EXXON COMPANY, U.S.A.

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MARKETING DEPARTMENT

ENVIRONMENTAL ENGINEERING
G. D. GIBSON
SENIOR ENVIRONMENTAL ENGINEER

August 13, 1990

Exxon RAS 7-3399
2991 Hopyard Road
Pleasanton, California

Mr. Richard Hiett
San Francisco Bay Regional Water Quality Control Board
1800 Harrison Street, Suite 700
Oakland, California 94612

Dear Mr. Hiett:

Attached for your review is the Letter Progress Report on Ground-Water Monitoring at the above referenced Exxon Company, U.S.A. facility in the City of Pleasanton. This report presents the results of the monthly monitoring conducted in June, 1990.

Please contact me at (415) 246-8768 if you have any questions or concerns about this report. Thank you.

Sincerely,

Gary D. Gibson

GDG:vv
1437E
Attachment

c - w/attachment:
Mr. S. Cusenza - City of Pleasanton Public Works Department
Mr. L. Feldman - San Francisco Bay Region Water Quality Control Board
Mr. J. Killingstad - Alameda County Flood Control District Zone 7
Mr. R. Meuller - City of Pleasanton Fire Department

w/o attachment:
Ms. M. D. Baca
Mr. P. J. Brininstool
Mr. J. R. Hastings
Mr. J. K. Hunter
Mr. L. W. Lindeen
Mr. M. Thomson - Alameda County District Attorney's Office
Mr. R. C. Witham - Applied GeoSystems

Applied GeoSystems 43255 Mission Boulevard, Fremont, CA 94539 (415) 651-1906

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LETTER PROGRESS REPORT OF GROUND-WATER MONITORING FOR JUNE 1990

at

Exxon Station No. 7-3399
2991 Hopyard Road
Pleasanton, California

AGS Job No. 18034-8

Applied GeoSystems 43255 Mission Boulevard, Fremont, CA 94539 (415) 651-1906

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July 26, 1990
AGS 18034-8.pr5

Mr. Gary Gibson
Exxon Company, U.S.A.
P. O. Box 4032
2300 Clayton Avenue
Concord, California 94520

Subject: Letter Progress Report on Ground-Water Monitoring for June 1990 at Exxon Station No. 7-3399, 2991 Hopyard Road, Pleasanton, California

Mr. Gibson:

This report presents the results of the ground-water monitoring and sampling program for June 1990 at Exxon Service Station No. 7-3399. The Exxon station is located at the intersection between Hopyard Road and Valley Avenue in Pleasanton, California. The program included depth-to-water measurements and subjective ground-water evaluations of the monitoring wells on the site. In addition, ground-water samples taken from two wells were analyzed for gasoline hydrocarbon compounds.

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 southeast part of the site were removed in July 1988. The current station features three new USTs containing respectively unleaded, premium unleaded, and regular leaded gasoline; and a waste oil UST (Plate P-1).

Nine ground-water monitoring wells exist on the site (Plate P-1). 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 first and shallowest aquifer below the site. The remaining two wells, MW-5d and MW-8, are screened in the underlying, second and third aquifers, respectively.

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

Field Activities

On June 11, 1990, AGS conducted depth-to-water measurements and subjective ground-water evaluations of the wells on the site. In addition, wells MW-1 and MW-8 were purged and water was sampled for laboratory analyses. Water from well MW-9, which is included in the monthly sampling program, was not sampled because floating product was detected in the well. The field activities were performed in accordance with the AGS Field Procedures (Appendix).

During the site visit, AGS inspected the ground-water recovery system. The flow meter was inspected, and total gallons pumped and estimated pumping rates were recorded.

Results of Ground-Water Monitoring

A comparison of the depth-to-water data after March 1990 indicates a continuous decrease in water levels in the monitoring wells screened in the first aquifer (Table 1). Water levels decreased on average 0.06 feet between March and April 1990, 1.1 feet between April and May 1990, and again 1.1 feet between May and June 1990.

On June 11, 1990, 4.5 inches of a dark orange hydrocarbon product was observed floating on the ground water in well MW-9. Floating product was not observed in any of the other wells (Table 2).

Plate P-2 is a ground-water elevation map for June 1990 based on the depth-to-water data for wells screened in the first aquifer. Due to the presence of floating product, data for well MW-9 was not included in the preparation of Plate P-2. Ground-water flow direction is inferred to be generally southward, however, the flow gradient below much of the site is nearly flat. Previous AGS monitoring suggests a general southward flow direction with a pumping-induced flow component towards recovery well MW-7.

Results of Ground-Water Sampling

Two ground-water samples, one from well MW-1 and the other from well MW-8, were analyzed chemically for gasoline hydrocarbon compounds. The ground-water samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by Environmental Protection Agency (EPA) modified Method 8015, and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 602. The analyses were performed by Applied Analytical Environmental Laboratories (Hazardous Waste Testing Laboratory Certificate 153), Fremont, California. A copy of the Chain of Custody Record is in the Appendix.

TPHg and BTEX were not detected in either one of the two ground-water samples (refer to the laboratory report in the Appendix). Table 2 presents the laboratory results of the June 1990 sampling together with previous AGS sampling results of the site.

Results of Recovery System Monitoring

The total number of gallons recovered from well MW-7 between October 30, 1989, when the recovery system was placed in operation, and June 11, 1990, was approximately 132,440 gallons. Between May 17, 1990, and June 11, 1990, approximately 1,810 gallons were recovered from well MW-7. The low water recovery in the past month is due to declining water levels in well MW-7, and consequently the recovery system was shut-off on June 11, 1990. Recovery activities will resume when the ground water rises to a sufficient level for pumping.

Please call if you have questions.

Sincerely,
Applied GeoSystems

Rodger C. Witham
Project Manager

Paul A. Studemeister
Project Geologist
RG 4635

Enclosures: Table 1 - Ground-Water Elevation Data, Uppermost Aquifer
Table 2 - Cumulative Results of Subjective Analyses
Table 3 - Results of Analyses of Ground-Water Samples
Plate P-1 - Generalized Site Plan
Plate P-2 - Ground-Water Elevation Map (June 11, 1990)
Appendix - Applied GeoSystems Field Procedure
- Chain of Custody Record
- Laboratory Analysis Report (Applied Analytical Environmental Laboratories)

TABLE 1
GROUND-WATER ELEVATION DATA
UPPERMOST AQUIFER

Well No.	Casing Elevation	Depth to Ground Water	Ground-Water Elevation
April 18, 1990			
MW-1	321.44	48.79	272.65
MW-4	321.56	48.90	272.66
MW-5s	321.64	48.95	272.69
MW-7	321.27	57.55*	263.72
MW-9	321.44	48.81	272.63
MW-10	322.99	50.45	272.54
MW-11	321.71	49.12	272.59
May 17, 1990			
MW-1	321.44	49.40	272.04
MW-4	321.56	50.03	271.53
MW-5s	321.64	50.06	271.58
MW-7	321.27	57.40*	263.87
MW-9	321.44	49.96	271.48
MW-10	322.99	51.63	271.36
MW-11	321.71	50.30	271.41
June 11, 1990			
MW-1	321.44	50.83	270.61
MW-4	321.56	50.98	270.58
MW-5s	321.64	50.98	270.66
MW-7	321.27	50.68	270.59
MW-9	321.44	51.58	269.86
MW-10	321.99	52.53	270.46
MW-11	321.71	51.16	270.55

Elevation is in feet above mean sea level.
Depth to ground water is in feet below the top of the casing.
* = water level during pumping of well MW-7

TABLE 2
CUMULATIVE RESULTS OF SUBJECTIVE ANALYSES
(page 1 of 8)

Well/Boring	Date	Depth to Water (ft)	Floating Product (in)	Sheen
MW-1	4/6/88	36.34	None	None
	4/8/88	36.29	None	None
	4/19/88	36.36	None	None
	6/6/88	38.16	None	None
	6/23/88	38.71	None	None
	6/28/88	39.16	--	--
	7/6/88	39.73	None	None
	7/13/88	40.22	None	None
	8/12/88	Well buried under excavated soil		
	8/26/88	41.90	--	--
	9/7/88	42.27	None	None
	12/7/88	43.94	None	None
	12/19/88	43.70	None	None
	2/9/89	42.53	--	--
	3/8/89	41.96	None	None
	4/3/89	41.59	--	--
	4/26/89	41.67	--	--
	6/30/89	43.79	None	None
	7/17/89	44.74	None	None
	7/18/89	44.76	--	--
	7/19/89	44.82	--	--
	7/20/89	44.85	None	None
	7/21/89	44.95	--	--
	7/26/89	45.42	None	None
	8/2/89	--	--	--
	8/3/89	46.18	--	--
	8/17/89	47.12	--	--
	9/13/89	49.08	None	None
	11/28/89	50.21	None	None
	1/9/90	49.31	None	None
	1/26/90	49.29	None	None
	2/23/90	49.02#	None	None
	2/23/90	49.02	None	None
	3/26/90	48.71#	None	None
	3/26/90	48.70	None	None

See notes on page 8 of 8.

TABLE 2
CUMULATIVE RESULTS OF SUBJECTIVE ANALYSES
(page 2 of 8)

Well/Boring	Date	Depth to Water (ft)	Floating Product (in)	Sheen
MW-1	4/18/90	48.79	None	None
	5/17/90	49.40	None	None
	6/11/90	50.83	None	None
MW-2	4/2/90	--	3.0	Heavy
	4/4/90	--	18.0	Heavy
	4/5/88	--	18.0	Heavy
	4/6/88	39.31	38.4	Heavy
	4/8/88	--*	--*	--*
	4/19/88	38.90	29.76**	Heavy
	6/6/88	38.78	3.12	Heavy
	6/23/88	39.23	1.50	Heavy
	6/28/88	39.72	--	--
	7/6/88	40.31	None	Slight
	7/12/88	Well destroyed due to excavation (old pit)		
MW-3	4/6/88	37.19	None	None
	4/8/88	37.14	None	None
	4/19/88	37.22	None	None
	6/6/88	39.02	None	None
	6/23/88	39.58	None	None
	6/28/88	40.04	--	--
	7/6/88	40.60	None	None
	7/13/88	41.09	None	None
	8/12/88	Well buried under excavated soil		
	8/26/88	42.77	--	--
	8/29/88	Well destroyed due to excavation (new pit)		
MW-4	4/8/88	36.41	None	None
	4/19/88	36.51	None	None
	6/6/88	38.26	None	None
	6/23/88	38.83	None	None
	6/28/88	39.28	--	--
	7/6/88	39.85	None	None
	7/13/88	40.31	None	None
	8/12/88	Well buried under excavated soil		

See notes on page 8 of 8.

TABLE 2
CUMULATIVE RESULTS OF SUBJECTIVE ANALYSES
(page 3 of 8)

Well/Boring	Date	Depth to Water (ft)	Floating Product (in)	Sheen
MW-4	8/26/88	42.01	--	--
	9/7/88	Not accessible due to construction		
	12/7/88	Not accessible due to construction		
	12/19/88	43.83	None	None
	2/9/89	42.67	--	--
	3/8/89	42.11	None	None
	4/3/89	41.73	--	--
	4/26/89	41.79	--	--
	6/30/89	43.88	None	None
	7/17/89	44.85	None	None
	7/18/89	44.88	--	--
	7/19/89	44.92	--	--
	7/20/89	44.98	None	None
	7/21/89	45.04	--	--
	7/26/89	45.50	None	None
	8/2/89	--	--	--
	8/3/89	46.28	--	--
	8/17/89	47.22	--	--
	9/13/89	49.19	None	None
	11/28/89	50.34	None	None
	1/9/90	49.47	None	None
	1/26/90	49.36	None	None
	2/23/90	49.18#	None	None
	2/23/90	49.15	None	None
	3/26/90	48.84#	None	None
	3/26/90	48.83	None	None
	4/18/90	48.90	None	None
	5/17/90	50.03	None	None
	6/11/90	50.98	None	None
B-4	4/2/88	--	None	None
MW-5d	5/25/88	38.55	None	None
	6/6/88	38.90	None	None
	6/23/88	39.56	None	None
	6/28/88	40.23	--	--

See notes on page 8 of 8.

TABLE 2
CUMULATIVE RESULTS OF SUBJECTIVE ANALYSES
(page 4 of 8)

Well/Boring	Date	Depth to Water (ft)	Floating Product (in)	Sheen
MW-5d	7/6/88	40.69	None	None
	7/13/88	41.22	None	None
	8/12/88	42.34	--	--
	8/26/88	42.60	--	--
	9/7/88	42.99	--	--
	12/7/88	44.58	None	None
	2/9/89	Casing head damaged by construction		
	3/8/89	Casing head cut to lower elevation		
		42.49	None	None
	4/3/89	42.21	--	--
	4/26/89	42.36	--	--
	6/30/89	44.79	None	None
	7/17/89	45.73	None	None
	7/18/89	45.75	--	--
	7/19/89	44.89	--	--
	7/20/89	46.02	None	None
	7/21/89	46.18	--	--
	7/26/89	46.83	None	None
	8/2/89	--	--	--
	8/3/89	47.67	--	--
	8/17/89	48.27	--	--
	9/13/89	50.60	None	None
	11/28/89	51.16	None	None
	1/9/90	50.42	None	None
	1/26/90	50.10	None	None
	2/23/90	50.08	None	None
	3/26/90	49.80#	None	None
	3/26/90	49.77	None	None
	4/18/90	49.80	None	None
	5/17/90	51.32	None	None
	6/11/90	52.10	None	None
MW-5s	5/25/88	38.46	None	None
	6/6/88	38.86	None	None
	6/23/88	39.52	None	None
	6/28/88	39.84	--	--
	7/6/88	40.45	None	None
	7/13/88	40.90	None	None

See notes on page 8 of 8.

TABLE 2
CUMULATIVE RESULTS OF SUBJECTIVE ANALYSES
(page 5 of 8)

Well/Boring	Date	Depth to Water (ft)	Floating Product (in)	Sheen
MW-5s	7/22/88	41.30	None	None
	8/5/88	23.84▼	None	None
	8/12/88	42.21	--	--
	8/26/88	42.55	--	--
	9/7/88	42.94	None	None
	12/7/88	44.67	None	None
	2/9/89	43.19	--	--
	3/8/89	Casing head cut to lower elevation		
		42.11	None	None
	4/26/89	41.84	--	--
	6/30/89	43.95	None	None
	7/17/89	44.91	None	None
	7/18/89	44.93	--	--
	7/19/89	44.98	--	--
	7/20/89	45.02	None	None
	7/21/89	45.10	--	--
	7/26/89	45.57	None	None
	8/2/89	--	--	--
	8/3/89	46.31	--	--
	8/17/89	47.25	--	--
	9/13/89	49.22	None	None
	11/28/89	50.39	None	None
	1/9/90	49.51	None	None
	1/26/90	49.40	None	None
	2/23/90	49.20#	None	None
	2/23/90	49.20	None	None
	3/26/90	48.89#	None	None
	3/26/90	48.88	None	None
	4/18/90	48.95	None	None
	5/17/90	50.06	None	None
	6/11/90	50.98	None	None

See notes on page 8 of 8.

TABLE 2
CUMULATIVE RESULTS OF SUBJECTIVE ANALYSES
(page 6 of 8)

Well/Boring	Date	Depth to Water (ft)	Floating Product (in)	Sheen
MW-6	5/11/88	37.71	None	None
	6/6/88	38.70	None	None
	6/23/88	39.23	None	None
	6/28/88	39.74	None	None
	7/13/88	40.78	None	None
	8/5/88	41.72	None	None
	8/12/88	42.14	--	--
	8/17/88	Well buried under excavated soil		
	8/26/88	42.51	--	--
	9/7/88	42.85	None	None
	10/24/88	Well destroyed for station construction		
MW-7	7/13/88	40.50	None	None
	7/22/88	41.85#	None##	None##
	8/5/88	41.45#	None##	None##
	8/12/88	42.69	--	--
	9/7/88	42.60	--	--
	12/7/88	Not accessible		
	1/17/89	43.20	--	--
	2/9/89	Not accessible, pump equipment in well		
	10/12/89	49.93	None	None
	11/28/89	57.61#	--	--
	1/9/90	57.57#	--	--
	1/26/90	57.54#	None	None
	1/26/90	49.08	None	None
	2/23/90	55.26#	None	None
	2/23/90	48.93	None	None
	3/26/90	57.52#	None	None
	3/26/90	48.60	None	None
	4/18/90	57.55#	None	None
	5/17/90	57.40#	None	None
	6/11/90	50.68#	None	None

See notes on page 8 of 8.

TABLE 2
CUMULATIVE RESULTS OF SUBJECTIVE ANALYSES
(page 7 of 8)

Well/Boring	Date	Depth to Water (ft)	Floating Product (in)	Sheen
MW-8	10/1/89	53.88	None	None
	11/28/89	53.74	None	None
	1/9/90	57.90	None	None
	1/26/90	53.57	None	None
	2/23/90	52.16	None	None
	3/26/90	52.80#	None	None
	4/18/90	51.60	None	None
	5/17/90	58.21	None	None
	6/11/90	58.65	None	None
MW-9	10/12/89	50.24	None	None
	11/28/89	50.59	1.0	Heavy
	12/1/89	50.32	0.25	Heavy
	12/7/89	50.13	1.92	Heavy
	12/13/89	49.91	None	Slight
	12/20/89	49.78	None	Slight
	1/2/90	--	None	Slight
	1/9/90	49.39	None	Slight
	1/26/90	49.30	None	None
	2/23/90	49.06#	None	None
	2/23/90	49.05	None	None
	3/26/90	48.75#	None	None
	3/26/90	48.73	None	V. Slight
	4/18/90	48.81	None	Slight
	5/17/90	49.96	None	Slight
	6/11/90	51.58	4.5	--
MW-10	10/12/89	51.93	None	None
	11/28/89	51.88	None	None
	12/20/89	51.47	None	None
	1/9/90	50.98	None	None
	1/26/90	50.87	None	None
	2/23/90	50.67#	None	None
	2/23/90	50.65	None	None
	3/26/90	50.36#	None	None
	3/26/90	50.35	None	None
	4/18/90	50.45	None	None
	6/11/90	51.16	None	None

See notes on page 8 of 8.

TABLE 2
CUMULATIVE RESULTS OF SUBJECTIVE ANALYSES
(page 8 of 8)

Well/Boring	Date	Depth to Water (ft)	Floating Product (in)	Sheen
MW-11	11/10/89	50.64	None	None
	11/28/89	50.51	None	V. Slight
	12/20/89	51.47	None	None
	1/9/90	49.68	None	None
	1/26/90	49.55	None	None
	2/23/90	49.37#	None	None
	2/23/90	49.35	None	None
	3/26/90	49.03#	None	None
	3/26/90	49.03	None	None
	4/18/90	49.12	None	None
	5/17/90	50.30	None	None
	6/11/90	51.16	None	None

Depth to water is in feet below top of casing.
Thickness of floating product is in inches.
-- = Not measured
* = 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.
= Pumping-water level.
= Water inspected in oil-water separator tank.

Applied GeoSystems

TABLE 3
RESULTS OF ANALYSES OF GROUND-WATER SAMPLES
(page 1 of 7)

Date	Sample No.	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Total Xylenes (ppm)	TPHg (ppm)	EPA 502.2 (ppm)	EPA 524.2 (ppm)
MW-1								
4/2/88	W-38-MW1	<0.0005	0.0017	<0.0005	<0.0005	<0.02	--	--
7/6/88	W-40-MW1	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
7/13/88	W-42-MW1	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
9/7/88	W-43-MW1	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
3/8/89	W-43-MW1	0.0016	<0.0005	<0.0005	<0.0005	<0.02	--	--
6/30/89	W-44-MW1	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
7/17/89	W-45-MW1	<0.0005	<0.0005	<0.0005	<0.0005	0.023	--	--
7/20/89	W-45-MW1	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
7/26/89	W-46-MW1	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
8/2/89	W-46-MW1	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
9/13/89	W-50-MW1	0.039	0.00060	<0.00050	0.0051	0.22	--	--
12/20/89	W-50-MW1	0.056	0.00072	<0.00050	0.00071	0.22	--	--
1/25/90	W-50-MW1	0.018	0.0016	<0.00050	0.0018	0.057	--	--
2/27/90	W-50-MW1	0.0032	0.0023	<0.00050	0.0032	0.055	--	--
3/26/90	W-49-MW1	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
4/18/90	W-49-MW1	0.0011	0.0016	<0.00050	0.0031	0.025	--	--
5/17/90	W-49-MW1	<0.00050	<0.00050	<0.00050	<0.00050	<0.020	--	--
6/11/90	W-52-MW1	<0.00050	<0.00050	<0.00050	<0.00050	<0.020	--	--
MW-2	(Well destroyed 7/12/88)							
7/6/88	W-41-MW2	5.7	18.5	2.9	21.4	62	--	--

See notes on page 7 of 7.

TABLE 3
RESULTS OF ANALYSES OF GROUND-WATER SAMPLES
(page 2 of 7)

Date	Sample No.	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Total Xylenes (ppm)	TPHg (ppm)	EPA 502.2 (ppm)	EPA 524.2 (ppm)
MW-3	(Well destroyed 8/29/88)							
4/6/88	W-39-MW3	<0.0005	<0.0005	<0.0005	<0.0005	0.02		
7/6/88	W-41-MW3	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
7/13/88	W-43-MW3	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
8/26/88	W-44-MW3	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
MW-4								
4/11/88	W-37-MW4	0.0018	0.0163	0.0006	0.0071	0.08	--	--
7/6/88	W-41-MW4	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
7/13/88	W-42-MW4	<0.0005	0.0009	<0.0005	<0.0005	<0.02	--	--
9/7/88			(Well not accessible)					
3/8/89	W-43-MW4	0.0038	0.0010	<0.0005	<0.0005	0.44	--	--
6/30/89	W-44-MW4	<0.0005	<0.0005	<0.0005	<0.0005	0.10	--	--
7/17/89	W-45-MW4	<0.0005	<0.0005	<0.0005	<0.0005	0.39	--	--
7/20/89	W-45-MW4	<0.0005	<0.0005	<0.0005	<0.0005	0.20	ND*	--
7/26/89	W-46-MW4	<0.0005	<0.0005	<0.0005	<0.0005	0.066	--	--
8/2/89	W-46-MW4	--	--	--	--	--	--	ND*
9/13/89	W-50-MW4	<0.00050	<0.00050	<0.00050	<0.00050	<0.020	--	--
12/20/89	W-50-MW-4	<0.00050	<0.00050	<0.00050	<0.00050	<0.020	--	--
3/26/90	W-49-MW-4	<0.00050	<0.00050	<0.00050	<0.00050	<0.020	--	--

See notes on page 7 of 7.

Applied GeoSystems

TABLE 3
RESULTS OF ANALYSES OF GROUND-WATER SAMPLES
(page 3 of 7)

Date	Sample No.	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Total Xylenes (ppm)	TPHg (ppm)	EPA 502.2 (ppm)	EPA 524.2 (ppm)
MW-5d								
5/25/88	W-9-MW5a	<0.0005	0.0031	<0.0005	<0.0005	<0.02	--	--
7/6/88	W-41-MW5d	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	-
7/13/88	W-43-MW5d	<0.0005	<0.0005	<0.0005	<0.0005	0.04	--	--
3/8/89	W-43-MW5d	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
6/30/80	W-45-MW5d	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
7/17/89	W-46-MW5d	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
7/20/89	W-47-MW5d	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
7/26/89	W-47-MW5d	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
8/2/89	W-48-MW5d	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
9/13/89	W-51-MW5d	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
12/20/89	W-51-MW5d	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
3/26/90	W-50-MW5d	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
MW-5s								
5/25/88	W-41-MW5b	<0.0005	0.0009	<0.0005	<0.0005	<0.02	--	--
7/6/88	W-41-MW5s	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
7/13/88	W-44-MW5s	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
7/22/88	W-42-MW5s	0.0009	0.0041	0.0013	0.0087	0.05	--	--
8/5/88	W-25-MW5s	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--

See notes on page 7 of 7.

TABLE 3
RESULTS OF ANALYSES OF GROUND-WATER SAMPLES
(page 4 of 7)

Date	Sample No.	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Total Xylenes (ppm)	TPHg (ppm)	EPA 502.2 (ppm)	EPA 524.2 (ppm)
MW-5s (continued)								
9/7/88	W-43-MW5s	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
3/8/89	W-43-MW5s	<0.0005	<0.0005	<0.0005	<0.001	<0.02	--	--
6/30/89	W-45-Mw5s	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
7/17/89	W-46-MW5s	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
7/20/89	W-46-MW5s	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
7/26/89	W-46-MW5s	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
8/2/89	W-47-MW5s	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
9/13/89	W-50-MW5s	<0.00050	<0.00050	<0.00050	<0.00050	<0.020	--	--
12/20/89	W-50-MW5s	<0.00050	<0.00050	<0.00050	<0.00050	<0.020	--	--
3/26/90	W-49-MW5s	<0.00050	<0.00050	<0.00050	<0.00050	<0.020	--	--
MW-6: (Well destroyed 10/24/88)								
5/17/88	W-40-MW6	<0.0005	<0.0005	<0.0005	<0.0005	<0.02	--	--
6/28/88	W-38-MW6	0.0318	0.0075	0.0054	0.0067	0.44	--	--
7/13/88	W-42-MW6	0.1623	0.0077	0.0225	0.0141	0.29	--	--
8/5/88	W-42-MW6	0.2450	0.0052	0.0471	0.0237	1.18	--	--
9/7/88	W-43-MW6	0.474	0.016	0.262	0.136	2.92	--	--

See notes on page 7 of 7.

Applied GeoSystems

TABLE 3
RESULTS OF ANALYSES OF GROUND-WATER SAMPLES
(page 5 of 7)

Date	Sample No.	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Total Xylenes (ppm)	TPHg (ppm)	EPA 502.2 (ppm)	EPA 524.2 (ppm)
MW-7 (recovery well)								
7/13/88	W-34-MW7	0.86	1.91	0.71	4.42	16.7	--	--
7/22/88	W-50-MW7	0.136	0.085	0.005	0.058	0.46	--	--
8/5/88	W-45-MW7	0.0733	0.0528	0.0023	0.0281	0.27	--	--
2/9/89	W-50-MW7	0.600	0.688	0.010	0.448	6.7	--	--
6/30/89	W-Pump-MW7	0.18	0.050	0.013	0.040	1.1	--	--
8/2/89	W-TAP-MW7	0.0016	<0.0005	<0.0005	0.00060	0.031	--	--
9/13/89	W-Influent	<0.00050	0.0026	<0.00050	0.012	0.087	--	--
12/20/89	W-TAP-MW7	<0.00050	<0.00050	<0.00050	<0.00050	<0.020	--	--
Well No. 7								
7/20/89	Well 7	--	--	--	--	--	ND*	--
8/2/89	W-TAP-CW7	--	--	--	--	--	--	ND*
3/26/90	W-TAP-MW7	<0.00050	<0.00050	<0.00050	<0.00050	<0.020	--	--

See notes on page 7 of 7.

Applied GeoSystems

TABLE 3
RESULTS OF ANALYSES OF GROUND-WATER SAMPLES
(page 6 of 7)

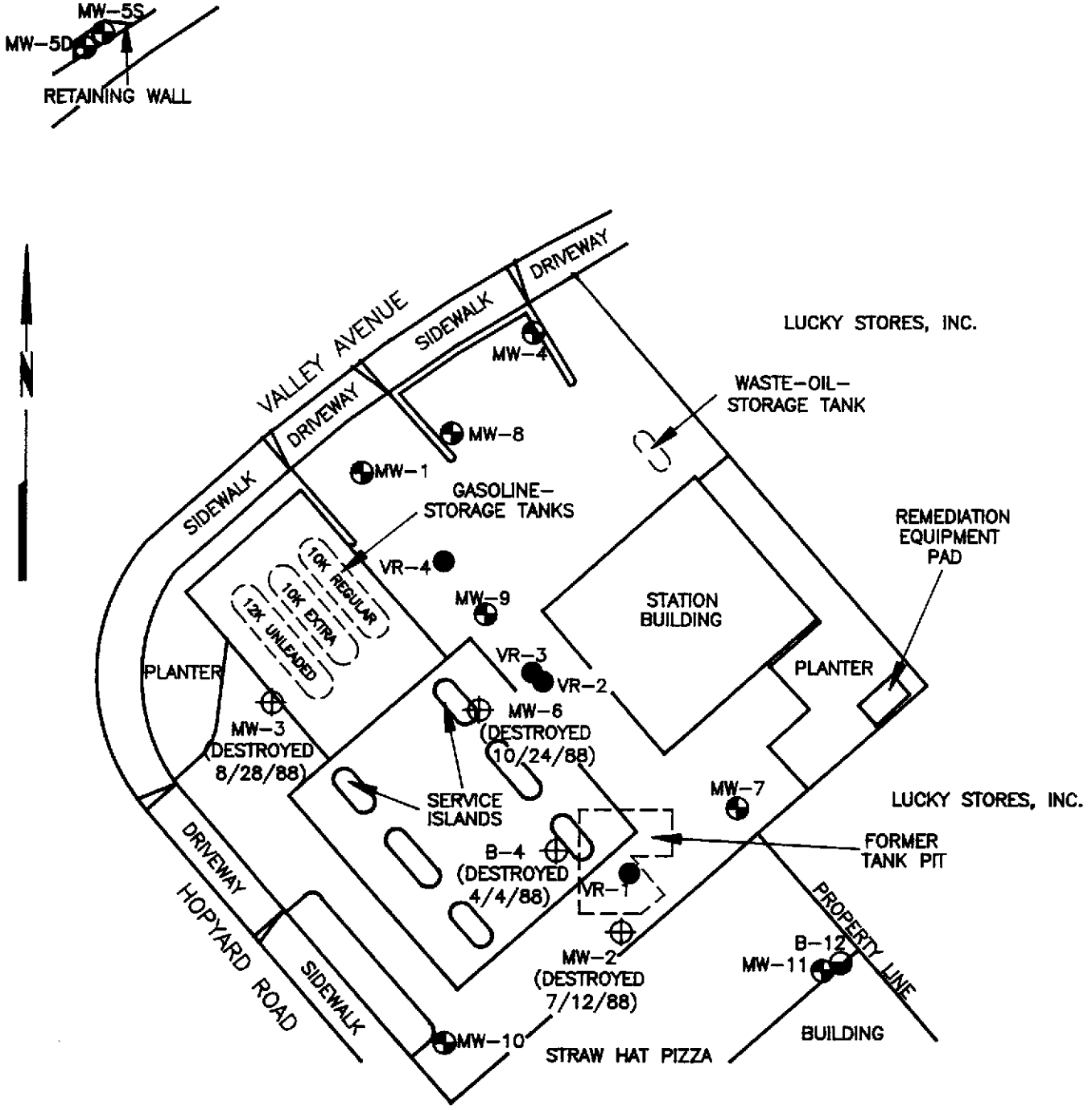
Date	Sample No.	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Total Xylenes (ppm)	TPHg (ppm)	EPA 502.2 (ppm)	EPA 524.2 (ppm)
MW-8								
10/3/89	W-53-MW8	<0.00050	<0.00050	<0.00050	<0.00050	<0.020	--	--
12/20/89	W-52-MW8	<0.00050	<0.00050	<0.00050	0.00061	<0.020	--	--
1/31/90	W-55-MW8	<0.00050	<0.00050	<0.00050	0.00087	<0.020	--	--
2/9/90	W-52-MW8	<0.00050	<0.00050	<0.00050	0.0011	<0.020	--	--
	(Blank)	<0.00050	<0.00050	<0.00050	<0.00050	<0.020	--	--
3/26/90	W-55-MW8	<0.00050	<0.00050	<0.00050	<0.00050	<0.020	--	--
	(Blank)	<0.00050	<0.00050	<0.00050	<0.00050	<0.020	--	--
4/18/90	W-52-MW8	<0.00050	0.00058	<0.00050	0.0011	<0.020	--	--
5/17/90	W-60-MW8	<0.00050	<0.00050	<0.00050	<0.00050	<0.020	--	--
6/11/90	W-62-MW8	<0.00050	<0.00050	<0.00050	<0.00050	<0.020	--	--
MW-9								
10/13/89	W-50-MW9	1.0	9.2	3.0	13	89	--	--
12/20/89	W-50-MW9	6.3	31	9.5	55	190	--	--
1/25/90	W-50-MW9	2.4	9.4	2.7	15	77	--	--
2/27/90	W-50-MW9	1.2	7.1	2.3	14	97	--	--
3/26/90	W-49-MW9	1.8	7.7	2.0	11	89	--	--
4/18/90	W-49-MW9	2.0	7.5	2.5	16	110	--	--
5/17/90	W-50-MW9	1.5	5.7	2.3	14	81	--	--
6/11/90	Not sampled because of the presence of floating product							

See notes on page 7 of 7.

TABLE 3
RESULTS OF ANALYSES OF GROUND-WATER SAMPLES
(page 7 of 7)

Date	Sample No.	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Total Xylenes (ppm)	TPHg (ppm)	EPA 502.2 (ppm)	EPA 524.2 (ppm)
MW-10								
10/12/89	W-52-MW10	<0.00050	<0.00050	<0.00050	0.0015	0.020	--	--
12/20/89	W-52-MW10	<0.00050	<0.00050	<0.00050	0.0018	<0.020	--	--
3/26/90	W-51-MW10	<0.00050	<0.00050	<0.00050	<0.00050	<0.020	--	--
MW-11								
11/16/89	W-51-MW11	0.0041	0.0094	0.00074	0.020	0.15	--	--
12/20/89	W-50-MW11	0.0072	0.0075	0.0029	0.013	0.15	--	--
3/26/90	W-50-MW11	<0.00050	<0.00050	<0.00050	0.0027	0.032	--	--

Results in milligrams per liter (mg/l) = parts per million (ppm)
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 compounds)
< = 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
Well No. 7 = City of Pleasanton Municipal Well No. 7
Sample designation: W-50-MW11
- W = water
- 50 = depth of sample to the nearest foot (for well MW-7, sample collected from a sample port at the surface)
- MW11 = monitoring well number



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

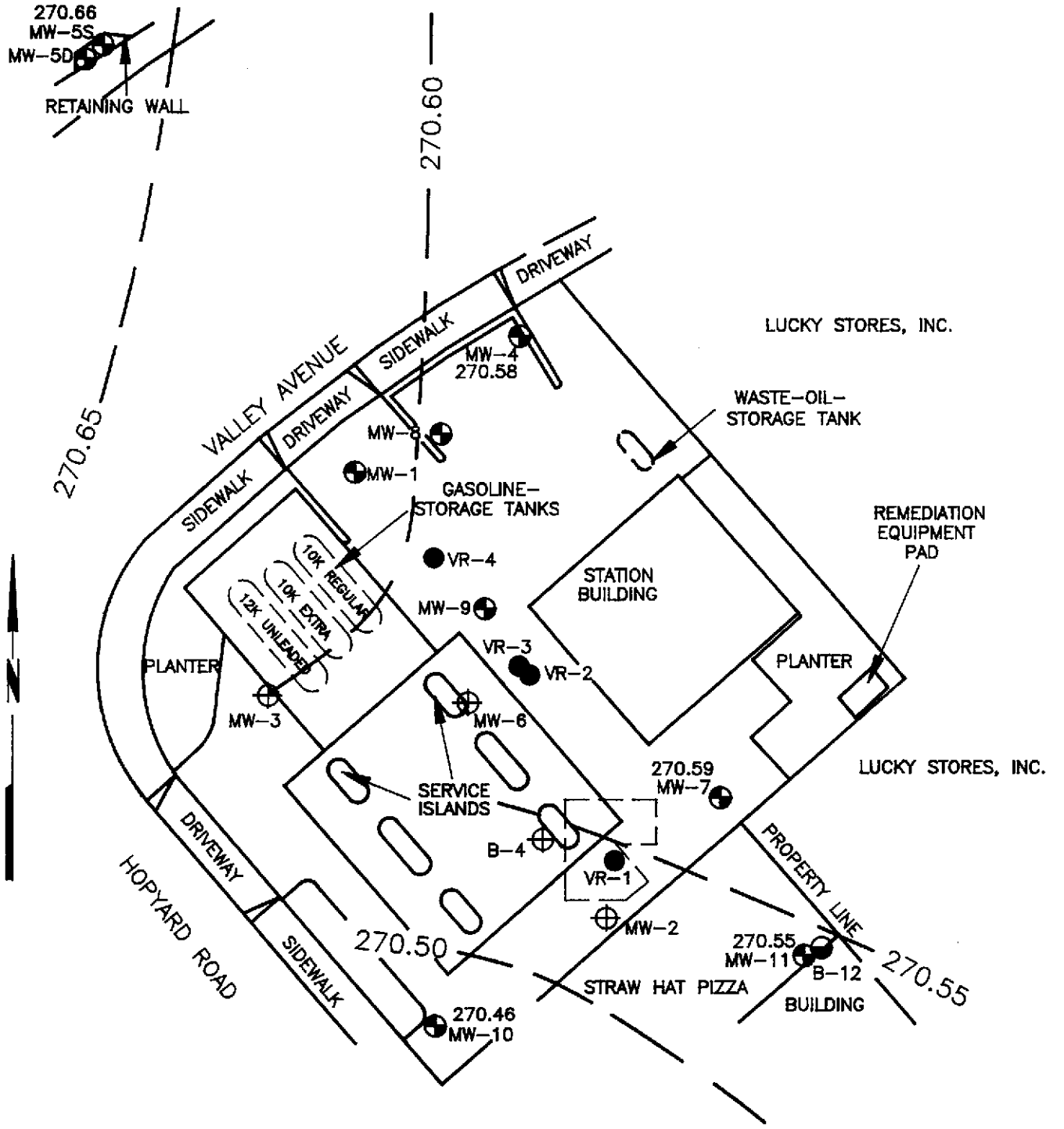
Approximate Scale
40 20 0 40 80
feet

Applied GeoSystems

PROJECT NO. 18034-8

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

PLATE
P - 1



270.65 = Line of equal elevation of ground water in feet above mean sea level

MW-7 = Monitoring well

VR-1 = Vapor recovery well

B-12 = Soil boring

MW-6 = Former well or boring

Applied GeoSystems

PROJECT NO. 18034-8

GROUND-WATER ELEVATION MAP
June 11, 1990
Exxon Station No. 7-3399
2991 Hopyard Road
Pleasanton, California

PLATE

P - 2

FIELD PROCEDURES

Subjective Evaluations

Before ground-water 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. Ground-water 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, sheen, and emulsions. The bailer was washed with Alconox, a commercial biodegradable detergent, and rinsed with deionized water before each use.

Ground-Water Sampling

Wells MW-1 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.

Applied GeoSystems

CHAIN-OF-CUSTODY RECORD

PROJECT NO: 180348

PROJECT NAME: Exxon, Pleasanton

P.O. NO:

SAMPLERS (Signature): Russell Bk

DATE MM/DD/YY	TIME		No. of Containers	TPHgasoline (8015)	BTEX (602/8020)	TPHdiesel (8015)					Preserved?	REMARKS	LABORATORY I.D. NUMBER
				ANALYSIS									
6-11-90	11:05	W-62-MW8	4	✓	✓						Acl +ice		
6-11-90	12:05	W-52-MW1	4	✓	✓						↓		

RELINQUISHED BY (Signature): Russell Bk — DATE / TIME: 6-14-90

RECEIVED BY (Signature):

RELINQUISHED BY (Signature):

DATE / TIME:

RECEIVED BY (Signature):

RELINQUISHED BY (Signature):

DATE / TIME:

RECEIVED BY (Signature): Marla

Laboratory: Applied Analytical

Turn Around: 2 weeks

SEND RESULTS TO:
Applied GeoSystems
42501 Albrae Street
Suite 100
Fremont, California 94639
(415) 651-1906

Proj. Mgr.: Rodger Witham

APPLIED ANALYTICAL

Environmental Laboratories

42501 Albrae St., Suite 100
Fremont, CA 94538
Bus: (415) 623-0775
Fax: (415) 651-8647

ANALYSIS REPORT

1020lab.frm

Attention:	Mr. Rodger Witham	Date Sampled:	06-11-90
	Applied GeoSystems	Date Received:	06-11-90
	42501 Albrae Street	BTEX Analyzed:	06-24-90
	Fremont, CA 94538	TPHg Analyzed:	06-24-90
Project:	AGS 18034-8	TPHd Analyzed:	NR
		Matrix:	Water

	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPHg	TPHd
	ppb	ppb	ppb	ppb	ppb	ppb
Detection Limit:	0.50	0.50	0.50	0.50	20	100
SAMPLE Laboratory Identification						
W-52-MW1 W1006267	ND	ND	ND	ND	ND	NR
W-62-MW8 W1006268	ND	ND	ND	ND	ND	NR

ppb = parts per billion = µg/L = micrograms per liter.
ND = Not detected. Compound(s) may be present at concentrations below the detection limit.
NR = Analysis not requested.

ANALYTICAL PROCEDURES

BTEX-- Benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) are measured by extraction using EPA Method 5030 followed by analysis using EPA Method 8020/602, which utilizes a gas chromatograph (GC) equipped with a photoionization detector (PID) and a flame-ionization detector (FID) in series.

TPHg--Total petroleum hydrocarbons as gasoline (low-to-medium boiling points) are measured by extraction using EPA Method 5030, followed by analysis using modified EPA Method 8015, which utilizes a GC equipped with an FID.

TPHd--Total petroleum hydrocarbons as diesel (high boiling points) are measured by extraction using EPA Method 3550 for soils and EPA Method 3510 for water, followed by modified EPA Method 8015 with direct sample injection into a GC equipped with an FID.

Laboratory Representative

06-27-90
Date Reported