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Alameda County
Environmental Health

**FIRST SEMI-ANNUAL 2010
GROUNDWATER MONITORING**

**ABE Petroleum LLC
17715 Mission Boulevard
Hayward, California 94539**

**Prepared for
Mr. Paul Garg
ABE Petroleum LLC**

**Prepared by
Sierra Environmental, Inc.**

**June 11, 2010
Project 03-103.00**



Sierra Environmental, Inc.
Environmental Consultants

June 11, 2010
Project 03-103.00

Mr. Paul Garg
ABE Petroleum LLC
33090 Mission Boulevard
Union City, California 94587

Subject: Report for First Semi-Annual 2010 Groundwater Monitoring, ABE Petroleum LLC, 17715 Mission Boulevard, Hayward, California

Dear Mr. Garg:

Sierra Environmental, Inc. (Sierra) is pleased to present this report summarizing the results for the first semi-annual 2010 groundwater monitoring at the subject location, hereafter, referred to as Site. Figure 1 shows the Site location. The groundwater monitoring was concurred by Alameda County Health Care Services (ACHCS) in a letter dated February 16, 2000, as result of gasoline impact to groundwater beneath the Site.

On June 2, 2010, Sierra obtained and recorded groundwater data, and collected groundwater samples from five (5) groundwater monitoring wells at and near the Site for chemical analysis. Sierra submitted the samples to Torrent Laboratory (Torrent) of Milpitas, California for chemical analysis. Torrent is a State-certified analytical laboratory (ELAP #1991).

BACKGROUND

Please refer to Appendix A for Site's background information.

GROUNDWATER MONITORING

On June 2, 2010, Sierra performed the first semi-annual 2010 groundwater monitoring at the Site. Sierra's field personnel measured the groundwater levels at MW1, MW2, MW3, MW6, and MW7 (Figure 2) using an electronic sounder. Depth of groundwater was measured to the TOC. Groundwater levels were measured at approximately 17.13' to 21.01' feet below TOC with a westerly flow direction during this monitoring event. Table I presents the groundwater measurement data.

MW4 and MW5 were inaccessible due to route 238 expansion project.

Sierra's field personnel purged the wells using bailers. pH, temperature, and electrical conductivity of groundwater were recorded during the purging activities to affirm that groundwater in the wells have stabilized. After completion of the purging, groundwater samples MW-1, MW-2, MW-3, MW-6, and MW-7 were collected from the wells. After collection, the groundwater from each well was transferred into clean volatile organic analysis vials. The vials were sealed with Teflon-septum screw caps, labeled, placed on ice in a cooler, and delivered to Accutest with chain-of-custody documentation.

All sampling and measurement equipment were washed with Liqui-Nox[®] (a phosphate free laboratory detergent), and rinsed with tap water at each measurement and sampling interval. Purged and wash water was stored in 55-gallon drums at a designated location at the Site. Sierra's quality assurance/quality control (QA/QC) protocol is presented in Appendix B.

CHEMICAL ANALYSIS

The samples were analyzed for total petroleum hydrocarbons as gasoline (TPHG) using the United States Environmental Protection Agency (EPA) GC-MS/8260B method. The samples were also analyzed for benzene, toluene, ethyl benzene, total xylenes (BTEX), and fuel oxygenates also using EPA method 8260B. Copies of certified analytical results and chain-of-custody documentation are presented in Appendix C. Copies of the field notes are presented in Appendix D.

ANALYTICAL RESULTS

Table II presents Summary of the analytical results.

CONCLUSION AND RECOMMENDATIONS

No gasoline constituents were detected in offsite monitoring well MW6 and MW7. Concentrations of the gasoline constituents in the groundwater samples collected from the onsite wells have slightly decreased during this monitoring event, compared to the 2nd semi annual 2009 groundwater monitoring event. Sierra recommends continuing the semi-annual groundwater monitoring at the Site in 2010.

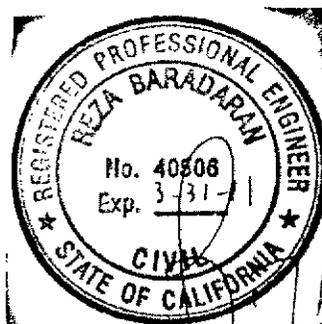
In its subsurface investigation report dated September 29, 2009, Sierra has also recommended initiating remedial action by performing a 5-days high vacuum dual phase extraction (DPE) test at the Site. After receiving ACHCS response to its recommendations, Sierra will proceed with the remedial action at the Site.

LIMITATIONS

The content and conclusion provided by Sierra in this report are based on information collected during its assessment/monitoring, which include, but are not limited to field observations and analytical results for the groundwater samples collected at the Site. Sierra assumes that the samples collected and laboratory results are reasonably representative of the whole Site, which may not be the case at unsampled areas. This assessment/monitoring was performed in accordance with generally accepted principles and practices of environmental engineering and assessment in Northern California at the time of the work. This report presents our professional opinion based on our findings, technical knowledge, and experience working on similar projects. No warranty, either expressed or implied, is made. The conclusions presented are based on the analytical results and current regulatory requirements. We are not responsible for the impact of any changes in environmental standards or regulations in the future.

Please feel welcome to call us if you have questions.

Very Truly Yours,
Sierra Environmental, Inc.



Handwritten signature and date: 6/11/2010

Reza Baradaran, PE, GE
Principal

A large, stylized handwritten signature in black ink.

Mitch Hajiaghai, REA II, CAC
Principal

- Attachments:
- Table I - Groundwater Elevation Data
 - Table II - Analytical Results for Groundwater Samples
 - Figure 1 - Site Location Map
 - Figure 2 - Groundwater Monitoring Well Locations
 - Appendix A - Background Information
 - Appendix B - QA/QC Protocol
 - Appendix C - Certified Analytical Results and Chain-of-Custody Documentation
 - Appendix D - Field Notes

cc: Mr. Mark Detterman ACHCS (1 Copy)

**TABLE I
GROUNDWATER ELEVATION DATA**

Well ID	Measurement Date	Well Casing Diameter (in)	Well Casing Elevation (ft)	Depth to ¹ Water (ft)	Water Table ² Elevation (ft)
MW1	8-18-00	2	99.46	20.32	79.14
	3-30-01			20.30	79.16
	6-22-01			21.91	77.55
	9-20-01			23.56	75.90
	12-27-01			22.59	76.87
	9-24-02			23.69	75.77
	12-17-02			22.75	76.71
	4-2-03			21.15	78.31
	6-12-03			20.64	78.82
	9-29-03			22.95	76.51
	12-04-03			23.70	75.76
	03-09-04			19.80	79.66
	6-24-04			21.44	78.02
	9-09-04			23.30	76.16
	12-21-04			22.92	76.54
	3-16-05			18.99	80.47
	6-09-05			20.02	79.44
	9-22-05	20.69	78.77		
	12-07-05	21.90	77.56		
	3-10-06	17.85	81.61		
	6-7-06	15.91	43.59		
	9-11-06	18.60	40.90		
	12-13-06	20.05	39.45		
	3-12-07	19.47	40.03		
	6-6-07	21.11	38.39		
	9-6-07	22.61	36.89		
	12-14-07	23.50	36.00		
	3-13-08	20.09	39.41		
	6-13-08	22.08	37.42		
	09-09-08	23.57	35.93		
12-12-08	24.42	35.08			
03-12-09	21.22	38.28			
06-04-09	22.52	36.98			
12-03-09	24.18	35.32			
06-02-10	19.85	39.65			

**TABLE I
GROUNDWATER ELEVATION DATA
(CONTINUED)**

Well ID	Measurement Date	Well Casing Diameter (in)	Well Casing Elevation (ft)	Depth to Water (ft)	Water Table Elevation (ft)
MW2	8-18-00	2	100.58	21.55	79.03
	3-30-01			21.55	79.03
	6-22-01			23.15	77.43
	9-20-01			24.78	75.80
	12-27-01			23.82	76.76
	9-24-02			24.89	75.69
	12-17-02			23.99	76.59
	4-2-03			22.32	78.26
	6-12-03			21.84	78.74
	9-29-03			24.15	76.43
	12-04-03			24.91	75.67
	03-09-04			21.05	79.53
	6-24-04			22.95	77.63
	9-09-04			24.55	76.03
	12-21-04			24.21	76.37
	3-16-05			20.29	80.29
	6-09-05			21.68	78.90
	9-22-05			21.98	78.60
	12-7-05			23.22	77.36
	3-10-06			19.15	81.43
	6-7-06	17.31	43.30		
	9-11-06	19.99	40.62		
	12-13-06	21.48	39.13		
	3-12-07	20.71	39.90		
	6-6-07	22.33	38.28		
	9-6-07	23.85	36.76		
	12-14-07	24.71	35.90		
	3-13-08	21.34	39.27		
	6-13-08	23.29	37.32		
	09-09-08	24.82	35.79		
	12-12-08	25.65	34.96		
	03-12-09	22.45	38.16		
	06-04-09	23.68	36.93		
12-03-09	25.33	35.28			
06-02-10	21.01	39.60			
			60.61		

**TABLE I
GROUNDWATER ELEVATION DATA
(CONTINUED)**

Well ID	Measurement Date	Well Casing Diameter (in)	Well Casing Elevation (ft)	Depth to Water (ft)	Water Table Elevation (ft)
MW3	8-18-00	2	99.69	20.68	79.01
	3-30-01			20.68	79.01
	6-22-01			22.31	77.38
	9-20-01			23.92	75.77
	12-27-01			22.95	76.74
	9-24-02			24.03	75.66
	12-17-02			23.09	76.60
	4-2-03			21.46	78.23
	6-12-03			20.99	78.70
	9-29-03			23.30	76.39
	12-04-03			24.05	75.64
	03-09-04			20.20	79.49
	6-24-04			22.11	77.58
	9-09-04			20.20	79.49
	12-21-04			23.35	76.34
	3-16-05			19.43	80.26
	6-09-05			20.47	79.22
	9-22-05		21.13	78.56	
	12-7-05		22.36	77.33	
	3-10-06		18.30	81.39	
	6-7-06		16.47	43.26	
	9-11-06		19.13	40.60	
	12-13-06		20.66	39.07	
	3-12-07		19.88	39.85	
	6-6-07		21.48	38.25	
	9-6-07		22.99	36.74	
	12-14-07		23.85	35.88	
	3-13-08		20.47	39.26	
	6-13-08		22.43	37.30	
	09-09-08		23.98	35.75	
	12-12-08		24.91	34.82	
	03-12-09	21.57	38.16		
06-04-09	22.82	36.91			
12-03-09	24.49	35.24			
06-02-10	20.16	39.57			
			59.73		

**TABLE I
GROUNDWATER ELEVATION DATA
(CONTINUED)**

Well ID	Measurement Date	Well Casing Diameter (in)	Well Casing Elevation (ft)	Depth to Water (ft)	Water Table Elevation (ft)
MW4	6-7-06	2	59.29	15.71	43.58
	9-11-06			18.40	40.89
	12-13-06			19.64	39.65
	3-12-07			19.13	40.16
	6-6-07			N/A ³	N/A
	9-6-07			N/A	N/A
	12-14-08			N/A	N/A
	3-13-08			N/A	N/A
	6-13-08			N/A	N/A
	09-09-08			N/A	N/A
	12-12-08			N/A	N/A
	03-12-09			N/A	N/A
	06-04-09			N/A	N/A
	12-03-09			N/A	N/A
06-02-10	N/A	N/A			
MW5	6-7-06	2	56.31	13.35	42.96
	9-11-06			15.99	40.32
	12-13-06			17.45	38.86
	3-12-07			16.68	39.63
	6-6-07			N/A	N/A
	9-6-07			N/A	N/A
	12-14-08			N/A	N/A
	3-13-08			N/A	N/A
	6-13-08			N/A	N/A
	09-09-08			N/A	N/A
	12-12-08			N/A	N/A
	03-12-09			N/A	N/A
	06-04-09			N/A	N/A
	12-03-09			N/A	N/A
06-02-10	N/A	N/A			

**TABLE I
GROUNDWATER ELEVATION DATA
(CONTINUED)**

Well ID	Measurement Date	Well Casing Diameter (in)	Well Casing Elevation (ft)	Depth to Water (ft)	Water Table Elevation (ft)
MW6	6-7-06	2	56.63	13.64	42.99
	9-11-06			16.25	40.38
	12-13-06			17.72	38.91
	3-12-07			16.95	39.68
	6-6-07			18.47	38.16
	9-6-07			19.96	36.67
	12-14-07			20.81	35.82
	3-13-08			17.46	39.17
	6-13-08			19.38	37.25
	09-09-08			20.96	35.67
	12-12-08			21.81	34.82
	03-12-09			18.58	38.05
	06-04-09			19.77	36.86
	12-03-09			21.45	35.18
06-02-10	17.13	39.50			
MW7	6-7-06	2	57.50	14.50	43.00
	9-11-06			17.12	40.38
	12-13-06			18.58	38.92
	3-12-07			17.81	39.69
	6-6-07			19.32	38.18
	9-6-07			20.87	36.63
	12-14-07			21.30	36.20
	3-13-08			18.34	39.16
	6-13-08			20.15	37.35
	09-09-08			21.31	36.19
	12-12-08			22.29	35.21
	03-12-09			19.45	38.05
	06-04-09			20.36	37.14
	12-03-09			22.13	35.37
06-02-10	18.01	39.49			

1. Depths to groundwater were measured to the top of the well casings
2. Water table elevations were measured in relation to mean sea level (MSL)
3. N/A = Not Accessible

**TABLE II
ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES**

Sample ID	Sample Date	Sample Location	TPHG ¹ μg/L	Benzene μg/L	Toluene μg/L	Ethylbenzene μg/L	Xylenes μg/L	MTBE ² μg/L
MW-1	8-18-00	MW1	280,000	10,000	16,000	11,000	49,000	4,000
*	3-30-01		98,000	8,600	14,000	6,300	26,000	7,600
*	6-22-01		110,000	7,500	12,000	5,700	24,000	3,800
*	9-20-01		93,000	8,700	11,000	6,300	27,000	4,600
*	12-27-01		140,000	7,700	11,000	6,500	28,000	7,700
*	9-24-02		110,000	4,600	4,000	4,000	18,000	3,400
*	12-17-02		110,000	6,600	6,700	5,400	23,000	2,900
*	4-2-03		89,000	4,800	6,000	4,600	20,000	5,900
*	6-12-03		69,000	4,100	4,300	3,900	17,000	4,700
*	9-29-03		96,000	7,000	7,700	5,100	22,000	6,200
*	12-04-03		110,000	5,800	5,900	4,300	18,000	4,500
*	03-09-04		130,000	5,900	9,700	4,900	22,000	6,000
*	6-24-04		48,000	5,800	7,500	4,000	18,000	4,000
*	9-09-04		64,000	4,800	7,500	4,500	19,000	2,200
*	12-21-04		53,000	4,800	6,000	3,600	15,000	2,600
*	3-16-05		82,000	4,000	8,600	3,900	18,000	4,300
*	6-09-05		52,000	3,600	6,400	3,300	17,000	3,500
*	9-22-05		62,000	3,500	5,400	3,900	17,000	2,100
*	12-7-05		40,000	3,300	7,500	3,700	18,000	2,500
*	3-10-06		53,000	3,600	6,900	4,000	18,000	3,300
*	6-07-06		57,000	4,200	12,000	3,700	16,000	3,900
*	9-11-06		120,000	3,600	9,500	5,200	23,000	3,000
*	12-13-06		21,000	2,600	8,400	4,300	20,000	1,200
*	3-12-07		96,000	2,300	5,600	5,900	26,000	1,400
*	6-6-07		58,000	2,000	3,400	3,900	16,000	1,500
*	9-6-07		84,000	3,000	4,300	6,000	25,000	2,300
*	12-14-07		55,000	2,500	2,400	4,400	18,000	1,900
*	3-13-08		80,000	2,400	5,400	4,700	22,000	2,000
*	6-13-08		87,000	2,800	2,200	5,000	21,000	3,100
*	09-09-08		34,400	2,040	1,120	2,390	10,100	1,890
*	12-12-08		91,000	2,110	1,240	3,660	17,200	1,560
*	03-12-09		92,000	1,510	1,240	2,630	16,500	1,040
*	06-04-09		61,200	1,780	711	3,840	14,600	1,580
*	12-03-09		66,300	2,300	346	4,100	15,400	2,690
*	06-02-10		63,000	2,100	1,300	2,600	13,600	2,500

**TABLE II
ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES
(CONTINUED)**

Sample ID	Sample Date	Sample Location	TPHG µg/L	Benzene µg/L	Toluene µg/L	Ethyl benzene µg/L	Xylenes µg/L	MTBE µg/L
MW-2	8-18-00	MW2	290,000	3700	990	7,300	26,000	ND ³
*	3-30-01		47,000	3,200	470	4,500	13,000	3,100
*	6-22-01		57,000	2,500	350	4,200	12,000	1,800
*	9-20-01		42,000	2,300	230	4,300	12,000	2,200
*	12-27-01		70,000	2,900	390	4,800	14,000	2,400
*	9-24-02		110,000	1,600	200	3,400	9,100	2,500
*	12-17-02		66,000	2,400	340	4,600	13,000	1,900
*	4-2-03		29,000	1,000	130	2,300	5,100	2,000
*	6-12-03		8,700	380	52	790	2,000	2,200
*	9-29-03		52,000	1,700	200	4,500	9,800	2,300
*	12-04-03		66,000	1,500	210	4,500	9,200	1,900
*	03-09-04		61,000	1,500	2,000	4,200	8,500	2,200
*	6-24-04		29,000	1,200	72	3,100	6,000	2,100
*	9-09-04		37,000	1,600	110	4,000	8,500	3,100
*	12-21-04		27,000	1,400	84	3,100	5,400	3,200
*	3-16-05		54,000	1,700	140	4,500	8,900	4,000
*	6-09-05		2,800	420	ND ³	180	51	930
*	9-22-05		33,000	1,400	ND	3,400	5,700	2,200
*	12-7-05		20,000	1,600	130	3,400	6,000	3,000
*	3-10-06		34,000	2,100	170	4,200	7,500	4,400
*	6-07-06		29,000	2,400	250	3,600	5,100	3,200
*	9-11-06		32,000	1,100	140	2,400	3,500	1,600
*	12-13-06		36,000	1,400	220	3,400	4,900	1,900
*	3-12-07		36,000	1,200	250	3,800	5,700	1,800
*	6-6-07		24,000	1,100	170	3,000	4,200	1,400
*	9-6-07		44,000	1,600	290	5,700	6,800	1,900
*	12-14-07		28,000	1,200	160	3,600	3,700	1,500
*	3-13-08		47,000	1,100	190	5,800	7,500	1,200
*	6-13-08		40,000	950	170	4,600	4,800	1,400
*	09-09-08		20,300	706	121	2,680	2,580	1,180
*	12-12-08		48,000	826	114	4,050	4,250	1,610
*	03-12-09		43,000	686	128	2,740	4,520	974
*	06-04-09		20,600	440	94.3	2,770	2,270	717
*	12-03-09		26,600	372	29.7	3,250	2,250	608
*	06-02-10		21,000	130	13	2,400	1,500	160

**TABLE II
ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES
(CONTINUED)**

Sample ID	Sample Date	Sample Location	TPHG µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L
MW-3	8-18-00	MW3	46,000	3,200	550	3,700	14,000	2,200
*	3-30-01		30,000	3,300	340	2,800	9,100	4,700
*	6-22-01		35,000	4,000	340	2,900	7,600	4,100
*	9-20-01		30,000	3,800	260	2,500	6,600	5,300
*	12-27-01		39,000	4,400	340	3,000	6,700	5,500
*	9-24-02		53,000	4,100	270	3,100	6,600	6,400
*	12-17-02		40,000	3,600	240	2,200	5,700	5,200
*	4-2-03		24,000	2,000	130	1,800	3,300	3,000
*	6-12-03		26,000	2,700	180	2,000	4,200	5,500
*	9-29-03		39,000	4,000	220	3,200	5,300	4,800
*	12-04-03		40,000	3,200	180	2,200	4,300	4,400
*	03-09-04		39,000	3,100	160	2,100	4,400	4,000
*	6-24-04		21,000	3,000	110	2,300	3,800	3,400
*	9-09-04		26,000	4,100	140	2,200	4,300	6,000
*	12-21-04		20,000	3,400	99	1,700	2,900	6,400
*	3-16-05		35,000	1,800	78	1,900	2,600	4,000
*	6-09-05		2,000	55	ND	120	30	150
*	9-22-05		17,000	2,000	69	1,500	1,900	3,500
*	12-7-05		11,000	1,800	62	1,500	1,700	2,300
*	3-10-06		9,100	1,100	24	990	810	1,300
*	6-07-06		3,000	440	16	180	450	320
*	9-11-06		17,000	1,300	38	1,000	1,600	690
*	12-13-06		13,000	1,200	ND	1,000	1,300	520
*	3-12-07		120,000	10,000	210	11,000	11,000	ND
*	6-6-07		13,000	1,200	19	1,100	1,100	590
*	9-6-07		22,000	1,900	32	2,000	1,600	1,000
*	12-14-07		16,000	1,400	23	1,200	1,300	600
*	3-13-08		10,000	870	ND	1,000	670	420
*	6-13-08		15,000	1,300	27	1,300	1,200	660
*	09-09-08		9,030	890	<10	695	372	460
*	12-12-08		26,000	1,200	15.4	995	875	423
*	03-12-09		15,000	759	18.3	704	1,010	300
*	06-04-09		11,500	1,250	34.9	821	1,040	422
*	12-03-09		19,500	2250	25.1	1330	1,050	577
*	06-02-10		8,800	1,100	9.7	200	530	320

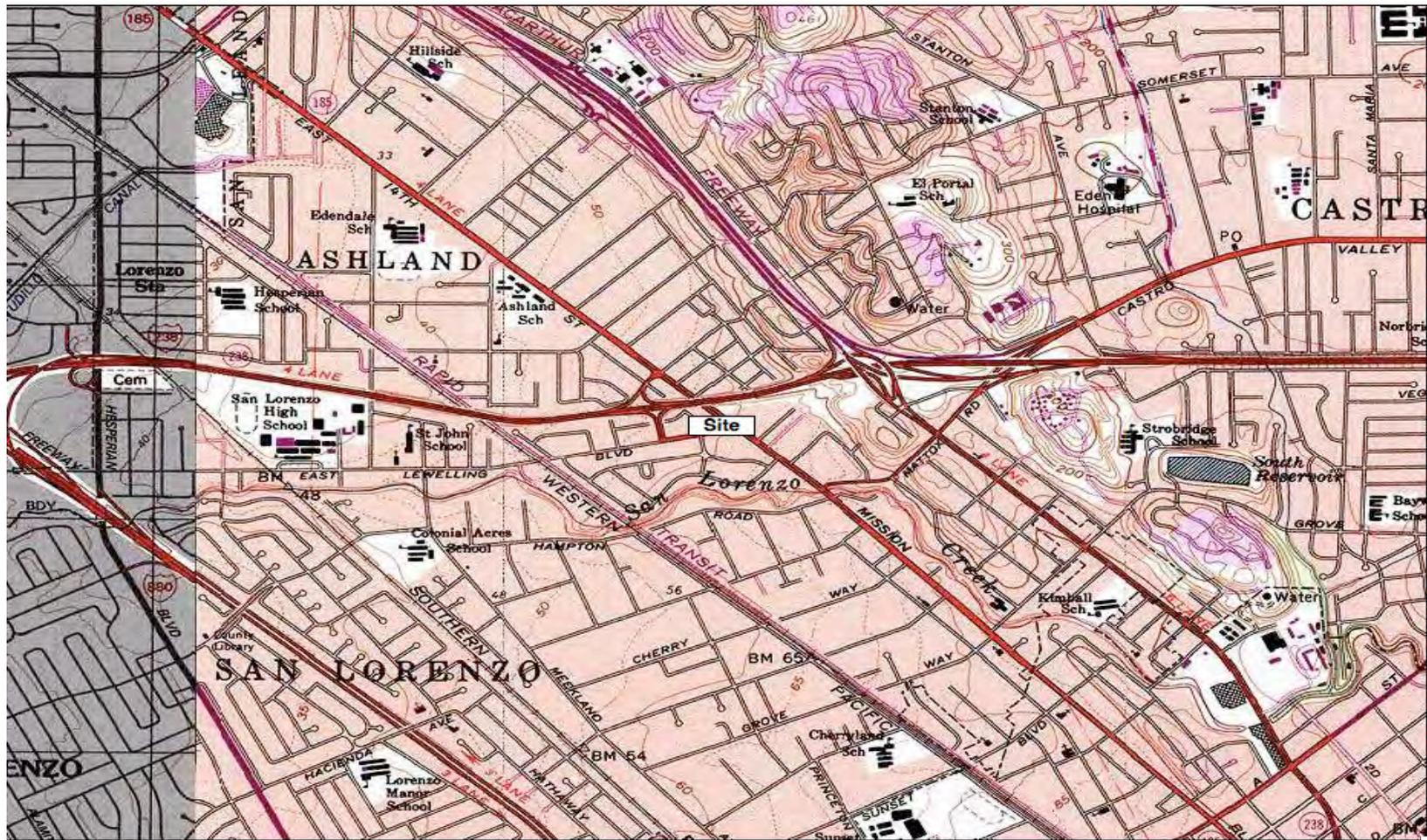
**TABLE II
ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES
(CONTINUED)**

Sample ID	Sample Date	Sample Location	TPHG µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L
MW-4 * * *	6-7-06	MW4	<25	<0.5	<0.5	<0.5	<0.5	<1
	9-11-06		<25	<0.5	<0.5	<0.5	<0.5	<1
	12-13-06		<25	<0.5	<0.5	<0.5	<0.5	<1
	3-12-07		<25	<0.5	<0.5	<0.5	<0.5	<1
	6-6-07		NS ³	NS	NS	NS	NS	NS
	9-6-07		NS	NS	NS	NS	NS	NS
	12-14-07		NS	NS	NS	NS	NS	NS
	3-13-08		NS	NS	NS	NS	NS	NS
	6-13-08		NS	NS	NS	NS	NS	NS
	09-09-08		NS	NS	NS	NS	NS	NS
	12-12-08		NS	NS	NS	NS	NS	NS
	03-12-09		NS	NS	NS	NS	NS	NS
	06-04-09		NS	NS	NS	NS	NS	NS
	12-03-09		NS	NS	NS	NS	NS	NS
	06-02-10		NS	NS	NS	NS	NS	NS
MW-5 * * *	6-7-06	MW5	<25	<0.5	<0.5	<0.5	<0.5	<1
	9-11-06		<25	<0.5	<0.5	<0.5	<0.5	<1
	12-13-06		<25	<0.5	<0.5	<0.5	<0.5	<1
	3-12-07		<25	<0.5	<0.5	<0.5	<0.5	<1
	6-6-07		NS	NS	NS	NS	NS	NS
	9-6-07		NS	NS	NS	NS	NS	NS
	12-14-07		NS	NS	NS	NS	NS	NS
	3-13-08		NS	NS	NS	NS	NS	NS
	6-13-08		NS	NS	NS	NS	NS	NS
	09-09-08		NS	NS	NS	NS	NS	NS
	12-12-08		NS	NS	NS	NS	NS	NS
	03-12-09		NS	NS	NS	NS	NS	NS
	06-04-09		NS	NS	NS	NS	NS	NS
	12-03-09		NS	NS	NS	NS	NS	NS
	06-02-10		NS	NS	NS	NS	NS	NS

**TABLE II
ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES
(CONTINUED)**

Sample ID	Sample Date	Sample Location	TPHG µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L
MW-6	6-7-06	MW6	<25	<0.5	<0.5	<0.5	<0.5	<1
*	9-11-06		<25	<0.5	<0.5	<0.5	<0.5	<1
*	12-13-06		<25	<0.5	<0.5	<0.5	<0.5	<1
*	3-12-07		<25	<0.5	<0.5	<0.5	<0.5	<1
*	6-6-07		<25	<0.5	<0.5	<0.5	<0.5	<1
*	9-6-07		<25	<0.5	<0.5	<0.5	<0.5	<1
*	12-14-07		<25	<0.5	<0.5	<0.5	<0.5	<1
*	3-13-08		<25	<0.5	<0.5	<0.5	<0.5	<1
*	6-13-08		<25	<0.5	<0.5	<0.5	<1	<1
*	09-09-08		<25	<0.3	<0.5	<0.3	<0.7	<0.5
*	12-12-08		<50	<0.5	<0.5	<0.5	<1.5	<0.5
*	03-12-09		<50	<0.5	<0.5	<0.5	<1.5	<0.5
*	06-04-09		<25	<0.3	<0.5	<0.3	<0.7	<0.5
*	12-03-09		<25	<0.3	<0.5	<0.3	<0.7	<0.5
*	06-02-10		<50	<0.5	<0.5	<0.5	<0.5	<0.5
MW-7	6-7-06	MW7	<25	<0.5	<0.5	<0.5	<0.5	<1
*	9-11-06		<25	<0.5	<0.5	<0.5	<0.5	<1
*	12-13-06		<25	<0.5	<0.5	<0.5	<0.5	<1
*	3-12-07		27	<0.5	<0.5	<0.5	<0.5	<1
*	6-6-07		<25	<0.5	<0.5	<0.5	<0.5	<1
*	9-6-07		<25	<0.5	<0.5	<0.5	<0.5	<1
*	12-14-07		<25	<0.5	<0.5	<0.5	<0.5	<1
*	3-13-08		<25	<0.5	<0.5	<0.5	<0.5	<1
*	6-13-08		<25	<0.5	<0.5	<0.5	<1	<1
*	09-09-08		<25	<0.5	<0.5	<0.5	<1	<1
*	12-12-08		<50	<0.5	<0.5	<0.5	<1.5	<0.5
*	03-12-09		<50	<0.5	<0.5	<0.5	<1.5	<0.5
*	06-04-09		<25	<0.3	<0.5	<0.3	<0.7	<0.5
*	06-02-10		<50	<0.5	<0.5	<0.5	<0.5	<0.5

1. TPHG = Total Petroleum Hydrocarbons as Gasoline
 2. MTBE = Methyl Tertiary Butyl Ether
 3. NS = Not Sampled
- * The Sample was analyzed for Fuel Oxygenates using EPA Method 8260B. Analytical result is for MTBE



TN \star MN
15°

0 1000 FEET 0 500 1000 METERS
Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)



SIERRA ENVIRONMENTAL, INC.
Environmental Consultants

980 W. Taylor Street, San Jose, CA 95126
Phone [408] 971-6758 • Fax [408] 971-6759

SITE LOCATION MAP

**First Semi-Annual 2010 Groundwater Monitoring
ABE Petroleum LLC**

17715 Mission Boulevard • Hayward • California

FIGURE

1

June 11, 2010
Project 03-103.00



LEGEND

-  MW1 Existing Groundwater Monitoring Well Location and Designation
-  B1 Historical Soil Boring Location and Designation
- NA Not Accessible



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On-Site & Off-Site Monitoring Well and Boring Locations

**First Semi-Annual 2010 Groundwater Monitoring
ABE Petroleum LLC**

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FIGURE

2

June 11, 2010
Project 03-103.00

Appendix A
BACKGROUND INFORMATION

BACKGROUND

On September 16, 1997, Balch Petroleum Contractors & Builders, Inc. (Balch) of Milpitas, California, removed one 2,000-gallon, two 6,000-gallon, one 10,000-gallon single-wall steel gasoline, and one 500-gallon single-wall steel waste oil USTs from the Site. Former UST locations are shown in Figure A of this appendix.

No hole or damage was observed in the tanks. No groundwater was encountered in the tank excavations. After UST removal, Sierra collected soil samples from the tank excavations for chemical analysis.

Up to 2,300 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPHG) was detected in the soil samples collected from beneath the tanks at approximately 14 feet below ground surface (bgs). The soil sample locations are shown in Figure A.

On August 14, 2000, Sierra drilled three exploratory soil borings and converted them to groundwater monitoring well MW1 through MW3. The wells are approximately 35 feet deep. Sierra collected soil and groundwater samples from the borings/wells for chemical analysis. The analytical results showed up to 720 ppm TPHG, 2.2 ppm benzene, and 3.4 ppm methyl tertiary butyl ether (MTBE) in the soil samples. Up to 290000 ppb TPHG, 10000 ppb benzene, and 4300 ppb MTBE were detected in the groundwater samples. Gasoline constituents were detected in groundwater samples collected from all three monitoring wells. Groundwater monitoring well locations are shown on Figure 2.

Starting March 30, 2001, Sierra performed quarterly groundwater monitoring at the Site. The field and analytical results are presented in Table I and II.

On May 4, 2006, Sierra retained services of Vironex Environmental Services (Vironex) to drill soil boring B1 through B4 at the Jack In The Box and Cal/Trans properties. Sierra collected grab groundwater samples from the borings for chemical analysis. Up to 370 $\mu\text{g/l}$ total petroleum hydrocarbons as gasoline (TPHG), 16 $\mu\text{g/l}$ toluene, 15 $\mu\text{g/l}$ ethylbenzene, and 100 $\mu\text{g/l}$ xylenes were detected in the water sample collected from the borings (B3 and B4) advanced at the Jack In The Box property. No benzene or MTBE was detected in water samples collected at this property. 3.2 $\mu\text{g/l}$ MTBE was detected in the water samples collected from the borings advanced at the Cal/Trans properties. The MTBE was detected in boring B2 located within 300 feet northwest at hydraulic down gradient of the Site. On May 10 and 11, 2006, Sierra retained services of Hew Drilling Company, Inc. (Hew) to construct 4 groundwater monitoring wells (MW4 through MW7) at the CalTrans properties, and Langton Drive. After the well construction, Sierra had the wellheads surveyed, developed the wells, and collected groundwater samples from the wells for chemical analysis. No gasoline constituents were detected in the groundwater samples collected from the wells. The analytical results for the soil and groundwater samples collected from the boring and the wells suggest the tip of the dissolved MTBE plume in the groundwater is confined within 300 feet northwest of the Site. The length of the dissolved plume of other gasoline

constituents in groundwater were shorter than the MTBE plume. Figure 2 shows the groundwater monitoring well locations.

On September 11, 2006, Sierra started quarterly groundwater monitoring of MW1 through MW7. Table I and II presents the groundwater measurement and analytical data.

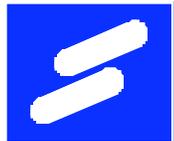
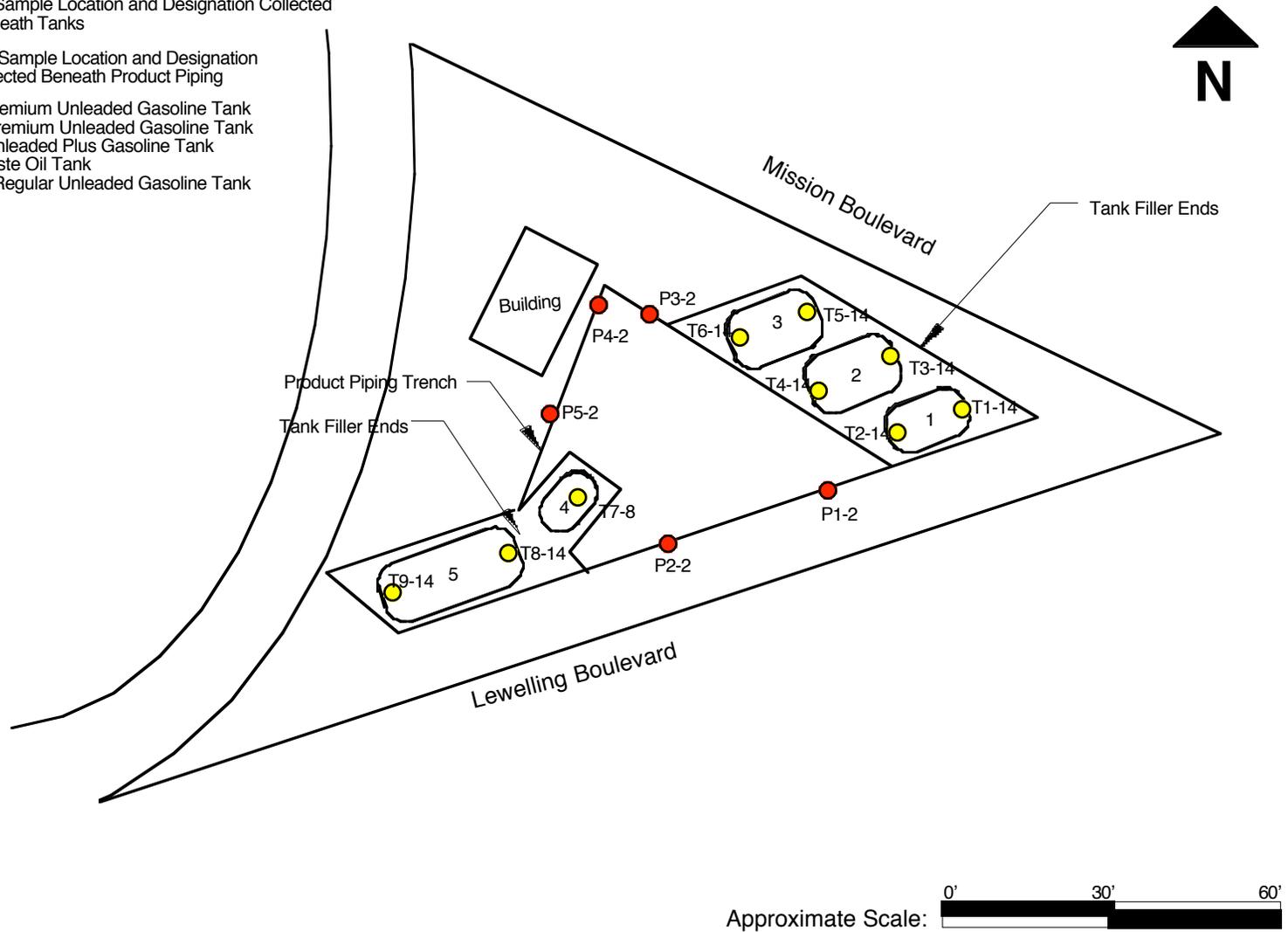
On August 27, 28, and 31 2009, Sierra had 9 membrane interface probes [MIP (B1 through B9)] advanced at the Site. The MIPs were extended to 40 feet bgs. Before advancing the MIPs, on August 27, 2009, Sierra had confirmatory soil boring S1 advanced near MW1 to explore depth of first encountered groundwater, and collected soil and groundwater samples for chemical analysis, soil oxygen demand (SOD), permeability, and gradations tests. Soil explored/tested at the Site consisted of silty clay/silty sandy clay to approximately 35 feet bgs and sandy gravel encountered at 35 through 40 feet below ground surface. Groundwater was first encountered in boring S1 at approximately 31 feet bgs and raised to 25 feet bgs.

The MIP results suggest that soil impacted with the gasoline constituents exist from approximately 10 feet bgs to the saturated zone. The horizontal extend of impacted soil is within approximately 25 feet radius of MW1. MIP results depicted higher contaminant concentrations at 20-25 feet and 30-32 feet bgs.

Up to 320,000 $\mu\text{g}/\text{kg}$ TPHG, 1170 $\mu\text{g}/\text{kg}$ benzene, and 1150 $\mu\text{g}/\text{kg}$ MTBE were detected in the soil representing 20 feet bgs in boring S1 (confirmatory boring), at the source area. Also, up to 59,900 $\mu\text{g}/\text{l}$ of TPHG, 1680 $\mu\text{g}/\text{l}$ benzene, and 893 $\mu\text{g}/\text{l}$ MTBE were detected in the grab water collected from boring S1. High/moderate concentrations of gasoline constituents were also detected in grab groundwater samples at all the MIP borings. Summary of the above work was presented in "Remedial Investigation/Feasibility Study" report dated September 29, 2009. The MIP boring locations are shown in Figure B of this Appendix.

LEGEND

- T1-14 Soil Sample Location and Designation Collected Beneath Tanks
 - P1-2 Soil Sample Location and Designation Collected Beneath Product Piping
- 1 = 2,000-Gallon Premium Unleaded Gasoline Tank
 2 = 6,000-Gallon Premium Unleaded Gasoline Tank
 3 = 6,000-Gallon Unleaded Plus Gasoline Tank
 4 = 500-Gallon Waste Oil Tank
 5 = 10,000-Gallon Regular Unleaded Gasoline Tank



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Former UST and Soil Sample Locations

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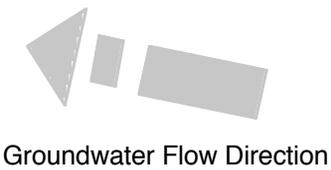
FIGURE

A

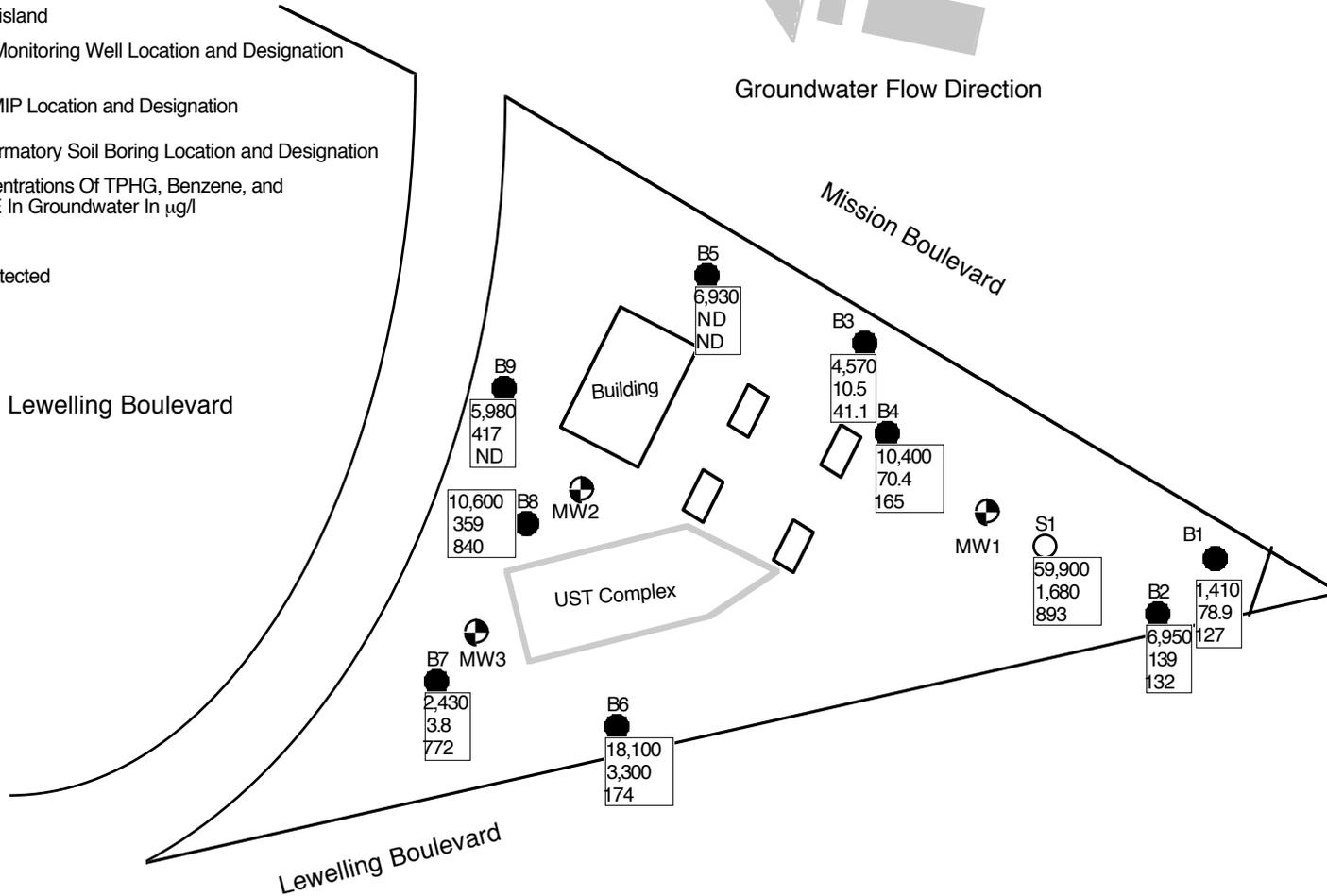
June 11, 2010
 Project 03-103.00

LEGEND

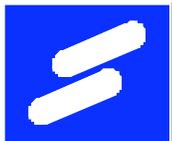
-  Pump island
 -  MW1 Monitoring Well Location and Designation
 -  B1 MIP Location and Designation
 -  S1 Confirmatory Soil Boring Location and Designation
- | | |
|-------|--|
| 1,410 | Concentrations Of TPHG, Benzene, and MTBE In Groundwater In µg/l |
| 78.9 | |
| 127 | |
- ND Not Detected



970 & 982 E. Lewelling Boulevard



Approximate Scale: 



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MIP Boring Locations

First Semi-Annual 2010 Groundwater Monitoring
ABE Petroleum LLC

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FIGURE

B

June 11, 2010
Project 03-103.00

Appendix B
QA/QC PROTOCOL

QA/QC PROTOCOL

Groundwater Level and Well Depth Measurements

Groundwater level and well depths are measured using electrical sounder. An electrical sounder consists of a reel, two-conductor cable, a water sensor, and a control panel with a buzzer. To measure groundwater level, the sensor is lowered into a well. A low current circuit is completed when the sensor makes contact with water. The current in the circuit is then amplified and activates a buzzer which produce an audible signal. Cable markings are divided at 0.05-foot increments. Well depths are measured to the nearest 0.01 foot. Groundwater levels are measured before and after sample collection to ensure data accuracy.

Well Purging

Low flow submersible electrical pumps or bailers are used to purge groundwater monitoring wells. Approximately 3 to 5 well casing volume of water is removed from the well as a measure to stabilize natural, and representative groundwater in each well. pH, electrical conductivity, and temperature of the purged water is measured and recorded at approximately each casing volume interval. Purge water is stabilized when pH is recorded within 0.5 unit, electrical conductivity is within 5 percent, and temperature is within 1.0 degree Celsius.

Groundwater Sampling

Groundwater samples are transferred into appropriate containers provided by certified analytical laboratories. The containers include proper preservatives, and labels with appropriate project information. Groundwater is transferred into the containers with as little agitation as possible. After collection, containers are sealed and checked to ensure that no head space or air bubbles are present in the sample.

After collection, if required, samples are kept in a cooler to be delivered to analytical laboratory with chain-of-custody documentation.

Equipment Decontamination

All sampling equipment are washed with Liqui-Nox[®] (a phosphate free laboratory detergent), and rinsed with tap water before each sampling event, and at each sampling interval. To reduce the risk of cross contamination, wells which have shown lower levels of contamination historically are purged and sampled first.

Analytical Procedures

Samples are analyzed by an accredited State-certified analytical laboratory using procedures prescribed by United State Environmental Protection Agency (EPA) and other Federal, State, and Local agencies. At minimum a field blank is analyzed with each group of samples for quality assurance measures. At minimum two qualified personnel review analytical results and compare them with historical data for consistency and accuracy.

Field Reports

All field observations are documented in field reports. A field report contain project information, climatic condition, contractor/subcontractor information, field observation, discussions and communications during each particular field activity. Field reports are stored in appropriate project files. Project managers review field reports to obtain necessary information regarding the status of each project on daily basis.

Appendix C
CERTIFIED ANALYTICAL REPORTS AND
CHAIN-OF-CUSTODY DOCUMENTATION



Sierra Environmental Inc
980 W Taylor Street
San Jose, California 95126
Tel: 4089716758
Fax: 4089716759
RE: ABE(17715 Mission Blvd)

Work Order No.: 1006017

Dear Mazyar Hajiaghai:

Torrent Laboratory, Inc. received 5 sample(s) on June 02, 2010 for the analyses presented in the following Report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc. is certified by the State of California, ELAP #1991. If you have any questions regarding these test results, please feel free to contact the Project Management Team at (408)263-5258; ext 204.

N. S. Kabir

Nutan Kabir

June 09, 2010

Date



Date: 6/9/2010

Client: Sierra Environmental Inc

Project: ABE(17715 Mission Blvd)

Work Order: 1006017

CASE NARRATIVE

Note for GRO for samples 1006017-001A and -002A : Even though TPH as Gasoline constituents are present, sample chromatogram does not resemble gasoline standard pattern. Reported value includes a portion of heavy end hydrocarbons within range of C5-C12 quantified as Gasoline that biases the quantitation (possibly aged gasoline).

No issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.



Sample Result Summary

Report prepared for: Mazyar Hajiaghai
Sierra Environmental Inc

Date Received: 06/02/10

Date Reported: 06/09/10

MW-1

1006017-001

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
MTBE	SW8260B	44	17	22	2500	ug/L
Benzene	SW8260B	44	15	22	2100	ug/L
Toluene	SW8260B	44	8.4	22	1300	ug/L
Ethyl Benzene	SW8260B	44	6.8	22	2600	ug/L
m,p-Xylene	SW8260B	44	8.8	44	11000	ug/L
o-Xylene	SW8260B	44	5.6	22	2600	ug/L
TPH(Gasoline)	8260TPH	88	1900	4400	63000	ug/L

MW-2

1006017-002

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
MTBE	SW8260B	11	4.1	5.5	160	ug/L
Benzene	SW8260B	11	3.7	5.5	130	ug/L
Toluene	SW8260B	11	2.1	5.5	13	ug/L
m,p-Xylene	SW8260B	11	2.2	11	1500	ug/L
Ethyl Benzene	SW8260B	44	6.8	22	2400	ug/L
TPH(Gasoline)	8260TPH	44	950	2200	21000	ug/L

MW-3

1006017-003

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
MTBE	SW8260B	11	4.1	5.5	320	ug/L
Benzene	SW8260B	11	3.7	5.5	1100	ug/L
Toluene	SW8260B	11	2.1	5.5	9.7	ug/L
Ethyl Benzene	SW8260B	11	1.7	5.5	200	ug/L
m,p-Xylene	SW8260B	11	2.2	11	480	ug/L
o-Xylene	SW8260B	11	1.4	5.5	50	ug/L
TPH(Gasoline)	8260TPH	44	950	2200	8800	ug/L

MW-6

1006017-004

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
--------------------	------------------------	-----------	------------	------------	----------------	-------------

All compounds were non-detectable for this sample.



Sample Result Summary

Report prepared for: Mazyar Hajiaghai
Sierra Environmental Inc

Date Received: 06/02/10

Date Reported: 06/09/10
1006017-005

MW-7

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
--------------------	------------------------	-----------	------------	------------	----------------	-------------

All compounds were non-detectable for this sample.



SAMPLE RESULTS

Report prepared for: Mazyar Hajiaghai
Sierra Environmental Inc

Date Received: 06/02/10
Date Reported: 06/09/10

Client Sample ID:	MW-1	Lab Sample ID:	1006017-001A
Project Name/Location:	ABE(17715 Mission Blvd)	Sample Matrix:	Water
Project Number:	03-103.00		
Date/Time Sampled:	06/02/10 / 11:15		
Tag Number:	17715 Mission Boulevard		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
MTBE	SW8260B	NA	06/08/10	44	17	22	2500		ug/L	401155	NA
tert-Butanol	SW8260B	NA	06/08/10	44	66	220	ND		ug/L	401155	NA
Diisopropyl ether (DIPE)	SW8260B	NA	06/08/10	44	16	22	ND		ug/L	401155	NA
ETBE	SW8260B	NA	06/08/10	44	17	22	ND		ug/L	401155	NA
Benzene	SW8260B	NA	06/08/10	44	15	22	2100		ug/L	401155	NA
TAME	SW8260B	NA	06/08/10	44	14	22	ND		ug/L	401155	NA
Toluene	SW8260B	NA	06/08/10	44	8.4	22	1300		ug/L	401155	NA
Ethyl Benzene	SW8260B	NA	06/08/10	44	6.8	22	2600		ug/L	401155	NA
m,p-Xylene	SW8260B	NA	06/08/10	44	8.8	44	11000		ug/L	401155	NA
o-Xylene	SW8260B	NA	06/08/10	44	5.6	22	2600		ug/L	401155	NA
(S) Dibromofluoromethane	SW8260B	NA	06/08/10	44	61.2	131	95.1		%	401155	NA
(S) Toluene-d8	SW8260B	NA	06/08/10	44	75.1	127	86.4		%	401155	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	06/08/10	44	64.1	120	103		%	401155	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	06/07/10	88	1900	4400	63000		ug/L	401144	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	06/07/10	88	58.4	133	113		%	401144	NA

NOTE: See narrative.



SAMPLE RESULTS

Report prepared for: Mazyar Hajiaghai
Sierra Environmental Inc

Date Received: 06/02/10
Date Reported: 06/09/10

Client Sample ID:	MW-2	Lab Sample ID:	1006017-002A
Project Name/Location:	ABE(17715 Mission Blvd)	Sample Matrix:	Water
Project Number:	03-103.00		
Date/Time Sampled:	06/02/10 / 11:30		
Tag Number:	17715 Mission Boulevard		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
MTBE	SW8260B	NA	06/08/10	11	4.1	5.5	160		ug/L	401155	NA
tert-Butanol	SW8260B	NA	06/08/10	11	17	55	ND		ug/L	401155	NA
Diisopropyl ether (DIPE)	SW8260B	NA	06/08/10	11	4.0	5.5	ND		ug/L	401155	NA
ETBE	SW8260B	NA	06/08/10	11	4.4	5.5	ND		ug/L	401155	NA
Benzene	SW8260B	NA	06/08/10	11	3.7	5.5	130		ug/L	401155	NA
TAME	SW8260B	NA	06/08/10	11	3.5	5.5	ND		ug/L	401155	NA
Toluene	SW8260B	NA	06/08/10	11	2.1	5.5	13		ug/L	401155	NA
m,p-Xylene	SW8260B	NA	06/08/10	11	2.2	11	1500		ug/L	401155	NA
o-Xylene	SW8260B	NA	06/08/10	11	1.4	5.5	ND		ug/L	401155	NA
(S) Dibromofluoromethane	SW8260B	NA	06/08/10	11	61.2	131	91.6		%	401155	NA
(S) Toluene-d8	SW8260B	NA	06/08/10	11	75.1	127	87.2		%	401155	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	06/08/10	11	64.1	120	95.5		%	401155	NA
Ethyl Benzene	SW8260B	NA	06/07/10	44	6.8	22	2400		ug/L	401159	NA
(S) Dibromofluoromethane	SW8260B	NA	06/07/10	44	61.2	131	107		%	401159	NA
(S) Toluene-d8	SW8260B	NA	06/07/10	44	75.1	127	103		%	401159	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	06/07/10	44	64.1	120	99.2		%	401159	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	06/07/10	44	950	2200	21000		ug/L	401144	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	06/07/10	44	58.4	133	113		%	401144	NA

NOTE: See narrative.



SAMPLE RESULTS

Report prepared for: Mazyar Hajiaghai
Sierra Environmental Inc

Date Received: 06/02/10
Date Reported: 06/09/10

Client Sample ID:	MW-3	Lab Sample ID:	1006017-003A
Project Name/Location:	ABE(17715 Mission Blvd)	Sample Matrix:	Water
Project Number:	03-103.00		
Date/Time Sampled:	06/02/10 / 11:45		
Tag Number:	17715 Mission Boulevard		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
MTBE	SW8260B	NA	06/08/10	11	4.1	5.5	320		ug/L	401155	NA
tert-Butanol	SW8260B	NA	06/08/10	11	17	55	ND		ug/L	401155	NA
Diisopropyl ether (DIPE)	SW8260B	NA	06/08/10	11	4.0	5.5	ND		ug/L	401155	NA
ETBE	SW8260B	NA	06/08/10	11	4.4	5.5	ND		ug/L	401155	NA
Benzene	SW8260B	NA	06/08/10	11	3.7	5.5	1100		ug/L	401155	NA
TAME	SW8260B	NA	06/08/10	11	3.5	5.5	ND		ug/L	401155	NA
Toluene	SW8260B	NA	06/08/10	11	2.1	5.5	9.7		ug/L	401155	NA
Ethyl Benzene	SW8260B	NA	06/08/10	11	1.7	5.5	200		ug/L	401155	NA
m,p-Xylene	SW8260B	NA	06/08/10	11	2.2	11	480		ug/L	401155	NA
o-Xylene	SW8260B	NA	06/08/10	11	1.4	5.5	50		ug/L	401155	NA
(S) Dibromofluoromethane	SW8260B	NA	06/08/10	11	61.2	131	84.8		%	401155	NA
(S) Toluene-d8	SW8260B	NA	06/08/10	11	75.1	127	80.5		%	401155	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	06/08/10	11	64.1	120	89.1		%	401155	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	06/07/10	44	950	2200	8800	x	ug/L	401144	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	06/07/10	44	58.4	133	81.9		%	401144	NA

NOTE: x - Not typical of Gasoline standard pattern. Reported result is elevated due to the presence of non-target compounds within range of C5-C12 quantified as Gasoline.



SAMPLE RESULTS

Report prepared for: Mazyar Hajiaghai
Sierra Environmental Inc

Date Received: 06/02/10
Date Reported: 06/09/10

Client Sample ID:	MW-6	Lab Sample ID:	1006017-004A
Project Name/Location:	ABE(17715 Mission Blvd)	Sample Matrix:	Water
Project Number:	03-103.00		
Date/Time Sampled:	06/02/10 / 12:00		
Tag Number:	17715 Mission Boulevard		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
MTBE	SW8260B	NA	06/07/10	1	0.38	0.50	ND		ug/L	401159	NA
tert-Butanol	SW8260B	NA	06/07/10	1	1.5	5.0	ND		ug/L	401159	NA
Diisopropyl ether (DIPE)	SW8260B	NA	06/07/10	1	0.36	0.50	ND		ug/L	401159	NA
ETBE	SW8260B	NA	06/07/10	1	0.40	0.50	ND		ug/L	401159	NA
Benzene	SW8260B	NA	06/07/10	1	0.33	0.50	ND		ug/L	401159	NA
TAME	SW8260B	NA	06/07/10	1	0.32	0.50	ND		ug/L	401159	NA
Toluene	SW8260B	NA	06/07/10	1	0.19	0.50	ND		ug/L	401159	NA
Ethyl Benzene	SW8260B	NA	06/07/10	1	0.15	0.50	ND		ug/L	401159	NA
m,p-Xylene	SW8260B	NA	06/07/10	1	0.20	1.0	ND		ug/L	401159	NA
o-Xylene	SW8260B	NA	06/07/10	1	0.13	0.50	ND		ug/L	401159	NA
(S) Dibromofluoromethane	SW8260B	NA	06/07/10	1	61.2	131	103		%	401159	NA
(S) Toluene-d8	SW8260B	NA	06/07/10	1	75.1	127	108		%	401159	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	06/07/10	1	64.1	120	99.8		%	401159	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	06/07/10	1	22	50	ND		ug/L	401144	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	06/07/10	1	58.4	133	97.1		%	401144	NA



SAMPLE RESULTS

Report prepared for: Mazyar Hajiaghai
Sierra Environmental Inc

Date Received: 06/02/10
Date Reported: 06/09/10

Client Sample ID:	MW-7	Lab Sample ID:	1006017-005A
Project Name/Location:	ABE(17715 Mission Blvd)	Sample Matrix:	Water
Project Number:	03-103.00		
Date/Time Sampled:	06/02/10 / 12:30		
Tag Number:	17715 Mission Boulevard		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
MTBE	SW8260B	NA	06/07/10	1	0.38	0.50	ND		ug/L	401159	NA
tert-Butanol	SW8260B	NA	06/07/10	1	1.5	5.0	ND		ug/L	401159	NA
Diisopropyl ether (DIPE)	SW8260B	NA	06/07/10	1	0.36	0.50	ND		ug/L	401159	NA
ETBE	SW8260B	NA	06/07/10	1	0.40	0.50	ND		ug/L	401159	NA
Benzene	SW8260B	NA	06/07/10	1	0.33	0.50	ND		ug/L	401159	NA
TAME	SW8260B	NA	06/07/10	1	0.32	0.50	ND		ug/L	401159	NA
Toluene	SW8260B	NA	06/07/10	1	0.19	0.50	ND		ug/L	401159	NA
Ethyl Benzene	SW8260B	NA	06/07/10	1	0.15	0.50	ND		ug/L	401159	NA
m,p-Xylene	SW8260B	NA	06/07/10	1	0.20	1.0	ND		ug/L	401159	NA
o-Xylene	SW8260B	NA	06/07/10	1	0.13	0.50	ND		ug/L	401159	NA
(S) Dibromofluoromethane	SW8260B	NA	06/07/10	1	61.2	131	113		%	401159	NA
(S) Toluene-d8	SW8260B	NA	06/07/10	1	75.1	127	100		%	401159	NA
(S) 4-Bromofluorobenzene	SW8260B	NA	06/07/10	1	64.1	120	106		%	401159	NA

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	NA	06/07/10	1	22	50	ND		ug/L	401144	NA
(S) 4-Bromofluorobenzene	8260TPH	NA	06/07/10	1	58.4	133	93.5		%	401144	NA



MB Summary Report

Work Order:	1006017	Prep Method:	NA	Prep Date:	NA	Prep Batch:	NA
Matrix:	Water	Analytical Method:	8260TPH	Analyzed Date:	06/07/10	Analytical Batch:	401144
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
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TPH(Gasoline)	22	50	ND		
(S) 4-Bromofluorobenzene			116		

Work Order:	1006017	Prep Method:	NA	Prep Date:	NA	Prep Batch:	NA
Matrix:	Water	Analytical Method:	SW8260B	Analyzed Date:	06/08/10	Analytical Batch:	401155
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
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Dichlorodifluoromethane	0.41	0.50	ND	
Chloromethane	0.41	0.50	ND	
Vinyl Chloride	0.37	0.50	ND	
Bromomethane	0.37	0.50	ND	
Trichlorofluoromethane	0.34	0.50	ND	
1,1-Dichloroethene	0.29	0.50	ND	
Freon 113	0.38	0.50	ND	
Methylene Chloride	0.18	5.0	ND	
trans-1,2-Dichloroethene	0.31	0.50	ND	
MTBE	0.38	0.50	ND	
tert-Butanol	1.5	5.0	2.0	
Diisopropyl ether (DIPE)	0.36	0.50	ND	
1,1-Dichloroethane	0.28	0.50	ND	
ETBE	0.40	0.50	ND	
cis-1,2-Dichloroethene	0.33	0.50	ND	
2,2-Dichloropropane	0.37	0.50	ND	
Bromochloromethane	0.34	0.50	ND	
Chloroform	0.29	0.50	ND	
Carbon Tetrachloride	0.26	0.50	ND	
1,1,1-Trichloroethane	0.32	0.50	ND	
1,1-Dichloropropene	0.40	0.50	ND	
Benzene	0.33	0.50	ND	
TAME	0.32	0.50	ND	
1,2-Dichloroethane	0.28	0.50	ND	
Trichloroethylene	0.38	0.50	ND	
Dibromomethane	0.21	0.50	ND	
1,2-Dichloropropane	0.37	0.50	ND	
Bromodichloromethane	0.23	0.50	ND	
2-Chloroethyl vinyl ether	0.91	2.0	ND	
cis-1,3-Dichloropropene	0.30	0.50	ND	



MB Summary Report

Work Order:	1006017	Prep Method:	NA	Prep Date:	NA	Prep Batch:	NA
Matrix:	Water	Analytical Method:	SW8260B	Analyzed Date:	06/08/10	Analytical Batch:	401155
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
Toluene	0.19	0.50	ND		
Tetrachloroethylene	0.15	0.50	ND		
trans-1,3-Dichloropropene	0.20	0.50	ND		
1,1,2-Trichloroethane	0.20	0.50	ND		
Dibromochloromethane	0.21	0.50	ND		
1,3-Dichloropropane	0.18	0.50	ND		
1,2-Dibromoethane	0.19	0.50	ND		
Chlorobenzene	0.14	0.50	ND		
Ethyl Benzene	0.15	0.50	ND		
1,1,1,2-Tetrachloroethane	0.10	0.50	ND		
m,p-Xylene	0.20	1.0	ND		
o-Xylene	0.13	0.50	ND		
Styrene	0.20	0.50	ND		
Bromoform	0.45	1.0	ND		
Isopropyl Benzene	0.28	0.50	ND		
Bromobenzene	0.39	0.50	ND		
1,1,2,2-Tetrachloroethane	0.26	0.50	ND		
n-Propylbenzene	0.30	0.50	ND		
2-Chlorotoluene	0.33	0.50	ND		
1,3,5-Trimethylbenzene	0.20	0.50	ND		
4-Chlorotoluene	0.32	0.50	ND		
tert-Butylbenzene	0.29	0.50	ND		
1,2,3-Trichloropropane	0.59	1.0	ND		
1,2,4-Trimethylbenzene	0.33	0.50	ND		
sec-Butyl Benzene	0.24	0.50	ND		
p-Isopropyltoluene	0.25	0.50	ND		
1,3-Dichlorobenzene	0.31	0.50	ND		
1,4-Dichlorobenzene	0.37	0.50	ND		
n-Butylbenzene	0.32	0.50	ND		
1,2-Dichlorobenzene	0.39	0.50	ND		
1,2-Dibromo-3-Chloropropane	0.45	1.0	ND		
Hexachlorobutadiene	0.22	0.50	ND		
1,2,4-Trichlorobenzene	0.48	1.0	ND		
Naphthalene	0.57	1.0	0.64		
1,2,3-Trichlorobenzene	0.52	1.0	ND		
(S) Dibromofluoromethane			83.4		
(S) Toluene-d8			81.8		
(S) 4-Bromofluorobenzene			87.2		



MB Summary Report

Work Order:	1006017	Prep Method:	NA	Prep Date:	NA	Prep Batch:	NA
Matrix:	Water	Analytical Method:	SW8260B	Analyzed Date:	06/07/10	Analytical Batch:	401159
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
Dichlorodifluoromethane	0.41	0.50	ND		
Chloromethane	0.41	0.50	ND		
Vinyl Chloride	0.37	0.50	ND		
Bromomethane	0.37	0.50	ND		
Trichlorofluoromethane	0.34	0.50	ND		
1,1-Dichloroethene	0.29	0.50	ND		
Freon 113	0.38	0.50	ND		
Methylene Chloride	0.18	5.0	ND		
trans-1,2-Dichloroethene	0.31	0.50	ND		
MTBE	0.38	0.50	ND		
tert-Butanol	1.5	5.0	ND		
Diisopropyl ether (DIPE)	0.36	0.50	ND		
1,1-Dichloroethane	0.28	0.50	ND		
ETBE	0.40	0.50	ND		
cis-1,2-Dichloroethene	0.33	0.50	ND		
2,2-Dichloropropane	0.37	0.50	ND		
Bromochloromethane	0.34	0.50	ND		
Chloroform	0.29	0.50	ND		
Carbon Tetrachloride	0.26	0.50	ND		
1,1,1-Trichloroethane	0.32	0.50	ND		
1,1-Dichloropropene	0.40	0.50	ND		
Benzene	0.33	0.50	ND		
TAME	0.32	0.50	ND		
1,2-Dichloroethane	0.28	0.50	ND		
Trichloroethylene	0.38	0.50	ND		
Dibromomethane	0.21	0.50	ND		
1,2-Dichloropropane	0.37	0.50	ND		
Bromodichloromethane	0.23	0.50	ND		
2-Chloroethyl vinyl ether	0.91	2.0	ND		
cis-1,3-Dichloropropene	0.30	0.50	ND		
Toluene	0.19	0.50	ND		
Tetrachloroethylene	0.15	0.50	ND		
trans-1,3-Dichloropropene	0.20	0.50	ND		
1,1,2-Trichloroethane	0.20	0.50	ND		
Dibromochloromethane	0.21	0.50	ND		
1,3-Dichloropropane	0.18	0.50	ND		
1,2-Dibromoethane	0.19	0.50	ND		
Chlorobenzene	0.14	0.50	ND		
Ethyl Benzene	0.15	0.50	ND		
1,1,1,2-Tetrachloroethane	0.10	0.50	ND		
m,p-Xylene	0.20	1.0	ND		



MB Summary Report

Work Order:	1006017	Prep Method:	NA	Prep Date:	NA	Prep Batch:	NA
Matrix:	Water	Analytical Method:	SW8260B	Analyzed Date:	06/07/10	Analytical Batch:	401159
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
o-Xylene	0.13	0.50	ND	
Styrene	0.20	0.50	ND	
Bromoform	0.45	1.0	ND	
Isopropyl Benzene	0.28	0.50	ND	
Bromobenzene	0.39	0.50	ND	
1,1,2,2-Tetrachloroethane	0.26	0.50	ND	
n-Propylbenzene	0.30	0.50	ND	
2-Chlorotoluene	0.33	0.50	ND	
1,3,5-Trimethylbenzene	0.20	0.50	ND	
4-Chlorotoluene	0.32	0.50	ND	
tert-Butylbenzene	0.29	0.50	ND	
1,2,3-Trichloropropane	0.59	1.0	ND	
1,2,4-Trimethylbenzene	0.33	0.50	ND	
sec-Butyl Benzene	0.24	0.50	ND	
p-Isopropyltoluene	0.25	0.50	ND	
1,3-Dichlorobenzene	0.31	0.50	ND	
1,4-Dichlorobenzene	0.37	0.50	ND	
n-Butylbenzene	0.32	0.50	ND	
1,2-Dichlorobenzene	0.39	0.50	ND	
1,2-Dibromo-3-Chloropropane	0.45	1.0	ND	
Hexachlorobutadiene	0.22	0.50	ND	
1,2,4-Trichlorobenzene	0.48	1.0	ND	
Naphthalene	0.57	1.0	ND	
1,2,3-Trichlorobenzene	0.52	1.0	ND	
(S) Dibromofluoromethane			126	
(S) Toluene-d8			118	
(S) 4-Bromofluorobenzene			83.1	



LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1006017	Prep Method:	NA	Prep Date:	NA	Prep Batch:	NA
Matrix:	Water	Analytical Method:	8260TPH	Analyzed Date:	06/07/10	Analytical Batch:	401144
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	22	50		227.27	95.4	97.9	2.63	52.4 - 127	30	
(S) 4-Bromofluorobenzene				11.36	118	114		58.4 - 133		

Work Order:	1006017	Prep Method:	NA	Prep Date:	NA	Prep Batch:	NA
Matrix:	Water	Analytical Method:	SW8260B	Analyzed Date:	06/08/10	Analytical Batch:	401155
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.29	0.50		17.04	96.5	99.3	2.51	61.4 - 129	30	
Benzene	0.33	0.50		17.04	92.6	84.1	9.76	66.9 - 140	30	
Trichloroethylene	0.38	0.50		17.04	101	106	4.19	69.3 - 144	30	
Toluene	0.19	0.50		17.04	93.5	98.3	5.21	76.6 - 123	30	
Chlorobenzene	0.14	0.50		17.04	97.7	102	4.42	73.9 - 137	30	
(S) Dibromofluoromethane				11.36	69.4	76.8		61.2 - 131		
(S) Toluene-d8				11.36	82.0	81.2		75.1 - 127		
(S) 4-Bromofluorobenzene				11.36	84.9	87.1		64.1 - 120		

Work Order:	1006017	Prep Method:	NA	Prep Date:	NA	Prep Batch:	NA
Matrix:	Water	Analytical Method:	SW8260B	Analyzed Date:	06/07/10	Analytical Batch:	401159
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.29	0.50		17.04	119	117	1.50	61.4 - 129	30	
Benzene	0.33	0.50		17.04	116	116	0.456	66.9 - 140	30	
Trichloroethylene	0.38	0.50		17.04	99.2	95.1	4.23	69.3 - 144	30	
Toluene	0.19	0.50		17.04	114	106	7.67	76.6 - 123	30	
Chlorobenzene	0.14	0.50		17.04	103	99.7	2.96	73.9 - 137	30	
(S) Dibromofluoromethane				11.36	110	111		61.2 - 131		
(S) Toluene-d8				11.36	120	112		75.1 - 127		
(S) 4-Bromofluorobenzene				11.36	82.6	101		64.1 - 120		



Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
Duplicate - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit (PQL) - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
Tentatively Identified Compound (TIC) - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
Units: the unit of measure used to express the reported result - mg/L and mg/Kg (equivalent to PPM - parts per million in liquid and solid), ug/L and ug/Kg (equivalent to PPB - parts per billion in liquid and solid), ug/m³ , mg.m³ , ppbv and ppmv (all units of measure for reporting concentrations in air), % (equivalent to 10000 ppm or 1,000,000 ppb), ug/Wipe (concentration found on the surface of a single Wipe usually taken over a 100cm ² surface)

LABORATORY QUALIFIERS:

<p>B - Indicates when the analyte is found in the associated method or preparation blank</p> <p>D - Surrogate is not recoverable due to the necessary dilution of the sample</p> <p>E - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.</p> <p>H- Indicates that the recommended holding time for the analyte or compound has been exceeded</p> <p>J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative</p> <p>NA - Not Analyzed</p> <p>N/A - Not Applicable</p> <p>NR - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added</p> <p>R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts</p> <p>S- Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative</p> <p>X -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.</p>



Sample Receipt Checklist

Client Name: Sierra Environmental Inc

Date and Time Received: 6/2/2010 13:25

Project Name: ABE(17715 Mission Blvd)

Received By: NG

Work Order No.: 1006017

Physically Logged By: NG

Checklist Completed By: NG

Carrier Name: Client Dropped off

Chain of Custody (COC) Information

Chain of custody present? Yes
Chain of custody signed when relinquished and received? Yes
Chain of custody agrees with sample labels? Yes
Custody seals intact on sample bottles? Not Present

Sample Receipt Information

Custody seals intact on shipping container/cooler? Not Present
Shipping Container/Cooler In Good Condition? Yes
Samples in proper container/bottle? Yes
Samples containers intact? Yes
Sufficient sample volume for indicated test? Yes

Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes
Container/Temp Blank temperature in compliance? Temperature: °C
Water-VOA vials have zero headspace? Yes
Water-pH acceptable upon receipt?
pH Checked by: pH Adjusted by:

Samples received in a cooler with ice.



Login Summary Report

Client ID: TL5191 Sierra Environmental Inc
Project Name: ABE(17715 Mission Blvd)
Project # : 03-103.00
Report Due Date: 6/9/2010
Comments: 5 day TAT! Received 5 waters for TPHg,BTEX,Fuel oxys.
Work Order # : 1006017

QC Level:
TAT Requested: 5+ day:0
Date Received: 6/2/2010
Time Received: 13:25

<u>WO Sample ID</u>	<u>Client Sample ID</u>	<u>Collection Date/Time</u>	<u>Matrix</u>	<u>Scheduled Disposal</u>	<u>Sample On Hold</u>	<u>Test On Hold</u>	<u>Requested Tests</u>	<u>Subbed</u>
1006017-001A	MW-1	06/02/10 11:15	Water	07/17/10			W_8260Pet EDF W_GCMS-GRO	
Sample Note: TPHg,BTEX,Fuel oxys for all samples.								
1006017-001A44 x	MW-1	06/02/10 11:15	Water	07/17/10			W_8260Pet	
1006017-001A88 x	MW-1	06/02/10 11:15	Water	07/17/10			W_GCMS-GRO	
1006017-002A	MW-2	06/02/10 11:30	Water	07/17/10			W_8260Pet W_GCMS-GRO	
1006017-002A11 x	MW-2	06/02/10 11:30	Water	07/17/10			W_8260Pet	
1006017-002A44 x	MW-2	06/02/10 11:30	Water	07/17/10			W_8260Pet W_GCMS-GRO	
1006017-003A	MW-3	06/02/10 11:45	Water	07/17/10			W_8260Pet W_GCMS-GRO	
1006017-003A11 x	MW-3	06/02/10 11:45	Water	07/17/10			W_8260Pet	
1006017-003A44 x	MW-3	06/02/10 11:45	Water	07/17/10			W_GCMS-GRO	
1006017-004A	MW-6	06/02/10 12:00	Water	07/17/10			W_8260Pet W_GCMS-GRO	
1006017-005A	MW-7	06/02/10 12:30	Water	07/17/10			W_8260Pet W_GCMS-GRO	



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1006017

CHAIN OF CUSTODY

Project Name: ABE Project No 03-103.00 Date: 06-02-10

Project Location: 17715 Mission Boulevard Client: Paul Garg Sampler: Mike Hagit

001A
002A
003A
004A
005A

Sample ID	Date Sampled	Sampling Time	Matrix	N° of Containers	Analysis Requested						Turnaround Time		
					TPHG&BTEX Fuel Oxygenates 8260B								
MW-1	6/2/10	11:15	Water	3	X							24-hour Other _____	Normal
MW-2	↓	11:30	↓	↓	↓							24-hour Other _____	Normal
MW-3	↓	11:45	↓	↓	↓							24-hour Other _____	Normal
MW-6	↓	12:00	↓	↓	↓							24-hour Other _____	Normal
MW-7	↓	12:30	↓	↓	↓							24-hour Other _____	Normal
												24-hour Other _____	Normal
												24-hour Other _____	Normal

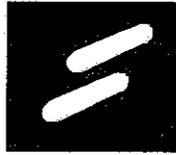
Remarks: Samples contain preservative. Please email the results in EDF format for Geotracker ID# T0600102154 to maz.sierra@sbcglobal.net

Relinquished by <u>[Signature]</u>	Date <u>6/2/10</u>	Time <u>1:25</u>	Received by <u>[Signature]</u>	Date <u>6-2-10</u>	Time <u>1:25 AM</u>
Relinquished by	Date	Time	Received by	Date	Time

980 W. Taylor Street • San Jose • California • 95126
Phone (408) 971-6758 • Fax (408) 9716759

D/O.

Appendix D
FIELD NOTES



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GROUNDWATER MONITORING DATA FORM

Project No: 03-103.00

Date: 6/02/10

Project Name: ABE

Well N°: MW1

Field Personnel: Mike & Maz

Weather: Sunny

Project Location: 17715 Mission Boulevard, Hayward

PURGE WATER VOLUME CALCULATION	Total Well Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier Casing Diameter			Casing Volume (gal)	Purged Volume (gal)
				2"	4"	6"		
	33.25	19.85	13.4	0.16	0.64	1.44	2.1	≈ 6.0

Purge Method: Bailer Measuring Reference: TOC

Time								
Volume Purged (gal)		0	2	4	6			
Temperature (° F)		66.8	66.7	66.9	67.0			
pH		6.40	6.37	6.39	6.39			
Specific Conductivity (umhos/cm)		790	800	800	790			
Turbidity/Color		light gray	→	→	→			
Odor		yes	→	→	→			

Comments: The odor and sheens



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GROUNDWATER MONITORING DATA FORM

Project No: 03-103.00

Date: 6/02/10

Project Name: ABE

Well N°: MW2

Field Personnel: Mike & Maz

Weather: Sunny

Project Location: 17715 Mission Boulevard, Hayward

PURGE WATER VOLUME CALCULATION	Total Well Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier Casing Diameter			Casing Volume (gal)	Purged Volume (gal)
	33.75	21.01	12.74	2"	4"	6"	2.03	≈ 6.0
				0.16	0.64	1.44		

Purge Method: Bailer Measuring Reference: TOC

Time						
Volume Purged (gal)		0	2	4	6	
Temperature (° F)		66.7	66.9	67.0	67.0	
pH		6.29	6.30	6.33	6.32	
Specific Conductivity (umhos/cm)		830	820	820	820	
Turbidity/Color		Light gray	→	→	→	
Odor		yes	→	→	→	

Comments: The odor



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GROUNDWATER MONITORING DATA FORM

Project No: 03-103.00

Date: 6/02/10

Project Name: ABE

Well N°: MW3

Field Personnel: Mike & Maz

Weather: Sunny

Project Location: 17715 Mission Boulevard, Hayward

PURGE WATER VOLUME CALCULATION	Total Well Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier Casing Diameter			Casing Volume (gal)	Purged Volume (gal)
				2"	4"	6"		
	33.75	20.16	13.59	0.16	0.64	1.44	2.17	≈ 6.0

Purge Method: Bailer Measuring Reference: TOC

Time						
Volume Purged (gal)		0	2	4	6	
Temperature (° F)		66.9	67.0	67.1	67.2	
pH		6.33	6.35	6.34	6.35	
Specific Conductivity (umhos/cm)		810	810	820	830	
Turbidity/Color		Light gray	→	→	→	
Odor		yes	→	→	→	

Comments: The odor



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GROUNDWATER MONITORING DATA FORM

Project No: 03-103.00

Date: 6/27/00

Project Name: ABE

Well N°: MW6

Field Personnel: Mike & Maz

Weather: Sunny

Project Location: 17715 Mission Boulevard, Hayward

PURGE WATER VOLUME CALCULATION

Total Well Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier Casing Diameter			Casing Volume (gal)	Purged Volume (gal)
			2"	4"	6"		
25	17.13	7.87	0.16	0.64	1.44	1.25	≈ 4.0

Purge Method: Bailer Measuring Reference: TOC

Time

Volume Purged (gal)

Temperature (° F)

pH

Specific Conductivity (umhos/cm)

Turbidity/Color

Odor

0 1.5 3.0 4.0

66.3 66.4 66.6 66.7

6.25 6.23 6.25 6.25

810 820 820 830

Light Brown → → →

NO → → →

Comments: _____



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GROUNDWATER MONITORING DATA FORM

Project No: 03-103.00

Date: 6/02/10

Project Name: ABE

Well N°: MW7

Field Personnel: Mike & Maz

Weather: Sunny

Project Location: 17715 Mission Boulevard, Hayward

PURGE WATER VOLUME CALCULATION	Total Well Depth (ft)	Depth to Water (ft)	Water Column (ft)	Multiplier Casing Diameter			Casing Volume (gal)	Purged Volume (gal)
	25	18.01	6.99	2"	4"	6"	1.11	≈ 3.0
				0.16	0.64	1.44		

Purge Method: Bailer Measuring Reference: TOC

Time						
Volume Purged (gal)	0	1	2	3		
Temperature (° F)	66.5	66.6	66.6	66.8		
pH	6.37	6.35	6.36	6.35		
Specific Conductivity (umhos/cm)	840	830	840	840		
Turbidity/Color	LIGHT BROWN	→	→	→		
Odor	NO	→	→	→		

Comments: _____