

R0324



**Second Quarter 2005 Groundwater Monitoring Report
160 Holmes Street, Livermore, California**

Date:
June 17, 2005

Project No.:
015-01-002

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

Alameda County

JUN 27 2005

Environmental Health

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

Phone: (831) 425-2608
Fax: (831) 425-2609
<http://www.allterraenv.com>

June 23, 2005

Ms. Donna Drogos
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

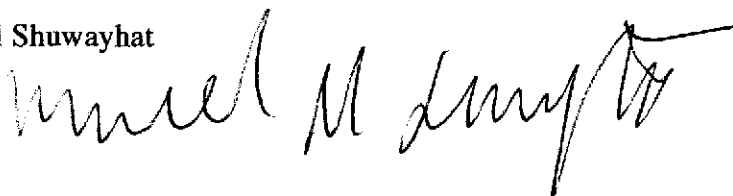
Subject: Perjury Statement for the Second Quarter 2005 Groundwater Monitoring Report, 160 Holmes Street, Livermore, California

Dear Ms. Drogos:

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

Sincerely,

Manwel Shuwayhat



Alameda County
JUL 05 2005
Environmental Health

4/28/05

Alameda County Environmental Health Department
Attention: Robert Schultz P.G.
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Dear Mr. Schultz,

The report of 1st quarter 2005 groundwater monitoring for the Livermore Gas and Mini Mart, 160 Holmes Street, Livermore, CA is enclosed for your review and comment.

PERJURY STATEMENT

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

Manwel or Samira Shuwayhat June 30th 2005
Manwel or Samira Shuwayhat date
54 Wolfe Canyon road
Kentfield, CA 94904

Alameda County
JUL 05 2005
Environmental Health



Alameda County

JUN 27 2005

Environmental Health

June 23, 2005

Ms. Donna Drogos
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

**SUBJECT: Second Quarter 2005 Groundwater Monitoring Report,
160 Holmes Street, Livermore, California**

Dear Ms. Drogos:

On behalf of Mr. Manwel Shuwayhat, Allterra Environmental, Inc. (Allterra) has prepared the enclosed Second Quarter 2005 Groundwater Monitoring Report. Should you have any questions or comments please contact Allterra at (831) 425-2608.

Sincerely,

Allterra Environmental, Inc.

A handwritten signature in cursive script that reads "William Satterthwaite".

William Satterthwaite
Staff Scientist

enclosures: Second Quarter 2005 Groundwater Monitoring Report



June 17, 2005
Project No.: 015-01-002

Alameda County

JUN 27 2005

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

Environmental Health

**Subject: Second Quarter 2005 Groundwater Monitoring Report
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 second quarter 2005 groundwater monitoring report for the property located at 160 Holmes Street in Livermore, CA (site). This report describes the field and analytical methods, provides a summary of groundwater monitoring results, and presents conclusions and recommendations regarding groundwater conditions at the site.

Site Location and Description

The subject 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 May 27, 2005, Allterra performed quarterly groundwater monitoring at the subject site for six monitoring and one extraction wells at the site. Groundwater monitoring activities included the measurement of static groundwater levels, an evaluation of groundwater in the wells for the presence of petroleum hydrocarbons, and purging and sampling of six wells for laboratory analysis.

Groundwater Monitoring Field Activities

Depth to groundwater measurements and an evaluation of groundwater for the presence of petroleum hydrocarbons were performed in wells MW-1 through MW-6, and also in well EX-1. 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 2.

For second quarter 2005, all six monitoring wells were sampled for laboratory analysis. Each well was purged and sampled in accordance with Alameda County Environmental Health Services (ACEHS) and Regional Water Quality Control Board (RWQCB) guidelines and Allterra protocols presented in Appendix A. Groundwater Sampling Field Logs are included in Appendix B. Groundwater samples were submitted under chain-of-custody documentation to

McC Campbell 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 six monitoring wells were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and total petroleum hydrocarbons as diesel (TPHd) by EPA Method 8015C modified, and for benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tert-butyl ether (MTBE) by EPA Method 8021B. 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 May 27, 2005, Allterra personnel measured and recorded depths to groundwater from the tops of well casings (TOC) for monitoring wells MW-1 through MW-6 and well EX-1. Recorded depths to groundwater ranged from 18.29 to 20.15 feet. Groundwater elevation data are summarized in Table 1 and depicted in Figure 3 as groundwater elevation contours. For the May 2005 groundwater monitoring event, groundwater appeared to flow northwest at a gradient of approximately 0.0069 foot per foot (ft/ft).

Analytical Results

Fuel-related compounds were detected in four of six wells sampled this quarter. Dissolved TPHg was detected in two wells at concentrations of 270 micrograms per liter ($\mu\text{g/L}$) (MW-2) and 79,000 $\mu\text{g/L}$ (MW-1). TPHd was detected in two wells at concentrations of 59 $\mu\text{g/L}$ (MW-2) and 4,600 $\mu\text{g/L}$ (MW-1). Benzene was detected in two wells at concentration ranging from 14 $\mu\text{g/L}$ to 4,300 $\mu\text{g/L}$ in wells MW-2 and MW-1, respectively. Well samples indicated the presence of MTBE in four wells at levels ranging from 9.6 $\mu\text{g/L}$ in well MW-4 to 240,000 $\mu\text{g/L}$ in well MW-1. Groundwater analytical results from well samples are presented in Table 2. The distribution of TPHg, TPHd, benzene, and MTBE in groundwater is presented in Figure 4.

Purge water

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

Conclusions

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

- Groundwater appears to flow to the northwest with a gradient of 0.0069 ft/ft and appears to be consistent with previous monitoring events;
- The highest concentrations of dissolved TPHg, TPHd, benzene, and MTBE were detected in on-site monitoring well MW-1;
- MTBE was found in off-site wells MW-4 and MW-5.

Recommendations

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

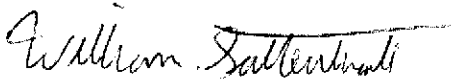
- Continue with the quarterly groundwater monitoring program at the site.
- Perform a conduit study and prepare a work plan for soil and groundwater investigation in accordance with Alameda County's March 29, 2005 letter.

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.



William Satterthwaite, Ph.D.
Environmental Scientist



Michael Killoran, P.G. 6670
Senior Geologist



List of Figures

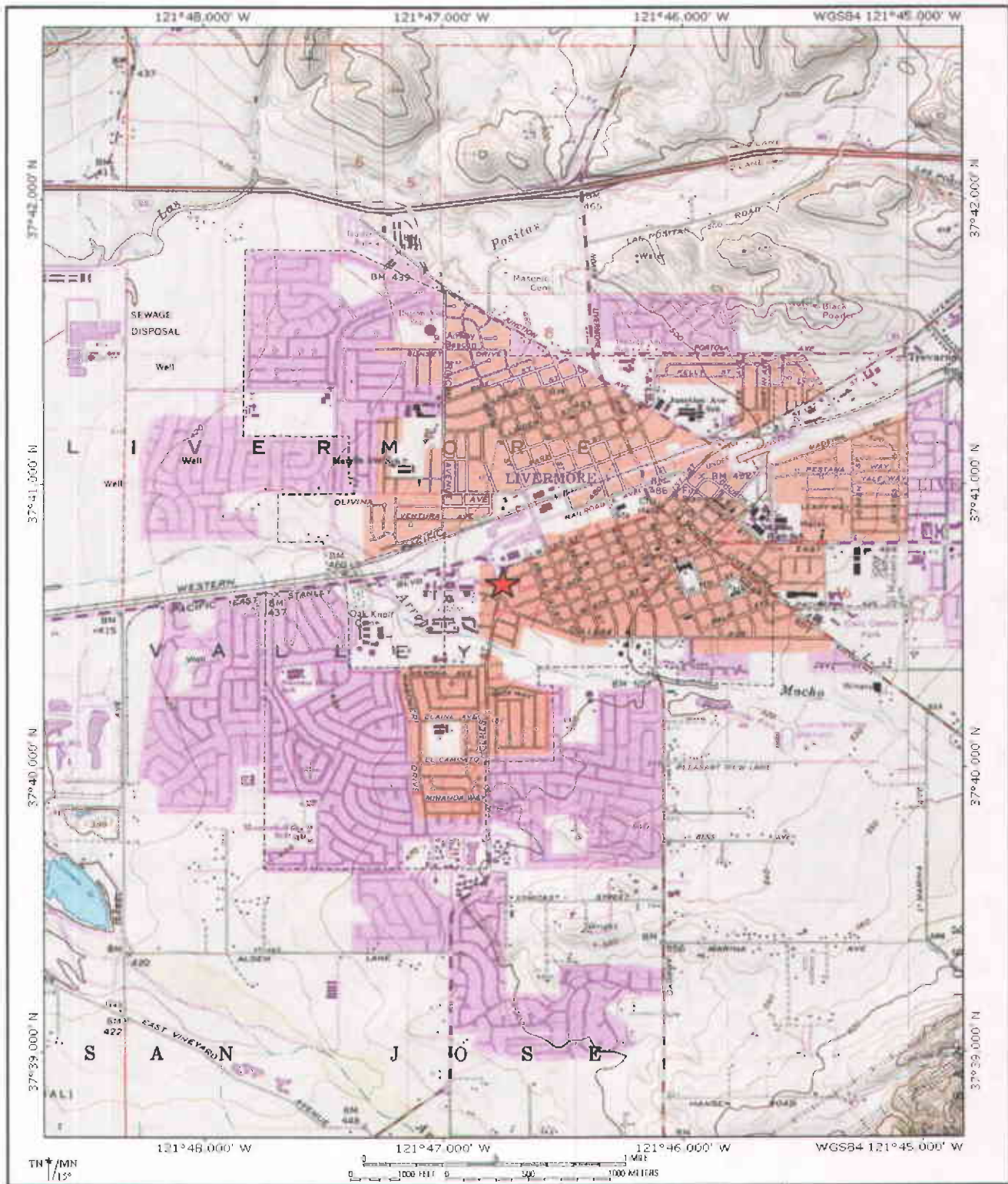
- Figure 1, Vicinity Map
- Figure 2, Site Plan
- Figure 3, Groundwater Gradient Map for 5/27/05
- Figure 4, Concentrations of Fuel-Related Compounds in Groundwater

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- Table 1, Groundwater Elevations
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List of Appendices

- Appendix A, Groundwater Monitoring Field Protocol
- Appendix B, Groundwater Sampling Field Logs
- Appendix C, Certified Analytical Reports and Chain of Custody



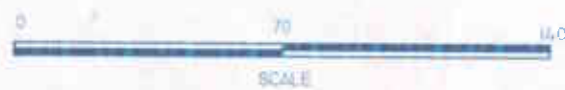
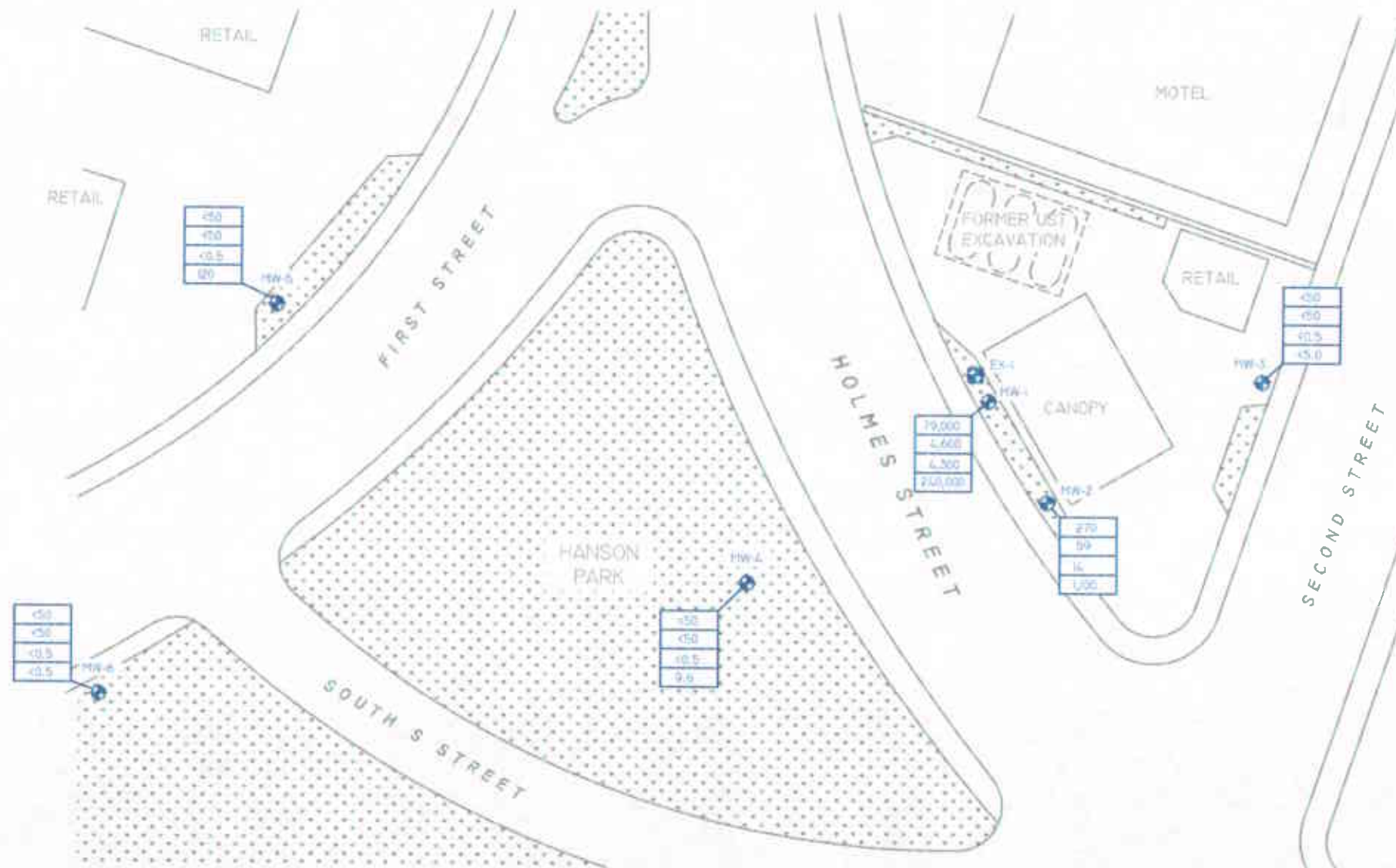
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Vicinity Map
 Livermore Gas and Minimart
 160 Holmes Street
 Livermore, California

Figure 1

6/17/2005

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LEGEND:

- MW-1 MONITORING WELL LOCATION
- EX-1 EXTRACTION WELL LOCATION

<50	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
<50	TOTAL PETROLEUM HYDROCARBONS AS DIESEL
<0.5	BENZENE
<0.5	METHYL TERTIARY BUTYL ETHER

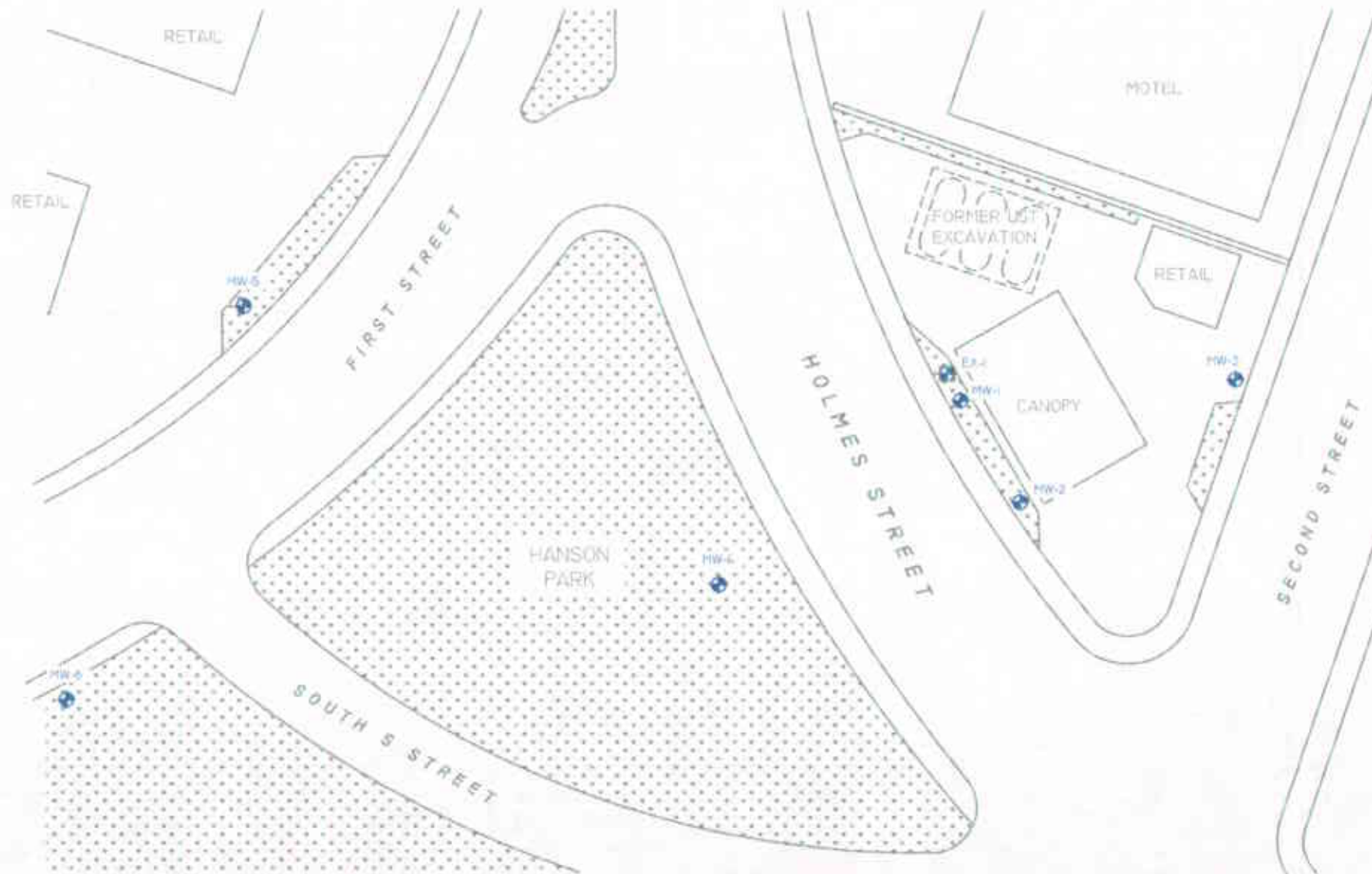
NOTES:

CONCENTRATIONS OF FUEL-RELATED COMPOUNDS ARE REPORTED IN MICROGRAMS PER LITER (UG/L)



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CONCENTRATIONS OF FUEL-RELATED COMPOUNDS IN GROUNDWATER
 160 HOLMES STREET
 LIVERMORE, CALIFORNIA

FIGURE 4
 6/16/05
 2ND QTR



LEGEND:

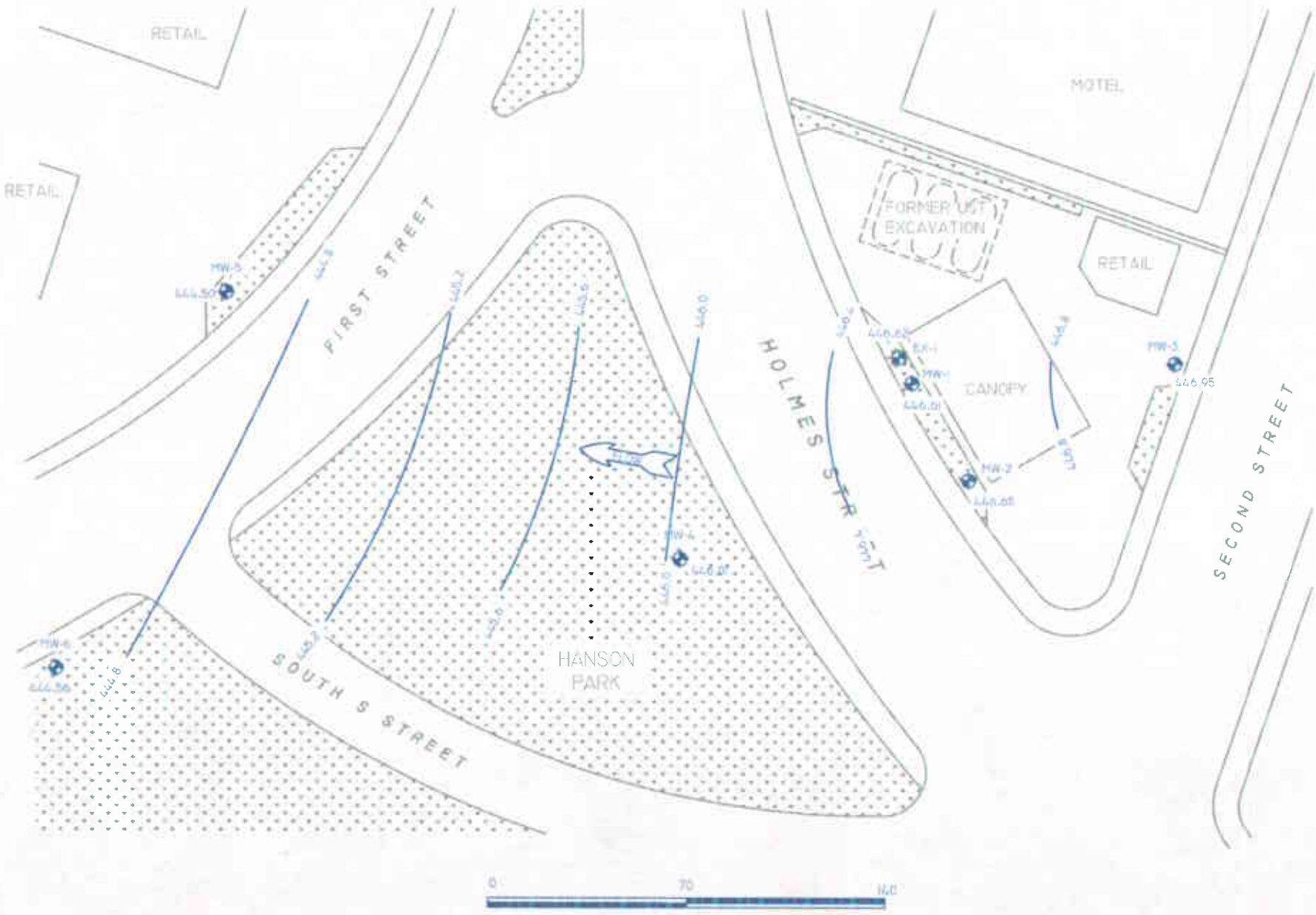
-  MW-1 MONITORING WELL LOCATION
-  EX-1 EXTRACTION WELL LOCATION



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SITE MAP
 160 HOLMES STREET
 LIVERMORE, CALIFORNIA

FIGURE 2
 6/16/05
 2ND QTR



LEGEND:

-  MW-4 MONITORING WELL LOCATION
-  EX-1 EXTRACT ION WELL LOCATION

-  APPROXIMATE GROUNDWATER FLOW DIRECTION
-  445.6 INFERRED GROUNDWATER GRADIENT CONTOUR
-  444.56 GROUNDWATER ELEVATION IN FEET

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GROUNDWATER POTENTIOMETRIC
 MAP FOR 5/27/05
 160 HOLMES STREET
 LIVERMORE, CALIFORNIA

FIGURE 3
 6/16/05
 2ND QTR

Table 1
Groundwater Elevation Data
160 Holmes Street, Livermore

Monitoring Well ID	Date	Top of Casing Elevation* (feet, msl)	Depth to Groundwater (feet)	Groundwater Elevation (feet, msl)
MW-1	8/11/00	465.03	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	
MW-2	8/11/00	464.94	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	

Table 1
Groundwater Elevation Data
 160 Holmes Street, Livermore

Monitoring Well ID	Date	Top of Casing Elevation* (feet, msl)	Depth to Groundwater (feet)	Groundwater Elevation (feet, msl)
MW-3	8/11/00	465.84	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
MW-4	11/14/01	465.15	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

Table 1
Groundwater Elevation Data
160 Holmes Street, Livermore

Monitoring Well ID	Date	Top of Casing Elevation* (feet, msl)	Depth to Groundwater (feet)	Groundwater Elevation (feet, msl)
MW-5	11/14/01	464.65	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
MW-6	11/14/01	464.13	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

Table 1
Groundwater Elevation Data
 160 Holmes Street, Livermore

Monitoring Well ID	Date	Top of Casing Elevation* (feet, msl)	Depth to Groundwater (feet)	Groundwater Elevation (feet, msl)
EX-1	11/14/01	465.30	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

MSL: Mean sea level

bgs: Below ground surface

NA: well not accessible

NC: elevation not calculated

NM: well not measured

Table 2
Groundwater Analytical Results
 160 Holmes Street, Livermore

Monitoring Well ID	Date Collected	Total Petroleum Hydrocarbons as (µg/L)		Aromatic Volatile Organic Compounds (µg/L)				Fuel Oxygenates (µg/L)
		Gasoline	Diesel	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
MW-1	8/11/00	170,000	57,000	6,400	7,600	4,200	9,700	320,000
	10/19/00	170,000	17,000	8,400	3,200	2,700	10,000	200,000
	2/22/01	82,000	11,000	5,100	1,000	13,000	8,700	190,000
	5/30/01	not sampled - well dry						
	11/14/01	not sampled - well dry						
	5/7/02	not sampled - well dry						
	9/11/02	130,000	NA	7,700	1,100	4,500	1,500	<5000
	12/1/02	NS	NS	NS	NS	NS	NS	NS
	3/14/03	180,000	3,800	7,100	3,200	4,300	6,000	220,000
	6/25/03	71,000	3,100	7,500	4,700	4,800	8,900	210,000
	9/16/03	37,000	3,600	4,600	220	3,600	930	150,000
	12/22/03	44,000	4,000	6,800	1,500	4,000	3,800	180,000
	3/10/04	72,000	3,100	6,000	11,000	3,900	10,000	260,000
	6/15/04	42,000	4,300	5,000	1,800	3,700	6,000	210,000
	9/17/04	24,000	2,900	2,800	<33	2,900	500	83,000
	12/10/04	31,000	2,700	4,600	190	4,400	2,800	200,000
	3/2/05	58,000	2,800	4,000	2,500	4,500	7,800	230,000
5/27/05	79,000	4,600	4,300	6,200	5,100	13,000	240,000	
MW-2	8/11/00	4,500	1,900	220	52	160	170	3,000
	10/19/00	3,400	1,300	150	21	100	70	1,900
	2/22/01	7,600	880	25	<10	69	25	2,200
	5/30/01	not sampled - well dry						
	11/14/01	not sampled - well dry						
	5/7/02	400	86	5.4	<0.5	1.9	2.3	230
	9/11/02	260	NA	1.3	<0.5	0.57	0.77	200
	12/11/02	250	120	7.9	1.6	13	9.9	180
	3/14/03	830	110	56	<0.5	<0.5	<1.0	1,200
	6/25/03	260	180	0.92	2.9	3.1	8.1	2,000
	9/16/03	420	260	3.6	3.4	5.2	2.4	1,300
	12/22/03	240	120	0.82	3.1	7.8	3.9	1,400
	3/10/04	280	210	9.4	4.2	14	11	1,400
	6/15/04	150	150	2.1	2.4	2.2	1.3	1,500
	9/17/04	61	70	<0.5	1.0	<0.5	<0.5	730
	12/10/04	84	110	<0.5	1.2	<0.5	1.5	1,300
	3/2/05	63	91	0.55	<0.5	0.63	0.51	1,000
5/27/05	270	59	14	3.9	19	6.8	1,100	

Table 2
Groundwater Analytical Results
 160 Holmes Street, Livermore

Monitoring Well ID	Date Collected	Total Petroleum Hydrocarbons as (µg/L)		Aromatic Volatile Organic Compounds (µg/L)				Fuel Oxygenates (µg/L)
		Gasoline	Diesel	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
MW-3	8/11/00	59	260	<0.5	<0.5	<0.5	<0.5	<5.0
	10/19/00	<50	<65	<0.5	<0.5	<0.5	<0.5	<5.0
	2/22/01	<50	100	<0.5	<0.5	<0.5	<0.5	<5.0
	5/30/01	not sampled - well dry						
	11/14/01	not sampled - well dry						
	5/7/02	not sampled - well dry						
	9/11/02	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	12/11/02		NS					
	3/14/03	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	6/25/03	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/16/03	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	12/22/03	<50	69	<0.5	<0.5	<0.5	<0.5	<5.0
	3/10/04	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	6/15/04	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/17/04	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	12/10/04	<50	<50	<0.5	<0.5	<0.5	<0.5	7.6
	3/5/05	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
5/27/05	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
MW-4	11/14/01	510	90	4.0	<0.5	<0.5	<0.5	14
	5/7/02	150	<50	3.5	0.5	<0.5	<0.5	48
	9/11/02	<50	NA	<0.5	<0.5	<0.5	<0.5	15
	12/11/02	<50	<50	<0.5	<0.5	<0.5	<0.5	24
	3/14/03	<50	<50	<0.5	<0.5	<0.5	<0.5	<1.0
	6/25/03	<50	<50	<0.5	<0.5	<0.5	<0.5	<1.0
	9/16/03	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	12/22/03	<50	69	<0.5	<0.5	<0.5	<0.5	<5.0
	3/4/04	<50	<50	<0.5	<0.5	<0.5	<0.5	37
	6/15/04	<50	<50	<0.5	<0.5	<0.5	<0.5	7.4
	9/17/04	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	12/10/04	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/2/05	<50	<50	<0.5	<0.5	<0.5	<0.5	14
5/27/05	<50	<50	<0.5	<0.5	<0.5	<0.5	9.6	
MW-5	11/14/01	<50	<66	<0.5	<0.5	<0.5	<0.5	8.2
	5/7/02	140	<50	<0.5	<0.5	<0.5	<0.5	110
	9/11/02	<50	NA	<0.5	<0.5	<0.5	<0.5	6.3
	12/11/02	73	<50	<0.5	<0.5	<0.5	<0.5	160
	3/14/03	110	<50	<0.5	<0.5	<0.5	<0.5	170
	6/25/03	<50	<50	<0.5	<0.5	<0.5	<0.5	89
	9/16/03	630	<50	<0.5	3.5	<0.5	2.6	1500
	12/22/03	<0.5	<50	<0.5	<0.5	<0.5	<0.5	630
	3/10/04	57	<50	<0.5	<0.5	<0.5	<0.5	1100
	6/15/04	<50	<50	<0.5	<0.5	<0.5	<0.5	750
	9/17/04	<50	<50	<0.5	<0.5	<0.5	<0.5	780
	12/10/04	<50	<50	<0.5	<0.5	<0.5	<0.5	120
	3/2/05	<50	<50	<0.5	<0.5	<0.5	<0.5	320
5/27/05	<50	<50	<0.5	<0.5	<0.5	<0.5	120	

Table 2
Groundwater Analytical Results
 160 Holmes Street, Livermore

Monitoring Well ID	Date Collected	Total Petroleum Hydrocarbons as (µg/L)		Aromatic Volatile Organic Compounds (µg/L)				Fuel Oxygenates (µg/L)
		Gasoline	Diesel	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-6	11/14/01	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	5/7/02	<50	<67	<0.5	<0.5	<0.5	<0.5	<5.0
	9/11/02	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	12/11/02	<50	<50	<0.5	<0.5	<0.5	<0.5	<1.0
	3/14/03	<50	<50	<0.5	<0.5	<0.5	<1.0	<1.0
	6/25/03	<50	<50	<0.5	<0.5	<0.5	<1.0	<1.0
	9/16/03	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	12/22/03	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/10/04	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	6/15/04	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/17/04	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	12/10/04	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/2/05	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	5/27/05	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0
EX-1	11/14/01	13,000	2,000	180	1,000	330	3,200	2,200
	5/7/02	7,700	560	320	<25	66	150	6,200
	9/11/02	2,800	NA	32	<13	14	<13	2,500
	12/11/02	3,000	100	81	<0.5	44	<1.0	4,800
	3/14/03	750	50	<0.5	<0.5	7.7	13	1,200
	6/25/03	120	<50	3.2	3.7	4.2	7.6	260
	9/16/03	170	<50	0.5	1.5	<0.5	0.9	1,600
	3/10/04		NS					
	6/15/04		NS					
	9/17/04		NS					
	12/10/04		NS					
	3/2/05		NS					
	5/27/05		NS					

Notes:

-- = not applicable
 µg/L = micrograms per liter
 NS = Not Sampled
 NA = Not Analyzed
 MTBE = methyl tertiary butyl ether

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

ALTEREA

Groundwater Sampling Field Log

Site Address 160 Holmes St.	Date 5/27/05
Project Number 015-01-002	Field Personnel WS
Monitoring Well Information	
Monitoring Well ID MW-1	Monitoring Well Diameter (inches) 2
Depth to Water (feet) 18.42	Water Column (feet) 11.58
Total Depth (feet) 30	80% Recharge Depth (feet)
Depth to Product (feet)	1 Well Volume (gallons) 1.97
Comments	

Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
13:25		2.0 gall	1356 μ S	19.2°C		high	grey	strong product
		2.0	1341	19.3		"	"	"
		2.0	1338	19.2		"	"	"

Total Purge Volume 6.0 gall	Comments
-----------------------------	----------

Groundwater Sampling Information

Sample ID MW-1	Sample Time 13:40
Sample Containers (Number/Type): 4 voas, 1 amber	
Comments	

Groundwater Sampling Field Log

Site Address 160 Holmes St.	Date 5/27/05
Project Number 015-01-002	Field Personnel
Monitoring Well Information	
Monitoring Well ID MW-2	Monitoring Well Diameter (inches) 2
Depth to Water (feet) 18.29	Water Column (feet) 11.71
Total Depth (feet) 30	80% Recharge Depth (feet)
Depth to Product (feet)	1 Well Volume (gallons) 1.99
Comments	

Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
12:55		2.0 gall	1046 μ S	19.7°C		moderate	brown	moderate product
		2.0	1040	19.7		high	"	"
		2.0	1027	19.8		"	"	"

Total Purge Volume 6.0 gall	Comments
-----------------------------	----------

Groundwater Sampling Information

Sample ID MW-2	Sample Time 13:10
Sample Containers (Number/Type): 4 voas, 1 amber	
Comments	

ALTERE 3

Groundwater Sampling Field Log

Site Address 160 Holmes St.

Date 5/27/05

Project Number 015-01-002

Field Personnel

Monitoring Well Information

Monitoring Well ID Mw-3

Monitoring Well Diameter (inches) 2

Depth to Water (feet) 18.89

Water Column (feet) 11.11

Total Depth (feet) 30

80% Recharge Depth (feet)

Depth to Product (feet)

1 Well Volume (gallons) 1.89

Comments

Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
12:25		1.9 gall	955 μ S	19.3°C		moderate	brown	none
		1.9	871	18.9		high	"	"
		1.9	873	18.9		high	"	"

Total Purge Volume 5.7 gall

Comments

Groundwater Sampling Information

Sample ID Mw-4

Sample Time 12:45

Sample Containers (Number/Type): 4 voas, 1 amber

Comments

Groundwater Sampling Field Log

Site Address 160 Holmes St.

Date 5/27/05

Project Number 015-01-002

Field Personnel

Monitoring Well Information

Monitoring Well ID Mw-4

Monitoring Well Diameter (inches) 2

Depth to Water (feet) 19.14

Water Column (feet) 30.86

Total Depth (feet) 50

80% Recharge Depth (feet)

Depth to Product (feet)

1 Well Volume (gallons) 5.25

Comments

Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
14:00		5.0 gall	746 μ S	19.4°C		moderate	brown	none
		5.0	743	18.9		high	"	"
		5.0	747	18.9		"	"	"

Total Purge Volume 15.0 gall

Comments

Groundwater Sampling Information

Sample ID Mw-4

Sample Time 14:25

Sample Containers (Number/Type): 4 voas, 1 amber

Comments

ALTERE-3

Groundwater Sampling Field Log

Site Address 160 Holmes St.	Date 5/27/05
Project Number 015-01-002	Field Personnel
Monitoring Well Information	
Monitoring Well ID <i>MW-5</i>	Monitoring Well Diameter (inches) <i>2</i>
Depth to Water (feet) <i>20.15</i>	Water Column (feet) <i>29.85</i>
Total Depth (feet) <i>50</i>	80% Recharge Depth (feet)
Depth to Product (feet)	1 Well Volume (gallons) <i>5.07</i>
Comments	

Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
<i>15:25</i>		<i>5.0 gall</i>	<i>840 μS</i>	<i>20.0°C</i>		<i>moderate</i>	<i>brown</i>	<i>none</i>
		<i>5.0</i>	<i>842</i>	<i>20.0</i>		<i>"</i>	<i>"</i>	<i>"</i>
		<i>5.0</i>	<i>854</i>	<i>20.0</i>		<i>"</i>	<i>"</i>	<i>"</i>

Total Purge Volume <i>15.0 gall</i>	Comments
-------------------------------------	----------

Groundwater Sampling Information

Sample ID <i>MW-5</i>	Sample Time <i>15:50</i>
Sample Containers (Number/Type): <i>4 voas, 1 amber</i>	
Comments	

Groundwater Sampling Field Log

Site Address 160 Holmes St.	Date 5/27/05
Project Number 015-01-002	Field Personnel
Monitoring Well Information	
Monitoring Well ID <i>MW-6</i>	Monitoring Well Diameter (inches) <i>2</i>
Depth to Water (feet) <i>19.57</i>	Water Column (feet) <i>30.43</i>
Total Depth (feet) <i>50</i>	80% Recharge Depth (feet)
Depth to Product (feet)	1 Well Volume (gallons) <i>5.17</i>
Comments	

Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
<i>14:45</i>		<i>5.0 gall</i>	<i>1004 μS</i>	<i>18.6°C</i>		<i>low</i>	<i>brown</i>	<i>none</i>
		<i>5.0</i>	<i>1006</i>	<i>18.5</i>		<i>moderate</i>	<i>"</i>	<i>"</i>
		<i>5.0</i>	<i>1008</i>	<i>18.5</i>		<i>"</i>	<i>"</i>	<i>"</i>

Total Purge Volume	Comments
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Groundwater Sampling Information

Sample ID <i>MW-6</i>	Sample Time <i>15:05</i>
Sample Containers (Number/Type): <i>4 voas, 1 amber</i>	
Comments	

Groundwater Sampling Field Log

Site Address 160 Holmes St	Date 5/27/05
Project Number 015-01-002	Field Personnel
Monitoring Well Information	
Monitoring Well ID <i>EX-1</i>	Monitoring Well Diameter (inches) <i>8</i>
Depth to Water (feet) <i>18.68</i>	Water Column (feet) <i>36.32</i>
Total Depth (feet) <i>55</i>	80% Recharge Depth (feet)
Depth to Product (feet)	1 Well Volume (gallons)
Comments <i>tagged only, not sampled</i>	

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 <i>tagged only, not sampled</i>	

Groundwater Sampling Field Log

Site Address 160 Holmes St	Date 5/27/05
Project Number 015-01-002	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
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Groundwater Sampling Information

Sample ID	Sample Time
Sample Containers (Number/Type):	
Comments	

APPENDIX C
Certified Analytical Reports and Chain of Custody



McC Campbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mcccampbell.com E-mail: main@mcccampbell.com

Allterra Environmental, Inc 849 Almar Ave, Ste. C #281 Santa Cruz, CA 95060	Client Project ID: #002-02-011; 160 Holmes St	Date Sampled: 05/27/05
		Date Received: 05/27/05
	Client Contact: James Allen	Date Reported: 06/03/05
	Client P.O.:	Date Completed: 06/03/05

WorkOrder: 0505455

June 03, 2005

Dear James:

Enclosed are:

- 1). the results of 6 analyzed samples from your #002-02-011; 160 Holmes St project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

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

If you have any questions please contact me. McC Campbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager

**McC Campbell Analytical, Inc.**
 110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
 Telephone : 925-798-1620 Fax : 925-798-1622
 Website: www.mccampbell.com E-mail: main@mccampbell.com

Allterra Environmental, Inc 849 Almar Ave, Ste. C #281 Santa Cruz, CA 95060	Client Project ID: #002-02-011; 160 Holmes St	Date Sampled: 05/27/05
	Client Contact: James Allen	Date Received: 05/27/05
	Client P.O.:	Date Extracted: 06/01/05-06/02/05
		Date Analyzed: 06/01/05-06/02/05

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Cm

Work Order: 0505455

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	79,000,a,i	240,000	4300	6200	5100	13,000	100	107
002A	MW-2	W	270,a,i	1100	14	3.9	19	6.8	1	105
003A	MW-3	W	ND,i	ND	ND	ND	ND	ND	1	102
004A	MW-4	W	ND,i	9.6	ND	ND	ND	ND	1	100
005A	MW-5	W	ND,i	120	ND	ND	ND	ND	1	101
006A	MW-6	W	ND,i	ND	ND	ND	ND	ND	1	109

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	0.5	1	µg/L
	S	NA	NA	NA	NA	NA	NA	NA	1	mg/Kg

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

†The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request.



McC Campbell Analytical, Inc.

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 Telephone : 925-798-1620 Fax : 925-798-1622
 Website: www.mcccampbell.com E-mail: main@mcccampbell.com

Allterra Environmental, Inc 849 Almar Ave, Ste. C #281 Santa Cruz, CA 95060	Client Project ID: #002-02-011; 160 Holmes St	Date Sampled: 05/27/05
	Client Contact: James Allen	Date Received: 05/27/05
	Client P.O.:	Date Extracted: 05/27/05
		Date Analyzed: 06/01/05

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

Extraction method: SW3510C

Analytical methods: SW8015C

Work Order: 0505455

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0505455-001B	MW-1	W	4600,d,i	1	110
0505455-002B	MW-2	W	59,b,i	1	105
0505455-003B	MW-3	W	ND,i	1	107
0505455-004B	MW-4	W	ND,i	1	107
0505455-005B	MW-5	W	ND,i	1	108
0505455-006B	MW-6	W	ND,i	1	106

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

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

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

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

G.C. [Signature] Angela Rydelius, Lab Manager



QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0505455

EPA Method: SW8021B/8015Cm		Extraction: SW5030B			BatchID: 16417			Spiked Sample ID: 0505454-015B		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) [£]	ND	60	96.8	96.4	0.397	93.2	92.8	0.396	70 - 130	70 - 130
MTBE	ND	10	82.2	82.8	0.790	86.7	117	29.6	70 - 130	70 - 130
Benzene	ND	10	104	106	1.99	99.1	103	4.25	70 - 130	70 - 130
Toluene	ND	10	104	107	2.18	99.8	104	4.00	70 - 130	70 - 130
Ethylbenzene	ND	10	106	107	1.25	102	105	2.79	70 - 130	70 - 130
Xylenes	ND	30	110	110	0	90.7	91.3	0.733	70 - 130	70 - 130
%SS:	97	10	97	96	1.23	114	117	2.67	70 - 130	70 - 130

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

BATCH 16417 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0505455-001A	5/27/05	6/01/05	6/01/05 1:06 AM	0505455-001A	5/27/05	6/02/05	6/02/05 9:10 AM
0505455-002A	5/27/05	6/01/05	6/01/05 7:01 AM	0505455-002A	5/27/05	6/02/05	6/02/05 11:10 AM
0505455-003A	5/27/05	6/01/05	6/01/05 8:29 AM	0505455-004A	5/27/05	6/01/05	6/01/05 8:59 AM
0505455-005A	5/27/05	6/01/05	6/01/05 9:59 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 % Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 £ TPH(btex) = sum of BTEX areas from the FID.
 # cluttered chromatogram; sample peak coelutes with surrogate peak.
 N/A = not applicable or not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0505455

EPA Method: SW8021B/8015Cm		Extraction: SW5030B			BatchID: 16418			Spiked Sample ID: 0505460-003B		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) ^E	ND	60	98	99.2	1.21	95.2	91.4	4.09	70 - 130	70 - 130
MTBE	ND	10	84.3	87.9	4.17	111	83.7	27.6	70 - 130	70 - 130
Benzene	ND	10	104	110	5.15	101	104	2.60	70 - 130	70 - 130
Toluene	ND	10	105	111	4.82	102	104	1.80	70 - 130	70 - 130
Ethylbenzene	ND	10	107	111	3.60	105	105	0	70 - 130	70 - 130
Xylenes	ND	30	110	110	0	91.3	91.7	0.364	70 - 130	70 - 130
%SS:	96	10	95	98	3.05	113	115	2.43	70 - 130	70 - 130

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

BATCH 16418 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0505455-006A	5/27/05	6/02/05	6/02/05 9:40 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.
^E TPH(btex) = sum of BTEX areas from the FID.
 # cluttered chromatogram; sample peak coelutes with surrogate peak.
 N/A = not applicable or not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0505455

EPA Method: SW8015C		Extraction: SW3510C			BatchID: 16404			Spiked Sample ID: N/A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	N/A	1000	N/A	N/A	N/A	98.8	98.5	0.286	N/A	70 - 130
%SS:	N/A	2500	N/A	N/A	N/A	96	96	0	N/A	70 - 130

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

BATCH 16404 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0505455-001B	5/27/05	5/27/05	6/01/05 5:47 PM	0505455-002B	5/27/05	5/27/05	6/01/05 6:55 PM
0505455-003B	5/27/05	5/27/05	6/01/05 8:04 PM	0505455-004B	5/27/05	5/27/05	6/01/05 9:12 PM
0505455-005B	5/27/05	5/27/05	6/01/05 10:20 PM	0505455-006B	5/27/05	5/27/05	6/01/05 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.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

AIRS 0505455

ALTERRA

849 Almar Avenue, Suite C, #281

Santa Cruz, California 95060

Website: www.allterraenv.com

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

Chain of Custody Record

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

Report and Bill to: Allterra Environmental, Inc.

Project Number: 002-02-011

Project Location: 160 Holmes St., Livermore, CA

Project Name: 160 Holmes St

Sampler Signature: *William Satterthwaite*

Sample ID	Sample Collection		Sample Containers		Matrix					Preservation				TPHg, BTEX&MTBE (EPA 8015/8020)	BTEX (EPA 8020)	TPHd (EPA 8015)	5-fuel oxys (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)	PAHs/ 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 ₃	Other																	
MW-1	5/27/05		4,1	voas, amber	X					X				X	X															X
MW-2	5/27/05		4,1	voas, amber	X					X				X	X															X
MW-3	5/27/05		4,1	voas, amber	X					X				X	X															X
MW-4	5/27/05		4,1	voas, amber	X					X				X	X															X
MW-5	5/27/05		4,1	voas, amber	X					X				X	X															X
MW-6	5/27/05		4,1	voas, amber	X					X				X	X															X

+2
+2
+2
+2
+10
+2

Sampled By: William Satterthwaite <i>William Satterthwaite</i>	Date: 5/27/05	Time: 5:35p	Received By: <i>Joe Volk</i>
Received By:	Date:	Time:	Received By:
Received By:	Date:	Time:	Received By:

Comments:

ICBP GOOD CONDITION HEAD SPACE ABSENT DECHLORINATED IN LAB PRESERVED IN LAB

APPROPRIATE CONTAINERS PRESERVED IN LAB

PRESERVATION VOAS O&G METALS OTHER

McC Campbell Analytical, Inc.

CHAIN-OF-CUSTODY RECORD



110 Second Avenue South, #D7
 Pacheco, CA 94553-5560
 (925) 798-1620

WorkOrder: 0505455

ClientID: ATRS

Report to:

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

TEL: 831-334-0696
 FAX: 831-425-2609
 ProjectNo: #002-02-011; 160 Holmes St
 PO:

Bill to:

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

Requested TAT:

5 days

Date Received: 05/27/2005

Date Printed: 05/27/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)															
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
0505455-001	MW-1	Water	5/27/05	<input type="checkbox"/>	A	A	B													
0505455-002	MW-2	Water	5/27/05	<input type="checkbox"/>	A		B													
0505455-003	MW-3	Water	5/27/05	<input type="checkbox"/>	A		B													
0505455-004	MW-4	Water	5/27/05	<input type="checkbox"/>	A		B													
0505455-005	MW-5	Water	5/27/05	<input type="checkbox"/>	A		B													
0505455-006	MW-6	Water	5/27/05	<input type="checkbox"/>	A		B													

Test Legend:

1	G-MBTEX_W	2	PREFD REPORT	3	TPH(D)_W	4		5	
6		7		8		9		10	
11		12		13		14		15	

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.



McC Campbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

INVOICE for ANALYTICAL SERVICES

Project Name: #002-02-011; 160 Holmes St
PO Number: N/A
Date Sampled: 05/27/05
Date Received: 05/27/05

Invoice N°: 0505455

INV DATE: *June 03, 2005*
Print DATE: *June 03, 2005*

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

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

Description	TAT	Matrix	Qty	Mult	Unit Price	Test Total
Tests:						
TPH(d)	5 days	Water	6	1	\$45.00	\$270.00
TPH(g) + MBTEX	5 days	Water	6	1	\$45.00	\$270.00
Miscellaneous:						
EDF Report			1	1	\$25.00	\$25.00
SubTotal:						\$565.00

Invoice Total: \$565.00

*** ALL FAXED INVOICES ARE FOR YOUR INFORMATION ONLY - PLEASE PAY OFF ORIGINAL**

Please include the invoice number with your check and remit to Accounts Receivable at the letter head address. MAI also accepts credit card (Visa/Master Card/Discover/American Express) payment. Please call Account Receivable for details on this service.

MAI's EDF charge does not include the EDF charge for subcontracted analyses. The minimum EDF charge per workorder is \$25.00. For invoice total greater than \$5000.00, EDF will be 2% of the total invoice. The EDF charge for subcontracted analyses will be identical to Subcontractor's fee.

Terms are net 30 days from the invoice date. After this period 1.5% interest per month will be charged. Overdue accounts are responsible for all legal and collection fees. If you have any questions about billing, please contact Accounts Receivable at McC Campbell Analytical.