

Exxon Company, U.S.A.  
QUARTERLY SUMMARY REPORT  
April - June 1992

EXXON SERVICE STATION #7-3399  
2991 Hopyard Road  
Pleasanton, California

RESNA Job No. 18034-15

WORK PERFORMED THIS QUARTER:

- Performed monthly groundwater gauging on April 14, May 21, and June 8, 1992.
- Submitted final first quarter monitoring report (RESNA Report No. 18034-9, June 18, 1992) on June 18, 1992.
- Collected second quarter 1992 groundwater samples from groundwater monitoring wells with sufficient water on June 8, 1992.

QUARTERLY GROUNDWATER SAMPLING (6/8/92) RESULTS: (ug/l)

Well	B	T	E	X	TPHg	Historical Trend
MW-7	<0.5	<0.5	<0.5	<0.5	<50	Decreased
MW-8	<0.5	<0.5	<0.5	<0.5	<50	Unchanged

B = benzene, T = toluene, E = ethylbenzene, X = total xylenes  
TPHg = Total petroleum hydrocarbons as gasoline

FREE PHASE PRODUCT RECOVERY SUMMARY:

- Product recovered this quarter: 0 gallons
- Cumulative total product recovered: 58 gallons

WORK TO BE COMPLETED NEXT QUARTER:

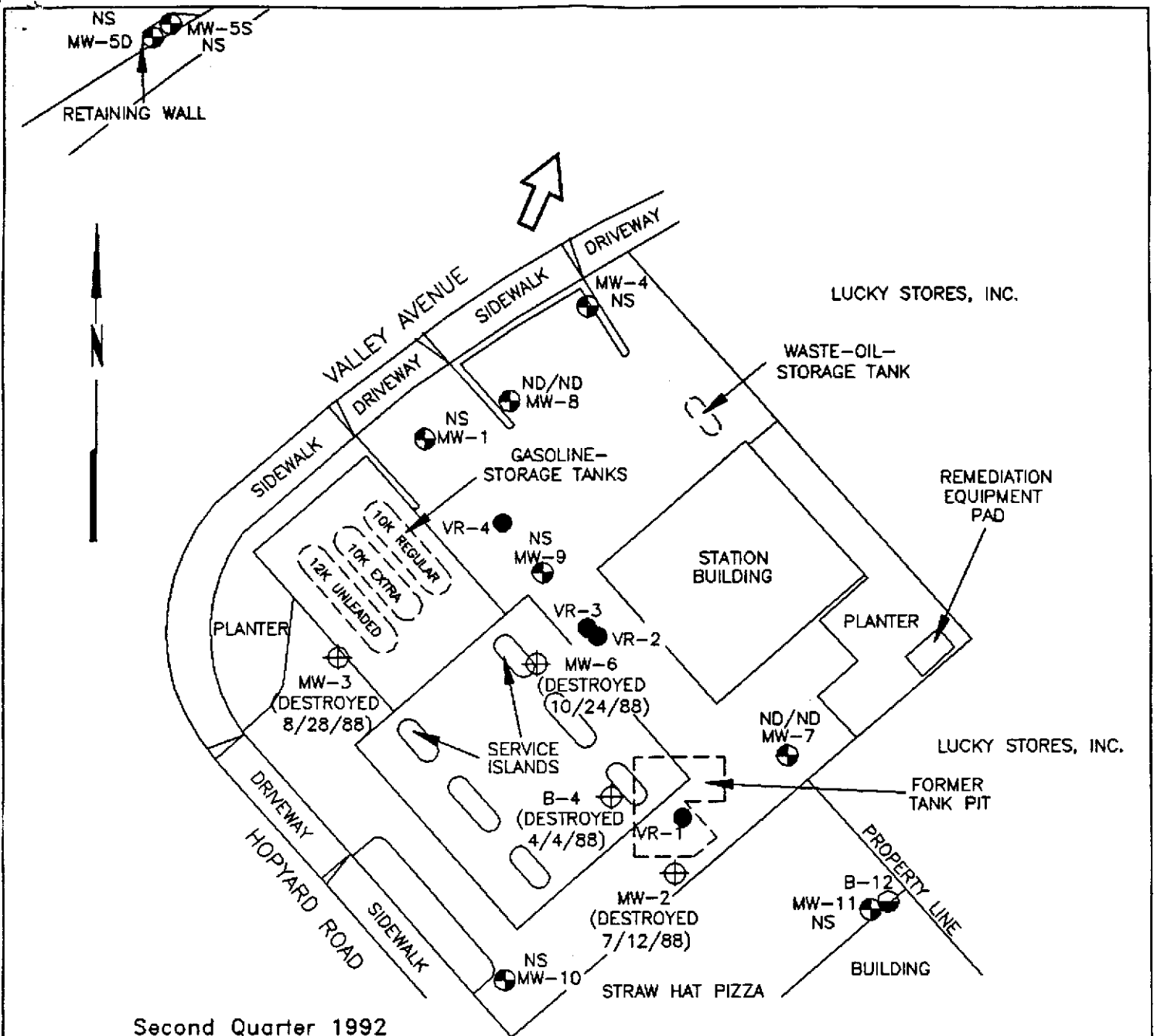
Estimated Completion  
Date 9/30/92

- Begin operation of the modified abatement system.
- Perform monthly groundwater gauging
- Resume groundwater recovery if the water level rises.
- Submit draft and final report on groundwater monitoring and sampling for second quarter 1992.
- Continue groundwater monitoring and sampling.
- Report on site status.

WORK TO BE PERFORMED NEXT 12 MONTHS:

Estimated Completion  
Date 6/30/93

- Conduct influent vapor readings daily for the first week, then weekly until carbon breakthrough.
- Perform monthly influent vapor sampling.
- Perform monthly groundwater gauging.
- Perform quarterly groundwater sampling.
- Complete quarterly status reports.




Second Quarter 1992


ND/ND = Concentration of Benzene/TPHg in groundwater in parts per billion


ND = Nondetectable

NS = Not sampled

 = Approximate direction of groundwater flow

MW-11  = Groundwater monitoring well

VR-4  = Vapor recovery well

B-12  = Soil boring

MW-6  = Former well or boring

Approximate Scale



**RESNA**

PROJECT NO. 18034-15

SITE PLAN FOR  
 QUARTERLY SUMMARY REPORT  
 Exxon Station No. 7-3399  
 2991 Hopyard Road  
 Pleasanton, California

PLATE

1

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

**LETTER REPORT  
FOURTH QUARTER 1991  
GROUNDWATER MONITORING  
AND  
REMEDIATION ACTIVITIES  
at  
Exxon Station No. 7-3399  
2991 Hopyard Road  
Pleasanton, California  
RESNA Job No. 18034-9**

3-31-92

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

March 31, 1992  
RESNA 18034-9

Ms. Marla D. Guensler  
Exxon Company, U.S.A.  
2300 Clayton Road, Suite 250  
P.O. Box 4032  
Concord, California 94520

Subject: Letter Report on Fourth Quarter 1991 Groundwater Monitoring and Remediation Activities, at Exxon Station No. 7-3399, 2991 Hopyard Road, Pleasanton, California.

Dear Mr. Wang:

This report presents the results of the fourth quarter 1991 groundwater monitoring and sampling and an update of remediation activities, at Exxon Service Station No. 7-3399. The Exxon station is located at the intersection of Hopyard Road and Valley Avenue in Pleasanton, California (Plate 1). The monitoring program included measuring depth to groundwater, subjectively evaluating water from each of the wells for evidence of hydrocarbons, and purging the wells and collecting water samples for laboratory analysis.

**Site Setting and Background**

The original service station on the site was demolished in September 1988, and new station facilities were constructed between September 1988 and February 1989. The fuel underground storage tanks (USTs) in the southeastern part of the site were removed in July 1988, prior to station demolition. The current station has four USTs containing premium unleaded, unleaded, super leaded gasoline, and waste oil (Plate 2).

Nine groundwater monitoring wells currently are used to monitor groundwater at the site (Plate 2). Seven of the nine wells, designated MW-1, MW-4, MW-5s, MW-7, MW-9, MW-10, and MW-11, are screened in the uppermost aquifer beneath the site. The remaining two wells, MW-5d and MW-8, are screened in the underlying second and third aquifers, respectively.

A groundwater recovery system has been in operation since 1988. Groundwater is pumped from well MW-7, the water passes through an oil-water separator, and then into the sanitary sewer under a permit from the Dublin-San Ramon Services District.

A 100-cubic-feet-per-minute vacuum pump and catalytic oxidizer were installed at the site in November 1990 to extract and treat soil vapors. The intent of the vapor extraction program is to remove vapors from the sand and gravel of the uppermost aquifer before the water level in this aquifer rises, and reduce potential future impact to the groundwater. The vacuum system is connected to six wells; shallow well VR-1, installed in the backfill material of the former UST pit; shallow wells VR-3 and VR-4, installed in the unsaturated silty clay overlying the uppermost aquifer; and deeper wells VR-2, MW-1, and MW-9, installed in sand and gravel in the uppermost aquifer. Because of the drop in water level since 1988, the sand and gravel zone is mostly unsaturated.

The vapor extraction system was permitted by the Bay Area Air Quality Management District under Authority to Construct No. 5125, dated August 2, 1990, and under permit to operate, dated January 4, 1991. After start up testing in late November, the system began operating on December 7, 1990. During December 1990 and January 1991, influent vapor samples were collected on a weekly and a biweekly basis, and after January were collected on a monthly basis.

## **MONITORING**

### **Field Activities**

On December 30, 1991, RESNA personnel measured depth to water, subjectively evaluated groundwater in monitoring wells MW-4, MW-5d, MW-5s, MW-7, MW-8, and MW-11, and purged and sampled wells MW-7 and MW-8 for laboratory analysis. Wells MW-1, MW-9, and MW-10 are coupled to the vapor extraction system and were inaccessible on this sampling event. Wells MW-5s and MW-11 contained insufficient water for sampling, and wells MW-4 and MW-5d were dry.

### **Results of Groundwater Monitoring**

Between September and December 1991, depth to water measurements from wells in the uppermost aquifer indicated essentially no change since the previous monitoring event. The water level in MW-5d (second aquifer) fell below the total depth of the well; while, the water level in MW-8 (third aquifer) rose approximately 22 feet. No floating product or sheen was observed in the water samples from the wells. Cumulative results of depth to water measurements and subjective evaluations are presented in Table 1. The field activities were performed using the procedures described in Appendix A.

Due to insufficient water levels in the uppermost aquifer on December 30, 1991, a groundwater elevation map was not constructed. Previous water level data suggest the groundwater flow is generally southward and the hydraulic gradient beneath much of the site is essentially flat.

### **Laboratory Methods and Results of Groundwater Sampling**

Groundwater samples from MW-7 and MW-8 were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by Environmental Protection Agency (EPA) modified Method 8015, and benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 602. The analyses were performed by PACE Incorporated (Hazardous Waste Testing Laboratory Certification No. 147), Novato, California.

Results of laboratory analyses of water samples from well MW-7 and MW-8 indicate no detectable concentrations of TPHg and BTEX. These analytical results indicate that BTEX compounds previously detected in groundwater were not present in the water samples from this sampling event (Table 2). Chain of Custody Records and certified analysis reports are enclosed in Appendix A.

## **REMEDIATION**

### **Groundwater Recovery**

During this monitoring period, groundwater recovery from the upper aquifer was not undertaken due to insufficient water. Recovery activities will resume when the groundwater rises to a sufficient level for pumping.

### **Soil-Vapor Extraction System**

Since November 1990, the existing catalytic oxidizer has effectively reduced vapor concentrations to levels below 0.5 ppm TPHg (Table 3). To continue vapor extraction of low hydrocarbon concentrations, the current cat-ox unit was shut off on July 24, 1991, pending modification of this system to an activated carbon abatement system.

Please call if you have questions.

Sincerely,  
RESNA Industries



Keith M. McVicker  
Project Geologist



Mark E. Detterman  
Project Manager, R.G. 4799

Enclosures: Table 1, Cumulative Results of Subjective Evaluation of Water Samples  
Table 2, Cumulative Results of Groundwater Analyses  
Table 3, Cumulative Results of Influent and Effluent Vapor Samples  
Plate 1, Site Vicinity Map  
Plate 2, Generalized Site Plan

Appendix A: Field Procedures  
Subjective Evaluation of Groundwater and Well Purge Data Sheets  
Chain of Custody Records and Laboratory Analysis Reports

Draft: February 13, 1992  
Final: March 31, 1992



TABLE 1  
 CUMULATIVE RESULTS OF SUBJECTIVE EVALUATION OF WATER SAMPLES  
 (page 1 of 8)

Date	Depth to Water (ft)	Groundwater Elevation (ft)	Floating Product (in)	Sheen
MM-1 (Wellhead Elevation = 321.44 ft)				
04/06/88	36.34	285.00	None	None
04/08/88	36.29	285.15	None	None
04/19/88	36.36	285.08	None	None
06/06/88	38.16	283.28	None	None
06/23/88	38.71	282.73	None	None
06/28/88	39.16	282.28	--	--
07/06/88	39.73	281.71	None	None
07/13/88	40.22	281.22	None	None
08/12/88		Well buried under excavated soil		
08/26/88	41.90	279.54	--	--
09/07/88	42.27	279.17	None	None
12/07/88	43.94	277.50	None	None
12/19/88	43.70	277.74	None	None
02/09/89	42.53	278.91	--	--
03/08/89	41.96	279.48	None	None
04/03/89	41.59	279.85	--	--
04/26/89	41.67	279.77	--	--
06/30/89	43.79	277.65	None	None
07/17/89	44.74	276.70	None	None
07/18/89	44.76	276.68	--	--
07/19/89	44.82	276.62	--	--
07/20/89	44.85	276.59	None	None
07/21/89	44.95	276.49	--	--
07/26/89	45.42	276.02	None	None
08/02/89	--	NA	NA	NA
08/03/89	46.18	275.26	--	--
08/17/89	47.12	274.32	--	--
09/13/89	49.08	272.36	None	None
11/28/89	50.21	271.23	None	None
01/09/90	49.31	272.13	None	None
01/26/90	49.29	272.15	None	None
02/23/90	49.02#	272.42	None	None
02/23/90	49.02	272.42	None	None
03/26/90	48.71#	272.73	None	None
03/26/90	48.70	272.74	None	None
04/18/90	48.79	272.65	None	None
05/17/90	49.40	272.04	None	None
06/11/90	50.83	270.61	None	None
07/30/90	52.17	269.27	None	None
08/27/90	53.44	268.00	None	None
09/28/90	53.40	268.04	None	None
12/27/90	--	NA	NA	NA
03/20/91	53.35	268.08	--	--
06/20/91	53.55	267.89	None	None
09/12/91	--	NA	None	None
12/30/91	--	NA	NA	NA

See notes on page 8 of 8.

TABLE 1  
 CUMULATIVE RESULTS OF SUBJECTIVE EVALUATION OF WATER SAMPLES  
 (page 2 of 8)

Date	Depth to Water (ft)	Groundwater Elevation (ft)	Floating Product (in)	Sheen
<b>MW-2</b>				
04/02/88	--	--	3.0	Heavy
04/04/88	--	--	18.0	Heavy
04/05/88	--	--	18.0	Heavy
04/06/88	39.31	--	38.4	Heavy
04/08/88	---	--	---	---
04/19/88	38.90	--	29.76**	Heavy
06/06/88	38.78	--	3.12	Heavy
06/23/88	39.23	--	1.50	Heavy
06/28/88	39.72	--	--	--
07/06/88	40.31	--	None	Slight
07/12/88	Well destroyed due to excavation (old pit)			
<b>MW-3</b>				
04/06/88	37.19	--	None	None
04/08/88	37.14	--	None	None
04/19/88	37.22	--	None	None
06/06/88	39.02	--	None	None
06/23/88	39.58	--	None	None
06/28/88	40.04	--	--	--
07/06/88	40.60	--	None	None
07/13/88	41.09	--	None	None
08/12/88	Well buried under excavated soil			
08/26/88	42.77	--	--	--
08/29/88	Well destroyed due to excavation (new pit)			
<b>MW-4 (Wellhead elevation = 321.56 ft)</b>				
04/08/88	36.41	285.15	None	None
04/19/88	36.51	285.05	None	None
06/06/88	38.26	283.30	None	None
06/23/88	38.83	282.73	None	None
06/28/88	39.28	282.28	--	--
07/06/88	39.85	281.71	None	None
07/13/88	40.31	281.25	None	None
08/12/88	Well buried under excavated soil			
08/26/88	42.01	279.55	--	--
09/07/88	Not accessible due to construction			
12/07/88	Not accessible due to construction			
12/19/88	43.83	277.73	None	None
02/09/89	42.67	278.89	--	--
03/08/89	42.11	279.45	None	None
04/03/89	41.73	279.83	--	--
04/26/89	41.79	279.77	--	--
06/30/89	43.88	277.68	None	None
07/17/89	44.85	276.71	None	None
07/18/89	44.88	276.68	--	--
07/19/89	44.92	276.64	--	--

See notes on page 8 of 8.

TABLE 1  
 CUMULATIVE RESULTS OF SUBJECTIVE EVALUATION OF WATER SAMPLES  
 (page 3 of 8)

Date	Depth to Water (ft)	Groundwater Elevation (ft)	Floating Product (in)	Sheen
<b>MW-4 (continued)</b>				
07/20/89	44.98	276.58	None	None
07/21/89	45.04	276.52	--	--
07/26/89	45.50	276.06	None	None
08/02/89	--	NA	NA	NA
08/03/89	46.28	275.28	--	--
08/17/89	47.22	274.34	--	--
09/13/89	49.19	272.37	None	None
11/28/89	50.34	271.22	None	None
01/09/90	49.47	272.09	None	None
01/26/90	49.36	272.20	None	None
02/23/90	49.18#	272.38	None	None
02/23/90	49.15	272.41	None	None
03/26/90	48.84#	272.72	None	None
03/26/90	48.83	272.73	None	None
04/18/90	48.90	272.66	None	None
05/17/90	50.03	271.53	None	None
06/11/90	50.98	270.58	None	None
07/30/90	53.57	267.99	None	None
08/27/90	53.61	267.95	None	None
09/28/90	53.57	267.99	None	None
12/27/90	53.68	267.88	None	None
03/20/91	53.56	268.00	None	None
06/20/91	53.75	267.81	None	None
09/12/91	53.70	267.86	None	None
12/30/91	Dry	NA	NA	NA
<b>B-4</b>				
04/02/88	--	NA	None	None
<b>MW-5d (Wellhead Elevation = 321.79 ft)</b>				
05/25/88	38.55	283.24	None	None
06/06/88	38.90	282.89	None	None
06/23/88	39.56	282.23	None	None
06/28/88	40.23	281.33	--	--
07/06/88	40.69	281.10	None	None
07/13/88	41.22	280.57	None	None
08/12/88	42.34	279.45	--	--
08/26/88	42.60	279.19	--	--
09/07/88	42.99	278.80	--	--
12/07/88	44.58	277.21	None	None
02/09/89		Casing head damaged by construction		
03/08/89		Casing head cut to lower elevation		
	42.49	279.30	None	None
04/03/89	42.21	279.58	--	--
04/26/89	42.36	279.43	--	--
06/30/89	44.79	277.00	None	None
07/17/89	45.73	276.06	None	None
07/18/89	45.75	276.04	--	--

See notes on page 8 of 8.

TABLE 1  
 CUMULATIVE RESULTS OF SUBJECTIVE EVALUATION OF WATER SAMPLES  
 (page 4 of 8)

Date	Depth to Water (ft)	Groundwater Elevation (ft)	Floating Product (in)	Sheen
<b>MW-5d</b>				
07/19/89	44.89	276.90	--	--
07/20/89	46.02	275.77	None	None
07/21/89	46.18	275.38	--	--
07/26/89	46.83	274.96	None	None
08/02/89	--	NA	NA	NA
08/03/89	47.67	274.12	--	--
08/17/89	48.27	273.52	--	--
09/13/89	50.60	271.19	None	None
11/28/89	51.16	270.63	None	None
01/09/90	50.42	271.37	None	None
01/26/90	50.10	271.66	None	None
02/23/90	50.08	271.77	None	None
03/26/90	49.80#	271.99	None	None
03/26/90	49.77	272.02	None	None
04/18/90	49.80	271.99	None	None
05/17/90	51.32	270.47	None	None
06/11/90	52.10	269.69	None	None
07/30/90	53.47	268.32	None	None
08/27/90	58.24	263.55	None	None
09/28/90	60.70	261.09	None	None
12/27/90	62.52	259.27	None	None
03/20/91	59.18	262.61	None	None
06/20/91	65.02	256.77	None	None
09/12/91	DRY	NA	NA	NA
12/30/91	DRY	NA	NA	NA
<b>MW-5s (Wellhead Elevation = 321.64 ft)</b>				
05/25/88	38.46	283.18	None	None
06/06/88	38.86	282.78	None	None
06/23/88	39.52	282.12	None	None
06/28/88	39.84	281.80	--	--
07/06/88	40.45	281.19	None	None
07/13/88	40.90	280.74	None	None
07/22/88	41.30	280.34	None	None
08/05/88	23.84v	297.80	None	None
08/12/88	42.21	279.43	--	--
08/26/88	42.55	279.09	--	--
09/07/88	42.94	278.70	None	None
12/07/88	44.67	276.97	None	None
02/09/89	43.19	278.45	--	--
03/08/89		Casing head cut to lower elevation		
	42.11	279.53	None	None
04/26/89	41.84	279.80	--	--
06/30/89	43.95	277.69	None	None
07/17/89	44.91	276.73	None	None
07/18/89	44.93	276.71	--	--
07/19/89	44.98	276.66	--	--
07/20/89	45.02	276.62	None	None

See notes on page 8 of 8.

TABLE 1  
 CUMULATIVE RESULTS OF SUBJECTIVE EVALUATION OF WATER SAMPLES  
 (page 5 of 8)

Date	Depth to Water (ft)	Groundwater Elevation (ft)	Floating Product (in)	Sheen
<b>MW-5s (continued)</b>				
07/21/89	45.10	276.54	--	--
07/26/89	45.57	276.07	None	None
08/02/89	--	--	NA	NA
08/03/89	46.31	275.33	--	--
08/17/89	47.25	274.39	--	--
09/13/89	49.22	272.42	None	None
11/28/89	50.39	271.25	None	None
01/09/90	49.51	272.13	None	None
01/26/90	49.40	272.24	None	None
02/23/90	49.20#	272.44	None	None
02/23/90	49.20	272.44	None	None
03/26/90	48.89#	272.75	None	None
03/26/90	48.88	272.76	None	None
04/18/90	48.95	272.69	None	None
05/17/90	50.06	271.58	None	None
06/11/90	50.98	270.66	None	None
07/30/90	53.40	268.24	None	None
08/27/90	53.60	268.04	None	None
09/28/90	53.55	268.09	None	None
12/27/90	53.61	268.03	None	None
03/20/91	53.56	268.08	None	None
06/20/91	53.73	267.91	None	None
09/12/91	53.78	267.86	None	None
12/30/91	53.80	267.84	None	None
<b>MW-6</b>				
05/11/88	37.71	--	None	None
06/06/88	38.70	--	None	None
06/23/88	39.23	--	None	None
06/28/88	39.74	--	None	None
07/13/88	40.78	--	None	None
08/05/88	41.72	--	None	None
08/12/88	42.14	--	--	--
08/17/88		Well buried under excavated soil	--	--
08/26/88	42.51	--	--	--
09/07/88	42.85	--	None	None
10/24/88		Well destroyed for station construction		
<b>MW-7 (Wellhead Elevation = 321.27 ft)</b>				
07/13/88	40.50	280.77	None	None
07/22/88	41.85#	279.42	None##	None##
08/05/88	41.45#	279.82	None##	None##
08/12/88	42.69	278.58	--	--
09/07/88	42.60	278.67	--	--
12/07/88		Not accessible		
01/17/89	43.20	278.07	--	--
02/09/89		Not accessible, pump equipment in well		
10/12/89	49.93	271.34	None	None
11/28/89	57.61#	264.03	--	--

See notes on page 8 of 8.

TABLE 1  
 CUMULATIVE RESULTS OF SUBJECTIVE EVALUATION OF WATER SAMPLES  
 (page 6 of 8)

Date	Depth to Water (ft)	Groundwater Elevation (ft)	Floating Product (in)	Sheen
<b>MW-7 (continued)</b>				
01/09/90	57.57#	263.70	--	--
01/26/90	57.54#	263.73	None	None
01/26/90	49.08	272.19	None	None
02/23/90	55.26#	266.01	None	None
02/23/90	48.93	272.34	None	None
03/26/90	57.52#	263.73	None	None
03/26/90	48.60	272.67	None	None
04/18/90	57.55#	263.72	None	None
05/17/90	57.40#	263.87	None	None
06/11/90	50.68	270.59	None	None
07/30/90	--	NA	None	None
08/27/90	53.05	268.22	None	None
09/28/90	--	NA	NA	NA
12/27/90	--	NA	NA	NA
03/20/91	54.11	267.16	--	--
06/20/91	55.14	266.13	None	None
09/12/91	55.84	265.43	None	None
12/30/91	55.21	266.06	None	None
<b>MW-8 (Wellhead Elevation = 321.86 ft)</b>				
10/01/89	53.88	267.98	None	None
11/28/89	53.74	268.12	None	None
01/09/90	57.90	263.96	None	None
01/26/90	53.57	268.29	None	None
02/23/90	52.16	269.70	None	None
03/26/90	52.80#	269.06	None	None
04/18/90	51.60	270.26	None	None
05/17/90	58.21	263.65	None	None
06/11/90	58.65	263.21	None	None
07/30/90	64.33	257.53	None	None
08/27/90	70.41	251.45	None	None
09/28/90	71.93	249.93	None	None
12/27/90	66.60	255.26	None	None
03/20/91	60.75	261.11	None	None
06/20/91	88.77	233.09	None	None
09/12/91	103.17	218.69	None	None
12/30/91	81.15	240.71	None	None
<b>MW-9 (Wellhead elevation = 321.44 ft)</b>				
10/12/89	50.24	271.20	None	None
11/28/89	50.59	270.85	1.0	Heavy
12/01/89	50.32	271.12	0.25	Heavy
12/07/89	50.13	271.31	1.92	Heavy
12/13/89	49.91	271.53	None	Slight
12/20/89	49.78	271.66	None	Slight
01/02/90	--	NA	None	Slight
01/09/90	49.39	272.05	None	Slight
01/26/90	49.30	272.14	None	None
02/23/90	49.06#	272.38	None	None
02/23/90	49.05	272.39	None	None
03/26/90	48.75#	272.69	None	None

See notes on page 8 of 8.

TABLE 1  
 CUMULATIVE RESULTS OF SUBJECTIVE EVALUATION OF WATER SAMPLES  
 (page 7 of 8)

Date	Depth to Water (ft)	Groundwater Elevation (ft)	Floating Product (in)	Sheen
<b>MW-9 (continued)</b>				
03/26/90	48.73	272.71	None	Very Slight
04/18/90	48.81	272.63	None	Slight
05/17/90	49.96	271.48	None	Slight
06/11/90	51.58	269.86	4.5	NA
07/30/90	Dry	NA	NA	NA
08/27/90	Dry	NA	NA	NA
09/28/90	Dry	NA	NA	NA
12/27/90	--	NA	NA	NA
03/20/91	Dry	NA	None	Very Slight
06/20/91	49.63	271.81	None	None
09/12/91	--	NA	NA	NA
12/30/91	--	NA	NA	NA
<b>MW-10 (Wellhead Elevation = 322.99 ft)</b>				
10/12/89	51.93	271.06	None	None
11/28/89	51.88	271.11	None	None
12/20/89	51.47	271.52	None	None
01/09/90	50.98	272.01	None	None
01/26/90	50.87	272.12	None	None
02/23/90	50.67#	272.32	None	None
02/23/90	50.65	272.34	None	None
03/26/90	50.36#	272.63	None	None
03/26/90	50.35	272.64	None	None
04/18/90	50.45	272.54	None	None
06/11/90	51.16	271.83	None	None
07/30/90	55.72	267.27	None	None
08/27/90	57.75	265.24	None	None
09/28/90	--	NA	NA	NA
12/27/90	58.08	264.91	None	None
03/20/91	57.80	265.19	None	None
06/20/91	58.00	264.99	None	None
09/12/91	DRY	NA	NA	NA
12/30/91	--	NA	NA	NA
<b>MW-11 (Wellhead Elevation = 321.77 ft)</b>				
11/10/89	50.64	271.13	None	None
11/28/89	50.51	271.26	None	Very Slight
12/20/89	51.47	270.30	None	None
01/09/90	49.68	272.09	None	None
01/26/90	49.55	272.22	None	None
02/23/90	49.37#	272.40	None	None
02/23/90	49.35	272.42	None	None
03/26/90	49.03#	272.74	None	None
03/26/90	49.03	272.74	None	None
04/18/90	49.12	272.65	None	None
05/17/90	50.30	271.47	None	None
06/11/90	51.16	270.61	None	None
07/30/90	53.50	268.27	None	None
08/27/90	53.65	268.12	None	None
09/28/90	53.62	268.15	None	None

See notes on page 8 of 8.

TABLE 1  
CUMULATIVE RESULTS OF SUBJECTIVE EVALUATION OF WATER SAMPLES  
(page 8 of 8)

Date	Depth to Water (ft)	Groundwater Elevation (ft)	Floating Product (in)	Sheen
MW-11 (continued)				
12/27/90	53.63	268.14	None	None
03/20/91	53.26	268.51	None	None
06/20/91	53.60	268.17	None	None
09/12/91	53.60	268.17	None	None
12/30/91	53.95	267.82	None	None

Depth to groundwater is in feet below top of casing.

Elevation is in feet above mean sea level.

-- = Not measured

NA = Not applicable

\* = Not measured because of installed product-skimmer pump.

\*\* = Thickness of floating product after the well was allowed to recharge for approximately 3 hours.

∇ = Anomalous water level possibly due to recharge from a perched water zone.

# = Water level during pumping of MW-7.

## = Water inspected in oil-water separator tank.



TABLE 2  
CUMULATIVE RESULTS OF GROUNDWATER ANALYSES  
(page 1 of 4)

Date	Sample No.	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Total Xylenes (ppb)	TPHg (ppb)	EPA 502.2 (ppb)	EPA 524.2 (ppb)
<b>MW-1</b>								
4/02/88	W-38-MW1	<0.5	1.7	<0.5	<0.5	<20	--	--
7/06/88	W-40-MW1	<0.5	<0.5	<0.5	<0.5	<20	--	--
7/13/88	W-42-MW1	<0.5	<0.5	<0.5	<0.5	<20	--	--
9/07/88	W-43-MW1	<0.5	<0.5	<0.5	<0.5	<20	--	--
3/08/89	W-43-MW1	1.6	<0.5	<0.5	<0.5	<20	--	--
6/30/89	W-44-MW1	<0.5	<0.5	<0.5	<0.5	<20	--	--
7/17/89	W-45-MW1	<0.5	<0.5	<0.5	<0.5	23	--	--
7/20/89	W-45-MW1	<0.5	<0.5	<0.5	<0.5	<20	--	--
7/26/89	W-46-MW1	<0.5	<0.5	<0.5	<0.5	<20	--	--
8/02/89	W-46-MW1	<0.5	<0.5	<0.5	<0.5	<20	--	--
9/13/89	W-50-MW1	39	0.60	<0.50	5.1	220	--	--
12/20/89	W-50-MW1	56	0.72	<0.50	0.71	220	--	--
1/25/90	W-50-MW1	18	1.6	<0.50	1.8	57	--	--
2/27/90	W-50-MW1	3.2	2.3	<0.50	3.2	55	--	--
3/26/90	W-49-MW1	<0.5	<0.5	<0.5	<0.5	<20	--	--
4/18/90	W-49-MW1	1.1	1.6	<0.50	3.1	25	--	--
5/17/90	W-49-MW1	<0.5	<0.5	<0.5	<0.5	<20	--	--
6/11/90	W-52-MW1	<0.5	<0.5	<0.5	<0.5	<20	--	--
7/30/90	W-53-MW1	<0.5	<0.5	<0.5	<0.5	<20	--	--
8/27/90	W-53-MW1	<0.5	<0.5	<0.5	<0.5	<20	--	--
9/28/90	W-53-MW1	<0.5	<0.5	<0.5	<0.5	<50	--	--
<b>MW-2</b>								
7/06/88	W-41-MW	25,700	18,500	2,900	21,400	62,000	--	--
7/12/88				Well destroyed				
<b>MW-3</b>								
4/06/88	W-39-MW3	<0.5	<0.5	<0.5	<0.5	20	--	--
7/06/88	W-41-MW3	<0.5	<0.5	<0.5	<0.5	<20	--	--
7/13/88	W-43-MW3	<0.5	<0.5	<0.5	<0.5	<20	--	--
8/26/88	W-44-MW3	<0.5	<0.5	<0.5	<0.5	<20	--	--
8/29/88				Well destroyed				
<b>MW-4</b>								
4/11/88	W-37-MW4	1.8	16.3	0.6	7.1	80	--	--
7/06/88	W-41-MW4	<0.5	<0.5	<0.5	<0.5	<20	--	--
7/13/88	W-42-MW4	<0.5	0.9	<0.5	<0.5	<20	--	--
3/08/89	W-43-MW4	3.8	1.0	<0.5	<0.5	440	--	--
6/30/89	W-44-MW4	<0.5	<0.5	<0.5	<0.5	100	--	--
7/17/89	W-45-MW4	<0.5	<0.5	<0.5	<0.5	390	--	--
7/20/89	W-45-MW4	<0.5	<0.5	<0.5	<0.5	200	ND*	--
7/26/89	W-46-MW4	<0.5	<0.5	<0.5	<0.5	66	--	--
8/02/89	W-46-MW4	--	--	--	--	--	--	ND*
9/13/89	W-50-MW4	<0.5	<0.5	<0.5	<0.5	<20	--	--
12/20/89	W-50-MW-4	<0.5	<0.5	<0.5	<0.5	<20	--	--
3/26/90	W-49-MW-4	<0.5	<0.5	<0.5	<0.5	<20	--	--
8/01/90	W-54-MW-4	<0.5	<0.5	<0.5	<0.5	<20	--	--
12/27/90	W-54-MW-4	<0.5	<0.5	<0.5	<0.5	<50	--	--
03/20/91	W-53-MW-4	<0.5	<0.5	<0.5	<0.5	<50	--	--

See notes on page 4 of 4.

TABLE 2  
CUMULATIVE RESULTS OF GROUNDWATER ANALYSES  
(page 2 of 4)

Date	Sample No.	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Total Xylenes (ppm)	TPHg (ppm)	EPA 502.2 (ppm)	EPA 524.2 (ppm)
<b>MU-5d</b>								
5/25/88	W-9-MW5a	<0.5	3.1	<0.5	<0.5	<20	--	--
7/06/88	W-41-MW5d	<0.5	<0.5	<0.5	<0.5	<20	--	--
7/13/88	W-43-MW5d	<0.5	<0.5	<0.5	<0.5	40	--	--
3/08/89	W-43-MW5d	<0.5	<0.5	<0.5	<0.5	<20	--	--
6/30/80	W-45-MW5d	<0.5	<0.5	<0.5	<0.5	<20	--	--
7/17/89	W-46-MW5d	<0.5	<0.5	<0.5	<0.5	<20	--	--
7/20/89	W-47-MW5d	<0.5	<0.5	<0.5	<0.5	<20	--	--
7/26/89	W-47-MW5d	<0.5	<0.5	<0.5	<0.5	<20	--	--
8/02/89	W-48-MW5d	<0.5	<0.5	<0.5	<0.5	<20	--	--
9/13/89	W-51-MW5d	<0.5	<0.5	<0.5	<0.5	<20	--	--
12/20/89	W-51-MW5d	<0.5	<0.5	<0.5	<0.5	<20	--	--
3/26/90	W-50-MW5d	<0.5	<0.5	<0.5	<0.5	<20	--	--
8/01/90	W-56-MW5d	<0.5	<0.5	<0.5	<0.5	<20	--	--
12/27/90	W-63-MW5d	<0.5	<0.5	<0.5	<0.5	<50	--	--
03/20/91	W-59-MW5d	<0.5	<0.5	<0.5	<0.5	<50	--	--
06/20/91	W-65-MW5d	<0.5	<0.5	<0.5	<0.5	<50	--	--
<b>MU-5s</b>								
5/25/88	W-41-MW5b	<0.5	0.9	<0.5	<0.5	<20	--	--
7/06/88	W-41-MW5s	<0.5	<0.5	<0.5	<0.5	<20	--	--
7/13/88	W-44-MW5s	<0.5	<0.5	<0.5	<0.5	<20	--	--
7/22/88	W-42-MW5s	0.9	4.1	1.3	8.7	50	--	--
8/05/88	W-25-MW5s	<0.5	<0.5	<0.5	<0.5	<20	--	--
9/07/88	W-43-MW5s	<0.5	<0.5	<0.5	<0.5	<20	--	--
3/08/89	W-43-MW5s	<0.5	<0.5	<0.5	<1.0	<20	--	--
6/30/89	W-45-MW5s	<0.5	<0.5	<0.5	<0.5	<20	--	--
7/17/89	W-46-MW5s	<0.5	<0.5	<0.5	<0.5	<20	--	--
7/20/89	W-46-MW5s	<0.5	<0.5	<0.5	<0.5	<20	--	--
7/26/89	W-46-MW5s	<0.5	<0.5	<0.5	<0.5	<20	--	--
8/02/89	W-47-MW5s	<0.5	<0.5	<0.5	<0.5	<20	--	--
9/13/89	W-50-MW5s	<0.5	<0.5	<0.5	<0.5	<20	--	--
12/20/89	W-50-MW5s	<0.5	<0.5	<0.5	<0.5	<20	--	--
3/26/90	W-49-MW5s	<0.5	<0.5	<0.5	<0.5	<20	--	--
8/01/90	W-55-MW5s	<0.5	<0.5	<0.5	<0.5	<50	--	--
12/27/90	W-54-MW5s	<0.5	<0.5	<0.5	<0.5	<50	--	--
<b>MU-6</b>								
5/17/88	W-40-MW6	<0.5	<0.5	<0.5	<0.5	<20	--	--
6/28/88	W-38-MW6	31.8	7.5	5.4	6.7	440	--	--
7/13/88	W-42-MW6	162.3	7.7	22.5	14.1	290	--	--
8/05/88	W-42-MW6	245	5.2	47.1	23.7	1,180	--	--
9/07/88	W-43-MW6	474	16	262	136	2,920	--	--
10/24/88				Well destroyed				

See notes on page 4 of 4.

TABLE 2  
CUMULATIVE RESULTS OF GROUNDWATER ANALYSES  
(page 3 of 4)

Date	Sample No.	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Total Xylenes (ppb)	TPHg (ppb)	EPA 502.2 (ppb)	EPA 524.2 (ppb)
<b>MW-7 (recovery well)</b>								
7/13/88	W-34-MW7	860	1,910	710	4,420	16,700	--	--
7/22/88	W-50-MW7	136	85	5	58	460	--	--
8/05/88	W-45-MW7	73.3	52.8	2.3	28.1	270	--	--
2/09/89	W-50-MW7	600	688	10	448	6,700	--	--
6/30/89	W-Pump-MW7	180	50	13	40	1,100	--	--
8/02/89	W-TAP-MW7	1.6	<0.5	<0.5	0.60	31	--	--
9/13/89	W-Influent	<0.5	2.6	<0.5	12	87	--	--
12/20/89	W-TAP-MW7	<0.5	<0.5	<0.5	<0.5	<20	--	--
6/20/91	W-55-MW7	<0.5	1.8	0.6	4.1	74	--	--
9/12/91	W-56-MW7	3.5	<0.5	1.7	6.8	<50	--	--
12/30/91	W-55-MW7	<0.5	<0.5	<0.5	<0.5	<50	--	--
<b>Well No. 7 (City of Pleasanton)</b>								
7/20/89	Well 7	--	--	--	--	--	ND*	--
8/02/89	W-TAP-CW7	--	--	--	--	--	--	ND*
3/26/90	W-TAP-MW7	<0.50	<0.50	<0.50	<0.50	<20	--	--
<b>MW-8</b>								
10/03/89	W-53-MW8	<0.5	<0.5	<0.5	<0.5	<20	--	--
12/20/89	W-52-MW8	<0.50	<0.50	<0.50	0.61	<20	--	--
1/31/90	W-55-MW8	<0.50	<0.50	<0.50	0.87	<20	--	--
2/09/90	W-52-MW8	<0.5	<0.5	<0.5	1.1	<20	--	--
	(Blank)	<0.5	<0.5	<0.5	<0.5	<20	--	--
3/26/90	W-55-MW8	<0.5	<0.5	<0.5	<0.5	<20	--	--
	(Blank)	<0.5	<0.5	<0.5	<0.5	<20	--	--
4/18/90	W-52-MW8	<0.50	0.58	<0.50	1.1	<20	--	--
5/17/90	W-60-MW8	<0.5	<0.5	<0.5	<0.5	<20	--	--
6/11/90	W-62-MW8	<0.5	<0.5	<0.5	<0.5	<20	--	--
8/01/90	W-61-MW8	<0.5	<0.5	<0.5	<0.5	<20	--	--
8/27/90	W-70-MW8	<0.5	<0.5	0.5	0.5	<20	--	--
9/28/90	W-71-MW8	<0.5	<0.5	<0.5	0.5	<50	--	--
12/27/90	W-67-MW8	<0.5	<0.5	<0.5	0.6	<50	--	--
03/20/91	W-60-MW8	<0.5	<0.5	<0.5	<0.5	<50	--	--
06/20/91	W-88-MW8	<0.5	<0.5	<0.5	0.6	<50	--	--
10/14/91	W-99-MW8	<0.5	<0.5	<0.5	<0.5	<50	--	--
12/30/91	W-81-MW8	<0.5	<0.5	<0.5	<0.5	<50	--	--
<b>MW-9</b>								
10/13/89	W-50-MW9	1,000	9,200	3,000	13,000	89,000	--	--
12/20/89	W-50-MW9	6,300	31,000	9,500	55,000	190,000	--	--
1/25/90	W-50-MW9	2,400	9,400	2,700	15,000	77,000	--	--
2/27/90	W-50-MW9	1,200	7,100	2,300	14,000	97,000	--	--
3/26/90	W-49-MW9	1,800	7,700	2,000	11,000	89,000	--	--
4/18/90	W-49-MW9	2,000	7,500	2,500	16,000	110,000	--	--
5/17/90	W-50-MW9	1,500	5,700	2,300	14,000	81,000	--	--
6/20/91	W-19-MW9	<0.5	<0.5	<0.5	<0.5	430	--	--
<b>MW-10</b>								
10/12/89	W-52-MW10	<0.5	<0.5	<0.5	1.5	20	--	--
12/20/89	W-52-MW10	<0.5	<0.5	<0.5	1.8	<20	--	--
3/26/90	W-51-MW10	<0.5	<0.5	<0.5	<0.5	<20	--	--
8/01/90	W-57-MW10	<0.5	<0.5	<0.5	<0.5	<20	--	--

See notes on page 4 of 4.

TABLE 2  
 CUMULATIVE RESULTS OF GROUNDWATER ANALYSES  
 (page 4 of 4)

Date	Sample No.	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Total Xylenes (ppb)	TPHg (ppb)	EPA 502.2 (ppb)	EPA 524.2 (ppb)
<b>MW-11</b>								
11/16/89	W-51-MW11	4.1	9.4	0.74	20	150	--	--
12/20/89	W-50-MW11	7.2	7.5	2.9	13	150	--	--
3/26/90	W-50-MW11	<0.5	<0.5	<0.5	2.7	32	--	--
7/30/90	W-54-MW11	<0.5	<0.5	<0.5	3.8	26	--	--

TPHg = total petroleum hydrocarbons as gasoline by EPA modified Method 8015  
 EPA 502.2 = EPA Method 502.2 (volatile organic compounds)  
 EPA 524.2 = EPA Method 524.2 (volatile organic compound)  
 < = Less than the method detection limits of the laboratory  
 -- = Not analyzed or not applicable  
 ND = Nondetectable or below the method detection limit(s) of the laboratory  
 \* = Nondetectable concentrations for 58 volatile organic compounds

Sample designation: W-54-MW11

┌───┐ monitoring well number  
 │───┘ depth of sample to the nearest foot  
 └───┘ water

**TABLE 3**  
**CUMULATIVE RESULTS OF INFLUENT AND EFFLUENT VAPOR SAMPLES**

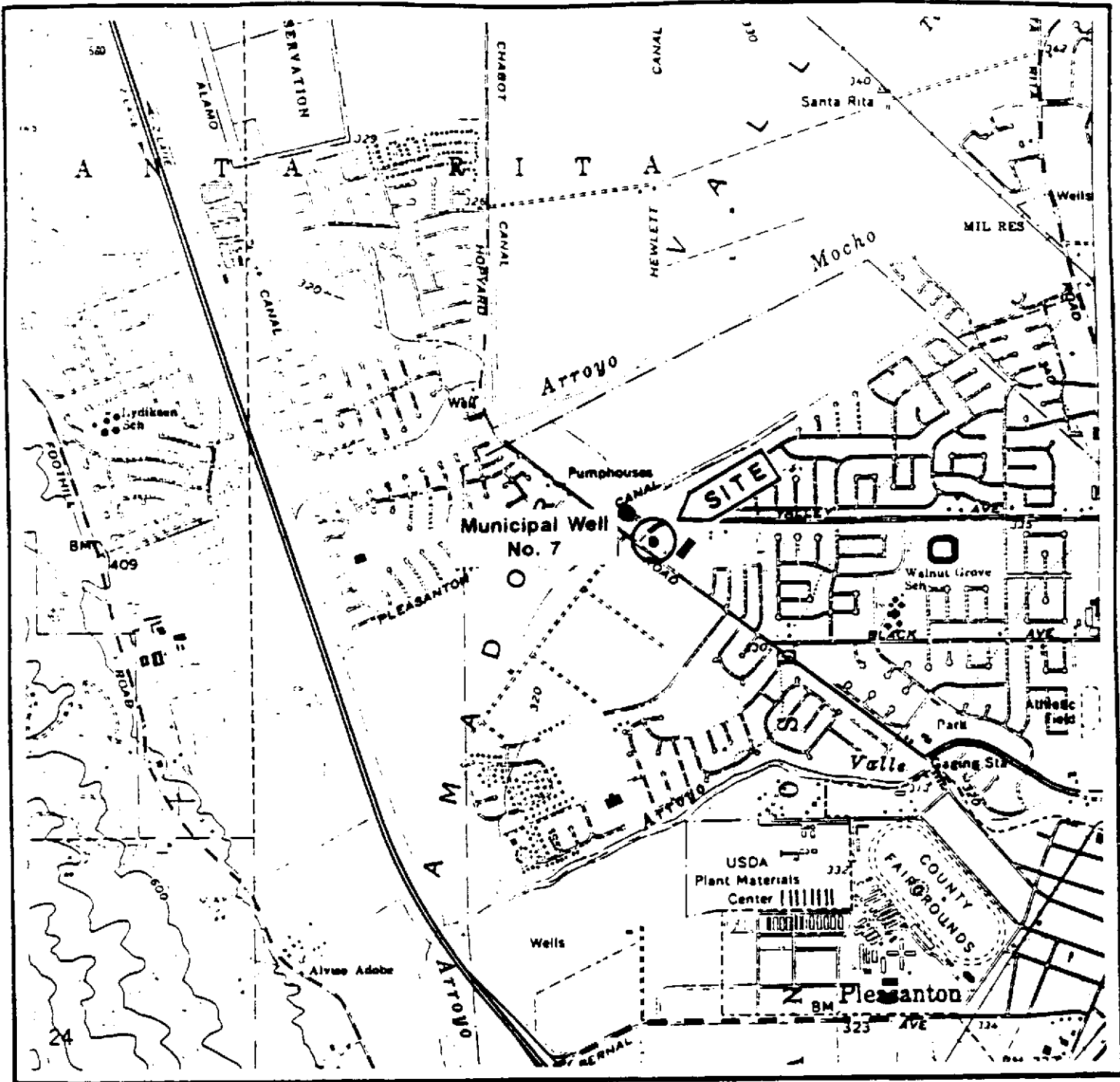
Date	Sample No.	TPHg	Benzene	Toluene	Ethyl-benzene	Total xylenes
11/30/90	influent	1800*	19*	21*	15*	52*
12/11/90	influent	1.4	<0.0001	0.0005	0.0003	0.0008
12/14/90	influent	0.94	<0.0005	0.011	0.0083	0.025
	effluent	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
12/17/90	influent	0.20	0.0024	0.0016	0.0010	0.0026
	effluent	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
12/28/90	influent	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
	effluent	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
1/4/91	influent	0.94	0.013	0.0005	0.0006	0.0015
1/14/91	influent	1.2	0.0023	0.0013	0.0009	0.0039
1/28/91	influent	0.96	0.028	0.0008	0.0005	0.0005
2/28/91	System inoperative					
3/18/91	influent	0.91	0.0037	0.0015	0.0018	0.0091
4/22/91	System inoperative					
5/3/91	influent	0.62	<0.0005	<0.0005	<0.0005	0.0009
6/20/91	influent	0.49	0.026	0.041	0.0089	0.050

Results are in parts per million (ppm).

\* = Results in milligrams per cubic meter (mg/m<sup>3</sup>).

TPHg = Total petroleum hydrocarbons as gasoline.

< = Less than the method detection limit of the laboratory.



Source: U.S. Geological Survey  
 7.5-Minute Quadrangle  
 Dublin, California  
 Photorevised 1980

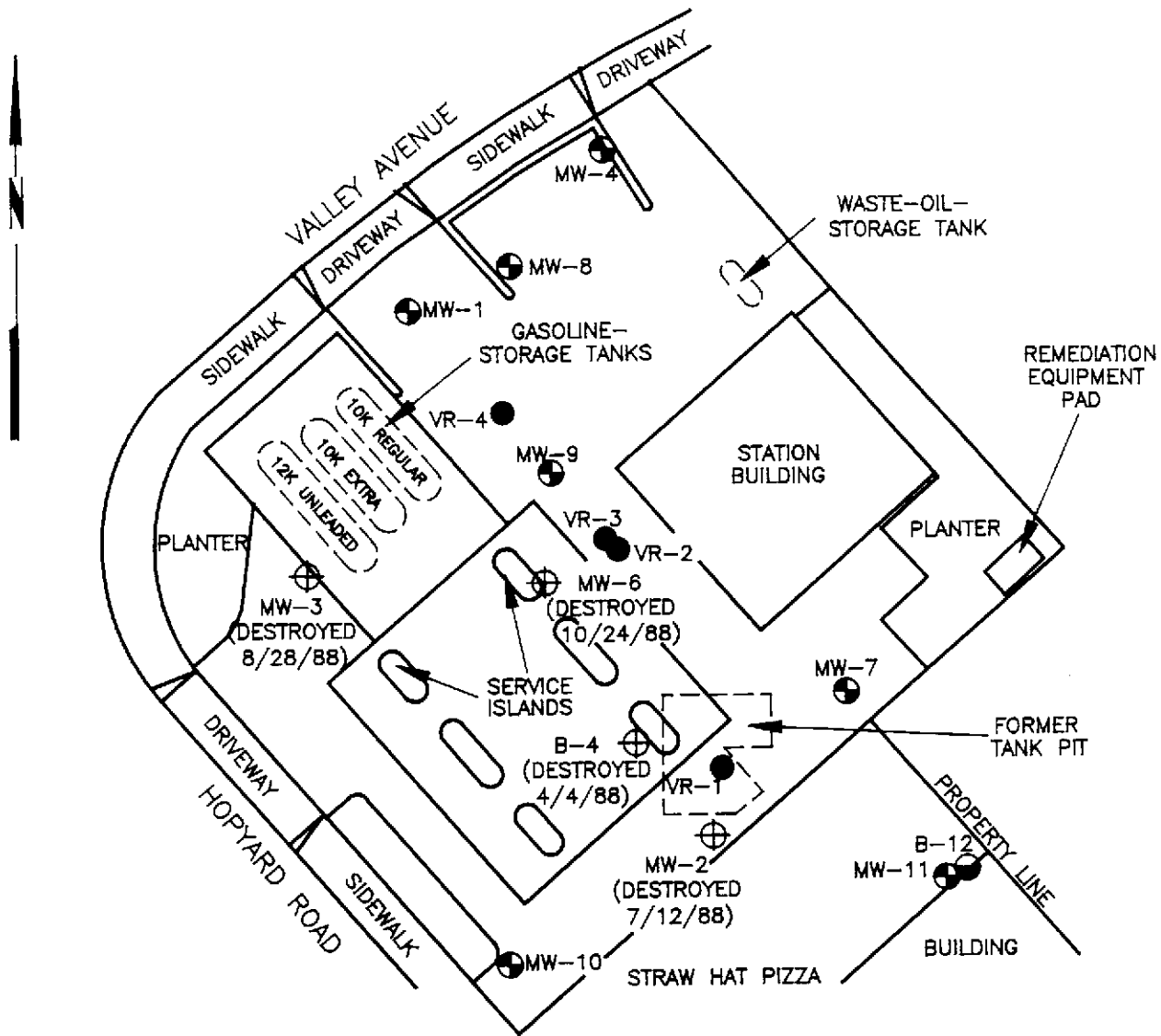
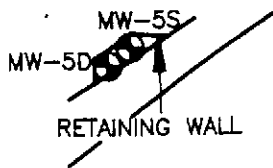


**RESNA**

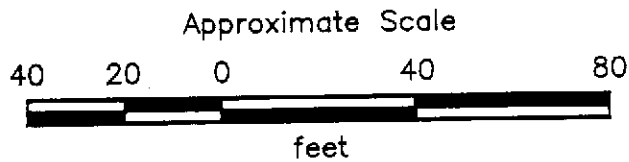
PROJECT NO. 18034-9

**SITE VICINITY MAP**  
**Exxon Station No. 7-3399**  
**2991 Hopyard Road**  
**Pleasanton, California**

**PLATE**  
**1**



- MW-7 ● = Monitoring well
- VR-1 ● = Vapor recovery well
- B-12 ● = Soil boring
- MW-6 ⊕ = Former well or boring



**RESNA**

PROJECT NO. 18034-9

**GENERALIZED SITE PLAN**  
Exxon Station No. 7-3399  
2991 Hopyard Road  
Pleasanton, California

PLATE

2

## **FIELD PROCEDURES**

### **Subjective Evaluations**

Before groundwater samples were collected for subjective evaluations, the depth to static water level in each well was measured to the nearest 0.01 foot with a Solinst electronic water-level indicator. Groundwater samples were then collected from each well by gently lowering approximately half the length of a Teflon bailer past the air-water interface. The samples were retrieved and examined for evidence of floating product and sheen. The bailer was washed with Alconox, a commercial biodegradable detergent, and rinsed with deionized water before each use.

### **Groundwater Sampling**

Wells MW-7 and MW-8 were each purged of approximately three well volumes of water. A water sample was collected from each well after the well had recharged to more than 80 percent of the static level. A clean Teflon bailer was used to collect the ground-water samples. Half the length of the bailer was lowered past the air-water interface to retrieve the water sample. The bailer was retrieved and the water was slowly decanted into laboratory cleaned, 40-milliliter, volatile-organic analysis, glass sample vials with Teflon-lined caps. Hydrochloric acid was added to the samples as a preservative. The sample vials were promptly capped, labeled, and placed in iced storage for transport to Applied Analytical Environmental Laboratories. Chain-of-custody protocol was observed throughout the handling of samples.

### **Water Storage and Disposal**

Purged ground water was temporarily stored onsite in 17E, 55-gallon liquid-waste drums approved for this purpose by the Department of Transportation. The purged water was discharged through the oil-water separator onsite and into the sanitary sewer under a permit from the Dublin-San Ramon Services District.

### **Influent and Effluent Vapor Sampling**

Influent and effluent vapors samples have previously been collected at the catalytic oxidizer's inlet port using evacuated aerosol containers (280 cubic centimeter Vacuum Samplers). These Vacuum Samplers were fitted with a septum port and needle guide, through which the containers were filled for subsequent laboratory analysis.

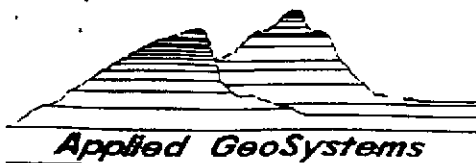


**SUBJECTIVE EVALUATION OF GROUNDWATER**

Project No. 18034-9  
 Date 12/30/91  
 Page 1 of 1

Well No.	Initial Depth to Water	Depth to Product	Product Thickness	Total Depth	Sheen	Comments
MW-1	--	--	--	--	--	Connected to vapor syst.
MW-4	Dry	NA	NA	--	NA	
MW-5d	Dry	NA	NA	--	NA	Silt at bottom
MW-5s	53.80	None	NA	--	None	clear
MW-7	55.21	None	NA	--	None	clear
MW-8	81.15	None	NA	--	None	clear
MW-9	--	--	--	--		Connected to vapor syst.
MW-10	--	--	--	--	--	Connected to vapor syst.
MW-11	53.95	None	NA	--	None	clear

NA = Not applicable  
 -- = Not measured



# WELL PURGE DATA SHEET

Project Name: Exxon Pleasanton  
 Job Number: 18034-9 Date: 12/30/91  
 Sampler: CMV Page 1 of 2

Wellhead Type Steel Plate Locked? NA ID #? \_\_\_\_\_ Casing Size 5"  
 Comments: Wellhead Condition GOOD

**WELL  
NUMBER**

MV-7

## SUBJECTIVE DATA

TIME	DEPTH TO WATER (ft)	DEPTH TO PRODUCT (ft)	PRODUCT THICKNESS (ft)	SHEEN	COMMENTS
	<u>55.4</u>	-	-	-	

## PURGE VOLUME COMPUTATION

TOTAL DEPTH (ft)	WATER COLUMN (ft)	CONVERSION FACTOR	CASING VOLUME (gal)	NUMBER OF VOLUMES	GALLONS TO BE PURGED
<u>59.10</u>	<u>3.79</u>	<u>0.67</u>	<u>3</u>	<u>3+</u>	<u>10</u>

## PURGE DATA

TIME	CUMULATIVE GALLONS PURGED	PUMP ON/OFF	TEMPERATURE °F °C	pH	CONDUCTIVITY	SUBJECTIVE TURBIDITY
<u>Start</u>	<u>1</u>	<u>N/A</u>	<u>17.1</u>	<u>7.8</u>	<u>2,500</u>	<u>Clear.</u>
	<u>2</u>	<u>N/A</u>	<u>16.9</u>	<u>7.9</u>	<u>2,400</u>	<u>Turbid</u>
	<u>4</u>	<u>N/A</u>	<u>16.6</u>	<u>7.8</u>	<u>2,300</u>	<u>Turbid</u>

Pump type/# Bailed Total gallons purged 12 Method of measurement 5 gal. bucket GPM \_\_\_\_\_

## RECOVERY/SAMPLE DATA

DATE	TIME	DEPTH TO WATER (ft)	PERCENT RECOVERY	SAMPLED YES/NO	COMMENTS
<u>12/30/91</u>	<u>2 p.m.</u>	<u>55.4</u>	<u>100</u>	<u>YES</u>	

NA = Data not available or not applicable.

# WELL PURGE DATA SHEET

Project Name: Exxon Pleasanton  
 Job Number: 18034-9  
 Sampler: K.M.V.

Date: 12/30/91  
 Page 2 of 2

Wellhead Type DWP Locked? YES ID #? \_\_\_\_\_ Casing Size 4"  
 Comments: Wellhead Condition GOOD

**WELL NUMBER**  
  
MW-8

## SUBJECTIVE DATA

TIME	DEPTH TO WATER (ft)	DEPTH TO PRODUCT (ft)	PRODUCT THICKNESS (ft)	SHEEN	COMMENTS
-	81.15	-	-	-	

## PURGE VOLUME COMPUTATION

TOTAL DEPTH (ft)	WATER COLUMN (ft)	CONVERSION FACTOR	CASING VOLUME (gal)	NUMBER OF VOLUMES	GALLONS TO BE PURGED
≈ 132	≈ 51'	.66	34	3+	102

## PURGE DATA

TIME	CUMULATIVE GALLONS PURGED	PUMP ON/OFF	TEMPERATURE °F °C	pH	CONDUCTIVITY	SUBJECTIVE TURBIDITY
0	10	ON	16.6	7.39	2,200	Clear
9 min	20	"	16.9	7.37	1500	"
20 min	30	"	16.9	7.23	1700	"
27 min	50	"	16.9	7.12	1700	"
35 min	60	"	16.6	7.12	1700	"
50 min	80	"	16.7	7.13	1700	"
80 min	120	"	16.6	7.12	1700	"

Pump type/# Grundfos Total gallons purged 120 Method of measurement Flowmeter GPM

## RECOVERY/SAMPLE DATA

DATE	TIME	DEPTH TO WATER (ft)	PERCENT RECOVERY	SAMPLED YES/NO	COMMENTS
12/30/91	-	≈ 81.2	100	YES	



Resna/Applied Geosystems  
 41674 Christy St.  
 Fremont, CA 94538

January 08, 1992  
 PACE Project Number: 420102502

Attn: Mr. Keith McVicker

Client Reference: Exxon 7-3399

PACE Sample Number: 70 0000190  
 Date Collected: 12/30/91  
 Date Received: 01/02/92  
 Client Sample ID: W-55-MW7

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

ORGANIC ANALYSIS

TPH GASOLINE/BTEX			
TOTAL FUEL HYDROCARBONS, (LIGHT):		-	01/06/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	ND 01/06/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):		-	01/06/92
Benzene	ug/L	0.5	ND 01/06/92
Toluene	ug/L	0.5	ND 01/06/92
Ethylbenzene	ug/L	0.5	ND 01/06/92
Xylenes, Total	ug/L	0.5	ND 01/06/92

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

Mr. Keith McVicker  
 Page 2

January 08, 1992  
 PACE Project Number: 420102502

Client Reference: Exxon 7-3399

PACE Sample Number: 70 0000203  
 Date Collected: 12/30/91  
 Date Received: 01/02/92  
 Client Sample ID: W-81-MW8

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

ORGANIC ANALYSIS

TPH GASOLINE/BTEX

TOTAL FUEL HYDROCARBONS, (LIGHT):		-	01/06/92
Purgeable Fuels, as Gasoline (EPA 8015)	ug/L	50	ND 01/06/92
PURGEABLE AROMATICS (BTXE BY EPA 8020):		-	01/06/92
Benzene	ug/L	0.5	ND 01/06/92
Toluene	ug/L	0.5	ND 01/06/92
Ethylbenzene	ug/L	0.5	ND 01/06/92
Xylenes, Total	ug/L	0.5	ND 01/06/92

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

Mr. Keith McVicker  
 Page 3

QUALITY CONTROL DATA

January 08, 1992  
 PACE Project Number: 420102502

Client Reference: Exxon 7-3399

TPH GASOLINE/BTEX  
 Batch: 70 08979  
 Samples: 70 0000190, 70 0000203

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	297	105%	103%	1%
Benzene	ug/L	0.5	40.0	96%	101%	5%
Toluene	ug/L	0.5	40.0	96%	101%	5%
Ethylbenzene	ug/L	0.5	40.0	97%	101%	4%
Xylenes, Total	ug/L	0.5	80.0	99%	103%	3%

MDL Method Detection Limit  
 RPD Relative Percent Difference