December 19, 2011

Mr. Mark Detterman
ACHSA
1131 Harbor Bay Parkway
Suite 250
Alameda, CA 94502-6577

Subject: **Second Semi-Annual 2011 Groundwater Monitoring Dated December 15, 2011, 17715 Mission Boulevard, Hayward, California**

Dear Mr. Detterman:

Enclosed, please find a copy of Second Semi-Annual 2011 Groundwater Monitoring dated December 15, 2011 for the subject property. With my authorization, the work was performed by Sierra Environmental, Inc. (Sierra).

I Declare, under penalty of perjury, that the information and/or recommendations contained in the report is true and correct to the best of my knowledge.

Please call me at (925) 519-9305 if you have questions.

Sincerely Yours,

Som Gupta
ABE Petroleum LLC

Enclosure

SECOND SEMI-ANNUAL 2011 GROUNDWATER MONITORING

ABE Petroleum LLC
17715 Mission Boulevard
Hayward, California 94539

Prepared for

Mr. Paul Garg
ABE Petroleum LLC

Prepared by

Sierra Environmental, Inc.

December 15, 2011
Project 11-103.00

Sierra Environmental, Inc.
Environmental Consultants

December 15, 2011
Project 11-103.00

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

Subject: Report for Second Semi-Annual 2011 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 second semi-annual 2011 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 December 2, 2011, 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 Accutest Laboratories (Accutest) for chemical analysis. Accutest is a State-certified analytical laboratory (08258CA).

980 W. Taylor Street
San Jose, CA 95126
Phone (408) 971-6758
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GROUNDWATER MONITORING

On December 2, 2011, Sierra performed the second semi-annual 2011 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 18.76' to 22.62' 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. CalTrans covered the location of MW4 and MW5 with imported fill material without notifying Sierra.

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 A.

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 B. Copies of the field notes are presented in Appendix C.

ANALYTICAL RESULTS

Table II presents Summary of the analytical results.

CONCLUSION AND RECOMMENDATIONS

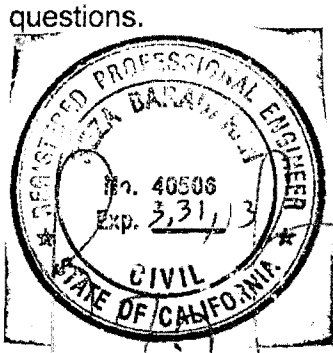
No gasoline constituents were detected in offsite monitoring well MW6 and MW7. Except MW1, concentrations of the gasoline constituents in the groundwater samples collected from the other onsite wells (MW2 and MW3) have increased during this monitoring event, compared to the first semi-annual 2011 groundwater monitoring event. Sierra recommends continuing the semi-annual groundwater monitoring at the Site in 2012. Sierra is planning for implementation of additional corrective action for the Site. The corrective action was explained in a work plan prepared by Sierra dated August 26, 2011.

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.



Reza Baradaran, PE, GE
Principal

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	-	QA/QC Protocol
Appendix B	-	Certified Analytical Results and Chain-of-Custody Documentation
Appendix C	-	Field Notes

cc: Mr. Mark Detterman ACHCS (1 Copy)

R11-103.00\SecondSemi-Annual2011GW\MH12152011

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		59.50	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
	12-01-10			22.73	36.77
	06-03-11			18.48	41.02
	12-02-11			21.44	38.06

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		60.61	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
	12-01-10			23.96	36.65
	06-03-11			19.69	40.92
	12-02-11			22.62	37.99

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		59.73	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
	12-01-10			23.07	36.66
	06-03-11			18.84	40.89
	12-02-11			21.76	37.97

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
	12-01-10			N/A	N/A
	06-03-11			N/A	N/A
	12-02-11			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
	12-01-10			N/A	N/A
	06-03-11			N/A	N/A
	12-02-11			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
	12-01-10			20.04	36.59
	06-03-11			15.93	40.70
	12-02-11			18.76	37.87
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
	12-01-10			20.89	36.61
	06-03-11			16.81	40.69
	12-02-11			19.62	37.88

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
	12-01-10		54,000	2,520	180	4,240	10,200	2,230
	06-03-11		46,600	1,900	689	2,670	8,110	2,080
	12-02-11		31,900	1,720	153	2,460	3,920	1,490

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
	12-01-10		14,300	127	ND	1,890	697	206
*	06-03-11		8,150	72.0	ND	845	352	130
	12-02-11		16,700	130	ND	2,370	351	350

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	2,250	25.1	1330	1,050	577
	06-02-10		8,800	1,100	9.7	200	530	320
	12-01-10		7,910	1,020	ND	358	128	257
*	06-03-11		2,910	93.7	ND	104	55.5	43.9
**	12-02-11		8,870	502	ND	546	328	125

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[4]	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
	12-01-10		NS	NS	NS	NS	NS	NS
	06-03-11		NS	NS	NS	NS	NS	NS
	12-02-11		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
	12-01-10		NS	NS	NS	NS	NS	NS
	06-03-11		NS	NS	NS	NS	NS	NS
	12-02-11		NS	NS	NS	NS	NS	NS

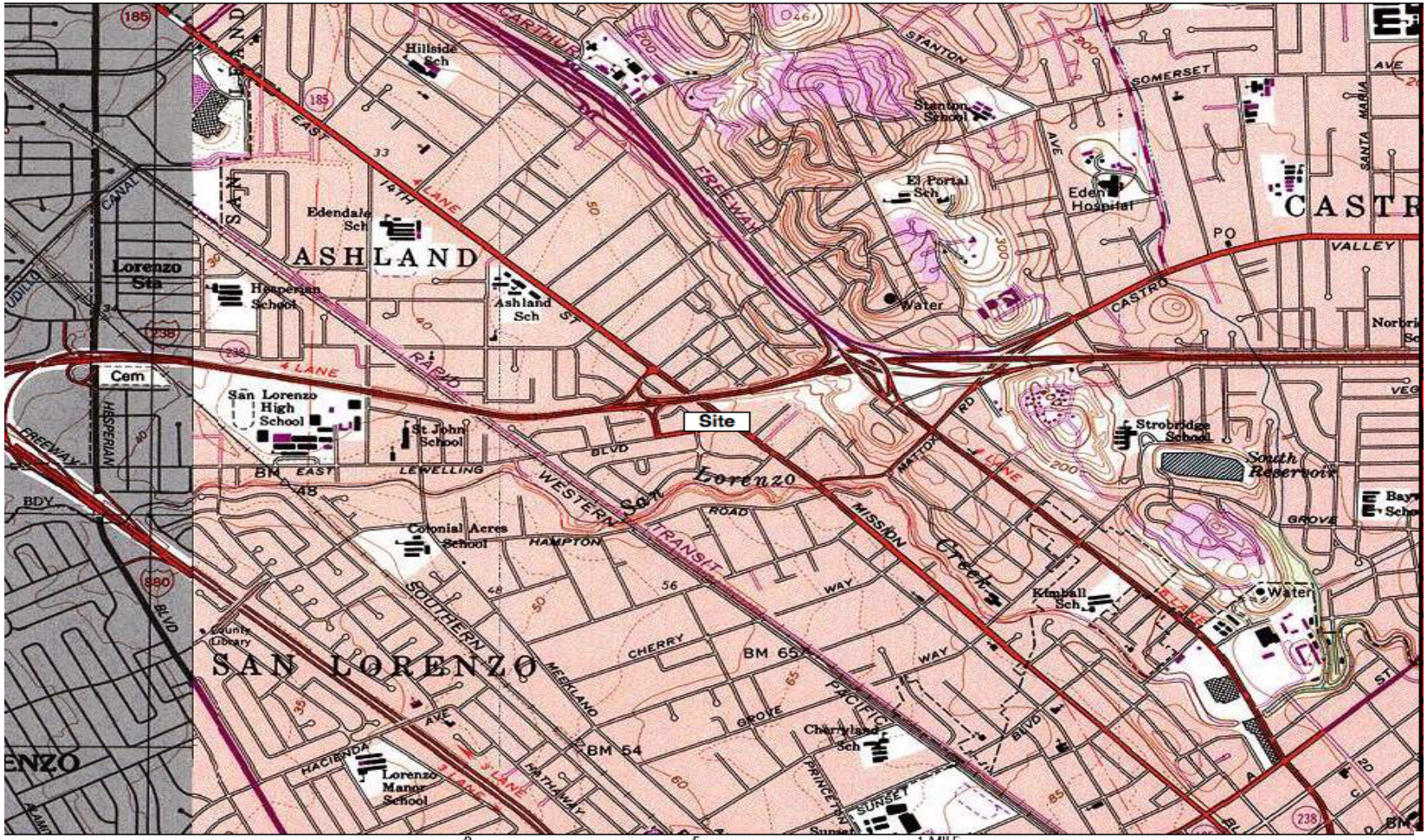
TABLE II
ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES
(CONTINUED)

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
	12-01-10		<25	<0.3	<0.5	<0.3	<0.7	<0.5
	06-03-11		<25	<0.3	<0.5	<0.3	<0.7	<0.5
	12-02-11		<25	<0.3	<0.5	<0.3	<0.7	<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
	12-01-10		<25	<0.3	<0.5	<0.3	<0.7	<0.5
	06-03-11		<25	<0.3	<0.5	<0.3	<0.7	<0.5
	12-02-11		<25	<0.3	<0.5	<0.3	<0.7	<0.5

1. TPHG = Total Petroleum Hydrocarbons as Gasoline
2. MTBE = Methyl Tertiary Butyl Ether
3. ND = Below Laboratory Detection Limit
4. NS = Not Sampled

* 78.3 ug/L of TertButyl Alcohol was detected in sample MW-2, and 84.2 ug/L of Tert-Butyl Alcohol was detected in sample MW-3.

** 1,130 ug/L of TertButyl Alcohol was detected in sample MW-3.



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

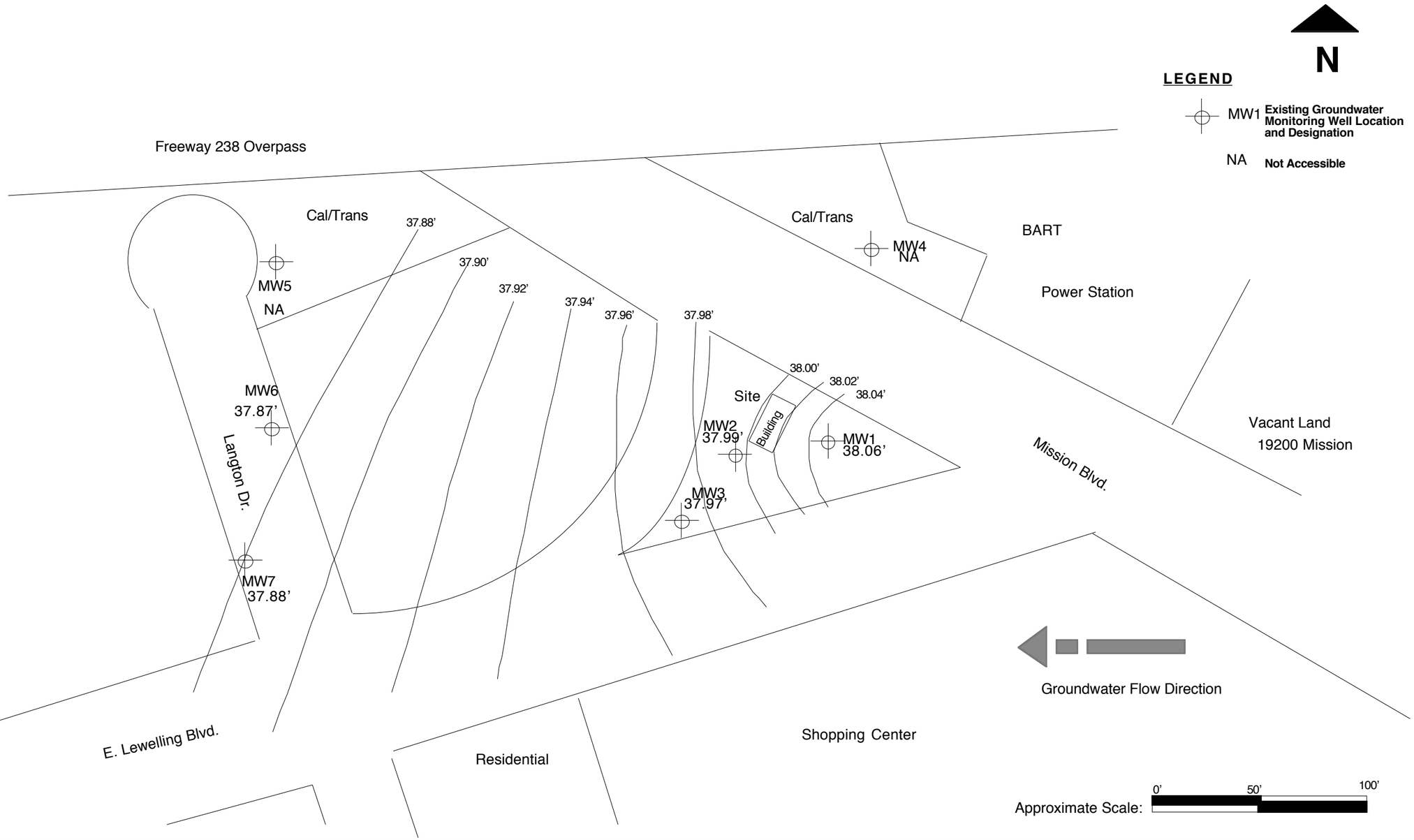
SITE LOCATION MAP

Second Semi-Annual 2011 Groundwater Monitoring
ABE Petroleum LLC

17715 Mission Boulevard • Hayward • California

FIGURE
1

Dec. 15 2011
Project 11-103.00



SIERRA ENVIRONMENTAL, INC.

Environmental Consultants

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

Second Semi-Annual 2011 Groundwater Monitoring
ABE Petroleum LLC

17715 Mission Boulevard•Hayward • California

FIGURE
2
Dec. 15, 2011
Project 11-103.00

Appendix A
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 B
CERTIFIED ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

Northern California ACCUTEST LABORATORIES

12/13/11

Technical Report for

Sierra Environmental, Inc.

T0600102154-ABE, 17715 Mission Boulevard, CA

11-103.00

Accutest Job Number: C19227

Sampling Date: 12/02/11

Report to:

Sierra Environmental, Inc.
980 West Taylor Street
San Jose, CA 95126
mazyar@sierraenvironmentalinc.com

ATTN: Mitch Hajiaghai

Total number of pages in report: **21**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Kesavalu M. Bagawandoss, Ph.D., J.D., Lab Director

Client Service contact: Diane Theesen 408-588-0200

Certifications: CA (08258CA) AZ (AZ0762) DoD/ISO/IEC 17025:2005 (L2242)

Sections: 1 2 3 4

Table of Contents

Sample Summary

Sierra Environmental, Inc.

Job No: C19227

T0600102154-ABE, 17715 Mission Boulevard, CA
Project No: 11-103.00

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C19227-1	12/02/11	12:30	MH	12/02/11	AQ	Ground Water	MW-1
C19227-2	12/02/11	12:10	MH	12/02/11	AQ	Ground Water	MW-2
C19227-3	12/02/11	11:55	MH	12/02/11	AQ	Ground Water	MW-3
C19227-4	12/02/11	11:40	MH	12/02/11	AQ	Ground Water	MW-6
C19227-5	12/02/11	11:35	MH	12/02/11	AQ	Ground Water	MW-7

Northern California ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-1
Lab Sample ID: C19227-1
Matrix: AQ - Ground Water
Method: SW846 8260B
Project: T0600102154-ABE, 17715 Mission Boulevard, CA

Date Sampled: 12/02/11
Date Received: 12/02/11
Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L12877.D	100	12/07/11	XB	n/a	n/a	VL397
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	1720	100	30	ug/l	
108-88-3	Toluene	153	100	50	ug/l	
100-41-4	Ethylbenzene	2460	100	30	ug/l	
1330-20-7	Xylene (total)	3920	200	70	ug/l	
108-20-3	Di-Isopropyl ether	ND	500	50	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	500	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1490	100	50	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	500	50	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	1000	500	ug/l	
	TPH-GRO (C6-C10)	31900	5000	2500	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		60-130%
2037-26-5	Toluene-D8	100%		60-130%
460-00-4	4-Bromofluorobenzene	100%		60-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-2		
Lab Sample ID:	C19227-2	**Date Sampled:**	12/02/11
Matrix:	AQ - Ground Water	**Date Received:**	12/02/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	T0600102154-ABE, 17715 Mission Boulevard, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L12923.D	40	12/08/11	XB	n/a	n/a	VL398
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	130	40	12	ug/l	
108-88-3	Toluene	ND	40	20	ug/l	
100-41-4	Ethylbenzene	2370	40	12	ug/l	
1330-20-7	Xylene (total)	351	80	28	ug/l	
108-20-3	Di-Isopropyl ether	ND	200	20	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	200	20	ug/l	
1634-04-4	Methyl Tert Butyl Ether	350	40	20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	200	20	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	400	200	ug/l	
	TPH-GRO (C6-C10)	16700	2000	1000	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		60-130%
2037-26-5	Toluene-D8	100%		60-130%
460-00-4	4-Bromofluorobenzene	100%		60-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	C19227-3	**Date Sampled:**	12/02/11
Matrix:	AQ - Ground Water	**Date Received:**	12/02/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	T0600102154-ABE, 17715 Mission Boulevard, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L12924.D	12.5	12/08/11	XB	n/a	n/a	VL398
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	502	13	3.8	ug/l	
108-88-3	Toluene	ND	13	6.3	ug/l	
100-41-4	Ethylbenzene	546	13	3.8	ug/l	
1330-20-7	Xylene (total)	328	25	8.8	ug/l	
108-20-3	Di-Isopropyl ether	ND	63	6.3	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	63	6.3	ug/l	
1634-04-4	Methyl Tert Butyl Ether	125	13	6.3	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	63	6.3	ug/l	
75-65-0	Tert-Butyl Alcohol	1130	130	63	ug/l	
	TPH-GRO (C6-C10)	8870	630	310	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		60-130%
2037-26-5	Toluene-D8	102%		60-130%
460-00-4	4-Bromofluorobenzene	100%		60-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	C19227-4	**Date Sampled:**	12/02/11
Matrix:	AQ - Ground Water	**Date Received:**	12/02/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	T0600102154-ABE, 17715 Mission Boulevard, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L12875.D	1	12/07/11	XB	n/a	n/a	VL397
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	5.0	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		60-130%
2037-26-5	Toluene-D8	98%		60-130%
460-00-4	4-Bromofluorobenzene	99%		60-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-7		
Lab Sample ID:	C19227-5	**Date Sampled:**	12/02/11
Matrix:	AQ - Ground Water	**Date Received:**	12/02/11
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	T0600102154-ABE, 17715 Mission Boulevard, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L12876.D	1	12/07/11	XB	n/a	n/a	VL397
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	5.0	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		60-130%
2037-26-5	Toluene-D8	99%		60-130%
460-00-4	4-Bromofluorobenzene	99%		60-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SIERRA ENVIRONMENTAL, INC.
Environmental Consultants

C19227

CHAIN OF CUSTODY

SEQA5J137

Project Name: ABE Project No: 11-103.00 Date: 12-02-11

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

Sample ID	Date Sampled	Sampling Time	Matrix	N° of Containers	Analysis Requested: TPHG, BTEX Fuel Oxygenates 8260	Analysis Requested: TPHG & BTEX 8015	Analysis Requested	Analysis Requested	Analysis Requested	Analysis Requested	Analysis Requested	Turnaround Time
MW-1	12/2/11	12:30	water	3	X	-1						24-hour Other ____ Normal
MW-2		12:10				-2						24-hour Other ____ Normal
MW-3		11:55				-3						24-hour Other ____ Normal
MW-6		11:40				-4						24-hour Other ____ Normal
MW-7		11:35				-5						24-hour Other ____ Normal
												24-hour Other ____ Normal
								Temp 6.1-0.4 = 5.7°C				24-hour Other ____ Normal

Remarks: *Please email the results in EDF format for Geotracker ID# T0600102154 to mazyar@sierrainvironmentalinc.com*

Relinquished by	Date	Time	Received by	Date	Time
	12/2/11	2:15		12.2.11	14:15
Relinquished by	Date	Time	Received by	Date	Time

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C19227: Chain of Custody
Page 1 of 2

Accutest Laboratories Northern California   Sample Receiving Check List   **Job# :** C19227   **Initial:** Jm

Review Chain of Custody   **Chain of Custody is to be complete and legible.**

- ✓ Are these regulatory (NPDES) samples? CWA — (Yes) / No
- ✓ Is pH requested? — Yes / (No)
  - ◻ Was Client informed that hold time is 15 min? Yes / No — Continue Yes / No
  - ◻ Was ortho-Phosphate filtered with in 15 min? Yes / No — Continue Yes / No
- ✓ Are sample within hold time? — (Yes) / No
  - Are sample in danger of exceeding hold-time — Yes / (No)
- ✓ Existing Client? (Yes) / No — Existing Project? (Yes) / No
  - If No: Is Report to info complete and legible, including;
    - ◻ deliverable ◻ Name ◻ Address ◻ phone ◻ e-mail
  - Is Bill to info complete and legible, including;
    - ◻ PO# ◻ Credit card ◻ Contact ◻address ◻ phone ◻ e-mail
  - Is Contact and/or Project Manager identified, including;
    - ◻ phone ◻ e-mail
    - ◻ Project name / number
- ✓ Special requirements? — Yes / (No)
- ✓ Sample IDs / date & time of collection provided? — (Yes) / No
- ✓ Is Matrix listed and correct? — (Yes) / No
- ✓ Analyses listed, we do, or client has authorized a subcontract? — (Yes) / No
- ✓ Chain is signed and dated by both client and sample custodian? — (Yes) / No
- ✓ TAT requested available? (Yes) / No — Approved by PM

Review Coolers:

- ✓ Were all Coolers temperatures measured at ≤6°C? — (Yes) / No
  - If cooler is outside the ≤6°C; note down the affected bottles in that cooler on the left
- ✓ Are samples on Ice? — (Yes) / No

Note that ANC does NOT accept evidentiary samples. (We do not lock refrigerators)

- ✓ Shipment Received Method Walk In
- ✓ Custody Seals: Present: Yes / (No) — If Yes; Unbroken: Yes / No

Review of Sample Bottles: If you answer no, explain to the side

- ✓ Chain matches bottle labels? (Yes) / No — ✓ Sample bottle intact? (Yes) / No
- ✓ Is there enough sample volume in proper bottle for requested analyses? — (Yes) / No
- ✓ Proper Preservatives? (Yes) / No
  - Check pH on preserved samples except 1664, 625, 8270 and VOAs; make notes on left.
- ✓ Headspace-VOAs? **Greater than 6mm in diameter** — Yes / (No)
  - **List sample ID and affected container**

Client Sample ID	pH Check	Other Comments/Issues

Non-Compliance issues and discrepancies on the COC are forwarded to Project Management

\\Accunca.accutest.com\depts\qa\sops\sop_completelist_2010\current_active_sop_oct_2010\sc001f1_0_form1_samplecontrol_samplereceivingchecklist_2009-01-01.doc

C19227: Chain of Custody
Page 2 of 2

Northern California ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C19227
Account: SECASJ Sierra Environmental, Inc.
Project: T0600102154-ABE, 17715 Mission Boulevard, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL397-MB	L12865.D	1	12/07/11	XB	n/a	n/a	VL397

The QC reported here applies to the following samples: **Method:** SW846 8260B

C19227-1, C19227-4, C19227-5

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	5.0	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	95%	60-130%
2037-26-5	Toluene-D8	97%	60-130%
460-00-4	4-Bromofluorobenzene	100%	60-130%

Method Blank Summary

Job Number: C19227
Account: SECASJ Sierra Environmental, Inc.
Project: T0600102154-ABE, 17715 Mission Boulevard, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL398-MB	L12911.D	1	12/08/11	XB	n/a	n/a	VL398

The QC reported here applies to the following samples: **Method:** SW846 8260B

C19227-2, C19227-3

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	5.0	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	94%	60-130%
2037-26-5	Toluene-D8	101%	60-130%
460-00-4	4-Bromofluorobenzene	100%	60-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C19227
Account: SECASJ Sierra Environmental, Inc.
Project: T0600102154-ABE, 17715 Mission Boulevard, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL397-BS	L12861.D	1	12/07/11	XB	n/a	n/a	VL397
VL397-BSD	L12862.D	1	12/07/11	XB	n/a	n/a	VL397

The QC reported here applies to the following samples: **Method:** SW846 8260B

C19227-1, C19227-4, C19227-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	18.0	90	17.7	89	2	60-130/30
108-20-3	Di-Isopropyl ether	20	18.3	92	18.0	90	2	60-130/30
100-41-4	Ethylbenzene	20	18.7	94	18.5	93	1	60-130/30
637-92-3	Ethyl Tert Butyl Ether	20	18.8	94	18.4	92	2	60-130/30
1634-04-4	Methyl Tert Butyl Ether	20	18.9	95	18.3	92	3	60-130/30
994-05-8	Tert-Amyl Methyl Ether	20	18.5	93	18.0	90	3	60-130/30
75-65-0	Tert-Butyl Alcohol	100	117	117	103	103	13	60-130/30
108-88-3	Toluene	20	18.0	90	17.9	90	1	60-130/30
1330-20-7	Xylene (total)	60	56.4	94	56.1	94	1	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	99%	100%	60-130%
2037-26-5	Toluene-D8	97%	98%	60-130%
460-00-4	4-Bromofluorobenzene	101%	101%	60-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C19227
Account: SECASJ Sierra Environmental, Inc.
Project: T0600102154-ABE, 17715 Mission Boulevard, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL398-BS	L12907.D	1	12/08/11	XB	n/a	n/a	VL398
VL398-BSD	L12908.D	1	12/08/11	XB	n/a	n/a	VL398

The QC reported here applies to the following samples: **Method:** SW846 8260B

C19227-2, C19227-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	18.4	92	17.9	90	3	60-130/30
108-20-3	Di-Isopropyl ether	20	18.6	93	17.8	89	4	60-130/30
100-41-4	Ethylbenzene	20	19.5	98	19.2	96	2	60-130/30
637-92-3	Ethyl Tert Butyl Ether	20	19.4	97	18.2	91	6	60-130/30
1634-04-4	Methyl Tert Butyl Ether	20	20.2	101	18.2	91	10	60-130/30
994-05-8	Tert-Amyl Methyl Ether	20	19.3	97	17.9	90	8	60-130/30
75-65-0	Tert-Butyl Alcohol	100	134	134* [a]	107	107	22	60-130/30
108-88-3	Toluene	20	18.8	94	18.5	93	2	60-130/30
1330-20-7	Xylene (total)	60	59.3	99	58.0	97	2	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	101%	99%	60-130%
2037-26-5	Toluene-D8	100%	100%	60-130%
460-00-4	4-Bromofluorobenzene	101%	102%	60-130%

(a) Outside laboratory control limits.

Laboratory Control Sample Summary

Job Number: C19227
Account: SECASJ Sierra Environmental, Inc.
Project: T0600102154-ABE, 17715 Mission Boulevard, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL397-LCS	L12864.D	1	12/07/11	XB	n/a	n/a	VL397

The QC reported here applies to the following samples: **Method:** SW846 8260B

C19227-1, C19227-4, C19227-5

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits
	TPH-GRO (C6-C10)	125	109	87	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	95%	60-130%
2037-26-5	Toluene-D8	98%	60-130%
460-00-4	4-Bromofluorobenzene	100%	60-130%

Laboratory Control Sample Summary

Job Number: C19227
Account: SECASJ Sierra Environmental, Inc.
Project: T0600102154-ABE, 17715 Mission Boulevard, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL398-LCS	L12910.D	1	12/08/11	XB	n/a	n/a	VL398

The QC reported here applies to the following samples: **Method:** SW846 8260B

C19227-2, C19227-3

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits
	TPH-GRO (C6-C10)	125	116	93	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	95%	60-130%
2037-26-5	Toluene-D8	100%	60-130%
460-00-4	4-Bromofluorobenzene	100%	60-130%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C19227
Account: SECASJ Sierra Environmental, Inc.
Project: T0600102154-ABE, 17715 Mission Boulevard, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C19206-1MS	L12882.D	1	12/08/11	XB	n/a	n/a	VL397
C19206-1MSD	L12883.D	1	12/08/11	XB	n/a	n/a	VL397
C19206-1	L12866.D	1	12/07/11	XB	n/a	n/a	VL397

The QC reported here applies to the following samples: **Method:** SW846 8260B

C19227-1, C19227-4, C19227-5

CAS No.	Compound	C19206-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	17.7	89	17.9	90	1	60-130/25
108-20-3	Di-Isopropyl ether	ND		20	17.3	87	17.3	87	0	60-130/25
100-41-4	Ethylbenzene	ND		20	18.1	91	18.4	92	2	60-130/25
637-92-3	Ethyl Tert Butyl Ether	ND		20	18.5	93	18.7	94	1	60-130/25
1634-04-4	Methyl Tert Butyl Ether	ND		20	17.7	89	17.7	89	0	60-130/25
994-05-8	Tert-Amyl Methyl Ether	ND		20	17.6	88	17.6	88	0	60-130/25
75-65-0	Tert-Butyl Alcohol	ND		100	82.0	82	79.8	80	3	60-130/25
108-88-3	Toluene	ND		20	17.6	88	17.9	90	2	60-130/25
1330-20-7	Xylene (total)	ND		60	54.7	91	55.3	92	1	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C19206-1	Limits
1868-53-7	Dibromofluoromethane	97%	98%	96%	60-130%
2037-26-5	Toluene-D8	98%	99%	100%	60-130%
460-00-4	4-Bromofluorobenzene	101%	101%	99%	60-130%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C19227
Account: SECASJ Sierra Environmental, Inc.
Project: T0600102154-ABE, 17715 Mission Boulevard, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C19206-4MS	L12928.D	1	12/09/11	XB	n/a	n/a	VL398
C19206-4MSD	L12929.D	1	12/09/11	XB	n/a	n/a	VL398
C19206-4	L12916.D	1	12/08/11	XB	n/a	n/a	VL398

The QC reported here applies to the following samples: **Method:** SW846 8260B

C19227-2, C19227-3

CAS No.	Compound	C19206-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	17.1	86	17.4	87	2	60-130/25
108-20-3	Di-Isopropyl ether	ND		20	16.2	81	16.6	83	2	60-130/25
100-41-4	Ethylbenzene	ND		20	18.2	91	18.2	91	0	60-130/25
637-92-3	Ethyl Tert Butyl Ether	ND		20	17.6	88	18.1	91	3	60-130/25
1634-04-4	Methyl Tert Butyl Ether	1.7		20	18.5	84	18.9	86	2	60-130/25
994-05-8	Tert-Amyl Methyl Ether	ND		20	16.8	84	17.1	86	2	60-130/25
75-65-0	Tert-Butyl Alcohol	27.1		100	116	89	111	84	4	60-130/25
108-88-3	Toluene	ND		20	17.6	88	17.8	89	1	60-130/25
1330-20-7	Xylene (total)	ND		60	55.3	92	55.4	92	0	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C19206-4	Limits
1868-53-7	Dibromofluoromethane	97%	98%	95%	60-130%
2037-26-5	Toluene-D8	100%	100%	102%	60-130%
460-00-4	4-Bromofluorobenzene	100%	100%	99%	60-130%

Appendix C
FIELD NOTES

SIERRA ENVIRONMENTAL, INC.
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GROUNDWATER MONITORING DATA FORM

Project No: 11-103.00 Date: 12-02-11

Project Name ABE Well N°: MW1

Field Personnel: Mike 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	21.44	11.81	0.16	0.64	1.44	1.88	26.0

Purge Method: Bailer Measuring Reference: TOC

Time						
Volume Purged (gal)	0	2	4	6		
Temperature (° F)	65.9	65.7	65.5	65.4		
pH	6.61	6.58	6.57	6.55		
Specific Conductivity (umhos/cm)	710	710	730	720		
Turbidity/Color	Light Gray	→	→	→		
Odor	Yes	→	→	→		

Comments:

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GROUNDWATER MONITORING DATA FORM

Project No: 11-103.00 Date: 12-02-11

Project Name ABE Well N°: MW2

Field Personnel: Mike Weather:

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	22.62	11.13	0.16	0.64	1.44	1.78	≈ 6.0

Purge Method: Bailer Measuring Reference: TOC

Time						
Volume Purged (gal)	0	2	4	6		
Temperature (° F)	64.7	64.6	64.9	64.7		
pH	6.37	6.35	6.36	6.37		
Specific Conductivity (umhos/cm)	690	700	720	720		
Turbidity/Color	Light gray	→	→	→		
Odor	Yes	→	→	→		

Comments:

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SIERRA ENVIRONMENTAL, INC.
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GROUNDWATER MONITORING DATA FORM

Project No: 11-103.00 Date: ~~12-02-11~~

Project Name ABE Well N°: ~~MW3~~

Field Personnel: Mike 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	21.76	11.99	0.16	0.64	1.44	1.91	≈ 6.0

Purge Method: Bailer Measuring Reference: TOC

Time						
Volume Purged (gal)	0	2	4	6		
Temperature (° F)	65.5	65.4	65.5	65.3		
pH	6.50	6.47	6.47	6.45		
Specific Conductivity (umhos/cm)	680	680	690	700		
Turbidity/Color	Light Gray	→	→	→		
Odor	Yes	→	→	→		

Comments:

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SIERRA ENVIRONMENTAL, INC.
Environmental Consultants

GROUNDWATER MONITORING DATA FORM

Project No: 11-103.00 Date: 12-02-11

Project Name ABE Well N°: MW6

Field Personnel: Mike 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	18.76	6.24	0.16	0.64	1.44	0.99	≈3.0

Purge Method: Bailer Measuring Reference: TOC

Time						
Volume Purged (gal)	0	1	2	3		
Temperature (° F)	65.9	65.7	65.7	65.5		
pH	6.44	6.47	6.46	6.45		
Specific Conductivity (umhos/cm)	690	690	700	710		
Turbidity/Color	Light Brown	"	"	"		
Odor	NO	"	"	"		

Comments:

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SIERRA ENVIRONMENTAL, INC.
Environmental Consultants

GROUNDWATER MONITORING DATA FORM

Project No: 11-103.00 Date: ~~12-02-11~~

Project Name ABE Well N°: ~~MW7~~

Field Personnel: Mike 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	19.62	5.38	0.16	0.64	1.44	0.86	≈ 3 0

Purge Method: Bailer Measuring Reference: TOC

Time						
Volume Purged (gal)	0	1	2	3		
Temperature (° F)	65.8	65.3	65.2	65.2		
pH	6.37	6.41	6.40	6.40		
Specific Conductivity (umhos/cm)	710	700	680	690		
Turbidity/Color	SLT BROWN	→	→	→		
Odor	NO	→	→	→		

Comments:

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