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ALLTERRA

Third Quarter 2005 Groundwater Monitoring Report
160 Holmes Street, Livermore, California

Date:
August 12, 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

Allterra Environmental, Inc.
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Santa Cruz, California 95060

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August 12, 2005

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

SUBJECT: Third 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 Third Quarter 2005 Groundwater Monitoring Report. Should you have any questions or comments please contact Allterra at (831) 425-2608.

Sincerely,

Allterra Environmental, Inc.

Erik Allen

Erik Allen
Staff Scientist

enclosures: Third Quarter 2005 Groundwater Monitoring Report

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August 12, 2005
Project No.: 015-01-002

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

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

Groundwater Monitoring
On July 21, 2005, Allterra performed quarterly groundwater monitoring at the Site for six monitoring wells and one extraction well 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 seven 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 monitoring wells MW-1 through MW-6 and extraction 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 third quarter 2005, six monitoring wells and one extraction well were sampled for laboratory analysis. Each well was purged and sampled in accordance with Alameda County Environmental Health Services (ACEHS) and Regional Water Quality Control Board (RWQCB) guidelines and Allterra protocols presented in Appendix A. Groundwater Sampling Field Logs

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

Laboratory Analysis of Groundwater Samples

Groundwater samples from each of the seven wells were analyzed for total petroleum hydrocarbons as gasoline (TPHg), and for benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tert-buty 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 July 21, 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 21.10 to 22.55 feet. Groundwater elevation data are summarized in Table 1 and depicted in Figure 3 as groundwater elevation contours. For the July 2005 groundwater monitoring event, groundwater appeared to flow northwest at a gradient of approximately 0.009 foot per foot (ft/ft).

Analytical Results

Fuel-related compounds were detected in four of seven wells sampled this quarter. Dissolved TPHg was detected in two wells at concentrations of 280 micrograms per liter (µg/L) (MW-2) and 80,000 µg/L (MW-1). Benzene was detected in two wells at concentration ranging from 8.6 µg/L to 4,300 µg/L in wells MW-2 and MW-1, respectively. Well samples indicated the presence of MTBE in four wells at levels ranging from 97 µg/L in well MW-5 to 300,000 µg/L in well MW-1. Groundwater analytical results from well samples are presented in Table 2. The distribution of TPHg, 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 0.009 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-1;
- MTBE was found in off-site well MW-5.

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

- Continue with the quarterly groundwater monitoring program at the site.

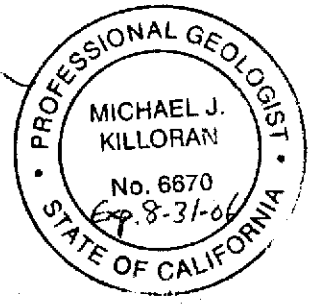
Limitations
Allterra prepared this report for the use of Livermore Gas and Mini Mart and ACEHS in evaluating groundwater quality at selected on-site locations at the time of this study. Statements, conclusions, and recommendations in this report are based solely on the field observations and analytical 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.

Erik N. Allen
Environmental Scientist

Michael Killoran, P.G. 6670
Senior Geologist



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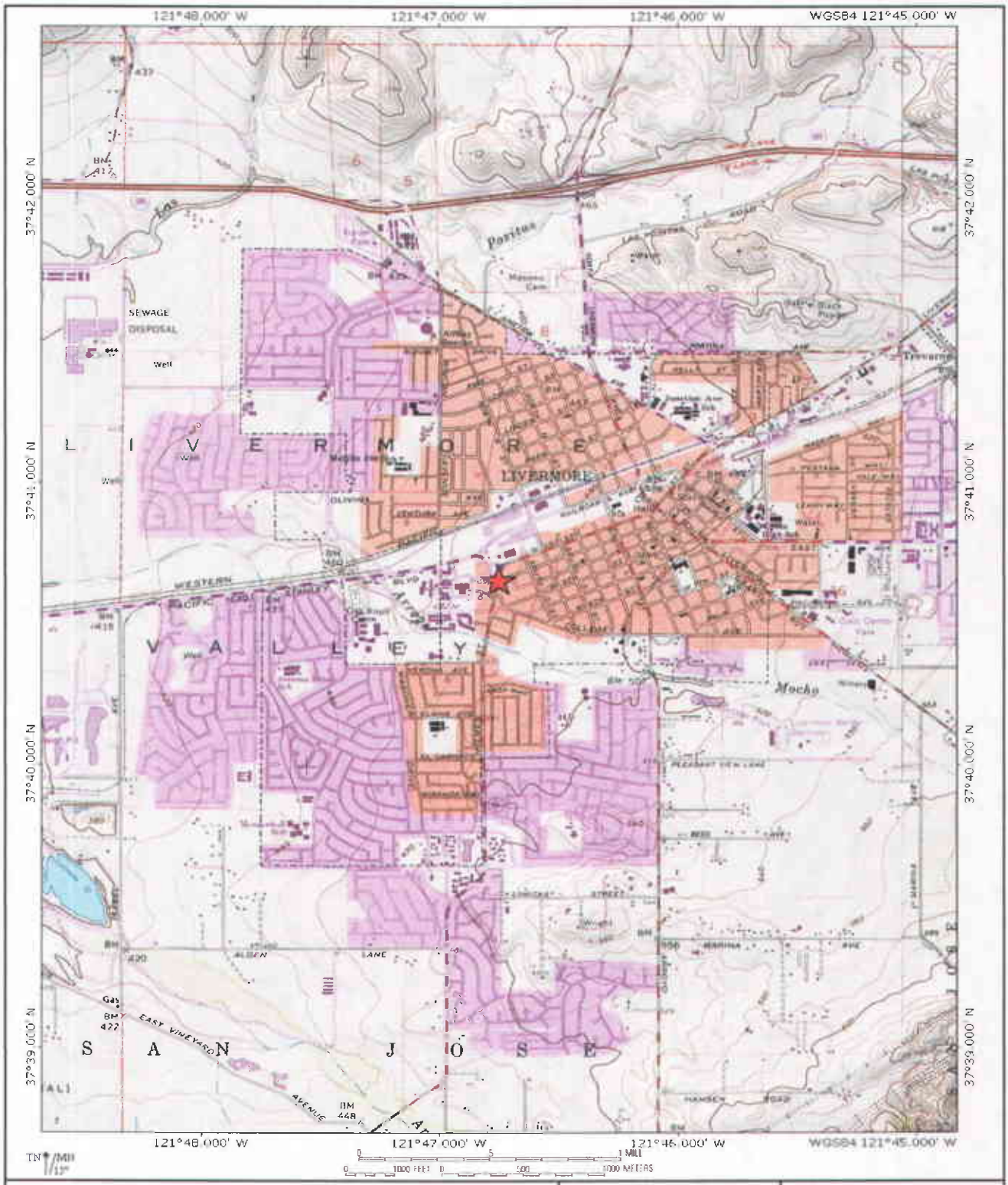
Appendix C, Certified Analytical Reports and Chain of Custody

cc: Donna Drogos, ACEHS



Vicinity Map

Livermore Gas and Minimart
160 Holmes Street
Livermore, California

Figure 1

6/28/2005

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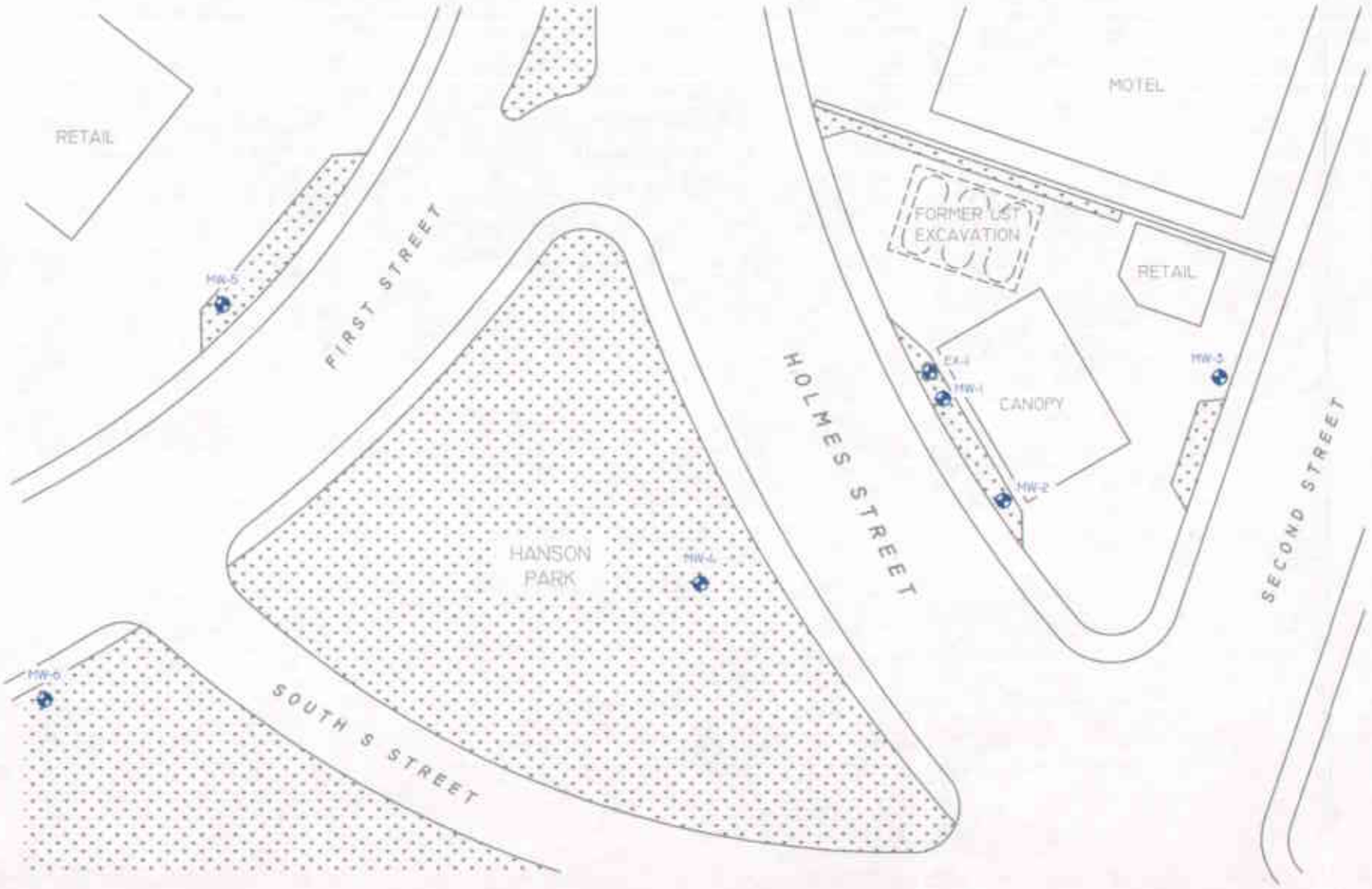

LEGEND:

MW-4 MONITORING WELL LOCATION

EX-1 EXTRACTION WELL LOCATION

0 70 140

SCALE

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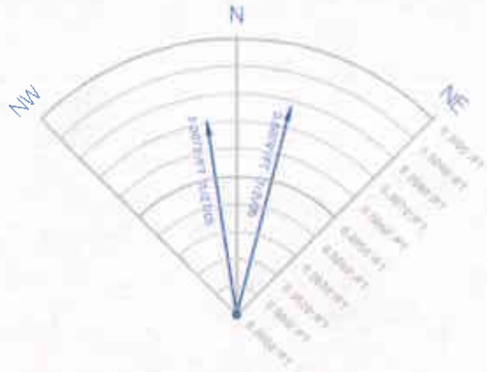
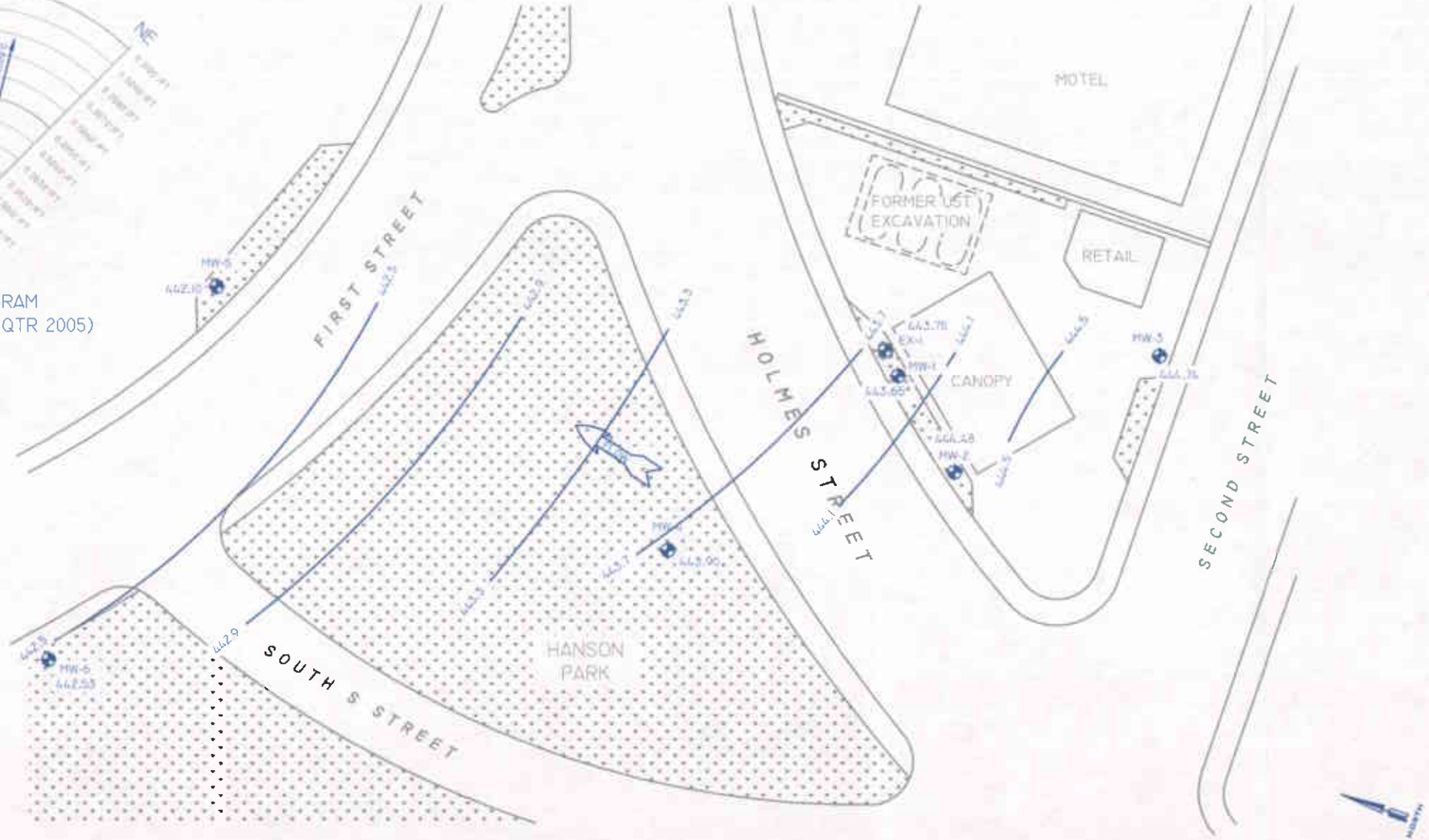
SITE MAP

160 HOLMES STREET
LIVERMORE, CALIFORNIA

FIGURE 2
8/17/05
3RD QTR



ROSE DIAGRAM
(BEGINNING 2ND QTR 2005)



LEGEND:

MW-4	MONITORING WELL LOCATION
EX-1	EXTRACTION WELL LOCATION
*	DATA NOT CONTOURED
FLOW	APPROXIMATE GROUNDWATER FLOW DIRECTION
442.5	INFERRED GROUNDWATER GRADIENT CONTOUR
444.28	GROUNDWATER ELEVATION IN FEET

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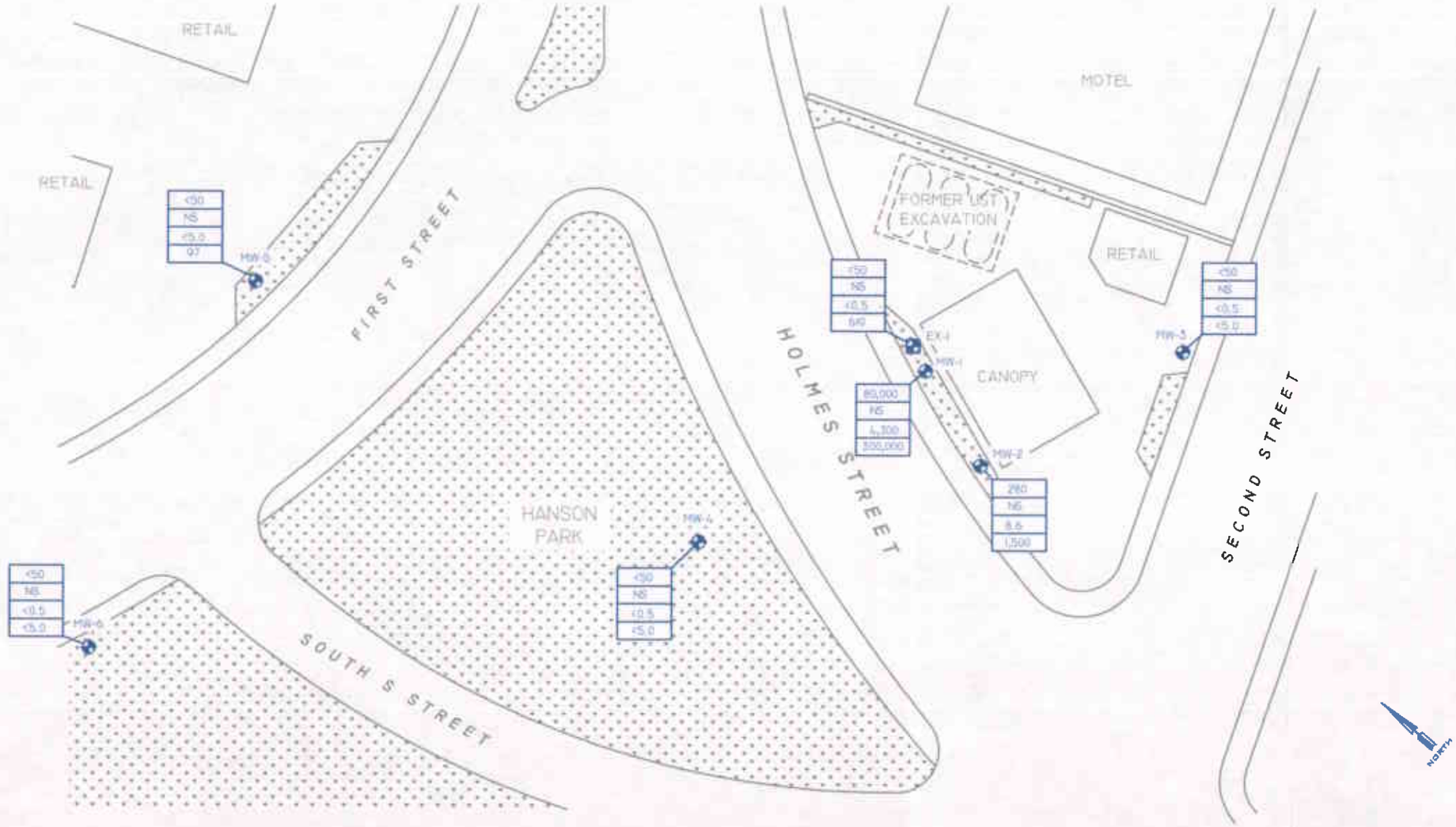
GROUNDWATER POTENTIAMETRIC MAP FOR 7/21/05

160 HOLMES STREET
LIVERMORE, CALIFORNIA

FIGURE 3
8/17/05
3RD QTR



0 70 140

SCALE

LEGEND:

MW-4 MONITORING WELL LOCATION

EX-1 EXTRACTION WELL LOCATION

NS NOT SAMPLED

<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
8/17/05
3RD 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
	7/21/05	**465.03**	**21.38**	**443.65**
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
	7/21/05	**464.94**	**20.46**	**444.48**

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
	7/21/05	**465.84**	**21.10**	**444.74**
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
	7/21/05	**465.15**	**21.25**	**443.90**

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
	7/21/05	**464.65**	**22.55**	**442.10**
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
	7/21/05	**464.13**	**21.60**	**442.53**

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
	7/21/05	**465.30**	**21.55**	**443.75**

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	Ethyl-benzene	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
	7/21/05	**80,000**	**NS**	**4,300**	**5,300**	**5,400**	**14,000**	**300,000**
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
	7/21/05	**280**	**NS**	**8.6**	**2.5**	**17**	**2.5**	**1,500**

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-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
	7/21/05	**<50**	**NS**	**<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
	7/21/05	**<50**	**NS**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**
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
	7/21/05	**<50**	**NS**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**97**

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
	7/21/05	**<50**	**NS**	**<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					
	7/21/05	**<50**	**NS**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**610**

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 7/21/05
Project Number	Field Personnel EA

Monitoring Well Information

Monitoring Well ID MW-1	Monitoring Well Diameter (inches) 2.0
Depth to Water (feet) 21.38	Water Column (feet) 8.62
Total Depth (feet) 30.0	80% Recharge Depth (feet)
Depth to Product (feet)	1 Well Volume (gallons) 1.47
Comments	

Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
11:40	21.38	1.5	1277 µs	18.1 °C	6.94	high	grey	strong
11:50		1.5	1209 µs	18.8 °C	6.90	high	grey	strong
12:00		1.5	1189 µs	18.9 °C	6.85	"	"	"

Total Purge Volume	Comments

Groundwater Sampling Information

Sample ID MW-1	Sample Time 12:00
Sample Containers (Number/Type) 4 VOAs	
Comments	

Groundwater Sampling Field Log

Site Address 160 Holmes St.	Date 7/21/05
Project Number	Field Personnel EA

Monitoring Well Information

Monitoring Well ID MW-2	Monitoring Well Diameter (inches)
Depth to Water (feet) 20.26	Water Column (feet) 9.80
Total Depth (feet) 30.0	80% Recharge Depth (feet)
Depth to Product (feet)	1 Well Volume (gallons) 1.50
Comments	

Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
12:05	21.20	1.5	1032 µs	18.7°C	6.87	high	grey	strong
12:10		1.5	1034 µs	19.1°C	6.87	↓	↓	↓
12:15		1.5	1041 µs	19.2°C	6.91	↓	↓	↓

Total Purge Volume	Comments

Groundwater Sampling Information

Sample ID MW-2	Sample Time 12:15
Sample Containers (Number/Type) 4 VOAs	
Comments	

ALLTERRA

Groundwater Sampling Field Log

Site Address 160 Holmes	Date 7/21/05
Project Number	Field Personnel EA

Monitoring Well Information

Monitoring Well ID MW-3	Monitoring Well Diameter (inches) 2.0
Depth to Water (feet) 25.10	Water Column (feet) 4.90
Total Depth (feet) 30.0	80% Recharge Depth (feet)
Depth to Product (feet)	1 Well Volume (gallons) .83
Comments	

Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
12:20		.83	845 µs	18.7°C	6.99	high	brown	weak
12:25		.83	845 µs	18.6°C	6.93	↓	↓	↓
12:30		.83	849 µs	18.5°C	6.91	↓	↓	↓

Total Purge Volume	Comments

Groundwater Sampling Information

Sample ID MW-3	Sample Time 12.30
Sample Containers (Number/Type) 4 Voas	
Comments	

Groundwater Sampling Field Log

Site Address 160 Holmes	Date 7/21/05
Project Number	Field Personnel EA

Monitoring Well Information

Monitoring Well ID MW-4	Monitoring Well Diameter (inches) 2.0
Depth to Water (feet) 21.25	Water Column (feet) 23.75
Total Depth (feet) 50.0	80% Recharge Depth (feet)
Depth to Product (feet)	1 Well Volume (gallons) 4.23
Comments	

Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
12:40	25.25	4.2	765 µs	17.8°C	7.18	high	brown	none
12:50		4.2	761 µs	17.9°C	7.22	↓	↓	↓
1:00		4.2	755 µs	17.9°C	7.31	↓	↓	↓

Total Purge Volume	Comments

Groundwater Sampling Information

Sample ID MW-4	Sample Time 1:00
Sample Containers (Number/Type) 4 Voas	
Comments	

ALTERRA

Groundwater Sampling Field Log

Site Address 160 Holmes	Date 7/21/05
Project Number	Field Personnel EA

Monitoring Well Information

Monitoring Well ID MW-5	Monitoring Well Diameter (inches) 2.0
Depth to Water (feet) 22.15	Water Column (feet) 26.85
Total Depth (feet) 50.0	80% Recharge Depth (feet)
Depth to Product (feet)	1 Well Volume (gallons) 4.56
Comments	

Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
1:10	23.15	4.56	921ms	19.4°C	7.38	High	Brown	None
1:20	23.15	4.56	920ms	19.5°C	7.38	High	Brown	None
1:30	23.15	4.56	920ms	19.5°C	7.37	"	"	"

Total Purge Volume	Comments

Groundwater Sampling Information

Sample ID MW-5	Sample Time 1:30
Sample Containers (Number/Type) 4 VOAs	
Comments	

Groundwater Sampling Field Log

Site Address ~~MW-6~~ 160 Holmes	Date 7/21/05
Project Number	Field Personnel EA

Monitoring Well Information

Monitoring Well ID MW-6	Monitoring Well Diameter (inches) 2.0
Depth to Water (feet) 22.80	Water Column (feet) 27.65
Total Depth (feet) 50.0	80% Recharge Depth (feet)
Depth to Product (feet)	1 Well Volume (gallons) 4.70
Comments	

Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
1:55	22.35	4.7	1125ms	18.1°C	7.10	High	Brown	Weak
1:45	"	4.7	1144ms	18.0°C	7.06	High	Brown	Weak
1:55	"	4.7	1145ms	18.0°C	7.06	High	Brown	Weak

Total Purge Volume	Comments

Groundwater Sampling Information

Sample ID MW-6	Sample Time 1:55
Sample Containers (Number/Type) 4 VOAs	
Comments	

ALTERRA

Groundwater Sampling Field Log

Site Address 160 Holmes	Date 7/21/05
Project Number	Field Personnel EA

Monitoring Well Information

Monitoring Well ID EX-1	Monitoring Well Diameter (inches) 6.0
Depth to Water (feet) 21.55	Water Column (feet) 28.45
Total Depth (feet) 55.0	80% Recharge Depth (feet)
Depth to Product (feet)	1 Well Volume (gallons) 19.92
Comments	

Field Measurements and Observations

Time	Depth to Water	Purge Volume	Conductivity	Temperature	pH	Turbidity	Color	Odor
1:35	21.55	14.92	780ms	18.5°C	7.55	Low	Brown	None
1:45	"	"	781ms	18.1°C	7.58	moderate	Brown	None
1:55	"	"	781ms	18.0°C	7.56	moderate	Brown	None

Total Purge Volume	Comments

Groundwater Sampling Information

Sample ID EX-1	Sample Time 1:55
Sample Containers (Number/Type) 4 VOAs	
Comments	

Groundwater Sampling Field Log

Site Address	Date
Project Number	Field Personnel

Monitoring Well Information

Monitoring Well ID	Monitoring Well Diameter (inches)
Depth to Water (feet)	Water Column (feet)
Total Depth (feet)	80% Recharge Depth (feet)
Depth to Product (feet)	1 Well Volume (gallons)
Comments	

Field Measurements and Observations

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

Total Purge Volume	Comments

Groundwater Sampling Information

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

APPENDIX C
Certified Analytical Reports and Chain of Custody

McCampbell 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	Client Project ID: 160 Holmes St	Date Sampled: 07/21/05
849 Almar Ave, Ste. C #281		Date Received: 07/27/05
Santa Cruz, CA 95060	Client Contact: James Allen	Date Extracted: 07/30/05-08/01/05
	Client P.O.:	Date Analyzed: 07/30/05-08/01/05

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0507446

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	80,000,a,i	300,000	4300	5300	5400	14,000	20	98
002A	MW-2	W	280,a,i	1500	8.6	2.5	17	2.5	1	103
003A	MW-3	W	ND,i	ND	ND	ND	ND	ND	1	99
004A	MW-4	W	ND,i	ND	ND	ND	ND	ND	1	101
005A	MW-5	W	ND,i	97	ND	ND	ND	ND	1	104
006A	MW-6	W	ND,i	ND	ND	ND	ND	ND	1	100
007A	EX-1	W	ND,i	610	ND	ND	ND	ND	1	111
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.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell 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

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0507446

EPA Method: SW8021B/8015Cm **Extraction: SW5030B** **BatchID: 17341** **Spiked Sample ID: 0507446-003A**

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	LCS / LCSD
TPH(btex)£	ND	60	92.3	93.2	0.948	91.6	93.7	2.25	70 - 130	70 - 130
MTBE	ND	10	91.9	94.1	2.43	86.4	88.9	2.83	70 - 130	70 - 130
Benzene	ND	10	86.3	84.7	1.83	83.5	84.5	1.20	70 - 130	70 - 130
Toluene	ND	10	91.9	90.1	1.95	88.2	90.1	2.16	70 - 130	70 - 130
Ethylbenzene	ND	10	98.6	97.4	1.28	94.8	97.4	2.72	70 - 130	70 - 130
Xylenes	ND	30	100	100	0	96	100	4.08	70 - 130	70 - 130
%SS:	99	10	99	96	2.71	97	96	0.943	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 17341 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0507446-001A	7/21/05	7/30/05	7/30/05 10:52 PM	0507446-001A	7/21/05	8/01/05	8/01/05 7:40 PM
0507446-002A	7/21/05	7/30/05	7/30/05 2:36 PM	0507446-002A	7/21/05	8/01/05	8/01/05 5:40 PM
0507446-003A	7/21/05	7/30/05	7/30/05 3:07 PM	0507446-004A	7/21/05	7/30/05	7/30/05 3:38 PM
0507446-005A	7/21/05	7/30/05	7/30/05 4:10 PM	0507446-006A	7/21/05	7/30/05	7/30/05 4:41 PM
0507446-007A	7/21/05	7/30/05	7/30/05 5:14 PM	0507446-007A	7/21/05	8/01/05	8/01/05 6:10 PM

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

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

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

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

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

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

DHS Certification No. 1644

QA/QC Officer

0507446

ALLTERRA
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:
Project Location: 160 Holmes St.
Project Name:
Sampler Signature: EW

	Sample ID	Sample Collection: Date	Sample Collection: Time	Sample Containers: Number of Containers	Sample Containers: Container Type	Matrix: Air	Matrix: Water	Matrix: Soil	Matrix: Sludge	Matrix: Other	Preservation: Ice	Preservation: HCl	Preservation: HNO3	Preservation: Other	TPHg/ BTEX/ MTBE (EPA 8015/8021)	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)	PAH's/ PNA's (EPA 8270,625/8310)	Fish Toxicity/Bioassay	Lead (EPA 6010/200.9/200.8)		EDF required
H	MW-1	7/21		4 Voas	Voas		X				X	X			X														X
H	MW-2																												
-1	MW-3																												
-1	MW-4																												
H	MW-5																												
H	MW-6																												
H	EX-1																												

Sampled By: Erik Allen
Date: 7/21/05 Time: Received By:
Received By:
Date: 7/27/05 Time: 8am Received By:
Received By:
Date: Time: Received By:

Comments:

ICE/t° ✓
GOOD CONDITION ✓ APPROPRIATE ✓
HEAD SPACE ABSENT CONTAINERS
DECHLORINATED IN LAB PRESERVED IN LAB

PRESERVATION	VOAS	O&G	METALS	OTHER

REC'D SEALED & INTACT VIA C/O

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0507446 **ClientID: ATRS** **EDF: YES**

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: 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: 07/27/2005
Date Printed: 07/27/2005

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
0507446-001	MW-1	Water	7/21/05	☐	A														
0507446-002	MW-2	Water	7/21/05	☐	A														
0507446-003	MW-3	Water	7/21/05	☐	A														
0507446-004	MW-4	Water	7/21/05	☐	A														
0507446-005	MW-5	Water	7/21/05	☐	A														
0507446-006	MW-6	Water	7/21/05	☐	A														
0507446-007	EX-1	Water	7/21/05	☐	A														

Test Legend:

1	G-MBTEX_W	2		3		4		5	
6		7		8		9		10	
11		12		13		14		15	

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.