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**Fourth Quarter 2008 Groundwater Monitoring Report for  
Fuel Leak Case No. RO0000324, Livermore Gas and Mini Mart  
160 Holmes Street, Livermore, California**

*Date:*  
January 8, 2009

*Project No.:*  
160

*Prepared For:*  
Livermore Gas and Mini mart  
Attention: Manwel and Samira Shuwayhat  
54 Wolfe Canyon Road  
Kentfield, California 94904

**Allterra Environmental, Inc.**  
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January 8, 2009  
Project No.: 160

Manwel and Samira Shuwayhat  
Livermore Gas and Mini Mart  
54 Wolfe Canyon Road  
Kentfield, California 94904

**Subject: Fourth Quarter 2008 Groundwater Monitoring Report for Fuel Leak Case  
No. RO0000324, Livermore Gas and Mini Mart, 160 Holmes Street,  
Livermore, California**

Dear Mr. and Mrs. Shuwayhat:

On your behalf, Allterra Environmental, Inc. (Allterra) has prepared this fourth quarter 2008 groundwater monitoring for the property located at 160 Holmes Street in Livermore, California (Site). This report describes the field and analytical methods, provides a summary of groundwater monitoring and interim remedial results, and presents conclusions and recommendations regarding groundwater conditions at the Site.

### **Site Location and Description**

The Site is located on the southwest corner of Holmes Street and Second Street at 160 Holmes Street in Livermore, California (Figure 1). The Site currently operates as a service station and convenience store. Pertinent site features, such as monitoring well locations, are presented in Figure 2.

### **Groundwater Monitoring**

Groundwater monitoring activities are completed on a quarterly basis in order to evaluate groundwater quality beneath and downgradient of the Site over time. For this quarter, groundwater monitoring of fifteen wells (MW-1A through MW-9B) was completed on November 5, 2008.

### Groundwater Monitoring Field Activities

Groundwater monitoring activities included measuring the depth to static groundwater in wells MW-1A through MW-9B relative to the top of well casings (TOC), evaluating groundwater in each well for the presence of petroleum hydrocarbon odor and sheen, and purging and sampling groundwater from wells for laboratory analysis. During this quarter, water levels in nine monitoring wells were too low to collect samples; therefore, only six monitoring wells were sampled for laboratory analysis (MW-1B, MW-5B, MW-7C, MW-8A, MW-8B, and MW-9B). Groundwater monitoring field activities were completed in accordance with Alameda County Environmental Health Services (ACEHS), Regional Water Quality Control Board (RWQCB) guidelines, and Allterra protocols presented in Appendix A. Data and observations gathered during this quarter were recorded in Groundwater Sampling Field Logs, which are included in Appendix B.

### Laboratory Analysis of Groundwater Samples

Groundwater samples from monitoring wells were submitted under chain-of-custody documentation to McCampbell Analytical, Inc., of Pacheco, California, a State of California certified laboratory (ELAP #1644). The samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) as well as diesel (TPHd) by EPA method 8015C, for benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tert-butyl ether (MTBE) by EPA Method 8021B, and for the fuel oxygenates MTBE, ethyl tert-butyl ether (ETBE), tert-amyl methyl ether (TAME), di-isopropyl ether (DIPE), tert-butyl alcohol (TBA), methanol, ethanol, 1,2-dibromoethane (EDB), and 1,2-dichloroethane (1,2-DCA) by EPA Method 8260B. A copy of the chain-of-custody documentation for the samples and the certified analytical report, including quality assurance and quality control (QA/QC) data, are included in Appendix C.

### Purge water

Purge water generated during purging of the groundwater monitoring wells was stored on-site in Department of Transportation (DOT) approved 55-gallon drums pending disposal.

## **Groundwater Monitoring Results**

### Groundwater Elevation and Gradient Results

On November 18, 2008, recorded depths to groundwater in monitoring wells MW-1A through MW-9B ranged from 33.82 to 51.65 feet below ground surface (bgs). Groundwater elevations are summarized in Table 1 and depicted in Figure 3. For the November 2008 groundwater monitoring event, nine monitoring wells were dry; therefore, there was an insufficient number of wells to calculate a groundwater flow direction and gradient. Historically, groundwater flow is toward the northwest at gradients of less than 0.01 feet per foot.

### Analytical Results

Fuel-related compounds were detected at or above laboratory detection limits in five of the six wells sampled. Dissolved TPHg was detected in two of the six wells sampled at concentrations of 97 micrograms per liter ( $\mu\text{g}/\text{L}$ ) and 67  $\mu\text{g}/\text{L}$  in wells MW-7C and MW-8A, respectively. TPHd was detected in two wells at concentrations of 120  $\mu\text{g}/\text{L}$  and 1,000  $\mu\text{g}/\text{L}$  in wells MW-8B and MW-9B, respectively. Concentrations of toluene (2.6  $\mu\text{g}/\text{L}$ ) and xylenes (1.6  $\mu\text{g}/\text{L}$ ) were detected in well MW-8A; however, BTEX compounds were not detected in the other sampled wells. MTBE was detected in four wells, MW-5B, MW-8A, MW-8B, and MW-9B, at concentrations ranging from 1.2  $\mu\text{g}/\text{L}$  (MW-5B) to 7.5  $\mu\text{g}/\text{L}$  (MW-9B). TBA was detected in one well, MW-9B, at a concentration of 4.6  $\mu\text{g}/\text{L}$ . Groundwater analytical results from well samples are presented in Table 2 and the distribution of TPHg, TPHd, benzene, and MTBE in groundwater is presented in Figure 4.

### **Status Update for UST Cleanup Fund**

The UST Cleanup Fund is in a financial crisis and has significantly delayed reimbursement payments to claimants. Based on our estimates, the UST Cleanup Fund will not issue a reimbursement for your claim (Claim No. 14294) until February, at the earliest. Therefore, Allterra proposes to take immediate cost saving measures to help involved parties survive this difficult period. We propose to reduce the scheduled laboratory analyses to TPHg, BTEX, and

MTBE by EPA Method 8015C/8021B, thereby reducing costs by more than \$150 per sample. Additionally, we recommend postponing implementation of the November 4, 2008 Work Plan for Pilot Scale Vapor Extraction System until after the reimbursement check has been received. Implementing these proposals will allow for continued corrective action for the Site.

## **Conclusions**

Based on the current groundwater monitoring data, Allterra concludes the following:

- Groundwater elevations remain low, resulting in nine monitoring wells being dry.
- Due to the low water table, the groundwater flow direction and gradient were not calculated. However, the gradient has historically ranged from approximately 0.004 to 0.010 ft/ft.
- Fourth quarter 2008 sampling data verified the presence of a dissolved hydrocarbon plume down-gradient of the subject site.
- Except for one well, samples could not be collected from A-zone wells, due to the low water table.

## **Recommendations**

Based on the conclusions presented above, Allterra recommends the following:

- Quarterly groundwater monitoring samples will be analyzed for TPHg by EPA Method 8015C and BTEX and MTBE by EPA Method 8021B.
- Implement the Work Plan for Pilot Scale Vapor Extraction System, as soon as project funding is made available by the UST Cleanup Fund.

## **Limitations**

Allterra prepared this report for the use of Livermore Gas and Mini Mart and ACEHS in evaluating groundwater quality at selected on-site locations at the time of this study. Statements, conclusions, and recommendations in this report are based solely on the field observations and analytical results related to work performed by Allterra and there is no warranty, expressed or implied. Site conditions and data can change over time; therefore, data presented in this report is only applicable to the timeframe of this study. Allterra's services have been performed in accordance with environmental principles generally accepted at this time and location

Should you have any questions, please contact Allterra at (831) 425-2608.

Sincerely,  
Allterra Environmental, Inc.



James Allen, R.E.A. II  
Project Manager

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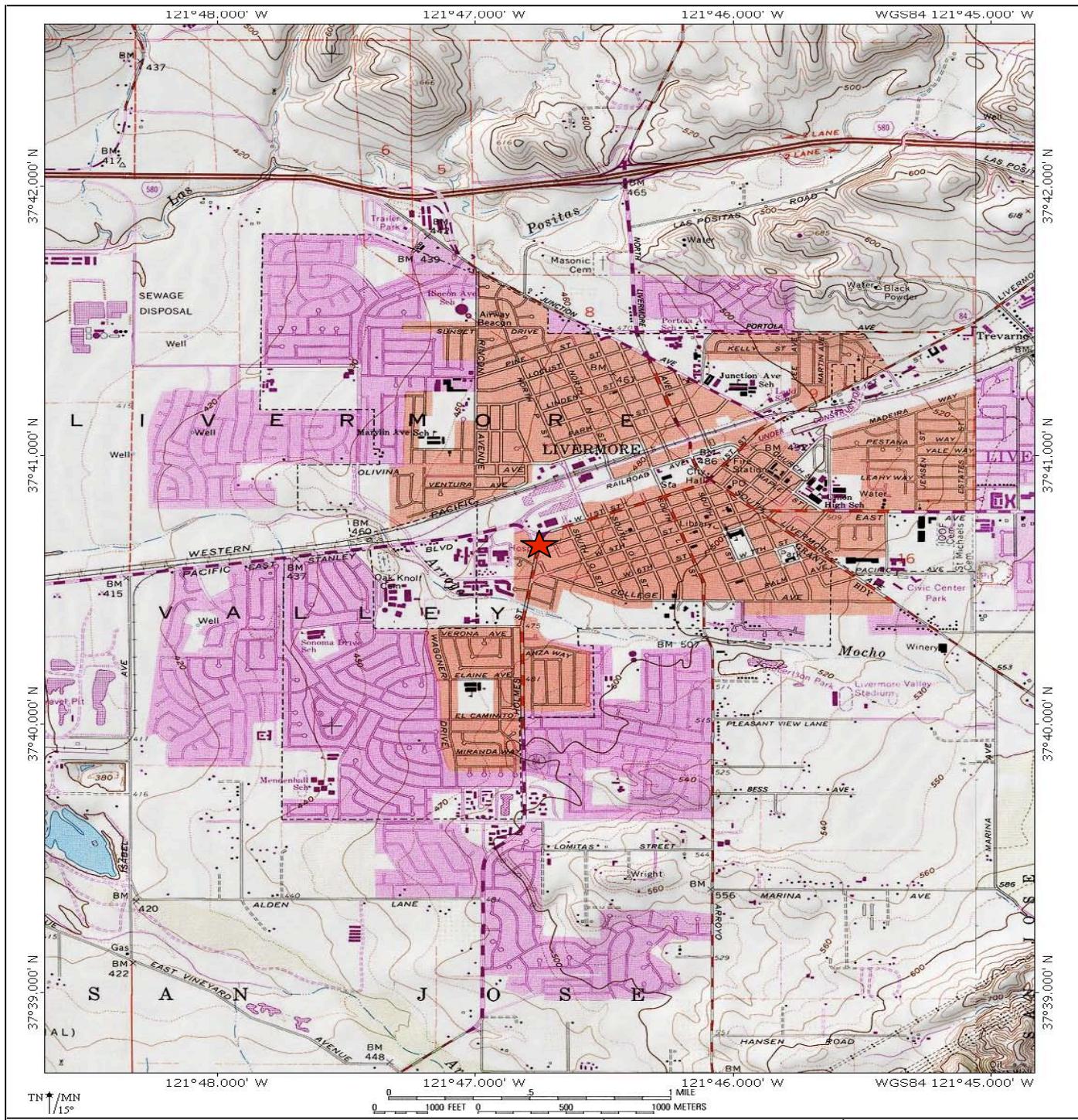
cc: Jerry Wickham, ACEHS



Michael Killoran, P.G. 6670  
Senior Geologist



## FIGURES 1-4



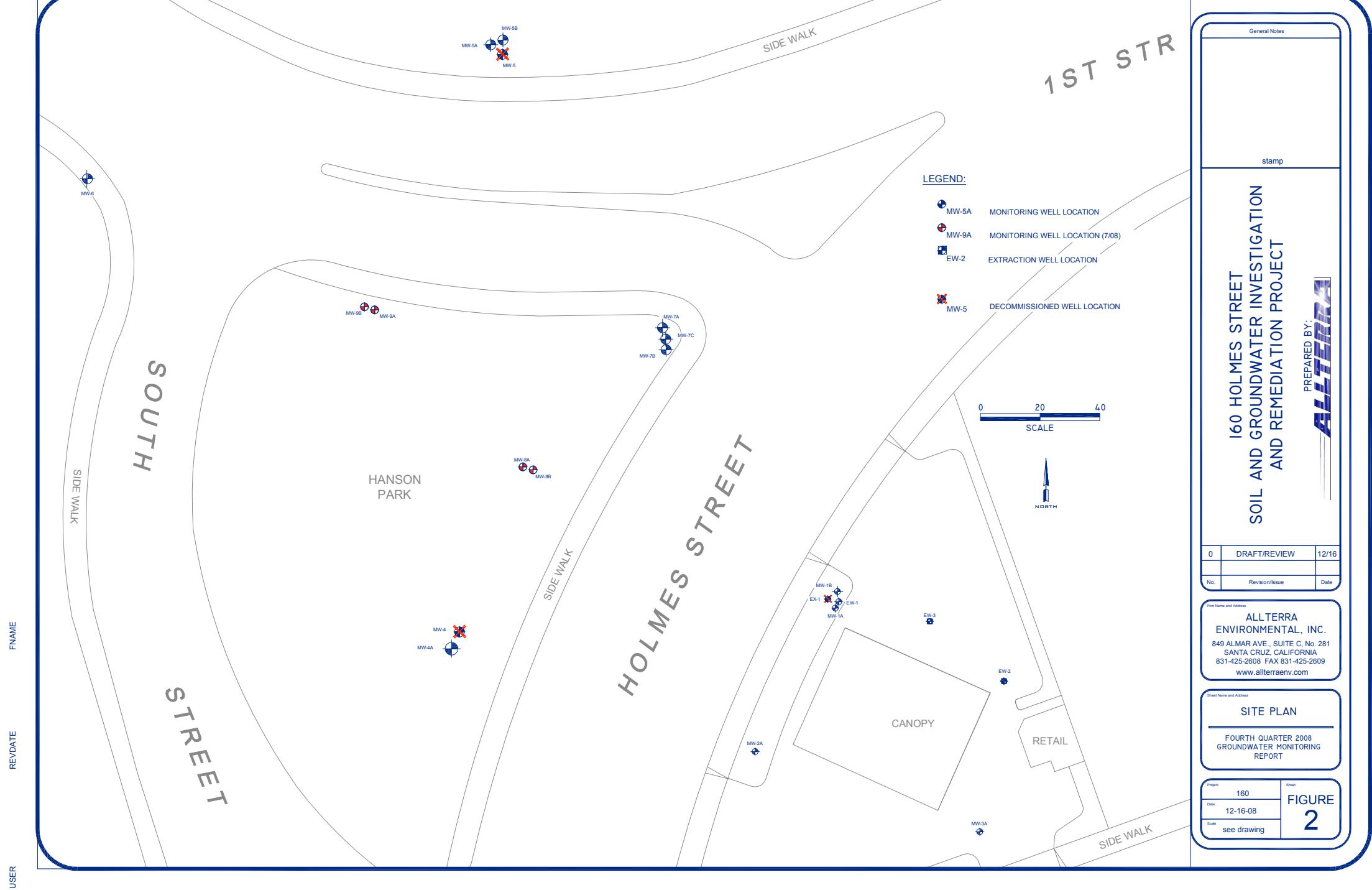
## Site Vicinity Map

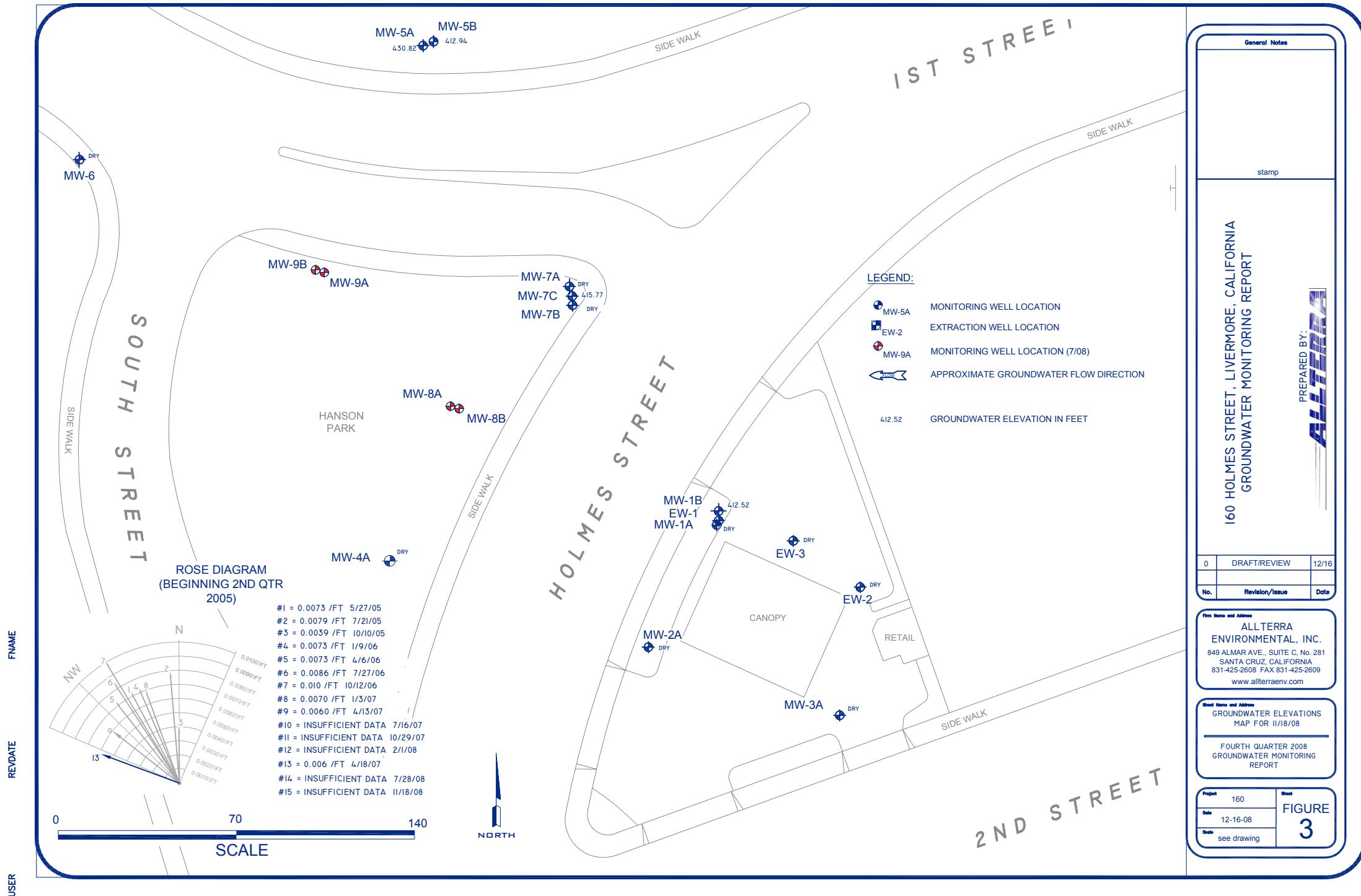
Livermore Gas and Minimart  
160 Holmes Street  
Livermore, California

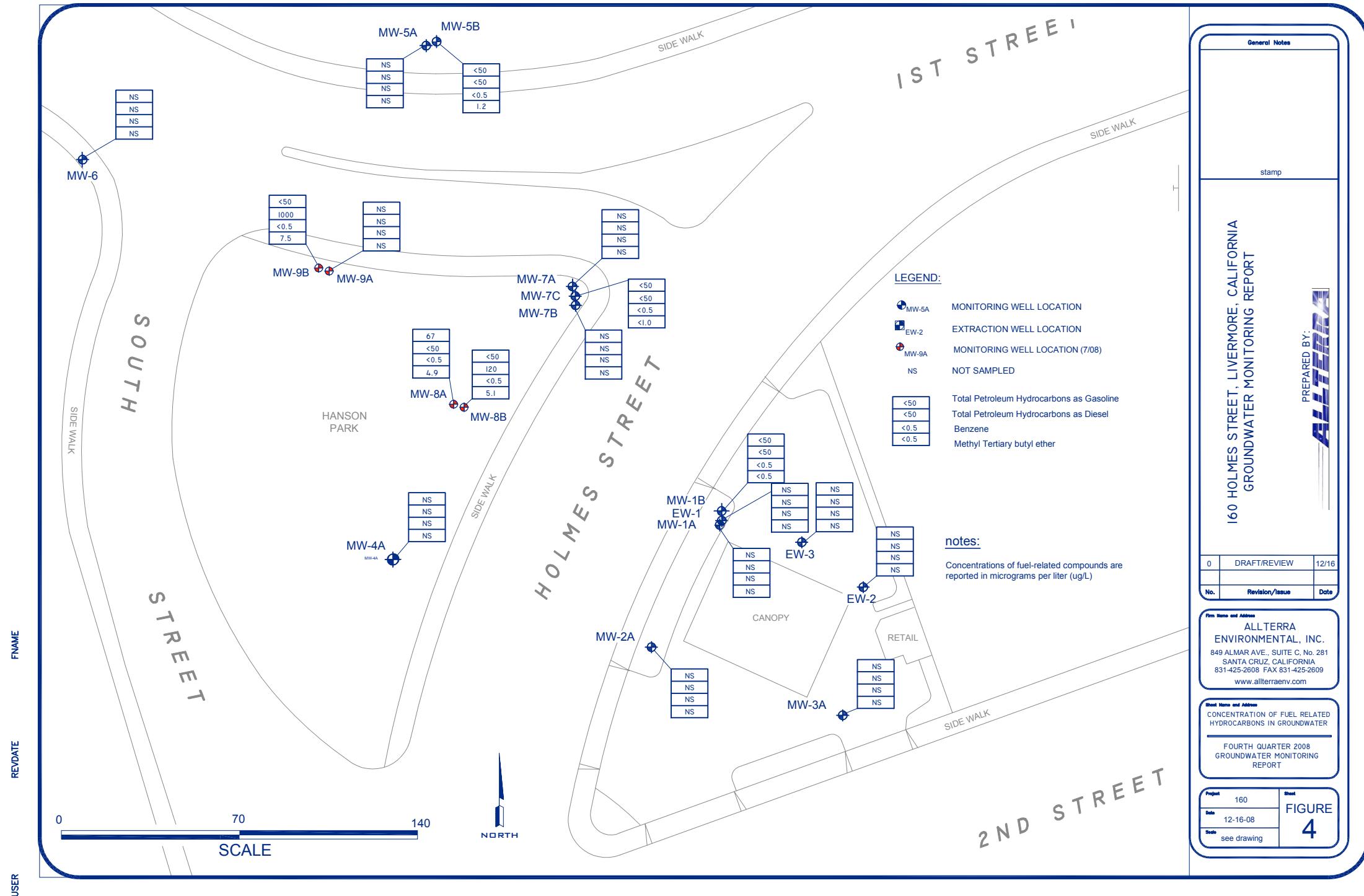
Figure 1

1/5/09

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## TABLES 1-2

**Table 1**  
**Groundwater Elevation Data**  
160 Holmes Street, Livermore

Monitoring Well ID	Date	Top of Casing Elevation* (feet, msl)	Screen Interval (feet, bgs)	Depth to Groundwater (feet)	Groundwater Elevation (feet, msl)
MW-1*	8/11/00	465.03	15-30	NM	NC
	10/19/00	465.03		21.94	443.09
	2/22/01	465.03		22.91	442.12
	5/30/01	465.03		Dry	NC
	11/14/01	465.03		Dry	NC
	5/7/02	465.03		Dry	NC
	9/11/02	465.03		26.16	438.87
	12/1/02	465.03		27.55	437.48
	3/14/03	465.03		22.63	442.40
	6/25/03	465.03		22.10	442.93
	9/16/03	465.03		24.91	440.12
	12/22/03	465.03		21.75	443.28
	3/10/04	465.03		17.45	447.58
	6/15/04	465.03		22.38	442.65
	9/17/04	465.03		25.61	439.42
	12/10/04	465.03		22.18	442.85
	3/2/05	465.03		16.95	448.08
	5/27/05	465.03		18.42	446.61
	7/21/05	465.03		21.38	443.65
	10/10/05	465.03		22.49	442.54
	1/9/06	465.03		18.05	446.98
MW-1A*	4/6/06	465.03	15-30	15.60	449.43
	7/27/06	465.03		22.42	442.61
	10/12/06	465.03		23.46	441.57
	1/3/07	465.03		21.00	444.03
	4/13/07	465.03		23.24	441.79
	7/16/07	465.03		Dry	NC
	10/29/07	465.03		Dry	NC
	2/1/08	465.03		Dry	NC
	4/18/08	465.03		27.34	437.69
	7/28/08	465.03		Dry	NC
	<b>11/18/08</b>	<b>465.03</b>		<b>Dry</b>	<b>NC</b>
MW-1B**	4/6/06	465.02	50-55	15.59	449.43
	7/27/06	465.02		22.47	442.55
	10/12/06	465.02		23.51	441.51
	1/3/07	465.02		21.04	443.98
	4/13/07	465.02		23.30	441.72
	7/16/07	465.02		35.57	429.45
	10/29/07	465.02		47.32	417.70
	2/1/08	465.02		33.90	431.12
	4/18/08	465.02		27.35	437.67
	7/28/08	465.02		44.03	420.99
	<b>11/18/08</b>	<b>465.02</b>		<b>48.50</b>	<b>416.52</b>
MW-2	8/11/00	464.94	15-30	NM	NC
	10/19/00	464.94		21.80	443.14
	2/22/01	464.94		22.87	442.07
	5/30/01	464.94		Dry	NC
	11/14/01	464.94		Dry	NC
	5/7/02	464.94		26.70	438.24
	9/11/02	464.94		25.96	438.98
	12/11/02	464.94		27.56	437.38
	3/14/03	464.94		22.41	442.53
	6/25/03	464.94		21.97	442.97
	9/16/03	464.94		24.70	440.24
	12/22/03	464.94		21.58	443.36

**Table 1**  
**Groundwater Elevation Data**  
160 Holmes Street, Livermore

Monitoring Well ID	Date	Top of Casing Elevation* (feet, msl)	Screen Interval (feet, bgs)	Depth to Groundwater (feet)	Groundwater Elevation (feet, msl)
MW-2 (cont.)	3/10/04	464.94		17.31	447.63
	6/15/04	464.94		22.18	442.76
	9/17/04	464.94		25.44	439.50
	12/10/04	464.94		22.00	442.94
	3/2/05	464.94		16.75	448.19
	5/27/05	464.94		18.29	446.65
	7/21/05	464.94		20.46	444.48
	10/10/05	464.94		22.30	442.64
	1/9/06	464.94		17.67	447.27
MW-2A	4/6/06	464.94	15-30	15.47	449.47
	7/27/06	464.94		22.27	442.67
	10/12/06	464.94		23.35	441.59
	1/3/07	464.94		20.90	444.04
	4/13/07	464.94		23.16	441.78
	7/16/07	464.94		Dry	NC
	10/29/07	464.94		Dry	NC
	2/1/08	464.94		Dry	NC
	4/18/08	464.94		27.26	437.68
	7/28/08	464.94		Dry	NC
	<b>11/18/08</b>	<b>464.94</b>		<b>Dry</b>	<b>NC</b>
MW-3	8/11/00	465.84	15-30	NM	NC
	10/19/00	465.84		22.45	443.39
	2/22/01	465.84		23.51	442.33
	5/30/01	465.84		Dry	NC
	11/14/01	465.84		Dry	NC
	5/7/02	465.84		Dry	NC
	9/11/02	465.84		26.61	439.23
	12/11/02	465.84		28.18	437.66
	3/14/03	465.84		23.04	442.80
	6/25/03	465.84		22.59	443.25
	9/16/03	465.84		25.33	440.51
	12/22/03	465.84		22.37	443.47
	3/10/04	465.84		17.88	447.96
	6/15/04	465.84		22.82	443.02
	9/17/04	465.84		26.09	439.75
	12/10/04	465.84		22.65	443.19
	3/5/05	465.84		17.33	448.51
	5/27/05	465.84		18.89	446.95
	7/21/05	465.84		21.10	444.74
	10/10/05	465.84		22.94	442.90
	1/9/06	465.84		18.24	447.60
<b>Well Destroyed</b>					
MW-3A	4/6/06	465.84	15-30	16.02	449.82
	7/27/06	465.84		22.90	442.94
	10/12/06	465.84		23.99	441.85
	1/3/07	465.84		21.52	444.32
	4/13/07	465.84		23.78	442.06
	7/16/07	465.84		Dry	NC
	10/29/07	465.84		Dry	NC
	2/1/08	465.84		Dry	NC
	4/18/08	465.84		27.86	437.98
	7/28/08	465.84		Dry	NC
	<b>11/18/08</b>	<b>465.84</b>		<b>Dry</b>	<b>NC</b>

**Table 1**  
**Groundwater Elevation Data**  
160 Holmes Street, Livermore

Monitoring Well ID	Date	Top of Casing Elevation* (feet, msl)	Screen Interval (feet, bgs)	Depth to Groundwater (feet)	Groundwater Elevation (feet, msl)
MW-4***	11/14/01	465.15	15-30	33.84	431.31
	5/7/02	465.15		26.75	438.40
	9/11/02	465.15		26.66	438.49
	12/11/02	465.15		28.39	436.76
	3/14/03	465.15		23.14	442.01
	6/25/03	465.15		22.72	442.43
	9/16/03	465.15		25.39	439.76
	12/22/03	465.15		22.42	442.73
	3/4/04	465.15		18.20	446.95
	6/15/04	465.15		22.95	442.20
	9/17/04	465.15		26.12	439.03
	12/10/04	465.15		22.73	442.42
	3/2/05	465.15		17.60	447.55
	5/27/05	465.15		19.14	446.01
	7/21/05	465.15		21.25	443.90
	10/10/05	465.15		22.85	442.30
	1/9/06	465.15		18.54	446.61
MW-4A**	4/6/06	464.96	15-30	16.19	448.77
	7/27/06	464.96		22.87	442.09
	10/12/06	464.96		23.90	441.06
	1/3/07	464.96		21.52	443.44
	4/13/07	464.96		23.78	441.18
	7/16/07	464.96		Dry	NC
	10/29/07	464.96		Dry	NC
	2/1/08	464.96		Dry	NC
	4/18/08	464.96		27.91	437.05
	7/28/08	464.96		Dry	NC
	<b>11/18/08</b>	<b>464.96</b>		<b>Dry</b>	<b>NC</b>
MW-5***	11/14/01	464.65	20-50	34.94	429.71
	5/7/02	464.65		27.90	436.75
	9/11/02	464.65		27.99	436.66
	12/11/02	464.65		29.50	435.15
	3/14/03	464.65		24.26	440.39
	6/25/03	464.65		24.01	440.64
	9/16/03	464.65		26.83	437.82
	12/22/03	464.65		23.68	440.97
	3/10/04	464.65		19.22	445.43
	6/15/04	464.65		24.20	440.45
	9/17/04	464.65		27.68	436.97
	12/10/04	464.65		23.93	440.72
	3/2/05	464.65		18.56	446.09
	5/27/05	464.65		20.15	444.50
	7/21/05	464.65		22.55	442.10
	10/10/05	464.65		23.35	441.30
	1/9/06	464.65		19.53	445.12

**Table 1**  
**Groundwater Elevation Data**  
160 Holmes Street, Livermore

Monitoring Well ID	Date	Top of Casing Elevation* (feet, msl)	Screen Interval (feet, bgs)	Depth to Groundwater (feet)	Groundwater Elevation (feet, msl)
MW-5A**	4/6/06	464.64	20-35	17.35	447.29
	7/27/06	464.64		24.40	440.24
	10/12/06	464.64		25.58	439.06
	1/3/07	464.64		22.53	442.11
	4/13/07	464.64		24.77	439.87
	7/16/07	464.64		Dry	NC
	10/29/07	464.64		Dry	NC
	2/1/08	464.64		34.03	430.61
	4/18/08	464.64		28.13	436.51
	7/28/08	464.64		Dry	NC
	<b>11/18/08</b>	<b>464.64</b>		<b>33.82</b>	<b>430.82</b>
MW-5B**	4/6/06	464.59	50-55	17.44	447.15
	7/27/06	464.59		24.09	440.50
	10/12/06	464.59		25.17	439.42
	1/3/07	464.59		22.44	442.15
	4/13/07	464.59		25.33	439.26
	7/16/07	464.59		36.50	428.09
	10/29/07	464.59		47.90	416.69
	2/1/08	464.59		33.25	431.34
	4/18/08	464.59		28.77	435.82
	7/28/08	464.59		44.76	419.83
	<b>11/18/08</b>	<b>464.59</b>		<b>51.65</b>	<b>412.94</b>
MW-6	11/14/01	464.13	20-50	33.88	430.25
	5/7/02	464.13		27.01	437.12
	9/11/02	464.13		27.03	437.10
	12/11/02	464.13		28.77	435.36
	3/14/03	464.13		23.46	440.67
	6/25/03	464.13		23.08	441.05
	9/16/03	464.13		25.77	438.36
	12/22/03	464.13		22.59	441.54
	3/10/04	464.13		18.65	445.48
	6/15/04	464.13		23.31	440.82
	9/17/04	464.13		26.56	437.57
	12/10/04	464.13		23.09	441.04
	3/2/05	464.13		18.04	446.09
	5/27/05	464.13		19.57	444.56
	7/21/05	464.13		21.60	442.53
	10/10/05	464.13		22.21	441.92
	1/9/06	464.13		18.99	445.14
	4/6/06	464.13		17.00	447.13
	7/27/06	464.13		23.45	440.68
	10/12/06	464.13		24.36	439.77
	1/3/07	464.13		22.03	442.10
	4/13/07	464.13		24.40	439.73
	7/16/07	464.13	Well obstructed	NM	NC
	10/29/07	464.13		Dry	NC
	2/1/08	464.13		33.05	431.08
	4/18/08	464.13		28.20	435.93
	7/28/08	464.13		Dry	NC
	<b>11/18/08</b>	<b>464.13</b>		<b>Dry</b>	<b>NC</b>

**Table 1**  
**Groundwater Elevation Data**  
160 Holmes Street, Livermore

Monitoring Well ID	Date	Top of Casing Elevation* (feet, msl)	Screen Interval (feet, bgs)	Depth to Groundwater (feet)	Groundwater Elevation (feet, msl)
MW-7A**	4/6/06	465.32	15-30	16.61	448.71
	7/27/06	465.32		23.40	441.92
	10/12/06	465.32		24.50	440.82
	1/3/07	465.32		21.80	443.52
	4/13/07	465.32		24.05	441.27
	7/16/07	465.32		Dry	NC
	10/29/07	465.32		Dry	NC
	2/1/08	465.32		Dry	NC
	4/18/08	465.32		28.16	437.16
	7/28/08	465.32		Dry	NC
	<b>11/18/08</b>	<b>465.32</b>		<b>Dry</b>	<b>NC</b>
MW-7B**	4/6/06	465.39	45-50	16.85	448.54
	7/27/06	465.39		23.72	441.67
	10/12/06	465.39		24.74	440.65
	1/3/07	465.39		22.18	443.21
	4/13/07	465.39		24.41	440.98
	7/16/07	465.39		36.40	428.99
	10/29/07	465.39		Dry	NC
	2/1/08	465.39		33.84	431.55
	4/18/08	465.39		28.52	436.87
	7/28/08	465.39		44.92	420.47
	<b>11/18/08</b>	<b>465.39</b>		<b>Dry</b>	<b>NC</b>
MW-7C**	4/6/06	465.39	65-70	17.18	448.21
	7/27/06	465.39		24.15	441.24
	10/12/06	465.39		24.74	440.65
	1/3/07	465.39		22.53	442.86
	4/13/07	465.39		24.73	440.66
	7/16/07	465.39		36.70	428.69
	10/29/07	465.39		48.25	417.14
	2/1/08	465.39		34.00	431.39
	4/18/08	465.39		28.75	436.64
	7/28/08	465.39		45.00	420.39
	<b>11/18/08</b>	<b>465.39</b>		<b>49.62</b>	<b>415.77</b>
EW-1**	4/6/06	465.45	15-40	15.99	449.46
	7/27/06	465.45		23.85	441.60
	10/12/06	465.45		23.51	441.94
	1/3/07	465.45		21.45	444.00
	4/13/07	465.45		23.69	441.76
	10/29/07	465.45		NM	NC
	2/1/08	465.45		NM	NC
	4/18/08	465.45		27.83	437.62
	7/28/08	465.45		NM	NC
	<b>11/18/08</b>	<b>465.45</b>		<b>Dry</b>	<b>NC</b>
EW-2**	4/6/06	465.99	15-40	16.20	449.79
	7/27/06	465.99		23.10	442.89
	10/12/06	465.99		21.48	444.51
	1/3/07	465.99		21.66	444.33
	4/13/07	465.99		23.93	442.06
	10/29/07	465.99		Dry	NC
	2/1/08	465.99		NM	NC
	4/18/08	465.99		28.04	437.95
	7/28/08	465.99		NM	NC
	<b>11/18/08</b>	<b>465.99</b>		<b>Dry</b>	<b>NC</b>
EW-3	<b>11/18/08</b>	NC		<b>Dry</b>	NC

**Table 1**  
**Groundwater Elevation Data**  
160 Holmes Street, Livermore

Monitoring Well ID	Date	Top of Casing Elevation* (feet, msl)	Screen Interval (feet, bgs)	Depth to Groundwater (feet)	Groundwater Elevation (feet, msl)
MW-8A	7/28/08 <b>11/18/08</b>	NC NC	16-36	Dry <b>35.40</b>	NC NC
MW-8B	7/28/08 <b>11/18/08</b>	NC NC	46-51	44.90 <b>49.85</b>	NC NC
MW-9A	7/28/08 <b>11/18/08</b>	NC NC	14-36	Dry <b>48.97</b>	NC NC
MW-9B	7/28/08 <b>11/18/08</b>	NC NC	47-52	44.05 <b>38.28</b>	NC NC
EX-1***	11/14/01 5/7/02 9/11/02 12/11/02 3/14/03 6/25/03 9/16/03 3/10/04 6/15/04 9/17/04 12/10/04 3/2/05 5/27/05 7/21/05 10/10/05 1/9/06	465.30 465.30 465.30 465.30 465.30 465.30 465.30 465.30 465.30 465.30 465.30 465.30 465.30 465.30 465.30 465.30	30-55	33.41 27.58 NM 27.98 23.02 22.41 24.65 17.99 22.48 25.91 NM NM 18.68 21.55 22.73 18.05	431.89 437.72 NC 437.32 442.28 442.89 440.65 447.31 442.82 439.39 NC NC 446.62 443.75 442.57 447.25

MSL: Mean sea level

bgs: Below ground surface

NC: elevation not calculated

NA: well not accessible

NM: well not measured

\* = Well MW-1 renamed MW-1A

\*\* = Well installed on 2/22/06-2/28/06

\*\*\* = Well destroyed on 2/22/06-2/28/06

**Table 2**  
**Groundwater Analytical Results**  
160 Holmes Street, Livermore, California

Well ID	Date Collected	Groundwater Elevation (feet above MSL)	Total Petroleum Hydrocarbons (µg/L)		Aromatic Volatile Organic Compounds (µg/L)				Oxygenated Volatile Organics (µg/L)						Lead Scavengers (µg/L)		
			Gasoline	Diesel	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE (8021B)	TAME	TBA	DIPE	ETBE	MTBE	ethanol	methanol	EDB
MW-1A*	8/11/00	NC	170,000	57,000	6,400	7,600	4,200	9,700	320,000	NA	NA	NA	NA	NA	NA	NA	NA
	10/19/00	443.09	170,000	17,000	8,400	3,200	2,700	10,000	200,000	NA	NA	NA	NA	NA	NA	NA	NA
	2/22/01	442.12	82,000	11,000	5,100	1,000	13,000	8,700	190,000	NA	NA	NA	NA	NA	NA	NA	NA
	5/30/01	NC	not sampled - well dry							NA	NA	NA	NA	NA	NA	NA	NA
	11/14/01	NC	not sampled - well dry							NA	NA	NA	NA	NA	NA	NA	NA
	5/7/02	NC	not sampled - well dry							NA	NA	NA	NA	NA	NA	NA	NA
	9/11/02	438.87	130,000	NA	7,700	1,100	NS	1,500	<5000	NA	NA	NA	NA	NA	NA	NA	NA
	12/1/02	437.48	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA
	3/14/03	442.40	180,000	3,800	7,100	3,200	4,300	6,000	220,000	NA	NA	NA	NA	NA	NA	NA	NA
	6/25/03	442.93	71,000	3,100	7,500	4,700	4,800	8,900	210,000	NA	NA	NA	NA	NA	NA	NA	NA
	9/16/03	440.12	37,000	3,600	4,600	220	3,600	930	150,000	NA	NA	NA	NA	NA	NA	NA	NA
	12/22/03	443.28	44,000	4,000	6,800	1,500	4,000	3,800	180,000	NA	NA	NA	NA	NA	NA	NA	NA
	3/10/04	447.58	72,000	3,100	6,000	11,000	3,900	10,000	260,000	NA	NA	NA	NA	NA	NA	NA	NA
	6/15/04	442.65	42,000	4,300	5,000	1,800	3,700	6,000	210,000	NA	NA	NA	NA	NA	NA	NA	NA
	9/17/04	439.42	24,000	2,900	2,800	<33	2,900	500	83,000	NA	NA	NA	NA	NA	NA	NA	NA
	12/10/04	442.85	31,000	2,700	4,600	190	4,400	2,800	200,000	NA	NA	NA	NA	NA	NA	NA	NA
	3/2/05	448.08	58,000	2,800	4,000	2,500	4,500	7,800	230,000	NA	NA	NA	NA	NA	NA	NA	NA
	5/27/05	446.61	79,000	4,600	4,300	6,200	5,100	13,000	240,000	NA	NA	NA	NA	NA	NA	NA	NA
	7/21/05	443.65	80,000	NS	4,300	5,300	5,400	14,000	300,000	NA	NA	NA	NA	NA	NA	NA	NA
	10/10/05	442.54	58,000	NS	4,300	240	5,600	8,300	170,000	NA	NA	NA	NA	NA	NA	NA	NA
	1/9/06	446.98	47,000	3,700	3,100	1,100	4,400	5,900	180,000	<2,500	<25,000	<2,500	240,000	<250,000	<2,500,000	<2,500	<2,500
	4/6/06	449.43	18,000	1,900	1,200	280	2,400	2,200	110,000	<2,500	<25,000	<2,500	87,000	<250,000	<2,500,000	<2,500	<2,500
	7/27/06	442.61	24,000	2,400	2,100	350	3,400	5,300	130,000	<5000	<50,000	<5000	<5000	160,000	NA	NA	NA
	10/12/06	441.57	19,000	1,700	1,000	26	2,000	1,000	68,000	<1,200	<12,000	<1,200	84,000	<120,000	<1,200,000	NA	NA
	1/3/07	444.03	27,000	2,300	1,300	53	2,500	1,900	120,000	<1,700	<1,7000	<1,700	110,000	<170,000	<1,700,000	<1,700	<1,700
	4/13/07	441.79	28,000	3,000	1,600	74	3,700	1,800	190,000	<5,000	<50,000	<5,000	<5,000	200,000	<500,000	<5,000,000	<5,000
	7/16/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/29/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/1/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/18/08	437.69	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-1B	3/13/06	446.44	<50	<50	<0.5	<0.5	<0.5	<0.5	8.2	<0.5	<5.0	<0.5	<0.5	7.9	<50	<500	<0.5
	4/6/06	449.43	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	1.0	<50	<500	<0.5
	7/27/06	442.55	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA
	10/12/06	441.51	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	NA
	1/3/07	443.98	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5
	4/13/07	441.72	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5
	7/16/07	429.45	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA
	10/29/07	417.70	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5
	2/1/08	431.12	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5
	4/18/08	437.67	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5
	7/29/08	420.99	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5
	11/18/08	416.52	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	<50	<500	<0.5

**Table 2**  
**Groundwater Analytical Results**  
160 Holmes Street, Livermore, California

Well ID	Date Collected	Groundwater Elevation (feet above MSL)	Total Petroleum Hydrocarbons (µg/L)		Aromatic Volatile Organic Compounds (µg/L)					Oxygenated Volatile Organics (µg/L)						Lead Scavengers (µg/L)		
			Gasoline	Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE (8021B)	TAME	TBA	DIPE	ETBE	MTBE	ethanol	methanol	EDB	1,2-DCA
MW- 2A*	8/11/00	NC	4,500	1,900	220	52	160	170	3,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/19/00	443.14	3,400	1,300	150	21	100	70	1,900	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/22/01	442.07	7,600	880	25	<10	69	25	2,200	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/30/01	NC	not sampled - well dry							NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/01	NC	not sampled - well dry							NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/7/02	438.24	400	86	5.4	<0.5	1.9	2.3	230	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/11/02	438.98	260	NA	1.3	<0.5	0.57	0.77	200	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/1/02	437.38	250	120	7.9	1.6	13	9.9	180	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/14/03	442.53	830	110	.56	<0.5	<0.5	<1.0	1,200	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/25/03	442.97	260	180	0.92	2.9	3.1	8.1	2,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/16/03	440.24	420	260	3.6	3.4	5.2	2.4	1,300	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/22/03	443.36	240	120	0.82	3.1	7.8	3.9	1,400	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/10/04	447.63	280	210	9.4	4.2	14	11	1,400	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/15/04	442.76	150	150	2.1	2.4	2.2	1.3	1,500	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/17/04	439.50	61	70	<0.5	1.0	<0.5	<0.5	730	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/10/04	442.94	84	110	<0.5	1.2	<0.5	1.5	1,300	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/2/05	448.19	63	91	0.55	<0.5	0.63	0.51	1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/27/05	446.65	270	59	14	3.9	19	6.8	1,100	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/21/05	444.48	280	NS	8.6	2.5	17	2.5	1,500	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/10/05	442.64	<50	NS	<.5	<.5	<.5	<.5	680	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/9/06	447.27	1,700	890	4.4	1.3	120	18	530	<10	330	<10	<10	590	<1000	<10,000	<10	<10
	4/7/06	449.47	110	160	0.61	0.80	4.1	<0.5	270	<5.0	660	<5.0	<5.0	240	<500	<5,000	<5.0	<5.0
	7/27/06	442.67	<50	120	<0.5	0.84	<0.5	<0.5	87	<5.0	870	<5.0	<5.0	110	NA	NA	NA	NA
	10/12/06	441.59	<50	70	<0.5	<0.5	<0.5	<0.5	29	<5.0	480	<5.0	<5.0	30	<500	<5000	NA	NA
	1/3/07	444.04	55	60	0.57	<0.5	<0.5	<0.5	8.5	<2.5	590	<2.5	<2.5	7.8	<250	<2,500	<2.5	<2.5
	4/13/07	441.78	86	130	<0.5	0.60	<0.5	<0.5	16	<5.0	740	<5.0	<5.0	16	<500	<5,000	<5.0	<5.0
	7/16/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/29/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/1/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/18/08	437.68	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW- 3A*	8/11/00	NC	59	260	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/19/00	443.39	<50	<65	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/22/01	442.33	<50	100	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/30/01	NC	not sampled - well dry							NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/01	NC	not sampled - well dry							NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/7/02	NC	not sampled - well dry							NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/11/02	439.23	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/1/02	437.66	NS							NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/14/03	442.80	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/25/03	443.25	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/16/03	440.51	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/22/03	443.47	<50	69	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA

**Table 2**  
**Groundwater Analytical Results**  
160 Holmes Street, Livermore, California

Well ID	Date Collected	Groundwater Elevation (feet above MSL)	Total Petroleum Hydrocarbons ( $\mu\text{g/L}$ )		Aromatic Volatile Organic Compounds ( $\mu\text{g/L}$ )					Oxygenated Volatile Organics ( $\mu\text{g/L}$ )						Lead Scavengers ( $\mu\text{g/L}$ )		
			Gasoline	Diesel	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE (8021B)	TAME	TBA	DIPE	ETBE	MTBE	ethanol	methanol	EDB	1,2-DCA
MW-3A (cont.)	3/10/04	447.96	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/15/04	443.02	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/17/04	439.75	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/10/04	443.19	<50	<50	<0.5	<0.5	<0.5	<0.5	7.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/2/05	448.51	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/27/05	446.95	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/21/05	444.74	<50	NS	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/10/05	442.90	<50	NS	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/9/06	447.60	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	<0.5	<500	<0.5	<0.5	<0.5
	4/7/06	449.82	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	<0.5	<500	<0.5	<0.5	<0.5
	7/27/06	442.94	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	<0.5	NA	NA	NA	NA
	10/12/06	441.85	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	<0.5	<500	NA	NA	NA
	1/3/07	444.32	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	<0.5	<500	<0.5	<0.5	<0.5
	4/13/07	442.06	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	<0.5	<500	<0.5	<0.5	<0.5
	7/16/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/29/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/1/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/18/08	437.98	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4**	11/14/01	431.31	510	90	4.0	<0.5	<0.5	<0.5	14	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/7/02	438.40	150	<50	3.5	0.5	<0.5	<0.5	48	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/11/02	438.49	<50	NA	<0.5	<0.5	<0.5	<0.5	15	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/1/02	436.76	<50	<50	<0.5	<0.5	<0.5	<0.5	24	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/14/03	442.01	<50	<50	<0.5	<0.5	<0.5	<0.5	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/25/03	442.43	<50	<50	<0.5	<0.5	<0.5	<0.5	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/16/03	439.76	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/22/03	442.73	<50	69	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/10/04	446.95	<50	<50	<0.5	<0.5	<0.5	<0.5	37	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/15/04	442.20	<50	<50	<0.5	<0.5	<0.5	<0.5	7.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/17/04	439.03	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/10/04	442.42	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/2/05	447.55	<50	<50	<0.5	<0.5	<0.5	<0.5	14	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/27/05	446.01	<50	<50	<0.5	<0.5	<0.5	<0.5	9.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/21/05	443.90	<50	NS	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/10/05	442.30	<50	NS	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/9/06	446.61	<50	<50	<0.5	<0.5	<0.5	<0.5	0.86	<0.5	<5.0	<0.5	<5.0	0.86	<50	<500	<5.0	<5.0
MW-4A	3/13/06	445.87	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	0.70	<50	<500	<0.5	<0.5
	4/7/06	448.77	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	1.1	<50	<500	<0.5	<0.5
	7/28/06	442.09	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	3.0	NA	NA	NA	NA
	10/13/06	441.06	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	2.0	<50	<500	NA	NA
	1/4/07	443.44	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	0.79	<50	<500	<0.5	<0.5
	4/16/07	441.18	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	0.51	<50	<500	<0.5	<0.5
	7/16/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/29/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/1/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/18/08	437.05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

**Table 2**  
**Groundwater Analytical Results**  
160 Holmes Street, Livermore, California

Well ID	Date Collected	Groundwater Elevation (feet above MSL)	Total Petroleum Hydrocarbons (µg/L)		Aromatic Volatile Organic Compounds (µg/L)					Oxygenated Volatile Organics (µg/L)						Lead Scavengers (µg/L)		
			Gasoline	Diesel	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE (8021B)	TAME	TBA	DIPE	ETBE	MTBE	ethanol	methanol	EDB	1,2-DCA
MW-5**	11/14/01	429.71	<50	<66	<0.5	<0.5	<0.5	<0.5	8.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/7/02	436.75	140	<50	<0.5	<0.5	<0.5	<0.5	110	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/11/02	436.66	<50	NA	<0.5	<0.5	<0.5	<0.5	6.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/1/02	435.15	73	<50	<0.5	<0.5	<0.5	<0.5	160	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/14/03	440.39	110	<50	<0.5	<0.5	<0.5	<0.5	170	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/25/03	440.64	<50	<50	<0.5	<0.5	<0.5	<0.5	89	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/16/03	437.82	630	<50	<0.5	3.5	<0.5	2.6	1500	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/22/03	440.97	<0.5	<50	<0.5	<0.5	<0.5	<0.5	630	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/10/04	445.43	57	<50	<0.5	<0.5	<0.5	<0.5	1100	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/15/04	440.45	<50	<50	<0.5	<0.5	<0.5	<0.5	750	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/17/04	436.97	<50	<50	<0.5	<0.5	<0.5	<0.5	780	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/10/04	440.72	<50	<50	<0.5	<0.5	<0.5	<0.5	120	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/2/05	446.09	<50	<50	<0.5	<0.5	<0.5	<0.5	320	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/27/05	444.50	<50	<50	<0.5	<0.5	<0.5	<0.5	120	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/21/05	442.10	<50	NS	<0.5	<0.5	<0.5	<0.5	97	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/10/05	441.30	<50	NS	<0.5	<0.5	<0.5	<0.5	41	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/9/06	445.12	<50	<50	<0.5	<0.5	<0.5	<0.5	37	<0.5	<5.0	<0.5	<5.0	<5.0	<50	<500	<0.5	<0.5
MW-5A	3/13/06	444.48	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	<0.5	<50	<500	<0.5	<0.5
	4/7/06	447.29	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	<0.5	<50	<500	<0.5	<0.5
	7/28/06	440.24	<50	62	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	NA	NA	NA
	10/13/06	439.06	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	6.3	<0.5	<0.5	0.61	<50	<500	NA	NA
	1/4/07	442.11	<50	320	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	<0.5	<50	<500	<0.5	<0.5
	4/16/07	439.87	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	<0.5	<50	<500	<0.5	<0.5
	7/16/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/29/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/1/08	430.61	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	1.3	<50	<500	<0.5	<0.5
	4/18/08	436.51	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/08	464.64	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-5B	3/13/06	444.46	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	0.69	<50	<500	<0.5	<0.5
	4/7/06	447.15	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	0.98	<50	<500	<0.5	<0.5
	7/28/06	440.50	<50	<50	<0.5	<0.5	<0.5	<0.5	6.8	<0.5	6.3	<0.5	<0.5	0.61	NA	NA	NA	NA
	10/13/06	439.42	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	3.6	<50	<500	NA	NA
	1/4/07	442.15	<50	89	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	1.3	<50	<500	<0.5	<0.5
	4/16/07	439.26	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	1.5	<50	<500	<0.5	<0.5
	7/17/07	428.09	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	1.4	NA	NA	NA	NA
	10/29/07	416.69	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	<0.5	<50	<500	<0.5	<0.5
	2/1/08	431.34	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	1.9	<50	<500	<0.5	<0.5
	4/18/08	435.82	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	1.5	<50	<500	<0.5	<0.5
	7/29/08	419.83	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	11/18/08	464.59	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	1.2	<50	<500	<0.5	<0.5

**Table 2**  
**Groundwater Analytical Results**  
160 Holmes Street, Livermore, California

Well ID	Date Collected	Groundwater Elevation (feet above MSL)	Total Petroleum Hydrocarbons (µg/L)		Aromatic Volatile Organic Compounds (µg/L)				Oxygenated Volatile Organics (µg/L)						Lead Scavengers (µg/L)			
			Gasoline	Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE (8021B)	TAME	TBA	DIPE	ETBE	MTBE	ethanol	methanol	EDB	1,2-DCA
MW-6	11/14/01	430.25	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/7/02	437.12	<50	<67	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/11/02	437.10	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/1/02	435.36	<50	<50	<0.5	<0.5	<0.5	<0.5	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/14/03	440.67	<50	<50	<0.5	<0.5	<0.5	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/25/03	441.05	<50	<50	<0.5	<0.5	<0.5	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/16/03	438.36	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/22/03	441.54	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/10/04	445.48	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/15/04	440.82	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/17/04	437.57	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/10/04	441.04	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/2/05	446.09	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/27/05	444.56	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/21/05	442.53	<50	NS	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/10/05	441.92	<50	NS	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/9/06	445.14	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	0.86	<50	<500	<0.5	<0.5
	4/6/06	447.13	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	<0.5	<50	<500	<0.5	<0.5
	7/28/06	440.68	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	<0.5	NA	NA	NA	NA
	10/13/06	439.77	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	<0.5	<50	<500	NA	NA
	1/4/07	442.10	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	<0.5	<50	<500	<0.5	<0.5
	4/16/07	439.73	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<5.0	<0.5	<50	<500	<0.5	<0.5
	7/16/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/29/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/1/08	431.08	<50	<50	<0.5	<0.5	<0.5	0.91	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	4/18/08	435.93	<50	<50	<0.5	<0.5	<0.5	0.91	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5
	7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-7A	3/13/06	445.85	6,200	1,800	140	21	200	560	6,900	<100	4400	<100	<100	6,300	<10,000	<100,000	<100	<100
	4/7/06	448.71	5,300	1,700	130	26	330	420	5,900	<100	7,500	<100	<100	6,600	<10,000	<100,000	<100	<100
	7/28/06	441.92	2,200	470	28	18	60	0.85	240	<25	4,700	<25	<25	240	NA	NA	NA	NA
	10/12/06	440.82	6,500	2,400	83	38	300	160	980	<17	4,700	<10	<17	1200	<1700	<17,000	NA	NA
	11/21/06	NM	1,400	NA	25	17	65	<0.5	45	<10	1,400	<10	<10	42	<1,000	<10,000	<10	<10
	1/4/07	443.52	1,000	440	12	18	48	8.3	75	<5.0	1,100	<5.0	<5.0	73	<500	<5000	<5.0	<5.0
	4/16/07	441.27	520	470	17	5.6	2.6	0.88	140	<12	2,500	<12	<12	170	<1,200	<12,000	<12	<12
	7/16/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/29/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/1/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/18/08	437.16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

**Table 2**  
**Groundwater Analytical Results**  
160 Holmes Street, Livermore, California

Well ID	Date Collected	Groundwater Elevation (feet above MSL)	Total Petroleum Hydrocarbons (µg/L)		Aromatic Volatile Organic Compounds (µg/L)				Oxygenated Volatile Organics (µg/L)						Lead Scavengers (µg/L)					
			Gasoline	Diesel	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE (8021B)	TAME	TBA	DIPE	ETBE	MTBE	ethanol	methanol	EDB	1,2-DCA		
***	MW-7B	3/13/06	445.64	230	<50	1.8	4.7	<0.5	2.2	1,500	<50	7300	<50	1,300	<5,000	<50,000	<50	<50		
		4/7/06	448.54	81	<50	1.9	1.6	1.1	0.58	1,000	<50	9,200	<50	930	<5,000	<50,000	<50	<50		
		7/28/06	441.67	150	<50	<0.5	1.9	<0.5	<0.5	1,500	<50	16,000	<50	<50	1,900	NA	NA	NA		
		10/12/06	440.65	110	<50	<0.5	1.3	<0.5	<0.5	900	<17	15,000	<17	<17	860	<1700	<17,000	NA	NA	
		11/21/06	NM	61	NA	<0.5	0.76	<0.5	<0.5	740	<50	10,000	<50	<50	680	<5,000	<50,000	<50	<50	
		1/4/07	443.21	91	<50	<0.5	2.1	<0.5	<0.5	200	<50	11,000	<50	<50	180	<5000	<50,000	<50	<50	
		4/16/07	440.98	94	<50	<0.5	2.6	<0.5	<0.5	35	<50	10,000	<50	<50	<50	<5000	<50,000	<50	<50	
		7/17/07	428.99	<50	<50	0.61	0.63	<0.5	<0.5	13	<17	4,000	<17	<17	<17	NA	NA	NA	NA	
		10/29/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		2/1/08	431.55	420	<50	0.77	17	<0.5	0.97	45	<25	4000	<25	<25	49	<2500	<25000	<25	<25	
		4/18/08	436.87	650	100	3.4	15	8.3	<0.5	150	<25	3800	<25	<25	140	<2500	<25000	<25	<25	
		7/28/08	420.47	<50	<50	<0.5	0.56	<0.5	<0.5	17	<5.0	760	<5.0	<5.0	22	<500	<5000	<5.0	<5.0	
		11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
***	MW-7C	3/13/06	445.34	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	0.60	<50	<500	<0.5	<0.5	
		4/7/06	448.21	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5	
		7/28/06	441.24	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA
		10/13/06	440.65	89	<50	<0.5	1.4	<0.5	<0.5	900	<17	12,000	<17	<17	820	<1700	<17,000	NA	NA	
		11/21/06	NM	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5	
		1/4/07	442.86	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5	
		4/16/07	440.66	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5	
		7/17/07	428.69	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA	
		10/29/07	417.14	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5	
		2/1/08	431.39	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5	
		4/18/08	436.64	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5	
		7/28/08	420.39	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	<0.5	<50	<500	<0.5	<0.5	
		11/18/08	465.39	97	<50	<0.5	<0.5	<0.5	<0.5	<90	<1.0	<4.0	<1.0	<1.0	<1.0	<100	<1000	<1.0	<1.0	
MW-8A		7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		11/18/08	NC	67	<50	<0.5	2.6	<0.5	1.6	<5.0	<0.5	<2.0	<0.5	<0.5	4.9	<50	<500	<0.5	<0.5	
MW-8B		7/28/08	NC	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<2.0	<0.5	<0.5	2.5	<50	<500	<0.5	<0.5	
		11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.5	<0.5	
MW-9A		7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
MW-9B		7/29/08	NC	<50	63	<0.5	<0.5	<0.5	<0.5	100	<10	2,800	<10	<10	160	<1,000	<10,000	<10	<10	
		11/18/08	NC	<50	1000	<0.5	<0.5	<0.5	<0.5	7.0	<0.5	4.6	<0.5	<0.5	7.5	<50	<500	<0.5	<0.5	
EX-1**		11/14/01	431.89	13,000	2,000	180	1,000	330	3,200	2,200	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		5/7/02	437.72	7,700	560	320	<25	66	150	6,200	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		9/11/02	NC	2,800	NA	32	<13	14	<13	2,500	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		12/1/02	437.32	3,000	100	81	<0.5	44	<1.0	4,800	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		3/14/03	442.28	750	50	<0.5	<0.5	7.7	13	1,200	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		6/25/03	442.89	120	<50	3.2	3.7	4.2	7.6	260	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		9/16/03	440.65	170	<50	0.5	1.5	<0.5	0.9	1,600	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		3/10/04	447.31	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		6/15/04	442.82	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		9/17/04	439.39	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		12/10/04	NC	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		3/2/05	NC	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		5/27/05	446.62	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		7/21/05	443.75	<50	NS	<0.5	<0.5	<0.5	<0.5	610	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		10/10/05	442.57	<50	NS	<0.5	<0.5	<0.5	<0.5	31	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		1/9/06	447.25	580	55	40	25	45	43	4,200	<170	<1,700	<170	<170	5,200	<170,000	<17,000	<170	<170	

**Table 2**  
**Groundwater Analytical Results**  
160 Holmes Street, Livermore, California

Well ID	Date Collected	Groundwater Elevation (feet above MSL)	Total Petroleum Hydrocarbons (µg/L)		Aromatic Volatile Organic Compounds (µg/L)					Oxygenated Volatile Organics (µg/L)						Lead Scavengers (µg/L)		
			Gasoline	Diesel	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE (8021B)	TAME	TBA	DIPE	ETBE	MTBE	ethanol	methanol	EDB	1,2-DCA
EW-1	3/13/06	446.47	210	120	5.0	4.1	7.5	12	3,400	<50	<100	<50	<50	2,300	<5,000	<50,000	<50	<50
	4/7/06	449.46	1,900	190	66	170	110	380	7,900	<100	<1000	<100	<100	6,400	<10,000	<100,000	<100	<100
	7/27/06	441.60	280	100	7.4	5.5	12	28	8,400	<500	<5,000	<500	<500	12,000	NA	NA	NA	NA
	10/12/06	441.94	2,100	130	86	19	100	310	2,400	<50	1,400	<50	<50	2,800	<5,000	180,000	NA	NA
	1/4/07	444.00	1,600	150	56	27	110	240	5,000	<50	2,900	<50	<50	4,900	<5,000	<50,000	<50	<50
	4/13/07	441.76	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/16/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/29/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/1/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/18/08	437.62	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
EW-2	3/13/06	446.81	<250	69	<2.5	<2.5	<2.5	<2.5	5,400	<100	<1,000	<100	<100	5,100	<10,000	<100,000	<100	<100
	4/7/06	449.79	470	160	15	2.5	24	13	2,000	<50	<500	<50	<50	1,800	<5,000	<50,000	<50	<50
	7/27/06	442.89	260	350	2.2	1.7	6.1	3.0	8,700	<500	<5,000	<500	<500	12,000	NA	NA	NA	NA
	10/12/06	444.51	110	<50	2.0	1.0	3.1	3.9	620	<12	<120	<12	<12	680	<1200	<12,000	NA	NA
	1/4/07	444.33	<500	<50	5.3	<5.0	16	7.1	4,500	<50	<500	<50	<50	4,200	<5000	<50,000	<50	<50
	4/13/07	442.06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/16/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/29/07	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/1/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/18/08	437.95	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	7/28/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/08	NC	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
B1	2/2/01	30	650,000	13,000	6,300	10000.0	<2,500	12,000	290,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
B2	2/2/01	30	56	<0.5	<0.5	<0.5	<0.5	<0.5	47	NA	NA	NA	NA	NA	NA	NA	NA	NA
B3	2/2/01	30	6,200	NA	<50	<50	<50	<50	3,800	NA	NA	NA	NA	NA	NA	NA	NA	NA
B4	2/2/01	30	12,000	NA	<50	<50	<50	<50	6,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
B5	2/2/01	30	<25,000	960	<250	<250	<250	<250	16,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
MB-1-A	11/10/01	28	21,000	4,300	970	<25	3,300	1200	NA	<2,500	<25,000	<2,500	<2,500	100,000	NA	NA	NA	NA
MB-1-B	11/10/01	50	470	210	7.8	0.97	31	48	NA	<25	<250	<25	<25	1,500	NA	NA	NA	NA
MB-1-C	11/10/01	70	990	NA	17	1.3	89	160	NA	<25	<250	<25	<25	1,200	NA	NA	NA	NA
MB-2-A	11/9/01	28	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA
MB-2-B	11/10/01	50	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA
MB-3-A	11/10/01	28	40,000	41,000	120	130	1,700	2,800	NA	<50	2,500	<50	<50	<4,500	NA	NA	NA	NA
MB-3-B	11/13/01	50	1,400	210	0.93	9.3	14	27	NA	<50	6,200	<50	<50	190	NA	NA	NA	NA
MB-3-C	11/13/01	70	930	260	1.7	3.8	33	100	NA	<100	16,000	<100	<100	330	NA	NA	NA	NA
DB-1-A	11/9/01	28	160	NA	<0.5	<0.5	<0.5	<0.5	NA	<1.7	<17	<1.7	<1.7	86	NA	NA	NA	NA
DB-2-A	11/10/01	28	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA
DB-3-A	11/13/01	28	<50	51	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA
DB-4-A	11/13/01	28	<50	57	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA
DB-5-A	11/10/01	28	<50	910	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA
B-1-A	11/9/01	28	<50	230	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<5.0	<0.5	<0.5	<0.5	28	NA	NA	NA
B-2-A	11/9/01	28	25,000	6,200	900	<50	2,000	2,600	NA	<1,700	<17,000	<1,700	<1,700	80,000	NA	NA	NA	NA
B-3-A	11/9/01	28	42,000	14,000	530	140	2,400	7,800	NA	<500	<5,000	<500	<500	19,000	NA	NA	NA	NA
HP-1-A	11/13/01	28	<50	NA	<0.5	<0.5	<0.5	0.80	NA	<50	24	<50	<50	12	NA	NA	NA	NA

**Table 2**  
**Groundwater Analytical Results**  
160 Holmes Street, Livermore, California

Well ID	Date Collected	Groundwater Elevation (feet above MSL)	Total Petroleum Hydrocarbons (µg/L)		Aromatic Volatile Organic Compounds (µg/L)				Oxygenated Volatile Organics (µg/L)						Lead Scavengers (µg/L)		
			Gasoline	Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE (8021B)	TAME	TBA	DIPE	ETBE	MTBE	ethanol	methanol	EDB
GP-1	1/10/07	28	270	--	<0.5	<0.5	2.6	0.85	61	--	--	--	--	--	--	--	--
GP-2	1/10/07	28	2,000	--	61	46	93	280	2,600	--	--	--	--	--	--	--	--
GP-3	1/10/07	28	11,000	--	38	27	1,100	980	37,000	--	--	--	--	--	--	--	--
GP-4	1/10/07	28	20,000	--	820	260	1,400	3,200	35,000	--	--	--	--	--	--	--	--
GP-5	1/10/07	28	4,100	--	64	6.6	13	550	780	--	--	--	--	--	--	--	--
GP-6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GP-6A	1/11/07	28	11,000	--	360	150	1,500	480	6,100	--	--	--	--	--	--	--	--
GP-7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GP-8	1/10/07	28	61,000	--	2,800	490	2,600	4,400	190,000	--	--	--	--	--	--	--	--
GP-9	1/10/07	28	100,000	--	5,600	3,400	3,500	24,000	260,000	--	--	--	--	--	--	--	--
GP-10	1/10/07	28	44,000	--	2,400	590	3,600	3,300	92,000	--	--	--	--	--	--	--	--
GP-11	1/11/07	28	550	--	1.4	1.3	2.1	36	110	--	--	--	--	--	--	--	--
GP-12	1/11/07	28	15,000	--	68	20	1,800	94	6,600	--	--	--	--	--	--	--	--
GP-13	1/11/07	28	88,000	--	5,100	<50	5,500	7,400	87,000	--	--	--	--	--	--	--	--
GP-14	1/11/07	28	210,000	--	11,000	26,000	4,600	21,000	1,500,000	--	--	--	--	--	--	--	--
GP-15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
GP-16	1/11/07	28	160	--	5.2	3.2	18	7.5	210	--	--	--	--	--	--	--	--
GP-17	1/11/07	28	460	--	7.7	4.8	8.0	7.4	790	--	--	--	--	--	--	--	--
GP-18	1/11/07	28	35,000	--	250	72	2,800	380	13,000	--	--	--	--	--	--	--	--
GP-19	1/11/07	28	430	--	8.9	1.6	24	31	430	--	--	--	--	--	--	--	--

**Notes:**

Samples analyzed for TPHg and TPPh by EPA Method 8015Cm, BTEX by EPA Method 8021B, MTBE by EPA Method 8021B and/or 8260B, and the fuel oxygenates DIPE, ETBE, TAME, EDB, 1,2-DCA, ethanol, methanol, and TBA by EPA Method 8260B.

µg/L = micrograms per liter

MTBE = methyl tertiary butyl ether

NA = Not Analyzed

DIPE = Di-isopropyl Ether

EDB = 1,2-Dibromoether

ETBE = Ethyl tert-Butyl Ether

NS = Not Sampled

TAME - tert-Amyl Methyl Ether

1,2-DCA = 1,2-Dichloroethane

TBA = tert-Butanol

\* = Well MW-1 renamed MW-1A, well MW-2 renamed MW-2A, Well MW-3 renamed MW-3A in February 2006

\*\* = Well destroyed in February 2006

\*\*\* = Anomalous data observed in MW-7C from October 12, 2006 sample. Therfore, wells MW-7A, MW-7B, and MW-7C were resampled on November 21, 2006.

**APPENDIX A**  
**Groundwater Monitoring Field Protocol**

## **Appendix A**

### Groundwater Monitoring Protocol

#### Well Monitoring and Sample Collection

A Teflon bailer or submersible pump was used to purge a minimum of three well volumes of groundwater from each well. After each well volume is purged, field parameters such as pH, temperature, and conductivity are recorded. Wells are purged until field parameters have stabilized or a maximum of ten (10) well volumes of groundwater have been removed. When possible, purge rates will not exceed the recharge rate for the well. However, if the well yield is low and the well was dewatered, the well is allowed to recharge to 80% of its original volume prior to sample collection. Field parameter measurements and pertinent qualitative observations, such as groundwater color and odor, are recorded in Groundwater Sampling Field Logs. Groundwater samples are collected in appropriate bottles and stored on ice for delivery, under chain-of-custody documentation, to a state-certified laboratory for analysis.

#### Equipment Decontamination

All drilling, sampling, and well development equipment was cleaned in a solution of laboratory grade detergent and distilled water or steam cleaned before use at each sampling point.

#### Field Personnel

During groundwater sampling activities, sampling personnel will wear pertinent attire to minimize risks to health and safety. Field personnel will also use a pair of clean, powderless, surgical gloves for each successive sampling point. Used surgical gloves will be placed into waste barrels for future disposal.

#### Waste Disposal

Water generated during well purging and sampling activities will be placed into DOT-approved 55-gallon waste drums. Waste drums will be temporarily stored on-site pending proper disposal of wastewater to an approved transport, storage, and disposal (TSD) facility.

**APPENDIX B**  
**Groundwater Sampling Field Logs**



## Groundwater Sampling Field Log

Site Address 160 Holmes Date 11-18-08  
 Project Number Field Personnel EA

## Monitoring Well Information

Monitoring Well ID ML-5B	Monitoring Well Diameter (inches) 20
Depth to Water (feet) 51.65	Water Column (feet) 3.35
Total Depth (feet) 55.0	80% Recharge Depth (feet)
Depth to Product (feet)	1 Well Volume (gallons) 6
Comments	

## Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
	.6	577.1	21.6 °C	9.51	high	brown	none	
	1	543	21.2	8.60	1		1	1
		537	20.7	8.49				

Total Purge Volume Comments

## Groundwater Sampling Information

Sample ID ML-5B Sample Time

Sample Containers (Number/Type) 3 vials / 1 Amber

Comments

## Groundwater Sampling Field Log

Site Address 160 Date 11-18-08  
 Project Number Field Personnel EA

## Monitoring Well Information

Monitoring Well ID ML-5A	Monitoring Well Diameter (inches) 2.0
Depth to Water (feet) 33.82	Water Column (feet) 1.18
Total Depth (feet) 35.0	80% Recharge Depth (feet)
Depth to Product (feet)	1 Well Volume (gallons) , 3
Comments	

## Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
	33.82	.3						
	1	1	N/A					

Total Purge Volume Comments

## Groundwater Sampling Information

Sample ID Sample Time

Sample Containers (Number/Type)

Comments No H2S production

**ALLTERRA****Groundwater Sampling Field Log**

Site Address 160

Date 11-18-08

Project Number

Field Personnel EA

**Monitoring Well Information**

Monitoring Well ID 8A

Monitoring Well Diameter (inches) 2.0

Depth to Water (feet) 35.40

Water Column (feet) 4.60

Total Depth (feet) 40.0

80% Recharge Depth (feet)

Depth to Product (feet)

1 Well Volume (gallons) 18

Comments

**Field Measurements and Observations**

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
	35.40	.8						
1	1	NA	Grab sample					

Total Purge Volume	Comments
--------------------	----------

**Groundwater Sampling Information**

Sample ID	Sample Time
Sample Containers (Number/Type)	2 Vials
Comments	Well slow to recharge

**Groundwater Sampling Field Log**

Site Address 160 Holmes

Date 11-18-08

Project Number

Field Personnel SIZ

**Monitoring Well Information**

Monitoring Well ID MW-7C

Monitoring Well Diameter (inches)

Depth to Water (feet) 49.62

Water Column (feet) 28.08

Total Depth (feet) 75

80% Recharge Depth (feet)

Depth to Product (feet)

1 Well Volume (gallons) 4.77

Comments

**Field Measurements and Observations**

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
	49.62	4.77	500 $\mu$ s	19.2°C	8.44	High	brown	none
1	1	488 $\mu$ s	19.1°C	8.42	1	1	1	1
		484 $\mu$ s	18.8°C	8.34				

Total Purge Volume	Comments
--------------------	----------

**Groundwater Sampling Information**

Sample ID MW-7C

Sample Time

Sample Containers (Number/Type) 3 vials Amber

Comments

**ALLTERRA****Groundwater Sampling Field Log**

Site Address 160 Holmes

Date 11-18-08

Project Number

Field Personnel JTR

**Monitoring Well Information**

Monitoring Well ID MW-9B

Monitoring Well Diameter (inches) 2.0

Depth to Water (feet) 48.97

Water Column (feet) 1.03

Total Depth (feet) 56.0

80% Recharge Depth (feet)

Depth to Product (feet)

1 Well Volume (gallons) 0.17

Comments

**Field Measurements and Observations**

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
	48.97	0.17						
	1	1	NA - Grab Sample					

Total Purge Volume

Comments

**Groundwater Sampling Information**

Sample ID MW-9B

Sample Time

Sample Containers (Number/Type) 1 Amber 3 Vyc

Comments

**Groundwater Sampling Field Log**

Site Address 160 Holmes

Date 11-18-08

Project Number

Field Personnel JT

**Monitoring Well Information**

Monitoring Well ID MW-9BA

Monitoring Well Diameter (inches) 2.0

Depth to Water (feet) 38.28

Water Column (feet)

Total Depth (feet) 46.0

80% Recharge Depth (feet)

Depth to Product (feet)

1 Well Volume (gallons)

Comments

**Field Measurements and Observations**

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor	
	—	—	—						
				NA					

Total Purge Volume

Comments

**Groundwater Sampling Information**

Sample ID

Sample Time

Sample Containers (Number/Type)

Empty Tanker NO Sample

Comments

Well  
Non Dry

**APPENDIX C**  
**Certified Analytical Reports and Chain of Custody**



## McCampbell Analytical, Inc.

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Web: [www.mccampbell.com](http://www.mccampbell.com) E-mail: [main@mccampbell.com](mailto:main@mccampbell.com)  
Telephone: 877-252-9262 Fax: 925-252-9269

Allterra Environmental, Inc  849 Almar Ave, Ste. C #281  Santa Cruz, CA 95060	Client Project ID: #160 Holmes	Date Sampled: 11/18/08
		Date Received: 11/24/08
	Client Contact: James Allen	Date Reported: 12/01/08
	Client P.O.:	Date Completed: 12/01/08

**WorkOrder: 0811742**

December 01, 2008

Dear James:

Enclosed within are:

- 1) The results of the **6** analyzed samples from your project: **#160 Holmes**,
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing  
McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius  
Laboratory Manager  
McCampbell Analytical, Inc.

**ALLTERRA**

849 Almar Avenue, Suite C, #281

Santa Cruz, California 95060

Website: [www.allterraenv.com](http://www.allterraenv.com)

Phone: (831) 425-2608 Facsimile: (831) 425-2609

**Report and Bill to: Allterra Environmental, Inc.**

Project Number: 160

Project Location: 160 Hanes

**Project Name:**

Sampler Signature: EW A

Sample ID	Sample Collection		Number of Containers	Container Type	Matrix		Preservation
	Date	Time			Air	Water	
MW-1B	11-18-08	8/1	Voa/L		✓		✓ ✓
MW-5B		3/1	Voi/L			✓	
MW-7C		3/1	Voa/L			✓	
MW-8A		2	Voa				
MW-8B		3/1	Voa/L				
MW-9B		3/1	Voi/L				

## **Chain of Custody Record**

	Turn Around Time (circle one)	RUSH	24HR	48HR	72HR	5 Day
TPHg/BTEX/ MTBE (EPA 8015/8021)						
BTEX (EPA 8020)						
TPHd (EPA 8015)						
5-fuel oxy's (EPA 8240)						
Ethanol and Methanol (EPA 8260)						
Lead Scavengers (8260)						
Total HVOCs (EPA 8260)						
Hardness/Total dissolved solids						
CAM-17 Metals (EPA 6010/6020)						
LUFT 5 Metals (EPA 6010/6020)						
PAH's/ PNA's (EPA 8270/625/8310)						
Fish Toxicity/Bioassay						
Lead (EPA 6010/200.9/200.8)						
EDF required						

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Pittsburg, CA 94565-1701  
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 0811742

ClientCode: ATRS

WriteOn  EDF  Excel  Fax  Email  HardCopy  ThirdParty  J-flag

Report to:

James Allen  
Allterra Environmental, Inc  
849 Almar Ave, Ste. C #281  
Santa Cruz, CA 95060  
831-425-2608 FAX 831-425-2609

Email: allterraenvironmental@yahoo.com  
cc:  
PO:  
ProjectNo: #160 Holmes

Bill to:

Accounts Payable  
Allterra Environmental  
849 Almar Ave, Ste. C #281  
Santa Cruz, CA 95060  
micah@allterraenv.com

Requested TAT: 5 days

Date Received: 11/24/2008

Date Printed: 11/24/2008

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0811742-001	MW-1B	Water	11/18/2008	<input type="checkbox"/>	C	B	A	A								
0811742-002	MW-5B	Water	11/18/2008	<input type="checkbox"/>	C	B		A								
0811742-003	MW-7C	Water	11/18/2008	<input type="checkbox"/>	C	B		A								
0811742-004	MW-8A	Water	11/18/2008	<input type="checkbox"/>	A	A		B								
0811742-005	MW-8B	Water	11/18/2008	<input type="checkbox"/>	C	B		A								
0811742-006	MW-9B	Water	11/18/2008	<input type="checkbox"/>	C	B		A								

Test Legend:

1	9-OXYS_W
6	
11	

2	G-MBTEX_W
7	
12	

3	PREDF REPORT
8	

4	TPH(D)_W
9	

5	
10	

Prepared by: Samantha Arbuckle

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
Hazardous samples will be returned to client or disposed of at client expense.

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Telephone: 877-252-9262 Fax: 925-252-9269

## Sample Receipt Checklist

Client Name: **Allterra Environmental, Inc**Date and Time Received: **11/24/2008 5:45:47 PM**Project Name: **#160 Holmes**Checklist completed and reviewed by: **Samantha Arbuckle**WorkOrder N°: **0811742** Matrix WaterCarrier: Rob Pringle (MAI Courier)

### Chain of Custody (COC) Information

- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Sample IDs noted by Client on COC? Yes  No
- Date and Time of collection noted by Client on COC? Yes  No
- Sampler's name noted on COC? Yes  No

### Sample Receipt Information

- Custody seals intact on shipping container/cooler? Yes  No  NA
- Shipping container/cooler in good condition? Yes  No
- Samples in proper containers/bottles? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No

### Sample Preservation and Hold Time (HT) Information

- All samples received within holding time? Yes  No
- Container/Temp Blank temperature Cooler Temp: 7.8°C NA
- Water - VOA vials have zero headspace / no bubbles? Yes  No  No VOA vials submitted
- Sample labels checked for correct preservation? Yes  No
- TTLC Metal - pH acceptable upon receipt (pH<2)? Yes  No  NA
- Samples Received on Ice? Yes  No

(Ice Type: WET ICE )

\* NOTE: If the "No" box is checked, see comments below.

-----

Client contacted:

Date contacted:

Contacted by:

Comments:



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Allterra Environmental, Inc  849 Almar Ave, Ste. C #281  Santa Cruz, CA 95060	Client Project ID: #160 Holmes	Date Sampled: 11/18/08
		Date Received: 11/24/08
	Client Contact: James Allen	Date Extracted: 11/26/08-11/27/08
	Client P.O.:	Date Analyzed 11/26/08-11/27/08

## Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0811742

Lab ID	0811742-001C	0811742-002C	0811742-003C	0811742-004A	Reporting Limit for DF=1
Client ID	MW-1B	MW-5B	MW-7C	MW-8A	
Matrix	W	W	W	W	
DF	1	1	2	1	S W
Compound	Concentration				ug/kg µg/L
tert-Amyl methyl ether (TAME)	ND	ND	ND<1.0	ND	NA 0.5
t-Butyl alcohol (TBA)	ND	ND	ND<4.0	ND	NA 2.0
1,2-Dibromoethane (EDB)	ND	ND	ND<1.0	ND	NA 0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND<1.0	ND	NA 0.5
Diisopropyl ether (DIPE)	ND	ND	ND<1.0	ND	NA 0.5
Ethanol	ND	ND	ND<100	ND	NA 50
Ethyl tert-butyl ether (ETBE)	ND	ND	ND<1.0	ND	NA 0.5
Methanol	ND	ND	ND<1000	ND	NA 500
Methyl-t-butyl ether (MTBE)	ND	1.2	ND<1.0	4.9	NA 0.5

## Surrogate Recoveries (%)

%SS1:	88	88	92	97	
Comments	b1	b1	a3,b1	b1	

\* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

a3) sample diluted due to high organic content / matrix interference.

b1) aqueous sample that contains greater than ~1 vol. % sediment

b6) lighter than water immiscible sheen/product is present



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Allterra Environmental, Inc  849 Almar Ave, Ste. C #281  Santa Cruz, CA 95060	Client Project ID: #160 Holmes	Date Sampled: 11/18/08
		Date Received: 11/24/08
	Client Contact: James Allen	Date Extracted: 11/26/08-11/27/08
	Client P.O.:	Date Analyzed 11/26/08-11/27/08

## Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0811742

Lab ID	0811742-005C	0811742-006C			Reporting Limit for DF = 1
Client ID	MW-8B	MW-9B			
Matrix	W	W			
DF	1	1			S W
Compound	Concentration			ug/kg	μg/L
tert-Amyl methyl ether (TAME)	ND	ND		NA	0.5
t-Butyl alcohol (TBA)	ND	4.6		NA	2.0
1,2-Dibromoethane (EDB)	ND	ND		NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND		NA	0.5
Diisopropyl ether (DIPE)	ND	ND		NA	0.5
Ethanol	ND	ND		NA	50
Ethyl tert-butyl ether (ETBE)	ND	ND		NA	0.5
Methanol	ND	ND		NA	500
Methyl-t-butyl ether (MTBE)	5.1	7.5		NA	0.5

## Surrogate Recoveries (%)

%SS1:	88	89			
Comments	b1	b6,b1			

\* water and vapor samples are reported in μg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in μg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

a3) sample diluted due to high organic content / matrix interference.

b1) aqueous sample that contains greater than ~1 vol. % sediment

b6) lighter than water immiscible sheen/product is present



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Allterra Environmental, Inc  849 Almar Ave, Ste. C #281  Santa Cruz, CA 95060	Client Project ID: #160 Holmes	Date Sampled: 11/18/08
		Date Received: 11/24/08
	Client Contact: James Allen	Date Extracted: 11/25/08-11/26/08
	Client P.O.:	Date Analyzed 11/25/08-11/26/08

## **Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE\***

Extraction method SW5030B

### Analytical methods SW8021B/8015Cm

Work Order: 0811742

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg

\* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

# cluttered chromatogram: sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation;

b1) aqueous sample that contains greater than ~1 vol. % sediment

b6) lighter than water immiscible sheen/product is present

d6) one to a few isolated non-target peaks present in the TPH(g) chromatogram

d9) no recognizable pattern



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Telephone: 877-252-9262 Fax: 925-252-9269

Allterra Environmental, Inc  849 Almar Ave, Ste. C #281  Santa Cruz, CA 95060	Client Project ID: #160 Holmes	Date Sampled: 11/18/08
		Date Received: 11/24/08
	Client Contact: James Allen	Date Extracted: 11/24/08
	Client P.O.:	Date Analyzed 11/25/08-11/26/08

## Total Extractable Petroleum Hydrocarbons\*

Extraction method SW3510C

Analytical methods: SW8015B

Work Order: 0811742

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

\* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

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

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

- b1) aqueous sample that contains greater than ~1 vol. % sediment
  - b6) lighter than water immiscible sheen/product is present
  - c2) diesel range compounds are significant; no recognizable pattern
  - e7) oil range compounds are significant
  - e8) kerosene/kerosene range/ jet fuel range



## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 39837

WorkOrder 0811742

EPA Method SW8260B		Extraction SW5030B								Spiked Sample ID: 0811694-001C			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)				
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD	
tert-Amyl methyl ether (TAME)	ND	10	103	103	0	103	106	3.21	70 - 130	30	70 - 130	30	
t-Butyl alcohol (TBA)	ND	50	99.9	109	8.91	93.6	98.3	4.92	70 - 130	30	70 - 130	30	
1,2-Dibromoethane (EDB)	ND	10	105	105	0	108	114	5.24	70 - 130	30	70 - 130	30	
1,2-Dichloroethane (1,2-DCA)	ND	10	115	114	1.10	116	121	4.50	70 - 130	30	70 - 130	30	
Diisopropyl ether (DIPE)	ND	10	103	101	1.98	103	105	1.20	70 - 130	30	70 - 130	30	
Ethyl tert-butyl ether (ETBE)	ND	10	113	112	0.843	114	117	3.19	70 - 130	30	70 - 130	30	
Methyl-t-butyl ether (MTBE)	ND	10	94.2	93.5	0.748	95.4	97	1.71	70 - 130	30	70 - 130	30	
%SS1:	100	25	99	99	0	98	98	0	70 - 130	30	70 - 130	30	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

### BATCH 39837 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811742-001C	11/18/08	11/27/08	11/27/08 1:44 AM	0811742-002C	11/18/08	11/27/08	11/27/08 2:22 AM
0811742-003C	11/18/08	11/27/08	11/27/08 3:01 AM	0811742-004A	11/18/08	11/26/08	11/26/08 5:27 PM
0811742-005C	11/18/08	11/27/08	11/27/08 3:40 AM	0811742-006C	11/18/08	11/27/08	11/27/08 4:19 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



## QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 39865

WorkOrder: 0811742

EPA Method SW8021B/8015Cm		Extraction SW5030B								Spiked Sample ID: 0811742-001B			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)				
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD	
TPH(btex) <sup>f</sup>	ND	60	105	102	3.18	85.4	89.6	4.84	70 - 130	20	70 - 130	20	
MTBE	ND	10	90.5	83	8.59	98.9	91.7	7.56	70 - 130	20	70 - 130	20	
Benzene	ND	10	98.6	96.2	2.49	83.3	92.8	10.8	70 - 130	20	70 - 130	20	
Toluene	ND	10	109	109	0	83.5	92.5	10.2	70 - 130	20	70 - 130	20	
Ethylbenzene	ND	10	111	107	3.54	87.2	94.6	8.05	70 - 130	20	70 - 130	20	
Xylenes	ND	30	119	116	2.50	96.4	106	9.36	70 - 130	20	70 - 130	20	
%SS:	100	10	102	97	4.49	94	96	2.60	70 - 130	20	70 - 130	20	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

### BATCH 39865 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811742-001B	11/18/08	11/25/08	11/25/08 2:03 PM	0811742-002B	11/18/08	11/25/08	11/25/08 1:33 PM
0811742-003B	11/18/08	11/25/08	11/25/08 7:37 PM	0811742-004A	11/18/08	11/25/08	11/25/08 7:07 PM
0811742-005B	11/18/08	11/26/08	11/26/08 8:19 PM	0811742-006B	11/18/08	11/25/08	11/25/08 5:06 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

<sup>f</sup> TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.



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## QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 39846

WorkOrder 0811742

EPA Method SW8015B		Extraction SW3510C								Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)				
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD	
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	123	124	0.749	N/A	N/A	70 - 130	30	
%SS:	N/A	2500	N/A	N/A	N/A	111	112	0.368	N/A	N/A	70 - 130	30	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

### BATCH 39846 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811742-001A	11/18/08	11/24/08	11/25/08 6:16 PM	0811742-002A	11/18/08	11/24/08	11/25/08 7:24 PM
0811742-003A	11/18/08	11/24/08	11/25/08 11:58 PM	0811742-004B	11/18/08	11/24/08	11/26/08 1:06 AM
0811742-005A	11/18/08	11/24/08	11/25/08 6:16 PM	0811742-006A	11/18/08	11/24/08	11/26/08 7:09 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification 1644

 QA/QC Officer