ALLTERES

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 2 7 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

M M M M

Emilionmental 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".

JUL 0 5 2005
Environmental Health

Manwel or Samira Shuwayhat

54 Wolfe Canyon road Kentfield, CA 94904

MMy June 30 h 2005



Alameda County

JUN 27 2005

June 23, 2005

Environmental Health

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.

William Satterthwaite

Staff Scientist

enclosures: Second Quarter 2005 Groundwater Monitoring Report



June 17, 2005

Project No.: 015-01-002

Alameda County

JUN 2 7 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

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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 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-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 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 (μ g/L) (MW-2) and 79,000 μ g/L (MW-1). TPHd was detected in two wells at concentrations of 59 μ g/L (MW-2) and 4,600 μ g/L (MW-1). Benzene was detected in two wells at concentration ranging from 14 μ g/L to 4,300 μ 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 μ g/L in well MW-4 to 240,000 μ 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.



Second Quarter 2005 Groundwater Monitoring Report, 160 Holmes Street, Livermore, California Project No.: 015-01-002

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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 Sallenbrute

William Satterthwaite, Ph.D.

Environmental Scientist

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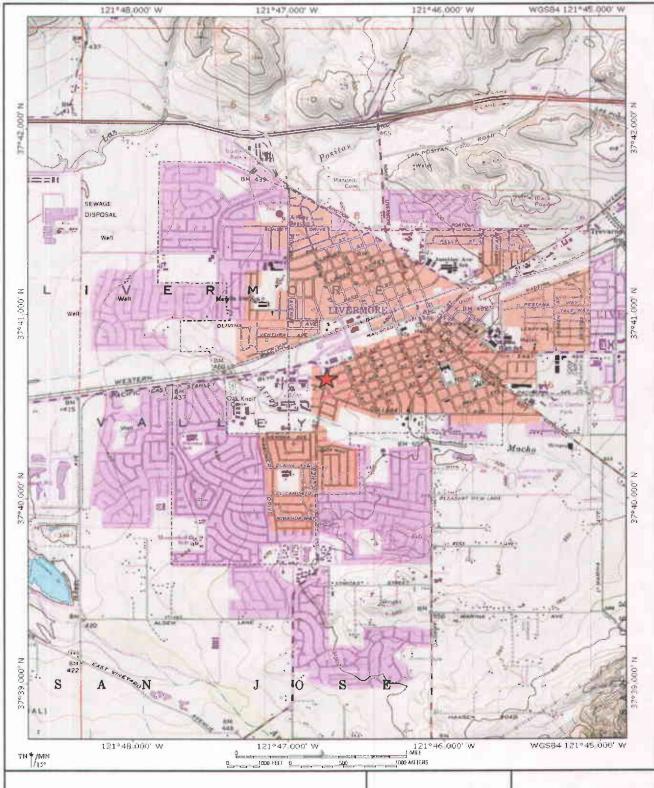
Appendix C, Certified Analytical Reports and Chain of Custody

Michael Killoran, P.G./6670 Senior Geologia RED GEO

> Michael J. Killoran

> > No. 6670

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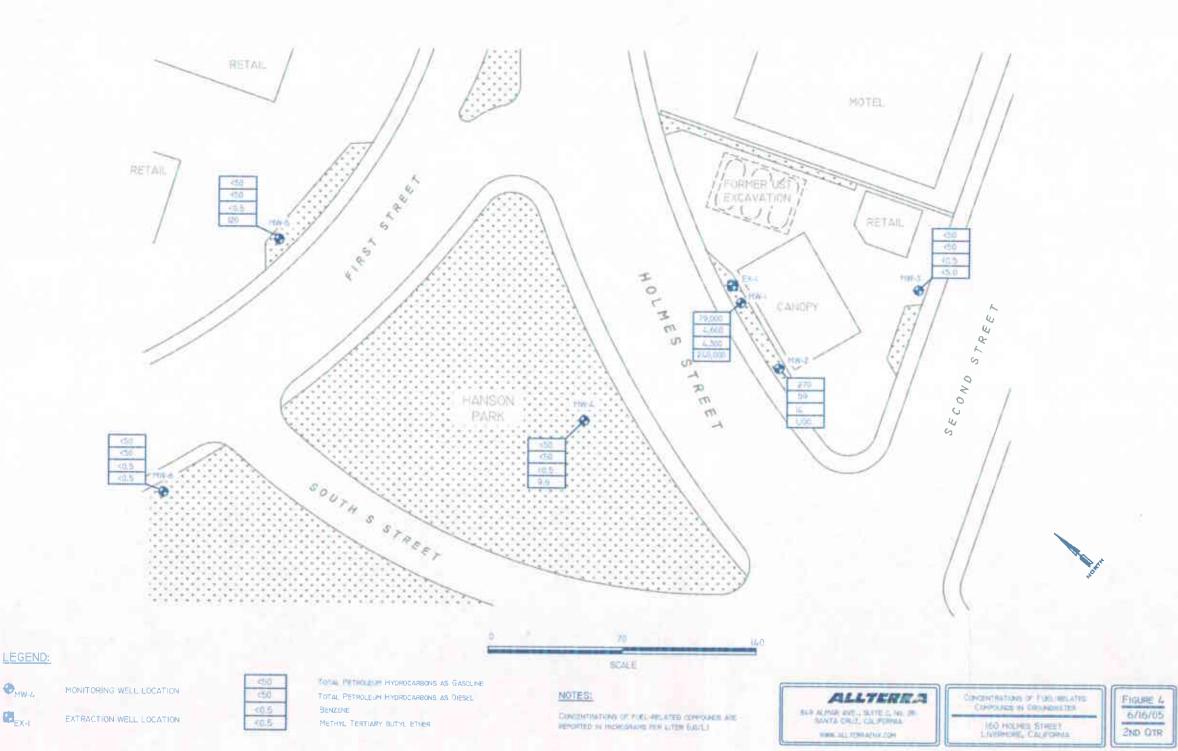
Vicinity Map

Livermore Gas and Minimart 160 Holmes Street Livermore, California Figure 1

6/17/2005

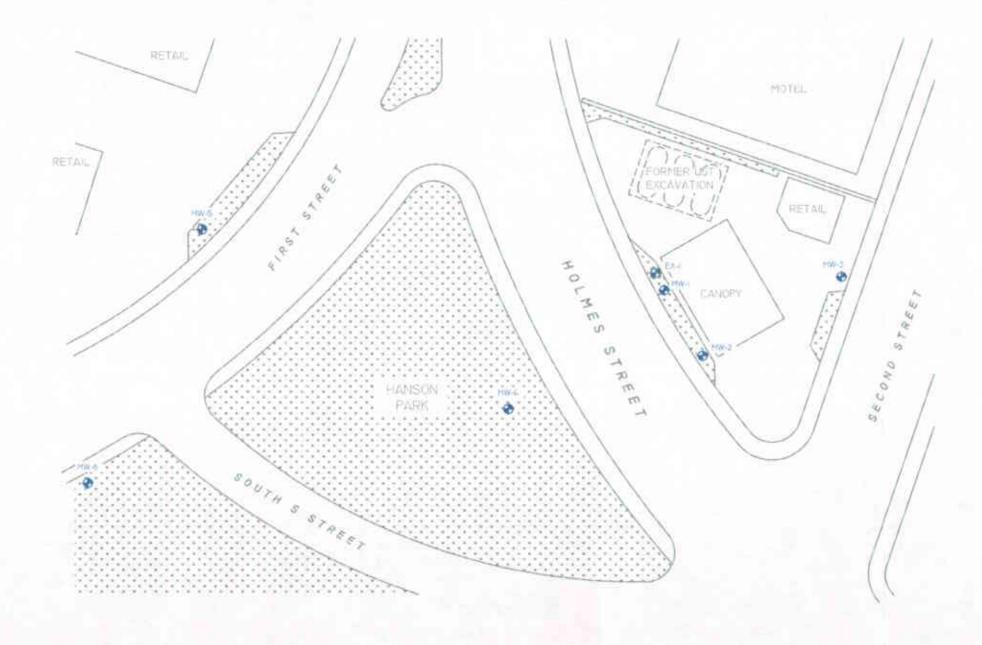
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⊕MW-4

EX-I



LEGEND:

₱_{MW-4}

MONITORING WELL LOCATION

€EX-1

EXTRACT ON WELL LOCATION



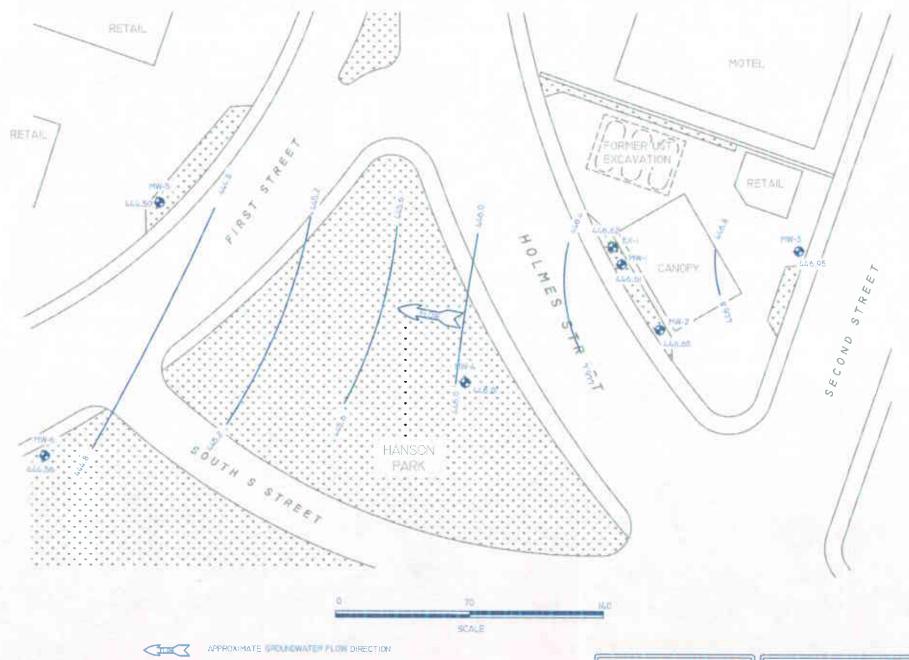
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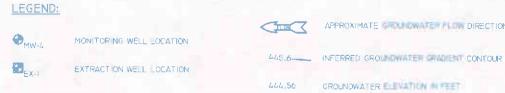
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WWW.ALLTERNATIV.COM

SITE MAP

160 HOLSES STREET LIVESPORE, CALIFORNIA 6/16/05 2ND OTR





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GROUNDWATER POTENTIANETHIC HAP FOR 5/27/05 160 HOLNES STREET LIVERHOLE, CALIFORNA

6/16/05 2ND Q1R

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 Data160 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 Data160 Holmes Street, Livermore

100 Hollies Sticet, Livermote							
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

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

Monitoring Well ID	Date Collected	Total Pe Hydroca (µg	rbons as	Aromatic	· Volatile C (μg.		npounds	Fuel Oxygenates (µg/L)
	Concue	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 sa	mpled - we	ell dry				
	11/14/01	not sa	mpled - we	ell dry				
	5/7/02	not sa	impled - we	ll 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
I	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
1	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		mpled - we	ell dry				
	11/14/01		mpled - we					
	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

Monitoring Well ID	Date Collected	Total Pe Hydroca (µg		Aromatic	Volatile C (μg	organic Con /L)	npounds	Fuel Oxygenates (µg/L)
WCH ID	Concicu	Gasoline	Diesel	Benzene	Toluene	Ethyl- benzene	Total Xylenes	мтве
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		mpled - we					
į	11/14/01		mpled - we					
	5/7/02		mpled - we	ell d ry				
	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
t t	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
1	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
Ì	3/2/05 5/27/05	<50 < 50	<50 <50	<0.5 < 0.5	<0.5 < 0.5	<0.5 < 0.5	<0.5 <0.5	14 9.6
MW-5	11/14/01	<50	-66	-0.5	-05	z0.5	-0.5	0.2
C- W IVI	11/14/01 5/7/02	140	<66 <50	<0.5	<0.5	<0.5	<0.5	8.2
	9/11/02	<50	<50	<0.5	<0.5	<0.5	<0.5	110
	12/11/02	<30 73	NA <50	<0.5 <0.5	<0.5 <0.5	<0.5	<0.5	6.3
	3/14/03	110	<50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	160 170
ļ	6/25/03	< 5 0	<50 <50	<0.5	<0.5	<0.5	<0.5	170 8 9
}	9/16/03	630	<50 <50	<0.5	3.5	<0.5	2.6	1500
	12/22/03	<0.5	<50 <50	<0.5	<0.5	<0.5	<0.5	630
İ	3/10/04	57	<50 <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
1	5/27/05	<50	<50	<0.5	<0.5	<0.5	<0.5	120

Page 2 of 3

Table 2 Groundwater Analytical Results

Monitoring Well ID	Date Collected	Total Pe Hydroca (μg		Aromatic	c Volatile C (μg		npounds	Fuel Oxygenates (µg/L)
		Gasoline	Diesel	Benzene	Toluene	Ethyl- benzene	Total Xylenes	МТВЕ
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
ł	3/14/03	<50	<50	<0.5	< 0.5	< 0.5	<1.0	<1.0
İ	6/25/03	<50	<50	<0.5	< 0.5	< 0.5	<1.0	<1.0
Ì	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
1	3/10/04		NS					
	6/15/04		NS					
į	9/17/04		NS					
	12/10/04		NS					
	3/2/05		NS					
	5/27/05		NS					
Notes								<u> </u>

Notes:

-- = not applicable

 $\mu g/L = micrograms per liter$

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

Site Address 160 Holmes St. Date 5/27/05 Project Number 015-01-002 Monitoring Veil ID MW-1 Monitoring Weil Diameter (inches) Z. Depth to Water (feet) 13:17.2 Water Column (feet) 11.9 7				THE CARE	Author has all more single values in particular transfer and				SANTALIA ANALAS ANTALAS
Project Number 015-01-002 Field Personnel				And the second	ACT CONTRACTOR OF THE PROPERTY.		-cg:	Letter in the	
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Monitoring Well ID MW~1 Depth to Water (feet) 18.12. Depth to Water (feet) 18.12. Depth to Water (feet) 30 Solve Recharge Depth (feet) 1.58 Depth to Product (feet) 1.1 Well Volume (gallons) 1.77 Depth to Product (feet) 1.1 Well Volume (gallons) 1.77 Depth to Water Volume (suit) 1.47 Depth to Mw-1 Sample Time (3.140 Sample ID Mw-1 Sample Time (3.140 Depth to Water (feet) 1.8.2.1 Depth to Water (feet) 1.8.2.1 Monitoring Well ID Mu-2. Depth to Water (feet) 1.8.2.1 Monitoring Well ID Immeter (inches) 2. Depth to Water (feet) 1.8.2.1 Water Column (feet) 1.7.7 Depth to Product (feet) 1.9.2.1 Water Column (feet) 1.9.9 Depth to Product (feet) 2.0.0 Depth to Product (feet) 1.9.2.1 Time Depth to Purge Conductivity 1.9.7 Depth to Product (feet) 2.0.0 Depth to Purge Conductivity 1.9.7 Depth to Purge Condu	Project Nu	mber 015	-01-002	Vices and the second				West Calling Town	
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Solution Solution					Monitoring We	ell Diamet		2	
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Water Volume tivity sture pr Information Color	1.98000.55	kon iliyan da. T		eia Mea sui	ements and	Observ	ations		
2.0 34 19,3 11 11 11 12 12 1388 49.2 11 11 11 11 11 11 11			Volume			рН	Turbidity	Color	Odor
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Cotal Purge Volume 6.0 gall Comments		<u> </u>	*		19,3		1	1,	11
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		1, 9	873	18.9		high	1(11
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Sample ID	MW-Y			Sample Time	12:45			
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Monitoring \ Depth to Wa Total Depth Depth to Pro Comments	Nell ID Muster (feet) (feet) 5 (oduct (feet)	Purge Volume 5.0 9all	Monitor Id Measure Conductivity 746	Date 5/27/05 Field Personne ing Well Info Monitoring We Water Column 80% Recharge 1 Well Volume Temper- ature [9,4% [8,4]	el rmation Il Diamete (feet) Depth (fe (gallons)	er (inches) 30,86 eet) 5,25 etions	Color brown	Odor None
Monitoring \ Depth to Wa Total Depth Depth to Pro Comments	Nell ID Muster (feet) (feet) 5 (oduct (feet)	Purge Volume 5.0 24//	Monitor Monitor Conductivity 746,6	Date 5/27/05 Field Personne ing Well Info Monitoring We Water Column 80% Recharge 1 Well Volume Temper- ature [9,4%	el rmation Il Diamete (feet) Depth (fe (gallons)	r (inches) 30,86 eet) 5,25 tions Turbidity high	Color brown	Odor
Monitoring Monitoring	Meil ID Meater (feet) (feet) 5 (oduct (feet) Depth to Water	Purge Volume 5.0 94/1 5.0	Monitor Monitor Conductivity 746,6	Date 5/27/05 Field Personne ing Well Info Monitoring We Water Column 80% Recharge 1 Well Volume Temper- ature [9,4% [8,4]	el rmation Il Diamete (feet) Depth (fe (gallons)	r (inches) 30,86 eet) 5,25 tions Turbidity high	Color brown	Odor None
Monitoring Monitoring	Meil ID Meater (feet) (feet) 5 (oduct (feet) Depth to Water	Purge Volume 5.0 gall 5.0 gall	Monitor Id Measure Conductivity 746,45 743	Date 5/27/05 Field Personne ing Well Info Monitoring We Water Column 80% Recharge 1 Well Volume ements and C Temper- ature [9,4°C [8,9] [8,9] [8,9] Comments	el rmation Il Diamete (feet) Depth (fe (gallons) Dbserva pH	r (inches) 30,86 eet) 5,25 rtions Turbidity moderaty high	Color brown	Odor None
Monitoring Monitoring	Nell ID Muster (feet) (feet) 5 (oduct (feet)	Purge Volume 5.0 gall 5.0 gall	Monitor Id Measure Conductivity 746,45 743	Date 5/27/05 Field Personne ing Well Info Monitoring We Water Column 80% Recharge 1 Well Volume ements and C Temper- ature [9,4% [8,9]	el rmation Il Diamete (feet) Depth (fe (gallons) Dbserva pH	r (inches) 30,86 eet) 5,25 rtions Turbidity moderaty high	Color brown	Odor None
Monitoring Monitoring	Meil ID Muster (feet) (feet) 5 (oduct (feet) Depth to Water Volume 15	rimes St. -01-002 -y -y -y -y -y -y -y -y -y -	Monitor Id Measure Conductivity 746,45 743	Date 5/27/05 Field Personne ing Well Info Monitoring We Water Column 80% Recharge 1 Well Volume Temperature [9,4°C [8,9] [8,9] Comments Er Sampling I	el rmation Il Diamete (feet) Depth (fe (gallons) Diserva pH	r (inches) 30,86 eet) 5,25 rtions Turbidity moderaty high	Color brown	Odor None

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Project Nu	ımber 015	-01-002		Field Personr	Personnel					
10.10			Monitor	ing Well Info	Amador			Sept of the second		
Monitoring		14-5		Monitoring W			2			
	Vater (feet)			Water Column		2 9.85	_			
Total Depl		0		80% Recharg						
	Product (feet)		<u></u>	1 Well Volume						
Comments	···	***************************************		T TTER TORIN	e (ganons)	2107				
		Fi	eld Measur	ements and	Observa	ations				
Time	Depth to Water	Purge Volume	Conduc- tivity	Temper- ature	рН	Turbidity	Color	Odor		
15:25		5.0gall	840,5	20,0°C		moderati	brown	V1 0~~/		
		5,0	841	20.0		fı	(1	17		
		5.0	854	20.0		11	1	11		
				30,0			 • • • • • • • • • • • • • • • • • • •	***************************************		
Total Purg	e Volume	5,0 94/1	<u> </u>	Comments		<u>-!</u>	L	<u> </u>		
			Froundwat	er Sampling	Informa	tion	dula 78 dalah	Market - 12 Mary Market		
Sample ID	mw-5			Sample Time				egij die vedyjsverki ved		
<u>.</u>			4 voas, 1 an		13130					
			Groundwa	ter Sampling	g Field L	og				
Site Addre	ss 160 Ho	lmes St.		Date 5/27/05						
Project Nu	mber 015	-01-002		Field Personn	el					
			Monitor	ing Well Info	rmation					
Monitoring	Well ID	lw-6		Monitoring We			2			
	Vater (feet)	19.57		Water Column		30,43				
Total Dept		0		80% Recharge						
	roduct (feet)	<u></u> -		1 Well Volume		5.17				
Comments					, (ganons)					
		Fie	ld Measur	ements and	Observa	itions				
Time	Depth to Water	Purge Volume	Conduc- tivity	Temper- ature	рН	Turbidity	Color	Odor		
14:45		S. Ugall	100445	18.60		low	6 Nun	none		
		5.0	1006	18.5		modest	1)	()		
		5.0	(008	18.5		11	e l	11		
			· · · · ·	· · · · · · · · · · · · · · · · · · ·		 	-	1,7		
Total Purge	e Volume	· · · · · · · · · · · · · · · · · · ·	<u> </u>	Comments			,			
			roundwat	er Sampling	Informa	tion		alaphale til kalanda		
Sample ID	Mw-6	e yay e ye i ngalay tita ye agyahada i		Sample Time			e i projetije projet prije	and the section of the section of		
		mber/Type\	4 voas, 1 ап	ber	.7.05					
Comments			. , July 1 MII							
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ALLTERE.3

Site Address 160 Holmes St. Date 527/05				er unti	iter Sampling	Field I	ومر		i jana jana Kanada
Monitoring Well ID EX-1	Site Addre	ess 160 Ho	lmes St.		Date 5/27/05				
Monitoring Well Discrete (Inches) S	Project Nu	ımber 015	-01-002		Field Personn	el			
Depth to Water (feet) 18 / 6 8 Water Column (feet) 3 6 / 3 2		Printer 1	V \$315000	Monitor	ing Well Info	inatio	1 7 7 7 7 7 7 7		10 Ja (10 4 10)
Depth to Water (feet) 18 , 6 8 Water Column (feet) 3 6 , 3 2	Monitoring	Well ID E	メー		Monitoring We	ell Diamet	er (inches) S	?	
Total Depth (feet) 5-5" 80% Recharge Depth (feet)	Depth to V	Vater (feet)	18,68						
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Water Volume Sivity Sture PH Turbidity Color Odor	1 04 TO ASS. T		Fie	ld Measur	ements and	Observ	ations		
Groundwater Sampling Information Sample ID Sample Time Sample Containers (Number/Type): Comments	Time					рН	Turbidity	Color	Odor
Groundwater Sampling Information Sample ID Sample Time Sample Containers (Number/Type): Comments				,		· .			
Groundwater Sampling Information Sample ID Sample Time Sample Containers (Number/Type): Comments		 							
Sample ID Sample Time Sample Containers (Number/Type): Comments					-				
Groundwater Sampling Information Sample ID Sample Time Sample Containers (Number/Type): Comments									
Groundwater Sampling Information Sample ID Sample Time Sample Containers (Number/Type): Comments	Total Pum	e Volume			C	<u> </u>			
Sample ID Sample Time Sample Containers (Number/Type): Comments	10th Fully	e volume	novina desp	7 mart 1505	<u> </u>			eminory je un	e dikejita ee i
Sample Containers (Number/Type): 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 Information Monitoring Well Diameter (inches) Depth to Water (feet) Water Column (feet) Depth to Product (feet) 1 Well Volume (gallons) Comments Field Measurements and Observations Time Depth to Purge Conductivity Temperature pH Turbidity Color Odor Time Depth to Purge Volume Conductivity Ature PH Turbidity Color Odor	Sample ID		1 34 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ionunan		intorma	IDON		
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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 Volume tivity Temperature pH Turbidity Color Odor Total Purge Volume Comments Total Purge Volume Comments Comments				Groundwa	ter Sampling	Field L	.og		
Monitoring Well ID Monitoring Well Diameter (inches)	Site Addre	ss 160 Hol	mes St.		Date 5/27/05			 	
Monitoring Well ID Depth to Water (feet) Total Depth (feet) Depth to Product (feet) Solve Recharge Depth (feet) 1 Well Volume (gallons) Comments Field Measurements and Observations Time Depth to Purge Volume Tivity Temperature pH Turbidity Color Odor Odor Total Purge Volume Comments	Project Nu	mber 015	01-002		Field Personne	el			
Depth to Water (feet) Total Depth (feet) Depth to Product (feet) Comments Field Measurements and Observations Field Measurements and Observations Time Depth to Water Volume tivity Temperature pH Turbidity Color Odor Total Purge Volume Comments		War Min		Monitor	ing Well Info	rmation			
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Total Depth (feet) Depth to Product (feet) Solve Recharge Depth (feet) 1 Well Volume (gallons) Comments Field Measurements and Observations Time Depth to Water Volume Conductivity Temperature pH Turbidity Color Odor And And And And And And And And And And	Depth to V	Vater (feet)							
Depth to Product (feet) Field Measurements and Observations Time Depth to Water Volume tivity Temperature pH Turbidity Color Odor	Total Dept	h (feet)			80% Recharge	Depth (f	eet)		
Time Depth to Water Volume Conductivity Temperature pH Turbidity Color Odor	Depth to P	roduct (feet)							
Time Depth to Water Volume Conductivity Temperature pH Turbidity Color Odor	Comments	<u> </u>				, - , 			
Total Purge Volume Water Volume tivity ature pH Turbidity Color Odor Comments		N. Spiller A.	Fie	ld Measun	ements and (Observa	ntions		Part 1
	Time				,	рΗ	Turbidity	Color	Odor
		-							
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					Comments			1	
Groundwater Sampling Information	Total Pume	e Volume			: ~~::::::::::::::::::::::::::::::::::				
	Total Purge	e Volume	e e	mundwate	F Sampling	nforma	Hon	in gradina in the	proposition proposition
Sample Containers (Number/Type):			G	roundwate		nforma	tion		
Comments	Sample ID			roundwate	Sample Time	nforma	tion		

APPENDIX C
Certified Analytical Reports and Chain of Custody



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: #002-02-011; 160 Holmes St	Date Sampled: 05/27/05
849 Almar Ave, Ste. C #281	Homes St	Date Received: 05/27/05
Santa Cruz, CA 95060	Client Contact: James Allen	Date Reported: 06/03/05
Summer of the state of the stat	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. 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.

Yours truly,

Angela Rydelius, Lab Manager

Oak Cooper



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Allterra Environmental, Inc	Client Project ID: #002-02-011; 160	Date Sampled: 05/27/05
849 Almar Ave, Ste. C #281	Holmes St	Date Received: 05/27/05
Santa Cruz, CA 95060	Client Contact: James Allen	Date Extracted: 06/01/05-06/02/05
Danial Craz, Cri 93000	Client P.O.:	Date Analyzed: 06/01/05-06/02/05

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

	method: SW5030B				methods: SW8021		T = 1		Order: 0:	
Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Тојцепе	Ethylbenzene	Xylenes	DF	% S
001A	MW-l	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	10
006A	MW-6	w	ND,i	ND	ND	ND	ND	ND	1	10
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	Limit for DF =1; not detected at or	W	50	5.0	0.5	0.5	0.5	0.5	1	μд
	e reporting limit	S	NA	NA	NA	NA	NA	NA	1	mg/

ND means not detected at or			•••			0.5	0.5	,	PS-L
above the reporting limit	S	NA	NA	NA	NA	NA	NA	1	mg/Kg
* water and vapor samples an	d all TCI	P & SPLP extrac	ts are reported in	ug/L, soil/sludge	/solid samples in	mg/kg, wipe sa	mples in μg/wipe		

[#] cluttered chromatogram; sample peak coelutes with surrogate peak.

product/oil/non-aqueous liquid samples in mg/L.

⁺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.



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

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

Extraction method: SW	73510C		Analytical methods: SW8015C	Work Order:	0505455
Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0505455-001B	MW-I	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	ı	106
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Reporting Limit for DF =1; ND means not detected at or	W	50	μg/L
above the reporting limit	S	NA	NA
			<u></u>

^{*} 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 / SPLP / TCLP extracts are reported in µg/L.

G.C. Angela Rydelius, Lab Manager

[#] 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 SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0505455

EPA Method: SW8021B	/8015Cm E	xtraction:	SW5030E	1	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 / LCSE
TPH(btex) [£]	ND	60	96.8	96.4	0.397	93.2	92.8	0.396	70 - 130	70 - 130
МТВЕ	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 / 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.

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).

[£] 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.



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Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0505455

EPA Method: SW8021B	/8015Cm E	SW5030B	3	BatchID: 16418			Spiked Sample ID: 0505460-003B			
Analyte	Sample	Spiked µg/L	MS % Rec.	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	μg/L			% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) [£]	ND	60	98	99.2	1.21	95.2	91.4	4.09	70 - 130	70 - 130
мтве	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	01	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.

£ 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.



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QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0505455

EPA Method: SW8015C	E	Extraction: SW3510C				BatchID: 16404			Spiked Sample ID: N/A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance	e 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).

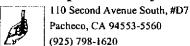
MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the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

-OHRS 0505455

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	P	hone: (831) 425-2608 F	acsimile: (8	31) 4	25-260	29						58]				ļ			<u>6</u>		- 1		١.
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Project Location: 16	0 Holmes St., L	ivermore.	CA										ם	1	ļ		<u> </u>	_	၂ ေ	<u>8</u>	jšj	ğ	9,0		8	≴	1
Project Name: 160 H			.~	······································									Ή			ାଛା	=	3	8	<u> </u>	V	8	7.23	20	6		
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	Sample Co	llection	Sample	Containers	\top	j	Matrix		T	Prese	rvatio	n	3	8	51.5	l &	Et l	CES	<u> </u>	i di	Si Si) s	回	Bio	≥	荔	1
Sample ID	Date	Time	Number of Containers	Container Type	Air				Other		HNO	Other	PHE, BTEX&MTBE (EPA 8015/8020)	STEX (EPA 8020)	TPHd (EPA 8015)	5-fuel oxys (EPA 8260)	Ethanol and Methanol (EPA	ead Scavengers (8260)	fotal HVOCs (EPA 8260)	fardness/Total dissolved solids	CAM-17 Metals (EPA 6010/6020)	UFT 5 Metals (EPA 6010/6020)	PAH's/ PNA's (EPA 8270,625/8310)	Fish Toxicity/Bioassay	ead (EPA 6010/200.9/200.8)	Iotal Toxic Organics (EPA	
MW-1	5/27/05		4,1	yoas, ambe	 T	x			X				X		X	\ \rac{1}{2}	<u>E</u>	<u> </u>	F	H	Ų.	=	<u>a</u>	E.	-7	Ĕ	X
MW-2	5/27/05		4.1	voas, ambe	3	х			х	1			X	-	X												X
MW-3	5/27/05		4.1	voas, ambe		X		_	— - <u>Ω</u>	 			_ <u></u>		X	 			<u>_</u>								-
MW-4	5/27/05		4.1	yoas, ambe		X	-	-+	X	1				 		-							·	-			X
			·							 			<u> </u>		X	 					i						X
MW-5	5/27/05		4.1	voas, ambe	r	X			<u> </u>				X		X				. ,								X
MW-6	5/27/05		4,1	voas, ambe	τ	X			X	<u> </u>			X		X												\mathbf{x}
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CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 0505455

ClientID: ATRS

Report to:

James Allen

Allterra Environmental, Inc

849 Almar Ave, Ste. C #281 Santa Cruz, CA 95060 TEL: FAX:

831-334-0696

831-425-2609

ProjectNo: #002-02-011; 160 Holmes St

PO:

Bill to:

Requested TAT:

5 days

Accounts Payable

Allterra Environmental

849 Almar Ave, Ste. C #281

Santa Cruz, CA 95060

Date Received: 05/27/2005

.......

Date Printed: 05/27/2005

									 F	Reque	estec	d Test	s (See	legend	below)					
Sample ID	ClientSampID	Matrix	Collection Date	Hold	1	2	3	4	5	6	T.	7	8	9	10	11	12	13	14	15
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0505455-001	MW-1	Water	5/27/05		Α	Α	В												ľ	
0505455-002	MW-2	Water	5/27/05		Α		В													
0505455-003	MW-3	Water	5/27/05		Α		В													
0505455-004	MW-4	Water	5/27/05		Α		В									1				
0505455-005	MW-5	Water	5/27/05		Α		В							1	1	1		 		
0505455-006	MW-6	Water	5/27/05		Α		В	-	•					· • · · · ·	 					\top

Test Legend:

1 G-MBTEX_W	2 PREDF 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.



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 No: 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 McCampbell Analytical.