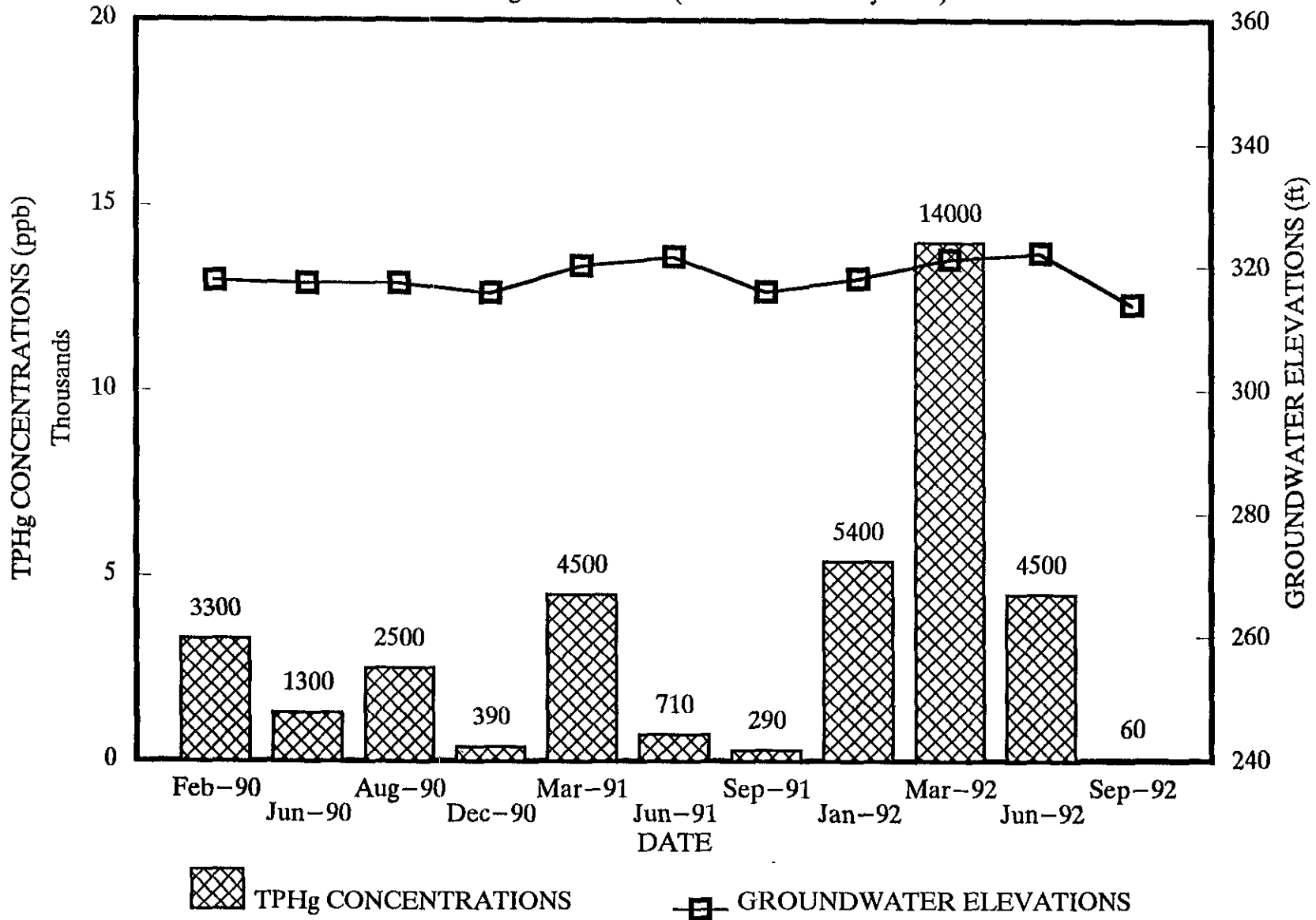
Monitoring Well MW-7 (September 28, 1992)



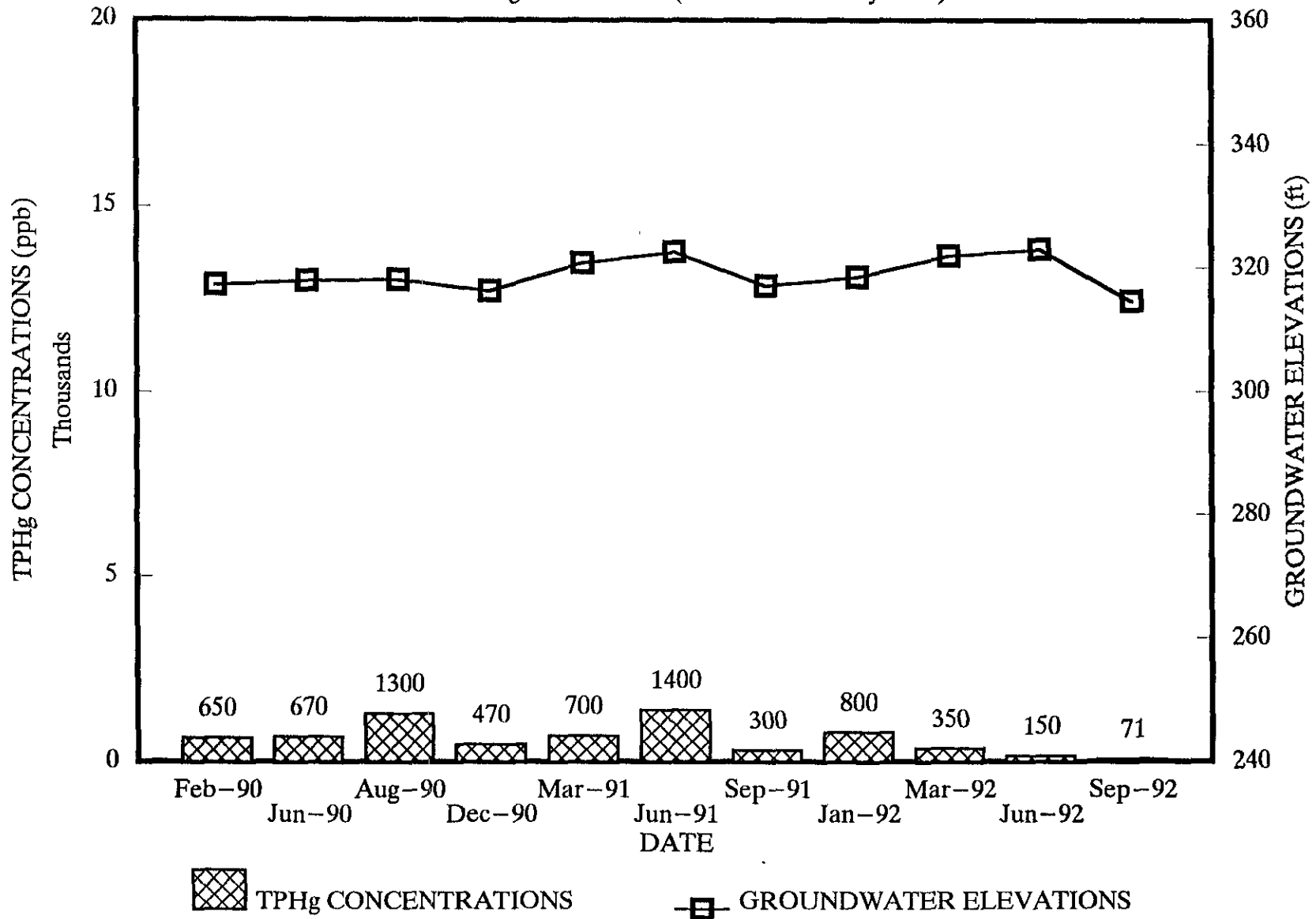
**APPENDIX B**

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

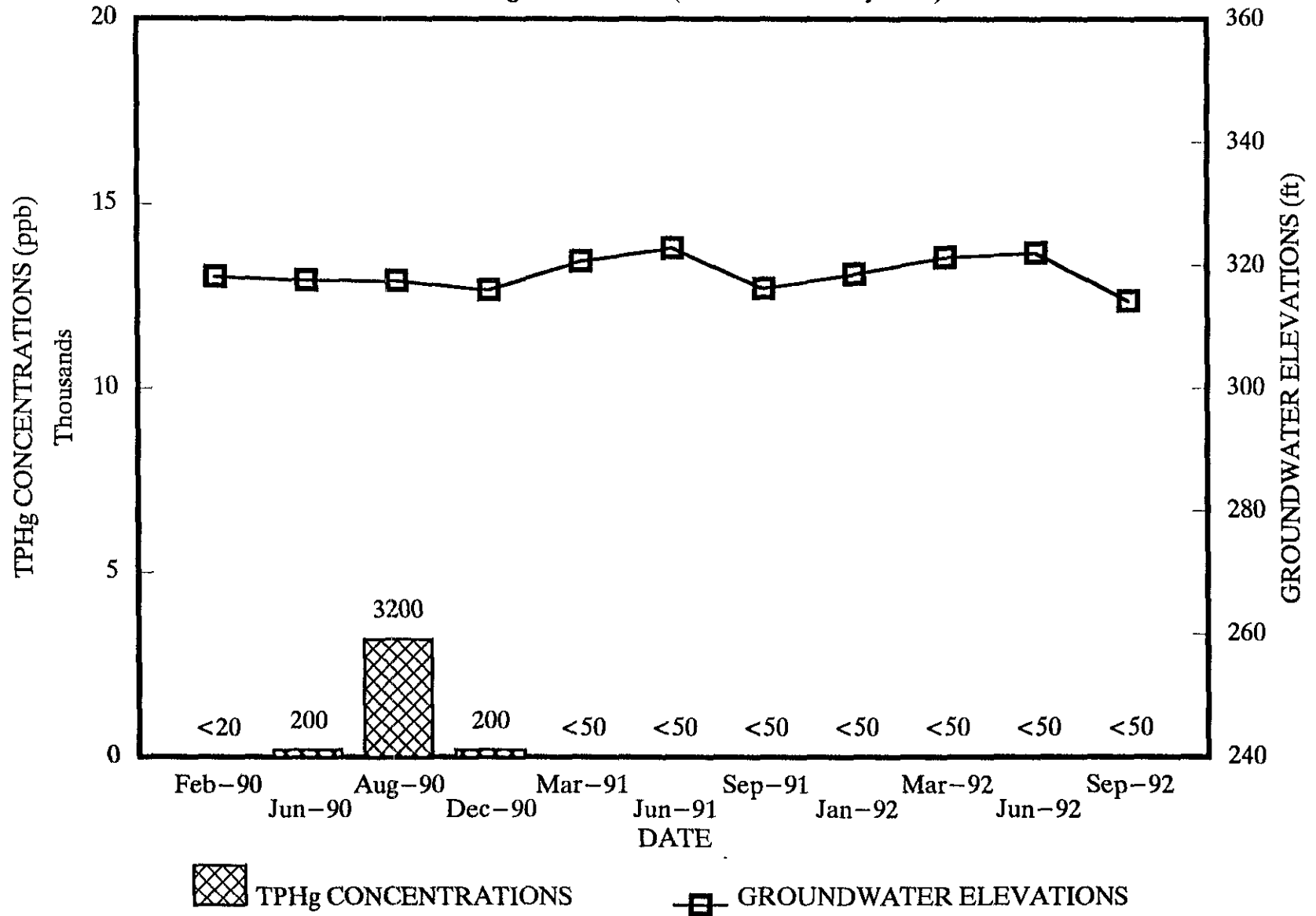
EXXON 7-7003 HYDROGRAPH AND TPHg CONCENTRATION GRAPH 1990-92  
Monitoring Well MW-1 (Installed February 1990)



EXXON 7-7003 HYDROGRAPH AND TPHg CONCENTRATION GRAPH 1990-92  
Monitoring Well MW-2 (Installed February 1990)

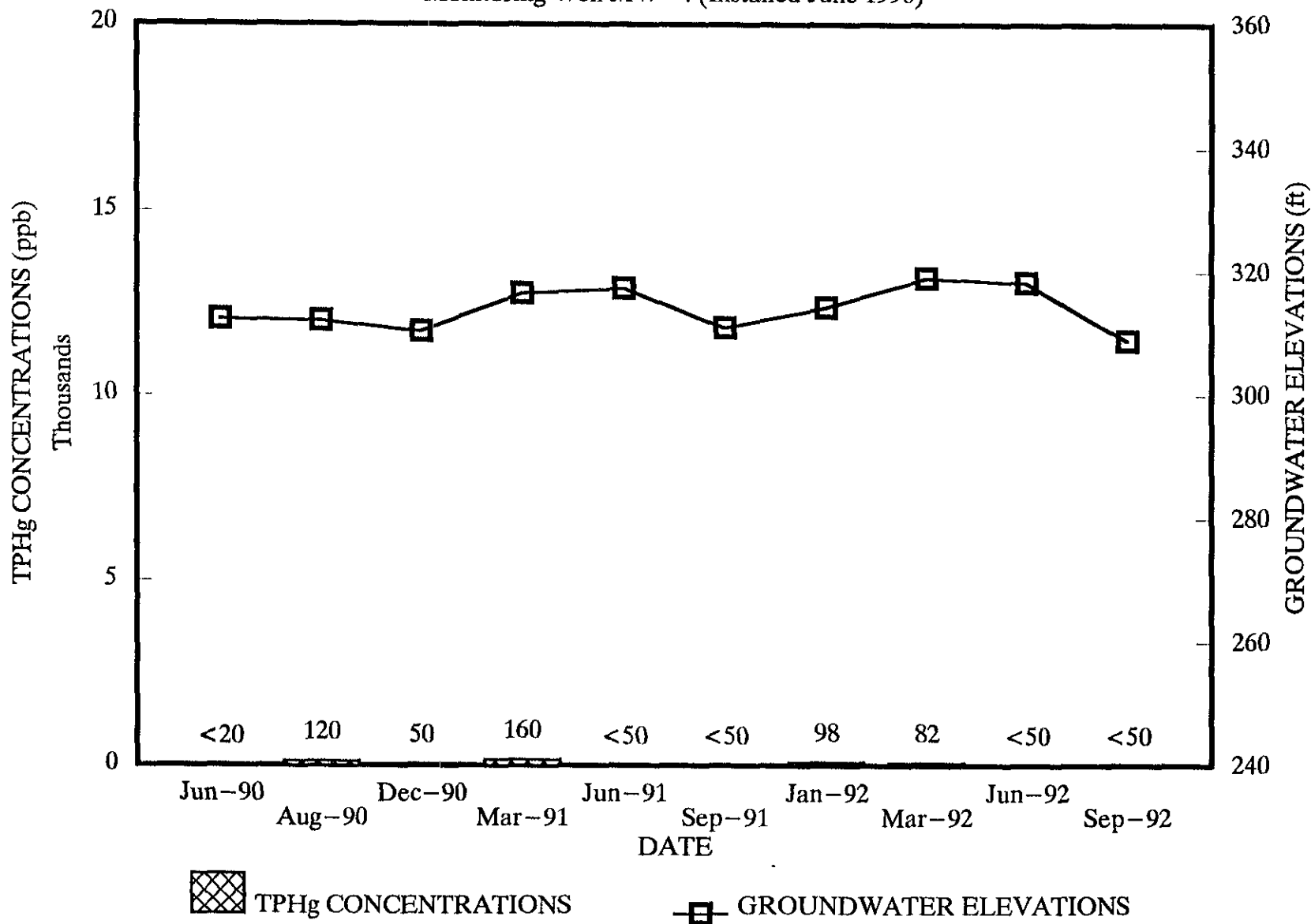


EXXON 7-7003 HYDROGRAPH AND TPHg CONCENTRATION GRAPH 1990-92  
Monitoring Well MW-3 (Installed February 1990)

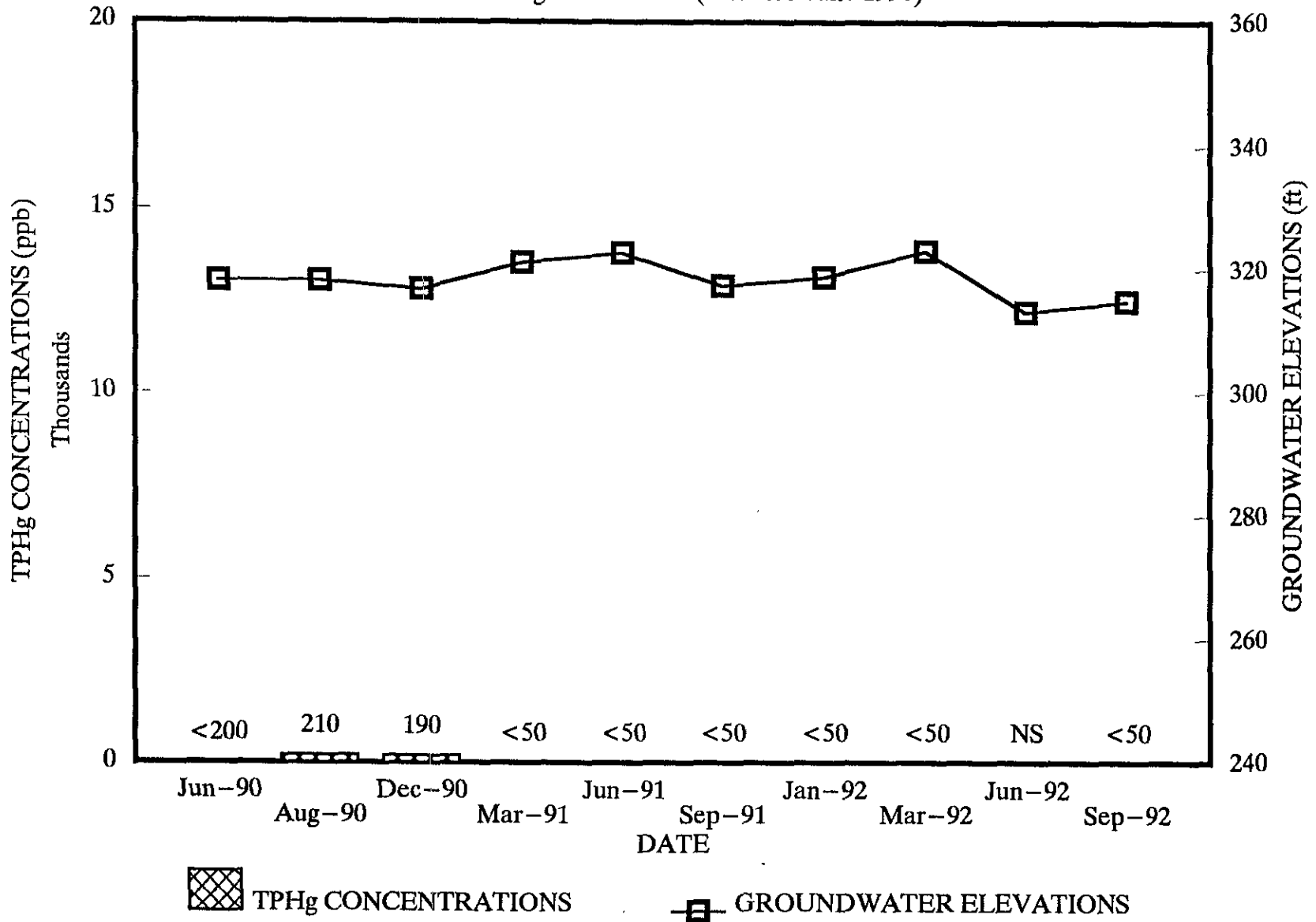




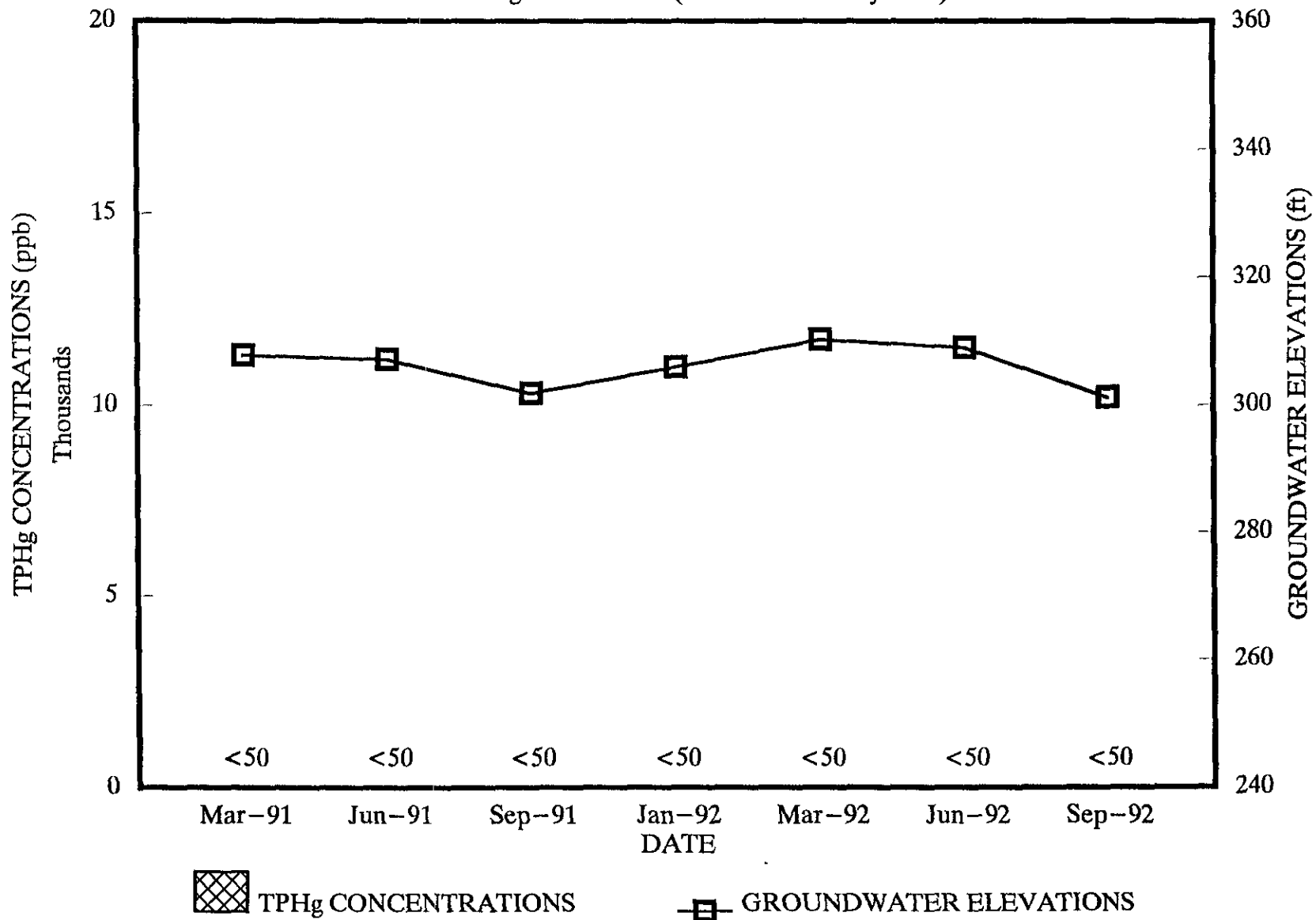
EXXON 7-7003 HYDROGRAPH AND TPHg CONCENTRATION GRAPH 1990-92  
Monitoring Well MW-4 (Installed June 1990)



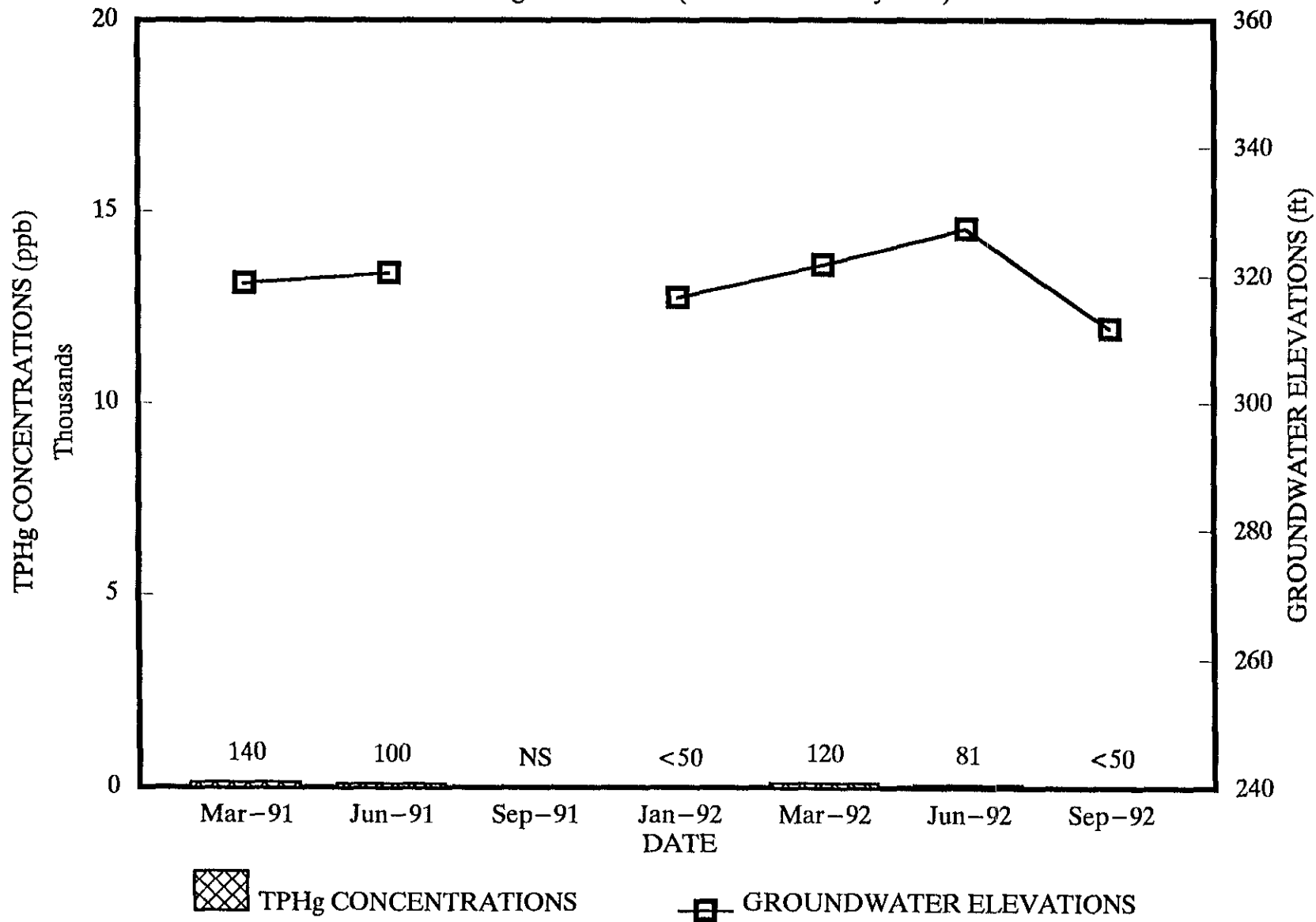
EXXON 7-7003 HYDROGRAPH AND TPHg CONCENTRATION GRAPH 1990-92  
 Monitoring Well MW-5 (Installed June 1990)



EXXON 7-7003 HYDROGRAPH AND TPHg CONCENTRATION GRAPH 1991-92  
Monitoring Well MW-6 (Installed February 1991)



EXXON 7-7003 HYDROGRAPH AND TPHg CONCENTRATION GRAPH 1991-92  
Monitoring Well MW-7 (Installed February 1991)



**APPENDIX C**

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





EXXON COMPANY, U.S.A.

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

CHAIN OF CUSTODY

421002509

J. Ziff



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



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

Consultant's Name: <b>RESNA</b>		Page <b>1</b> of <b>1</b>	
Address: <b>3315 Almaden Expressway Suite 34, SS, CA 95118</b>		Site Location: <b>Pleasanton</b>	
Project #:	Consultant Project # <b>19025.05</b>	Consultant Work Release #: <b>90060059/CO#2</b>	
Project Contact: <b>MARC BRIGGS</b>	Phone # <b>4082647723</b> Fax # <b>2642435</b>	Laboratory Work Release #:	
EXXON Contact: <b>MARIA GUENSLER</b> <input checked="" type="checkbox"/> EE <input type="checkbox"/> C&M	Phone # <b>510-246-8776</b> Fax # <b>2468768</b>	EXXON RAS #: <b>7-7003</b>	
Sampled by (print):	Sampler's Signature		
Shipment Method: <b>COURIER</b>	Air Bill #	Shipment Date:	
TAT <input type="checkbox"/> 24 hr <input type="checkbox"/> 48 hr <input type="checkbox"/> 72 hr <input checked="" type="checkbox"/> Standard (5 day)	ANALYSIS REQUIRED		

Sample Condition as Received  
 Temperature " C. \_\_\_\_\_  
 Cooler #: \_\_\_\_\_  
 Inbound Seal  Yes  No  
 Outbound Seal Yes No

COMMENTS

**see Attached  
 CoFC  
 Marc Briggs**

October 12, 1992

RECEIVED

OCT 15 1992

RESNA  
SAN JOSE

Mr. Marc Briggs  
Resna/Applied Geosystems  
3315 Almaden Expressway Suite 34  
San Jose, CA 95118


RE: PACE Project No. 421002.509  
Client Reference: Exxon 7-7003 (EE)

Dear Mr. Briggs:

Enclosed is the report of laboratory analyses for samples received October 02, 1992.

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

Sincerely,

  
Stephanie Matzo  
Project Manager

Enclosures



Resna/Applied Geosystems  
3315 Almaden Expressway Suite 34  
San Jose, CA 95118

October 12, 1992  
PACE Project Number: 421002509

Attn: Mr. Marc Briggs

Client Reference: Exxon 7-7003 (EE)

PACE Sample Number: 70 0218578  
Date Collected: 09/29/92  
Date Received: 10/02/92  
Client Sample ID: Exx 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):		-		10/06/92
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	60	10/06/92
PURGEABLE AROMATICS (BTXE BY EPA 8020M):				10/06/92
Benzene	ug/L	0.5	ND	10/06/92
Toluene	ug/L	0.5	0.9	10/06/92
Ethylbenzene	ug/L	0.5	ND	10/06/92
Xylenes, Total	ug/L	0.5	ND	10/06/92

PURGEABLE HALOCARBONS, EPA METHOD 601

Dichlorodifluoromethane	ug/L	2.0	ND	10/07/92
Chloromethane	ug/L	40	ND	10/07/92
Vinyl Chloride	ug/L	2.0	ND	10/07/92
Bromomethane	ug/L	2.0	ND	10/07/92
Chloroethane	ug/L	2.0	ND	10/07/92
Trichlorofluoromethane (Freon 11)	ug/L	2.0	ND	10/07/92
1,1-Dichloroethene	ug/L	0.5	ND	10/07/92
Methylene Chloride	ug/L	3.0	ND	10/07/92
trans-1,2-Dichloroethene	ug/L	0.5	ND	10/07/92
cis-1,2-Dichloroethene	ug/L	0.5	ND	10/07/92
1,1-Dichloroethane	ug/L	0.5	ND	10/07/92
Chloroform	ug/L	0.5	ND	10/07/92
1,1,1-Trichloroethane (TCA)	ug/L	0.5	ND	10/07/92
Carbon Tetrachloride	ug/L	0.5	ND	10/07/92
1,2-Dichloroethane (EDC)	ug/L	0.5	ND	10/07/92
Trichloroethene (TCE)	ug/L	0.5	ND	10/07/92
1,2-Dichloropropane	ug/L	0.5	ND	10/07/92

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

Mr. Marc Briggs  
Page 2

October 12, 1992  
PACE Project Number: 421002509

Client Reference: Exxon 7-7003 (EE)

PACE Sample Number: 70 0218578  
Date Collected: 09/29/92  
Date Received: 10/02/92  
Client Sample ID: Exx MW1

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

PURGEABLE HALOCARBONS, EPA METHOD 601

Bromodichloromethane	ug/L	0.5	ND	10/07/92
2-Chloroethylvinyl ether	ug/L	0.5	ND	10/07/92
cis-1,3-Dichloropropene	ug/L	0.5	ND	10/07/92
trans-1,3-Dichloropropene	ug/L	0.5	ND	10/07/92
1,1,2-Trichloroethane	ug/L	0.5	ND	10/07/92
Tetrachloroethene	ug/L	0.5	ND	10/07/92
Dibromochloromethane	ug/L	0.5	ND	10/07/92
Chlorobenzene	ug/L	0.5	ND	10/07/92
Bromoform	ug/L	0.5	ND	10/07/92
1,1,2,2-Tetrachloroethane	ug/L	0.5	ND	10/07/92
1,3-Dichlorobenzene	ug/L	0.5	ND	10/07/92
1,4-Dichlorobenzene	ug/L	0.5	ND	10/07/92
1,2-Dichlorobenzene	ug/L	0.5	ND	10/07/92
Bromochloromethane (Surrogate Recovery)			79%	10/07/92
1,4-Dichlorobutane (Surrogate Recovery)			81%	10/07/92

TOTAL OIL AND GREASE (SM 5520)

Total Oil & Grease SM 5520	mg/L	5.0	ND	10/09/92
Date Extracted			10/08/92	

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

Mr. Marc Briggs  
 Page 3

October 12, 1992  
 PACE Project Number: 421002509

Client Reference: Exxon 7-7003 (EE)

PACE Sample Number: 70 0218586  
 Date Collected: 09/29/92  
 Date Received: 10/02/92  
 Client Sample ID: Exx MW2

Parameter	Units	MDL		DATE ANALYZED
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ORGANIC ANALYSIS

TPH GASOLINE/BTEX

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	10/06/92
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	71	10/06/92
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	10/06/92
Benzene	ug/L	0.5	ND	10/06/92
Toluene	ug/L	0.5	ND	10/06/92
Ethylbenzene	ug/L	0.5	ND	10/06/92
Xylenes, Total	ug/L	0.5	ND	10/06/92

PURGEABLE HALOCARBONS, EPA METHOD 601

Dichlorodifluoromethane	ug/L	2.0	ND	10/07/92
Chloromethane	ug/L	40	ND	10/07/92
Vinyl Chloride	ug/L	2.0	ND	10/07/92
Bromomethane	ug/L	2.0	ND	10/07/92
Chloroethane	ug/L	2.0	ND	10/07/92
Trichlorofluoromethane (Freon 11)	ug/L	2.0	ND	10/07/92
1,1-Dichloroethene	ug/L	0.5	ND	10/07/92
Methylene Chloride	ug/L	3.0	ND	10/07/92
trans-1,2-Dichloroethene	ug/L	0.5	ND	10/07/92
cis-1,2-Dichloroethene	ug/L	0.5	ND	10/07/92
1,1-Dichloroethane	ug/L	0.5	ND	10/07/92
Chloroform	ug/L	0.5	ND	10/07/92
1,1,1-Trichloroethane (TCA)	ug/L	0.5	ND	10/07/92
Carbon Tetrachloride	ug/L	0.5	ND	10/07/92
1,2-Dichloroethane (EDC)	ug/L	0.5	ND	10/07/92
Trichloroethene (TCE)	ug/L	0.5	ND	10/07/92
1,2-Dichloropropane	ug/L	0.5	ND	10/07/92
Bromodichloromethane	ug/L	0.5	ND	10/07/92
2-Chloroethylvinyl ether	ug/L	0.5	ND	10/07/92

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

Mr. Marc Briggs  
 Page 4

October 12, 1992  
 PACE Project Number: 421002509

Client Reference: Exxon 7-7003 (EE)

PACE Sample Number: 70 0218586  
 Date Collected: 09/29/92  
 Date Received: 10/02/92  
 Client Sample ID: Exx MW2

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

PURGEABLE HALOCARBONS, EPA METHOD 601

cis-1,3-Dichloropropene	ug/L	0.5	ND	10/07/92
trans-1,3-Dichloropropene	ug/L	0.5	ND	10/07/92
1,1,2-Trichloroethane	ug/L	0.5	ND	10/07/92
Tetrachloroethene	ug/L	0.5	ND	10/07/92
Dibromochloromethane	ug/L	0.5	ND	10/07/92
Chlorobenzene	ug/L	0.5	ND	10/07/92
Bromoform	ug/L	0.5	ND	10/07/92
1,1,2,2-Tetrachloroethane	ug/L	0.5	ND	10/07/92
1,3-Dichlorobenzene	ug/L	0.5	ND	10/07/92
1,4-Dichlorobenzene	ug/L	0.5	ND	10/07/92
1,2-Dichlorobenzene	ug/L	0.5	ND	10/07/92
Bromochloromethane (Surrogate Recovery)			84%	10/07/92
1,4-Dichlorobutane (Surrogate Recovery)			84%	10/07/92

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

Mr. Marc Briggs  
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October 12, 1992  
PACE Project Number: 421002509

Client Reference: Exxon 7-7003 (EE)

PACE Sample Number: 70 0218594  
Date Collected: 09/28/92  
Date Received: 10/02/92  
Client Sample ID: Exx MW3

<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):			-	10/09/92
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	10/09/92
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	10/09/92
Benzene	ug/L	0.5	ND	10/09/92
Toluene	ug/L	0.5	ND	10/09/92
Ethylbenzene	ug/L	0.5	ND	10/09/92
Xylenes, Total	ug/L	0.5	ND	10/09/92

PURGEABLE HALOCARBONS, EPA METHOD 601

Dichlorodifluoromethane	ug/L	2.0	ND	10/07/92
Chloromethane	ug/L	40	ND	10/07/92
Vinyl Chloride	ug/L	2.0	ND	10/07/92
Bromomethane	ug/L	2.0	ND	10/07/92
Chloroethane	ug/L	2.0	ND	10/07/92
Trichlorofluoromethane (Freon 11)	ug/L	2.0	ND	10/07/92
1,1-Dichloroethene	ug/L	0.5	ND	10/07/92
Methylene Chloride	ug/L	3.0	ND	10/07/92
trans-1,2-Dichloroethene	ug/L	0.5	ND	10/07/92
cis-1,2-Dichloroethene	ug/L	0.5	ND	10/07/92
1,1-Dichloroethane	ug/L	0.5	ND	10/07/92
Chloroform	ug/L	0.5	ND	10/07/92
1,1,1-Trichloroethane (TCA)	ug/L	0.5	ND	10/07/92
Carbon Tetrachloride	ug/L	0.5	ND	10/07/92
1,2-Dichloroethane (EDC)	ug/L	0.5	ND	10/07/92
Trichloroethene (TCE)	ug/L	0.5	ND	10/07/92
1,2-Dichloropropane	ug/L	0.5	ND	10/07/92
Bromodichloromethane	ug/L	0.5	ND	10/07/92
2-Chloroethylvinyl ether	ug/L	0.5	ND	10/07/92

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

Mr. Marc Briggs  
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October 12, 1992  
 PACE Project Number: 421002509

Client Reference: Exxon 7-7003 (EE)

PACE Sample Number: 70 0218594  
 Date Collected: 09/28/92  
 Date Received: 10/02/92  
 Client Sample ID: Exx MW3

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

PURGEABLE HALOCARBONS, EPA METHOD 601

cis-1,3-Dichloropropene	ug/L	0.5	ND	10/07/92
trans-1,3-Dichloropropene	ug/L	0.5	ND	10/07/92
1,1,2-Trichloroethane	ug/L	0.5	ND	10/07/92
Tetrachloroethene	ug/L	0.5	ND	10/07/92
Dibromochloromethane	ug/L	0.5	ND	10/07/92
Chlorobenzene	ug/L	0.5	ND	10/07/92

Bromoform	ug/L	0.5	ND	10/07/92
1,1,2,2-Tetrachloroethane	ug/L	0.5	ND	10/07/92
1,3-Dichlorobenzene	ug/L	0.5	ND	10/07/92
1,4-Dichlorobenzene	ug/L	0.5	ND	10/07/92
1,2-Dichlorobenzene	ug/L	0.5	ND	10/07/92
Bromochloromethane (Surrogate Recovery)			81%	10/07/92

1,4-Dichlorobutane (Surrogate Recovery)			80%	10/07/92
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TOTAL OIL AND GREASE (SM 5520)

Total Oil & Grease SM 5520	mg/L	5.0	ND	10/09/92
Date Extracted			10/08/92	

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

Mr. Marc Briggs  
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October 12, 1992  
 PACE Project Number: 421002509

Client Reference: Exxon 7-7003 (EE)

PACE Sample Number: 70 0218608  
 Date Collected: 09/29/92  
 Date Received: 10/02/92  
 Client Sample ID: Exx MW4

Parameter	Units	MDL		DATE ANALYZED
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ORGANIC ANALYSIS

TPH GASOLINE/BTEX

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	10/09/92
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	10/09/92
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	10/09/92
Benzene	ug/L	0.5	ND	10/09/92
Toluene	ug/L	0.5	ND	10/09/92
Ethylbenzene	ug/L	0.5	ND	10/09/92
Xylenes, Total	ug/L	0.5	ND	10/09/92

PURGEABLE HALOCARBONS, EPA METHOD 601

Dichlorodifluoromethane	ug/L	2.0	ND	10/07/92
Chloromethane	ug/L	40	ND	10/07/92
Vinyl Chloride	ug/L	2.0	ND	10/07/92
Bromomethane	ug/L	2.0	ND	10/07/92
Chloroethane	ug/L	2.0	ND	10/07/92
Trichlorofluoromethane (Freon 11)	ug/L	2.0	ND	10/07/92
1,1-Dichloroethene	ug/L	0.5	ND	10/07/92
Methylene Chloride	ug/L	3.0	ND	10/07/92
trans-1,2-Dichloroethene	ug/L	0.5	ND	10/07/92
cis-1,2-Dichloroethene	ug/L	0.5	ND	10/07/92
1,1-Dichloroethane	ug/L	0.5	ND	10/07/92
Chloroform	ug/L	0.5	ND	10/07/92
1,1,1-Trichloroethane (TCA)	ug/L	0.5	ND	10/07/92
Carbon Tetrachloride	ug/L	0.5	ND	10/07/92
1,2-Dichloroethane (EDC)	ug/L	0.5	ND	10/07/92
Trichloroethene (TCE)	ug/L	0.5	ND	10/07/92
1,2-Dichloropropane	ug/L	0.5	ND	10/07/92
Bromodichloromethane	ug/L	0.5	ND	10/07/92
2-Chloroethylvinyl ether	ug/L	0.5	ND	10/07/92

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

Mr. Marc Briggs  
 Page 8

October 12, 1992  
 PACE Project Number: 421002509

Client Reference: Exxon 7-7003 (EE)

PACE Sample Number: 70 0218608  
 Date Collected: 09/29/92  
 Date Received: 10/02/92  
 Client Sample ID: Exx MW4

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

PURGEABLE HALOCARBONS, EPA METHOD 601

cis-1,3-Dichloropropene	ug/L	0.5	ND	10/07/92
trans-1,3-Dichloropropene	ug/L	0.5	ND	10/07/92
1,1,2-Trichloroethane	ug/L	0.5	ND	10/07/92
Tetrachloroethene	ug/L	0.5	ND	10/07/92
Dibromochloromethane	ug/L	0.5	ND	10/07/92
Chlorobenzene	ug/L	0.5	ND	10/07/92
Bromoform	ug/L	0.5	ND	10/07/92
1,1,2,2-Tetrachloroethane	ug/L	0.5	ND	10/07/92
1,3-Dichlorobenzene	ug/L	0.5	ND	10/07/92
1,4-Dichlorobenzene	ug/L	0.5	ND	10/07/92
1,2-Dichlorobenzene	ug/L	0.5	ND	10/07/92
Bromochloromethane (Surrogate Recovery)			80%	10/07/92
1,4-Dichlorobutane (Surrogate Recovery)			80%	10/07/92

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



Mr. Marc Briggs  
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October 12, 1992  
 PACE Project Number: 421002509

Client Reference: Exxon 7-7003 (EE)

PACE Sample Number: 70 0218616  
 Date Collected: 09/28/92  
 Date Received: 10/02/92  
 Client Sample ID: Exx MW5

Parameter	Units	MDL		DATE ANALYZED
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ORGANIC ANALYSIS

TPH GASOLINE/BTEX

TOTAL FUEL HYDROCARBONS, (LIGHT):			-	10/09/92
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND	10/09/92
PURGEABLE AROMATICS (BTXE BY EPA 8020M):			-	10/09/92
Benzene	ug/L	0.5	ND	10/09/92
Toluene	ug/L	0.5	ND	10/09/92
Ethylbenzene	ug/L	0.5	ND	10/09/92
Xylenes, Total	ug/L	0.5	ND	10/09/92

PURGEABLE HALOCARBONS, EPA METHOD 601

Dichlorodifluoromethane	ug/L	2.0	ND	10/07/92
Chloromethane	ug/L	40	ND	10/07/92
Vinyl Chloride	ug/L	2.0	ND	10/07/92
Bromomethane	ug/L	2.0	ND	10/07/92
Chloroethane	ug/L	2.0	ND	10/07/92
Trichlorofluoromethane (Freon 11)	ug/L	2.0	ND	10/07/92
1,1-Dichloroethene	ug/L	0.5	ND	10/07/92
Methylene Chloride	ug/L	3.0	ND	10/07/92
trans-1,2-Dichloroethene	ug/L	0.5	ND	10/07/92
cis-1,2-Dichloroethene	ug/L	0.5	ND	10/07/92
1,1-Dichloroethane	ug/L	0.5	ND	10/07/92
Chloroform	ug/L	0.5	ND	10/07/92
1,1,1-Trichloroethane (TCA)	ug/L	0.5	ND	10/07/92
Carbon Tetrachloride	ug/L	0.5	ND	10/07/92
1,2-Dichloroethane (EDC)	ug/L	0.5	ND	10/07/92
Trichloroethene (TCE)	ug/L	0.5	ND	10/07/92
1,2-Dichloropropane	ug/L	0.5	ND	10/07/92
Bromodichloromethane	ug/L	0.5	ND	10/07/92
2-Chloroethylvinyl ether	ug/L	0.5	ND	10/07/92

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

Mr. Marc Briggs  
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October 12, 1992  
 PACE Project Number: 421002509

Client Reference: Exxon 7-7003 (EE)

PACE Sample Number: 70 0218616  
 Date Collected: 09/28/92  
 Date Received: 10/02/92  
 Client Sample ID: Exx MW5

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

PURGEABLE HALOCARBONS, EPA METHOD 601

cis-1,3-Dichloropropene	ug/L	0.5	ND	10/07/92
trans-1,3-Dichloropropene	ug/L	0.5	ND	10/07/92
1,1,2-Trichloroethane	ug/L	0.5	ND	10/07/92
Tetrachloroethene	ug/L	0.5	ND	10/07/92
Dibromochloromethane	ug/L	0.5	ND	10/07/92
Chlorobenzene	ug/L	0.5	ND	10/07/92
Bromoform	ug/L	0.5	ND	10/07/92
1,1,2,2-Tetrachloroethane	ug/L	0.5	ND	10/07/92
1,3-Dichlorobenzene	ug/L	0.5	ND	10/07/92
1,4-Dichlorobenzene	ug/L	0.5	ND	10/07/92
1,2-Dichlorobenzene	ug/L	0.5	ND	10/07/92
Bromochloromethane (Surrogate Recovery)			97%	10/07/92
1,4-Dichlorobutane (Surrogate Recovery)			89%	10/07/92

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

Mr. Marc Briggs  
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October 12, 1992  
PACE Project Number: 421002509

Client Reference: Exxon 7-7003 (EE)

PACE Sample Number: 70 0218624  
Date Collected: 09/28/92  
Date Received: 10/02/92  
Client Sample ID: Exx 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):		-	10/07/92
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND
PURGEABLE AROMATICS (BTXE BY EPA 8020M):		-	10/07/92
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

PURGEABLE HALOCARBONS, EPA METHOD 601

Dichlorodifluoromethane	ug/L	2.0	ND	10/07/92
Chloromethane	ug/L	40	ND	10/07/92
Vinyl Chloride	ug/L	2.0	ND	10/07/92
Bromomethane	ug/L	2.0	ND	10/07/92
Chloroethane	ug/L	2.0	ND	10/07/92
Trichlorofluoromethane (Freon 11)	ug/L	2.0	ND	10/07/92
1,1-Dichloroethene	ug/L	0.5	ND	10/07/92
Methylene Chloride	ug/L	3.0	ND	10/07/92
trans-1,2-Dichloroethene	ug/L	0.5	ND	10/07/92
cis-1,2-Dichloroethene	ug/L	0.5	ND	10/07/92
1,1-Dichloroethane	ug/L	0.5	ND	10/07/92
Chloroform	ug/L	0.5	ND	10/07/92
1,1,1-Trichloroethane (TCA)	ug/L	0.5	ND	10/07/92
Carbon Tetrachloride	ug/L	0.5	ND	10/07/92
1,2-Dichloroethane (EDC)	ug/L	0.5	ND	10/07/92
Trichloroethene (TCE)	ug/L	0.5	ND	10/07/92
1,2-Dichloropropane	ug/L	0.5	ND	10/07/92
Bromodichloromethane	ug/L	0.5	ND	10/07/92
2-Chloroethylvinyl ether	ug/L	0.5	ND	10/07/92

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

**REPORT OF LABORATORY ANALYSIS**

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October 12, 1992  
 PACE Project Number: 421002509

Client Reference: Exxon 7-7003 (EE)

PACE Sample Number: 70 0218624  
 Date Collected: 09/28/92  
 Date Received: 10/02/92  
 Client Sample ID: Exx MW6

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

PURGEABLE HALOCARBONS, EPA METHOD 601

cis-1,3-Dichloropropene	ug/L	0.5	ND	10/07/92
trans-1,3-Dichloropropene	ug/L	0.5	ND	10/07/92
1,1,2-Trichloroethane	ug/L	0.5	ND	10/07/92
Tetrachloroethene	ug/L	0.5	ND	10/07/92
Dibromochloromethane	ug/L	0.5	ND	10/07/92
Chlorobenzene	ug/L	0.5	ND	10/07/92
Bromoform	ug/L	0.5	ND	10/07/92
1,1,2,2-Tetrachloroethane	ug/L	0.5	ND	10/07/92
1,3-Dichlorobenzene	ug/L	0.5	ND	10/07/92
1,4-Dichlorobenzene	ug/L	0.5	ND	10/07/92
1,2-Dichlorobenzene	ug/L	0.5	ND	10/07/92
Bromochloromethane (Surrogate Recovery)			90%	10/07/92
1,4-Dichlorobutane (Surrogate Recovery)			88%	10/07/92

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

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October 12, 1992  
 PACE Project Number: 421002509

Client Reference: Exxon 7-7003 (EE)

PACE Sample Number: 70 0218632  
 Date Collected: 09/28/92  
 Date Received: 10/02/92  
 Client Sample ID: Exx MW7

<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):		-	10/07/92
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	ND
PURGEABLE AROMATICS (BTXE BY EPA 8020M):		-	10/07/92
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

**PURGEABLE HALOCARBONS, EPA METHOD 601**

Dichlorodifluoromethane	ug/L	2.0	ND	10/07/92
Chloromethane	ug/L	40	ND	10/07/92
Vinyl Chloride	ug/L	2.0	ND	10/07/92
Bromomethane	ug/L	2.0	ND	10/07/92
Chloroethane	ug/L	2.0	ND	10/07/92
Trichlorofluoromethane (Freon 11)	ug/L	2.0	ND	10/07/92
1,1-Dichloroethene	ug/L	0.5	ND	10/07/92
Methylene Chloride	ug/L	3.0	ND	10/07/92
trans-1,2-Dichloroethene	ug/L	0.5	ND	10/07/92
cis-1,2-Dichloroethene	ug/L	0.5	ND	10/07/92
1,1-Dichloroethane	ug/L	0.5	ND	10/07/92
Chloroform	ug/L	0.5	ND	10/07/92
1,1,1-Trichloroethane (TCA)	ug/L	0.5	ND	10/07/92
Carbon Tetrachloride	ug/L	0.5	ND	10/07/92
1,2-Dichloroethane (EDC)	ug/L	0.5	ND	10/07/92
Trichloroethene (TCE)	ug/L	0.5	ND	10/07/92
1,2-Dichloropropane	ug/L	0.5	ND	10/07/92
Bromodichloromethane	ug/L	0.5	ND	10/07/92
2-Chloroethylvinyl ether	ug/L	0.5	ND	10/07/92

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

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October 12, 1992  
 PACE Project Number: 421002509

Client Reference: Exxon 7-7003 (EE)

PACE Sample Number: 70 0218632  
 Date Collected: 09/28/92  
 Date Received: 10/02/92  
 Client Sample ID: Exx MW7

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

PURGEABLE HALOCARBONS, EPA METHOD 601

cis-1,3-Dichloropropene	ug/L	0.5	ND	10/07/92
trans-1,3-Dichloropropene	ug/L	0.5	ND	10/07/92
1,1,2-Trichloroethane	ug/L	0.5	ND	10/07/92
Tetrachloroethene	ug/L	0.5	ND	10/07/92
Dibromochloromethane	ug/L	0.5	ND	10/07/92
Chlorobenzene	ug/L	0.5	ND	10/07/92
Bromoform	ug/L	0.5	ND	10/07/92
1,1,2,2-Tetrachloroethane	ug/L	0.5	ND	10/07/92
1,3-Dichlorobenzene	ug/L	0.5	ND	10/07/92
1,4-Dichlorobenzene	ug/L	0.5	ND	10/07/92
1,2-Dichlorobenzene	ug/L	0.5	ND	10/07/92
Bromochloromethane (Surrogate Recovery)			87%	10/07/92
1,4-Dichlorobutane (Surrogate Recovery)			88%	10/07/92

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

These data have been reviewed and are approved for release.

*Mark A. Valentini*

Mark A. Valentini, Ph.D.  
 Regional Director

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QUALITY CONTROL DATA

October 12, 1992  
 PACE Project Number: 421002509

Client Reference: Exxon 7-7003 (EE)

TOTAL OIL AND GREASE (GRAV. EPA 9070)  
 Batch: 70 16081  
 Samples: 70 0218578, 70 0218594

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Total Oil and Grease (Freon Extractable	mg/L	5.0	ND

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Total Oil and Grease (Freon Extractable	mg/L	5.0	20	100%	105%	4%

MDL Method Detection Limit  
 RPD Relative Percent Difference

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QUALITY CONTROL DATA

October 12, 1992  
 PACE Project Number: 421002509

Client Reference: Exxon 7-7003 (EE)

TPH GASOLINE/BTEX  
 Batch: 70 16030  
 Samples: 70 0218578, 70 0218586

METHOD BLANK:

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

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	294	99%	105%	5%
Benzene	ug/L	0.5	40.0	109%	105%	3%
Toluene	ug/L	0.5	40.0	107%	104%	2%
Ethylbenzene	ug/L	0.5	40.0	109%	105%	3%
Xylenes, Total	ug/L	0.5	80.0	107%	103%	3%

MDL Method Detection Limit  
 RPD Relative Percent Difference



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QUALITY CONTROL DATA

October 12, 1992  
 PACE Project Number: 421002509

Client Reference: Exxon 7-7003 (EE)

TPH GASOLINE/BTEX  
 Batch: 70 16047  
 Samples: 70 0218624, 70 0218632

METHOD BLANK:

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

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	427	93%	92%	1%
Benzene	ug/L	0.5	40.0	101%	100%	0%
Toluene	ug/L	0.5	40.0	91%	91%	0%
Ethylbenzene	ug/L	0.5	40.0	97%	97%	0%
Xylenes, Total	ug/L	0.5	80.0	98%	98%	0%

MDL Method Detection Limit  
 RPD Relative Percent Difference

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QUALITY CONTROL DATA

October 12, 1992  
 PACE Project Number: 421002509

Client Reference: Exxon 7-7003 (EE)

TPH GASOLINE/BTEX

Batch: 70 16074

Samples: 70 0218594, 70 0218608, 70 0218616

METHOD BLANK:

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

LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
Purgeable Fuels, as Gasoline (EPA 8015M)	ug/L	50	427	95%	96%	1%
Benzene	ug/L	0.5	40.0	91%	91%	0%
Toluene	ug/L	0.5	40.0	96%	97%	1%
Ethylbenzene	ug/L	0.5	40.0	106%	107%	0%
Xylenes, Total	ug/L	0.5	80.0	108%	109%	0%

MDL Method Detection Limit  
 RPD Relative Percent Difference

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QUALITY CONTROL DATA

October 12, 1992  
 PACE Project Number: 421002509

Client Reference: Exxon 7-7003 (EE)

**VOLATILE HALOCARBONS AND AROMATICS**

Batch: 70 16003

Samples: 70 0218578, 70 0218586, 70 0218594, 70 0218608, 70 0218616  
 70 0218624, 70 0218632

**METHOD BLANK:**

<u>Parameter</u>	<u>Units</u>	<u>MDL</u>	<u>Method Blank</u>
<b>VOLATILE HALOCARBONS BY EPA 8010</b>			
Dichlorodifluoromethane	ug/L	2.0	ND
Chloromethane	ug/L	40.	ND
Vinyl Chloride	ug/L	2.0	ND
Bromomethane	ug/L	2.0	ND
Chloroethane	ug/L	2.0	ND
Trichlorofluoromethane (Freon 11)	ug/L	2.0	ND
1,1-Dichloroethene	ug/L	0.5	ND
Methylene Chloride	ug/L	3.0	ND
trans-1,2-Dichloroethene	ug/L	0.5	ND
cis-1,2-Dichloroethene	ug/L	0.5	ND
1,1-Dichloroethane	ug/L	0.5	ND
Chloroform	ug/L	0.5	ND
1,1,1-Trichloroethane (TCA)	ug/L	0.5	ND
Carbon Tetrachloride	ug/L	0.5	ND
1,2-Dichloroethane (EDC)	ug/L	0.5	ND
Trichloroethene (TCE)	ug/L	0.5	ND
1,2-Dichloropropane	ug/L	0.5	ND
Bromodichloromethane	ug/L	0.5	ND
2-Chloroethylvinyl ether	ug/L	0.5	ND
cis-1,3-Dichloropropene	ug/L	0.5	ND
trans-1,3-Dichloropropene	ug/L	0.5	ND
1,1,2-Trichloroethane	ug/L	0.5	ND
Tetrachloroethene	ug/L	0.5	ND
Dibromochloromethane	ug/L	0.5	ND
Chlorobenzene	ug/L	0.5	ND
Bromoform	ug/L	0.5	ND
1,1,2,2-Tetrachloroethane	ug/L	0.5	ND
1,3-Dichlorobenzene	ug/L	0.5	ND
1,4-Dichlorobenzene	ug/L	0.5	ND

MDL Method Detection Limit

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QUALITY CONTROL DATA

October 12, 1992  
 PACE Project Number: 421002509

Client Reference: Exxon 7-7003 (EE)

**VOLATILE HALOCARBONS AND AROMATICS**

Batch: 70 16003

Samples: 70 0218578, 70 0218586, 70 0218594, 70 0218608, 70 0218616  
 70 0218624, 70 0218632

**METHOD BLANK:**

Parameter	Units	MDL	Method Blank
1,2-Dichlorobenzene	ug/L	0.5	ND
Bromochloromethane (Surrogate Recovery)			84%
1,4-Dichlorobutane (Surrogate Recovery)			98%
VOLATILE AROMATICS BY EPA 8020			
Benzene	ug/L	0.3	ND
Toluene	ug/L	0.3	ND
Ethylbenzene	ug/L	0.5	ND
Xylenes, Total	ug/L	0.5	ND
Fluorobenzene (Surrogate Recovery)			97%

**LABORATORY CONTROL SAMPLE AND CONTROL SAMPLE DUPLICATE:**

Parameter	Units	MDL	Reference Value	Recv	Dupl Recv	RPD
1,1-Dichloroethane	ug/L	0.5	10.00	103%	108%	4%
Trichloroethene (TCE)	ug/L	0.5	10.00	96%	97%	1%
trans-1,3-Dichloropropene	ug/L	0.5	3.8	101%	106%	4%
Tetrachloroethene	ug/L	0.5	10.00	102%	101%	0%
Benzene	ug/L	0.3	10.00	87%	86%	1%
Toluene	ug/L	0.3	10.00	90%	88%	2%
Xylenes, Total	ug/L	0.5	20.00	98%	95%	3%

MDL Method Detection Limit  
 RPD Relative Percent Difference

WELL PURGE DATA SHEET

Project Name: Exxon 7-7003

Job No. 19025.05

Date: September 28, 1992

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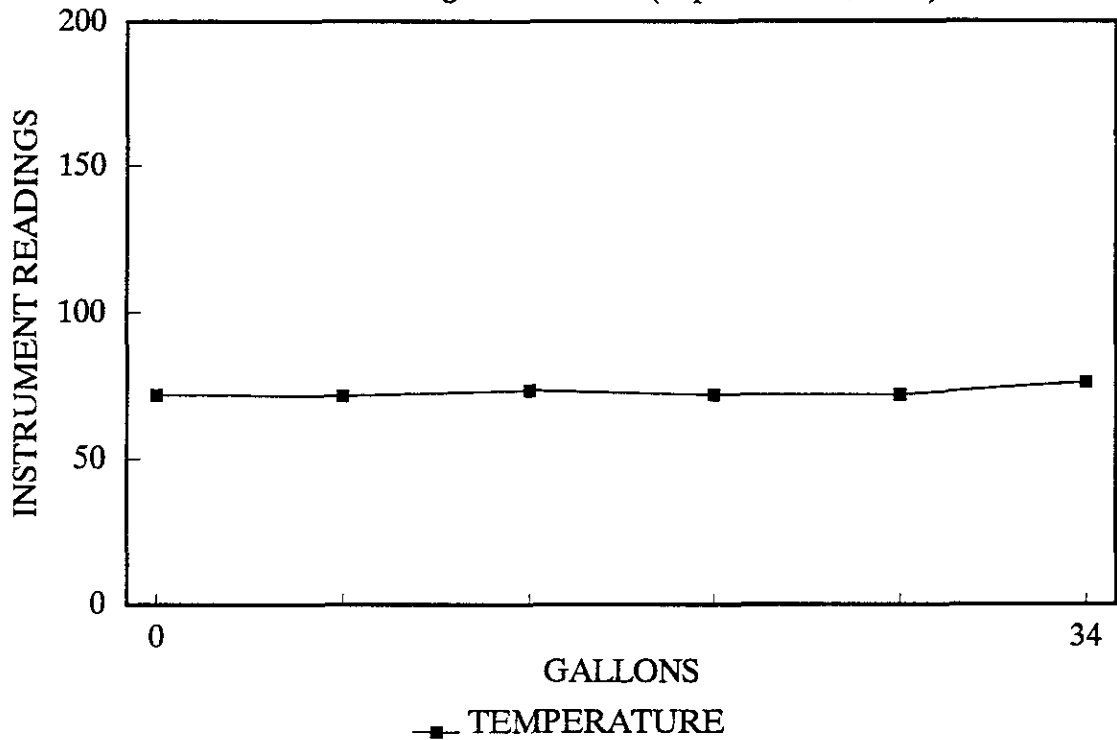
Well No. MW-7

Time Started 13:50

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)	TURBIDITY
13:50	Start purging MW-7				
13:50	0	69.9	6.45	1020	silty
13:55		69.4	6.52	1025	clear
14:00		69.3	6.49	1012	clear
14:05		69.2	6.70	1011	silty
	DRY				
15:00		69.9	6.63	1034	silty
15:09		69.4	6.48	1027	clear
15:11	38	69.1	6.43	1024	
	Stop purging MW-7				
Notes:					
	Well Diameter (inches)	:	4"		
	Depth to Bottom (feet)	:	44.98		
	Depth to Water - initial (feet)	:	31.92		
	Time Sampled	:	17:10		
	Gallons per Well Casing Volume	:	8.52		
	Gallons Purged	:	38.0		
	Well Casing Volume Purged	:	4.46		
	Approximate Pumping Rate (gpm)	:	1.46		

# EXXON 7003 STABILIZATION GRAPH

Monitoring Well MW-1 (September 29, 1992)



# EXXON 7003 STABILIZATION GRAPH

Monitoring Well MW-1 (September 29, 1992)

