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August 30, 2006

Mr. Jerry Wickham  
Alameda County Environmental Health Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502

**SUBJECT: Third Quarter 2006 Groundwater Monitoring Report  
160 Holmes Street, Livermore, California**

Dear Mr. Wickham:

On behalf of Mr. Manwel Shuwayhat, Allterra Environmental, Inc. (Allterra) has prepared the enclosed Third Quarter 2006 Groundwater Monitoring Report. Should you have any questions or comments please contact Allterra at (831) 425-2608.

Sincerely,

Allterra Environmental, Inc.

A handwritten signature in blue ink, appearing to read "Michael J. Killoran". The signature is fluid and cursive.

Michael J. Killoran, P.G.

Senior Geologist

enclosures: Third Quarter 2006 Groundwater Monitoring Report



**Third Quarter 2006 Groundwater Monitoring Report  
160 Holmes Street, Livermore, California**

*Date:*  
August 30, 2006

*Project No.:*  
015-01-002

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

**Allterra Environmental, Inc.**  
849 Almar Avenue, Suite C, No. 281  
Santa Cruz, California 95060

Phone: (831) 425-2608  
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<http://www.allterraenv.com>



August 30, 2006  
Project No.: 015-01-002

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

**Subject: Third Quarter 2006 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 third quarter 2006 groundwater monitoring report 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 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**

On July 27 and 28, 2006, Allterra performed quarterly groundwater monitoring for eleven monitoring wells (MW-1A, MW-1B, MW-2A, MW-3, MW-4A, MW-5A, MW-5B, MW-6, MW-7A, MW-7B, MW-7C) and two extraction wells (EW-1 and EW-2). A description of groundwater monitoring activities is presented below.

#### Groundwater Monitoring Field Activities

Depth to groundwater measurements and an evaluation of groundwater for the presence of petroleum hydrocarbons were performed in monitoring wells MW-1A through MW-7C and extraction wells EW-1 and EW-2. The surveyed elevations of each well casing (measured in feet relative to mean sea level), depths to groundwater, and calculated groundwater elevations are presented in Table 1.

For third quarter 2006, eleven monitoring wells and two extraction wells were sampled for laboratory analysis. Each well was purged and sampled in accordance with Alameda County Environmental Health Services (ACEHS) and Regional Water Quality Control Board (RWQCB) guidelines and Allterra protocols presented in Appendix A. Groundwater Sampling Field Logs are included in Appendix B. Groundwater samples were submitted under chain-of-custody

documentation to McCampbell Analytical, Inc., of Pacheco, California, a state of California certified laboratory (ELAP #1644). Copies of the chain-of-custody documentation for the samples are included in Appendix C.

#### Laboratory Analysis of Groundwater Samples

Groundwater samples from each of the thirteen wells were analyzed for total petroleum hydrocarbons as gasoline (TPHg) as well as diesel (TPHd) by EPA method 8015C, for benzene, toluene, ethylbenzene, and 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) by EPA Method 8260B. Analytical results from groundwater samples are presented in Table 2. The certified analytical report, including quality assurance and quality control (QA/QC) data, for the samples is included in Appendix C.

#### **Groundwater Monitoring Results**

On July 27, 2006, Allterra personnel measured and recorded depths to groundwater from the tops of well casings (TOC) for monitoring wells MW-1 through MW-7C and extraction wells EW-1 and EW-2. Recorded depths to groundwater ranged from 22.27 to 24.40 feet. Groundwater elevation data are summarized in Table 1 and depicted in Figure 3 as groundwater elevation contours. For the July 2006 groundwater monitoring event, groundwater appeared to flow northwest at a gradient of approximately 0.0086 feet per foot (ft/ft).

#### Analytical Results

Fuel-related compounds were detected in nine of thirteen wells sampled this quarter. Dissolved TPHg was detected in five wells at concentrations ranging from 150 micrograms per liter ( $\mu\text{g/L}$ ) in MW-7B to 24,000  $\mu\text{g/L}$  in MW-1A. Benzene was detected in four wells at concentrations ranging from 2.2  $\mu\text{g/L}$  to 2,100  $\mu\text{g/L}$  in wells EW-2 and MW-1A, respectively. Well samples indicated the presence of MTBE in eight wells at levels ranging from 3.0  $\mu\text{g/L}$  in well MW-4A to 160,000  $\mu\text{g/L}$  in well MW-1A. TBA was detected in three of thirteen wells at concentrations ranging from 870  $\mu\text{g/L}$  to 16,000  $\mu\text{g/L}$  in wells MW-2A and MW-7B, respectively. Groundwater analytical results from well samples are presented in Table 2. The distribution of TPHg, TPHd, benzene, and MTBE in groundwater is presented in Figure 4.

#### 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.

## Conclusions

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

- Groundwater appears to flow to the northwest with a gradient of 0.0086 ft/ft and appears to be consistent with previous monitoring events;
- The highest concentrations of dissolved TPHg, TPHd, benzene, and MTBE were detected in on-site monitoring well MW-1A;
- MTBE was found in off-site wells MW-4A, MW-5B, MW-7A, and MW-7B.
- In general, hydrocarbon levels decrease with depth.
- Elevated levels of dissolved TBA were detected in samples from MW-7A and MW-7B; however, TBA was not detected at or above detection limits in well MW-7C.

## Recommendations

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

- Continue with the quarterly groundwater monitoring program at the Site.
- Implement interim groundwater cleanup activities once the UST Cleanup Fund pre-approves the work.

## 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.

Michael Killoran, P.G. 6670  
Senior Geologist



The Allterra logo, consisting of the word "ALLTERRA" in a bold, blue, sans-serif font with a stylized horizontal line through the letters.

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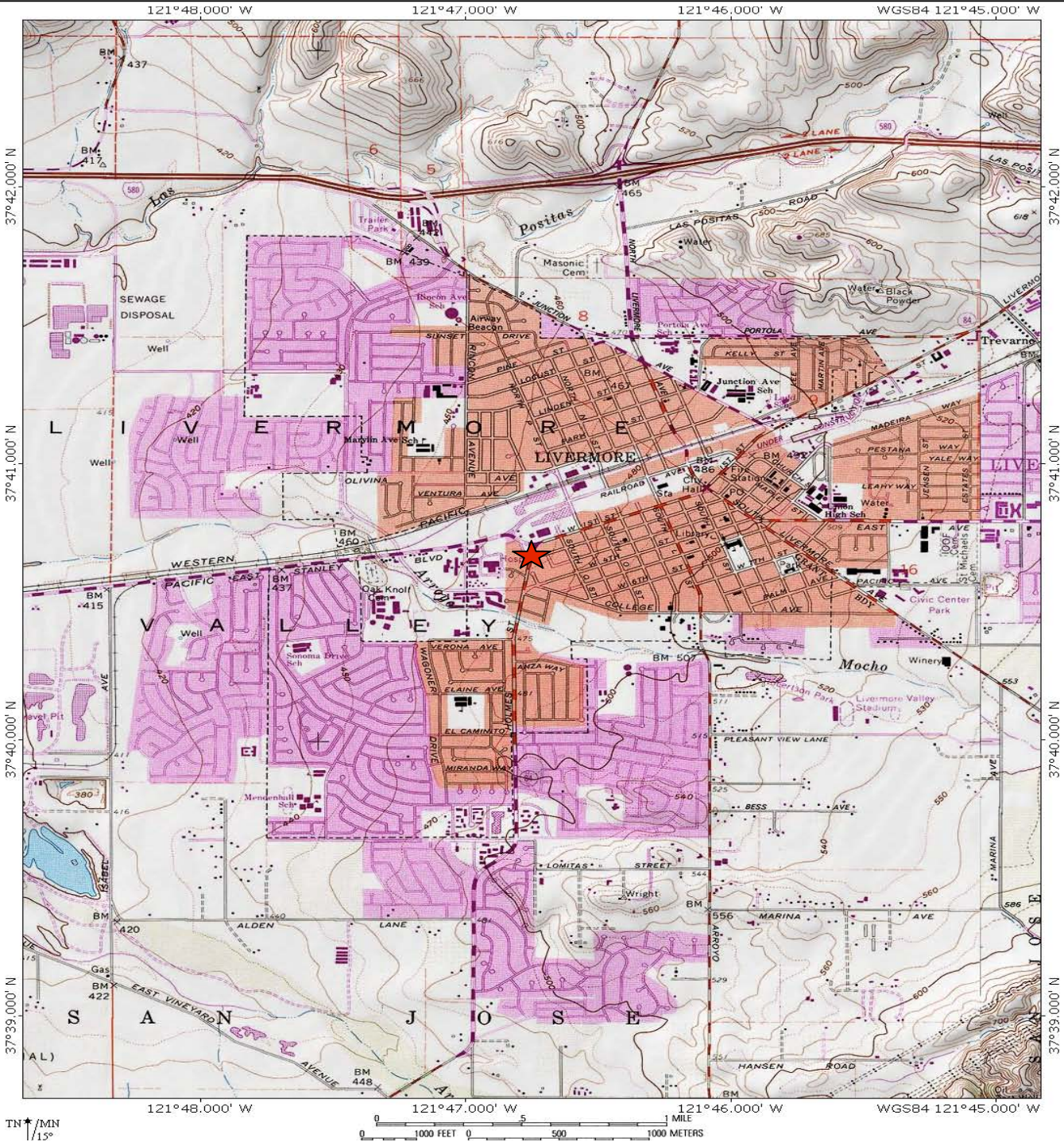
Appendix B, Groundwater Sampling Field Logs

Appendix C, Certified Analytical Reports and Chain of Custody

cc: Jerry Wickham, ACEHS

FIGURES 1-4





**Vicinity Map**

Livermore Gas and Mini-mart  
 160 Holmes Street  
 Livermore, California

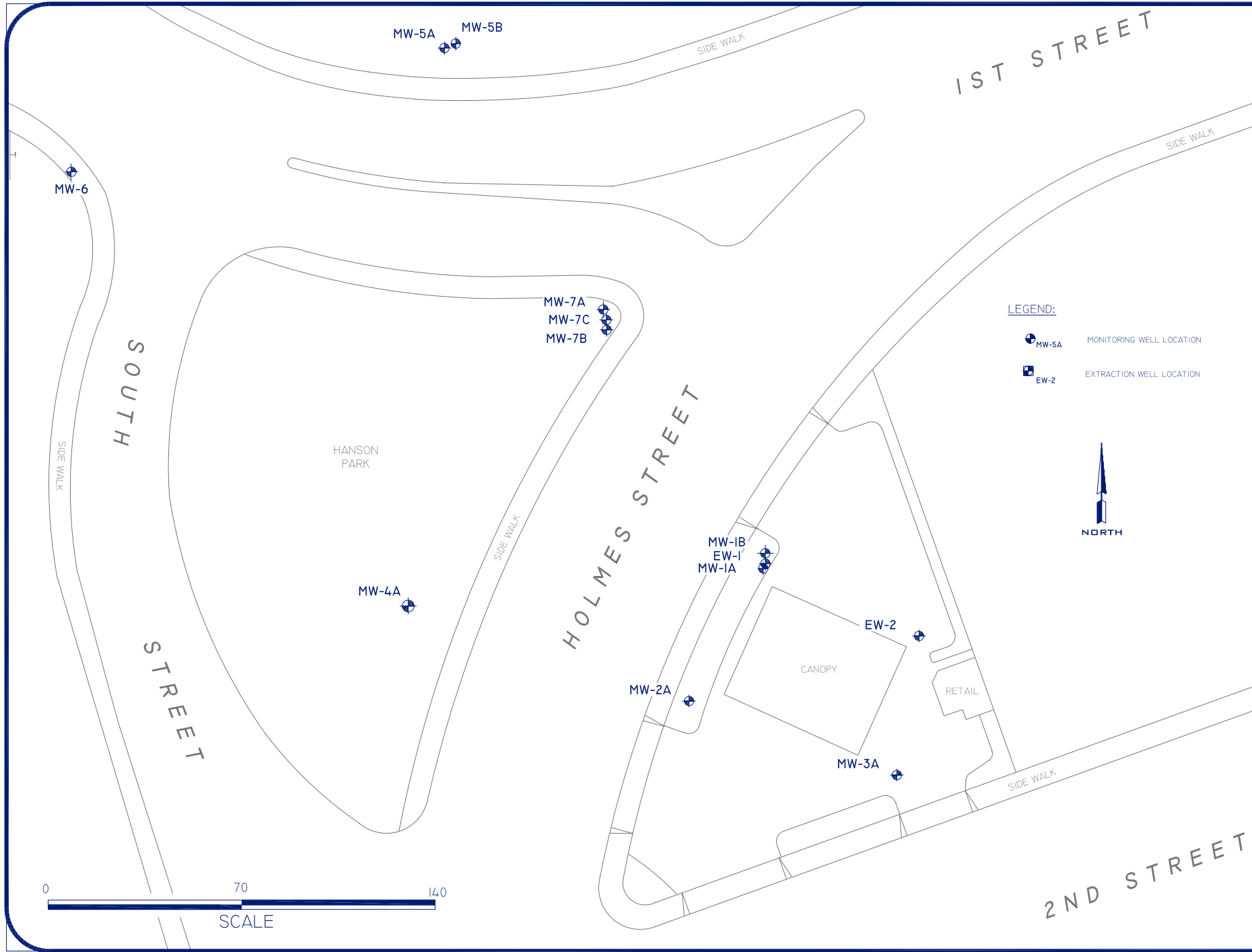
Figure 1

3/31/06

**ALLTERRA**  
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<http://www.allterraenv.com>



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AND REMEDIATION PROJECT**

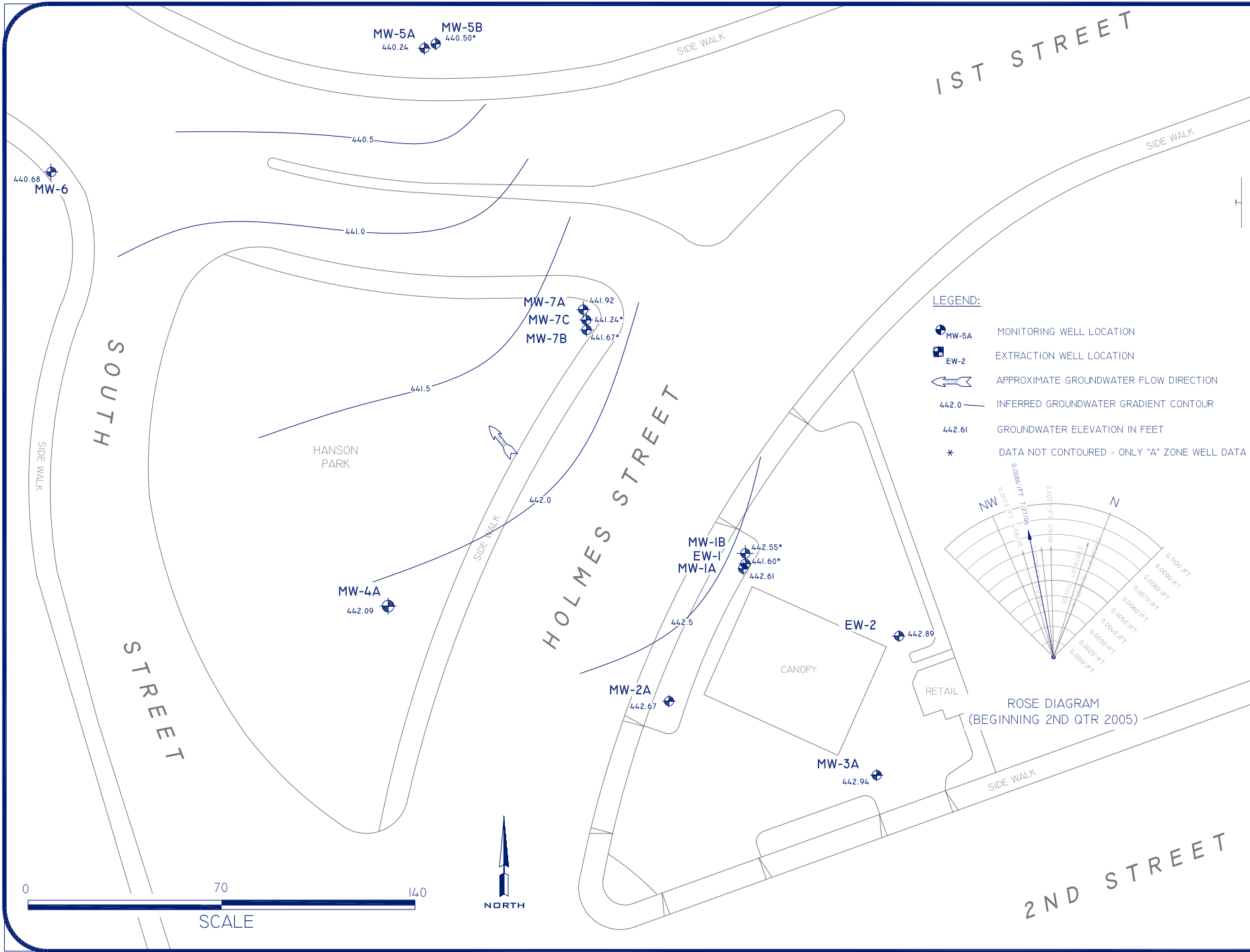


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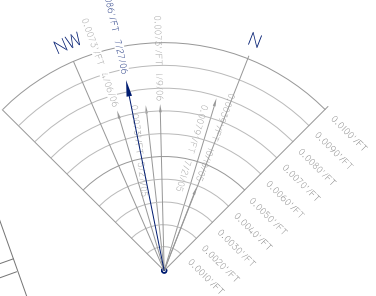
**Firm Name and Address**  
**ALLTERRA ENVIRONMENTAL, INC.**  
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**Sheet Name and Address**  
**SITE PLAN**  
 160 HOLMES STREET  
 LIVERMORE, CALIFORNIA

Project	Sheet
015-01-002	FIGURE 2
Date	8-28-06
Scale	SEE DRAWING



- LEGEND:**
- MW-5A MONITORING WELL LOCATION
  - EW-2 EXTRACTION WELL LOCATION
  - APPROXIMATE GROUNDWATER FLOW DIRECTION
  - 442.0 INFERRED GROUNDWATER GRADIENT CONTOUR
  - 442.61 GROUNDWATER ELEVATION IN FEET
  - \* DATA NOT CONTOURED - ONLY "A" ZONE WELL DATA



General Notes

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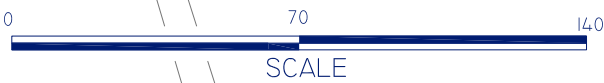
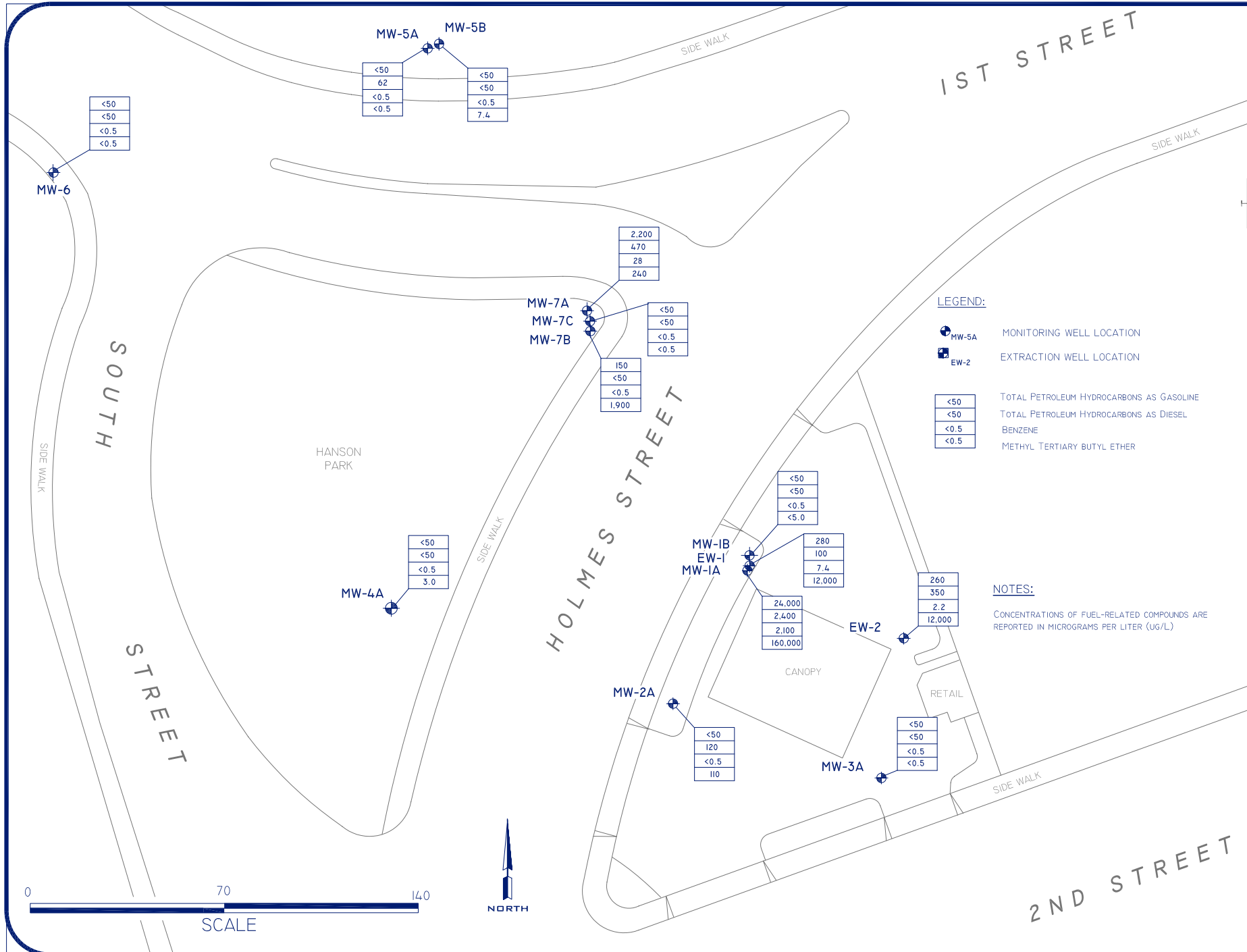
**GROUNDWATER POTENTIOMETRIC MAP FOR 7/27/06**

160 HOLMES STREET  
 LIVERMORE, CALIFORNIA

<small>Project</small> 015-01-002	<small>Sheet</small>
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General Notes

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160 HOLMES STREET  
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CONCENTRATION OF FUEL-RELATED HYDROCARBONS IN GROUNDWATER  
160 HOLMES STREET  
LIVERMORE, CALIFORNIA

Project	015-01-002	Sheet	FIGURE 4
Date	8-28-06		
Scale	SEE DRAWING		

## 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
	<b>7/27/06</b>	<b>465.03</b>		<b>22.42</b>	<b>442.61</b>
MW-1B**	4/6/06	465.02	50-55	15.59	449.43
	<b>7/27/06</b>	<b>465.02</b>		<b>22.47</b>	<b>442.55</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
	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
	<b>7/27/06</b>	<b>464.94</b>		<b>22.27</b>	<b>442.67</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-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		
MW-3A	4/6/06	465.84	15-30	16.02	449.82
	<b>7/27/06</b>	<b>465.84</b>		<b>22.90</b>	<b>442.94</b>
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
	<b>7/27/06</b>	<b>464.96</b>		<b>22.87</b>	<b>442.09</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-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		
MW-5A**	4/6/06	464.64	20-35	17.35	447.29
	<b>7/27/06</b>	<b>464.64</b>		<b>24.40</b>	<b>440.24</b>
MW-5B**	4/6/06	464.59	50-55	17.44	447.15
	<b>7/27/06</b>	<b>464.59</b>		<b>24.09</b>	<b>440.50</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
<b>7/27/06</b>	<b>464.13</b>	<b>23.45</b>	<b>440.68</b>		
MW-7A**	4/6/06	465.32	15-30	16.61	448.71
	<b>7/27/06</b>	<b>465.32</b>		<b>23.40</b>	<b>441.92</b>
MW-7B**	4/6/06	465.39	45-50	16.85	448.54
	<b>7/27/06</b>	<b>465.39</b>		<b>23.72</b>	<b>441.67</b>
MW-7C**	4/6/06	465.39	65-70	17.18	448.21
	<b>7/27/06</b>	<b>465.39</b>		<b>24.15</b>	<b>441.24</b>
EW-1**	4/6/06	465.45	15-40	15.99	449.46
	<b>7/27/06</b>	<b>465.45</b>		<b>23.85</b>	<b>441.60</b>
EW-2**	4/6/06	465.99	15-40	16.20	449.79
	<b>7/27/06</b>	<b>465.99</b>		<b>23.10</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)
EX-1***	11/14/01	465.30	30-55	33.41	431.89
	5/7/02	465.30		27.58	437.72
	9/11/02	465.30		NM	NC
	12/11/02	465.30		27.98	437.32
	3/14/03	465.30		23.02	442.28
	6/25/03	465.30		22.41	442.89
	9/16/03	465.30		24.65	440.65
	3/10/04	465.30		17.99	447.31
	6/15/04	465.30		22.48	442.82
	9/17/04	465.30		25.91	439.39
	12/10/04	465.30		NM	NC
	3/2/05	465.30		NM	NC
	5/27/05	465.30		18.68	446.62
	7/21/05	465.30		21.55	443.75
	10/10/05	465.30		22.73	442.57
	1/9/06	465.30		18.05	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 Hydrocarbonss (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-1A*	8/10/96	NC	170,000	57,000	6,400	7,600	4,200	9,700	320,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/18/96	443.09	170,000	17,000	8,400	3,200	2,700	10,000	200,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/21/97	442.12	82,000	11,000	5,100	1,000	13,000	8,700	190,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/29/97	NC	not sampled - well dry							NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/13/97	NC	not sampled - well dry							NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/6/98	NC	not sampled - well dry							NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/10/98	438.87	130,000	NA	7,700	1,100	4,500	1,500	<5000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/30/98	437.48	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/13/99	442.40	180,000	3,800	7,100	3,200	4,300	6,000	220,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/24/99	442.93	71,000	3,100	7,500	4,700	4,800	8,900	210,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/15/99	440.12	37,000	3,600	4,600	220	3,600	930	150,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/21/99	443.28	44,000	4,000	6,800	1,500	4,000	3,800	180,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/9/00	447.58	72,000	3,100	6,000	11,000	3,900	10,000	260,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/14/00	442.65	42,000	4,300	5,000	1,800	3,700	6,000	210,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/16/00	439.42	24,000	2,900	2,800	<33	2,900	500	83,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/9/00	442.85	31,000	2,700	4,600	190	4,400	2,800	200,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/1/01	448.08	58,000	2,800	4,000	2,500	4,500	7,800	230,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/26/01	446.61	79,000	4,600	4,300	6,200	5,100	13,000	240,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/20/01	443.65	80,000	NS	4,300	5,300	5,400	14,000	300,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/9/01	442.54	58,000	NS	4,300	240	5,600	8,300	170,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/8/02	446.98	47,000	3,700	3,100	1,100	4,400	5,900	180,000	<2,500	<25,000	<2,500	<2,500	240,000	<250,000	<2,500,000	<2,500	<2,500	
4/5/02	449.43	18,000	1,900	1,200	280	2,400	2,200	110,000	<2,500	<25,000	<2,500	<2,500	87,000	<250,000	<2,500,000	<2,500	<2,500	
<b>7/27/06</b>	<b>442.61</b>	<b>24,000</b>	<b>2,400</b>	<b>2,100</b>	<b>350</b>	<b>3,400</b>	<b>5,300</b>	<b>130,000</b>	<b>&lt;5000</b>	<b>&lt;50,000</b>	<b>&lt;5000</b>	<b>&lt;5000</b>	<b>160,000</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	
MW-1B	3/12/02	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	<0.5
	4/5/02	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	<0.5
	<b>7/27/06</b>	<b>442.55</b>	<b>&lt;50</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
MW- 2A*	8/10/96	NC	4,500	1,900	220	52	160	170	3,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/18/96	443.14	3,400	1,300	150	21	100	70	1,900	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/21/97	442.07	7,600	880	25	<10	69	25	2,200	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/29/97	NC	not sampled - well dry							NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/13/97	NC	not sampled - well dry							NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/6/98	438.24	400	86	5.4	<0.5	1.9	2.3	230	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/10/98	438.98	260	NA	1.3	<0.5	0.57	0.77	200	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/30/98	437.38	250	120	7.9	1.6	13	9.9	180	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/13/99	442.53	830	110	56	<0.5	<0.5	<1.0	1,200	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/24/99	442.97	260	180	0.92	2.9	3.1	8.1	2,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/15/99	440.24	420	260	3.6	3.4	5.2	2.4	1,300	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/21/99	443.36	240	120	0.82	3.1	7.8	3.9	1,400	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/9/00	447.63	280	210	9.4	4.2	14	11	1,400	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/14/00	442.76	150	150	2.1	2.4	2.2	1.3	1,500	NA	NA	NA	NA	NA	NA	NA	NA	NA	
9/16/00	439.50	61	70	<0.5	1.0	<0.5	<0.5	730	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 Hydrocarbonss (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* (cont.)	12/9/00	442.94	84	110	<0.5	1.2	<0.5	1.5	1,300	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/1/01	448.19	63	91	0.55	<0.5	0.63	0.51	1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/26/01	446.65	270	59	14	3.9	19	6.8	1,100	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/20/01	444.48	280	NS	8.6	2.5	17	2.5	1,500	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/9/01	442.64	<50	NS	<.5	<.5	<.5	<.5	680	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/8/02	447.27	1,700	890	4.4	1.3	120	18	530	<10	330	<10	<10	590	<1000	<10,000	<10	<10
	4/6/02	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
	<b>7/27/06</b>	<b>442.67</b>	<b>&lt;50</b>	<b>120</b>	<b>&lt;0.5</b>	<b>0.84</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>87</b>	<b>&lt;5.0</b>	<b>870</b>	<b>&lt;5.0</b>	<b>&lt;5.0</b>	<b>110</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
	MW- 3A*	8/10/96	NC	59	260	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA
10/18/96		443.39	<50	<65	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
2/21/97		442.33	<50	100	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
5/29/97		NC	not sampled - well dry							NA	NA	NA	NA	NA	NA	NA	NA	NA
11/13/97		NC	not sampled - well dry							NA	NA	NA	NA	NA	NA	NA	NA	NA
5/6/98		NC	not sampled - well dry							NA	NA	NA	NA	NA	NA	NA	NA	NA
9/10/98		439.23	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
11/30/98		437.66		NS						NA	NA	NA	NA	NA	NA	NA	NA	NA
3/13/99		442.80	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/24/99		443.25	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/15/99		440.51	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/21/99		443.47	<50	69	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/9/00		447.96	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
6/14/00		443.02	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
9/16/00		439.75	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
12/9/00		443.19	<50	<50	<0.5	<0.5	<0.5	<0.5	7.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/1/01		448.51	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
5/26/01		446.95	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
7/20/01		444.74	<50	NS	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
10/9/01		442.90	<50	NS	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/8/02	447.60	<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	
4/6/02	449.82	<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	
<b>7/27/06</b>	<b>442.94</b>	<b>&lt;50</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	
MW-4**	11/13/97	431.31	510	90	4.0	<0.5	<0.5	<0.5	14	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/6/98	438.40	150	<50	3.5	0.5	<0.5	<0.5	48	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/10/98	438.49	<50	NA	<0.5	<0.5	<0.5	<0.5	15	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/30/98	436.76	<50	<50	<0.5	<0.5	<0.5	<0.5	24	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/13/99	442.01	<50	<50	<0.5	<0.5	<0.5	<0.5	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/24/99	442.43	<50	<50	<0.5	<0.5	<0.5	<0.5	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/15/99	439.76	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/21/99	442.73	<50	69	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/9/00	446.95	<50	<50	<0.5	<0.5	<0.5	<0.5	37	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/14/00	442.20	<50	<50	<0.5	<0.5	<0.5	<0.5	7.4	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 Hydrocarbonss (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-4** (cont.)	9/16/00	439.03	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/9/00	442.42	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/1/01	447.55	<50	<50	<0.5	<0.5	<0.5	<0.5	14	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/26/01	446.01	<50	<50	<0.5	<0.5	<0.5	<0.5	9.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/20/01	443.90	<50	NS	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/9/01	442.30	<50	NS	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/8/02	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	3/12/02	445.87	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	0.70	<50	<500	<0.5	<0.5
	4/6/02	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
	<b>7/28/06</b>	<b>442.09</b>	<b>&lt;50</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>3.0</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
MW-5**	11/13/97	429.71	<50	<66	<0.5	<0.5	<0.5	<0.5	8.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/6/98	436.75	140	<50	<0.5	<0.5	<0.5	<0.5	110	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/10/98	436.66	<50	NA	<0.5	<0.5	<0.5	<0.5	6.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/30/98	435.15	73	<50	<0.5	<0.5	<0.5	<0.5	160	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/13/99	440.39	110	<50	<0.5	<0.5	<0.5	<0.5	170	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/24/99	440.64	<50	<50	<0.5	<0.5	<0.5	<0.5	89	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/15/99	437.82	630	<50	<0.5	3.5	<0.5	2.6	1500	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/21/99	440.97	<0.5	<50	<0.5	<0.5	<0.5	<0.5	630	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/9/00	445.43	57	<50	<0.5	<0.5	<0.5	<0.5	1100	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/14/00	440.45	<50	<50	<0.5	<0.5	<0.5	<0.5	750	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/16/00	436.97	<50	<50	<0.5	<0.5	<0.5	<0.5	780	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/9/00	440.72	<50	<50	<0.5	<0.5	<0.5	<0.5	120	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/1/01	446.09	<50	<50	<0.5	<0.5	<0.5	<0.5	320	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/26/01	444.50	<50	<50	<0.5	<0.5	<0.5	<0.5	120	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/20/01	442.10	<50	NS	<0.5	<0.5	<0.5	<0.5	97	NA	NA	NA	NA	NA	NA	NA	NA	NA
10/9/01	441.30	<50	NS	<0.5	<0.5	<0.5	<0.5	41	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1/8/02	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	3/12/02	444.48	<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
	4/6/02	447.29	<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
	<b>7/28/06</b>	<b>440.24</b>	<b>&lt;50</b>	<b>62</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
MW-5B	3/12/02	444.46	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	0.69	<50	<500	<0.5	<0.5
	4/6/02	447.15	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0	<0.5	<0.5	0.98	<50	<500	<0.5	<0.5
	<b>7/28/06</b>	<b>440.50</b>	<b>&lt;50</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>6.8</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>7.4</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
MW-6	11/13/97	430.25	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/6/98	437.12	<50	<67	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/10/98	437.10	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/10/98	435.36	<50	<50	<0.5	<0.5	<0.5	<0.5	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/13/99	440.67	<50	<50	<0.5	<0.5	<0.5	<1.0	<1.0	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 Hydrocarbonss (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 (cont.)	6/24/99	441.05	<50	<50	<0.5	<0.5	<0.5	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/15/99	438.36	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/21/99	441.54	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/9/00	445.48	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/14/00	440.82	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/16/00	437.57	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/9/00	441.04	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/1/01	446.09	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/26/01	444.56	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/20/01	442.53	<50	NS	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10/9/01	441.92	<50	NS	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
	1/8/02	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
	4/6/02	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
	<b>7/28/06</b>	<b>440.68</b>	<b>&lt;50</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
MW-7A	3/12/02	445.85	6,200	1,800	140	21	200	560	6,900	<100	4400	<100	<100	6,300	<10,000	<100,000	<100	<100
	4/6/02	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
	<b>7/28/06</b>	<b>441.92</b>	<b>2,200</b>	<b>470</b>	<b>28</b>	<b>18</b>	<b>60</b>	<b>0.85</b>	<b>240</b>	<b>&lt;25</b>	<b>4,700</b>	<b>&lt;25</b>	<b>&lt;25</b>	<b>240</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
MW-7B	3/12/02	445.64	230	<50	1.8	4.7	<0.5	2.2	1,500	<50	7300	<50	<50	1,300	<5,000	<50,000	<50	<50
	4/6/02	448.54	81	<50	1.9	1.6	1.1	0.58	1,000	<50	9,200	<50	<50	930	<5,000	<50,000	<50	<50
	<b>7/28/06</b>	<b>441.67</b>	<b>150</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>1.9</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>1,500</b>	<b>&lt;50</b>	<b>16,000</b>	<b>&lt;50</b>	<b>&lt;50</b>	<b>1,900</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
MW-7C	3/12/02	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
	4/6/02	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
	<b>7/28/06</b>	<b>441.24</b>	<b>&lt;50</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
EX-1**	11/13/97	431.89	13,000	2,000	180	1,000	330	3,200	2,200	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/6/98	437.72	7,700	560	320	<25	66	150	6,200	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/10/98	NC	2,800	NA	32	<13	14	<13	2,500	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/10/98	437.32	3,000	100	81	<0.5	44	<1.0	4,800	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/13/99	442.28	750	50	<0.5	<0.5	7.7	13	1,200	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/24/99	442.89	120	<50	3.2	3.7	4.2	7.6	260	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/15/99	440.65	170	<50	0.5	1.5	<0.5	0.9	1,600	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/9/00	447.31	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
	6/14/00	442.82	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/16/00	439.39	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/9/00	NC	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/1/01	NC	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
	5/26/01	446.62	NS	NS	NS	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA
	7/20/01	443.75	<50	NS	<0.5	<0.5	<0.5	<0.5	610	NA	NA	NA	NA	NA	NA	NA	NA	NA
10/9/01	442.57	<50	NS	<0.5	<0.5	<0.5	<0.5	31	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1/8/02	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 Hydrocarbonss (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
EW-1	3/12/02	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
	4/6/02	449.46	1,900	190	66	170	110	380	7,900	<100	<1000	<100	<100	6,400	<10,000	<100,000	<100	<100
	<b>7/27/06</b>	<b>441.60</b>	<b>280</b>	<b>100</b>	<b>7.4</b>	<b>5.5</b>	<b>12</b>	<b>28</b>	<b>8,400</b>	<b>&lt;500</b>	<b>&lt;5000</b>	<b>&lt;500</b>	<b>&lt;500</b>	<b>12,000</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
EW-2	3/12/02	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
	4/6/02	449.79	470	160	15	2.5	24	13	2,000	<50	<500	<50	<50	1,800	<5,000	<50,000	<50	<50
	<b>7/27/06</b>	<b>442.89</b>	<b>260</b>	<b>350</b>	<b>2.2</b>	<b>1.7</b>	<b>6.1</b>	<b>3.0</b>	<b>8,700</b>	<b>&lt;500</b>	<b>&lt;5000</b>	<b>&lt;500</b>	<b>&lt;500</b>	<b>12,000</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>

**Notes:**  
 Samples analyzed for TPHg and TPHd 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  
 NA = Not Analyzed  
 EDB = 1,2-Dibromoether  
 NS = Not Sampled  
 1,2-DCA = 1,2-Dichloroethane  
 \*\* = Well destroyed in February 2006  
 \* = Well MW-1 renamed MW-1A, well MW-2 renamed MW-2A, Well MW-3 renamed MW-3A in February 2006

MTBE = methyl tertiary butyl ether  
 DIPE =Di-isoprpopyl Ether  
 ETBE = Ethyl tert-Butyl Ether  
 TAME - tert-Amyl Methyl Ether  
 TBA = tert-Butanol

**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 7-28-06

Project Number

Field Personnel DL/EN

#### Monitoring Well Information

Monitoring Well ID ~~MW-4a~~

Monitoring Well Diameter (inches) 2"

Depth to Water (feet) 22.87'

Water Column (feet) 2.13

Total Depth (feet) 25'

80% Recharge Depth (feet)

Depth to Product (feet)

1 Well Volume (gallons) .34

Comments

#### Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
	22.87'	.34	<del>538 NS</del>	22.5°C	7.85	High	Bm.	n/a
			540 NS	23.2°C	7.45	(	(	(
			503 NS	21.6°C	7.34	(	(	(

Total Purge Volume

Comments

#### Groundwater Sampling Information

Sample ID MW-4a

Sample Time 1:30

Sample Containers (Number/Type) 4 vials / 1 L

Comments

### Groundwater Sampling Field Log

Site Address 160 Holmes

Date 7-28-06

Project Number

Field Personnel DL/EN

#### Monitoring Well Information

Monitoring Well ID MW-5a

Monitoring Well Diameter (inches) 2"

Depth to Water (feet) 24.40'

Water Column (feet) .60'

Total Depth (feet) 25'

80% Recharge Depth (feet)

Depth to Product (feet)

1 Well Volume (gallons) .10

Comments

#### Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
11:28	24.4'	.10	710 NS	22.1°C	7.85	low	n/a	n/a
			710 NS	22.1°C	7.78			
			710 NS	22.4°C	7.73			

Total Purge Volume

Comments

#### Groundwater Sampling Information

Sample ID MW-5a

Sample Time 11:28

Sample Containers (Number/Type) 4 vials / 1 L

Comments

# ALTERRA

## Groundwater Sampling Field Log

Site Address 160 Holmes Date 7-28-06  
Project Number \_\_\_\_\_ Field Personnel DL/EN

### Monitoring Well Information

Monitoring Well ID MW-5b Monitoring Well Diameter (inches) 2"  
Depth to Water (feet) 24.09 Water Column (feet) 30.91  
Total Depth (feet) 55' 80% Recharge Depth (feet) \_\_\_\_\_  
Depth to Product (feet) \_\_\_\_\_ 1 Well Volume (gallons) 4.95  
Comments \_\_\_\_\_

### Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
<u>1:08</u>	<u>24.09</u>	<u>4.45</u>	<u>1130NS</u>	<u>21.9°C</u>	<u>7.35</u>	<u>Med</u>	<u>brn.</u>	<u>n/a</u>
<u>1</u>	<u>1</u>	<u>1</u>	<u>1120</u>	<u>22.1°C</u>	<u>7.18</u>	<u>High</u>	<u>1</u>	<u>1</u>
			<u>1117</u>	<u>21.7°C</u>	<u>7.18</u>	<u>very high</u>		

Total Purge Volume \_\_\_\_\_ Comments \_\_\_\_\_

### Groundwater Sampling Information

Sample ID MW-5b Sample Time 1:08  
Sample Containers (Number/Type) 4 vials, 1 L  
Comments \_\_\_\_\_

## Groundwater Sampling Field Log

Site Address 160 Holmes Date 7-28-06  
Project Number \_\_\_\_\_ Field Personnel DL/EN

### Monitoring Well Information

Monitoring Well ID MW-6 Monitoring Well Diameter (inches) 2"  
Depth to Water (feet) 23.45' Water Column (feet) 1.55  
Total Depth (feet) 25' 80% Recharge Depth (feet) \_\_\_\_\_  
Depth to Product (feet) \_\_\_\_\_ 1 Well Volume (gallons) .25  
Comments \_\_\_\_\_

### Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
<u>11:00</u>	<u>23.45</u>	<u>.25</u>	<u>945</u>	<u>20.7°C</u>	<u>7.11</u>	<u>Med</u>	<u>Brown</u>	<u>n/a</u>
	<u>1</u>	<u>1</u>	<u>947</u>	<u>20.7°C</u>	<u>7.12</u>	<u>1</u>	<u>1</u>	<u>1</u>
			<u>950</u>	<u>21.3°C</u>	<u>7.11</u>			

Total Purge Volume \_\_\_\_\_ Comments \_\_\_\_\_

### Groundwater Sampling Information

Sample ID MW-6 Sample Time 11:00  
Sample Containers (Number/Type) 4 vials / 1 L  
Comments \_\_\_\_\_



# ALTERRA

## Groundwater Sampling Field Log

Site Address 160 Holmes

Date 7-27-06

Project Number

Field Personnel EA DL

### Monitoring Well Information

Monitoring Well ID EW-2

Monitoring Well Diameter (inches) 4.0

Depth to Water (feet) 23.10

Water Column (feet) 16.90

Total Depth (feet) 40.0

80% Recharge Depth (feet)

Depth to Product (feet)

1 Well Volume (gallons) 11.83

Comments

### Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
			1305uS	20.0°C	7.47	high	brown	low
			1110uS	19.9°C	7.29			
			927uS	19.6°C	7.21			

Total Purge Volume

Comments

### Groundwater Sampling Information

Sample ID EW-2

Sample Time

1:00

Sample Containers (Number/Type) 4 vials / 1 amber

Comments

## Groundwater Sampling Field Log

Site Address 160 Holmes

Date 7-27-06

Project Number

Field Personnel JR DL

### Monitoring Well Information

Monitoring Well ID MW-1a

Monitoring Well Diameter (inches) 3"

Depth to Water (feet) 22.42

Water Column (feet)

Total Depth (feet) 30'

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
			1280uS	21.8°C	6.86	med.	brown	low
			1209uS	22.0°C	6.76			
			1142uS	22.0°C	6.77			

Total Purge Volume

Comments

### Groundwater Sampling Information

Sample ID MW-1a

Sample Time

1:30

Sample Containers (Number/Type) 4 vials / 1 L

Comments

# ALTERRA

## Groundwater Sampling Field Log

Site Address 160 Holmes Date 7-27-06  
Project Number \_\_\_\_\_ Field Personnel EA/OL

### Monitoring Well Information

Monitoring Well ID MW-2A Monitoring Well Diameter (inches) 2.0  
Depth to Water (feet) 22.27 Water Column (feet) 2.63  
Total Depth (feet) 25.0 80% Recharge Depth (feet) \_\_\_\_\_  
Depth to Product (feet) \_\_\_\_\_ 1 Well Volume (gallons) .45  
Comments \_\_\_\_\_

### Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
	<u>22.27</u>	<u>.45</u>	<u>983<math>\mu</math>S</u>	<u>24.1<math>^{\circ}</math>C</u>	<u>7.31</u>	<u>high</u>	<u>brn</u>	<u>none</u>
			<u>982<math>\mu</math>S</u>	<u>22.8<math>^{\circ}</math>C</u>	<u>7.26</u>			
			<u>971<math>\mu</math>S</u>	<u>23.4<math>^{\circ}</math></u>	<u>7.11</u>			

Total Purge Volume \_\_\_\_\_ Comments \_\_\_\_\_

### Groundwater Sampling Information

Sample ID \_\_\_\_\_ Sample Time \_\_\_\_\_  
Sample Containers (Number/Type) \_\_\_\_\_  
Comments \_\_\_\_\_

## Groundwater Sampling Field Log

Site Address 160 Holmes Date 7-27-06  
Project Number \_\_\_\_\_ Field Personnel DL, EA

### Monitoring Well Information

Monitoring Well ID MW-3a Monitoring Well Diameter (inches) 2"  
Depth to Water (feet) 22.90 Water Column (feet) 2.1  
Total Depth (feet) 25' 80% Recharge Depth (feet) \_\_\_\_\_  
Depth to Product (feet) \_\_\_\_\_ 1 Well Volume (gallons) .34  
Comments \_\_\_\_\_

### Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
			<u>778<math>\mu</math>S</u>	<u>21.8<math>^{\circ}</math>C</u>	<u>7.13</u>	<u>med</u>	<u>brn</u>	<u>low</u>
			<u>776<math>\mu</math>S</u>	<u>21.2<math>^{\circ}</math>C</u>	<u>7.11</u>			
			<u>810<math>\mu</math>S</u>	<u>21.0<math>^{\circ}</math>C</u>	<u>7.07</u>			

Total Purge Volume \_\_\_\_\_ Comments \_\_\_\_\_

### Groundwater Sampling Information

Sample ID MW-3a Sample Time 2:15  
Sample Containers (Number/Type) 4 vials, 1L  
Comments \_\_\_\_\_

# ALTERRA

## Groundwater Sampling Field Log

Site Address 160 Holmer Date 7.27.06  
Project Number \_\_\_\_\_ Field Personnel CA, DL

### Monitoring Well Information

Monitoring Well ID EW-1 Monitoring Well Diameter (inches) 4.0  
Depth to Water (feet) 23.85 Water Column (feet) 16.15  
Total Depth (feet) 40.0 80% Recharge Depth (feet) \_\_\_\_\_  
Depth to Product (feet) \_\_\_\_\_ 1 Well Volume (gallons) 11.38  
Comments \_\_\_\_\_

### Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
	<u>23.85</u>	<u>11.38</u>	<u>807us</u>	<u>19.5°C</u>	<u>7.26</u>	<u>high</u>	<u>brn</u>	<u>moderate</u>
	<u>1</u>	<u>1</u>	<u>812us</u>	<u>19.7°C</u>	<u>7.24</u>	<u>1</u>	<u>1</u>	<u>1</u>
			<u>815us</u>	<u>19.7°C</u>	<u>7.23</u>			

Total Purge Volume \_\_\_\_\_ Comments \_\_\_\_\_

### Groundwater Sampling Information

Sample ID ~~ML-1B~~ EW-1 Sample Time \_\_\_\_\_  
Sample Containers (Number/Type) 4 Vac / Amber  
Comments \_\_\_\_\_

## Groundwater Sampling Field Log

Site Address 160 Holmes Date \_\_\_\_\_  
Project Number \_\_\_\_\_ Field Personnel \_\_\_\_\_

### Monitoring Well Information

Monitoring Well ID MW-1B Monitoring Well Diameter (inches) 2.0  
Depth to Water (feet) 22.47 Water Column (feet) 32.57  
Total Depth (feet) 55.0 80% Recharge Depth (feet) \_\_\_\_\_  
Depth to Product (feet) \_\_\_\_\_ 1 Well Volume (gallons) 5.53  
Comments \_\_\_\_\_

### Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
	<u>22.47</u>	<u>5.53</u>	<u>694us</u>	<u>20.3°C</u>	<u>7.88</u>	<u>moderate</u>	<u>brn</u>	<u>weak</u>
	<u>1</u>	<u>1</u>	<u>703us</u>	<u>20.2°C</u>	<u>7.82</u>	<u>1</u>	<u>1</u>	<u>1</u>
			<u>702us</u>	<u>19.9°C</u>	<u>7.79</u>			

Total Purge Volume \_\_\_\_\_ Comments \_\_\_\_\_

### Groundwater Sampling Information

Sample ID MW-1B Sample Time \_\_\_\_\_  
Sample Containers (Number/Type) 4 Vac / Amber  
Comments \_\_\_\_\_

# ALTERRA

## Groundwater Sampling Field Log

Site Address 160 Holmes Date 7-28-06  
Project Number \_\_\_\_\_ Field Personnel DL/EN

### Monitoring Well Information

Monitoring Well ID MW-7a Monitoring Well Diameter (inches) 2"  
Depth to Water (feet) 23.40' Water Column (feet) 1.60'  
Total Depth (feet) 25' 80% Recharge Depth (feet) \_\_\_\_\_  
Depth to Product (feet) \_\_\_\_\_ 1 Well Volume (gallons) .26  
Comments \_\_\_\_\_

### Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
			915 $\mu$ S	21.6°C	7.27	high	grey	low
			852 $\mu$ S	21.0°C	7.15			
			913 $\mu$ S	21.1°C	7.08			

Total Purge Volume \_\_\_\_\_ Comments \_\_\_\_\_

### Groundwater Sampling Information

Sample ID MW-7a Sample Time 11:00  
Sample Containers (Number/Type) 4 Vials / 1 L  
Comments \_\_\_\_\_

## Groundwater Sampling Field Log

Site Address 160 Holmes Date 7-28-06  
Project Number \_\_\_\_\_ Field Personnel DL/EN

### Monitoring Well Information

Monitoring Well ID MW-7b Monitoring Well Diameter (inches) 2"  
Depth to Water (feet) 23.72 Water Column (feet) 31.28  
Total Depth (feet) 55' 80% Recharge Depth (feet) \_\_\_\_\_  
Depth to Product (feet) \_\_\_\_\_ 1 Well Volume (gallons) 5.00  
Comments \_\_\_\_\_

### Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
			885 $\mu$ S	21.8°C	7.22	med	low	low
			925 $\mu$ S	21.0°C	7.20			
			874 $\mu$ S	21.0°C	7.20			

Total Purge Volume \_\_\_\_\_ Comments \_\_\_\_\_

### Groundwater Sampling Information

Sample ID MW-7b Sample Time 1:20  
Sample Containers (Number/Type) 4 Vials / 1 L  
Comments \_\_\_\_\_



### Groundwater Sampling Field Log

Site Address 160 Holmes

Date 7-28-06

Project Number

Field Personnel DL/EN

#### Monitoring Well Information

Monitoring Well ID MW-7c

Monitoring Well Diameter (inches) 2"

Depth to Water (feet) 24.15'

Water Column (feet) 45.85

Total Depth (feet) 70'

80% Recharge Depth (feet)

Depth to Product (feet)

1 Well Volume (gallons) 7.34

Comments

#### Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
	24.15'	7.34	349	20.4	8.18	10W	Grey/Br.	N/A
			601	20.4	7.81			
			689	20.0	7.7			

Total Purge Volume

Comments

#### Groundwater Sampling Information

Sample ID MW-7c

Sample Time 11:30

Sample Containers (Number/Type) 4 Vials / 1 L

Comments

### Groundwater Sampling Field Log

Site Address

Date

Project Number

Field Personnel

#### Monitoring Well Information

Monitoring Well ID

Monitoring Well Diameter (inches)

Depth to Water (feet)

Water Column (feet)

Total Depth (feet)

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

Total Purge Volume

Comments

#### Groundwater Sampling Information

Sample ID

Sample Time

Sample Containers (Number/Type)

Comments

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





**McC Campbell Analytical, Inc.**

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.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: #015-01-160; 160 Holmes	Date Sampled: 07/27/06
		Date Received: 08/01/06
	Client Contact: James Allen	Date Reported: 08/07/06
	Client P.O.:	Date Completed: 08/08/06

**WorkOrder: 0608014**

August 08, 2006

Dear James:

Enclosed are:

- 1). the results of **13** analyzed samples from your **#015-01-160; 160 Holmes project**,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill 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 please contact me. McC Campbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager



849 Almar Avenue, Suite C, #281

Website; www.allterraenv.com

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

Report and Bill to: Allterra Environmental, Inc.

Project Number: 015-01-160

Project Location: Livermoore

Project Name: 160 Holmes

Sampler Signature: *[Signature]*

VADUIT

### Chain of Custody Record

Turn Around Time (circle one) RUSH 24HR 48HR 72HR **5 Day**

Sample ID	Sample Collection		Sample Containers		Matrix					Preservation				TPHg, BTEX&MTBE (EPA 8015/8021)	TPHd, (EPA 8015)	MTBE (EPA 8260B)	5 -fuel olys (EPA 8260)	Ethanol and Methanol (EPA 8760)	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)	Turbidity	EDF required	
	Date	Time	Number of Containers	Container Type	Air	Water	Soil	Sludge	Other	Ice	HCl	HNO <sub>3</sub>	Other																
MW-1A	7/27/06		(4)/(1)	voas/1 L		x				x	x			x	x		x											x	x
MW-1B	7/27/06		(4)/(1)	voas/1 L		x				x	x			x	x		x											x	x
MW-2A	7/27/06		(4)/(1)	voas/1 L		x				x	x			x	x		x											x	x
MW-3A	7/27/06		(4)/(1)	voas/1 L		x				x	x			x	x		x											x	x
MW-4A	7/28/06		(4)/(1)	voas/1 L		x				x	x			x	x		x											x	x
MW-5A	7/28/06		(4)/(1)	voas/1 L		x				x	x			x	x		x											x	x
MW-5B	7/28/06		(4)/(1)	voas/1 L		x				x	x			x	x		x											x	x
MW-6	7/28/06		(4)/(1)	voas/1 L		x				x	x			x	x		x											x	x
MW-7A	7/28/06		(4)/(1)	voas/1 L		x				x	x			x	x		x											x	x
MW-7B	7/28/06		(4)/(1)	voas/1 L		x				x	x			x	x		x											x	x
MW-7C	7/28/06		(4)/(1)	voas/1 L		x				x	x			x	x		x											x	x
EW-1	7/27/06		(4)/(1)	voas/1 L		x				x	x			x	x		x											x	x
EW-2	7/27/06		(4)/(1)	voas/1 L		x				x	x			x	x		x											x	x

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Received By: <i>[Signature]</i>	Date: 7/31/06	Time:	Received By:
Received By: <i>[Signature]</i>	Date: 8/1/06	Time: 930	Received By: <i>[Signature]</i>
Received By:	Date:	Time:	Received By:

Comments:

ICE/°

GOOD CONDITION  APPROPRIATE CONTAINERS

HEAD SPACE ABSENT  PRESERVED IN LAB

DECHLORINATED IN LAB

PRESERVATION  VOAS  O&G  METALS  OTHER

REC'D SEALED & INTACT VIA *Calovernight*

# McC Campbell Analytical, Inc.



1534 Willow Pass Rd  
 Pittsburg, CA 94565-1701  
 (925) 252-9262

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 0608014

ClientID: ATRS

EDF: YES

Report to:  
 James Allen  
 Allterra Environmental, Inc  
 849 Almar Ave, Ste. C #281  
 Santa Cruz, CA 95060

Email:  
 TEL: 831-425-2608 FAX: 831-425-2609  
 ProjectNo: #015-01-160; 160 Holmes  
 PO:

Bill to:  
 Accounts Payable  
 Allterra Environmental  
 849 Almar Ave, Ste. C #281  
 Santa Cruz, CA 95060

Requested TAT: 5 days  
 Date Received: 08/01/2006  
 Date Printed: 08/01/2006

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
0608014-001	MW-1A	Water	7/27/06	<input type="checkbox"/>	C	A	A	B									
0608014-002	MW-1B	Water	7/27/06	<input type="checkbox"/>	C	A		B									
0608014-003	MW-2A	Water	7/27/06	<input type="checkbox"/>	C	A		B									
0608014-004	MW-3A	Water	7/27/06	<input type="checkbox"/>	C	A		B									
0608014-005	MW-4A	Water	7/28/06	<input type="checkbox"/>	C	A		B									
0608014-006	MW-5A	Water	7/28/06	<input type="checkbox"/>	C	A		B									
0608014-007	MW-5B	Water	7/28/06	<input type="checkbox"/>	C	A		B									
0608014-008	MW-6	Water	7/28/06	<input type="checkbox"/>	C	A		B									
0608014-009	MW-7A	Water	7/28/06	<input type="checkbox"/>	C	A		B									
0608014-010	MW-7B	Water	7/28/06	<input type="checkbox"/>	C	A		B									
0608014-011	MW-7C	Water	7/28/06	<input type="checkbox"/>	C	A		B									
0608014-012	EW-1	Water	7/27/06	<input type="checkbox"/>	C	A		B									
0608014-013	EW-2	Water	7/27/06	<input type="checkbox"/>	C	A		B									

**Test Legend:**

1	5-OXYS_W	2	G-MBTEX_W	3	PREDF REPORT	4	TPH(D)_W	5	
6		7		8		9		10	
11		12							

Prepared by: Melissa Valles

**Comments:**

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. 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

Allterra Environmental, Inc 849 Almar Ave, Ste. C #281 Santa Cruz, CA 95060	Client Project ID: #015-01-160; 160 Holmes	Date Sampled: 07/27/06-07/28/06
	Client Contact: James Allen	Date Received: 08/01/06
	Client P.O.	Date Extracted 08/02/06-08/04/06
		Date Analyzed: 08/02/06-08/04/06

### Oxygenated Volatile Organics by P&T and GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0608014

Lab ID	0608014-001C	0608014-002C	0608014-003C	0608014-004C	Reporting Limit for DF = 1	
Client ID	MW-1A	MW-1B	MW-2A	MW-3A		
Matrix	W	W	W	W		
DF	10000	1	10	1		

Compound	Concentration				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND<5000	ND	ND<5.0	ND	NA	0.5
t-Butyl alcohol (TBA)	ND<50,000	ND	870	ND	NA	5.0
Diisopropyl ether (DIPE)	ND<5000	ND	ND<5.0	ND	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND<5000	ND	ND<5.0	ND	NA	0.5
Methyl-t-butyl ether (MTBE)	160,000	ND	110	ND	NA	0.5

### Surrogate Recoveries (%)

%SS1:	108	109	106	111	
Comments	i		i	i	

\* 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 surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



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	Client Contact: James Allen	Date Received: 08/01/06
	Client P.O.	Date Extracted 08/02/06-08/04/06
		Date Analyzed: 08/02/06-08/04/06

### Oxygenated Volatile Organics by P&T and GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0608014

Lab ID	0608014-005C	0608014-006C	0608014-007C	0608014-008C	Reporting Limit for DF=1	
Client ID	MW-4A	MW-5A	MW-5B	MW-6		
Matrix	W	W	W	W		
DF	1	1	1	1		

Compound	Concentration				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND	ND	ND	NA	0.5
t-Butyl alcohol (TBA)	ND	ND	ND	ND	NA	5.0
Diisopropyl ether (DIPE)	ND	ND	ND	ND	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND	ND	ND	NA	0.5
Methyl-t-butyl ether (MTBE)	3.0	ND	7.4	ND	NA	0.5

### Surrogate Recoveries (%)

%SS1:	111	109	111	114	
Comments	i		i		

\* 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 surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



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Allterra Environmental, Inc 849 Almar Ave, Ste. C #281 Santa Cruz, CA 95060	Client Project ID: #015-01-160; 160 Holmes	Date Sampled: 07/27/06-07/28/06
	Client Contact: James Allen	Date Received: 08/01/06
	Client P.O.	Date Extracted 08/02/06-08/04/06
		Date Analyzed: 08/02/06-08/04/06

### Oxygenated Volatile Organics by P&T and GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0608014

Lab ID	0608014-009C	0608014-010C	0608014-011C	0608014-012C	Reporting Limit for DF = 1	
Client ID	MW-7A	MW-7B	MW-7C	EW-1		
Matrix	W	W	W	W		
DF	50	100	1	1000		

Compound	Concentration				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND<25	ND<50	ND	ND<500	NA	0.5
t-Butyl alcohol (TBA)	4700	16,000	ND	ND<5000	NA	5.0
Diisopropyl ether (DIPE)	ND<25	ND<50	ND	ND<500	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND<25	ND<50	ND	ND<500	NA	0.5
Methyl-t-butyl ether (MTBE)	240	1900	ND	12,000	NA	0.5

### Surrogate Recoveries (%)

%SS1:	104	109	114	100	
Comments	i			i	

\* 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 surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.





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Allterra Environmental, Inc 849 Almar Ave, Ste. C #281 Santa Cruz, CA 95060	Client Project ID: #015-01-160; 160 Holmes	Date Sampled: 07/27/06-07/28/06
	Client Contact: James Allen	Date Received: 08/01/06
	Client P.O.	Date Extracted 08/02/06-08/04/06
		Date Analyzed: 08/02/06-08/04/06

### Oxygenated Volatile Organics by P&T and GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0608014

Lab ID	0608014-013C				Reporting Limit for DF = 1
Client ID	EW-2				
Matrix	W				
DF	1000				

Compound	Concentration				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND<500				NA	0.5
t-Butyl alcohol (TBA)	ND<5000				NA	5.0
Diisopropyl ether (DIPE)	ND<500				NA	0.5
Ethyl tert-butyl ether (ETBE)	ND<500				NA	0.5
Methyl-t-butyl ether (MTBE)	12,000				NA	0.5

### Surrogate Recoveries (%)

%SS1:	108				
Comments	i				

\* 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 surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



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Allterra Environmental, Inc 849 Almar Ave, Ste. C #281 Santa Cruz, CA 95060	Client Project ID: #015-01-160; 160 Holmes	Date Sampled: 07/27/06-07/28/06
		Date Received: 08/01/06
	Client Contact: James Allen	Date Extracted: 08/04/06-08/05/06
	Client P.O.:	Date Analyzed 08/04/06-08/05/06

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

Extraction method SW5030B

Analytical methods SW8021B/8015Cm

Work Order: 0608014

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1A	W	24,000,a,i	130,000	2100	350	3400	5300	200	114
002A	MW-1B	W	ND	ND	ND	ND	ND	ND	1	108
003A	MW-2A	W	ND,i	87	ND	0.84	ND	ND	1	114
004A	MW-3A	W	ND,i	ND	ND	ND	ND	ND	1	111
005A	MW-4A	W	ND,i	ND	ND	ND	ND	ND	1	110
006A	MW-5A	W	ND	ND	ND	ND	ND	ND	1	111
007A	MW-5B	W	ND,i	6.8	ND	ND	ND	ND	1	98
008A	MW-6	W	ND	ND	ND	ND	ND	ND	1	100
009A	MW-7A	W	2200,a,i	240	28	18	60	0.85	1	94
010A	MW-7B	W	150,m	1500	ND	1.9	ND	ND	1	119
011A	MW-7C	W	ND	ND	ND	ND	ND	ND	1	99
012A	EW-1	W	280,a,i	8400	7.4	5.5	12	28	1	99
013A	EW-2	W	260,a,i	8700	2.2	1.7	6.1	3.0	1	103

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
	S	NA	NA	NA	NA	NA	NA	1	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 McC Campbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request; p) see attached narrative.



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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: #015-01-160; 160 Holmes	Date Sampled: 07/27/06-07/28/06
	Client Contact: James Allen	Date Received: 08/01/06
	Client P.O.	Date Analyzed 08/01/06-08/04/06
		Date Extracted 08/01/06

### Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel\*

Extraction method: SW3510C

Analytical methods: SW8015C

Work Order: 0608014

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0608014-001B	MW-1A	W	2400,d,i	1	101
0608014-002B	MW-1B	W	ND	1	106
0608014-003B	MW-2A	W	120,b,i	1	94
0608014-004B	MW-3A	W	ND,i	1	94
0608014-005B	MW-4A	W	ND,i	1	90
0608014-006B	MW-5A	W	62,f	1	94
0608014-007B	MW-5B	W	ND,i	1	96
0608014-008B	MW-6	W	ND	1	95
0608014-009B	MW-7A	W	470,d,i	1	98
0608014-010B	MW-7B	W	ND	1	94
0608014-011B	MW-7C	W	ND	1	95
0608014-012B	EW-1	W	100,d,i	1	96
0608014-013B	EW-2	W	350,d,i	1	94

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 McC Campbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant; d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range/jet fuel range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.



**QC SUMMARY REPORT FOR SW8260B**

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0608014

EPA Method: SW8260B		Extraction: SW5030B			BatchID: 22943			Spiked Sample ID: 0607556-010B		
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	LCS / LCSD
tert-Amyl methyl ether (TAME)	ND<500	10	87.8	94.8	7.67	116	117	1.50	70 - 130	70 - 130
t-Butyl alcohol (TBA)	ND<5000	50	85.1	81.2	4.74	93.7	97.9	4.36	70 - 130	70 - 130
Diisopropyl ether (DIPE)	ND<500	10	108	111	2.08	130	130	0	70 - 130	70 - 130
Ethyl tert-butyl ether (ETBE)	ND<500	10	97.1	98.9	1.77	122	124	1.64	70 - 130	70 - 130
Methyl-t-butyl ether (MTBE)	ND<500	10	99.4	101	1.97	123	124	1.07	70 - 130	70 - 130
%SS1:	95	10	98	99	0.736	99	98	1.24	70 - 130	70 - 130

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

BATCH 22943 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0608014-001C	7/27/06	8/02/06	8/02/06 3:25 PM	0608014-002C	7/27/06	8/02/06	8/02/06 4:11 PM
0608014-003C	7/27/06	8/04/06	8/04/06 3:16 AM	0608014-004C	7/27/06	8/02/06	8/02/06 5:41 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.

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



**QC SUMMARY REPORT FOR SW8260B**

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0608014

EPA Method: SW8260B		Extraction: SW5030B			BatchID: 22961			Spiked Sample ID: 0608018-005a		
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	LCS / LCSD
tert-Amyl methyl ether (TAME)	ND	10	107	105	1.50	115	115	0	70 - 130	70 - 130
t-Butyl alcohol (TBA)	ND	50	111	98.3	12.5	93.6	92.3	1.39	70 - 130	70 - 130
Diisopropyl ether (DIPE)	ND	10	121	120	0.747	127	128	0.251	70 - 130	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	108	108	0	119	121	2.22	70 - 130	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	108	106	1.78	120	116	3.12	70 - 130	70 - 130
%SS1:	97	10	100	97	2.59	96	98	1.59	70 - 130	70 - 130

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

**BATCH 22961 SUMMARY**

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0608014-005C	7/28/06	8/02/06	8/02/06 6:25 PM	0608014-006C	7/28/06	8/02/06	8/02/06 7:10 PM
0608014-007C	7/28/06	8/02/06	8/02/06 7:57 PM	0608014-008C	7/28/06	8/03/06	8/03/06 3:07 AM
0608014-009C	7/28/06	8/04/06	8/04/06 4:03 AM	0608014-010C	7/28/06	8/03/06	8/03/06 3:54 AM
0608014-011C	7/28/06	8/03/06	8/03/06 12:46 AM	0608014-012C	7/27/06	8/04/06	8/04/06 2:28 AM
0608014-013C	7/27/06	8/03/06	8/03/06 7:11 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.

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



### QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0608014

EPA Method: SW8015C		Extraction: SW3510C			BatchID: 22918			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	LCS / LCSD
TPH(d)	N/A	1000	N/A	N/A	N/A	110	110	0	N/A	70 - 130
%SS:	N/A	2500	N/A	N/A	N/A	98	98	0	N/A	70 - 130

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

#### BATCH 22918 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0608014-001B	7/27/06	8/01/06	8/02/06 9:33 PM	0608014-002B	7/27/06	8/01/06	8/02/06 10:40 PM
0608014-003B	7/27/06	8/01/06	8/03/06 9:02 PM	0608014-004B	7/27/06	8/01/06	8/03/06 10:10 PM
0608014-005B	7/28/06	8/01/06	8/01/06 10:56 PM	0608014-006B	7/28/06	8/01/06	8/03/06 11:18 PM
0608014-007B	7/28/06	8/01/06	8/04/06 12:27 AM	0608014-008B	7/28/06	8/01/06	8/04/06 1:35 AM
0608014-009B	7/28/06	8/01/06	8/04/06 2:44 AM	0608014-010B	7/28/06	8/01/06	8/04/06 3:52 AM
0608014-011B	7/28/06	8/01/06	8/04/06 5:00 AM	0608014-012B	7/27/06	8/01/06	8/04/06 6:09 AM
0608014-013B	7/27/06	8/01/06	8/04/06 7:17 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.





### QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0608014

EPA Method: SW8021B/8015Cm		Extraction: SW5030B			BatchID: 22942			Spiked Sample ID: 0607556-011A		
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	LCS / LCSD
TPH(btex) £	ND	60	102	101	1.54	105	103	2.06	70 - 130	70 - 130
MTBE	ND	10	100	102	1.48	81.9	79.3	3.30	70 - 130	70 - 130
Benzene	ND	10	86.5	90.6	4.69	101	102	0.713	70 - 130	70 - 130
Toluene	ND	10	87.8	95.1	7.98	107	109	1.24	70 - 130	70 - 130
Ethylbenzene	ND	10	97.6	100	2.69	110	110	0	70 - 130	70 - 130
Xylenes	ND	30	91	91.7	0.730	110	110	0	70 - 130	70 - 130
%SS:	104	10	99	98	0.385	107	108	0.765	70 - 130	70 - 130

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

#### BATCH 22942 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0608014-001A	7/27/06	8/04/06	8/04/06 8:49 AM	0608014-001A	7/27/06	8/05/06	8/05/06 4:12 AM
0608014-002A	7/27/06	8/04/06	8/04/06 9:21 AM	0608014-003A	7/27/06	8/04/06	8/04/06 9:53 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.  
 £ TPH(btex) = sum of BTEX areas from the FID.  
 # cluttered chromatogram; sample peak coelutes with surrogate peak.  
 N/A = not applicable or 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.



### QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0608014

EPA Method: SW8021B/8015Cm		Extraction: SW5030B			BatchID: 22960			Spiked Sample ID: 0608018-005F		
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	LCS / LCSD
TPH(btex) £	ND	60	108	102	5.29	107	104	3.28	70 - 130	70 - 130
MTBE	ND	10	92.1	95.8	3.95	89.5	89	0.554	70 - 130	70 - 130
Benzene	ND	10	90.1	80.6	11.2	88.4	84.1	4.90	70 - 130	70 - 130
Toluene	ND	10	85	81.7	3.98	89.5	87	2.79	70 - 130	70 - 130
Ethylbenzene	ND	10	93.2	92.6	0.546	99.7	97.9	1.84	70 - 130	70 - 130
Xylenes	ND	30	90	90.3	0.370	100	95.3	4.78	70 - 130	70 - 130
%SS:	99	10	94	93	0.609	97	95	2.79	70 - 130	70 - 130

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

#### BATCH 22960 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0608014-004A	7/27/06	8/04/06	8/04/06 10:26 AM	0608014-005A	7/28/06	8/04/06	8/04/06 10:59 AM
0608014-006A	7/28/06	8/04/06	8/04/06 11:32 AM	0608014-007A	7/28/06	8/05/06	8/05/06 1:40 PM
0608014-008A	7/28/06	8/04/06	8/04/06 9:48 PM	0608014-009A	7/28/06	8/04/06	8/04/06 10:18 PM
0608014-010A	7/28/06	8/04/06	8/04/06 7:44 AM	0608014-010A	7/28/06	8/04/06	8/04/06 6:49 PM
0608014-011A	7/28/06	8/04/06	8/04/06 11:18 PM	0608014-012A	7/27/06	8/04/06	8/04/06 11:47 PM
0608014-012A	7/27/06	8/05/06	8/05/06 5:43 PM	0608014-013A	7/27/06	8/05/06	8/05/06 12:17 AM
0608014-013A	7/27/06	8/05/06	8/05/06 6:19 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.  
 £ TPH(btex) = sum of BTEX areas from the FID.  
 # cluttered chromatogram; sample peak coelutes with surrogate peak.  
 N/A = not applicable or 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.