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Alameda County  
Environmental Health

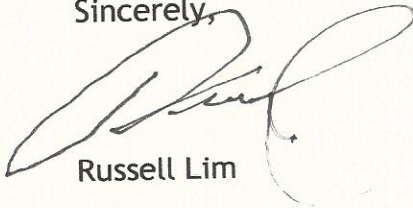
Alameda County Health Care Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502

Re: RO #479, Report 

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

If you have further questions I may be reached at 925-381-3608.

Sincerely,



Russell Lim



Aqua Science Engineers, Inc. 55 Oak Court, Suite 220, Danville, CA 94526  
(925) 820-9391 - Fax (925) 837-4853 - [www.aquascienceengineers.com](http://www.aquascienceengineers.com)

January 24, 2011

SEMI-ANNUAL GROUNDWATER MONITORING REPORT  
DECEMBER 2010 GROUNDWATER SAMPLING  
at  
Lim Family Property  
250 8th Street  
Oakland, California

Submitted by:  
AQUA SCIENCE ENGINEERS, INC.  
55 Oak Court, Suite 220  
Danville, CA 94526  
(925) 820-9391



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## 1.0 INTRODUCTION

This report presents the methods and findings of Aqua Science Engineers, Inc. (ASE)'s semi-annual groundwater monitoring at the Lim family property located at 250 8th Street in Oakland, California (*Figures 1 and 2*).

## 2.0 GROUNDWATER FLOW DIRECTION AND GRADIENT

On December 20, 2010, ASE measured the depth to water in monitoring wells MW-1 through MW-8 using an electric water level sounder. The surface of the groundwater was also checked for the presence of free-floating hydrocarbons or sheen. Monitoring wells MW-3 and MW-4R contained 0.45 and 2.00-feet of free-floating hydrocarbons, respectively. The free-floating hydrocarbon thickness in both of these wells decreased slightly since the previous sampling event in June 2010. The product was subsequently bailed by ASE and contained in a sealed and labeled 55-gallon steel drum for temporary storage until off-site disposal can be arranged. Groundwater elevation data is presented in Table One.

A groundwater elevation (potentiometric surface) contour map is shown as Figure 2. The groundwater flow direction at the site is generally to the south with an approximate gradient of 0.008 feet/foot during this sampling period. The gradient and flow direction are generally consistent with previous findings.

## 3.0 MONITORING WELL SAMPLING

On December 20, 2010, ASE collected groundwater samples from six of the eight monitoring wells for analysis. Monitoring wells MW-3 and MW-4R were not sampled due to the presence of free-floating hydrocarbons.

Prior to sampling, the wells were purged of three well casing volumes of groundwater using disposable polyethylene bailers. The pH, temperature and conductivity of the purge water were monitored during evacuation, and samples were not collected until these parameters stabilized. Samples were collected from each well using disposable polyethylene bailers. The groundwater samples were decanted from the bottom of the bailers using low-flow emptying devices into 40-ml volatile organic analysis (VOA) vials, preserved with hydrochloric acid, sealed without headspace and labeled. All samples were stored on ice for transport to Kiff Analytical, LLC, (KIFF) of Davis, California under appropriate chain of custody documentation. Well sampling purge water was contained in a sealed and labeled 55-gallon steel drum for temporary storage until off-site disposal can be arranged. See Appendix A for copies of the well sampling field logs.



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#### 4.0 ANALYTICAL RESULTS FOR GROUNDWATER

All groundwater samples were analyzed by KIFF for total petroleum hydrocarbons as gasoline (TPH-G), benzene, toluene, ethyl benzene, total xylenes (collectively known as BTEX), fuel oxygenates including methyl tertiary butyl ether (MTBE), and lead scavengers by EPA Method 8260B, and total petroleum hydrocarbons as diesel (TPH-D) by modified EPA Method 8015. The analytical results are tabulated in Table Two, and copies of the certified analytical report and chain of custody form are included in Appendix B.

#### 5.0 CONCLUSIONS

- TPH-G and TPH-D concentrations in groundwater samples collected from monitoring well MW-1 were very similar to previous results, while BTEX, MTBE, other oxygenates and lead scavenger concentrations remained non-detectable.
- TPH-G, toluene, ethyl benzene, and total xylene concentrations decreased in groundwater samples collected from monitoring well MW-2, while benzene and DIPE concentrations increased slightly in the same sample. No lead scavengers were detected.
- Monitoring well MW-3 contained 0.45-feet of free-floating hydrocarbons, which is a decrease in free-floating hydrocarbon thickness since the previous sampling.
- Monitoring well MW-4R contained 2.00-feet of free-floating hydrocarbons, which is a decrease in free-floating hydrocarbon thickness since the previous sampling.
- TPH-G, TPH-D, BTEX, and lead scavenger concentrations in groundwater samples collected from monitoring well MW-5 remained non-detectable during this sampling event. The only oxygenate concentrations detected were 0.61 parts per billion (ppb) MTBE and 0.67 ppb DIPE.
- No hydrocarbons or oxygenates were detected in groundwater samples collected from monitoring well MW-6.
- TPH-G and BTEX concentrations increased slightly from the previous sampling in groundwater samples collected from monitoring well MW-7. The only exception to this was the toluene concentration that decreased slightly.
- No hydrocarbons were detected in groundwater samples collected from monitoring well MW-8, indicating that the contamination has not reached the deeper water-bearing zones.

Concentrations in groundwater samples collected from the following wells exceeded Environmental Screening Levels (ESLs) for drinking water as presented in the "Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region dated May 2008:

- Concentrations of TPH-G, benzene, toluene, ethyl benzene, and xylenes in groundwater samples collected from monitoring wells MW-2 and MW-7 exceeded ESLs.
- Concentrations of TPH-G and TPH-D in groundwater samples collected from monitoring well MW-1 exceeded the ESLs



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## 6.0 RECOMMENDATIONS

ASE has installed an ozone-sparging and vapor extraction remediation system at the site and will begin full operation once the Bay Area Air Quality Management District (BAAQMD) permit is received. Following the installation and start up of a groundwater remediation system, ASE recommends that groundwater monitoring be modified to quarterly sampling for at least one year. The next groundwater sampling event is scheduled for June 2011.

## 7.0 REPORT LIMITATIONS

The results presented in this report represent conditions at the time of the groundwater sampling, at the specific locations where the samples were collected, and for the specific parameters analyzed by the laboratory. It does not fully characterize the site for contamination resulting from unknown sources, or for parameters not analyzed by the laboratory. All of the laboratory work cited in this report was prepared under the direction of an independent CAL-DHS certified laboratory. The independent laboratory is solely responsible for the contents and conclusions of the chemical analysis data.

Aqua Science Engineers appreciates the opportunity to assist The Lim Family with their environmental needs. Should you have any questions or comments, please feel free to call us at (925) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.

Robert E. Kitay, P.G., R.E.A.  
Senior Geologist



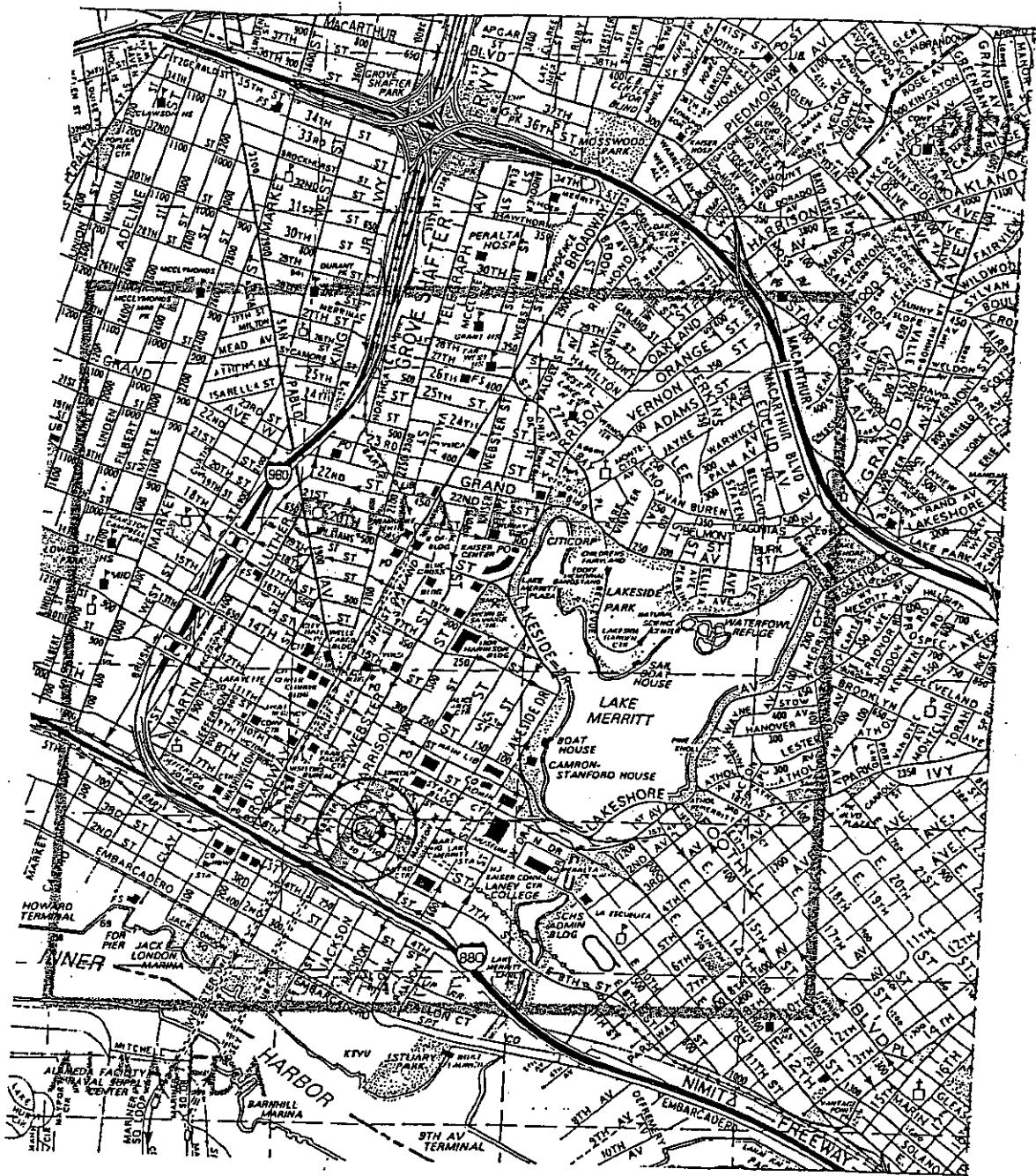
Attachments: Figures 1 and 2  
Tables One, Two, and Three  
Appendices A and B

cc: Mr. Jerry Wickham, ACHCSA



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## **FIGURES**

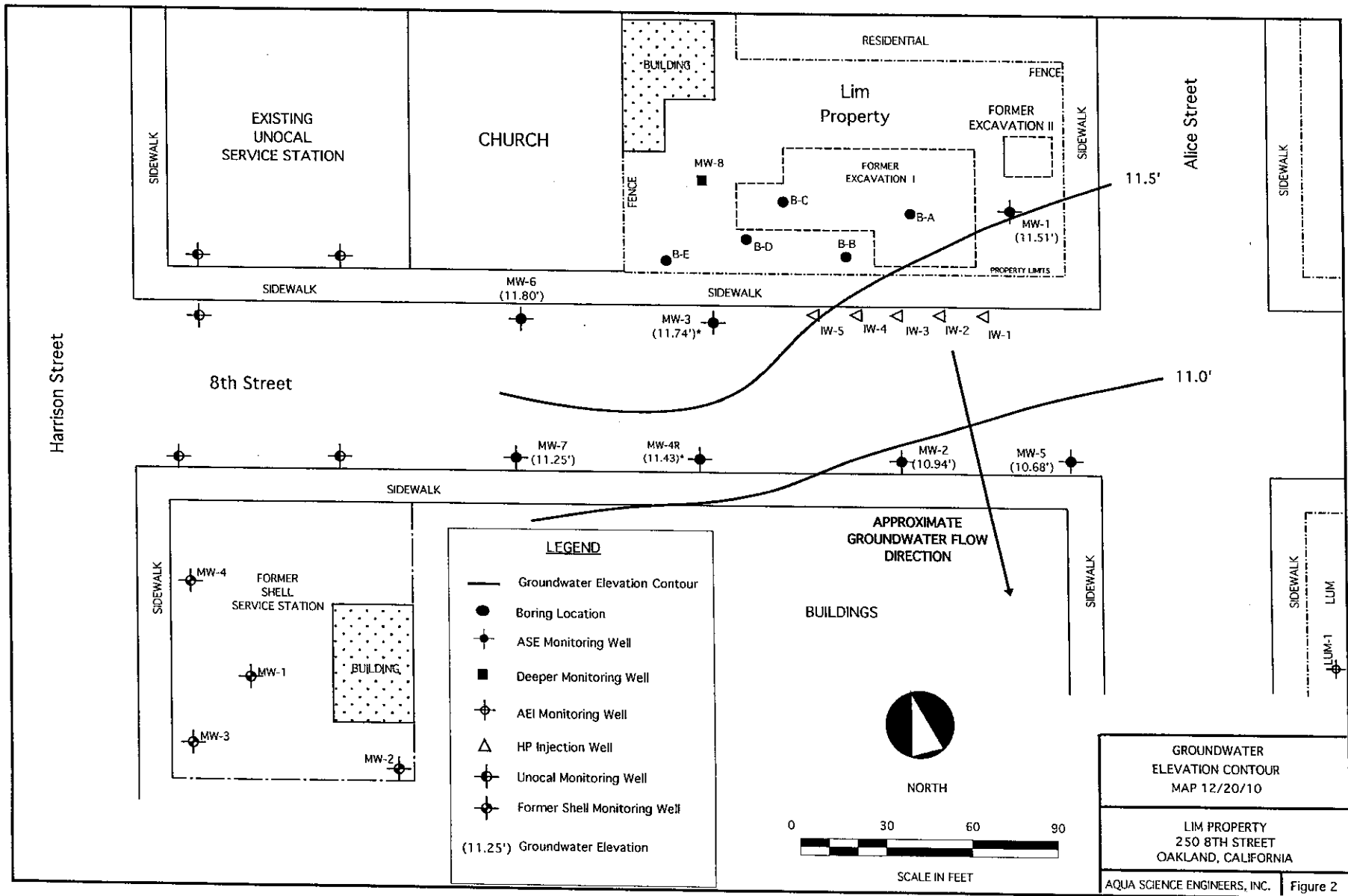


## SITE LOCATION MAP

Lim Property  
250 8th Street  
Oakland, California

Aqua Science Engineers

Figure 1



EXISTING UNOCAL SERVICE STATION

CHURCH

Lim Property

RESIDENTIAL

BUILDING

FENCE

FORMER EXCAVATION I

FORMER EXCAVATION II

PROPERTY LIMITS

MW-8

B-C

B-A

MW-1 (11.51')

B-E

B-D

B-B

MW-6 (11.80')

MW-3 (11.74')\*

IW-5

IW-4

IW-3

IW-2

IW-1

8th Street

MW-7 (11.25')

MW-4R (11.43')\*

MW-2 (10.94')

MW-5 (10.68')

MW-4

FORMER SHELL SERVICE STATION

MW-1

BUILDING

MW-3

MW-2

BUILDINGS



NORTH

SIDEWALK

LUM

LUM-1

GROUNDWATER ELEVATION CONTOUR MAP 12/20/10

LIM PROPERTY  
250 8TH STREET  
OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC.

Figure 2





Aqua Science Engineers, Inc. 55 Oak Court, Suite 220, Danville, CA 94526  
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## **TABLES**

**TABLE ONE**  
 Groundwater Elevation Data  
 Lim Family Property  
 250 8th Street  
 Oakland, CA

Well I.D.	Date of Measurement	Top of Casing Elevation (msl)	Depth to Water (feet)	Product Thickness (feet)	Groundwater Elevation (msl)
MW-1	01/30/95	25.51	16.21		9.30
	04/12/95		15.71		9.80
	07/14/95		16.71		8.80
	10/17/95		17.72		7.79
	01/12/96		18.03		7.48
	07/25/96		16.82		8.69
	01/06/97		15.60		9.91
	07/08/97		17.31		8.20
	01/26/98		15.21		10.30
	07/23/98		15.38		10.13
	01/05/99		16.82		8.69
	07/13/99		15.89		9.62
	01/12/00		17.44		8.07
	04/24/00		16.37		9.14
	07/20/00		16.30		9.21
	10/24/00		17.25		8.26
	01/18/01		17.29		8.22
	04/05/01		15.88		9.63
	07/17/01		16.54		8.97
	10/25/01		16.89		8.62
	01/21/02		14.92		10.59
	04/11/02	14.02		11.49	
	06/11/02	29.72	15.33		14.39
	09/17/02	15.96		13.76	
	12/18/02	16.14		13.58	
	03/25/03	16.16		13.56	
	06/23/03	16.01		13.71	
	09/26/03	16.57		13.15	
	12/18/03	16.41		13.31	
	03/12/04	14.64		15.08	
	06/17/04	15.71		14.01	
	09/17/04	16.35		13.37	
	12/17/04	16.10		13.62	
	04/28/05	14.10		15.62	
	07/19/05	15.94		13.78	
	10/03/05	16.34		13.38	
	12/06/05	16.21		13.51	
	03/15/06	16.21		13.51	
	06/28/06	14.92		14.80	
	08/31/06	15.60		14.12	
	11/21/06	17.20		12.52	
	02/12/07	16.12		13.60	
05/02/07	16.92		12.80		
08/09/07	17.58		12.14		
12/06/07	18.60		11.12		
02/26/08	17.13		12.59		
05/30/08	18.17		11.55		
08/28/08	18.47		11.25		
12/11/08	19.19		10.53		
03/31/09	17.59		12.13		
12/31/09	18.57		11.15		
06/03/10	16.94		12.78		
12/20/10	18.21		11.51		

TABLE ONE  
Groundwater Elevation Data  
Lim Family Property  
250 8th Street  
Oakland, CA

Well I.D.	Date of Measurement	Top of Casing Elevation (msl)	Depth to Water (feet)	Product Thickness (feet)	Groundwater Elevation (msl)
MW-2	01/30/95	23.99	15.02		8.97
	04/12/95		14.75		9.24
	07/14/95		16.02		7.97
	10/17/95		16.94		7.05
	01/12/96		17.05		6.94
	07/25/96		16.02		7.97
	01/06/97		14.34		9.65
	07/08/97		16.52		7.47
	01/26/98		14.10		9.89
	07/23/98		14.70		9.29
	01/05/99		16.01		7.98
	07/13/99		15.40		8.59
	01/12/00		16.76		7.23
	04/24/00		15.67		8.32
	07/20/00		15.70		8.29
	10/24/00		16.56		7.43
	01/18/01		16.47		7.52
	04/05/01		15.88		8.11
	07/17/01		15.35		8.64
	10/25/01		15.63		8.36
	01/21/02		13.55		10.44
	04/11/02		13.74		10.25
	06/11/02		28.19	14.06	14.13
	09/17/02		14.67		13.52
	12/18/02		14.88		13.31
	03/25/03		15.11		13.08
	06/23/03		14.94		13.25
	09/26/03		15.49		12.70
	12/18/03		15.13		13.06
	03/12/04		13.50		14.69
	06/17/04		14.63		13.56
	09/17/04		15.19		13.00
	12/17/04		14.88		13.31
	04/28/05		13.39		14.80
	07/19/05		15.27		12.92
	10/03/05		15.57		12.62
	12/06/05		15.35		12.84
	03/15/06		12.65		15.54
	06/28/06		14.45		13.74
	08/31/06		15.37		12.82
	11/21/06		16.22		11.97
	02/12/07		16.12		12.07
	05/02/07		16.12		12.07
	08/09/07		16.85		11.34
	12/06/07		17.95		10.24
	02/26/08		16.15		12.04
	05/30/08		17.33		10.86
08/28/08	17.53		10.66		
12/11/08	18.28		9.91		
03/31/09	16.63		11.56		
12/31/09	17.46		10.73		
06/03/10	16.00		12.19		
12/20/10	17.25		10.94		

**TABLE ONE**  
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 Lim Family Property  
 250 8th Street  
 Oakland, CA

Well I.D.	Date of Measurement	Top of Casing Elevation (msl)	Depth to Water (feet)	Product Thickness (feet)	Groundwater Elevation (msl)	
MW-3	01/12/00	24.25	16.68	0.01	7.58*	
	04/24/00		15.58	0.15	8.79*	
	07/20/00		16.01	0.41	8.57*	
	10/24/00		16.95	0.21	7.47*	
	01/18/01		16.63	0.21	7.79*	
	04/05/01		15.16	0.23	9.27*	
	07/17/01		15.92	0.39	8.64*	
	10/23/01		16.26	0.38	8.29*	
	01/21/02		14.08	0.16	10.30*	
	04/11/02		14.59	0.54	10.09*	
	06/11/02		28.58	15.16	0.90	14.14*
	09/17/02			16.04	1.24	13.53*
	10/01/02			16.14	1.23	13.42*
	10/25/02			15.80	0.60	13.26*
	11/12/02	15.87		0.47	13.09*	
	12/18/02	15.42		0.47	13.54*	
	03/25/03	16.11		1.14	13.38*	
	06/23/03	16.58		1.86	13.49*	
	09/26/03	16.11		0.66	13.00*	
	12/18/03	15.83		0.59	13.22*	
	03/12/04	14.51		1.21	15.04*	
	06/17/04	15.25		0.68	13.87*	
	09/17/04	16.14		0.96	13.21*	
	12/17/04	15.05		0.25	13.73*	
	01/13/05	13.40		0.45	15.54*	
	04/28/05	15.31		2.43	15.21*	
	07/19/05	16.29		1.67	13.63*	
	10/03/05	16.10		1.47	13.66*	
	12/06/05	15.04	1.17	14.48*		
	03/15/06	12.65	2.41	15.49*		
	06/28/06	13.55	2.61	16.16*		
	08/31/06	14.85	2.20	15.49*		
	11/21/06	16.05	1.10	13.41*		
02/12/07	15.96	0.35	12.90*			
05/02/07	15.11	0.09	13.54*			
08/09/07	15.83	0.09	12.82*			
12/06/07	18.10	0.50	10.88*			
02/26/08	16.47	0.22	12.29*			
05/30/08	17.90	0.70	11.24*			
08/28/08	18.05	0.54	10.96*			
12/11/08	18.57	0.46	10.38*			
03/31/09	16.89	0.23	11.87*			
12/31/09	17.64	sheen	10.94*			
06/03/10	16.58	0.56	12.45*			
12/20/10	17.20	0.45	11.74*			

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 Groundwater Elevation Data  
 Lim Family Property  
 250 8th Street  
 Oakland, CA

Well I.D.	Date of Measurement	Top of Casing Elevation (msl)	Depth to Water (feet)	Product Thickness (feet)	Groundwater Elevation (msl)	
MW-4	01/12/00	23.71	17.24		6.47	
	04/24/00		16.18		7.53	
	07/20/00		16.18		7.53	
	10/24/00		17.03		6.68	
	01/18/01		16.87		6.84	
	04/05/01		15.28		8.43	
	07/17/01		15.92		7.79	
	10/25/01		16.23		7.48	
	01/21/01		14.14		9.57	
	04/11/02		14.43		9.28	
	06/11/02		28.61	14.72		13.89
	09/17/02			15.29		13.32
	12/18/02			15.20		13.41
	03/25/03			15.53		13.08
	06/23/03			15.35		13.26
	09/26/03	15.91			12.70	
	12/18/03	15.63			12.98	
	03/12/04	13.88			14.73	
	06/17/04	15.03			13.58	
	09/17/04	15.61			13.00	
	12/17/04	15.32			13.29	
	04/28/05	13.82			14.79	
	07/19/05	15.44			13.17	
	10/03/05	15.91			12.70	
	12/06/05	15.71			12.90	
	03/15/06	13.05		15.56		
	06/28/06	14.49		14.12		
	08/31/06	15.75		12.86		
	11/21/06	16.70		11.91		
	02/12/07	16.51		12.10		
05/02/07	16.51		12.10			
08/09/07	17.17		11.44			
12/06/07	18.08		10.53			
02/26/08	16.57		12.04			
05/30/08	17.66		10.95			
08/28/08	17.98		10.63			
12/11/08	18.61		10.00			
03/31/09	18.75		2.00	11.46*		
MW-4R	12/31/09	28.78	19.85	2.30	10.77*	
	06/03/10		18.67	2.57	12.17*	
	12/20/10		18.95	2.00	11.43*	

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Well I.D.	Date of Measurement	Top of Casing Elevation (msl)	Depth to Water (feet)	Product Thickness (feet)	Groundwater Elevation (msl)
MW-5	06/11/02	28.40	14.23		14.17
	09/17/02		14.80		13.60
	12/18/02		15.08		13.32
	03/25/03		15.31		13.09
	06/23/03		15.16		13.24
	09/26/03		15.72		12.68
	12/18/03		15.47		12.93
	03/12/04		13.44		14.96
	06/17/04		14.90		13.50
	09/17/04		15.45		12.95
	12/17/04		15.12		13.28
	04/28/05		13.63		14.77
	07/19/05		15.67		12.73
	10/03/05		15.81		12.59
	12/06/05		15.60		12.80
	03/15/06		12.81		15.59
	06/28/06		15.21		13.19
	08/31/06		15.55		12.85
	11/21/06		17.09		11.31
	02/12/07		16.29		12.11
	05/02/07		16.21		12.19
	08/09/07		16.97		11.43
	12/06/07		18.35		10.05
02/26/08	16.35		12.05		
05/30/08	17.62		10.78		
08/28/08	17.72		10.68		
12/11/08	18.62		9.78		
03/31/09	16.94		11.46		
12/31/09	17.73		10.67		
06/03/10	16.20		12.20		
12/20/10	17.72		10.68		

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 Oakland, CA

Well I.D.	Date of Measurement	Top of Casing Elevation (msl)	Depth to Water (feet)	Product Thickness (feet)	Groundwater Elevation (msl)	
MW-6	06/11/02	29.20	14.95		14.25	
	09/17/02		15.47		13.73	
	12/18/02		15.43		13.77	
	03/25/03		15.67		13.53	
	06/23/03		15.48		13.72	
	09/26/03		NOT MEASURED - SOUNDER MALFUNCTION			
	12/18/03		15.79		13.41	
	03/12/04		14.04		15.16	
	06/17/04		15.13		14.07	
	09/17/04		15.74		13.46	
	12/17/04		15.54		13.66	
	04/28/05		13.91		15.29	
	07/19/05		15.30		13.90	
	10/03/05		15.35		13.85	
	12/06/05		15.69		13.51	
	03/15/06		13.14		16.06	
	06/28/06		14.44		14.76	
	08/31/06		16.25		12.95	
	11/21/06		16.69		12.51	
	02/12/07		16.63		12.57	
	05/02/07		16.57		12.63	
	08/09/07		17.19		12.01	
	12/06/07		17.95		11.25	
	02/26/08		16.66		12.54	
	05/30/08		17.64		11.56	
	08/28/08		18.03		11.17	
	12/11/08		18.54		10.66	
	03/31/09		17.10		12.10	
	12/31/09		18.00		11.20	
	06/03/10		16.58		12.62	
	12/20/10		17.40		11.80	

**TABLE ONE**  
 Groundwater Elevation Data  
 Lim Family Property  
 250 8th Street  
 Oakland, CA

Well I.D.	Date of Measurement	Top of Casing Elevation (msl)	Depth to Water (feet)	Product Thickness (feet)	Groundwater Elevation (msl)
MW-7	06/11/02	28.95	15.19		13.76
	09/17/02		15.73		13.22
	12/18/02	NOT MEASURED - CAR PARKED OVER WELL			
	03/25/03		15.96		12.99
	06/23/03		15.75		13.20
	09/26/03		16.29		12.66
	12/18/03		16.03		12.92
	03/12/04		14.28		14.67
	06/17/04		15.42		13.53
	09/17/04		16.02		12.93
	12/17/04		15.45		13.50
	04/28/05		14.15		14.80
	07/19/05		15.30		13.65
	10/03/05		16.25		12.70
	12/06/05		16.05		12.90
	03/15/06		13.36		15.59
	06/28/06		14.81		14.14
	08/31/06		16.13		12.82
	11/21/06		17.06		11.89
	02/12/07		16.97		11.98
	05/02/07		16.93		12.02
08/09/07		17.56		11.39	
12/06/07		18.32		10.63	
02/26/08		16.93		12.02	
05/30/08		17.97		10.98	
08/28/08		18.33		10.62	
12/11/08		18.86		10.09	
03/31/09		17.37		11.58	
12/31/09		18.26		10.69	
06/03/10		16.86		12.09	
12/20/10		17.70		11.25	
MW-8	02/26/08	30.14	21.50		8.64
	05/30/08		22.52		7.62
	08/28/08		23.27		6.87
	12/11/08		23.15		6.99
	03/31/09		21.46		8.68
	12/31/09		22.75		7.39
	06/03/10		21.06		9.08
12/20/10		22.18		7.96	

**Notes:**

\* = Adjusted for the presence of free-floating oil by the equation: Top of Casing Elevation - Depth to Water + (0.8 x Floating Hydrocarbon Thickness) = Groundwater Elevation (Adjusted).

Top of casing elevations resurveyed by Mid Coast Engineers on 6/27/02 and 7/11/02.



**TABLE TWO**  
 Summary of Chemical Analysis of Groundwater Samples  
 Petroleum Hydrocarbon Concentrations  
 All results are in parts per billion

Well/ Date Sampled	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	DIPE	TBA	Other Oxys	EDC	EDB
<b>MW-1</b>												
01/30/95	740	200	3	5	1	4	--	---	---	---	---	---
04/12/95	400	500	<0.5	<0.5	3	<2	--	---	---	---	---	---
07/14/95	520	400	1	<0.5	2	3	--	---	---	---	---	---
10/17/95	400	200	0.5	1	3	<2	--	---	---	---	---	---
01/12/96	120	890	<0.5	<0.5	<0.5	<1.0	<2.0	---	---	---	---	---
07/08/96	320	300	0.52	2.7	1.2	2.3	<5.0	---	---	---	---	---
01/06/97	110	75	<0.5	0.68	<0.5	<0.5	<5.0	---	---	---	---	---
07/08/97	380	290	<0.5	1.5	1.4	1.9	<5.0	---	---	---	<0.5	<0.5
01/26/98	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	<0.5	<0.5
07/23/98	190	<50	0.54	2.8	2	1.8	<5.0	---	---	---	<2	<2
01/05/99	200	<50	1.8	1.6	3.3	<0.5	<5.0	---	---	---	<0.5	<0.5
07/13/99	340	<50	<0.5	<0.5	2.6	<0.5	<5.0	---	---	---	<0.5	<0.5
01/12/00	300	1,000	22	36	5.5	24	<5.0	---	---	---	<0.5	<0.5
04/24/00	360	280*	<0.5	<0.5	<0.5	2.1	<5.0	---	---	---	<0.5	<0.5
07/20/00	290	150*	1.8	<0.5	<0.5	<0.5	<5.0	---	---	---	<0.5	<0.5
10/24/00	170**	280*	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	<0.5	<0.5
01/18/01	170**	150*	<0.5	<0.5	<0.5	2.1	<5.0	---	---	---	<0.5	<0.5
04/05/01	350**	190*	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	<0.5	<0.5
07/17/01	310	570	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	<0.5	<0.5
10/25/01	250	260	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	---	---
01/22/02	200	250	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	---	---
04/11/02	260	300	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	---	---
06/11/02	270	330	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	---	---
09/17/02	320	1,700	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	---	---
12/18/02	170	320	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	---	---
03/25/03	320	<500	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	---	---
06/23/03	240	310	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	<0.5	<0.5
09/26/03	110	300	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	<0.5	<0.5
12/18/03	150	340	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	<0.5	<0.5
03/12/04	220	510	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	<0.5	<0.5
06/17/04	250	490	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	<0.5	<0.5
09/17/04	110	--	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	---	---
11/10/04***	180	400	0.68	<0.5	1.7	<0.5	<5.0	---	---	---	---	---
12/17/04	77	130	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	<0.5	<0.5
04/28/05	250	190	<0.5	<0.5	<0.5	<0.5	<5.0	0.67	<0.5	<0.5	<0.5	<0.5
07/19/05	340	na	<0.5	<0.5	<0.5	<0.5	<5.0	0.76	<5.0	<0.5	<0.5	<0.5
10/03/05	170	<100	<0.5	<0.5	<0.5	<0.5	<5.0	<0.50	<5.0	<0.5	<0.5	<0.5
12/06/05	140	67	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	---	---	---
03/15/06	170	<80	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5
06/28/06	230	130	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5
08/31/06	310	<200	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50
11/21/06	220	160	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50
02/23/07	140	120	<0.50	<0.50	<0.50	<0.50	<0.50	1.2	<5.0	<0.50	<0.50	<0.50
05/02/07	180	140	<0.50	<0.50	<0.50	<0.50	<0.50	1.3	<5.0	<0.50	<0.50	<0.50
08/09/07	130	120	<0.50	<0.50	<0.50	<0.50	<0.50	0.85	<5.0	<0.50	<0.50	<0.50
12/06/07	53	160	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<5.0	<0.50	<0.50	<0.50
02/26/08	93	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	<5.0	<0.50	<0.50	<0.50
05/30/08	200	240	<0.50	<0.50	<0.50	<0.50	<0.50	0.95	<5.0	<0.50	<0.50	<0.50
08/28/08	150	200	<0.50	<0.50	<0.50	<0.50	<0.50	1.2	<5.0	<0.50	---	---
12/11/08	110	140	<0.50	<0.50	<0.50	<0.50	<0.50	0.92	<5.0	<0.50	---	---
03/31/09	160	<200	<0.50	<0.50	<0.50	<0.50	<0.50	1.8	<5.0	<0.50	<0.50	<0.50
12/31/09	140	200	<0.50	<0.50	<0.50	<0.50	<0.50	0.84	<5.0	<0.50	<0.50	<0.50
06/03/10	300	140	<0.50	<0.50	<0.50	<0.50	<0.50	0.72	<5.0	<0.50	<0.50	<0.50
12/20/10	140	180	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50

**TABLE TWO**  
 Summary of Chemical Analysis of Groundwater Samples  
 Petroleum Hydrocarbon Concentrations  
 All results are in parts per billion

Well/ Date Sampled	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	DIPE	TBA	Other Oxys	EDC	EDB
MW-2												
01/30/95	88,000	800	19,000	18,000	2,400	10,000	--	---	---	---	---	---
04/12/95	110,000	990	21,000	28,000	2,800	14,000	--	---	---	---	---	---
07/14/95	120,000	5,000	20,000	25,000	3,200	15,000	--	---	---	---	---	---
10/17/95	190,000	4,000	15,000	26,000	4,900	23,000	--	---	---	---	---	---
01/12/96	32,000	2,600	10,000	8,000	1,100	4,800	< 2	---	---	---	---	---
07/08/96	110,000	2,500	20,000	18,000	2,500	12,000	< 500	---	---	---	---	---
01/06/97	230,000	37,000	11,000	19,000	4,300	20,000	< 1,200	---	---	---	---	---
07/08/97	91,000	35,000	16,000	20,000	2,700	13,000	< 1,000	---	---	---	< 0.5	< 0.5
01/26/98	50,000	11,000	12,000	12,000	1,600	6,700	< 250	---	---	---	11	< 0.5
07/23/98	50,000	8,100#	11,000	8,300	1,800	7,000	1,100	---	---	---	9.9	< 0.5
01/05/99	50,000	7,600#	12,000	12,000	2,300	9,600	1,300	---	---	---	< 50	< 50
07/13/99	73,000	8,500	11,000	13,000	2,200	9,800	< 500	---	---	---	7.7	< 0.5
01/12/00	63,000	11,000	10,000	12,000	1,800	7,800	< 500	---	---	---	8.8	< 1.0
04/24/00	76,000	23,000*	7,100	14,000	2,000	9,400	< 500	---	---	---	5.9	< 5.0
07/20/00	68,000	5,300#	11,000	14,000	2,300	11,000	< 1,000	---	---	---	6.7	< 5.0
10/24/00	48,000	6,400*	11,000	9,400	1,500	7,300	< 500	---	---	---	< 5.0	< 5.0
01/18/01	37,000	4,600*	6,900	5,600	1,200	5,300	< 500	---	---	---	< 5.0	< 5.0
04/05/01	59,000	4,600*	7,100	9,800	1,600	7,600	< 500	---	---	---	4.6	< 5.0
07/17/01	90,000	< 10,000	9,200	14,000	2,700	11,000	< 50	---	---	---	< 50	---
10/25/01	79,000	< 3,800	9,200	14,000	2,400	11,000	< 50	---	---	---	< 50	< 50
01/22/02	76,000	< 2,300	7,000	13,000	2,200	9,600	< 50	---	---	---	< 50	< 50
04/11/02	76,000	< 1,500	7,800	11,000	2,900	12,000	< 50	---	---	---	---	---
06/11/02	72,000	< 2,500	7,300	9,600	2,500	12,000	< 50	---	---	---	---	---
09/17/02	52,000	< 3,000	5,000	5,400	2,100	9,100	< 20	---	---	---	< 20	< 20
12/18/02	46,000	< 6,000	2,900	3,000	1,800	7,600	22	---	---	---	< 10	< 10
03/25/03	87,000	< 8,000	7,900	9,300	2,900	12,000	< 50	---	---	---	< 50	< 50
06/23/03	46,000	< 3000	7,800	4,000	1,900	6,600	< 50	---	---	---	< 50	< 50
09/26/03	52,000	< 3000	9,100	3,500	1,300	5,000	< 50	---	---	---	< 50	< 50
12/18/03	61,000	< 4,000	13,000	3,500	1,600	5,600	< 20	---	---	---	< 20	< 20
03/12/04	53,000	< 4,000	9,100	3,500	1,700	5,700	< 25	---	---	---	< 25	< 25
06/17/04	59,000	< 3,000	7,100	4,000	1,700	7,300	< 25	---	---	---	< 25	< 25
09/17/04	33,000	--	9,800	1,200	1,300	4,000	< 20	---	---	---	---	---
11/10/04***	44,000	3,600	13,000	4,400	1,600	6,000	< 1000	---	---	---	---	---
12/17/04	54,000	< 3,000	7,900	2,200	1,700	3,900	< 15	---	---	---	< 15	< 15
04/28/05	81,000	< 3,000	7,000	6,000	2,100	8,700	< 15	90	< 15	< 15	< 15	< 15
07/19/05	59,000	na	7,900	4,400	1,900	7,000	< 15	< 15	77	< 15	< 15	< 15
10/03/05	34,000	< 800	7,800	810	1,000	2,800	< 15	< 15	< 70	< 15	< 15	< 15
12/06/05	26,000	< 800	6,100	940	770	2,000	< 15	---	---	---	---	---
03/15/06	33,000	< 1,500	7,700	2,600	1,400	4,200	< 15	< 15	< 15	< 15	< 15	< 15
06/28/06	96,000	< 4,000	10,000	14,000	2,900	12,000	< 15	< 15	< 5.0	< 15	33	< 15
8/31/06	47,000	< 3,000	5,800	5,100	2,200	8,700	< 15	< 15	81	< 15	< 15	< 15
11/21/06	51,000	< 1,500	6,800	3,400	1,700	6,200	< 15	< 15	82	< 15	< 15	< 15
02/23/07	38,000	< 1,500	7,800	2,000	1,500	4,600	< 15	< 15	190	< 15	< 15	< 15
05/02/07	55,000	< 3,000	6,500	5,100	2,400	8,600	< 15	< 15	110	< 15	< 15	< 15
08/09/07	39,000	< 3,000	6,600	2,200	1,600	4,900	< 15	< 15	81	< 15	< 15	< 15
12/06/07	20,000	< 1,500	7,400	510	680	1,200	< 15	< 15	120	< 15	< 15	< 15
02/26/08	43,000	< 4,000	8,200	940	1,400	3,700	< 15	< 15	70	< 15	< 15	< 15
05/30/08	31,000	< 1,000	11,000	620	1,100	2,300	< 15	< 15	84	< 15	< 15	< 15
08/28/08	38,000	< 3,000	11,000	630	1,400	3,800	< 25	< 25	< 150	< 25	---	---
12/11/08	32,000	< 2,000	11,000	610	1,000	2,700	< 25	< 25	< 150	< 25	---	---
03/31/09	44,000	< 4,000	6,500	3,300	1,700	5,600	< 9.0	< 9.0	56	< 9.0	< 9.0	< 9.0
12/31/09	36,000	< 4,000	9,700	350	1,600	3,800	< 9.0	13	56	< 9.0	< 9.0	< 9.0
06/03/10	53,000	< 10,000	8,600	2,600	2,500	8,000	< 5.0	8.9	69	< 5.0	< 5.0	< 5.0
12/20/10	39,000	< 4,000	13,000	530	1,600	3,600	< 15	21	< 70	< 15	< 15	< 15

**TABLE TWO**  
 Summary of Chemical Analysis of Groundwater Samples  
 Petroleum Hydrocarbon Concentrations  
 All results are in parts per billion

Well/ Date Sampled	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	DIPE	TBA	Other Oxys	EDC	EDB
<u>MW-3</u>												
01/12/00	140,000	13,000*	22,000	19,000	2,400	11,000	< 500	---	---	---	---	---
04/24/00	240,000	700,000*	33,000/	52,000/	5,700/	28,000/	< 5,000	---	---	---	---	---
			35,000	87,000	18,000	84,000						
07/20/00	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
10/24/00	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
01/18/01	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
04/05/01	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
07/17/01	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
10/25/01	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
01/22/02	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
04/11/02	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
06/11/02	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
09/17/02	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
12/18/02	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
03/25/03	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
06/23/03	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
09/26/03	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
12/18/03	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
03/12/04	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
06/17/04	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
09/17/04	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
11/10/04	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
12/17/04	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
04/28/05	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
07/19/05	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
10/03/05	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
12/06/05	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
03/15/06	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
06/28/06	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
8/31/06	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
11/21/06	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
02/23/07	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
05/02/07	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
08/09/07	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
12/06/07	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
02/26/08	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
05/30/08	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
08/28/08	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
12/11/08	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
03/31/09	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
12/31/09	60,000	<25,000	7,500	6,500	1,000	6,600	< 20	< 20	< 90	< 20	< 20	< 20
06/03/10	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
12/20/10	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											

**TABLE TWO**  
 Summary of Chemical Analysis of Groundwater Samples  
 Petroleum Hydrocarbon Concentrations  
 All results are in parts per billion

Well/ Date Sampled	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	DIPE	TBA	Other Oxys	EDC	EDB
<b>MW-4</b>												
01/12/00	99,000	7,900*	16,000	20,000	2,100	12,000	< 2,500	---	---	---	< 50	< 50
04/24/00	54,000	44,000*	3,400/	13,000/	1,800/	8,800/	< 1,300	---	---	---	< 250	< 250
			4,500	20,000	2,800	14,000						
07/20/00	8,000	3,500	9,200/	20,000	2,500	12,000/	< 1,000	---	---	---	< 200	< 200
			11,000	22,000	3,400	13,000						
10/24/00	98,000	8,000*	21,000	29,000	2,700	15,000	< 1,000	---	---	---	< 250	< 250
01/18/01	91,000	12,000	17,000/	21,000/	2,500/	13,000/	< 1,000	---	---	---	< 250	< 250
			15,000	21,000	2,800	11,000	< 5,000					
04/05/01	88,000	7,500*	6,900/	18,000/	2,500/	12,000/	< 1,000	---	---	---	< 50	< 50
			3,200	9,000	1,300	6,400	< 500					
07/17/01	95,000	< 3,000	8,000	16,000	2,900	11,000	49	---	---	---	69	---
10/25/01	89,000	< 2,200	9,300	18,000	2,400	12,000	66	---	---	---	72	< 50
01/22/02	80,000	< 2,300	4,600	15,000	2,500	11,000	< 50	---	---	---	< 50	< 50
04/11/02	90,000	< 900	6,600	18,000	2,800	12,000	55	---	---	---	---	---
06/25/02	110,000	< 3,000	10,000	20,000	2,900	13,000	< 100	---	---	---	< 100	< 100
09/17/02	110,000	< 3,000	9,600	21,000	2,800	13,000	< 100	---	---	---	< 100	< 100
12/18/02	97,000	< 4,000	8,000	20,000	2,600	12,000	< 50	---	---	---	< 50	< 50
03/25/03	97,000	< 7,500	7,600	22,000	2,500	12,000	< 100	---	---	---	< 100	< 100
06/23/03	100,000	< 3,000	9,600	22,000	3,300	15,000	< 100	---	---	---	< 100	< 100
09/26/03	110,000	< 4,000	9,300	17,000	2,100	10,000	< 50	---	---	---	87	< 50
12/18/03	110,000	< 2,000	8,900	19,000	2,500	12,000	< 25	---	---	---	46	< 25
03/12/04	96,000	< 4,000	6,500	18,000	2,700	12,000	< 40	---	---	---	< 40	< 40
06/17/04	110,000	< 4,000	10,000	20,000	2,900	13,000	< 50	---	---	---	93	< 50
09/17/04	78,000	--	9,300	15,000	2,400	11,000	< 50	---	---	---	---	---
11/10/04***	87,000	4,300	15,000	21,000	3,000	16,000	< 1300	---	---	---	---	---
12/17/04	88,000	< 3,000	8,500	16,000	2,800	12,000	< 25	---	---	---	53	< 25
04/28/05	110,000	< 3,000	7,800	14,000	2,200	10,000	< 25	< 25	< 25	< 25	46	< 25
07/19/05	90,000	na	10,000	13,000	2,300	10,000	< 40	< 20	< 20	< 20	73	< 40
10/03/05	68,000	< 800	9,400	4,000	1,800	8,700	23	23	< 5.0	< 2.0	62	< 20
12/06/05	81,000	< 1,500	8,900	7,200	2,200	9,500	< 20	---	---	---	---	---
03/15/06	68,000	< 3,000	7,300	14,000	2,500	10,000	< 20	< 20	< 20	< 20	< 20	< 20
06/28/06	61,000	< 3,000	8,500	4,100	2,600	11,000	< 20	< 20	< 5.0	< 2.0	20	< 20
08/31/06	68,000	< 2,000	9,500	9,600	2,500	12,000	< 20	< 20	< 5.0	< 2.0	36	< 20
11/21/06	68,000	< 1,500	9,000	5,000	2,000	9,300	< 20	< 20	230	< 2.0	42	< 20
02/23/07	90,000	< 2,000	11,000	11,000	2,800	12,000	< 20	< 20	290	< 2.0	36	< 20
05/02/07	56,000	< 2,000	7,300	6,300	2,500	11,000	< 15	< 15	160	< 15	20	< 15
08/09/07	52,000	< 2,000	7,600	2,600	2,100	8,400	< 15	15	170	< 15	31	< 15
12/06/07	60,000	< 2,000	13,000	2,000	2,800	11,000	< 15	22	150	< 15	< 15	< 15
02/26/08	42,000	< 2,000	3,700	2,300	2,300	8,900	< 15	< 15	90	< 15	< 15	< 15
05/30/08	64,000	< 3,000	9,200	5,100	3,000	12,000	< 15	< 15	83	< 15	19	< 15
08/28/08	73,000	< 5,000	9,700	5,500	3,300	12,000	< 15	< 15	< 70	< 15	---	---
12/11/08	120,000	< 40,000	14,000	12,000	4,400	19,000	< 25	< 25	< 150	< 25	---	---
03/31/09	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
<b>MW-4R</b>												
12/31/09	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
06/03/10	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											
12/20/10	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS											

**TABLE TWO**  
 Summary of Chemical Analysis of Groundwater Samples  
 Petroleum Hydrocarbon Concentrations  
 All results are in parts per billion

Well/ Date Sampled	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	DIPE	TBA	Other Oxys	EDC	EDB
<u>MW-5</u>												
06/11/02	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	28	---	---	---	< 0.5	< 0.5
09/17/02	< 50	110	< 0.5	< 0.5	< 0.5	< 0.5	4.8	---	---	---	< 0.5	< 0.5
12/18/02	< 50	140	< 0.5	< 0.5	< 0.5	< 0.5	1.8	---	---	---	< 0.5	< 0.5
03/25/03	< 50	130	< 0.5	< 0.5	< 0.5	< 0.5	7.4	---	---	---	< 0.5	< 0.5
06/23/03	< 50	390	< 0.5	< 0.5	< 0.5	< 0.5	17	---	---	---	< 0.5	< 0.5
09/26/03	< 50	700	< 0.5	< 0.5	< 0.5	< 0.5	21	---	---	---	< 0.5	< 0.5
12/18/03	< 50	550	< 0.5	< 0.5	< 0.5	< 0.5	16	---	---	---	< 0.5	< 0.5
03/12/04	< 50	490	< 0.5	< 0.5	< 0.5	< 0.5	9.1	---	---	---	< 40	< 40
06/17/04	< 50	510	< 0.5	< 0.5	< 0.5	< 0.5	9.8	---	---	---	< 0.5	< 0.5
09/17/04	< 50	--	< 0.5	< 0.5	< 0.5	< 0.5	5.5	---	---	---	---	---
11/10/04***	< 50	370	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	---	---	---	---	---
12/17/04	< 50	120	< 0.5	< 0.5	< 0.5	< 0.5	9.2	---	---	---	< 0.5	< 0.5
04/28/05	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	2.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
07/19/05	< 50	na	< 0.5	< 0.5	< 0.5	< 0.5	6.1	2.1	< 5.0	< 0.5	< 0.5	< 0.5
10/03/05	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	2.4	1.7	< 5.0	< 0.5	< 0.5	< 0.5
12/06/05	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	---	---	---	---	---
03/15/06	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	3.3	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5
06/28/06	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	1.8	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5
08/31/06	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	3.4	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50
12/05/06	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	5.2	1.7	5.4	< 0.50	< 0.50	< 0.50
02/23/07	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	6.0	1.4	< 5.0	< 0.50	< 0.50	< 0.50
05/02/07	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	3.8	1.3	< 5.0	< 0.50	< 0.50	< 0.50
08/09/07	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	5.5	1.3	< 5.0	< 0.50	< 0.50	< 0.50
12/06/07	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	1.8	1.5	< 5.0	< 0.50	< 0.50	< 0.50
02/26/08	260	< 50	32	1.3	0.62	0.92	3.4	5.6	7.7	< 0.50	0.60	< 0.50
05/30/08	71	< 50	1.8	< 0.50	< 0.50	< 0.50	2.4	3.1	< 5.0	< 0.50	< 0.50	< 0.50
08/28/08	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	2.1	2.2	< 5.0	< 0.50	---	---
12/11/08	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	2.2	2.5	< 5.0	< 0.50	---	---
03/31/09	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	1.2	1.3	< 5.0	< 0.50	< 0.50	< 0.50
12/31/09	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	1.9	1.5	< 5.0	< 0.50	< 0.50	< 0.50
06/03/10	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	0.56	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50
12/20/10	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	0.61	0.67	< 5.0	< 0.50	< 0.50	< 0.50

**TABLE TWO**  
 Summary of Chemical Analysis of Groundwater Samples  
 Petroleum Hydrocarbon Concentrations  
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Well/ Date Sampled	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	DIPE	TBA	Other Oxys	EDC	EDB
MW-6												
06/11/02	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	1.2	---	---	---	< 0.5	< 0.5
09/17/02	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	1.0	---	---	---	< 0.5	< 0.5
12/18/02	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	0.90	---	---	---	< 0.5	< 0.5
03/25/03	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	---	---	---	< 0.5	< 0.5
06/23/03	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	---	---	---	< 0.5	< 0.5
09/26/03	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	---	---	---	< 0.5	< 0.5
12/18/03	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	---	---	---	< 0.5	< 0.5
03/12/04	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	---	---	---	< 0.5	< 0.5
06/17/04	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	---	---	---	< 0.5	< 0.5
09/17/04	< 50	--	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	---	---	---	---	---
11/10/04***	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	---	---	---	---	---
12/17/04	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	---	---	---	< 0.5	< 0.5
04/28/05	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
07/19/05	< 50	na	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5
10/03/05	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5
12/06/05	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	---	---	---	---	---
03/15/06	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
06/28/06	< 50	< 50	< 0.5	< 0.5	< 0.5	0.65	< 0.5	< 0.5	< 5.0	< 0.5	< 0.5	< 0.5
08/31/06	< 50	< 50	< 0.50	2.4	0.90	4.0	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50
11/21/06	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50
02/23/07	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50
05/02/07	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50
08/09/07	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50
12/06/07	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50
02/26/08	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50
05/30/08	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50
08/28/08	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	---	---
12/11/08	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	---	---
03/31/09	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50
12/31/09	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50
06/03/10	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50
12/20/10	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50

**TABLE TWO**  
 Summary of Chemical Analysis of Groundwater Samples  
 Petroleum Hydrocarbon Concentrations  
 All results are in parts per billion

Well/ Date Sampled	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	DIPE	TBA	Other Oxys	EDC	EDB
<b>MW-7</b>												
06/25/02	38,000	<2,000	890	5,100	1,200	5,200	<20	---	---	---	<20	<20
09/17/02	26,000	<2,000	590	3,600	880	4,000	<20	---	---	---	<20	<20
12/18/02	NOT SAMPLED - CAR PARKED OVER WELL											
03/25/03	39,000	<2,900	410	7,700	1,000	6,400	<5.0	---	---	---	<2.5	<2.5
06/23/03	17,000	<1,000	440	2,600	630	2,600	<10	---	---	---	<10	<10
09/26/03	17,000	<1,000	230	1,800	470	2,200	<5.0	---	---	---	<5.0	<5.0
12/18/03	20,000	<1,000	290	2,500	590	2,900	<5.0	---	---	---	<10	<10
03/12/04	20,000	<1,500	300	3,000	760	3,200	<10	---	---	---	<5.0	<5.0
06/17/04	12,000	<800	250	1,800	450	1,900	<5.0	---	---	---	---	---
09/17/04	9,900	---	200	1,500	450	1,800	<5.0	---	---	---	---	---
11/10/04***	20,000	1,900	550	4,200	920	4,000	<500	---	---	---	---	---
12/17/04	14,000	<800	220	1,700	530	2,000	<3.0	---	---	---	<3.0	<3.0
04/28/05	13,000	<300	84	1,000	660	2,200	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
07/19/05	16,000	na	170	1,800	540	2,200	<2.5	<2.5	<5.0	<2.5	<2.5	<2.5
10/03/05	7,400	<200	140	710	350	1,100	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50
12/06/05	22,000	<600	240	2,300	800	3,400	<5.0	---	---	---	---	---
03/15/06	3,800	<200	4.6	160	120	620	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50
06/28/06	6,400	<500	19.0	340	490	940	<0.50	<0.50	<5.0	<0.50	<0.90	<0.90
08/31/06	20,000	<600	160	2,200	1,300	3,500	<2.5	1.4	<15	<5.0	<2.5	<2.5
11/21/06	21,000	<1,000	240	2,500	880	3,400	<5.0	<5.0	<25	<5.0	<5.0	<5.0
02/23/07	10,000	<200	150	1,300	580	2,400	<2.5	<2.5	<15	<2.5	<2.5	<2.5
05/02/07	26,000	<1,000	300	2,400	1,800	6,700	<2.5	<2.5	<50	<2.5	<2.5	<2.5
08/09/07	13,000	<800	250	800	1,000	3,000	<2.5	<2.5	<15	<2.5	<2.5	<2.5
12/06/07	9,600	<1,000	160	850	530	2,000	<2.5	<2.5	45	<2.5	<2.5	<2.5
02/26/08	14,000	<800	190	1,000	740	3,000	<2.5	<2.5	69	<2.5	<2.5	<2.5
05/30/08	9,900	<200	160	620	590	2,300	<2.5	<2.5	<15	<2.5	<2.5	<2.5
08/28/08	11,000	<800	180	500	650	2,400	<2.5	<2.5	<15	<2.5	---	---
12/11/08	8,000	<500	160	300	540	1,600	<2.5	<2.5	<15	<2.5	---	---
03/31/09	5,600	<300	82	190	360	1,000	<1.5	<1.5	<7.0	<1.5	<1.5	<1.5
12/31/09	16,000	<800	140	1,200	750	2,800	<0.5	<0.50	10	<0.50	<0.50	<0.50
06/03/10	22,000	<2,000	160	1,000	1,300	3,500	<5.0	<5.0	<25	<5.0	<5.0	<5.0
12/20/10	23,000	<1,000	230	820	1,500	4,900	<5.0	<5.0	<25	<5.0	<5.0	<5.0
<b>MW-8</b>												
02/26/08	<50	<50	0.51	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50
05/30/08	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50
08/28/08	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	---	---
12/11/08	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	---	---
03/31/09	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50
12/31/09	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50
06/03/10	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50
12/20/10	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50
ESL	100	100	1	40	30	20	5					

**Notes:**

\* = Hydrocarbons reported are in the early diesel range, and do not match the laboratory standards.

\*\* = Hydrocarbons reported do not match the laboratory gasoline standard.

\*\*\* = Grab sample - Not purged

# = Estimated concentration reported due to overlapping fuel patterns.

/ = Results separated by a slash represent results from two different laboratory methods (8020/B260)

na = not analyzed

Non-detectable concentrations noted by the less than sign (<) followed by the detection limit.

Most recent data in bold.

ESL = Environmental screening levels presented in the "Screening For Environmental Concerns at Site: With Contaminated Soil and Groundwater (May 2008)" document prepared by the California Regional Water Quality

TPH = Total petroleum hydrocarbons

MTBE = Methyl tertiary butyl ether

DIPE = Diisopropyl ether

TBA = Tery-butanol

Oxy = Oxygenates

EDC = 1,2-Dichloroethane

EDB = 1,2-Dibromoethane

**TABLE THREE**  
**Groundwater Analytical Results**  
**Oil & Grease and Volatile Organic Compounds**  
 All results are in parts per billion

Date Sampled & Compound Analyzed	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8
<u>7/8/97</u>								
Hydrocarbon Oil and Grease	-	< 1,000	-	-	-	-	-	-
Tetrachloroethene (PCE)	0.9	< 0.5	-	-	-	-	-	-
Other VOCs	< 0.5 - < 3	< 0.5 - < 3	-	-	-	-	-	-
<u>1/26/98</u>								
Hydrocarbon Oil and Grease	-	< 1,000	-	-	-	-	-	-
Trichloroethene	0.7	< 5.0	-	-	-	-	-	-
Tetrachloroethene	10	< 5.0	-	-	-	-	-	-
1,2-Dichloroethane	< 0.5	11	-	-	-	-	-	-
Other VOCs	< 0.5 - < 50	< 0.5 - < 50	-	-	-	-	-	-
<u>7/23/98</u>								
Hydrocarbon Oil and Grease	-	< 1,000	-	-	-	-	-	-
Tetrachloroethene	4	4.6	-	-	-	-	-	-
1,2-Dichloroethane	< 2	9.9	-	-	-	-	-	-
Other VOCs	< 2 - < 10	< 0.5 - < 50	-	-	-	-	-	-
<u>1/5/99</u>								
Hydrocarbon Oil and Grease	-	< 1,000	-	-	-	-	-	-
Tetrachloroethene	5.1	< 50	-	-	-	-	-	-
Trichloroethene	0.52	< 50	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.58	< 50	-	-	-	-	-	-
Chloroform	5.2	< 50	-	-	-	-	-	-
Other VOCs	< 0.5 - < 5	< 50 - < 500	-	-	-	-	-	-
<u>7/13/99</u>								
Hydrocarbon Oil and Grease	-	< 1,000	-	-	-	-	-	-
Tetrachloroethene	1.5	0.68	-	-	-	-	-	-
Chloroform	4.6	< 50	-	-	-	-	-	-
1,2-Dichloroethane	< 0.50	7.7	-	-	-	-	-	-
Other VOCs	< 0.5 - < 5	< 0.5 - < 500	-	-	-	-	-	-
<u>1/12/00</u>								
Hydrocarbon Oil and Grease	-	< 1,000	< 1,000	< 1,000	-	-	-	-
Tetrachloroethene	0.8	< 1.0	< 100	< 50	-	-	-	-
Chloroform	3.2	< 1.0	< 100	< 50	-	-	-	-
1,2-Dichloroethane	< 0.50	8.8	120	140	-	-	-	-
Acetone	-	-	25,000	6,400	-	-	-	-
Naphthalene	-	-	5.50	540	-	-	-	-
Isopropylbenzene	-	-	120	89	-	-	-	-
Other VOCs	< 0.5 - < 50	< 1.0 - < 4.0	< 100 - < 10,000	< 50 - < 5,000	-	-	-	-
<u>4/24/00</u>								
Hydrocarbon Oil and Grease	-	< 1,000	4,100	< 1,000	-	-	-	-
1,2-Dichloroethane	< 0.5	5.9	< 1,000	< 250	-	-	-	-
Naphthalene	-	-	3,800	580	-	-	-	-
Isopropylbenzene	-	-	1,200	< 250	-	-	-	-
Other VOCs	< 0.5 - < 50	< 5.0 - < 20	1,000 - < 100,000	< 250 - < 25,000	-	-	-	-
<u>7/20/00</u>								
Hydrocarbon Oil and Grease	-	< 1,000	-	< 1,000	-	-	-	-
Tetrachloroethene	0.59	< 5.0	FREE	< 200	-	-	-	-
Chloroform	2.1	< 5.0	PRODUCT	< 200	-	-	-	-
1,2-Dichloroethane	< 0.5	6.7	---	< 200	-	-	-	-
Acetone	-	-	NOT	< 20,000	-	-	-	-
Naphthalene	-	-	SAMPLED	730	-	-	-	-
Other VOCs	< 0.5 - < 20	< 5.0 - < 20	-	< 250 - < 20,000	-	-	-	-
<u>10/24/00</u>								
Hydrocarbon Oil and Grease	-	< 1,000	FREE	< 1,000	-	-	-	-
Tetrachloroethene	< 0.5	< 5.0	---	< 250	-	-	-	-
Chloroform	1.0	< 5.0	NOT	< 250	-	-	-	-
Other VOCs	< 0.5 - < 20	< 5.0 - < 20	SAMPLED	< 250 - < 25,000	-	-	-	-
<u>1/16/01</u>								
Hydrocarbon Oil and Grease	-	2,100	FREE	1,300	-	-	-	-
Tetrachloroethene	1.3	< 5.0	---	< 250	-	-	-	-
Chloroform	6.4	< 5.0	NOT	< 250	-	-	-	-
Other VOCs	< 0.5 - < 20	< 5.0 - < 20	SAMPLED	< 250 - < 25,000	-	-	-	-



**TABLE THREE**  
**Groundwater Analytical Results**  
**Oil & Grease and Volatile Organic Compounds**  
**All results are in parts per billion**

Date Sampled & Compound Analyzed	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8
<u>4/5/01</u>								
Hydrocarbon Oil and Grease	-	< 1.0	FREE	1,100.0	-	-	-	-
Tetrachloroethene	< 0.5	1.1	PRODUCT	< 50	-	-	-	-
1,2 dichloroethane	< 0.5	4.6	---	< 50	-	-	-	-
Trichloroethene	< 0.5	0.58	NOT	< 50	-	-	-	-
Naphthalene	-	-	---	320	-	-	-	-
Other VOCs	< 0.5 - < 2.0	< 5.0 - < 20	SAMPLED	< 50 - < 5,000	-	-	-	-
<u>7/17/01</u>								
Hydrocarbon Oil and Grease	-	< 500	FREE	< 500	-	-	-	-
Tetrachloroethene	-	-	PRODUCT	-	-	-	-	-
1,2 dichloroethane	< 0.5	< 50	---	69.0	-	-	-	-
Trichloroethene	-	-	NOT	-	-	-	-	-
Naphthalene	-	-	---	-	-	-	-	-
Other VOCs	-	-	SAMPLED	-	-	-	-	-



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## **APPENDIX A**

### Well Sampling Field Log

# AQUA SCIENCE ENGINEERS

## WELL SAMPLING FIELD LOG

PROJECT NAME LIM

---

JOB NUMBER 2808 DATE OF SAMPLING 12-20-2010

---

WELL ID. MW-1 SAMPLER BA/RK

---

TOTAL DEPTH OF WELL 26.80 WELL DIAMETER 2"

---

DEPTH TO WATER PRIOR TO PURGING 18.21 TIME OF MEASUREMENT 10:20

---

PRODUCT THICKNESS 0

---

DEPTH OF WELL CASING IN WATER 8.59

---

NUMBER OF GALLONS PER WELL CASING VOLUME 1.4

---

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 4.4 <sup>RK</sup> 3

---

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 4.4 <sup>gals</sup>

---

EQUIPMENT USED TO PURGE WELL NEW DISPOSABLE BAILER

---

TIME EVACUATION STARTED 1100 TIME EVACUATION COMPLETED 1110

---

TIME SAMPLES WERE COLLECTED 1110

---

DID WELL GO DRY No AFTER HOW MANY GALLONS —

---

VOLUME OF GROUNDWATER PURGED 4.4 <sup>gal</sup>

---

SAMPLING DEVICE NEW DISPOSABLE BAILER

---

SAMPLE COLOR clear ODOR/SEDIMENT None/slightly silty

### CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
1	20.1	7.4	420
2	20.3	6.9	380
3	20.3	6.8	380

### SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
<u>MW-1</u>	<u>5</u>	<u>40 ml vial</u>	<u>TPH &amp; metals</u>	<u>✓</u>

# AQUA SCIENCE ENGINEERS

## WELL SAMPLING FIELD LOG

PROJECT NAME LIM

JOB NUMBER 2808 DATE OF SAMPLING 12-20-2010

WELL ID. MW-2 SAMPLER DA/PK

TOTAL DEPTH OF WELL 26.80 WELL DIAMETER 2"

DEPTH TO WATER PRIOR TO PURGING 17.25 TIME OF MEASUREMENT 10:55

PRODUCT THICKNESS Shewn

DEPTH OF WELL CASING IN WATER 9.55

NUMBER OF GALLONS PER WELL CASING VOLUME 1.6

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 4-8 gal

EQUIPMENT USED TO PURGE WELL NEW DISPOSABLE BAILER

TIME EVACUATION STARTED 12:14 TIME EVACUATION COMPLETED 12:20

TIME SAMPLES WERE COLLECTED 12:20

DID WELL GO DRY No AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 4-8 gal

SAMPLING DEVICE NEW DISPOSABLE BAILER

SAMPLE COLOR slight gray ODOR/SEDIMENT strong h<sub>2</sub>O/slight gray silt

### CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
1	18.6	6.7	580
2	19.0	6.8	590
3	19.0	6.8	590

### SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
MW-	5	40 ml vial	TPH & more	✓

# AQUA SCIENCE ENGINEERS

## WELL SAMPLING FIELD LOG

PROJECT NAME LIM

JOB NUMBER 2808 DATE OF SAMPLING 12-20-2010

WELL ID. MW-3 SAMPLER BA / BK

TOTAL DEPTH OF WELL 30.0 WELL DIAMETER

DEPTH TO WATER PRIOR TO PURGING 17.20 TIME OF MEASUREMENT 10.05

PRODUCT THICKNESS 0.45' DTP = 16.75'

DEPTH OF WELL CASING IN WATER

NUMBER OF GALLONS PER WELL CASING VOLUME

NUMBER OF WELL CASING VOLUMES TO BE REMOVED

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING

EQUIPMENT USED TO PURGE WELL NEW DISPOSABLE BAILER

TIME EVACUATION STARTED TIME EVACUATION COMPLETED

TIME SAMPLES WERE COLLECTED

DID WELL GO DRY AFTER HOW MANY GALLONS

VOLUME OF GROUNDWATER PURGED

SAMPLING DEVICE NEW DISPOSABLE BAILER

SAMPLE COLOR ODOR/SEDIMENT

*Not Sampled  
Due to Product*

### CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY

### SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
<u>MW-</u>	<u>5</u>	<u>40 ml vial</u>	<u>TPH &amp; more</u>	<u>✓</u>

# AQUA SCIENCE ENGINEERS

## WELL SAMPLING FIELD LOG

PROJECT NAME LIM

JOB NUMBER 2808 DATE OF SAMPLING 12-20-2010

WELL ID. MW-2 SAMPLER DA/PA

TOTAL DEPTH OF WELL \_\_\_\_\_ WELL DIAMETER 2"

DEPTH TO WATER PRIOR TO PURGING 18.95 TIME OF MEASUREMENT 1010

PRODUCT THICKNESS 2.00' (DTP = 14.95')

DEPTH OF WELL CASING IN WATER \_\_\_\_\_

NUMBER OF GALLONS PER WELL CASING VOLUME \_\_\_\_\_

NUMBER OF WELL CASING VOLUMES TO BE REMOVED \_\_\_\_\_

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING \_\_\_\_\_

EQUIPMENT USED TO PURGE WELL \_\_\_\_\_ NEW DISPOSABLE BAILER \_\_\_\_\_

TIME EVACUATION STARTED \_\_\_\_\_ TIME EVACUATION COMPLETED \_\_\_\_\_

TIME SAMPLES WERE COLLECTED \_\_\_\_\_

DID WELL GO DRY \_\_\_\_\_ AFTER HOW MANY GALLONS \_\_\_\_\_

VOLUME OF GROUNDWATER PURGED \_\_\_\_\_

SAMPLING DEVICE \_\_\_\_\_ NEW DISPOSABLE BAILER \_\_\_\_\_

SAMPLE COLOR \_\_\_\_\_ ODOR/SEDIMENT \_\_\_\_\_

*Not Sampled Due to product*

### CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY

### SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
<u>MW-</u>	<u>5</u>	<u>40 ml vial</u>	<u>TPH &amp; more</u>	<u>✓</u>

# AQUA SCIENCE ENGINEERS

## WELL SAMPLING FIELD LOG

PROJECT NAME LIM

JOB NUMBER 2808 DATE OF SAMPLING 12-20-2010

WELL ID. MW-5 SAMPLER BA/PC

TOTAL DEPTH OF WELL 29.60 WELL DIAMETER 2"

DEPTH TO WATER PRIOR TO PURGING 17.72 TIME OF MEASUREMENT 10:00

PRODUCT THICKNESS 0

DEPTH OF WELL CASING IN WATER 11.88

NUMBER OF GALLONS PER WELL CASING VOLUME 2.0

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 6.0 gal

EQUIPMENT USED TO PURGE WELL NEW DISPOSABLE BAILER

TIME EVACUATION STARTED 1230 TIME EVACUATION COMPLETED 1240

TIME SAMPLES WERE COLLECTED 1240

DID WELL GO DRY No AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 6.0 gal

SAMPLING DEVICE NEW DISPOSABLE BAILER

SAMPLE COLOR slight yellow brown ODOR/SEDIMENT None / slight yellow brown

### CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
1	19.5	6.9	510
2	19.3	6.9	490
3	19.3	6.9	490

### SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
MW-	5	40 ml vial	TPH & metals	✓

# AQUA SCIENCE ENGINEERS

## WELL SAMPLING FIELD LOG

PROJECT NAME LIM

JOB NUMBER 2808 DATE OF SAMPLING 12-20-2010

WELL ID. MW-6 SAMPLER DA/PA

TOTAL DEPTH OF WELL 29.5 WELL DIAMETER 2"

DEPTH TO WATER PRIOR TO PURGING 17.40 TIME OF MEASUREMENT 955

PRODUCT THICKNESS 0

DEPTH OF WELL CASING IN WATER 12.10

NUMBER OF GALLONS PER WELL CASING VOLUME 2.0

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 6.0 gal

EQUIPMENT USED TO PURGE WELL NEW DISPOSABLE BAILER

TIME EVACUATION STARTED 1145 TIME EVACUATION COMPLETED 1150

TIME SAMPLES WERE COLLECTED 1150

DID WELL GO DRY NO AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 6.0 gal

SAMPLING DEVICE NEW DISPOSABLE BAILER

SAMPLE COLOR Slight yellow brown ODOR/SEDIMENT None of slight yellow brown

### CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
1	19.5	7.2	280
2	19.5	7.2	260
3	19.5	7.1	260

### SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
MW-	5	40 ml vial	TPH & metals	✓



# AQUA SCIENCE ENGINEERS

## WELL SAMPLING FIELD LOG

PROJECT NAME LIM

JOB NUMBER 2808 DATE OF SAMPLING 12-20-2010

WELL ID. MW-7 SAMPLER DA/PK

TOTAL DEPTH OF WELL 28.0 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 17.70 TIME OF MEASUREMENT 10:45

PRODUCT THICKNESS 0

DEPTH OF WELL CASING IN WATER 10.30

NUMBER OF GALLONS PER WELL CASING VOLUME 1.7

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 5.1

EQUIPMENT USED TO PURGE WELL NEW DISPOSABLE BAILER

TIME EVACUATION STARTED 11:57 TIME EVACUATION COMPLETED 12:05

TIME SAMPLES WERE COLLECTED 12:05

DID WELL GO DRY No AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 5.1 gal

SAMPLING DEVICE NEW DISPOSABLE BAILER

SAMPLE COLOR gray ODOR/SEDIMENT strong hc / gray silt

### CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
<del>1</del> <u>1</u>	<u>19.3</u>	<u>6.7</u>	<u>460</u>
<u>2</u>	<u>19.5</u>	<u>6.7</u>	<u>460</u>
<u>3</u>	<u>19.5</u>	<u>6.7</u>	<u>460</u>

### SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
<u>MW-7</u>	<u>5</u>	<u>40 ml vial</u>	<u>TPH &amp; metals</u>	<u>✓</u>

# AQUA SCIENCE ENGINEERS

## WELL SAMPLING FIELD LOG

PROJECT NAME LIM

JOB NUMBER 2808 DATE OF SAMPLING 12-20-2010

WELL ID. MW-8 SAMPLER DA/PA

TOTAL DEPTH OF WELL 49.00 WELL DIAMETER 2"

DEPTH TO WATER PRIOR TO PURGING 22.18 TIME OF MEASUREMENT 950

PRODUCT THICKNESS Ø

DEPTH OF WELL CASING IN WATER 26.82

NUMBER OF GALLONS PER WELL CASING VOLUME 4.6

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 13.8 gals

EQUIPMENT USED TO PURGE WELL NEW DISPOSABLE BAILER

TIME EVACUATION STARTED 1120 TIME EVACUATION COMPLETED 1135

TIME SAMPLES WERE COLLECTED 1135

DID WELL GO DRY No AFTER HOW MANY GALLONS -----

VOLUME OF GROUNDWATER PURGED 13.8 gals

SAMPLING DEVICE NEW DISPOSABLE BAILER

SAMPLE COLOR Clear ODOR/SEDIMENT None / None

### CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
1	19.3	9.4	550
2	18.7	8.2	390
	18.7	8.1	390

### SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
MW-	5	40 ml vial	TPH & metals	✓



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## **APPENDIX B**

Certified Analytical Report  
and  
Chain of Custody Documentation



## Laboratory Results

Robert Kitay  
Aqua Science Engineers, Inc.  
55 Oak Court, Suite 220  
Danville, CA 94526

Subject : 6 Water Samples  
Project Name : Lim  
Project Number : 2808

Dear Mr. Kitay,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed. Testing procedures comply with the 2003 NELAC standard. All soil samples are reported on a total weight (wet weight) basis unless noted otherwise in the case narrative. Laboratory results relate only to the samples tested. This report may be freely reproduced in full, but may only be reproduced in part with the express permission of Kiff Analytical, LLC. Kiff Analytical, LLC is certified by the State of California under the National Environmental Laboratory Accreditation Program (NELAP), lab # 08263CA. If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,



Joel Kiff

Project Name : **Lim**

Project Number : **2808**

Sample : **MW-1**

Matrix : Water

Lab Number : 75864-01

Sample Date :12/20/2010

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 22:29
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 22:29
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 22:29
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 22:29
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 22:29
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 22:29
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 22:29
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 22:29
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/22/10 22:29
<b>TPH as Gasoline</b>	<b>140</b>	50	ug/L	EPA 8260B	12/22/10 22:29
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 22:29
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 22:29
1,2-Dichloroethane-d4 (Surr)	97.3		% Recovery	EPA 8260B	12/22/10 22:29
Toluene - d8 (Surr)	94.9		% Recovery	EPA 8260B	12/22/10 22:29
<b>TPH as Diesel (Silica Gel)</b>	<b>180</b>	50	ug/L	M EPA 8015	12/28/10 04:47
Octacosane (Silica Gel Surr)	96.3		% Recovery	M EPA 8015	12/28/10 04:47

Project Name : **Lim**

Project Number : **2808**

Sample : **MW-2**

Matrix : Water

Lab Number : 75864-02

Sample Date :12/20/2010

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
<b>Benzene</b>	<b>13000</b>	25	ug/L	EPA 8260B	12/28/10 02:16
<b>Toluene</b>	<b>530</b>	15	ug/L	EPA 8260B	12/23/10 19:02
<b>Ethylbenzene</b>	<b>1600</b>	15	ug/L	EPA 8260B	12/23/10 19:02
<b>Total Xylenes</b>	<b>3600</b>	15	ug/L	EPA 8260B	12/23/10 19:02
Methyl-t-butyl ether (MTBE)	< 15	15	ug/L	EPA 8260B	12/23/10 19:02
<b>Diisopropyl ether (DIPE)</b>	<b>21</b>	15	ug/L	EPA 8260B	12/23/10 19:02
Ethyl-t-butyl ether (ETBE)	< 15	15	ug/L	EPA 8260B	12/23/10 19:02
Tert-amyl methyl ether (TAME)	< 15	15	ug/L	EPA 8260B	12/23/10 19:02
Tert-Butanol	< 70	70	ug/L	EPA 8260B	12/23/10 19:02
<b>TPH as Gasoline</b>	<b>39000</b>	1500	ug/L	EPA 8260B	12/23/10 19:02
1,2-Dichloroethane	< 15	15	ug/L	EPA 8260B	12/23/10 19:02
1,2-Dibromoethane	< 15	15	ug/L	EPA 8260B	12/23/10 19:02
1,2-Dichloroethane-d4 (Surr)	96.2		% Recovery	EPA 8260B	12/23/10 19:02
Toluene - d8 (Surr)	96.9		% Recovery	EPA 8260B	12/23/10 19:02
TPH as Diesel (Silica Gel)	< 4000	4000	ug/L	M EPA 8015	12/28/10 05:16
(Note: MRL increased due to interference from Gasoline-range hydrocarbons.)					
Octacosane (Silica Gel Surr)	99.3		% Recovery	M EPA 8015	12/28/10 05:16

Project Name : **Lim**

Project Number : **2808**

Sample : **MW-5**

Matrix : Water

Lab Number : 75864-03

Sample Date :12/20/2010

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 23:02
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 23:02
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 23:02
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 23:02
<b>Methyl-t-butyl ether (MTBE)</b>	<b>0.61</b>	0.50	ug/L	EPA 8260B	12/22/10 23:02
<b>Diisopropyl ether (DIPE)</b>	<b>0.67</b>	0.50	ug/L	EPA 8260B	12/22/10 23:02
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 23:02
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 23:02
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/22/10 23:02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/22/10 23:02
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 23:02
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 23:02
1,2-Dichloroethane-d4 (Surr)	95.0		% Recovery	EPA 8260B	12/22/10 23:02
Toluene - d8 (Surr)	96.0		% Recovery	EPA 8260B	12/22/10 23:02
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/28/10 10:23
Octacosane (Silica Gel Surr)	98.3		% Recovery	M EPA 8015	12/28/10 10:23

Project Name : **Lim**

Project Number : **2808**

Sample : **MW-6**

Matrix : Water

Lab Number : 75864-04

Sample Date :12/20/2010

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 23:34
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 23:34
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 23:34
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 23:34
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 23:34
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 23:34
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 23:34
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 23:34
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/22/10 23:34
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/22/10 23:34
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 23:34
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	12/22/10 23:34
1,2-Dichloroethane-d4 (Surr)	95.3		% Recovery	EPA 8260B	12/22/10 23:34
Toluene - d8 (Surr)	98.1		% Recovery	EPA 8260B	12/22/10 23:34
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/28/10 10:52
Octacosane (Silica Gel Surr)	94.4		% Recovery	M EPA 8015	12/28/10 10:52



Project Name : **Lim**

Project Number : **2808**

Sample : **MW-7**

Matrix : Water

Lab Number : 75864-05

Sample Date :12/20/2010

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
<b>Benzene</b>	<b>230</b>	5.0	ug/L	EPA 8260B	12/23/10 19:38
<b>Toluene</b>	<b>820</b>	5.0	ug/L	EPA 8260B	12/23/10 19:38
<b>Ethylbenzene</b>	<b>1500</b>	5.0	ug/L	EPA 8260B	12/23/10 19:38
<b>Total Xylenes</b>	<b>4900</b>	5.0	ug/L	EPA 8260B	12/23/10 19:38
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	12/23/10 19:38
Diisopropyl ether (DIPE)	< 5.0	5.0	ug/L	EPA 8260B	12/23/10 19:38
Ethyl-t-butyl ether (ETBE)	< 5.0	5.0	ug/L	EPA 8260B	12/23/10 19:38
Tert-amyl methyl ether (TAME)	< 5.0	5.0	ug/L	EPA 8260B	12/23/10 19:38
Tert-Butanol	< 25	25	ug/L	EPA 8260B	12/23/10 19:38
<b>TPH as Gasoline</b>	<b>23000</b>	500	ug/L	EPA 8260B	12/23/10 19:38
1,2-Dichloroethane	< 5.0	5.0	ug/L	EPA 8260B	12/23/10 19:38
1,2-Dibromoethane	< 5.0	5.0	ug/L	EPA 8260B	12/23/10 19:38
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	12/23/10 19:38
Toluene - d8 (Surr)	97.9		% Recovery	EPA 8260B	12/23/10 19:38
TPH as Diesel (Silica Gel)	< 1000	1000	ug/L	M EPA 8015	12/28/10 11:21
(Note: MRL increased due to interference from Gasoline-range hydrocarbons.)					
Octacosane (Silica Gel Surr)	97.8		% Recovery	M EPA 8015	12/28/10 11:21

Project Name : **Lim**

Project Number : **2808**

Sample : **MW-8**

Matrix : Water

Lab Number : 75864-06

Sample Date :12/20/2010

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/23/10 00:07
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/23/10 00:07
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/23/10 00:07
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/23/10 00:07
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/10 00:07
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/10 00:07
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/10 00:07
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/23/10 00:07
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/23/10 00:07
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/23/10 00:07
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	12/23/10 00:07
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	12/23/10 00:07
1,2-Dichloroethane-d4 (Surr)	98.0		% Recovery	EPA 8260B	12/23/10 00:07
Toluene - d8 (Surr)	95.7		% Recovery	EPA 8260B	12/23/10 00:07
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/28/10 11:50
Octacosane (Silica Gel Surr)	96.8		% Recovery	M EPA 8015	12/28/10 11:50

## QC Report : Method Blank Data

Project Name : Lim

Project Number : 2808

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/27/2010
Octacosane (Silica Gel Surr)	92.0		%	M EPA 8015	12/27/2010
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/23/2010
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/23/2010
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/23/2010
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/23/2010
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/2010
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/2010
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/2010
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/23/2010
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/23/2010
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/23/2010
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	12/23/2010
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	12/23/2010
1,2-Dichloroethane-d4 (Surr)	102		%	EPA 8260B	12/23/2010
Toluene - d8 (Surr)	97.3		%	EPA 8260B	12/23/2010
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/27/2010
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/22/2010
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/22/2010
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/22/2010
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/22/2010
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/22/2010
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/22/2010
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/22/2010
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/22/2010
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/22/2010
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/22/2010
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	12/22/2010
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	12/22/2010
1,2-Dichloroethane-d4 (Surr)	99.4		%	EPA 8260B	12/22/2010

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Toluene - d8 (Surr)	96.3		%	EPA 8260B	12/22/2010

## Report : Matrix Spike/ Matrix Spike Duplicate

Name : Lim

Number : 2808

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
(Si Gel)	BLANK	<50	1000	1000	864	877	ug/L	M EPA 8015	12/27/10	86.4	87.7	1.42	70-130	25
Bromoethane	75826-05	<0.50	40.0	40.0	39.4	40.0	ug/L	EPA 8260B	12/23/10	98.6	100	1.41	80-120	25
Chloroethane	75826-05	<0.50	40.0	40.0	39.0	38.7	ug/L	EPA 8260B	12/23/10	97.6	96.8	0.789	75.7-122	25
Ethane	75826-05	<0.50	40.0	40.0	38.8	38.3	ug/L	EPA 8260B	12/23/10	96.9	95.8	1.14	80-120	25
Propyl ether	75826-05	<0.50	40.0	40.0	40.2	39.8	ug/L	EPA 8260B	12/23/10	100	99.6	1.00	80-120	25
tert-butyl ether	75826-05	<0.50	40.0	40.0	40.2	40.4	ug/L	EPA 8260B	12/23/10	100	101	0.529	76.5-120	25
Benzene	75826-05	<0.50	40.0	40.0	41.5	41.0	ug/L	EPA 8260B	12/23/10	104	102	1.14	80-120	25
n-butyl ether	75826-05	20	39.9	39.9	58.0	58.4	ug/L	EPA 8260B	12/23/10	96.4	97.4	1.00	69.7-121	25
Xylene	75826-05	<0.50	40.0	40.0	40.3	40.0	ug/L	EPA 8260B	12/23/10	101	99.9	0.780	76.8-120	25

## Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : Lim

Project Number : 2808

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
tert-Butanol	75826-05	<5.0	200	200	200	204	ug/L	EPA 8260B	12/23/10	100	102	2.04	80-120	25
tert-amyl-methyl ether	75826-05	<0.50	40.0	40.0	39.1	38.9	ug/L	EPA 8260B	12/23/10	97.7	97.3	0.465	78.9-120	25
luene	75826-05	<0.50	40.0	40.0	38.1	37.6	ug/L	EPA 8260B	12/23/10	95.2	94.0	1.23	80-120	25
nzene	75865-01	<0.50	40.0	39.8	40.1	39.8	ug/L	EPA 8260B	12/27/10	100	100	0.136	80-120	25
1,1-Dibromoethane	75860-06	<0.50	40.0	40.0	42.3	38.7	ug/L	EPA 8260B	12/22/10	106	96.8	8.85	80-120	25
1,1-Dichloroethane	75860-06	<0.50	40.0	40.0	40.9	37.3	ug/L	EPA 8260B	12/22/10	102	93.2	9.19	75.7-122	25
nzene	75860-06	<0.50	40.0	40.0	41.9	38.7	ug/L	EPA 8260B	12/22/10	105	96.7	8.06	80-120	25
isopropyl ether	75860-06	<0.50	40.0	40.0	42.8	39.3	ug/L	EPA 8260B	12/22/10	107	98.2	8.67	80-120	25
nyl-tert-butyl ether	75860-06	<0.50	40.0	40.0	43.6	38.9	ug/L	EPA 8260B	12/22/10	109	97.2	11.5	76.5-120	25

## QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **Lim**Project Number : **2808**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Ethylbenzene	75860-06	<0.50	40.0	40.0	42.8	39.4	ug/L	EPA 8260B	12/22/10	107	98.4	8.38	80-120	25
Methyl-t-butyl ether	75860-06	47	39.9	39.9	88.4	83.8	ug/L	EPA 8260B	12/22/10	103	91.5	11.7	69.7-121	25
P + M Xylene	75860-06	<0.50	40.0	40.0	43.7	39.7	ug/L	EPA 8260B	12/22/10	109	99.2	9.74	76.8-120	25
Tert-Butanol	75860-06	<5.0	200	200	214	201	ug/L	EPA 8260B	12/22/10	107	100	6.58	80-120	25
Tert-amyl-methyl ether	75860-06	0.83	40.0	40.0	44.3	39.0	ug/L	EPA 8260B	12/22/10	108	95.3	12.9	78.9-120	25
Toluene	75860-06	<0.50	40.0	40.0	41.7	37.8	ug/L	EPA 8260B	12/22/10	104	94.4	9.98	80-120	25

## QC Report : Laboratory Control Sample (LCS)

Project Name : **Lim**Project Number : **2808**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
1,2-Dibromoethane	40.0	ug/L	EPA 8260B	12/23/10	101	80-120
1,2-Dichloroethane	40.0	ug/L	EPA 8260B	12/23/10	99.6	75.7-122
Benzene	40.0	ug/L	EPA 8260B	12/23/10	96.8	80-120
Diisopropyl ether	40.0	ug/L	EPA 8260B	12/23/10	100	80-120
Ethyl-tert-butyl ether	40.0	ug/L	EPA 8260B	12/23/10	102	76.5-120
Ethylbenzene	40.0	ug/L	EPA 8260B	12/23/10	104	80-120
Methyl-t-butyl ether	39.9	ug/L	EPA 8260B	12/23/10	100	69.7-121
P + M Xylene	40.0	ug/L	EPA 8260B	12/23/10	101	76.8-120
Tert-Butanol	200	ug/L	EPA 8260B	12/23/10	96.4	80-120
Tert-amyl-methyl ether	40.0	ug/L	EPA 8260B	12/23/10	99.6	78.9-120
Toluene	40.0	ug/L	EPA 8260B	12/23/10	94.4	80-120
Benzene	40.0	ug/L	EPA 8260B	12/27/10	99.6	80-120
1,2-Dibromoethane	40.1	ug/L	EPA 8260B	12/22/10	100	80-120
1,2-Dichloroethane	40.1	ug/L	EPA 8260B	12/22/10	94.8	75.7-122
Benzene	40.1	ug/L	EPA 8260B	12/22/10	97.1	80-120
Diisopropyl ether	40.1	ug/L	EPA 8260B	12/22/10	99.7	80-120
Ethyl-tert-butyl ether	40.1	ug/L	EPA 8260B	12/22/10	99.0	76.5-120
Ethylbenzene	40.1	ug/L	EPA 8260B	12/22/10	101	80-120
Methyl-t-butyl ether	40.0	ug/L	EPA 8260B	12/22/10	96.0	69.7-121
P + M Xylene	40.1	ug/L	EPA 8260B	12/22/10	101	76.8-120

## QC Report : Laboratory Control Sample (LCS)

Project Name : **Lim**Project Number : **2808**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
TPH as Gasoline	499	ug/L	EPA 8260B	12/22/10	82.5	70.0-130
Tert-Butanol	200	ug/L	EPA 8260B	12/22/10	100	80-120
Tert-amyl-methyl ether	40.1	ug/L	EPA 8260B	12/22/10	102	78.9-120
Toluene	40.1	ug/L	EPA 8260B	12/22/10	96.6	80-120



Aqua Science Engineers, Inc.  
 55 Oak Court, Suite 220  
 Danville, CA 94526  
 (925) 820-9391  
 FAX (925) 837-4853

# Chain of Custody

75864

PAGE 1 of 1

SAMPLER (SIGNATURE) Paul C. Kelly PROJECT NAME lum JOB NO. 2808  
 ADDRESS 250 8th Street, Oakland, CA

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:

SAMPLE ID.	DATE	TIME	MATRIX	QUANTITY	TPH-GAS / MTBE & BTEX (EPA 5030/8015-8020)	TPH-DIESEL (EPA 8010/8015) <u>w/ Silica Gel Cleanup</u>	TPH-DIESEL & MOTOR OIL (EPA 3510/8015)	CAM 17 METALS (EPA 8010+7000)	SEMI-VOLATILE ORGANICS (EPA 625/8270)	Pb (TOTAL or DISSOLVED) (EPA 8010)	PESTICIDES (EPA 8081)	FUEL OXYGENATES (EPA 8260)	PURGEABLE HALOGENATED (EPA 801/8010)	TPH-G/BTEX/5 OXYGENATES (EPA METHOD 8260) <u>SCAV</u>	MULTIRANGE HYDROCARBONS WITH SILICA GEL CLEANUP (EPA 8015)	VOLATILE ORGANICS (EPA 824/8240/8260)	LIFT METALS (5) (EPA 6010+7000)	COMPOSITE 4:1	EDF		
																					MW-1
MW-2		1220				X								X					X		02
MW-5		1240				X								X					X		03
MW-6		1150				X								X					X		04
MW-7		1205				X								X					X		05
MW-8		1135				X								X					X		06

RELINQUISHED BY: <u>Paul E. Kelly</u> 1600 (signature) (time) 12-22-10	RECEIVED BY: <u>[Signature]</u> (signature) (time)	RELINQUISHED BY: <u>[Signature]</u> (signature) (time)	RECEIVED BY LABORATORY: <u>[Signature]</u> 1600 (signature) (time)	COMMENTS:
Robert E. Kelly (printed name) (date)	(printed name) (date)	(printed name) (date)	Timothy Bomer 122210 (printed name) (date)	
Company-ASE, INC.	Company-	Company-	Company-Kiff Analytical LLC	TURN AROUND TIME STANDARD 24Hr 48Hr 72Hr OTHER:

**SAMPLE RECEIPT CHECKLIST**

SRG#: 75864 Date: 122210

Project ID: Lim

Method of Receipt:  Courier  Over-the-counter  Shipper

**COC Inspection**

- Is COC present?  Yes  No
- Custody seals on shipping container?  Intact  Broken  Not present  N/A
- Is COC Signed by Relinquisher?  Yes  No Dated?  Yes  No
- Is sampler name legibly indicated on COC?  Yes  No
- Is analysis or hold requested for all samples  Yes  No
- Is the turnaround time indicated on COC?  Yes  No
- Is COC free of whiteout and uninitialed cross-outs?  Yes  No, Whiteout  No, Cross-outs

**Sample Inspection**

- Coolant Present:  Yes  No (includes water)
- Temperature °C 0.0 Therm. ID# IR-5 Initial TJB Date/Time 122210/1810  N/A
- Are there custody seals on sample containers?  Intact  Broken  Not present
- Do containers match COC?  Yes  No  No, COC lists absent sample(s)  No, Extra sample(s) present
- Are there samples matrices other than soil, water, air or carbon?  Yes  No
- Are any sample containers broken, leaking or damaged?  Yes  No
- Are preservatives indicated?  Yes, on sample containers  Yes, on COC  Not indicated  N/A
- Are preservatives correct for analyses requested?  Yes  No  N/A
- Are samples within holding time for analyses requested?  Yes  No
- Are the correct sample containers used for the analyses requested?  Yes  No
- Is there sufficient sample to perform testing?  Yes  No
- Does any sample contain product, have strong odor or are otherwise suspected to be hot?  Yes  No

**Receipt Details**

Matrix WA Container type VOA # of containers received 30  
 Matrix \_\_\_\_\_ Container type \_\_\_\_\_ # of containers received \_\_\_\_\_  
 Matrix \_\_\_\_\_ Container type \_\_\_\_\_ # of containers received \_\_\_\_\_  
 Date and Time Sample Put into Temp Storage Date: 122210 Time: 1819

**Quicklog**

- Are the Sample ID's indicated:  On COC  On sample container(s)  On Both  Not indicated
- If Sample ID's are listed on both COC and containers, do they all match?  Yes  No  N/A
- Is the Project ID indicated:  On COC  On sample container(s)  On Both  Not indicated
- If project ID is listed on both COC and containers, do they all match?  Yes  No  N/A
- Are the sample collection dates indicated:  On COC  On sample container(s)  On Both  Not indicated
- If collection dates are listed on both COC and containers, do they all match?  Yes  No  N/A
- Are the sample collection times indicated:  On COC  On sample container(s)  On Both  Not indicated
- If collection times are listed on both COC and containers, do they all match?  Yes  No  N/A

COMMENTS: -02 (VOA 5 of 5) contains only preservative  
LJR122210-1856