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**Fourth Quarter 2006 Groundwater Monitoring Report and  
Interim Remedial Progress Report for Fuel Leak Case No. RO0000324,  
Livermore Gas and Mini Mart, 160 Holmes Street, Livermore, California**

*Date:*  
December 11, 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

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December 11, 2006  
Project No.: 015-01-002

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

**Subject: Fourth Quarter 2006 Groundwater Monitoring Report and Interim Remedial Progress 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 2006 groundwater monitoring and interim remedial progress 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 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**

On October 12 and 13, 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). On November 21, 2006 additional groundwater samples were collected from monitoring wells MW-7A, MW-7B, and MW-7C. 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 fourth 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. In addition to the October 2006 monitoring event, groundwater samples were collected from wells MW-7A, MW-7B, and MW-

7C on November 21, 2006. 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), methanol, ethanol, 1,2-dibromoethane (EDB), and 1,2-dichloroethane (1,2-DCA) by EPA Method 8260B. Groundwater samples collected from wells MW-7A, MW-7B, and MW-7C on November 21, 2006 were analyzed for TPHg by EPA method 8015C, for BTEX and MTBE by EPA Method 8021B, and for MTBE, ETBE, TAME, DIPE, TBA, methanol, ethanol, EDB, and 1,2-DCA 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 October 12, 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 21.48 to 25.58 feet below ground surface (bgs). Groundwater elevation data are summarized in Table 1 and depicted in Figure 3 as groundwater elevation contours. For the October 2006 groundwater monitoring event, groundwater appeared to flow north-northwest at a gradient of approximately 0.01 feet per foot (ft/ft).

#### Analytical Results

For the October monitoring event, fuel-related compounds were detected in ten of thirteen wells sampled this quarter. In addition to the October sampling event, wells MW-7A, MW-7B, and MW-7C were re-sampled due to anomalous analytical results. Using only the second set of analytical results, dissolved TPHg was detected in six wells at concentrations ranging from 61 micrograms per liter ( $\mu\text{g/L}$ ) in MW-7B to 19,000  $\mu\text{g/L}$  in MW-1A. TPHd was detected in four wells, MW-1A, MW-2A, MW-7A (October 12 sample), and EW-1 at concentrations of 1,700  $\mu\text{g/L}$ , 70  $\mu\text{g/L}$ , 2,400  $\mu\text{g/L}$ , and 130  $\mu\text{g/L}$ , respectively. Benzene was detected in four wells at concentrations ranging from 2.0  $\mu\text{g/L}$  to 1,000  $\mu\text{g/L}$  in wells EW-2 and MW-1A, respectively. Well samples indicated the presence of MTBE in nine wells at levels ranging from 0.61  $\mu\text{g/L}$  in well MW-5A to 84,000  $\mu\text{g/L}$  in well MW-1A. TBA was detected in five of thirteen wells at concentrations ranging from 6.3  $\mu\text{g/L}$  to 10,000  $\mu\text{g/L}$  in wells MW-5A and MW-7B, respectively. Methanol was detected in one well (EW-1) at a concentration of 180,000  $\mu\text{g/L}$ . 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.

Sample results from the November 21, 2006 monitoring of MW-7A, MW-7B, and MW-7C indicated that fuel-related compounds were detected in wells MW-7A and MW-7B, but not MW-7C. TPHg was detected in both wells at concentrations of 1,400 µg/L in MW-7A and 61 µg/L in MW-7B. Benzene was detected in one well, MW-7A, at 25 µg/L. MTBE was detected in both wells at 45 µg/L in MW-7A and 740 µg/L in well MW-7B (EPA Method 8021B). TBA was detected in both wells at concentrations of 1,400 µg/L (MW-7A) and 10,000 µg/L (MW-7B). Sample results are presented in Table 2.

#### 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.

### **Interim Groundwater Remediation**

#### Groundwater Extraction Activities

During this quarter, Allterra extracted approximately 10,575 gallons of impacted groundwater from extraction wells EW-1 and EW-2. The first phase of extraction (Batch 2) was completed between September 27 and 29, 2006 and consisted of extracting approximately 5,575 gallons of groundwater from on-site well EW-1. A second phase of extraction (Batch 3) occurred on November 21, 2006 and consisted of extracting approximately 5,000 gallons of groundwater from extraction well EW-2. Extracted groundwater was processed through a sediment filter, two 200-pound carbon vessels, and a flow meter prior to being stored in a 6,800-gallon holding tank. Field data sheets from extraction activities are included in Appendix B.

#### *Sample Collection and Analyses*

On September 29, 2006, sample IN-1 was collected from the influent groundwater flow stream from well EW-1. On November 21, 2006, sample IN-2 was collected from the influent groundwater flow stream from well EW-2. The samples were labeled, stored in a chilled ice chest, and submitted under chain of custody protocol to McCampbell Analytical, Inc., of Pacheco, California, a state of California certified laboratory (ELAP #1644). Each sample was tested for TPHg by EPA Method 8015C, BTEX and MTBE by EPA Method 8021B.

Water samples were collected from the on-site holding tank on October 13, 2006 (Tank-1 for Batch 2) and on November 21, 2006 (Tank-2 for Batch 3) for treatment verification and wastewater discharge permit purposes. The samples were labeled, stored in a chilled ice chest, and submitted under chain of custody protocol to Entech Analytical Labs, Inc. The samples were tested for total toxic organics (TTOs) by EPA Method 624 (as required by the City of Livermore for wastewater discharge).

#### *Wastewater Discharge Activities*

During this quarter, approximately 10,575 gallons of groundwater were discharged to the sanitary sewer under City of Livermore Wastewater Discharge Permit. Field data sheets from discharge activities are included in Appendix B.

## Interim Cleanup Results

### *Sample Analytical Data*

Analytical results from sample IN-1, collected from the influent flow stream, indicated elevated concentrations of petroleum hydrocarbons. TPHg was detected at 1,800 µg/L, benzene was detected at 120 µg/L, and MTBE was detected at 13,000 µg/L. Results from sample IN-2 indicated TPHg levels of 1,100 µg/L, benzene levels of 55 µg/L, and MTBE levels of 2,600 µg/L. Analytical results for sample Tank-1 indicated, with the exception of an MTBE concentration of 310 µg/L, that analytes were not detected at or above laboratory detection limits. Results from sample Tank-2 indicated that analytes were not detected at or above laboratory detection limits. Sample data for the influent sample is presented in Table 3 and holding tank data is presented in Table 4. Certified analytical reports for the samples are presented in Appendix C.

### *Groundwater Extraction Volumes and Contaminant Mass Removal Estimates*

Between September 27 and December 8, 2006, approximately 5,575 gallons of groundwater were extracted from well EW-1 at an estimated flow rate of 10 gallons per minute (gpm) and approximately 5,000 gallons of groundwater were extracted from EW-2 at an estimated flow rate of 14 gpm. Using groundwater extraction volumes and influent sample data, approximately 0.13 pounds of TPHg, 0.0079 pounds of benzene, and 0.71 pounds of MTBE were removed from wells EW-1 and EW-2 during this period.

### *Interim Remediation Reporting*

Interim remediation activities are documented in quarterly groundwater monitoring reports beginning with this fourth quarter 2006 report. Interim remediation activities that occur in the current quarter, but after release of this report, will be reported in the first quarter 2007 report.

## **Conclusions**

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

- Groundwater appears to flow north-northwest with a gradient of 0.01 ft/ft and appears to be consistent with previous monitoring events.
- The highest concentrations of dissolved TPHg, benzene, and MTBE were detected in on-site monitoring well MW-1A. The highest levels of dissolved TBA were found in well MW-7B at 10,000 µg/L.

- Anomalous contaminant levels were detected in the MW-7C sample collected on October 13, 2006. The data indicated first-time detections of TPHg, toluene, and TBA and a significant increase in MTBE levels in MW-7C. Additionally, MW-7C data was very similar to MW-7B data, which suggests that field or laboratory error was a possible explanation for the anomalous data. To test this hypothesis, Allterra collected additional samples from wells MW-7A, MW-7B, and MW-7C on November 21, 2006 and submitted the samples for analyses. The resulting data coincided with historical sample data, confirming the hypothesis that the spike in contaminant levels in the October 13 sample from MW-7C was caused by field or laboratory error.
- Dissolved contaminants were not detected at or above detection limits in the sample collected from well MW-7C on November 21, 2006.
- In general, hydrocarbon levels decrease with depth.
- Approximately 10,575 gallons of groundwater were extracted between September 27 and November 21, 2006, resulting in the removal of an estimated 0.13 pounds of TPHg, 0.0079 pounds of benzene, and 0.71 pounds of MTBE. During this period, two extraction batches were completed, bringing the total to three batches.
- Results of influent groundwater samples collected from extraction wells EW-1 and EW-2 indicate that groundwater from EW-1 has higher levels of TPHg, benzene, and MTBE.

### **Recommendations**

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

- Continue with the quarterly groundwater monitoring program at the Site.
- In an effort to reduce overall project costs, Allterra recommends TPHd analyses be performed on an annual basis (during first quarter of each year).
- Continue with interim groundwater cleanup activities; however, Allterra recommends that extraction well EW-1 be used for future interim groundwater extraction.

### **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.

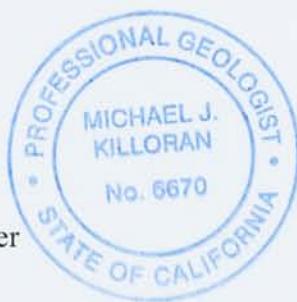
Sincerely,  
Allterra Environmental, Inc.



James Allen, R.E.A.  
Project Manager



Michael Killoran, P.G. 6670  
Senior Geologist



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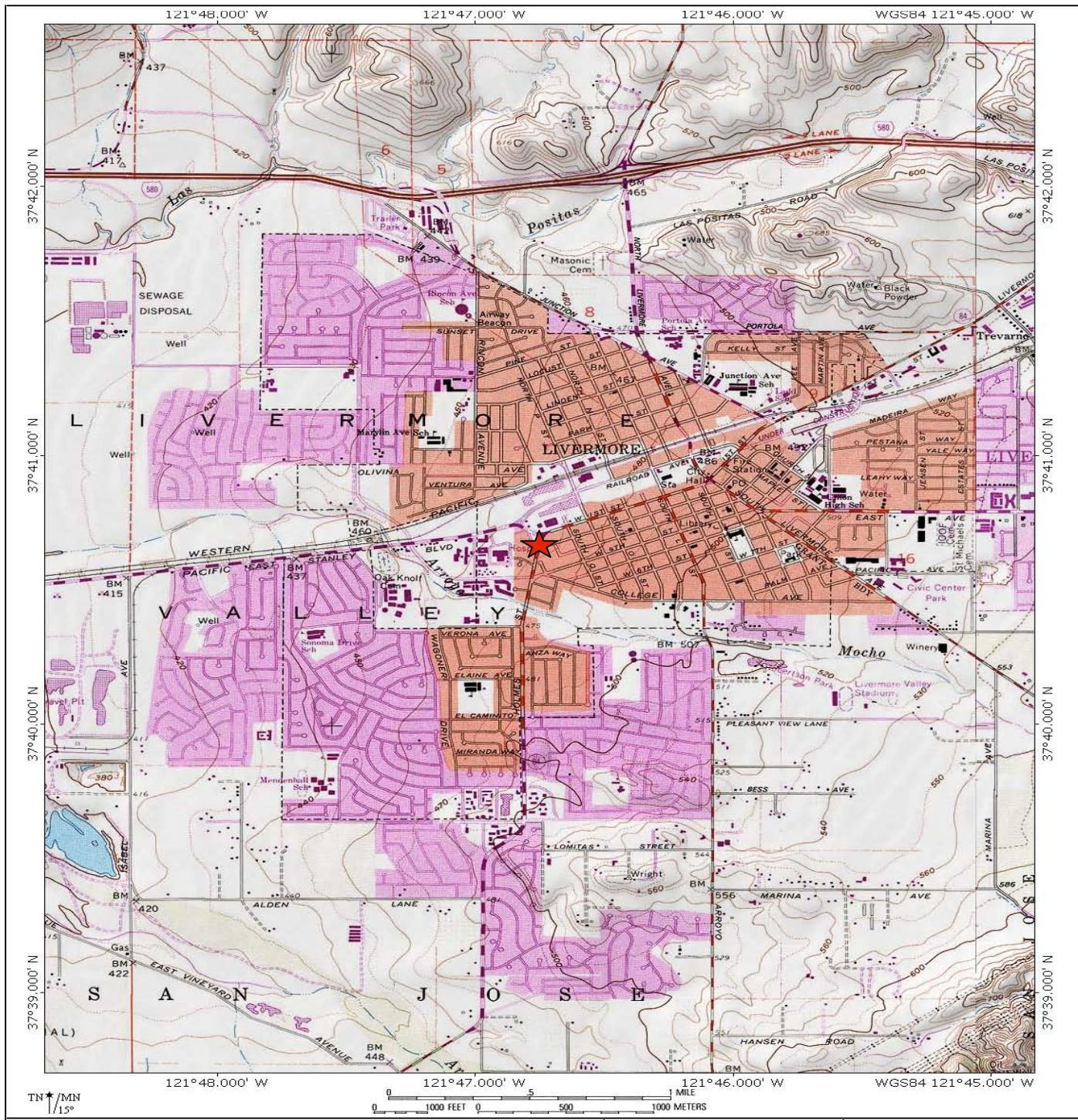
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cc: Jerry Wickham, ACEHS

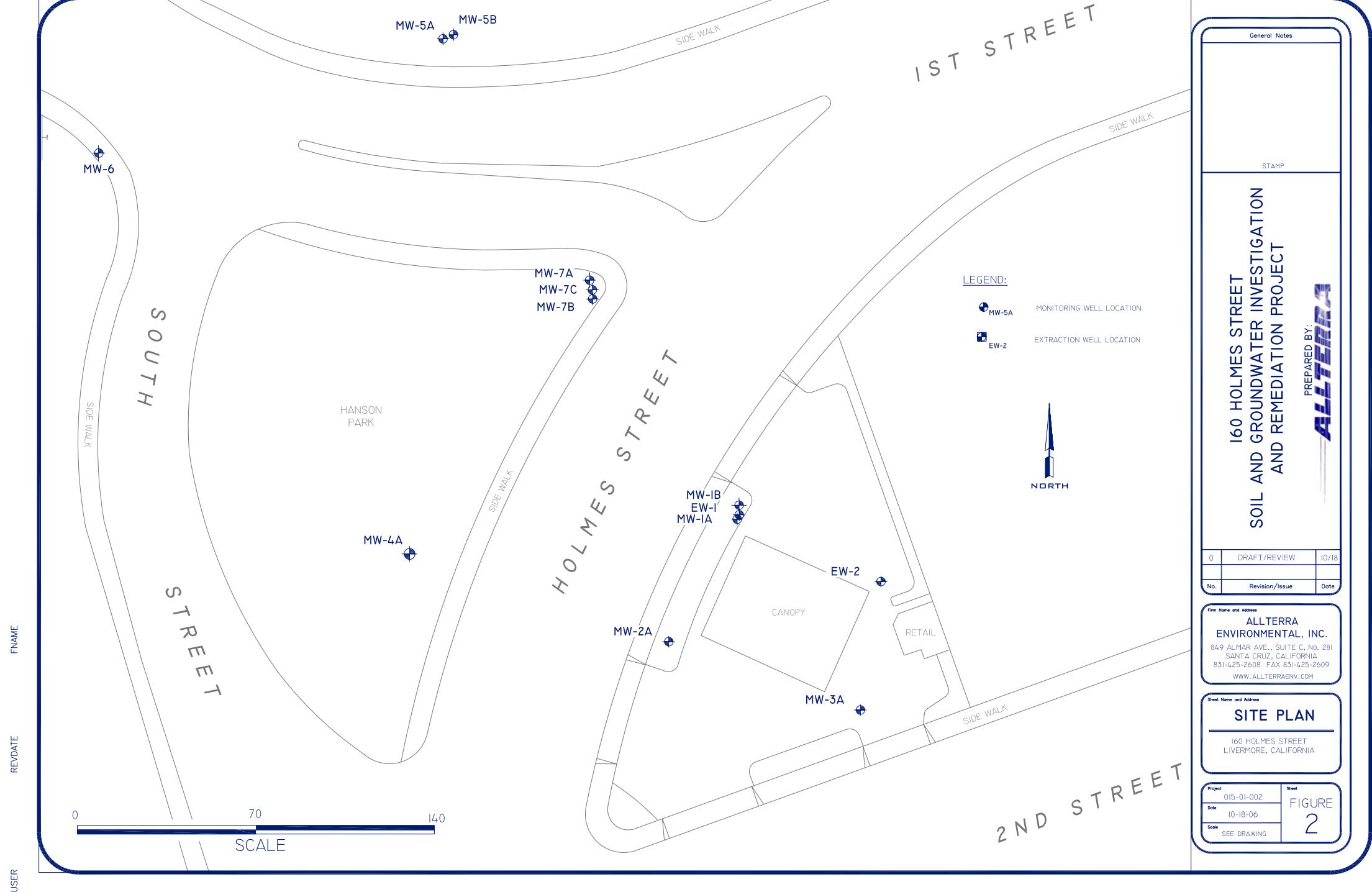
## FIGURES 1-4

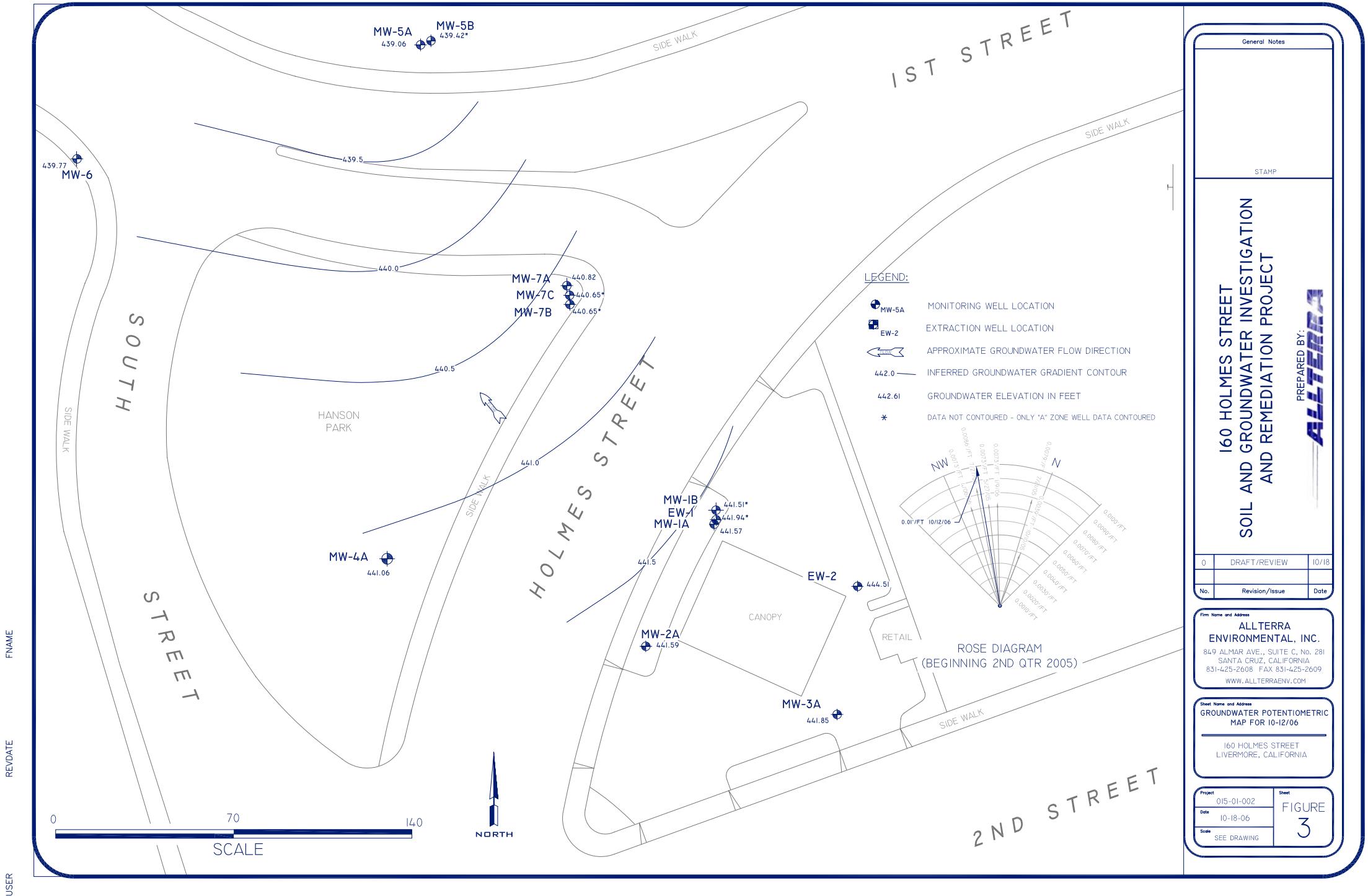


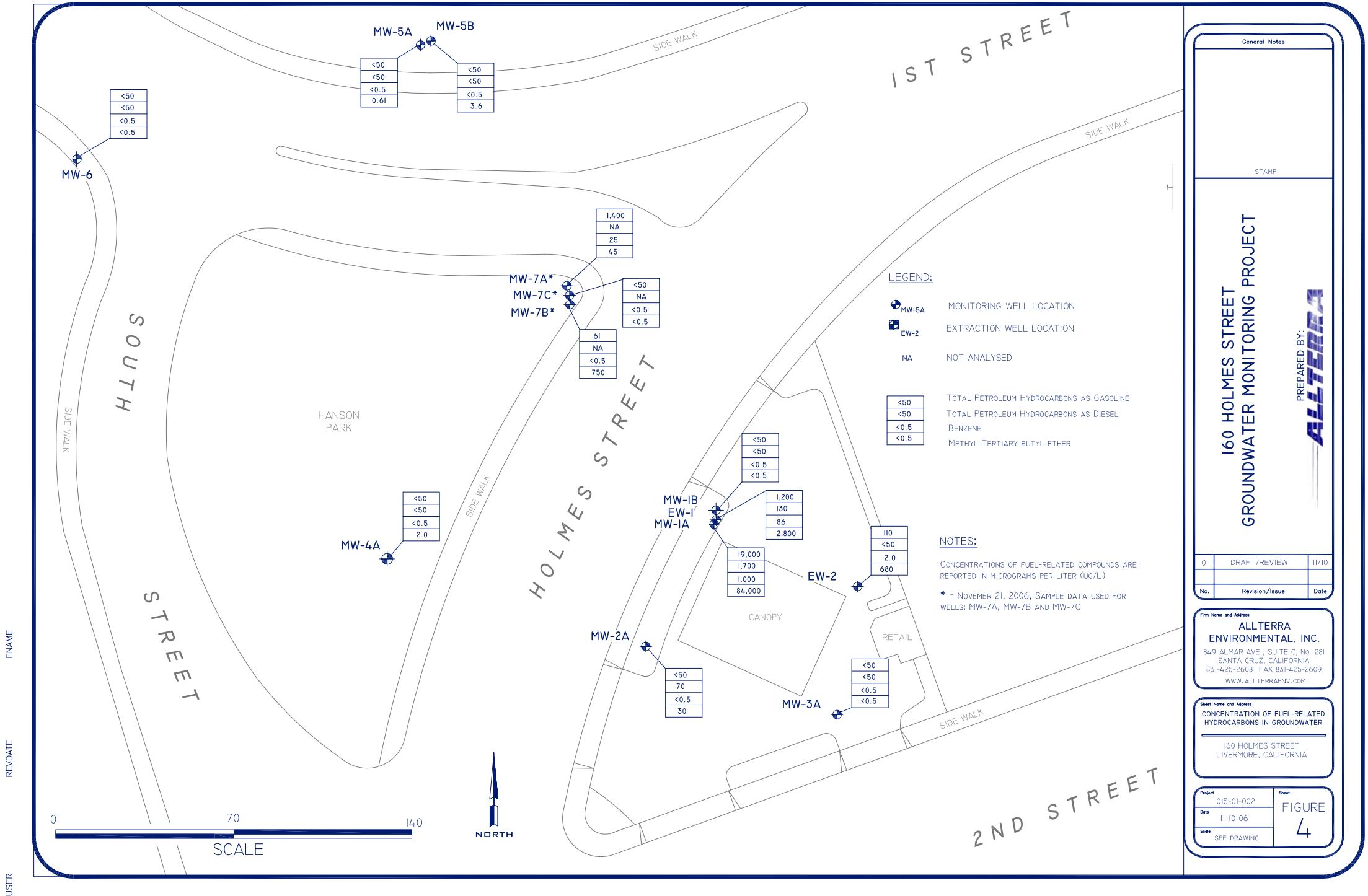
**Vicinity Map**  
Livermore Gas and Mini-mart  
160 Holmes Street  
Livermore, California

Figure 1 3/31/06

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## TABLES 1-5

**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
	<b>10/12/06</b>	<b>465.03</b>		<b>23.46</b>	<b>441.57</b>
MW-1B**	4/6/06	465.02	50-55	15.59	449.43
	7/27/06	465.02		22.47	442.55
	<b>10/12/06</b>	<b>465.02</b>		<b>23.51</b>	<b>441.51</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
	7/27/06	464.94		22.27	442.67
	<b>10/12/06</b>	<b>464.94</b>		<b>23.35</b>	<b>441.59</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
	7/27/06	465.84		22.90	442.94
	<b>10/12/06</b>	<b>465.84</b>		<b>23.99</b>	<b>441.85</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
	7/27/06	464.96		22.87	442.09
	<b>10/12/06</b>	<b>464.96</b>		<b>23.90</b>	<b>441.06</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
	7/27/06	464.64		24.40	440.24
	<b>10/12/06</b>	<b>464.64</b>		<b>25.58</b>	<b>439.06</b>
MW-5B**	4/6/06	464.59	50-55	17.44	447.15
	7/27/06	464.59		24.09	440.50
	<b>10/12/06</b>	<b>464.59</b>		<b>25.17</b>	<b>439.42</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
MW-7A**	4/6/06	465.32	15-30	16.61	448.71
	7/27/06	465.32		23.40	441.92
	<b>10/12/06</b>	<b>465.32</b>		<b>24.50</b>	<b>440.82</b>
MW-7B**	4/6/06	465.39	45-50	16.85	448.54
	7/27/06	465.39		23.72	441.67
	<b>10/12/06</b>	<b>465.39</b>		<b>24.74</b>	<b>440.65</b>
MW-7C**	4/6/06	465.39	65-70	17.18	448.21
	7/27/06	465.39		24.15	441.24
	<b>10/12/06</b>	<b>465.39</b>		<b>24.74</b>	<b>440.65</b>
EW-1**	4/6/06	465.45	15-40	15.99	449.46
	7/27/06	465.45		23.85	441.60
	<b>10/12/06</b>	<b>465.45</b>		<b>23.51</b>	<b>441.94</b>
EW-2**	4/6/06	465.99	15-40	16.20	449.79
	7/27/06	465.99		23.10	442.89
	<b>10/12/06</b>	<b>465.99</b>		<b>21.48</b>	<b>444.51</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

NA: well not accessible

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

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

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

NC: elevation not calculated

NM: well not measured

**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
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	4,500	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	<2,500	240,000	<250,000	<2,500,000	<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	<2,500	87,000	<250,000	<2,500,000	<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	<1,200	84,000	<120,000	<1,200,000	<1,200
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	NA	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	<50	<500	<0.5	<0.5
MW- 2A*	8/11/00	NC	4,500	1,900	220	52	160	170	3,000	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
	2/22/01	442.07	7,600	880	25	<10	69	25	2,200	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	438.24	400	86	5.4	<0.5	1.9	2.3	230	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
	12/1/02	437.38	250	120	7.9	1.6	13	9.9	180	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
	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
	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
	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
	3/10/04	447.63	280	210	9.4	4.2	14	11	1,400	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
	9/17/04	439.50	61	70	<0.5	1.0	<0.5	<0.5	730	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 (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
MW- 2A* (cont.)	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
	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
	5/27/05	446.65	270	59	14	3.9	19	6.8	1,100	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
	10/10/05	442.64	<50	NS	<.5	<.5	<.5	<.5	680	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
	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
	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
	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	<5.0
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
	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
	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
	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	439.23	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA	NA	NA	NA	NA	NA	NA
	12/1/02	437.66		NS						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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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	<50	<500	<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	<50	<500	<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
	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	<50	<500	<0.5
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
	5/7/02	438.40	150	<50	3.5	0.5	<0.5	<0.5	48	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
	12/1/02	436.76	<50	<50	<0.5	<0.5	<0.5	<0.5	24	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
	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
	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
	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
	3/10/04	446.95	<50	<50	<0.5	<0.5	<0.5	<0.5	37	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

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**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
MW-4** (cont.)	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
	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
	3/2/05	447.55	<50	<50	<0.5	<0.5	<0.5	<0.5	14	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
	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
	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
	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
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	<0.5	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	<0.5	3.0	NA	NA	NA
	<b>10/13/06</b>	<b>441.06</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>2.0</b>	<b>&lt;50</b>	<b>&lt;500</b>	<b>&lt;0.5 &lt;0.5</b>
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
	5/7/02	436.75	140	<50	<0.5	<0.5	<0.5	<0.5	110	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
	12/1/02	435.15	73	<50	<0.5	<0.5	<0.5	<0.5	160	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
	6/25/03	440.64	<50	<50	<0.5	<0.5	<0.5	<0.5	89	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
	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
	3/10/04	445.43	57	<50	<0.5	<0.5	<0.5	<0.5	1100	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
	9/17/04	436.97	<50	<50	<0.5	<0.5	<0.5	<0.5	780	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
	3/2/05	446.09	<50	<50	<0.5	<0.5	<0.5	<0.5	320	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
	7/21/05	442.10	<50	NS	<0.5	<0.5	<0.5	<0.5	97	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
	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	<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	<0.5	<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	<0.5	<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	<0.5	<0.5	NA	NA	NA
	<b>10/13/06</b>	<b>439.06</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>6.3</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>0.61</b>	<b>&lt;50</b>	<b>&lt;500</b>	<b>&lt;0.5 &lt;0.5</b>
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	<0.5	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	<0.5	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
	<b>10/13/06</b>	<b>439.42</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>3.6</b>	<b>&lt;50</b>	<b>&lt;500</b>	<b>&lt;0.5 &lt;0.5</b>
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
	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
	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
	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
	3/14/03	440.67	<50	<50	<0.5	<0.5	<0.5	<0.5	<1.0	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 (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
MW-6 (cont.)	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	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
	1/9/06	445.14	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<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	<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	NA	NA	NA	
	<b>10/13/06</b>	<b>439.77</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>&lt;50</b>	<b>&lt;500</b>	<b>&lt;0.5 &lt;0.5</b>
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
	<b>10/12/06</b>	<b>440.82</b>	<b>6,500</b>	<b>2,400</b>	<b>83</b>	<b>38</b>	<b>300</b>	<b>160</b>	<b>980</b>	<b>&lt;17</b>	<b>4,700</b>	<b>&lt;17</b>	<b>&lt;17</b>	<b>1200</b>	<b>&lt;1700</b>	<b>&lt;17,000</b>	<b>&lt;17 &lt;17</b>
	<b>11/21/06</b>	<b>NM</b>	<b>1,400</b>	<b>NA</b>	<b>25</b>	<b>17</b>	<b>65</b>	<b>&lt;0.5</b>	<b>45</b>	<b>&lt;10</b>	<b>1,400</b>	<b>&lt;10</b>	<b>&lt;10</b>	<b>42</b>	<b>&lt;1,000</b>	<b>&lt;10,000</b>	<b>&lt;10 &lt;10</b>
MW-7B	3/13/06	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
	4/7/06	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
	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
	<b>10/12/06</b>	<b>440.65</b>	<b>110</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>1.3</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>900</b>	<b>&lt;17</b>	<b>15,000</b>	<b>&lt;17</b>	<b>&lt;17</b>	<b>860</b>	<b>&lt;1700</b>	<b>&lt;17,000</b>	<b>&lt;17 &lt;17</b>
	<b>11/21/06</b>	<b>NM</b>	<b>61</b>	<b>NA</b>	<b>&lt;0.5</b>	<b>0.76</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>740</b>	<b>&lt;50</b>	<b>10,000</b>	<b>&lt;50</b>	<b>&lt;50</b>	<b>680</b>	<b>&lt;5,000</b>	<b>&lt;50,000</b>	<b>&lt;50 &lt;50</b>
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	<5.0	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	<5.0	<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	<5.0	<0.5	NA	NA	NA
	<b>10/13/06</b>	<b>440.65</b>	<b>89</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>1.4</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>900</b>	<b>&lt;17</b>	<b>12,000</b>	<b>&lt;17</b>	<b>&lt;17</b>	<b>820</b>	<b>&lt;1700</b>	<b>&lt;17,000</b>	<b>&lt;17 &lt;17</b>
	<b>11/21/06</b>	<b>NM</b>	<b>&lt;50</b>	<b>NA</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;5.0</b>	<b>&lt;0.5</b>	<b>&lt;50</b>	<b>&lt;500</b>	<b>&lt;0.5 &lt;0.5</b>
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
	5/7/02	437.72	7,700	560	320	<25	66	150	6,200	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
	12/1/02	437.32	3,000	100	81	<0.5	44	<1.0	4,800	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
	6/25/03	442.89	120	<50	3.2	3.7	4.2	7.6	260	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
	3/10/04	447.31	NS	NS	NS	NS	NS	NS	NS	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
	9/17/04	439.39	NS	NS	NS	NS	NS	NS	NS	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
	3/2/05	NC	NS	NS	NS	NS	NS	NS	NS	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
	7/21/05	443.75	<50	NS	<0.5	<0.5	<0.5	<0.5	610	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
	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

**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
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	1400	<50	<50	2,800	<5,000	180,000	<50	<50
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	<5000	<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	<12	<12

**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

MTBE = methyl tertiary butyl ether

EDB = 1,2-Dibromoether

NA = Not Analyzed

DIPE = Di-isopropyl Ether

NM = Not measured

ETBE = Ethyl tert-Butyl Ether

NS = Not Sampled

TAME - tert-Amyl Methyl Ether

1,2-DCA = 1,2-Dichloroethane

TBA = tert-Butanol

\*\* = 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

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

**Table 3**  
**Influent Groundwater Analytical Results**  
Livermore Gas & Mini Mart, 160 Holmes Street, Livermore, California

Sample ID	Sample Date	TPHg ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl- benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	MTBE ( $\mu\text{g/L}$ )
In-1	9/8/06	1,600	110	12	120	93	11,000
In-1	9/29/06	1,800	120	11	140	95	13,000
In-2	11/21/06	1,100	55	47	76	140	2,600

Notes and Definitions:

Samples analyzed for TPHg, benzene, toluene, ethylbenzene, xylenes, and MTBE by EPA Method 8015Cm/8021B

$\mu\text{g/L}$  = micrograms per liter

TPHg = Total Petroleum Hydrocarbons as gasoline

MTBE = Methyl tertiary butyl ether

In-1 = Influent water stream sample collected from extraction well EW-1

In-2 = Influent water stream sample collected from extraction well EW-2



**Table 4**  
**EPA Method 624 Analytical Results for Discharge**  
Livermore Gas & Mini Mart, 160 Holmes Street, Livermore, California

<b>Analyte</b>	<b>Result</b>		
	<b>9/11/06 Sample</b>	<b>10/13/06 Sample</b>	<b>11/21/06 Sample</b>
<i>Purgeables by EPA Method 624 (results in µg/L)</i>			
Benzene	<0.50	<0.50	<0.50
Bromodichloromethane	<0.50	<0.50	<0.50
Bromoform	<0.50	<0.50	<0.50
Bromomethane	<1.0	<1.0	<1.0
Carbon tetrachloride	<0.50	<0.50	<0.50
Chlorobezene	<0.50	<0.50	<0.50
Chloroethane	<1.0	<1.0	<1.0
Chloroform	<0.50	<0.50	<0.50
Chloromethane	<0.50	<0.50	<0.50
Dibromochloromethane	<0.50	<0.50	<0.50
1,2-Dichlorobenzene	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	<0.50	<0.50	<0.50
1,2-Dichloroethane	<0.50	<0.50	<0.50
1,1-Dichloroethane	<0.50	<0.50	<0.50
trans-1,2-Dichloroethene	<0.50	<0.50	<0.50
1,2-Dichloropropane	<0.50	<0.50	<0.50
cis-1,3-Dichloropropene	<0.50	<0.50	<0.50
trans-1,3-Dichloropropene	<0.50	<0.50	<0.50
Ethylbenzene	<0.50	<0.50	<0.50
Methylene chloride	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane	<0.50	<0.50	<0.50
Tetrachloroethene	<0.50	<0.50	<0.50
Toluene	<0.50	<0.50	<0.50
1,1,1-Trichloroethane	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	<0.50	<0.50	<0.50
Trichloroethene	<0.50	<0.50	<0.50
Trichlorofluoromethane	<0.50	<0.50	<0.50
Vinyl chloride	<0.50	<0.50	<0.50
Metyl tert Butyl Ether	NA	310	<1.0

Notes and Definitions:

Results are for sample Tank-1 are from a sample collected from treated groundwater stored in a holding tank.

Laboratory used EPA Extraction Method 624

µg/L = micrograms per liter

NA = not analyzed

**Table 5**  
**Contaminant Mass Removal Data**  
Livermore Gas & Mini Mart, 160 Holmes Street, Livermore, California

Extraction Batch Number	Date*	Extraction Well	Influent Concentration			Gallons Processed		Estimated Extraction Flow Rate (gpm)	Mass Removed (pounds)						
			TPHg	Benzene	MTBE	Batch Amount	Cumulative Total		Batch Amount			Cumulative Total			
									TPHg	Benzene	MTBE	TPHg	Benzene	MTBE	
1	9/8/06	EW-1	1,600	110	11,000	5,560	5,560	10	0.074	0.0051	0.51	0.074	0.005	0.51	
2	9/29/06	EW-1	1,800	120	13,000	5,575	11,135	10	0.083	0.0056	0.60	0.157	0.011	1.11	
3	11/21/06	EW-2	1,100	55	2,600	5,000	16,135	14	0.046	0.0023	0.11	0.203	0.013	1.22	

Definitions and Notes:

All concentrations listed in micrograms per liter ( $\mu\text{g/L}$ )

All masses listed in pounds (lb)

\* = Date provided is sample date. However, the extraction phase for each batch occurs over several days

gpm = gallons per minute



**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**  
**Interim Remedial Cleanup Field Logs**

**ALLTECH**

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**Groundwater Sampling Field Log**

Site Address 160 Holmes Date 10-12-06

Project Number Field Personnel 512

**Monitoring Well Information**

Monitoring Well ID MW-13 Monitoring Well Diameter (inches) 2.0

Depth to Water (feet) 23.51 Water Column (feet) 31.49

Total Depth (feet) 55.0 80% Recharge Depth (feet)

Depth to Product (feet)

1 Well Volume (gallons) 5.55

Comments

**Field Measurements and Observations**

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
11:20	23.51	5.35	647 μS	18.7°C	7.75	moderate	brn	none
11:30	1	1	661 μS	18.7°C	7.69	1	1	1
11:40	1	1	664 μS	18.5°C	7.66	1	1	1

Total Purge Volume 16.05 Comments

**Groundwater Sampling Information**

Sample ID MW-13 Sample Time 11:40

Sample Containers (Number/Type) 4 vials

Comments

**Groundwater Sampling Field Log**

Site Address 160 Holmes Date 10-12-06

Project Number Field Personnel 512

**Monitoring Well Information**

Monitoring Well ID MW-1A Monitoring Well Diameter (inches) 2.6

Depth to Water (feet) 23.46 Water Column (feet) 1.54

Total Depth (feet) 25.00 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
11:46	.3	969 μS	19.3°C	7.29	high	grey	high	high
11:46	.3	993 μS	19.1°C	7.12	1	1	1	1
11:46	.3	1015 μS	19.1°C	7.04				

Total Purge Volume Comments

**Groundwater Sampling Information**

Sample ID MW-1A Sample Time 11:40

Sample Containers (Number/Type) 4 vials

Comments

**ALLTECH****Groundwater Sampling Field Log**

Site Address 160 Holmes Date 10-16-06

Project Number Field Personnel 512

**Monitoring Well Information**

Monitoring Well ID	MW-2A	Monitoring Well Diameter (inches)	2.0
Depth to Water (feet)	23.35	Water Column (feet)	6.5
Total Depth (feet)	25'	80% Recharge Depth (feet)	
Depth to Product (feet)		1 Well Volume (gallons)	28
Comments			

**Field Measurements and Observations**

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
			732 μS	20.2°C	6.92	med	brown	med.
			808 μS	20.4°C	6.90	1	1	1
			891 μS	20.7°C	6.86			

Total Purge Volume Comments

**Groundwater Sampling Information**

Sample ID MW-2A Sample Time 1:40

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

Comments

**Groundwater Sampling Field Log**

Site Address 160 Holmes Date 10-17-06

Project Number Field Personnel 512

**Monitoring Well Information**

Monitoring Well ID	MW-3A	Monitoring Well Diameter (inches)	2.0
Depth to Water (feet)	23.99	Water Column (feet)	11.0
Total Depth (feet)	25.0	80% Recharge Depth (feet)	
Depth to Product (feet)		1 Well Volume (gallons)	1.9
Comments			

**Field Measurements and Observations**

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
12:30			770 μS	19.9°C	7.67	high	brn	none
12:40			771 μS	19.5°C	7.49	1	1	1
12:50			765 μS	19.4°C	7.42	1	1	1

Total Purge Volume Comments

**Groundwater Sampling Information**

Sample ID MW-3A Sample Time 12:50

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

Comments

**ALLTECH****Groundwater Sampling Field Log**

Site Address 160 Holmes Date 10-13-00  
 Project Number Field Personnel 312

**Monitoring Well Information**

Monitoring Well ID	MW-4A	Monitoring Well Diameter (inches)	2.0
Depth to Water (feet)	23.20	Water Column (feet)	11.1
Total Depth (feet)	35.0	80% Recharge Depth (feet)	
Depth to Product (feet)		1 Well Volume (gallons)	187
Comments			

**Field Measurements and Observations**

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
2340	1.87	878.03	18.85	8.60	7.5	cloudy	none	
		662.03	18.40	8.67				
		682.03	18.40	8.65				

Total Purge Volume      Comments

**Groundwater Sampling Information**

Sample ID MW-4A      Sample Time 10:51

Sample Containers (Number/Type) 4 Vials      Comments

**Groundwater Sampling Field Log**

Site Address 160 Holmes Date 10-13-00  
 Project Number Field Personnel 312

**Monitoring Well Information**

Monitoring Well ID	MW-5A	Monitoring Well Diameter (inches)	2.0
Depth to Water (feet)	25.58	Water Column (feet)	9.42
Total Depth (feet)		80% Recharge Depth (feet)	
Depth to Product (feet)		1 Well Volume (gallons)	1.00
Comments			

**Field Measurements and Observations**

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
2558	1.60	705.03	20.00	7.51	mudash brown	none		
		649.03	19.70	7.34				
		765.03	19.50	7.15				

Total Purge Volume      Comments

**Groundwater Sampling Information**

Sample ID MW-5A      Sample Time 11:00  
 Sample Containers (Number/Type) 4 Vials      Comments

(4)

**ALLTEKA****Groundwater Sampling Field Log**

Site Address 160 Holmes Date 10-13-06  
 Project Number Field Personnel 512

**Monitoring Well Information**

Monitoring Well ID MW-513 Monitoring Well Diameter (inches) 2.0  
 Depth to Water (feet) 25.17 Water Column (feet) 9.83 24.83  
 Total Depth (feet) 50 80% Recharge Depth (feet)  
 Depth to Product (feet) 1 Well Volume (gallons) 4.2  
 Comments

**Field Measurements and Observations**

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
12:10	25.17	4.2	1077 mS	20.2°C	7.36	high	brn	none
12:20		/	1044 mS	20.1°C	7.33	/	/	/
12:30			1082 mS	20.0°C	7.27	/	/	/

Total Purge Volume 50: Comments

**Groundwater Sampling Information**

Sample ID MW-513 Sample Time 12:30  
 Sample Containers (Number/Type) 4 vca 1 amber  
 Comments

**Groundwater Sampling Field Log**

Site Address 160 Holmes Date 10-13-06  
 Project Number Field Personnel 512

**Monitoring Well Information**

Monitoring Well ID MW-6 Monitoring Well Diameter (inches) 2.0  
 Depth to Water (feet) 24.36 Water Column (feet) 9.83  
 Total Depth (feet) 35 80% Recharge Depth (feet)  
 Depth to Product (feet) 1 Well Volume (gallons) 1.67  
 Comments

**Field Measurements and Observations**

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
24.36	16.7	867 mS	19.0°C	7.94	high	brwn	none	
	/	868 mS	18.9°C	7.71	/	/	/	/
		832 mS	18.7°C	7.68	/	/	/	/

Total Purge Volume Comments

**Groundwater Sampling Information**

Sample ID MW-6 Sample Time 12:28  
 Sample Containers (Number/Type) 4 vca 1 amber  
 Comments

**ALLTEKA****Groundwater Sampling Field Log**

Site Address 160 Holmes Date 10-12-06  
 Project Number Field Personnel D.L./EA

**Monitoring Well Information**

Monitoring Well ID MW-7B Monitoring Well Diameter (inches) 2"  
 Depth to Water (feet) 24.74 Water Column (feet) 10.26  
 Total Depth (feet) 35 80% Recharge Depth (feet)  
 Depth to Product (feet) 1.74  
 Comments

**Field Measurements and Observations**

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
/	/	/	838mS	19.8°C	7.65	med.	brown	med.
			823mS	19.2°C	7.56	1	1	1
			887mS	19.0°C	7.45			

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

**Groundwater Sampling Information**

Sample ID MW-7B Sample Time 2:30

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

Comments

**Groundwater Sampling Field Log**

Site Address 160 Date 10-12-06  
 Project Number Field Personnel EA / DL

**Monitoring Well Information**

Monitoring Well ID MW-7A Monitoring Well Diameter (inches)  
 Depth to Water (feet) 24.50 Water Column (feet) 10.50  
 Total Depth (feet) 35.0 80% Recharge Depth (feet)  
 Depth to Product (feet) 1 Well Volume (gallons) 1.8  
 Comments

**Field Measurements and Observations**

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
2:00	24.50	1.8	924mS	20.6°C	7.06	high	brn	none
2:10		1	912mS	20.5°C	7.05	1	1	1
2:20			891mS	20.5°C	7.03			

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

**Groundwater Sampling Information**

Sample ID MW-7A Sample Time 2:20

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

Comments

**ALLTECH****Groundwater Sampling Field Log**Site Address 60 HolmesDate 10-13-06

Project Number

Field Personnel EJ**Monitoring Well Information**Monitoring Well ID MW-7CMonitoring Well Diameter (inches) 2.0Depth to Water (feet) 24.74Water Column (feet) 45.26Total Depth (feet) 70.0

80% Recharge Depth (feet)

Depth to Product (feet)

1 Well Volume (gallons) 7.7

Comments

**Field Measurements and Observations**

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
	<u>24.74</u>	<u>7.7</u>	<u>875 ms</u>	<u>19.6 °C</u>	<u>7.56</u>	<u>low</u>	<u>brown</u>	<u>none</u>
	<u>1</u>	<u>1</u>	<u>874 ms</u>	<u>19.4 °C</u>	<u>7.54</u>	<u>1</u>	<u>1</u>	<u>1</u>
			<u>850 ms</u>	<u>19.1 °C</u>	<u>7.48</u>			

Total Purge Volume

Comments

**Groundwater Sampling Information**

Sample ID

Sample Time

Sample Containers (Number/Type)

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

**ALLTEC****Groundwater Sampling Field Log**

Site Address 160 Holmes Date 10-12-06  
 Project Number Field Personnel D.L./E.A.

**Monitoring Well Information**

Monitoring Well ID EW-1 Monitoring Well Diameter (inches) 4"  
 Depth to Water (feet) 23.51 Water Column (feet) 16.49  
 Total Depth (feet) 40' 80% Recharge Depth (feet)  
 Depth to Product (feet) 1 Well Volume (gallons) 10.88  
 Comments

**Field Measurements and Observations**

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
1	1	1	735 μS	19.4°C	7.25	high	brown	high
			231 μS	19.0°C	7.24	1	1	1
			734 μS	18.9°C	7.22	1	1	1

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

**Groundwater Sampling Information**

Sample ID EW-1 Sample Time 12:50  
 Sample Containers (Number/Type) 4 Vials / 1 Amber  
 Comments

**Groundwater Sampling Field Log**

Site Address Date  
 Project Number Field Personnel

**Monitoring Well Information**

Monitoring Well ID EW-2 Monitoring Well Diameter (inches) 4.0  
 Depth to Water (feet) 21.48 Water Column (feet) 18.52  
 Total Depth (feet) 40.0 80% Recharge Depth (feet)  
 Depth to Product (feet) 1 Well Volume (gallons) 12.97  
 Comments

**Field Measurements and Observations**

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
12.48	12.97	913 μS	19.5°C	7.22	high	brn	mild	
1	1	893 μS	19.4°C	7.15	1	1		
		810 μS	19.2°C	7.18	1	1		

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

**Groundwater Sampling Information**

Sample ID EW-2 Sample Time 1145  
 Sample Containers (Number/Type) 4 Vials / 1 Amber  
 Comments

**ALLTEC**

## Interim remedial clean-up field log

160 Holmes street, Livermore, CA

## GWTS OBSERVATIONS AND MEASUREMENTS

DATE: 9-27-06

PERSONNEL: DL

WELL ID: EW-1

DEPTH TO WATER: 26.73

PUMP DEPTH INITIAL: 31.0 ft.  
COMPLETED DEPTH:

FLOW RATE INITIAL	GPH
1 HOUR	12 JPM
2 HOUR	10 gpm
3 HOUR	12 gpm
4 HOUR	11 gpm
5 HOUR	
6 HOUR	
7 HOUR	
8 HOUR	

## FLOW TOTALIZE

INITIAL TOTAL 878,625  
COMPLETED TOTAL 880,510  
TOTAL GALLONS PUMPED 1885

## SAMPLES COLLECTED

TANK-1  
IN-1  
DATE:  
DATE: 9-27-06

NOTES: changed filter, put gas in generator

Batch 2

## TANK DISCHARGE:

TOTAL GALLONS DISCHARGED:

**ALLTEC**Interim remedial clean-up field log  
160 Holmes street, Livermore, CA

## GWTS OBSERVATIONS AND MEASUREMENTS

DATE: 9/29/06  
PERSONNEL: D.L.K.A.WELL ID: 6-1-1DEPTH TO WATER: 24.58PUMP DEPTH INITIAL:     
COMPLETED DEPTH:   

	GPH
FLOW RATE INITIAL	<u>11.5 gpm</u>
1 HOUR	<u>11.5 gpm</u>
2 HOUR	<u>11.0 gpm</u>
3 HOUR	<u>11.0 gpm</u>
4 HOUR	<u>  </u>
5 HOUR	<u>  </u>
6 HOUR	<u>  </u>
7 HOUR	<u>  </u>
8 HOUR	<u>  </u>

FLOW TOTALIZE  
INITIAL TOTAL 891510  
COMPLETED TOTAL 884200  
TOTAL GALLONS PUMPED 3690

## SAMPLES COLLECTED

TANK-1

X

DATE:

9-29-06

IN-1

NOTES: Re-sampled IN-1 initial sample (9-27-06) misplaced.

Batch 2

TANK DISCHARGE:

TOTAL GALLONS DISCHARGED:

**ALLTERRA**

## Interim remedial clean-up field log

160 Holmes street, Livermore, CA

**GWTS OBSERVATIONS AND MEASUREMENTS**DATE: **11-1-06**PERSONNEL: **JR**WELL ID: DEPTH TO WATER: PUMP DEPTH INITIAL: COMPLETED DEPTH: 

FLOW RATE INITIAL	GPH
1 HOUR	16.9
2 HOUR	15.0
3 HOUR	15.0
4 HOUR	15.0
5 HOUR	73.0
6 HOUR	12.0
7 HOUR	EMPTY
8 HOUR	

**FLOW TOTALIZE**INITIAL TOTAL COMPLETED TOTAL TOTAL GALLONS PUMPED **SAMPLES COLLECTED**

TANK-1


IN-1

DATE:


DATE:

NOTES: ~~Discharge point. 3900 ft.~~**TANK DISCHARGE:**TOTAL GALLONS DISCHARGED:  gallons  
**~5600**

**ALLTECIA**

## Interim remedial clean-up field log

160 Holmes street, Livermore, CA

**GWTS OBSERVATIONS AND MEASUREMENTS**DATE: 11-21-06PERSONNEL: JZWELL ID: FW-2DEPTH TO WATER: 22.07PUMP DEPTH INITIAL: 25.0COMPLETED DEPTH: 25.0

	GPH
FLOW RATE INITIAL	7.5
1 HOUR	14
2 HOUR	14
3 HOUR	14
4 HOUR	13.5
5 HOUR	
6 HOUR	
7 HOUR	
8 HOUR	

**FLOW TOTALIZE**INITIAL TOTAL 7238,295COMPLETED TOTAL —TOTAL GALLONS PUMPED 5,000**SAMPLES COLLECTED**

TANK-1

9 VOA'S

IN-1

VOA'S

RENAME

IN-2

DATE:

11-21-06

DATE:

11-21-06

NOTES: PH = 8.06 - FLOW METER BLOWDOWN AT 122

STARTED PUMPING 9:22

- SAME SAMPLE IN-2 COLLECTED AFTER 2 HOURS OF  
PUMPING

TANK DISCHARGE:

TOTAL GALLONS DISCHARGED:

41241 6204

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



## McCampbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
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: #015-01-001	Date Sampled: 10/12/06
		Date Received: 10/17/06
	Client Contact: James Allen	Date Reported: 10/23/06
	Client P.O.:	Date Completed: 10/27/06

**WorkOrder: 0610342**

October 27, 2006

Dear James:

Enclosed are:

- 1). the results of **13** analyzed samples from your **#015-01-001 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. McCampbell 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

ATP S

0610342



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: 015-01-00

Project Name: Project Holmes

**Project Name**

Project Name: \_\_\_\_\_

Sampler Signature:	Sample Collection												Sample Containers	Matrix				Preservation				EDF required			
Sample ID	Sample Collection		Number of Containers	Container Type	Matrix				Preservation				TPHg/BTEX/EPA 80	BTEX (EPA 80)	TPHn (EPA 80)	5-FUEL OXYS	Ethanol and Me	Lead Scavenging	Total HVOCs	Hardness/Total	Priority Metals	LUFT 5 Metal	PAHs/PNAs	Fish Toxicity/	Lead (EPA 60)
	Date	Time			Air	Water	Soil	Sludge	Other	Ice	HCl	HNO <sub>3</sub>	Other												
MW-1A	10/12/06		4,1	voa/amber	X				X X					X X	X X									X	
MW-1B	10/12/06		4,1	voa/amber	X				X X					X X	X X									X	
MW-2A	10/12/06		4,1	voa/amber	X				X X					X X	X X									X	
MW-3A	10/12/06		4,1	voa/amber	X				X X					X X	X X									X	
MW-4A	10/13/06		4,1	voa/amber	X				X X					X X	X X									X	
MW-5A	10/13/06		4	voa	X				X X					X X	X X									X	
MW-5B	10/13/06		4,1	voa/amber	X				X X					X X	X X									X	
MW-6	10/13/06		4,1	voa/amber	X				X X					X X	X X									X	
MW-7A	10/12/06		4,1	voa/amber	X				X X					X X	X X									X	
MW-7B	10/12/06		4,1	voa/amber	X				X X					X X	X X									X	
MW-7C	10/13/06		4,1	voa/amber	X				X X					X X	X X									X	
EW-1	10/12/06		4,1	voa/amber	X				X X					X X	X X									X	
EW-2	10/12/06		4,1	voa/amber	X				X X					X X	X X									X	
<i>Greg Nolan</i>				Time:	Received By: <i>John Bell 10/14/10/06</i>				Comments: No amber for MW-5A still need to test for TPHd.																
Sampled By:				Date:	Time:	Received By:				<i>ICE at 21.6°C</i>															
Received By:				Date:	Time:	Received By:				GOOD CONDITION ✓															
Received By:				Date:	Time:	Received By:				HEAD SPACE ABSENT ✓															
										DECHLORINATED IN LAB ✓															
										APPROPRIATE CONTAINERS ✓															
										PRESERVED IN LAB ✓															
										PRESERVATION ✓															
										VOAS ✓															
										O&G ✓															
										METALS ✓															
										OTHER ✓															

Comments: No amber for MW-5A still need to test for TPHd.

ICE/t° 21,6

GOOD CONDITION   
HEAD SPACE ABSENT   
DECHLORINATED IN LAB

#### **REFERENCES**

## PRESERVATION

APPROPRIATE  
CONTAINERS

| METALS | OTHER

**METALS      OTHER**

REC'D SEALED & INTACT VIA

# McCampbell Analytical, Inc.

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

# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 0610342

ClientID: ATRS

EDF

Fax

Email

HardCopy

ThirdParty

Report to:

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

Email: allterraenvironmental@yahoo.com  
TEL: 831-425-2608 FAX: 831-425-2609  
ProjectNo: #015-01-001  
PO:

Bill to:

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

Requested TAT: 5 days

Date Received: 10/17/2006  
Date Printed: 10/17/2006

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0610342-001	MW-1A	Water	10/12/06	<input type="checkbox"/>	A	A	B									
0610342-002	MW-1B	Water	10/12/06	<input type="checkbox"/>	A		B									
0610342-003	MW-2A	Water	10/12/06	<input type="checkbox"/>	A		B									
0610342-004	MW-3A	Water	10/12/06	<input type="checkbox"/>	A		B									
0610342-005	MW-4A	Water	10/13/06	<input type="checkbox"/>	A		B									
0610342-006	MW-5A	Water	10/13/06	<input type="checkbox"/>	A		B									
0610342-007	MW-5B	Water	10/13/06	<input type="checkbox"/>	A		B									
0610342-008	MW-6	Water	10/13/06	<input type="checkbox"/>	A		B									
0610342-009	MW-7A	Water	10/12/06	<input type="checkbox"/>	A		B									
0610342-010	MW-7B	Water	10/12/06	<input type="checkbox"/>	A		B									
0610342-011	MW-7C	Water	10/13/06	<input type="checkbox"/>	A		B									
0610342-012	EW-1	Water	10/12/06	<input type="checkbox"/>	A		B									
0610342-013	EW-2	Water	10/12/06	<input type="checkbox"/>	A		B									

**Test Legend:**

1	G-MBTEX_W
6	
11	

2	PREFD REPORT
7	
12	

3	TPH(D)_W
8	

4	
9	

5	
10	

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.



# McCampbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
 Web: www.mccampbell.com E-mail: 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: #015-01-001	Date Sampled: 10/12/06-10/13/06
		Date Received: 10/17/06
	Client Contact: James Allen	Date Extracted: 10/24/06-10/25/06
	Client P.O.:	Date Analyzed 10/24/06-10/25/06

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0610342

Lab ID	0610342-001A	0610342-002A	0610342-003A	0610342-004A	Reporting Limit for DF =1	
Client ID	MW-1A	MW-1B	MW-2A	MW-3A		
Matrix	W	W	W	W	S	W
DF	2500	1	10	1		
Compound	Concentration				ug/kg	μg/L
tert-Amyl methyl ether (TAME)	ND<1200	ND	ND<5.0	ND	NA	0.5
t-Butyl alcohol (TBA)	ND<12,000	ND	480	ND	NA	5.0
1,2-Dibromoethane (EDB)	ND<1200	ND	ND<5.0	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND<1200	ND	ND<5.0	ND	NA	0.5
Diisopropyl ether (DIPE)	ND<1200	ND	ND<5.0	ND	NA	0.5
Ethanol	ND<120,000	ND	ND<500	ND	NA	50
Ethyl tert-butyl ether (ETBE)	ND<1200	ND	ND<5.0	ND	NA	0.5
Methanol	ND<1,200,000	ND	ND<5000	ND	NA	500
Methyl-t-butyl ether (MTBE)	84,000	ND	30	ND	NA	0.5

## Surrogate Recoveries (%)

%SS1:	106	106	109	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.



# McCampbell Analytical, Inc.

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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: #015-01-001	Date Sampled: 10/12/06-10/13/06
		Date Received: 10/17/06
	Client Contact: James Allen	Date Extracted: 10/24/06-10/25/06
	Client P.O.:	Date Analyzed 10/24/06-10/25/06

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0610342

Lab ID	0610342-005A	0610342-006A	0610342-007A	0610342-008A	Reporting Limit for DF =1	
Client ID	MW-4A	MW-5A	MW-5B	MW-6		
Matrix	W	W	W	W	S	W
DF	1	1	1	1		
Compound	Concentration					ug/kg
tert-Amyl methyl ether (TAME)	ND	ND	ND	ND	NA	0.5
t-Butyl alcohol (TBA)	ND	6.3	ND	ND	NA	5.0
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND	ND	NA	0.5
Diisopropyl ether (DIPE)	ND	ND	ND	ND	NA	0.5
Ethanol	ND	ND	ND	ND	NA	50
Ethyl tert-butyl ether (ETBE)	ND	ND	ND	ND	NA	0.5
Methanol	ND	ND	ND	ND	NA	500
Methyl-t-butyl ether (MTBE)	2.0	0.61	3.6	ND	NA	0.5

## Surrogate Recoveries (%)

%SS1:	108	108	107	109	
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: #015-01-001	Date Sampled: 10/12/06-10/13/06
		Date Received: 10/17/06
	Client Contact: James Allen	Date Extracted: 10/24/06-10/25/06
	Client P.O.:	Date Analyzed 10/24/06-10/25/06

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0610342

Lab ID	0610342-009A	0610342-010A	0610342-011A	0610342-012A	Reporting Limit for DF =1	
Client ID	MW-7A	MW-7B	MW-7C	EW-1		
Matrix	W	W	W	W	S	W
DF	33	33	33	100		
Compound	Concentration				ug/kg	μg/L
tert-Amyl methyl ether (TAME)	ND<17	ND<17	ND<17	ND<50	NA	0.5
t-Butyl alcohol (TBA)	4700	15,000	12,000	1400	NA	5.0
1,2-Dibromoethane (EDB)	ND<17	ND<17	ND<17	ND<50	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND<17	ND<17	ND<17	ND<50	NA	0.5
Diisopropyl ether (DIPE)	ND<17	ND<17	ND<17	ND<50	NA	0.5
Ethanol	ND<1700	ND<1700	ND<1700	ND<5000	NA	50
Ethyl tert-butyl ether (ETBE)	ND<17	ND<17	ND<17	ND<50	NA	0.5
Methanol	ND<17,000	ND<17,000	ND<17,000	180,000	NA	500
Methyl-t-butyl ether (MTBE)	1200	860	820	2800	NA	0.5

## Surrogate Recoveries (%)

%SS1:	106	109	106	106	
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: #015-01-001	Date Sampled: 10/12/06-10/13/06
		Date Received: 10/17/06
	Client Contact: James Allen	Date Extracted: 10/24/06-10/25/06
	Client P.O.:	Date Analyzed 10/24/06-10/25/06

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0610342

Lab ID	0610342-013A				Reporting Limit for DF =1
Client ID	EW-2				
Matrix	W				
DF	25				S W
Compound	Concentration			ug/kg	μg/L
tert-Amyl methyl ether (TAME)	ND<12			NA	0.5
t-Butyl alcohol (TBA)	ND<120			NA	5.0
1,2-Dibromoethane (EDB)	ND<12			NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND<12			NA	0.5
Diisopropyl ether (DIPE)	ND<12			NA	0.5
Ethanol	ND<1200			NA	50
Ethyl tert-butyl ether (ETBE)	ND<12			NA	0.5
Methanol	ND<12,000			NA	500
Methyl-t-butyl ether (MTBE)	680			NA	0.5

## Surrogate Recoveries (%)

%SS1:	107			
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: #015-01-001	Date Sampled: 10/12/06-10/13/06
		Date Received: 10/17/06
	Client Contact: James Allen	Date Extracted: 10/21/06
	Client P.O.:	Date Analyzed 10/21/06

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

Extraction method SW5030B

Analytical methods SW8021B/8015Cm

Work Order: 0610342

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1A	W	19,000,a,i	68,000	1000	26	2000	1000	50	96
002A	MW-1B	W	ND	ND	ND	ND	ND	ND	1	94
003A	MW-2A	W	ND,i	29	ND	ND	ND	ND	1	97
004A	MW-3A	W	ND,i	ND	ND	ND	ND	ND	1	96
005A	MW-4A	W	ND,i	ND	ND	ND	ND	ND	1	94
006A	MW-5A	W	ND	ND	ND	ND	ND	ND	1	93
007A	MW-5B	W	ND,i	ND	ND	ND	ND	ND	1	92
008A	MW-6	W	ND	ND	ND	ND	ND	ND	1	89
009A	MW-7A	W	6500,a,i	980	83	38	300	160	10	104
010A	MW-7B	W	110,m	900	ND	1.3	ND	ND	1	114
011A	MW-7C	W	89,m	900	ND	1.4	ND	ND	1	111
012A	EW-1	W	2100,a	2400	86	19	100	310	10	96
013A	EW-2	W	110,a,i	620	2.0	1.0	3.1	3.9	1	108

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 McCampbell 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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Allterra Environmental, Inc  849 Almar Ave, Ste. C #281  Santa Cruz, CA 95060	Client Project ID: #015-01-001	Date Sampled: 10/12/06-10/13/06
		Date Received: 10/17/06
	Client Contact: James Allen	Date Extracted: 10/17/06
	Client P.O.:	Date Analyzed 10/18/06

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

Extraction method SW3510C

Analytical methods SW8015C

Work Order: 0610342

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0610342-001B	MW-1A	W	1700,d,i	1	105
0610342-002B	MW-1B	W	ND	1	105
0610342-003B	MW-2A	W	70,b,i	1	104
0610342-004B	MW-3A	W	ND,i	1	103
0610342-005B	MW-4A	W	ND,i	1	102
0610342-006B	MW-5A	W	ND	1	99
0610342-007B	MW-5B	W	ND,i	1	101
0610342-008B	MW-6	W	ND	1	103
0610342-009B	MW-7A	W	2400,d	1	106
0610342-010B	MW-7B	W	ND	1	109
0610342-011B	MW-7C	W	ND	1	105
0610342-012B	EW-1	W	130,d	1	106
0610342-013B	EW-2	W	ND,i	1	104

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: 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.



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## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0610342

EPA Method SW8260B		Extraction SW5030B				BatchID: 24448			Spiked Sample ID: 0610473-001A			
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	85.8	87.8	2.34	80	77.6	3.05	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	99.7	104	3.99	96.3	97.7	1.47	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	101	99.8	1.13	94.8	89.2	6.07	70 - 130	30	70 - 130	30
Ethanol	ND	500	107	112	4.62	113	113	0	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	88.5	88.4	0.121	83.7	77.6	7.54	70 - 130	30	70 - 130	30
Methanol	ND	2500	114	118	3.30	108	103	4.92	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	90.9	88.5	2.74	85.5	80.6	5.94	70 - 130	30	70 - 130	30
%SS1:	101	10	104	103	0.267	101	99	2.23	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 24448 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0610342-001	10/12/06	10/25/06	0/25/06 12:02 PM	0610342-002	10/12/06	10/24/06	10/24/06 6:36 PM
0610342-003	10/12/06	10/25/06	10/25/06 1:30 PM	0610342-004	10/12/06	10/24/06	10/24/06 8:05 PM
0610342-005	10/13/06	10/24/06	10/24/06 8:49 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.



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## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0610342

EPA Method SW8260B		Extraction SW5030B				BatchID: 24449			Spiked Sample ID: 0610481-003A			
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	90.3	97.7	7.86	82.2	85.9	4.35	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	105	110	4.88	103	102	1.31	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	104	110	5.60	95.4	97.1	1.80	70 - 130	30	70 - 130	30
Ethanol	ND	500	108	112	3.80	115	113	1.99	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	91.6	98.4	7.11	84.2	85.9	1.95	70 - 130	30	70 - 130	30
Methanol	ND	2500	100	103	2.11	116	112	4.07	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	96.6	104	7.61	87.7	88.9	1.28	70 - 130	30	70 - 130	30
%SS1:	100	10	101	102	0.945	100	99	1.44	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 24449 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0610342-006	10/13/06	10/24/06	0/24/06 11:00 PM	0610342-007	10/13/06	10/24/06	0/24/06 11:44 PM
0610342-008	10/13/06	10/25/06	0/25/06 12:28 AM	0610342-009	10/12/06	10/25/06	0/25/06 1:11 AM
0610342-010	10/12/06	10/25/06	10/25/06 1:56 AM	0610342-010	10/12/06	10/25/06	10/25/06 2:15 PM
0610342-011	10/13/06	10/25/06	10/25/06 2:40 AM	0610342-011	10/13/06	10/25/06	10/25/06 2:59 PM
0610342-012	10/12/06	10/25/06	0/25/06 12:46 PM	0610342-013	10/12/06	10/25/06	0/25/06 4:10 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.



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## QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0610342

EPA Method SW8021B/8015Cm		Extraction SW5030B		BatchID: 24323				Spiked Sample ID: 0610339-008A				
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	104	99.4	4.39	102	93.1	9.21	70 - 130	30	70 - 130	30
MTBE	ND	10	97.2	95.7	1.54	92.7	99.2	6.75	70 - 130	30	70 - 130	30
Benzene	ND	10	98.1	98.4	0.317	95.2	88.7	7.00	70 - 130	30	70 - 130	30
Toluene	ND	10	94.7	93.2	1.64	91.7	79.6	14.2	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	98.4	100	1.87	96.7	97.1	0.381	70 - 130	30	70 - 130	30
Xylenes	ND	30	91	94.7	3.95	90.7	90.7	0	70 - 130	30	70 - 130	30
%SS:	94	10	101	102	1.57	101	105	3.80	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 24323 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0610342-001	10/12/06	10/21/06	10/21/06 12:19 AM	0610342-001	10/12/06	10/21/06	10/21/06 8:48 PM
0610342-002	10/12/06	10/21/06	10/21/06 9:58 AM	0610342-003	10/12/06	10/21/06	10/21/06 10:30 AM
0610342-004	10/12/06	10/21/06	10/21/06 11:04 AM	0610342-005	10/13/06	10/21/06	10/21/06 11:37 AM
0610342-006	10/13/06	10/21/06	10/21/06 12:11 PM	0610342-007	10/13/06	10/21/06	10/21/06 12:45 PM
0610342-008	10/13/06	10/21/06	10/21/06 2:28 PM	0610342-009	10/12/06	10/21/06	10/21/06 6:33 PM
0610342-010	10/12/06	10/21/06	10/21/06 5:26 PM	0610342-010	10/12/06	10/21/06	10/21/06 8:06 PM
0610342-011	10/13/06	10/21/06	10/21/06 5:58 PM	0610342-011	10/13/06	10/21/06	10/21/06 8:36 PM
0610342-012	10/12/06	10/21/06	10/21/06 9:53 PM	0610342-013	10/12/06	10/21/06	10/21/06 4:51 AM
0610342-013	10/12/06	10/21/06	10/21/06 6:35 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.



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## QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0610342

EPA Method SW8015C		Extraction SW3510C				BatchID: 24327			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(d)	N/A	1000	N/A	N/A	N/A	116	113	2.26	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	115	113	1.88	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 24327 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0610342-001	10/12/06	10/17/06	10/18/06 12:02 AM	0610342-002	10/12/06	10/17/06	10/18/06 1:10 AM
0610342-003	10/12/06	10/17/06	10/18/06 4:33 AM	0610342-004	10/12/06	10/17/06	10/18/06 5:40 AM
0610342-005	10/13/06	10/17/06	10/18/06 6:48 AM	0610342-006	10/13/06	10/17/06	10/18/06 7:57 AM
0610342-007	10/13/06	10/17/06	10/18/06 9:08 AM	0610342-008	10/13/06	10/17/06	10/18/06 4:45 PM
0610342-009	10/12/06	10/17/06	10/18/06 3:49 AM	0610342-010	10/12/06	10/17/06	10/18/06 3:10 PM
0610342-011	10/13/06	10/17/06	10/18/06 3:10 PM	0610342-012	10/12/06	10/17/06	10/18/06 5:27 PM
0610342-013	10/12/06	10/17/06	10/18/06 6:35 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.



## McCampbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
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, Livermore	Date Sampled: 11/21/06
		Date Received: 11/29/06
	Client Contact: James Allen	Date Reported: 12/05/06
	Client P.O.:	Date Completed: 12/05/06

**WorkOrder: 0611528**

December 05, 2006

Dear James:

Enclosed are:

- 1). the results of **3** analyzed samples from your **160 Holmes, Livermore 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. McCampbell 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

0611528

# ALLTERRA

849 Almar Avenue, Suite C, #281

Santa Cruz, California 95060

Website: www.allterraenv.com

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

Report and Bill to: Allterra Environmental, Inc.

Project Number:

Project Location: 160 Holmes

Project Name: Livermore

Sampler Signature: Eric Ahn (far Greg Nolen Jr.)

Sample ID	Sample Collection		Sample Containers		Matrix		Preservation		TPHg, BTEX&MTBE (EPA 8015/8021)	BTEX (EPA 8020)	TPHd (EPA 8015)	5-fuel oxy's (EPA 8260)	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)	Total Toxic Organics (EPA 624)	EDF required
	Date	Time	Number of Containers	Container Type	Air	Water	Soil	Sludge	Other	Ice	HCl	HNO <sub>3</sub>	Other										
+1 MW-7A	11-21-06		2	VOS	X					X	X			-	X								
+ MW-7B			1	1	1					1	1			-	X								
+ MW-7C	1													-	-								

Sampled By: Greg Nolen Jr.

Date: 11/21/06 Time: Received By:

Received By: Greg Nolen Jr.

Date: 11/29/06 Time: Received By:

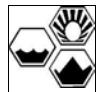
Received By: Greg Nolen Jr.

Date: 11/29/06 Time: Received By:

Comments: Sample for TTOs method 624

ICE/1°	10.1	GOOD CONDITION	✓	APPROPRIATE CONTAINERS	✓
HEAD SPACE ABSENT		DECHLORINATED IN LAB		PRESERVED IN LAB	
PRESERVATION	VOAS ✓	O&G	METALS	OTHER	

RECD SEALED & INTACT VIA \_\_\_\_\_

**McCAMPBELL ANALYTICAL, INC.**


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

**CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

**WorkOrder:** 0611528**ClientID:** ATRS EDF Fax Email HardCopy ThirdParty**Report to:**

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

Email: allterraenvironmental@yahoo.com  
TEL: 831-425-2608 FAX: 831-425-2609  
ProjectNo: 160 Holmes, Livermore  
PO:

**Bill to:**

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

**Requested TAT:** 5 days**Date Received:** 11/29/2006  
**Date Printed:** 11/29/2006

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0611528-001	MW-7A	Water	11/21/06	<input type="checkbox"/>	B	A	A									
0611528-002	MW-7B	Water	11/21/06	<input type="checkbox"/>	B	A										
0611528-003	MW-7C	Water	11/21/06	<input type="checkbox"/>	B	A										

**Test Legend:**

1	9-OXYS_W
6	
11	

2	G-MBTEX_W
7	
12	

3	PREDF REPORT
8	

4	
9	

5	
10	

**Prepared by:** Maria Venegas**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: 160 Holmes, Livermore	Date Sampled: 11/21/06
		Date Received: 11/29/06
	Client Contact: James Allen	Date Extracted: 11/30/06
	Client P.O.:	Date Analyzed 11/30/06

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0611528

Lab ID	0611528-001B	0611528-002B	0611528-003B		Reporting Limit for DF =1
Client ID	MW-7A	MW-7B	MW-7C		
Matrix	W	W	W		
DF	20	100	1		S W
Compound	Concentration			ug/kg	μg/L
tert-Amyl methyl ether (TAME)	ND<10	ND<50	ND		NA 0.5
t-Butyl alcohol (TBA)	1400	10,000	ND		NA 5.0
1,2-Dibromoethane (EDB)	ND<10	ND<50	ND		NA 0.5
1,2-Dichloroethane (1,2-DCA)	ND<10	ND<50	ND		NA 0.5
Diisopropyl ether (DIPE)	ND<10	ND<50	ND		NA 0.5
Ethanol	ND<1000	ND<5000	ND		NA 50
Ethyl tert-butyl ether (ETBE)	ND<10	ND<50	ND		NA 0.5
Methanol	ND<10,000	ND<50,000	ND		NA 500
Methyl-t-butyl ether (MTBE)	42	680	ND		NA 0.5

## Surrogate Recoveries (%)

%SS1:	108	110	109		
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 coelutes with another peak; &) low surrogate due to matrix interference.

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; J) analyte detected below quantitation limits; 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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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, Livermore	Date Sampled: 11/21/06
		Date Received: 11/29/06
	Client Contact: James Allen	Date Extracted: 11/29/06-11/30/06
	Client P.O.:	Date Analyzed 11/29/06-11/30/06

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

Extraction method SW5030B

Analytical methods SW8021B/8015Cm

Work Order: 0611528

\* 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: 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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## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0611528

EPA Method SW8260B		Extraction SW5030B				BatchID: 24928			Spiked Sample ID: 0611512-002b			
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	80.5	83.8	3.99	86.6	87.5	0.973	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	74.5	77.6	3.95	88.5	86.2	2.63	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	96	102	5.78	112	112	0	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	73.5	77.1	4.80	81.7	81.6	0.0511	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	105	108	3.11	112	110	1.18	70 - 130	30	70 - 130	30
Ethanol	ND	500	86.2	86	0.262	102	107	4.49	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	81.5	85	4.29	87.7	88	0.331	70 - 130	30	70 - 130	30
Methanol	ND	2500	113	113	0	118	112	4.77	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	77	80.2	4.16	84.3	83.5	1.02	70 - 130	30	70 - 130	30
%SS1:	109	10	90	91	0.444	94	94	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 24928 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0611528-001	11/21/06	11/30/06	11/30/06 2:30 PM	0611528-002	11/21/06	11/30/06	11/30/06 3:14 PM

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

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

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.



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## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0611528

EPA Method SW8260B		Extraction SW5030B				BatchID: 24944			Spiked Sample ID: 0611541-003c			
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	87.4	81	7.56	88.8	86.5	2.68	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	82.4	71.9	13.7	89.9	87.9	2.34	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	114	103	10.4	115	114	1.11	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	81.7	86.8	5.99	85.9	82.3	4.20	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	111	99.7	10.9	114	110	3.31	70 - 130	30	70 - 130	30
Ethanol	ND	500	96.4	104	7.15	103	104	0.802	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	88	79	10.7	89.8	87.5	2.59	70 - 130	30	70 - 130	30
Methanol	ND	2500	114	115	0.312	117	106	9.71	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	84.1	76.8	9.03	86.4	85.3	1.22	70 - 130	30	70 - 130	30
%SS1:	110	10	97	97	0	96	97	0.246	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 24944 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0611528-003	11/21/06	11/30/06	11/30/06 3:58 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.



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

## QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0611528

EPA Method SW8021B/8015Cm		Extraction SW5030B		BatchID: 24942				Spiked Sample ID: 0611541-003A				
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	108	123	13.6	106	120	12.0	70 - 130	30	70 - 130	30
MTBE	ND	10	113	102	10.5	100	118	16.3	70 - 130	30	70 - 130	30
Benzene	ND	10	110	103	6.77	106	116	9.25	70 - 130	30	70 - 130	30
Toluene	ND	10	104	94.3	10.2	99.6	106	5.91	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	108	102	6.35	105	114	7.91	70 - 130	30	70 - 130	30
Xylenes	ND	30	100	95.3	4.78	96.7	103	6.67	70 - 130	30	70 - 130	30
%SS:	98	10	107	100	6.84	104	109	4.51	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 24942 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0611528-001	11/21/06	11/30/06	11/30/06 2:24 AM	0611528-002	11/21/06	11/30/06	11/30/06 7:20 PM
0611528-002	11/21/06	11/30/06	11/30/06 7:53 PM	0611528-003	11/21/06	11/29/06	1/29/06 10:05 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.



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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: #015-01-160; LIVERMORE	Date Sampled: 09/29/06
		Date Received: 10/03/06
	Client Contact: James Allen	Date Reported: 10/10/06
	Client P.O.:	Date Completed: 10/10/06

**WorkOrder: 0610059**

October 10, 2006

Dear James:

Enclosed are:

- 1). the results of **1** analyzed sample from your **#015-01-160; LIVERMORE project**,
- 2). a QC report for the above sample
- 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. McCampbell 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

**ALLTERRA**

849 Almar Avenue, Suite C,

81

ATRS. 0610059

**Chain of Custody Record**Turn Around Time (circle one) RUSH 24HR 48HR 72HR **5 Day**

Website: www.allterraenv.com

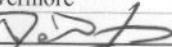
Phone: (831) 425-2608 Facsimile: (831) 425-2609

Report and Bill to: Allterra Environmental, Inc.

Project Number: 015-01-160

Project Location: 160 Holmes

Project Name: Livermore

Sampler Signature: 

Sample ID	Sample Collection		Sample Containers		Matrix		Preservation		TPHg, BTEX&MTBE (EPA 8021B)	TPHd (EPA 8015)	MTBE (EPA 8260B)	5-fuel oxy's (EPA 8260)	Ethanol and Methanol (EPA 8260)	Lead Scavengers (8260)	Total VOCs (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)	TTO's method 624	EDF required
	Date	Time	Number of Containers	Container Type	Air	Water	Soil	Sludge	Other	Ice	HCl	HNO <sub>3</sub>	Other										
IN-1	9/29/06		4	VOAS	X				X	X	X			X									

<i>Dick</i> 10/2/06	Received By:	Time: 2:50	Received By: <i>10/3/04</i>	Comments:
Received By:	Date:	Time:	Received By:	ICE/ <sup>1°</sup> _____ GOOD CONDITION _____ HEAD SPACE ABSENT _____ DECHLORINATED IN LAB _____ APPROPRIATE CONTAINERS _____ PRESERVED IN LAB _____
Received By:	Date:	Time:	Received By:	VOAS O&G METALS OTHER C/O

REC'D SEALED & INTACT VIA *C/O*

# McCampbell Analytical, Inc.

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

## CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 0610059

ClientID: ATRS

EDF

Fax

Email

HardCop

ThirdPart

Report to:

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

Email: allterraenvironmental@yahoo.com  
TEL: 831-425-2608 FAX: 831-425-2609  
ProjectNo: #015-01-160; LIVERMORE  
PO:

Bill to

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

Requested TAT: 5 days

Date Received 10/03/2006

Date Printed: 10/03/2006

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0610059-001	IN-1	Water	9/29/2006	<input type="checkbox"/>	A	A										

### Test Legend:

1	G-MBTEX_W
6	
11	

2	PREDF REPORT
7	
12	

3	
8	

4	
9	

5	
10	

Prepared by: Nickole White

### 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.



## **McCampbell Analytical, Inc.**

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
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: #015-01-160; LIVERMORE	Date Sampled: 09/29/06
		Date Received: 10/03/06
	Client Contact: James Allen	Date Extracted: 10/07/06-10/09/06
	Client P.O.:	Date Analyzed 10/07/06-10/09/06

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

Extraction method SW5030B

Analytical methods SW8021B/8015Cm

Work Order: 0610059

\* 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: 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.



**McCampbell Analytical, Inc.**

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
 Web: www.mccampbell.com E-mail: main@mccampbell.com  
 Telephone: 877-252-9262 Fax: 925-252-9269

## QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0610059

EPA Method SW8021B/8015Cm		Extraction SW5030B		BatchID: 24083				Spiked Sample ID: 0610054-004A				
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	103	99.4	3.87	96.8	95.9	0.878	70 - 130	30	70 - 130	30
MTBE	ND	10	91.8	92.8	1.04	90.3	89.3	1.05	70 - 130	30	70 - 130	30
Benzene	ND	10	105	103	1.55	86.3	102	16.8	70 - 130	30	70 - 130	30
Toluene	ND	10	96.5	95.3	1.21	76.8	92	18.0	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	102	99	3.27	95.7	80.5	17.3	70 - 130	30	70 - 130	30
Xylenes	ND	30	95	94.7	0.351	89.7	91.3	1.84	70 - 130	30	70 - 130	30
%SS:	103	10	106	105	0.828	103	100	3.05	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 24083 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0610059-001	9/29/06	10/07/06	10/07/06 7:44 PM	0610059-001	9/29/06	10/09/06	10/09/06 11:29 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.



## McCampbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
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 Livermore	Date Sampled: 11/21/06
		Date Received: 11/29/06
	Client Contact: James Allen	Date Reported: 12/05/06
	Client P.O.:	Date Completed: 12/05/06

**WorkOrder: 0611527**

December 05, 2006

Dear James:

Enclosed are:

- 1). the results of **1** analyzed sample from your **160 Holmes Livermore project**,
- 2). a QC report for the above sample
- 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. McCampbell 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



**McCAMPBELL ANALYTICAL, INC.**


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

**CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

**WorkOrder:** 0611527**ClientID:** ATRS EDF Fax Email HardCopy ThirdParty**Report to:**

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

Email: allterraenvironmental@yahoo.com  
TEL: 831-425-2608 FAX: 831-425-2609  
ProjectNo: 160 Holmes Livermore  
PO:

**Bill to:**

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

**Requested TAT:** 5 days*Date Received:* 11/29/2006  
*Date Printed:* 11/29/2006

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0611527-001	IN-2	Water	11/21/06	<input type="checkbox"/>	A	A										

**Test Legend:**

1	G-MBTEX_W
6	
11	

2	PREDF REPORT
7	
12	

3	
8	

4	
9	

5	
10	

**Prepared by:** Maria Venegas**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.



McCampbell Analytical, Inc.

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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 Livermore	Date Sampled: 11/21/06
		Date Received: 11/29/06
	Client Contact: James Allen	Date Extracted: 11/29/06-11/30/06
	Client P.O.:	Date Analyzed 11/29/06-11/30/06

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

Extraction method SW5030B

## Analytical methods SW8021B/8015Cm

Work Order: 0611527

\* 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: 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.



**McCampbell Analytical, Inc.**

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
 Web: www.mccampbell.com E-mail: main@mccampbell.com  
 Telephone: 877-252-9262 Fax: 925-252-9269

## QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0611527

EPA Method SW8021B/8015Cm		Extraction SW5030B		BatchID: 24942				Spiked Sample ID: 0611541-003A				
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	108	123	13.6	106	120	12.0	70 - 130	30	70 - 130	30
MTBE	ND	10	113	102	10.5	100	118	16.3	70 - 130	30	70 - 130	30
Benzene	ND	10	110	103	6.77	106	116	9.25	70 - 130	30	70 - 130	30
Toluene	ND	10	104	94.3	10.2	99.6	106	5.91	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	108	102	6.35	105	114	7.91	70 - 130	30	70 - 130	30
Xylenes	ND	30	100	95.3	4.78	96.7	103	6.67	70 - 130	30	70 - 130	30
%SS:	98	10	107	100	6.84	104	109	4.51	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 24942 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0611527-001	11/21/06	11/29/06	11/29/06 8:27 PM	0611527-001	11/21/06	11/30/06	11/30/06 1:52 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.

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

# **Entech Analytical Labs, Inc.**

**3334 Victor Court , Santa Clara, CA 95054**

**Phone: (408) 588-0200**

**Fax: (408) 588-0201**

**James Allen  
Allterra Environmental, Inc.  
849 Almar Avenue Suite C,#281  
Santa Cruz, CA 95060**

**Lab Certificate Number: 51921  
Issued: 10/19/2006**

**Project Number: 015-01-010  
Project Location: 160 Holmes St**

## **Certificate of Analysis - Final Report**

On October 16, 2006, a sample was received under chain of custody for analysis.  
Entech analyzes samples "as received" unless otherwise noted. The following results are included:

<u>Matrix</u>	<u>Test</u>	<u>Comments</u>
Liquid	VOCs: EPA 5030C / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).  
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,



**Erin Cunniffe  
Operations Manager**

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Allterra Environmental, Inc.  
849 Almar Avenue Suite C,#281  
Santa Cruz, CA 95060  
Attn: James Allen

Project Number: 015-01-010

Project Location: 160 Holmes St

## Certificate of Analysis - Data Report

Samples Received: 10/16/2006

Sample Collected by: Client

Lab #: 51921-001    Sample ID: Tank-1

Matrix: Liquid    Sample Date: 10/13/2006

### VOCs: EPA 5030C / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
Bromodichloromethane	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
Bromoform	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
Bromomethane	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
Carbon Tetrachloride	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
Chlorobenzene	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
Chloroethane	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
2-Chloroethyl-vinyl Ether	ND	5.0	25	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
Chloroform	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
Chloromethane	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
Dibromochloromethane	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
1,2-Dichlorobenzene	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
1,3-Dichlorobenzene	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
1,4-Dichlorobenzene	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
1,1-Dichloroethane	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
1,2-Dichloroethane	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
1,1-Dichloroethene	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
trans-1,2-Dichloroethene	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
1,2-Dichloropropane	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
cis-1,3-Dichloropropene	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
trans-1,3-Dichloropropene	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
Ethyl Benzene	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
Methylene Chloride	ND	5.0	100	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
1,1,2,2-Tetrachloroethane	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
Tetrachloroethene	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
Toluene	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
1,1,1-Trichloroethane	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
1,1,2-Trichloroethane	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
Trichloroethene	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
Trichlorofluoromethane	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
Vinyl Chloride	ND	5.0	2.5	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018
Methyl-t-butyl Ether	310	5.0	5.0	µg/L	N/A	N/A	N/A	10/18/2006	WM1061018

It is Entech's policy to report any analyte found to be >20 X the reporting limit.

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	108	60 - 130
Dibromofluoromethane	94.2	60 - 130
Toluene-d8	103	60 - 130

Analyzed by: XBian

Reviewed by: MaiChiTu

\*\*\* Sample diluted due to high concentration of non-target compound.

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200 Fax: (408) 588-0201

Method Blank - Liquid - VOCs: EPA 5030C / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

QC Batch ID: WM1061018

Validated by: MaiChiTu - 10/19/06

QC Batch Analysis Date: 10/18/2006

Parameter	Result	DF	PQLR	Units
1,1,1-Trichloroethane	ND	1	0.50	µg/L
1,1,2,2-Tetrachloroethane	ND	1	0.50	µg/L
1,1,2-Trichloroethane	ND	1	0.50	µg/L
1,1-Dichloroethane	ND	1	0.50	µg/L
1,1-Dichloroethene	ND	1	0.50	µg/L
1,2-Dichlorobenzene	ND	1	0.50	µg/L
1,2-Dichloroethane	ND	1	0.50	µg/L
1,2-Dichloropropane	ND	1	0.50	µg/L
1,3-Dichlorobenzene	ND	1	0.50	µg/L
1,4-Dichlorobenzene	ND	1	0.50	µg/L
2-Chloroethyl-vinyl Ether	ND	1	5.0	µg/L
Benzene	ND	1	0.50	µg/L
Bromodichloromethane	ND	1	0.50	µg/L
Bromoform	ND	1	0.50	µg/L
Bromomethane	ND	1	0.50	µg/L
Carbon Tetrachloride	ND	1	0.50	µg/L
Chlorobenzene	ND	1	0.50	µg/L
Chloroethane	ND	1	0.50	µg/L
Chloroform	ND	1	0.50	µg/L
Chloromethane	ND	1	0.50	µg/L
cis-1,3-Dichloropropene	ND	1	0.50	µg/L
Dibromochloromethane	ND	1	0.50	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Methylene Chloride	ND	1	20	µg/L
Methyl-t-butyl Ether	ND	1	1.0	µg/L
Tetrachloroethene	ND	1	0.50	µg/L
Toluene	ND	1	0.50	µg/L
trans-1,2-Dichloroethene	ND	1	0.50	µg/L
trans-1,3-Dichloropropene	ND	1	0.50	µg/L
Trichloroethene	ND	1	0.50	µg/L
Trichlorofluoromethane	ND	1	0.50	µg/L
Vinyl Chloride	ND	1	0.50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	100	70 - 125
Dibromofluoromethane	83.2	70 - 125
Toluene-d8	98.8	70 - 125

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054      Phone: (408) 588-0200      Fax: (408) 588-0201

LCS / LCSD - Liquid - VOCs: EPA 5030C / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

QC Batch ID: WM1061018

Reviewed by: MaiChiTu - 10/19/06

QC Batch ID Analysis Date: 10/18/2006

## LCS

Parameter	Method	Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
1,1-Dichloroethene		<0.50	20	17.5	µg/L	87.5	70 - 130
Benzene		<0.50	20	20.6	µg/L	103	70 - 130
Chlorobenzene		<0.50	20	21.3	µg/L	106	70 - 130
Methyl-t-butyl Ether		<1.0	20	19.9	µg/L	99.5	70 - 130
Toluene		<0.50	20	19.4	µg/L	97.0	70 - 130
Trichloroethene		<0.50	20	21.4	µg/L	107	70 - 130
Surrogate	% Recovery	Control Limits					
4-Bromofluorobenzene	115.0	60	-	130			
Dibromofluoromethane	103.0	60	-	130			
Toluene-d8	99.6	60	-	130			

## LCSD

Parameter	Method	Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene		<0.50	20	14.4	µg/L	72.0	19	25.0	70 - 130
Benzene		<0.50	20	16.9	µg/L	84.5	20	25.0	70 - 130
Chlorobenzene		<0.50	20	18.9	µg/L	94.5	12	25.0	70 - 130
Methyl-t-butyl Ether		<1.0	20	16.0	µg/L	80.0	22	25.0	70 - 130
Toluene		<0.50	20	17.3	µg/L	86.5	11	25.0	70 - 130
Trichloroethene		<0.50	20	19.0	µg/L	95.0	12	25.0	70 - 130
Surrogate	% Recovery	Control Limits							
4-Bromofluorobenzene	109.0	60	-	130					
Dibromofluoromethane	93.0	60	-	130					
Toluene-d8	103.0	60	-	130					



# **Entech Analytical Labs, Inc.**

**3334 Victor Court , Santa Clara, CA 95054**

**Phone: (408) 588-0200**

**Fax: (408) 588-0201**

**James Allen  
Allterra Environmental, Inc.  
849 Almar Avenue Suite C,#281  
Santa Cruz, CA 95060**

**Lab Certificate Number: 52678  
Issued: 12/05/2006**

**Project Number: 015-01-015**

**Global ID: T0600102287**

**Project Name: Livermore**

**Project Location: 160 Holmes St.**

## **Certificate of Analysis - Revision**

Note: This is a revision of the original 12/4/2006 issue.

On November 28, 2006, a sample was received under chain of custody for analysis.

Entech analyzes samples "as received" unless otherwise noted. The following results are included:

<u>Matrix</u>	<u>Test / Comments</u>
Liquid	Electronic Deliverables for Geotracker VOCs: EPA 5030C / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).  
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,



Laurie Glantz-Murphy  
Laboratory Director

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200

Fax: (408) 588-0201

Allterra Environmental, Inc.  
849 Almar Avenue Suite C,#281  
Santa Cruz, CA 95060  
Attn: James Allen

Project Number: 015-01-015  
Project Name: Livermore  
Project Location: 160 Holmes St.  
GlobalID: T0600102287

## Certificate of Analysis - Data Report

Samples Received: 11/28/2006  
Sample Collected by: Client

Lab #: 52678-001    Sample ID: Tank 2

Matrix: Liquid    Sample Date: 11/21/2006

### VOCs: EPA 5030C / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
Bromodichloromethane	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
Bromoform	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
Bromomethane	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
Carbon Tetrachloride	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
Chlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
Chloroethane	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
2-Chloroethyl-vinyl Ether	ND		1.0	5.0	µg/L	N/A	N/A	11/30/2006	WM1061130
Chloroform	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
Chloromethane	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
Dibromochloromethane	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
1,2-Dichlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
1,3-Dichlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
1,4-Dichlorobenzene	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
1,1-Dichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
1,2-Dichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
1,1-Dichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
trans-1,2-Dichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
1,2-Dichloropropane	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
cis-1,3-Dichloropropene	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
trans-1,3-Dichloropropene	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
Ethyl Benzene	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
Methylene Chloride	ND		1.0	20	µg/L	N/A	N/A	11/30/2006	WM1061130
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
Tetrachloroethene	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
Toluene	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
1,1,1-Trichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
1,1,2-Trichloroethane	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
Trichloroethene	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
Trichlorofluoromethane	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
Vinyl Chloride	ND		1.0	0.50	µg/L	N/A	N/A	11/30/2006	WM1061130
Methyl-t-butyl Ether	ND		1.0	1.0	µg/L	N/A	N/A	11/30/2006	WM1061130

Surrogate	Surrogate Recovery	Control Limits (%)	Analyzed by: XBian
4-Bromofluorobenzene	102	60 - 130	Reviewed by: MaiChiTu
Dibromofluoromethane	82.5	60 - 130	
Toluene-d8	102	60 - 130	

Detection Limit = Detection Limit for Reporting.

D/P-F = Dilution and/or Prep Factor includes sample volume adjustments.

ND = Not Detected at or above the Detection Limit.

Qual = Data Qualifier

12/5/2006 1:14:01 PM - dba

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054      Phone: (408) 588-0200      Fax: (408) 588-0201

**Method Blank - Liquid - VOCs: EPA 5030C / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater**

**QC Batch ID: WM1061130**

Validated by: MaiChiTu - 11/30/06

**QC Batch Analysis Date: 11/30/2006**

Parameter	Result	DF	PQLR	Units
1,1,1-Trichloroethane	ND	1	0.50	µg/L
1,1,2,2-Tetrachloroethane	ND	1	0.50	µg/L
1,1,2-Trichloroethane	ND	1	0.50	µg/L
1,1-Dichloroethane	ND	1	0.50	µg/L
1,1-Dichloroethene	ND	1	0.50	µg/L
1,2-Dichlorobenzene	ND	1	0.50	µg/L
1,2-Dichloroethane	ND	1	0.50	µg/L
1,2-Dichloropropane	ND	1	0.50	µg/L
1,3-Dichlorobenzene	ND	1	0.50	µg/L
1,4-Dichlorobenzene	ND	1	0.50	µg/L
2-Chloroethyl-vinyl Ether	ND	1	5.0	µg/L
Benzene	ND	1	0.50	µg/L
Bromodichloromethane	ND	1	0.50	µg/L
Bromoform	ND	1	0.50	µg/L
Bromomethane	ND	1	0.50	µg/L
Carbon Tetrachloride	ND	1	0.50	µg/L
Chlorobenzene	ND	1	0.50	µg/L
Chloroethane	ND	1	0.50	µg/L
Chloroform	ND	1	0.50	µg/L
Chloromethane	ND	1	0.50	µg/L
cis-1,3-Dichloropropene	ND	1	0.50	µg/L
Dibromochloromethane	ND	1	0.50	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Methylene Chloride	ND	1	20	µg/L
Methyl-t-butyl Ether	ND	1	1.0	µg/L
Tetrachloroethene	ND	1	0.50	µg/L
Toluene	ND	1	0.50	µg/L
trans-1,2-Dichloroethene	ND	1	0.50	µg/L
trans-1,3-Dichloropropene	ND	1	0.50	µg/L
Trichloroethene	ND	1	0.50	µg/L
Trichlorofluoromethane	ND	1	0.50	µg/L
Vinyl Chloride	ND	1	0.50	µg/L

**Surrogate for Blank    % Recovery    Control Limits**

4-Bromofluorobenzene	<b>101</b>	70 - 125
Dibromofluoromethane	<b>85.2</b>	70 - 125
Toluene-d8	<b>103</b>	70 - 125

# Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054

Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - VOCs: EPA 5030C / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

QC Batch ID: WM1061130

Reviewed by: MaiChiTu - 11/30/06

QC Batch ID Analysis Date: 11/30/2006

## LCS

Parameter	Method	Blank	Spike Amt	SpikeResult	Units	% Recovery	Recovery Limits
1,1-Dichloroethene		<0.50	20	16.3	µg/L	81.5	70 - 130
Benzene		<0.50	20	17.4	µg/L	87.0	70 - 130
Chlorobenzene		<0.50	20	19.1	µg/L	95.5	70 - 130
Methyl-t-butyl Ether		<1.0	20	16.5	µg/L	82.5	70 - 130
Toluene		<0.50	20	17.9	µg/L	89.5	70 - 130
Trichloroethene		<0.50	20	19.6	µg/L	98.0	70 - 130
Surrogate		% Recovery	Control Limits				
4-Bromofluorobenzene		101.0	60	-	130		
Dibromofluoromethane		88.2	60	-	130		
Toluene-d8		101.0	60	-	130		

## LCSD

Parameter	Method	Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene		<0.50	20	16.3	µg/L	81.5	0.0	25.0	70 - 130
Benzene		<0.50	20	17.7	µg/L	88.5	1.7	25.0	70 - 130
Chlorobenzene		<0.50	20	19.6	µg/L	98.0	2.6	25.0	70 - 130
Methyl-t-butyl Ether		<1.0	20	15.4	µg/L	77.0	6.9	25.0	70 - 130
Toluene		<0.50	20	17.9	µg/L	89.5	0.0	25.0	70 - 130
Trichloroethene		<0.50	20	19.9	µg/L	99.5	1.5	25.0	70 - 130
Surrogate		% Recovery	Control Limits						
4-Bromofluorobenzene		103.0	60	-	130				
Dibromofluoromethane		86.2	60	-	130				
Toluene-d8		100.0	60	-	130				

*Entech*

ALLTERRA										Chain of Custody Record														
849 Almar Avenue, Suite C, #281 Santa Cruz, California 95060 Website: www.allterraenv.com Phone: (831) 425-2608 Facsimile: (831) 425-2609										<input checked="" type="checkbox"/> Turn Around Time (circle one)      RUSH      24HR      48HR      72HR      5 Day														
Report and Bill to: Alterra Environmental, Inc. Project Number: Project Location: 160 Holmes Project Name: Livermore Sampler Signature: <i>Eric A (for Greg Nolen Jr.)</i>																								
Sample ID	Sample Collection		Sample Containers		Matrix		Preservation		TPHg, BTEX&MTBE (EPA 8015/8021)	BTEX (EPA 8020)	TPHd (EPA 8015)	Total Toxic Organics (EPA 624)	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)	PAHs/PNA's (EPA 8270,625/8310)	Fish Toxicity/Bioassay	Lead (EPA 6010/200,9/200,8)	Total Toxic Organics (EPA 624)	<input checked="" type="checkbox"/> EDF required	EDF required
	Date	Time	Number of Containers	Container Type	Air	Water	Soil	Sludge																
Tank 2	11-21-06	3	Vials	X				X X																
Sampled By:			Date:	Time:	Received By:		Comments: Sample for TTOs method 624																	
<i>Greg Nolen Jr.</i>			11/28/06	13:11																				
Received By:			Date:	Time:	Received By:																			
<i>[Signature]</i>																								
Received By:			Date:	Time:	Received By:																			
<i>[Signature]</i>																								