

ALL ENVIRONMENTAL
PROTECTION

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February 13, 1998

**QUARTERLY GROUNDWATER
MONITORING REPORT**

Fourth Quarter, 1997

568

625 Hegenberger Road
Oakland, California

2/13/98

Project No. 2169

Prepared For

Diversified Investment and Management Corp.
400 Oyster Point Blvd., Suite 415
South San Francisco, CA 94080

Prepared By

All Environmental, Inc.
901 Moraga Road, Suite C
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AEI



ALL ENVIRONMENTAL, INC.

Environmental Engineering & Construction

February 13, 1998

Mr. Barney Chan, Hazardous Materials Specialist
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Rm 250
Alameda, CA 94502

RE: Quarterly Groundwater Monitoring Report
Fourth Quarter of 1997
625 Hegenberger Road
Oakland, California
Project No. 2169

Dear Mr. Chan:

This Quarterly Groundwater Monitoring Report is submitted by All Environmental, Inc. (AEI) on the behalf of Diversified Investment and Management Corp. for the former fuel service station location at 625 Hegenberger Road, Oakland, California. AEI measured the depth to groundwater and collected water samples from five groundwater monitoring wells on January 28, 1998. Although the samples were collected in 1998, this data is intended as data for the fourth quarter of 1997. This groundwater monitoring episode is being conducted to monitor groundwater contamination caused by the release of hydrocarbon fuels at the site and to measure various chemical parameters to judge the suitability of the site for groundwater bioremediation.

Background

In October 1993, three underground storage tanks and related structures were removed from the site under the observation of Levine Fricke. Approximately 300 cubic yards (cy) of soil was excavated during the tank removal. Levine Fricke and Subsurface Consultants performed several shallow soil borings and installed six groundwater monitoring wells at the site. Results of the comprehensive soil investigation indicated that hydrocarbon contamination was present in elevated levels at the site.

(earlier than removals)

The quarterly monitoring of the six monitoring wells was performed by Levine Fricke through January 1995. AEI began monitoring the wells in October 1995. In March 1996, AEI destroyed one of the wells (designated MW-24) in anticipation of excavation activities.

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AEI excavated and aerated 1,600 cubic yards of contaminated soil in the spring and summer of 1996 as detailed in AEI's report, "Phase II Environmental Site Assessment" dated March 3, 1997. The excavation extended to the vadose zone, approximately 5 to 7 feet below ground surface (bgs). Figure 1 shows the areas excavated. AEI believes that all significant sources of groundwater contamination have been abated and that only minor contaminant concentrations remain within the soil at the site. The groundwater contamination should eventually attenuate to low levels. The site is currently being evaluated as a candidate for groundwater bioremediation to expedite the reduction of contamination.

(opinion)

Summary of Activities

Well locations are also shown in Figure 1, Potentiometric Map. The sampling procedure for each monitoring well involved measuring water levels, purging the wells, and collecting a water sample. The depth from the top of the well casing and the total well depth were measured prior to sampling with an electric water level indicator. The wells were purged and a groundwater sample was collected from each well using a battery powered submersible pump. Temperature, pH, conductivity, and turbidity were measured during the purging of the wells. AEI removed approximately 4.5 to 6.0 well volumes per well and, provided that the water quality parameters stabilized, a water sample was collected.

Water samples were poured slowly into laboratory-provided glass sampling containers, capped, and shipped on ice under proper chain of custody to McCampbell Analytical Inc. The samples were analyzed for Total Petroleum Hydrocarbons (TPH) as gasoline by EPA Method 5030/8015, benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 602, methyl tertiary butyl ether (MTBE), and TPH as diesel. AEI discontinued the analysis of samples for Total Petroleum Hydrocarbons as oil (TPHo) by EPA Methods 3510/8015 following the recommendations of the quarterly monitoring report dated March 20, 1996.

Field Results

No free product was encountered during monitoring activities. Groundwater levels for February 28, 1998 ranged from 0.04 to 0.37 feet below mean sea level (msl). These groundwater elevations were higher than the July 1997 levels. Groundwater flow direction appears to be to the west. The groundwater gradient was calculated to be 0.002 ft/ft. Groundwater elevation data are summarized in Table 1, Groundwater Elevations, and shown in Figure 1, Potentiometric Map. The groundwater elevation contours and the groundwater flow directions are shown in Figure 1. A summary of field parameters measured during sampling is presented in Table 2, Water Quality Parameters.

Mr. Barney Chan, Hazardous Materials Specialist

Alameda County Health Care Services Agency

February 13, 1998

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Groundwater Quality

In general, analysis of samples retrieved from wells MW-8 through MW-16 revealed no significant change in contamination levels. A summary of groundwater quality data, including available historic data, is presented in Table 3, Historic Groundwater Monitoring Data. Laboratory analysis data are presented in Appendix A, Laboratory Data.

Please do not hesitate to call either of the undersigned, if you have any questions.

Sincerely,

All Environmental, Inc.

Mauricio Escobar
Project Geologist

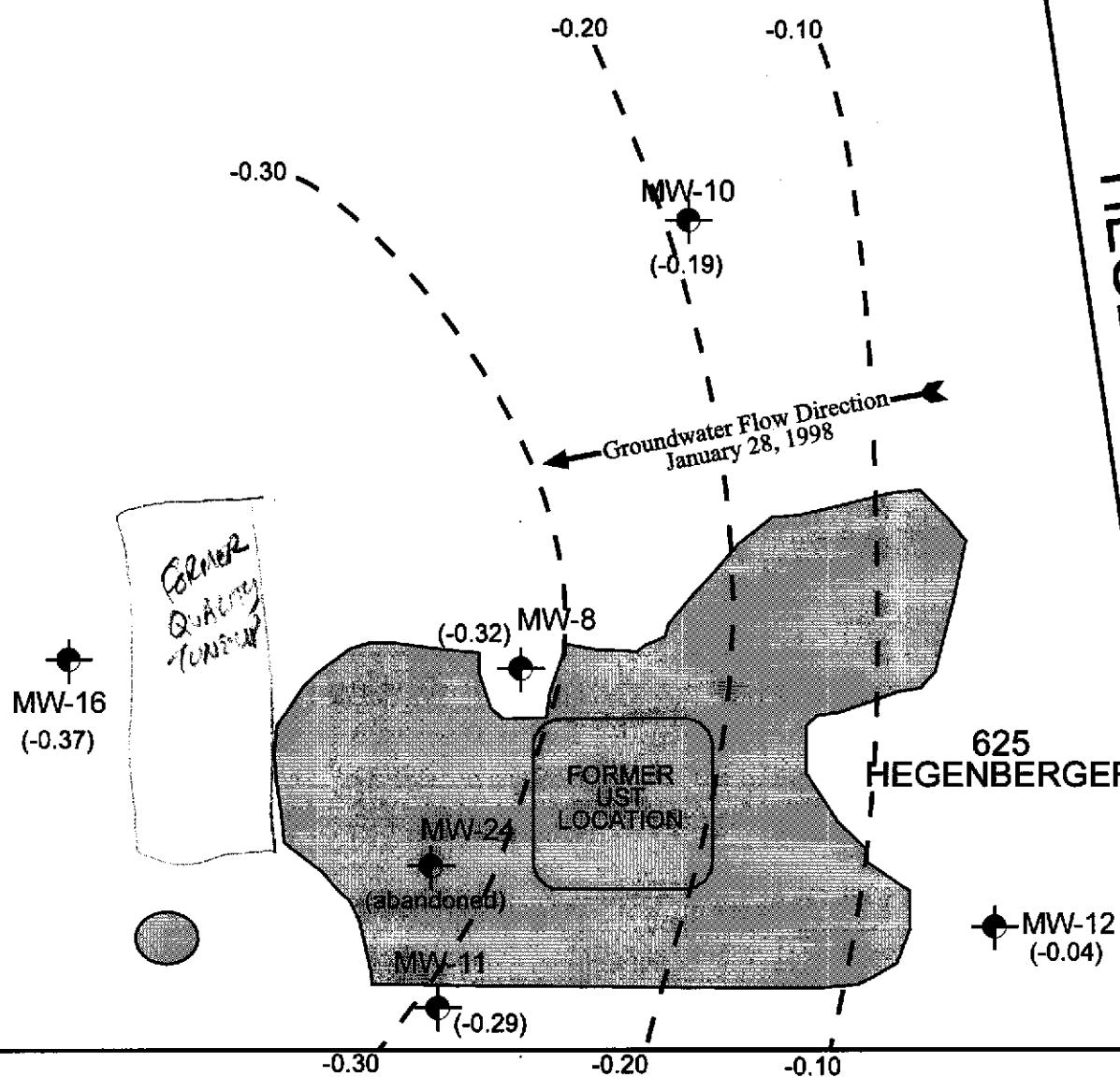


Joseph P. Derhake, PE, CAC
Senior Author

Attachments

cc: Dinesh Manner, Diversified Investment and Management Corp.
400 Oyster Point Boulevard, Suite 400, South San Francisco, CA 94080

HEGENBERGER ROAD



COLLINS DRIVE



LEGEND	
	Groundwater elevation (feet).
	Line of equal groundwater elevation.
	Excavated area.

ALL ENVIRONMENTAL, INC.
3364 MT. DIABLO BOULEVARD, LAFAYETTE, CA

DRAWN BY: M. ESCOBAR

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ALL DISTANCES APPROXIMATE

APPROXIMATE SCALE: 1"=40'

POTENTIOMETRIC MAP

625 Hegenberger Road,
Oakland, California

JN 2169
February 2, 1998

Table 1
Groundwater Elevations
625 Hegenberger Road, Oakland, California

Well ID	Date	Well Elevation (ft msl)	Depth to Water (ft)	Groundwater Elevation (ft msl)
MW-8	12/22/93	4.88	6.72	-1.84
MW-10	12/22/93	4.21	6.00	-1.79
MW-11	12/22/93	5.04	6.84	-1.80
MW-12	12/22/93	4.58	6.07	-1.49
MW-16	12/22/93	5.53	7.48	-1.95
MW-8	6/30/94	4.88	6.55	-1.67
MW-10	6/30/94	4.21	5.79	-1.58
MW-11	6/30/94	5.04	6.73	-1.69
MW-12	6/30/94	4.58	6.06	-1.48
MW-16	6/30/94	5.53	7.28	-1.75
MW-8	9/27/94	4.88	7.20	-2.32
MW-10	9/27/94	4.21	6.39	-2.18
MW-11	9/27/94	5.04	7.41	-2.37
MW-12	9/27/94	4.58	6.57	-1.99
MW-16	9/27/94	5.53	7.93	-2.40
MW-8	1/4/95	4.88	6.21	-1.67
MW-10	1/4/95	4.21	5.42	-1.58
MW-11	1/4/95	5.04	6.45	-1.69
MW-12	1/4/95	4.58	5.50	-1.48
MW-16	1/4/95	5.53	7.03	-1.50
MW-8	1/10/95	4.88	5.09	-2.32
MW-10	1/10/95	4.21	4.67	-2.18
MW-11	1/10/95	5.04	5.72	-2.37
MW-12	1/10/95	4.58	4.46	-1.99
MW-16	1/10/95	5.53	6.21	-2.40
MW-24	1/10/95	5.49	5.97	-0.48
MW-8	10/2/95	4.88	7.66	-2.78
MW-10	10/2/95	4.21	6.87	-2.66
MW-11	10/2/95	5.04	7.85	-2.81
MW-12	10/2/95	4.58	6.99	-2.41
MW-16	10/2/95	5.53	8.40	-2.87
MW-24	10/2/95	5.49	8.31	-2.82
MW-8	1/8/96	4.88	7.45	-2.57
MW-10	1/8/96	4.21	6.82	-2.61
MW-11	1/8/96	5.04	7.91	-2.87
MW-12	1/8/96	4.58	6.65	-2.07
MW-16	1/8/96	5.53	8.23	-2.70
MW-24	1/8/96	5.49	8.08	-2.59
MW-8	4/25/96	4.88	7.32	-2.44
MW-10	4/25/96	4.21	7.48	-3.27
MW-11	4/25/96	5.04	7.51	-2.47
MW-12	4/25/96	4.58	6.56	-1.98
MW-16	4/25/96	5.53	8.06	-2.53
MW-8	3/25/97	4.88	6.75	-1.87
MW-10	3/25/97	4.21	5.83	-1.62
MW-11	3/25/97	5.04	6.83	-1.79
MW-12	3/25/97	4.58	6.03	-1.45
MW-16	3/25/97	5.53	7.35	-1.82
MW-8	7/3/97	4.88	8.70	-3.82
MW-10	7/3/97	4.21	5.87	-1.66
MW-11	7/3/97	5.04	6.83	-1.79
MW-12	7/3/97	4.58	6.03	-1.45
MW-16	7/3/97	5.53	7.35	-1.82
MW-8	10/2/97	4.88	6.70	-1.82
MW-10	10/2/97	4.21	5.90	-1.59
MW-11	10/2/97	5.04	6.85	-1.81
MW-12	10/2/97	4.58	6.08	-1.50
MW-16	10/2/97	5.53	7.36	-1.83
MW-8	1/28/98	4.88	5.20	-0.32
MW-10	1/28/98	4.21	4.40	-0.19
MW-11	1/28/98	5.04	5.33	-0.29
MW-12	1/28/98	4.58	4.54	-0.04
MW-16	1/28/98	5.53	5.90	-0.37

Notes: All elevations are measured from the top of casing.
 ft msl = feet above mean sea level
 NA = Not Available
 All well elevation data was extracted from past Levine-Fricke reports.

Table 2
Water Quality Parameters
625 Hegenberger Road, Oakland, California

Well ID	Date	Well Volume (gallons)	Volume Withdrawn (gallons)	Well Volume Withdrawn	Stabilized Temperature (deg. C)	Qualitative Turbidity	Stabilized pH	Stabilized Dissolved Oxygen (mg/L)	Stabilized Redox Potential (mV)
MW-8	12/22/93	1.5	4.50	3.00	19.40	turbid*			
MW-10	12/22/93	1.6	7.00	4.38	20.80	moderately turbid			
MW-11	12/22/93	1.5	4.50	3.00	20.20	turbid			
MW-12	12/22/93	1.6	5.30	3.31	20.30	moderately turbid			
MW-16	12/22/93	1.1	4.50	4.09	20.50	turbid			
MW-8	6/30/94	1.5	8.00	5.33	21.00	turbid*			
MW-10	6/30/94	1.6	6.00	3.75	21.00	turbid			
MW-11	6/30/94	1.4	6.00	4.29	20.20	turbid			
MW-12	6/30/94	1.6	6.00	3.75	20.60	moderately turbid			
MW-16	6/30/94	1.1	4.50	4.09	21.80	turbid			
MW-8	9/27/94	1.4	4.50	3.21	21.60	turbid*			
MW-10	9/27/94	1.5	6.00	4.00	22.60	turbid			
MW-11	9/27/94	1.3	3.00	2.31	21.00	turbid			
MW-12	9/27/94	1.5	6.00	4.00	22.50	turbid			
MW-16	9/27/94	1.0	3.00	3.00	22.60	turbid			
MW-8	1/10/95	1.7	5.30	3.12	17.20	turbid*			
MW-10	1/10/95	1.8	6.00	3.33	19.50	turbid			
MW-11	1/10/95	1.6	5.30	3.31	18.60	turbid			
MW-12	1/10/95	1.8	6.00	3.33	19.30	turbid			
MW-16	1/10/95	1.2	6.00	5.00	19.30	turbid			
MW-24	1/10/95	4.9	41.00	8.37	18.90	turbid			
MW-8	10/2/95	1.1	11.00	10.00	22.80	moderately turbid	6.49		
MW-10	10/2/95	1.5	11.00	7.33	22.60	turbid	7.20		
MW-11	10/2/95	1.0	12.00	12.00	22.00	moderately turbid	6.85		
MW-12	10/2/95	1.3	11.00	8.46	22.90	turbid	7.20		
MW-16	10/2/95	1.1	11.00	10.00	22.60	turbid	7.20		
MW-24	10/2/95	3.4	20.00	5.88	22.80	turbid	7.10		
MW-8	1/8/96	1.1	12.00	10.91	17.30**	slightly turbid	6.74**		
MW-10	1/8/96	1.5	10.00	6.67	17.90**	slightly turbid	6.62**		
MW-11	1/8/96	1.0	5.50	5.50	17.60**	slightly turbid	6.65**		
MW-12	1/8/96	1.2	10.00	8.33	18.00**	slightly turbid	6.49**		
MW-16	1/8/96	0.9	5.00	5.56	19.00**	slightly turbid	7.50**		
MW-24	1/8/96	3.4	35.00	10.29	17.60**	slightly turbid	6.67**		
MW-8	4/25/96	1.1	5.00	4.55	21.11	clear	6.53		
MW-10	4/25/96	1.4	5.00	3.57	22.83	slightly turbid	6.70		
MW-11	4/25/96	1.1	5.50	5.00	21.39	clear	6.58		
MW-12	4/25/96	1.2	5.00	4.17	22.39	clear	6.50		
MW-16	4/25/96	1.2	5.00	4.17	25.33	slightly turbid	7.12		
MW-8	3/25/97	2.2	10.00	4.55	18.17	clear	6.67	0.23	-191.00
MW-10	3/25/97	3.4	12.00	3.57	19.72	slightly turbid	6.79	0.35	-131.00
MW-11	3/25/97	2.0	10.00	5.00	18.56	clear	6.64	0.19	-190.00
MW-12	3/25/97	2.4	10.00	4.17	18.44	clear	6.67	0.19	-79.00
MW-16	3/25/97	2.4	10.00	4.17	17.94	slightly turbid	7.02	0.10	-125.00
MW-8	7/3/97	1.1	12.00	10.91	19.58	clear	6.43	0.04	-90.00
MW-10	7/3/97	1.5	12.00	8.00	21.51	slightly turbid	6.67	0.17	-164.00
MW-11	7/3/97	1.4	12.00	8.57	19.38	clear	6.36	0.05	-34.00
MW-12	7/3/97	1.5	12.00	8.00	20.62	clear	6.50	0.10	-76.00
MW-16	7/3/97	1.0	12.00	12.00	19.66	clear	6.76	0.06	-165.00
MW-8	10/2/97	1.1	4.50	4.09	21.23	clear	6.93	NA	NA
MW-10	10/2/97	1.4	5.00	3.57	23.04	slightly turbid	7.26	NA	NA
MW-11	10/2/97	1.1	7.00	6.36	22.94	clear	6.73	NA	NA
MW-12	10/2/97	1.2	4.50	3.75	20.94	clear	7.15	NA	NA
MW-16	10/2/97	1.2	7.00	5.83	19.11	slightly turbid	7.22	NA	NA
MW-8	1/28/98	2.5	15.00	6.00	18.53	slightly greenish	6.86	0.10	-122.00
MW-10	1/28/98	2.7	15.00	5.56	20.89	moderately turbid	7.05	0.09	-138.00
MW-11	1/28/98	2.5	15.00	6.00	20.12	slightly greenish	6.74	0.11	-11.00
MW-12	1/28/98	2.6	14.00	5.38	19.83	moderately turbid	6.90	0.11	-115.00
MW-16	1/28/98	2.4	16.00	6.67	19.08	slightly turbid	7.20	0.10	-122.00

Notes: * A slight hydrocarbon sheen was reported.

** Only one measurement collected.

Table 3
Historic Groundwater Monitoring Data
625 Hegenberger Road, Oakland, California
(concentrations in mg/L)

Well ID	Date	Consultant/ Lab	TPHg	MTBE	Benzene	Toluene	Ethyl- Benzene	Xylenes	TPHo	TPHd	Total Lead	
MW-8	(1)	SUB	(2)	NA	NA	3.7	BDL	0.29	0.69	NA	NA	BDL
	5/28/93	HC/SUP	19	NA	6.4	0.028	0.16	0.036	NA	1	(3)	
	12/22/93	LF/AEN	(4)	56	NA	16	5.9993	(5)	0.65	2.7	<0.2	0.3
	6/30/94	LF/AEN	(4)	41	NA	11	4.8		2.2	8.2	0.5	<0.5
	9/27/94	LF/AEN		28	NA	8.5	0.26		1.6	5.3	<0.2	0.62
	1/10/95	LF/AEN		58	NA	10	11		2.4	12	<0.2	0.07
	10/2/95	AEI/PEL		28	NA	0.051	0.016		0.054	0.08	<0.5	<0.05
	1/8/96	AEI/MAI		72	NA	8.6	13		2.2	12	<0.25	3.7
	1/8/96	AEI/MAI		62	NA	7.2	9.5		1.6	8	NA	NA
	4/25/96	AEI/MAI		33	NA	7.6	2.3		1.5	4.8	NA	3.1
duplicate	3/25/97	AEI/MAI		23	1.5	8.3	0.08		0.35	0.38	NA	1.9
	7/3/97	AEI/MAI		14	1.3	6.6	0.032		0.19	0.1	NA	1.4
	7/3/97	AEI/MAI		15	1.7	7.3	0.034		0.16	0.11	NA	1.4
	10/2/97	AEI/MAI		7.6	0.89	3.5	0.014		0.037	0.021	NA	0.81
	1/28/98	AEI/MAI		21	0.9	5.5	0.27		0.73	0.78	NA	2.7
MW-10	(1)	SUB		NA	NA	0.0017	BDL		BDL	NA	NA	BDL
	5/28/93	HC/SUP	<0.05	NA	<0.0003	<0.0003		<0.0003	<0.0009	NA	0.054	(3)
	12/22/93	LF/AEN	<0.05	NA	<0.0005	<0.0007	(5)	<0.0005	<0.0002	<0.2	0.58	<0.04
	6/30/94	LF/AEN	<0.05	NA	<0.0005	<0.0005		<0.0005	<0.0002	0.6	<0.05	<0.04
	9/27/94	LF/AEN	<0.05	NA	<0.0005	<0.0005		<0.0005	<0.0002	<0.2	0.61	<0.04
	1/10/95	LF/AEN	<0.05	NA	<0.0005	<0.0005		<0.0005	<0.0002	<0.2	0.6	NA
	10/2/95	AEI/PEL		0.35	NA	0.0044	0.0026		0.0023	0.0064	<0.5	<0.05
	1/8/96	AEI/MAI		0.05	NA	0.0058	0.0071		0.0012	0.0064	<0.25	<0.05
	4/25/96	AEI/MAI		<0.05	NA	<0.0005	<0.0005		<0.0005	<0.0005	NA	<0.05
	3/25/97	AEI/MAI		<0.05	<0.005	<0.0005	<0.0005		<0.0005	<0.0005	NA	<0.05
	7/3/97	AEI/MAI		<0.05	<0.005	<0.0005	<0.0005		<0.0005	<0.0005	NA	<0.05
	10/2/97	AEI/MAI		<0.05	<0.005	<0.0005	<0.0005		<0.0005	<0.0005	NA	0.11
	1/28/98	AEI/MAI		<0.05	<0.005	0.0057	<0.0005		<0.0005	<0.0005	NA	ND
MW-11	(1)	SUB	(6)	NA	NA	0.053	BDL		BDL	NA	NA	0.21
	5/28/93	HC/SUP	1.2	NA	0.45	0.017		0.0015	0.0021	NA	<0.05	(3)
	12/22/93	LF/AEN	9.2	NA	4.5	0.0383	(5)	0.012	0.043	<0.2	0.53	<0.04
	6/30/94	LF/AEN	8.8	NA	1.5	0.013		0.69	1.2	1.1	<0.05	<0.04
	duplicate	6/30/94	LF/AEN	9.7	NA	1.7	0.014		0.73	1.3	NA	NA
	9/27/94	LF/AEN	15	NA	6.5	0.026		0.87	0.59	<0.2	0.91	<0.04
	1/10/95	LF/AEN	14	NA	0.89	0.22		0.84	2.4	0.2	1.1	NA
	10/2/95	AEI/PEL	7.1	NA	0.047	0.0057		0.011	0.036	<0.5	<0.05	NA
	1/8/96	AEI/MAI	12	NA	1.2	0.099		0.79	1.4	<0.25	2	NA
	4/25/96	AEI/MAI	5.8	NA	0.23	0.059		0.2	0.77	NA	1.4	NA
	3/25/97	AEI/MAI	0.76	0.13	0.13	0.049		0.0029	0.001	NA	0.49	NA
	7/3/97	AEI/MAI	0.29	0.38	<0.0005	<0.0005		0.6	<0.0005	NA	<0.05	NA
	10/2/97	AEI/MAI	0.22	0.72	0.0088	0.00073		<0.0005	0.00067	NA	0.22	NA
MW-12	1/28/98	AEI/MAI	0.54	0.36	0.14	0.00081		<0.0005	<0.0005	NA	0.16	NA
	(1)	SUB		NA	NA	0.0017	BDL		BDL	NA	NA	BDL
	5/28/93	HC/SUP	<0.05	NA	<0.0003	<0.0003		<0.0003	<0.0009	NA	<0.05	(3)
	12/22/93	LF/AEN	0.05	NA	<0.0005	<0.0007	(5)	<0.0005	<0.0002	<0.2	0.3	<0.04
	6/30/94	LF/AEN	<0.05	NA	<0.0005	<0.0005		<0.0005	<0.0002	0.4	<0.05	<0.04
	9/27/94	LF/AEN	<0.05	NA	<0.0005	<0.0005		<0.0005	<0.0002	<0.2	0.4	<0.04
	9/27/94	LF/AEN	<0.05	NA	<0.0005	<0.0005		<0.0005	<0.0002	NA	NA	NA
	1/10/95	LF/AEN	<0.05	NA	<0.0005	<0.0005		<0.0005	<0.0002	<0.2	0.3	NA
	10/2/95	AEI/PEL	<0.05	NA	<0.0005	<0.0005		<0.0005	<0.0005	<0.5	<0.05	NA
	1/8/96	AEI/MAI	<0.05	NA	0.0024	0.0027		0.00054	0.0028	<0.25	<0.05	NA
	4/25/96	AEI/MAI	<0.05	NA	<0.0005	<0.0005		<0.0005	<0.0005	NA	<0.05	NA
	3/25/97	AEI/MAI	<0.05	0.016	<0.0005	<0.0005		<0.0005	<0.0005	NA	<0.05	NA
MW-16	7/3/97	AEI/MAI	<0.05	0.016	<0.0005	<0.0005		<0.0005	<0.0005	NA	<0.05	NA
	10/2/97	AEI/MAI	<0.05	0.017	<0.0005	<0.0005		<0.0005	<0.0005	NA	<0.05	NA
	1/28/98	AEI/MAI	<0.05	0.013	0.0013	<0.0005		<0.0005	<0.0005	NA	<0.05	NA
	(1)	SUB	(7)	NA	NA	BDL	BDL		BDL	NA	NA	BDL
	5/28/93	HC/SUP	<0.05	NA	0.0028	<0.0003		<0.0007	<0.0009	NA	<0.05	(3)
	12/22/93	LF/AEN	2.2	NA	<0.0005	<0.0007	(5)	<0.0005	<0.0002	<0.2	0.52	<0.04
	6/30/94	LF/AEN	<0.05	NA	0.008	<0.0005		<0.0005	<0.0002	0.9	<0.05	<0.04
duplicate	9/27/94	LF/AEN	0.07	NA	0.017	<0.0005		<0.0005	<0.0002	<0.2	0.59	<0.04
	1/10/95	LF/AEN	0.3	NA	0.19	<0.0005		<0.0005	<0.0002	<0.2	0.7	NA
	10/2/95	AEI/PEL	0.55	NA	0.0077	0.0007		0.0035	0.013	<0.5	<0.05	NA
	1/8/96	AEI/MAI	0.36	NA	<0.0005	<0.0005		0.004	0.0097	<0.25	0.14	NA

Table 3
Historic Groundwater Monitoring Data
625 Hegenberger Road, Oakland, California
(concentrations in mg/L)

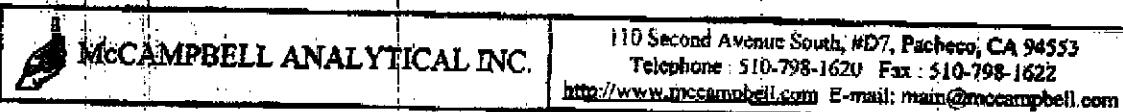
Well ID	Date	Consultant/ Lab	TPHg	MTBE	Benzene	Toluene	Ethyl- Benzene	Xylenes	TPHo	TPHd	Total Lead
	4/25/96	AEI/MAI	1.1	NA	0.39	0.0037	0.0032	0.014	NA	0.33	NA
	3/25/97	AEI/MAI	0.31	2.1	<0.0005	<0.0005	<0.0005	0.0014	NA	0.12	NA
	7/3/97	AEI/MAI	0.25	1.9	<0.0005	<0.0005	<0.0005	<0.0005	NA	0.13	NA
	10/2/97	AEI/MAI	0.29	2	<0.0005	<0.0005	<0.0005	<0.0005	NA	0.18	NA
	1/28/98	AEI/MAI	0.15	(8)	<0.0005	<0.0005	<0.0005	<0.0005	NA	0.13	NA
MW-24	1/10/95	LF/AEN	31	NA	12	1.9	1.1	1.3	0.2	0.9	NA
duplicate	1/10/95	LF/AEN	31	NA	12	2	1.1	1.3	0.2	0.8	NA
	10/2/95	AEI/PEL	8.6	NA	0.044	0.011	0.012	0.04	<0.5	<0.05	NA
	1/8/96	AEI/MAI	(8)	22	NA	8.8	0.14	0.5	0.28	<0.25	1.5
Blanks											
Trip Blank	5/28/93	HC/SUP	<0.05		<0.0003	<0.0003	<0.0003	<0.0009	NA	NA	BDL
MW-12-BB	12/22/93	LF/AEN	<0.05		<0.0005	0.0007	<0.0005	<0.0002	NA	NA	(3)
MW-16-BB	12/22/93	LF/AEN	NA		NA	NA	NA	NA	NA	NA	<0.04
MW-12-BB	6/30/94	LF/AEN	<0.05		<0.0005	<0.0005	<0.0005	<0.0002	NA	NA	<0.04
MW-12-BB	9/27/94	LF/AEN	<0.05		<0.0005	<0.0005	<0.0005	<0.0002	NA	NA	NA
Trip Blank	9/27/94	LF/AEN	<0.05		<0.0005	<0.0005	<0.0005	<0.0002	NA	NA	NA
MW-11-BB	1/10/95	LF/AEN	<0.05		<0.0005	<0.0005	<0.0005	<0.0002	NA	NA	NA

Notes

- BDL below detection limit
 NA not analyzed
 NS not sampled
 TPHd total petroleum hydrocarbons as diesel
 TPHg total petroleum hydrocarbons as gasoline
 TPHo total petroleum hydrocarbons as oil
 MTBE methyl tertiary butyl ether
 AEN American Environmental Networks, Pleasant Hill, California
 HC HartCrowser, San Francisco, California
 LF Levine Fricke, Emeryville, California
 SUB Subsurface Consultants, Oakland, California
 SUP Superior Analytical Laboratories, Martinez, California
 AEI All Environmental, Inc., Lafayette, California
 PEL Priority Analytical Laboratories, Milpitas, California
 MAI McCampbell Analytical Inc., Pacheco, California
- (1) Date of groundwater sampling unavailable.
 (2) 18 mg/total volatile hydrocarbons also detected
 (3) All May 1993 samples also analyzed for total organic lead (DHS Method). The compound was not detected above the detection limit of 4 mg/l.
 (4) A slight hydrocarbon sheen was observed on the surface of the well water.
 (5) Toluene detection for 22-Dec-93 were qualified using 0.0007 mg/l as a baseline.
 The bailer blank (MW-12-BB) contained toluene at 0.0007 mg/l.
 (6) 0.24 mg/l total volatile hydrocarbons also detected
 (7) 0.38 mg/l total volatile hydrocarbons also detected
 (8) Well Mw-8 was abandoned on April 5, 1996.

APPENDIX A

LABORATORY DATA

INVOICE FOR ANALYTICAL SERVICES LA

Attention: Accounts Payable

<u>All Environmental, Inc.</u> 3364 Mt. Diablo Blvd. Lafayette, CA 94549	Client Project ID: #2169; Hegenberger	Date Sampled: 01/28/98
		Date Received: 01/28/98
	Client Contact: Nick Walchuk	Date Extracted: 01/28/98
	Chem. P.O:	Date Analyzed: 01/28/98

Billing Date: 02/03/98

Invoice # 10389

Number of Samples	Analysis	TAT	Unit Price	Sub-Total
5	TPH(g)-BTEX MTBE	5d	\$50	\$250
5	TPH (d/w/mo)	5d	\$50	\$250
0	Oil & Grease (418.1 or 5520)	5d	\$45	\$0
0	EPA 601 / 6010 / BDB	5d	\$70	\$0
0	EPA 624 / 6240 / 6260	5d	\$130	\$0
0	EPA 625 / 6270	subbed, 5d	\$240	\$0
0	PCB / Chlorinated Pesticides, EPA 608 / 3080	5d	\$50 / \$90	\$0
0	RCI	5d	\$70	\$0
0	CAM 17 Metals	5d	\$150	\$0
0	13 Priority Pollutant Metals	5d	\$125	\$0
0	RCRA 8 Metals	5d	\$90	\$0
0	5 LUFT Metals	5d	\$60	\$0
0	Individual Metal (A.A. Flame, Furnace, ICP)	5d	\$25	\$0
0	Organic Lead	5d	\$60	\$0
0	STLC Extraction	5d	\$50	\$0
0	ZPE TCLP Extraction	5d	\$100	\$0
0	Semi-Volatile TCLP Extraction	5d	\$50	\$0
0		Subbed	\$0	\$0
INVOICE TOTAL: \$500				
If paid by 03/03/98 Prompt Pay Invoice Total = \$450				

Please include the invoice number(s) with your check and remit to:

McCampbell Analytical Inc.
 110 2nd Avenue South, #D7
 Pacheco, CA 94553

Terms are net 30 days from the billing date. After this period 1.5% interest per month will be charged. Overdue accounts are responsible for all legal and collection fees. If you have any questions about billing please contact Accounts Receivable at McCampbell Analytical.



McCAMPBELL ANALYTICAL INC.

110 Second Avenue South, #D7, Poulsbo, CA 94553
Telephone : 510-798-1620 Fax : 510-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

All Environmental, Inc. 3364 Mt. Diablo Blvd. Lafayette, CA 94549	Client Project ID: #2169; Hegenberger Client Contact: Nick Walchuk Client P.O:	Date Sampled: 01/28/98 Date Received: 01/28/98 Date Extracted: 01/29-02/04/98 Date Analyzed: 01/29-02/04/98
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Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel

EPA methods modified 8015- and 3550 or 3510 (EPA 600-R-95-003) were used to determine the total organic carbon as stated.

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in ug/kg, and all TCLP / STLC / SPLP extracts in ug/L.

* clustered chromatogram resulting in coeluted surrogate and sample peaks, or, surrogate peak is on elevated baseline, or, surrogate has been diminished by dilution of original extract

The following descriptions of the TPH chromatogram are arbitrary in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant no recognizable pattern; c) aged diesel is significant; d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than -5 vol. % sediment.



McCAMPBELL ANALYTICAL INC.

110 Second Avenue South, #D7, Pacheco, CA 94533
 Telephone: 510-798-1620 Fax: 510-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

All Environmental, Inc. 3364 Mt. Diablo Blvd. Lafayette, CA 94549	Client Project ID: #2169; Hegenberger				Date Sampled: 01/28/98				
					Date Received: 01/28/98				
	Client Contact: Nick Walchuk				Date Extracted: 01/29-02/02/98				
	Client P.O:				Date Analyzed: 01/29-02/02/98				
Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX* EPA methods 8030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method CCFID(5030)									
Lab ID	Client ID	Matrix	TPH(g)*	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Recovery Surrogate
85393	MW-8	W	21,000,a	900	5500	270	730	780	95
85394	MW-10	W	ND	ND	5.7	ND	ND	ND	99
85395	MW-11	W	540,d,a	360	140	0.81	ND	ND	105
85396	MW-12	W	ND	13	1.3	ND	ND	ND	97
85397	MW-16	W	150,	1900	ND	ND	ND	ND	102
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W	50 ug/L	5.0	0.5	0.5	0.5	0.5		
	S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005		

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L

* elutriated chromatogram; sample peak coelutes with surrogate peak

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant (gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern

DHS Certification No. 1644

Edward Hamilton, Lab Director

FEB-05-1998 11:20

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MCGRAW-HILL ANALYTICAL INC.

**#10 2ND AVENUE SOUTH, MD7
BACHIECO (CANADA)**

Teléfono: (510) 798-1620

Fax: (510) 298-1622

CHAIN OF CUSTODY RECORD

TURNAROUND TIME

BUSI 24 HOUR 48 HOUR 6 DAY

APPENDIX B

WELL SAMPLING SHEETS

**ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL
FIELD SAMPLING FORM**

Monitoring Well Number: MW-8

Project Name: Hegenberger	Date of Sampling: 1/28/98
Job Number: 2169	Name of Sampler: Dusty Roy
Project Address: 625 Hegenberger Road	Oakland, CA

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"
Seal at Grade -- Type and Condition	
Well Cap & Lock -- OK/Replace	
Elevation of Top of Casing	4.88
Depth of Well	
Depth to Water	5.20
Water Elevation	-0.32
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	7.5
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	15
Appearance of Purge Water	Slightly Greenish

GROUNDWATER SAMPLES

Number of Samples/Container Size	2 X 40 ml VOAs; 2 X 1 liter
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Time	Vol Remvd (gal)	Temp C	pH	Cond (mS)	Dissolved Oxygen (mg/L)	Redox Potential (mV)
	1.0	17.95	6.99	2003	0.45	-64
	2.0	18.06	6.90	2087	0.32	-85
	4.0	18.22	6.84	2255	0.23	-106
	6.0	18.28	6.84	2282	0.20	-113
	8.0	18.34	6.84	2362	0.15	-118
	10.0	18.41	6.85	2457	0.13	-124
	12.0	18.46	6.85	2466	0.10	-128
	14.0	18.50	6.86	2517	0.10	-130
	15.0	18.53	6.86	2520	0.10	-132

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

TD - Total Depth of Well

DTW - Depth To Water

**ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL
FIELD SAMPLING FORM**

Monitoring Well Number: MW-10

Project Name: Hegenberger	Date of Sampling: 1/28/98
Job Number: 2169	Name of Sampler: Dusty Roy
Project Address: 625 Hegenberger Road	Oakland, CA

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"
Seal at Grade -- Type and Condition	
Well Cap & Lock - OK/Replace	
Elevation of Top of Casing	4.21
Depth of Well	
Depth to Water	.4.40
Water Elevation	-0.19
Three Well Volumes (gallons)*	
2" casing: (TD - DTW)(0.16)(3)	8.0
4" casing: (TD - DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	15
Appearance of Purge Water	Moderately Turbid

GROUNDWATER SAMPLES

Number of Samples/Container Size	2 X 40 ml VOAs; 2 X 1 liter
----------------------------------	-----------------------------

Time	Vol Remvd (gal)	Temp C	pH	Cond (mS)	Dissolved Oxygen (mg/L)	Redox Potential (mV)
	1.0	20.99	6.83	5717	0.57	-133
	2.0	20.87	6.95	5754	0.37	-133
	4.0	20.89	7.01	5774	0.22	-132
	6.0	20.91	7.03	5785	0.19	-132
	8.0	20.90	7.04	5793	0.15	-133
	10.0	20.90	7.05	5803	0.11	-133
	12.0	20.90	7.05	5807	0.10	-133
	14.0	20.89	7.05	5815	0.09	-133
	15.0	20.89	7.05	5816	0.09	-134

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

TD - Total Depth of Well

DTW - Depth To Water

ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL FIELD SAMPLING FORM	
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Monitoring Well Number: MW-11	
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Project Name: Hegenberger	Date of Sampling: 1/28/98
Job Number: 2169	Name of Sampler: Dusty Roy
Project Address: 625 Hegenberger Road	Oakland, CA

MONITORING WELL DATA	
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Well Casing Diameter (2"/4"/6")	2"
Seal at Grade -- Type and Condition	
Well Cap & Lock – OK/Replace	
Elevation of Top of Casing	5.04
Depth of Well	
Depth to Water	5.33
Water Elevation	-0.29
Three Well Volumes (gallons)*	
2" casing: (TD – DTW)(0.16)(3)	7.5
4" casing: (TD – DTW)(0.65)(3)	
6" casing: (TD – DTW)(1.44)(3)	
Actual Volume Purged (gallons)	15
Appearance of Purge Water	Slightly Greenish

GROUNDWATER SAMPLES	
----------------------------	--

Number of Samples/Container Size	2 X 40 ml VOAs; 2 X 1 liter
----------------------------------	-----------------------------

Time	Vol Remvd (gal)	Temp C	pH	Cond (mS)	Dissolved Oxygen (mg/L)	Redox Potential (mV)
	1.0	19.53	7.17	1787	0.71	199
	2.0	19.07	6.80	1826	0.28	190
	4.0	19.43	6.59	1944	0.17	154
	6.0	19.90	6.66	2017	0.14	71
	8.0	20.04	6.70	2028	0.13	-4
	10.0	20.08	6.72	2045	0.12	-37
	12.0	20.11	6.73	2051	0.12	-54
	14.0	20.12	6.74	2064	0.11	-67
	15.0	20.12	6.74	2060	0.11	-72

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)
--

TD - Total Depth of Well

DTW - Depth To Water

**ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL
FIELD SAMPLING FORM**

Monitoring Well Number: MW-12

Project Name: Hegenberger	Date of Sampling: 1/28/98
Job Number: 2169	Name of Sampler: Dusty Roy
Project Address: 625 Hegenberger Road	Oakland, CA

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"
Seal at Grade – Type and Condition	
Well Cap & Lock – OK/Replace	.
Elevation of Top of Casing	4.58
Depth of Well	
Depth to Water	4.54
Water Elevation	-0.04
Three Well Volumes (gallons)*	
2" casing: (TD – DTW)(0.16)(3)	7.9
4" casing: (TD – DTW)(0.65)(3)	
6" casing: (TD – DTW)(1.44)(3)	
Actual Volume Purged (gallons)	14
Appearance of Purge Water	Moderately Turbid

GROUNDWATER SAMPLES

Number of Samples/Container Size	2 X 40 ml VOAs; 2 X 1 liter
----------------------------------	-----------------------------

Time	Vol Remvd (gal)	Temp C	pH	Cond (mS)	Dissolved Oxygen (mg/L)	Redox Potential (mV)
	1.0	19.58	7.34	2746	0.23	-112
	2.0	19.52	7.16	2617	0.18	-108
	4.0	19.74	6.99	2340	0.14	-105
	6.0	19.77	6.95	2301	0.13	-104
	8.0	19.74	6.91	2251	0.12	-104
	10.0	19.80	6.90	2234	0.11	-104
	12.0	19.82	6.90	2226	0.11	-105
	14.0	19.83	6.89	2215	0.11	-105

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

TD - Total Depth of Well

DTW - Depth To Water

**ALL ENVIRONMENTAL INC. - GROUNDWATER MONITORING WELL
FIELD SAMPLING FORM**

Monitoring Well Number: MW-16

Project Name: Hegenberger	Date of Sampling: 1/28/98
Job Number: 2169	Name of Sampler: Dusty Roy
Project Address: 625 Hegenberger Road	Oakland, CA

MONITORING WELL DATA

Well Casing Diameter (2"/4"/6")	2"
Seal at Grade -- Type and Condition	
Well Cap & Lock – OK/Replace	
Elevation of Top of Casing	5.53
Depth of Well	
Depth to Water	5.90
Water Elevation	-0.37
Three Well Volumes (gallons)*	
2" casing: (TD – DTW)(0.16)(3)	.7.2
4" casing: (TD – DTW)(0.65)(3)	
6" casing: (TD - DTW)(1.44)(3)	
Actual Volume Purged (gallons)	16
Appearance of Purge Water	Slightly Turbid

GROUNDWATER SAMPLES

Number of Samples/Container Size	2 X 40 ml VOAs; 2 X 1 liter

Time	Vol Remvd (gal)	Temp C	pH	Cond (mS)	Dissolved Oxygen (mg/L)	Redox Potential (mV)
	1.0	18.89	7.28	3440	0.62	245
	2.0	18.95	7.24	2737	0.52	207
	4.0	18.97	7.22	2922	0.43	159
	6.0	19.00	7.21	2401	0.38	106
	8.0	19.02	7.21	2668	0.28	67
	10.0	19.04	7.20	2354	0.28	32
	12.0	19.05	7.20	2784	0.20	-1
	14.0	19.07	7.20	2796	0.19	-29
	15.0	19.08	7.20	2784	0.18	-41
	16.0	19.08	7.20	2785	0.18	-51

COMMENTS (i.e., sample odor, well recharge time & percent, etc.)

TD - Total Depth of Well

DTW - Depth To Water