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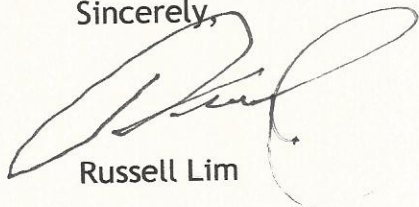
Alameda County Health Care Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

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

February 11, 2013

Mr. Jerry Wickham
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

SUBJECT: OZONE-SPARGING AND VAPOR EXTRACTION REMEDIATION
SYSTEMS SEMI-ANNUAL OPERATION REPORT
AND GROUNDWATER MONITORING REPORT
Lim Property, RO #0000479
250 8th Street
Oakland, California

Dear Mr. Wickham:

On behalf of our clients, Alice Ng and May Lee Lim, Aqua Science Engineers, Inc. (ASE) is pleased to submit this report detailing the semi-annual operation of the ozone-sparging and vapor-extraction remediation equipment at the subject site. This report also includes current groundwater monitoring well analytical results.

Should you require any additional information, please feel free to call me at (925) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.

A handwritten signature in black ink that reads "David Allen". The signature is written in a cursive, flowing style.

David Allen
Vice President



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February 11, 2013

REMEDIATION SYSTEMS SEMI-ANNUAL OPERATION REPORT
AND GROUNDWATER MONITORING RESULTS

LIM PROPERTY
250 8TH STREET
OAKLAND, CALIFORNIA
(ASE JOB NO. 2808)
(RO #0000479)
(USTCF Claim Number 7699)

for

Alice Ng Lim & May Lee Lim
c/o Mr. Russell Lim
3111 Diablo View Road
Lafayette, CA 94549

Submitted by:

Aqua Science Engineers
55 Oak Court, Suite 220
Danville, CA 94526
(925) 820-9391



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1.0 INTRODUCTION

This report details Aqua Science Engineers, Inc. (ASE) operation of the ozone-sparging and vapor-extraction remediation systems at the Lim property located at 250 8th Street in Oakland, California since June 2012 (Figure 1). This report also provides current groundwater concentrations in the site's on and off-site groundwater monitoring wells.

2.0 WEEKLY OPERATION AND MAINTENANCE ACTIVITIES

ASE personnel visited the site on a regular basis to maintain the remediation equipment and to comply with Bay Area Air Quality Management District (BAAQMD) permit requirements. During most visits, ASE personnel completes the following:

- Record the flowrate and vacuum influence of the vapor-extraction system,
- Measure and record the influent vapor concentration of each individual vapor-extraction well with ASE's photoionization detector (PID),
- Measure with ASE's PID and record the influent vapor concentration on the positive side of the remediation system blower which provides the total hydrocarbon concentration entering the remediation system. This concentration is less than the sum of the individual vapor-extraction wells due to fresh air that enters the system as a safety mechanism by the equipment supply company, Mako Industries (Mako), and by ASE personnel for the granulated activated carbon canisters (GAC's) that were installed in November 2012
- Measure with ASE's PID and record hydrocarbon concentrations in the on and off-site utility boxes and the vapor-monitoring points to ensure that hydrocarbon vapors are not being forced to the atmosphere due to the sparging activities,
- Record alarms and information on the sparging remediation equipment,
- Inspect site security fencing.

3.0 REMEDIATION SYSTEMS OPERATION

3.1 Ozone-Sparging Remediation System Operation

Between June 2012 and mid-November 2012, the ozone-sparging remediation equipment has operated 99% of the time in "air-only" mode with a constant high flow air stream into each of the ten sparging wells that are located on and off-site (Figure 2). Ozone was not turned on due to the operation of the Mako vapor-extraction system which is using a catalytic oxidizer as its abatement device. Ozone, if injected and sucked out of the ground by the vapor-extraction equipment, could damage the catalytic oxidizer. However, in October 2012, ASE removed the Mako catalytic oxidizer from the site due to the low hydrocarbon concentrations in the influent vapor stream. ASE replaced the catalytic oxidizer in late October 2012 with an ASE owned blower package and knock-out drum plumbed to two 200 pound GAC canisters plumbed in series, supplied to ASE by Baker Corporation. The ozone-sparging unit was operated for the wells on-site only in low-flow air only while the vapor-extraction equipment was being swapped out. Once the ASE vapor-extraction system was fully operational in mid-November, the ozone-sparging system was put back into full operation with ozone now being injected into the



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subsurface groundwater. Each ozone-sparging well has operated in low-flow ozone-injection mode since mid-November 2012 (see log).

Downtime for the ozone-sparging system only occurred, as stated above for certain wells when swapping out the vapor-extraction equipment, and for maintenance purposes and an occasional power failure at the site.

3.2 Vapor-Extraction Remediation System Operation

Between June 2012 and October 3, 2012, the vapor-extraction system, supplied by Mako, operated continuously. All existing vapor-extraction wells (VE-1 through VE-9) and monitoring wells that were fitted with vapor-extraction plumbing (MW-3 and MW-4R) have been operating in 100% open mode since mid April 2011. The only exceptions to this are VE-2 was closed on April 25, 2012, and VE-4 was closed on March 6, 2012 due to continued low PID concentrations. ASE closed these vapor-extraction wells to allow for greater vacuum influence on the more polluted vapor-extraction wells.

As shown on the attached Vapor-Extraction System Log, the influent vapor concentrations, when measured using ASE's PID, have been on a stable to declining low-concentration trend. Note that the total influent concentration measured just prior to the catalytic oxidizer is less than the sum of the individual vapor-extraction wells. This is due to fresh air that enters the system as a safety mechanism by Mako.

On October 3, 2012, the Mako catalytic oxidizer vapor-extraction system was removed from the site due to very low concentrations of hydrocarbons in the influent vapor measured with the PID. The Mako system was replaced by an ASE designed and constructed fixed vapor-extraction system that consists of a 100 cfm Rotron blower piped to a moisture knock-out drum. The negative-pressure side of the ASE vapor-extraction system is plumbed to the manifold of vapor-extraction wells. The positive-pressure side of the ASE vapor-extraction system is plumbed to two 200 pound GAC canisters filled with virgin vapor-phase GAC supplied to ASE by Baker Corporation. These GAC canisters are plumbed in series, and are approved for used by Bay Area Air Quality Management District (BAAQMD) Permit To Operate - Plant Number 18100. The ASE vapor-extraction system, plumbed to two 200 pound GAC canisters (ASE VE System) became fully operational on November 12, 2012. The down-time of the system between early October and mid-November was due to the timing of the ASE VE System construction and delivery, power hookup, GAC delivery and piping, testing, and a failed fuse on the blower. Once the ASE VE System was fully operational, all of the VE wells were opened to 25% open, with wells MW-3 and MW-4 opened to 100%. This was done to allow for air movement across the entire zone of ozone-sparging, while concentrating the most vapor-extraction vacuum on the VE wells with the highest PID readings (see log). Note that the total influent concentration measured just prior to the GAC canisters is far less than the sum of the individual vapor-extraction wells. This is due to fresh air that enters the system as a safety mechanism by ASE. The BAAQMD permit requires ASE to measure the influent and effluent on a daily basis to determine when breakthrough of hydrocarbons occurs on the first and second GAC canisters.



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The ASE VE System was turned off on weekends and during the Thanksgiving, Christmas and New Years holidays to comply with the BAAQMD requirement. ASE has requested a reduced sampling frequency from the BAAQMD that will allow for no greater than weekly sampling, which will allow the ASE VE System to operate without shut-down on the weekends.

3.21 *Periodic Influent Vapor Sampling*

Since June 2012, ASE has collected two influent vapor samples to determine petroleum-hydrocarbon concentrations in the extracted subsurface air.

- The first sample, collected on January 22, 2013, is an influent vapor sample collected from a sample port on the negative side of the blower, and consisted of soil vapors being extracted from only vapor-extraction well MW-3. This sample (sample Id. INF-VE-1.22.13) was collected to determine the worst-case scenario of vapors beneath the subject site. All other VE wells were 0% open for a brief time while the sample was being collected. Also, this sample was taken at the wellhead, and prior to the dilution air valve that brings fresh-air into the ASE VE System. Once this sample was collected, the remaining VE wells were opened back to their pre-sample position.
- The second sample, collected on January 29, 2013, is an influent vapor sample collected from a sample port on the negative side of the blower (on the VE subsurface piping manifold and before the fresh-air dilution point) and consisted of soil vapors being extracted from all the vapor-extraction wells on-site and off-site (VE-1 through VE-9) and monitoring wells MW-3 and MW-4R. This sample (sample Id. LIM-1.29.13) was used to calculate the pounds of hydrocarbons removed from the site.

The samples were collected in new 1-liter Tedlar bags, labeled individually, and submitted to McCampbell Analytical of Pittsburg, California under chain of custody procedures. These samples were analyzed by McCampbell for total petroleum hydrocarbons as gasoline (TPH-G) by EPA Method 8015, and MTBE, benzene, toluene, ethylbenzene, and xylenes (collectively known as MBTEX) by EPA Method 8021. The analytical results are summarized below, and copies of the certified analytical reports from McCampbell are attached in Appendix A.

- The 1/22/13 influent vapor sample contained 24,000 ug/L TPH-G, 230 ug/L benzene, 690 ug/L toluene, 110 ug/L ethylbenzene, 660 ug/L xylenes, and < 80 ug/L MTBE.
- The 1/29/13 influent vapor sample contained 190 ug/L TPH-G, 0.45 ug/L benzene, 2.8 ug/L toluene, 1.3 ug/L ethylbenzene, 13 ug/L xylenes, and < 2.5 ug/L MTBE.

Based on both influent air sample results, there still exists a moderate level of petroleum hydrocarbon vapors beneath the subsurface, likely the result of the pollution within the range of well MW-3 and across 8th Street in the vicinity of monitoring wells MW-2, MW-4R and MW-7. ASE plans to continue operation of the ASE VE System to (a) reduce the elevated concentration of hydrocarbons identified in well MW-3, (b) continue to alleviate the potential for build-up of vapors due to sparging beneath the off-site properties, and (c) to stimulate air-flow through the



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polluted zone for assistance in bio-remediation.

3.22 Estimated TPH-G Extracted from Vadose Zone

Using an average of the analytical results of the influent vapor samples collected on June 20, 2012 and January 29, 2013, ASE has calculated the volume of gasoline, in gallons, extracted from the subsurface both on and off-site. As shown on the attached Gasoline Extraction Log, and associated Mass Extraction Calculations, ASE estimates that 10.15 gallons of gasoline, in vapor phase, have been removed from the subsurface vadose zone. These calculations used a typical operating flowrate of 50 cfm, and used actual days of operation of the system. An average of the two sample concentrations was calculated and used as the daily concentration for calculating the total hydrocarbons removed for the period. Again, this extraction number represents an influent vapor stream that is diluted by VE wells that have extremely low concentrations of hydrocarbons. These wells are in 25% open mode to allow for air movement across the vadose zone where sparging is occurring. For months of operation up to and including June 2012, where actual air bag samples were not collected, ASE estimated the gallons extracted per day by using the actual air bag analytical results of the samples collected prior to and after the months without data, and finding the average between these months. See Appendix B for a copy of the Gasoline Extraction Log.

4.0 REMEDIATION SYSTEMS AND SITE MONITORING

4.1 Remediation Equipment Operating Parameters

ASE visits the site on a regular basis to confirm that the remediation equipment, both sparging and vapor-extraction, are working as designed. As the attached Vapor-Extraction Equipment Log shows, ASE logged/measured the system's operating flow in cfm, the overall influent vapor concentration (using a PID), and the individual well influent vapor concentrations. As the attached Sparging Well Log shows, ASE logged the operating parameters of each sparging well, showing the duration and injection media (low or high-flow air). See Appendix B for copies of the Sparging Well Log and Vapor-Extraction System Log.

4.2 Hydrocarbon Vapor Readings from Utility and Well Boxes Using PID

ASE measured for hydrocarbon vapors in the VMP's, remediation well boxes, and sidewalk utility boxes across 8th Street using a PID multiple times per month in an effort to determine if stripped hydrocarbons were being forced to the atmosphere by operation of the sparging wells. As shown on the attached Hydrocarbon Vapor Measurement Log, PID readings have always been "0" since the start-up of the vapor-extraction remediation system. ASE also measured for hydrocarbons in the utility boxes in the sidewalk in front of the subject site and within the well boxes and underground piping manifold box on site. Again, at no time were any PID readings above "0" observed in any sampling point. See Appendix B for a copy of the Hydrocarbon Vapor Measurement Log.



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5.0 GROUNDWATER MONITORING WELL SAMPLE COLLECTION

5.1 Water levels, Free-Product Thickness, and Flow Direction

On December 13, 2012, ASE measured the depth to water in monitoring wells MW-1 and MW-2 and MW-5 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. Free-floating hydrocarbon measurements were taken on vapor-extraction wells MW-3 and MW-4R using an interface probe due to the occasional historic presence of free-floating hydrocarbons. No free-floating hydrocarbons were present in any of the wells this sampling period; a sheen was identified during the purging of monitoring well MW-7. Groundwater elevation data is presented in Table One.

A groundwater elevation (potentiometric surface) contour map is shown as Figure 3. The groundwater flow direction at the site is generally to the south with an approximate gradient between 0.005 and 0.011 feet/foot during this sampling period. The gradient and flow direction are generally consistent with previous findings.

5.2 Groundwater Sample Collection

On December 13, 2012, ASE collected groundwater samples from all monitoring wells for analysis. 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 C for copies of the well sampling field logs.

5.3 Analytical Results for Groundwater Samples

All groundwater samples were analyzed by KIFF for 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 D. The groundwater analytical results are summarized below:

- Groundwater samples collected from monitoring well MW-1 contained 180 parts per billion (ppb) TPH-G, 90 ppb TPH-D, and 2.6 ppb benzene. These concentrations represent a decrease of approximately one order of magnitude since the previous sampling event. The



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current detectable concentrations are likely due to the sparging at the site and represents a slight shift in the water table from mounding.

- Groundwater samples collected from monitoring well MW-2 contained 2,400 ppb TPH-G, 66 ppb total petroleum hydrocarbons as diesel (TPH-D), 890 ppb benzene, 4.1 ppb toluene, 9.6 ppb ethylbenzene, 16 ppb xylenes, 5.4 ppb DIPE, 17 ppb TBA and 1.4 EDC. Hydrocarbon concentrations in groundwater samples collected from monitoring well MW-2 are relatively similar to the previous sampling and continue to represent a significant decrease of up to several orders of magnitude from pre-remediation conditions. The TPH-G, benzene, and ethyl benzene concentrations increased from the previous sampling. However, the TPH-D, toluene, and total xylene concentrations decreased, and are at historic lows.
- Groundwater samples collected from monitoring well MW-3 did not contain a measurable thickness of free-floating hydrocarbons, nor was free-phase hydrocarbons visible when a bailer was retrieved from the well. The samples collected from MW-3 contained 99,000 ppb TPH-G, 5,800 ppb benzene, 5,800 ppb toluene, 2,100 ppb ethylbenzene, 11,000 ppb xylenes, and 60 ppb TBA. Although these concentrations are still very high, the current benzene and toluene concentrations represent historic lows.
- Groundwater samples collected from monitoring well MW-4R contained 3,700 ppb TPH-G, 97 ppb benzene, 76 ppb toluene, 50 ppb ethylbenzene, 590 ppb xylenes, 1.0 ppb DIPE, 41 ppb TBA, and 2.5 ppb EDC. These concentrations are similar to the previous sampling event and continue to represent a significant decrease of up to several orders of magnitude from pre-remediation conditions. The TPH-G concentration decreased to a historic low; however, the BTEX concentrations increased slightly from the previous sampling event.
- Groundwater samples collected from monitoring well MW-5 contained 79 ppb TPH-G, 2.7 ppb benzene, 0.86 ppb ethylbenzene, and 0.74 ppb xylenes. These concentrations represent an increase from the non-detectable concentrations during the previous sampling event. These concentrations may be due to a slight mounding of the water table related to the ozone-sparging.
- No hydrocarbons or oxygenates were detected in groundwater samples collected from monitoring well MW-6.
- Groundwater samples collected from monitoring well MW-7 contained 16,000 ppb TPH-G, 610 ppb TPH-D, 78 ppb benzene, 80 ppb toluene, 1,000 ppb ethylbenzene, and 940 ppb xylenes. These concentrations increased very slightly from the previous sampling event, while the benzene, ethylbenzene, and TBA concentrations decreased. The benzene concentration is now at a historic low. In general, there has been a decreasing trend in hydrocarbon concentrations in this well, especially since the start of the current remediation activities.
- Groundwater samples collected from monitoring well MW-8 contained 56 ppb TPH-D. These results continue to indicate that no significant hydrocarbon concentrations exist in the deeper water-bearing zones.



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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, ethylbenzene, and xylenes in groundwater samples collected from monitoring wells MW-3, MW-4R, and MW-7.
- Concentrations of TPH-G and/or benzene in groundwater samples collected from monitoring wells MW-1, MW-2, and MW-5.

Current groundwater concentrations are much lower than in previous sampling events; this is obviously do to the ongoing soil vapor and groundwater remediation activities. ASE believes that continuation of the remediation systems will have an even greater affect on decreasing the hydrocarbon concentrations in groundwater over the next 12 to 18 months.

6.0 RECOMMENDATIONS

Based on the findings and the details reported within, ASE recommends the following:

- Continued operation of the remediation systems at the site for a minimum period of 12 months, with some modifications as listed below.
- Collect groundwater samples from monitoring wells MW-1 through MW-8, including wells MW-3 and MW-4R which are now vapor-extraction wells, in June 2013. In July 2013, prepare a semi- annual remediation effectiveness report.



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7.0 SIGNATURES

Should you require any additional information, please feel free to contact us at (925) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.

A handwritten signature in black ink that reads "David Allen".

David Allen
Vice President

A handwritten signature in black ink that reads "Robert E. Kitay".

Robert Kitay, P.G.
Senior Geologist

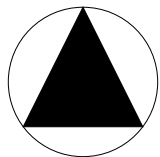
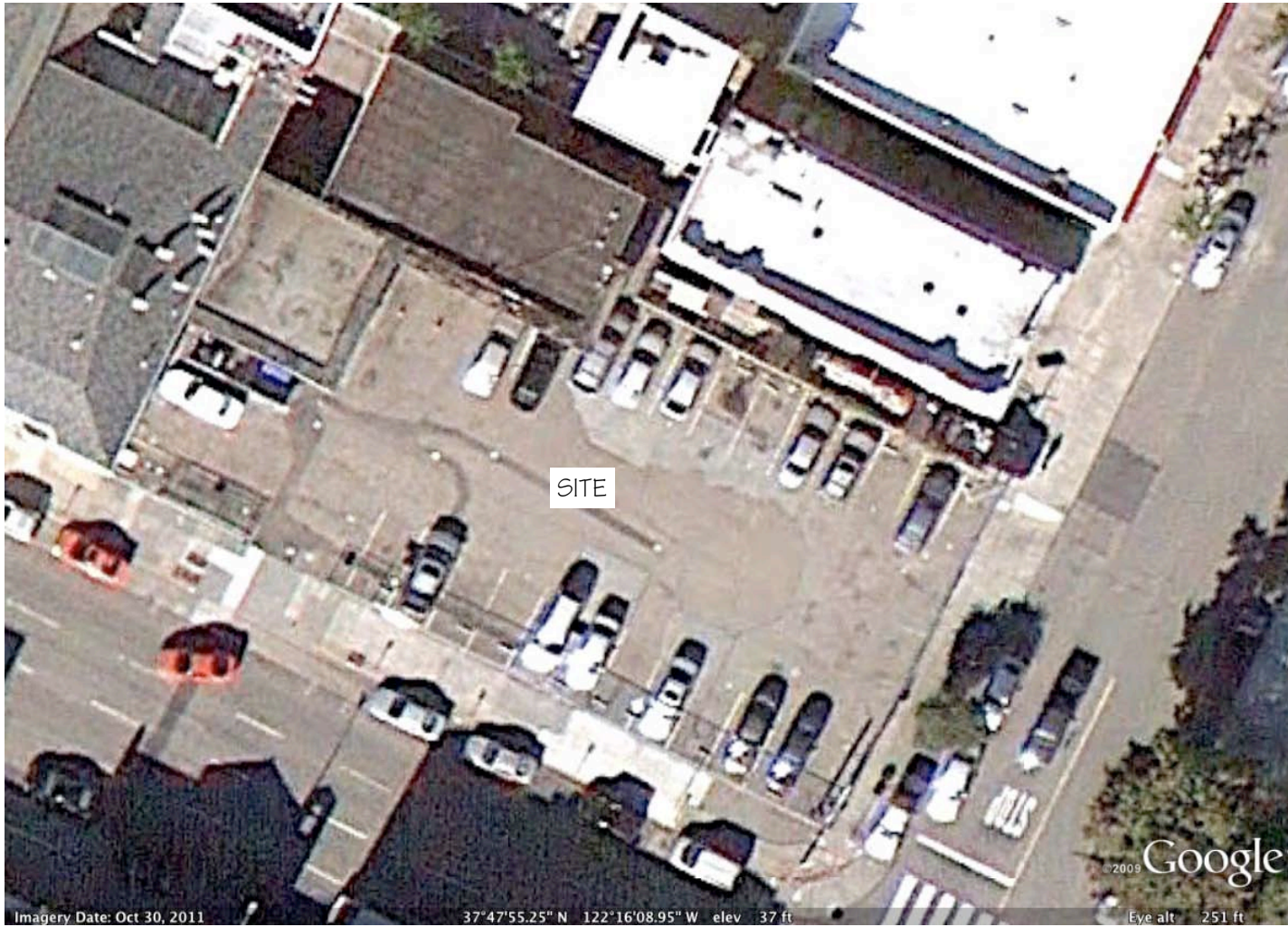


Cc: Mr. Jerry Wickhman, ACHCSA, electronically
Mr. Russ Lim, responsible party representative, electronically
RWQCB Geotracker Database, electronically



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FIGURES



NORTH

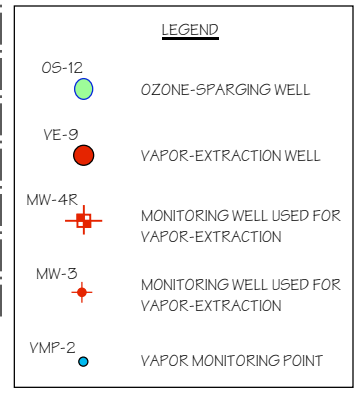
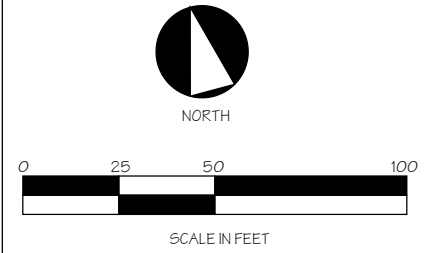
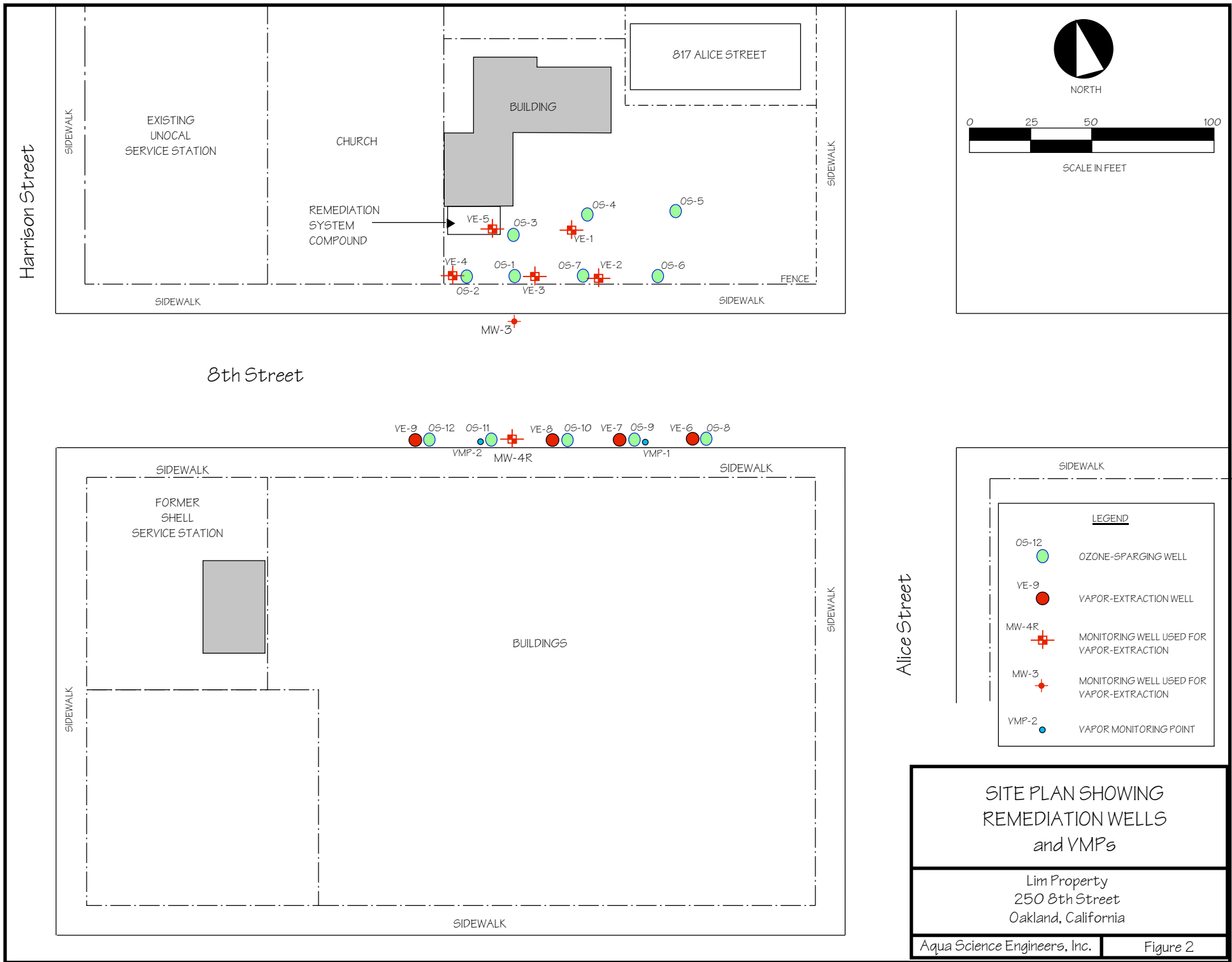
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SITE LOCATION MAP

Lim Family Property
250 8th Street
Oakland, California

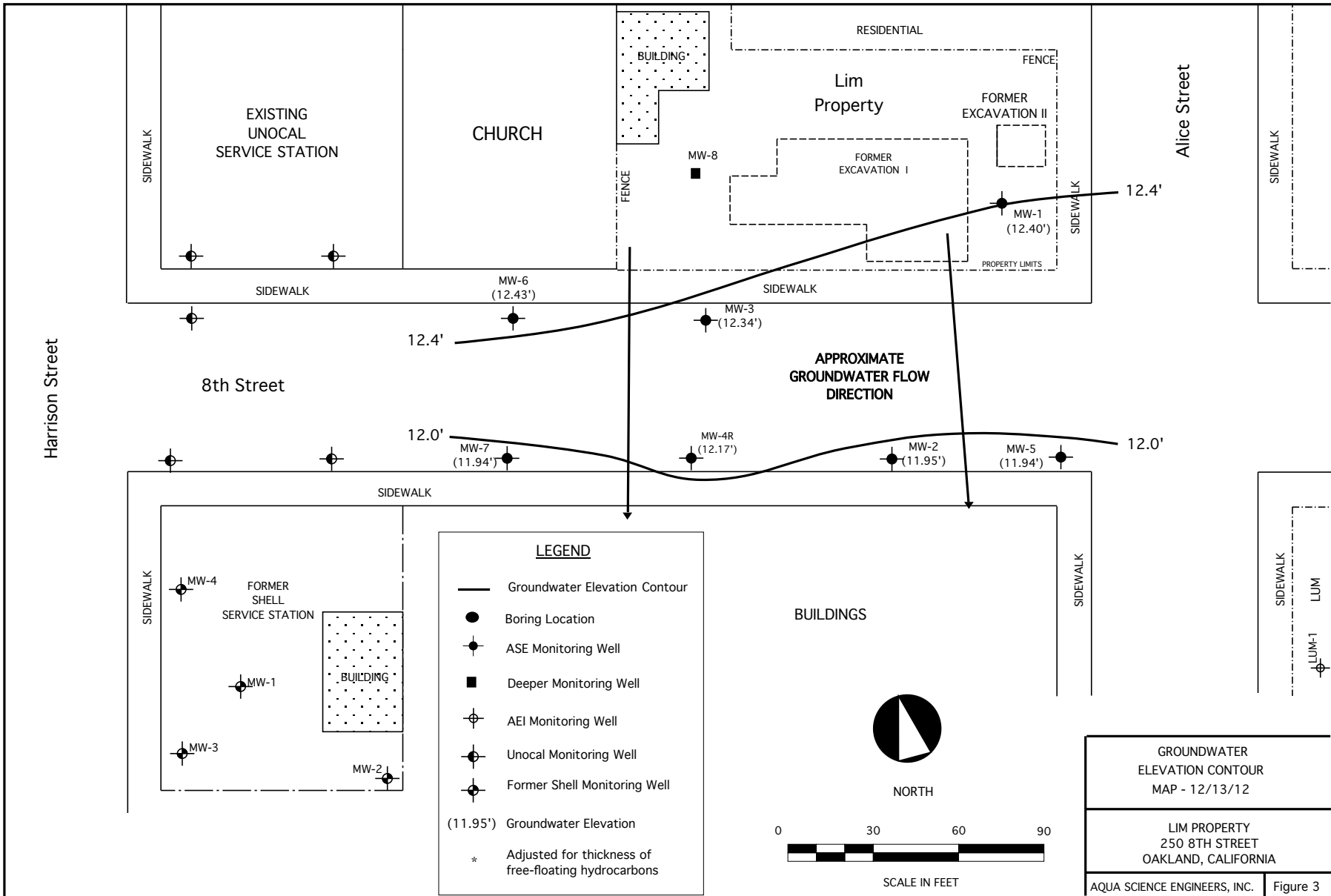
Aqua Science Engineers

Figure 1



SITE PLAN SHOWING
REMEDATION WELLS
and VMPs

Lim Property
250 8th Street
Oakland, California



LEGEND

- Groundwater Elevation Contour
- Boring Location
- ASE Monitoring Well
- Deeper Monitoring Well
- AEI Monitoring Well
- Unocal Monitoring Well
- Former Shell Monitoring Well
- (11.95') Groundwater Elevation
- * Adjusted for thickness of free-floating hydrocarbons

NORTH

SCALE IN FEET

0 30 60 90

GROUNDWATER
ELEVATION CONTOUR
MAP - 12/13/12

LIM PROPERTY
250 8TH STREET
OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC. | Figure 3



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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	
06/30/11			17.43		12.29	
06/22/12			17.08		12.64	
	12/15/12		17.52		12.40	

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	
06/30/11		16.55		11.64	
06/22/12		16.36		11.83	
	12/15/12		16.24		11.95

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-5	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*
	10/25/01		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*	
06/30/11		15.92		12.66	
06/22/12		16.64	0.69	12.48*	
	12/15/12		16.24	None	12.54

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-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*
	06/30/11		16.45		12.33
	06/22/12		16.69		12.09
	12/13/12			18.61	

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-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
	06/30/11		16.75		11.65
	06/22/12		16.41		11.99
	12/15/12		16.46		11.94

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-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
	06/30/11		17.02		12.18
	06/22/12		16.70		12.50
	12/15/12		16.77		12.43

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		
06/30/11		17.36		11.59		
06/22/12		17.03		11.92		
	12/15/12		17.01		11.94	
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	
	06/30/11		21.95		8.19	
	06/22/12		21.23		8.91	
		12/15/12		21.89		8.25

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	DIFE	TBA	Other Oxys	EDC	EDB
MW-1												
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	---	---	---	---	---
09/26/03	110	300	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	<0.5	<0.5
12/18/03	150	340	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	<0.5	<0.5
03/12/04	220	510	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	<0.5	<0.5
06/17/04	250	490	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	<0.5	<0.5
09/17/04	110	--	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
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	<0.5	---	---	---	<0.5	<0.5
04/28/05	250	190	<0.5	<0.5	<0.5	<0.5	<0.5	0.67	<0.5	<0.5	<0.5	<0.5
07/19/05	340	na	<0.5	<0.5	<0.5	<0.5	<0.5	0.76	<5.0	<0.5	<0.5	<0.5
10/03/05	170	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<5.0	<0.5	<0.5	<0.5
12/06/05	140	67	<0.5	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
03/15/06	170	<80	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
06/28/06	230	130	<0.5	<0.5	<0.5	<0.5	<0.5	<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
06/30/11	650	<200	1.9	<0.50	<0.50	<0.50	<0.50	0.78	<5.0	<0.50	<0.50	<0.50
06/22/12	750	<200	23	<0.50	1.1	2.3	<0.50	0.80	12	<0.50	<0.50	<0.50
12/15/12	180	80	2.6	<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	DIFE	TBA	Other Oxys	EDC	EDB
<u>MW-2</u>												
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
06/30/11	65,000	<6,000	7,300	5,900	2,400	10,000	<20	<20	<90	<20	<20	<20
06/22/12	1,200	140	50	56	4.0	160	<0.50	1.6	17	<0.50	1.1	<0.50
12/15/12	2,400	66	890	4.1	8.6	16	<0.50	5.4	17	<0.50	14	<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	DIFE	TBA	Other Oxys	EDC	EDB
MW-3												
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											
06/30/11	140,000	< 40,000	12,000	21,000	4,000	17,000	< 20	< 20	< 90	< 20	< 20	< 20
06/22/12	NOT SAMPLED DUE TO FREE-FLOATING HYDROCARBONS (0.69-feet)											
12/15/12	88,000	<12,000	5,800	5,800	2,100	11,000	<10	<10	60	<10	<10	<10

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	DIFE	TBA	Other Oxys	EDC	EDB
MW-4												
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/ 4,500	13,000/ 20,000	1,800/ 2,800	8,800/ 14,000	<1,300	---	---	---	<250	<250
07/20/00	8,000	3,500	9,200/ 11,000	20,000/ 22,000	2,500/ 3,400	12,000/ 13,000	<1,000	---	---	---	<200	<200
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/ 15,000	21,000/ 21,000	2,500/ 2,800	13,000/ 11,000	<1,000	---	---	---	<250	<250
04/05/01	88,000	7,500*	6,900/ 3,200	18,000/ 9,000	2,500/ 1,300	12,000/ 6,400	<1,000	---	---	---	<50	<50
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	<20	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	<20	20	<20
08/31/06	68,000	<2,000	9,500	9,600	2,500	12,000	<20	<20	<5.0	<20	36	<20
11/21/06	68,000	<1,500	9,000	5,000	2,000	9,300	<20	<20	230	<20	42	<20
02/23/07	90,000	<2,000	11,000	11,000	2,800	12,000	<20	<20	290	<20	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											
MW-4R												
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											
06/30/11	190,000	<30,000	3,800	11,000	2,900	20,000	<25	<25	<150	<25	<25	<25
06/22/12	4,500	<200	31	53	5.0	500	6.3	6.1	180	<0.5	21	<0.5
12/18/12	8,700	<200	87	76	50	580	<0.50	10	41	<0.50	25	<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	DIFE	TBA	Other Oxys	EDC	EDB
MW-5												
06/11/02	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	2.8	---	---	---	< 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	---	---	---	< 0.5	---
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
06/30/11	< 50	< 50	1.6	< 0.50	< 0.50	< 0.50	< 0.50	1.0	< 5.0	< 0.50	< 0.50	< 0.50
06/22/12	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50
12/15/12	79	< 50	2.7	< 0.50	0.86	0.74	< 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	DIFE	TBA	Other Oxys	EDC	EDB
<u>MW-6</u>												
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	---	---	---	< 0.5	---
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
06/30/11	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50
06/22/12	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50
12/18/12	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 5.0	< 0.50	< 0.50	< 0.50



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

APPENDIX A

CERTIFIED ANALYTICAL REPORT
AND CHAIN OF CUSTODY DOCUMENTATION
FOR AIR BAG SAMPLES



Analytical Report

Aqua Science Engineers, Inc. 55 Oak Court Suite 220 Danville, CA 94526	Client Project ID: #2808; LIM	Date Sampled: 01/22/13
		Date Received: 01/22/13
	Client Contact: Dave Allen	Date Reported: 01/24/13
	Client P.O.:	Date Completed: 01/23/13

WorkOrder: 1301496

January 28, 2013

Dear Dave:

Enclosed within are:

- 1) The results of the **1** analyzed sample from your project: **#2808; LIM,**
- 2) QC data for the above sample, and
- 3) A copy of the chain of custody.

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

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
 Laboratory Manager
 McC Campbell Analytical, Inc.

The analytical results relate only to the items tested.

1301496

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

Chain of Custody

PAGE 1 of 1

SAMPLER (SIGNATURE)

[Signature]

PROJECT NAME LIM

JOB NO. 2808

ADDRESS 250 8th ST. OAKLAND

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:

SAMPLE ID.	DATE	TIME	MATRIX	QUANTITY	TPH-GAS / MTBE & BTEX (EPA 5030/8015-8020)	TPH-DIESEL (EPA 3510/8015)	TPH-DIESEL & MOTOR OIL (EPA 3510/8015)	CAM 17 METALS (EPA 6010+7000)	SEMI-VOLATILE ORGANICS (EPA 625/8270)	Pb (TOTAL or DISSOLVED) (EPA 6010)	PESTICIDES (EPA 8081)	FUEL OXYGENATES (EPA 8260)	PURGEABLE HALOCARBONS (EPA 601/8010)	TPH-G/BTEX/5 OXYS (EPA METHOD 8260)	MULTI-RANGE HYDROCARBONS WITH SILICA GEL CLEANUP (EPA 8015)	VOLATILE ORGANICS (EPA 624/8240/8260)	LUFT METALS (5) (EPA 6010+7000)	COMPOSITE 4:1	EDF

RELINQUISHED BY:

[Signature]
(signature)

1500
(time)

RECEIVED BY:

[Signature]
(signature)

1500
(time)

RELINQUISHED BY:

[Signature]
(signature)

1400
(time)

RECEIVED BY LABORATORY:

[Signature]
(signature)

1400
1/22/13
(time)

COMMENTS:

[Printed Name]
(printed name)

1-22-13
(date)

[Printed Name]
(printed name)

1/23/13
(date)

[Printed Name]
(printed name)

1/22/13
(date)

[Printed Name]
(printed name)

1400
1/22/13
(date)

TURN AROUND TIME
STANDARD 24Hr 48Hr 72Hr

Company-ASE, INC.

Company-

Company-

Company- McCampbell

OTHER:



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1301496

ClientCode: ASED

- WaterTrax
 WriteOn
 EDF
 Excel
 EQUIS
 Email
 HardCopy
 ThirdParty
 J-flag

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

Email: dallen@aquascienceengineers.com
 cc:
 PO:
 ProjectNo: #2808; LIM

Bill to:
 Diane Schiell
 Aqua Science Engineers, Inc.
 217 Wild Flower Drive
 Roseville, CA 95678
 deezthng22@yahoo.com

Requested TAT: 5 days

Date Received: 01/22/2013

Date Printed: 01/23/2013

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)													
					1	2	3	4	5	6	7	8	9	10	11	12		
1301496-001	INF-VE-1-22-13	Air	1/22/2013 14:05	<input type="checkbox"/>	A													

Test Legend:

1	G-MBTX_AIR	2		3		4		5	
6		7		8		9		10	
11		12							

The following SampID: 001A contains testgroup.

Prepared by: Rosa Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
 Hazardous samples will be returned to client or disposed of at client expense.



Sample Receipt Checklist

Client Name: **Aqua Science Engineers, Inc.**

Date and Time Received: **1/22/2013 4:42:53 PM**

Project Name: **#2808; LIM**

LogIn Reviewed by: **Rosa Venegas**

WorkOrder N°: **1301496** Matrix: Air

Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sample IDs noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Date and Time of collection noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sampler's name noted on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper containers/bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature	Cooler Temp:		NA <input checked="" type="checkbox"/>
Water - VOA vials have zero headspace / no bubbles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Sample labels checked for correct preservation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Metal - pH acceptable upon receipt (pH<2)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Samples Received on Ice?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	

* NOTE: If the "No" box is checked, see comments below.

 Comments:



McC Campbell Analytical, Inc.
 "When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
 Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
 http://www.mcccampbell.com / E-mail: main@mcccampbell.com

Aqua Science Engineers, Inc. 55 Oak Court Suite 220 Danville, CA 94526	Client Project ID: #2808; LIM	Date Sampled: 01/22/13
		Date Received: 01/22/13
	Client Contact: Dave Allen	Date Extracted: 01/22/13
	Client P.O.:	Date Analyzed: 01/22/13

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Bm

Work Order: 1301496

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	INF-VE-1-22-13	A	6800	ND<30	72	180	25	150	20	---#	d1

ppm (mg/L) to ppmv (uL/L) conversion for TPH(g) assumes the molecular weight of gasoline to be equal to that of hexane.

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	7.0	0.68	0.077	0.065	0.057	0.057	1	uL/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

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

cluttered chromatogram; sample peak coelutes with surrogate peak; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

d1) weakly modified or unmodified gasoline is significant



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Air

QC Matrix: Water

BatchID: 74190

WorkOrder: 1301496

EPA Method: SW8021B/8015Bm		Extraction: SW5030B					Spiked Sample ID: 1301472-001A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) [£]	ND	60	108	116	7.63	111	70 - 130	20	70 - 130	
MTBE	ND	10	87.1	87.5	0.517	87.4	70 - 130	20	70 - 130	
Benzene	ND	10	99.8	105	5.06	108	70 - 130	20	70 - 130	
Toluene	ND	10	100	106	5.92	109	70 - 130	20	70 - 130	
Ethylbenzene	ND	10	99.9	108	7.86	108	70 - 130	20	70 - 130	
Xylenes	ND	30	102	112	9.29	112	70 - 130	20	70 - 130	
%SS:	92	10	93	93	0	97	70 - 130	20	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 74190 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1301496-001A	01/22/13 2:05 PM	01/22/13	01/22/13 6:02 PM				

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



Analytical Report

Aqua Science Engineers, Inc. 55 Oak Court Suite 220 Danville, CA 94526	Client Project ID: #2808; LIM	Date Sampled: 01/29/13
		Date Received: 01/30/13
	Client Contact: Dave Allen	Date Reported: 02/04/13
	Client P.O.:	Date Completed: 02/01/13

WorkOrder: 1301728

February 05, 2013

Dear Dave:

Enclosed within are:

- 1) The results of the **1** analyzed sample from your project: **#2808; LIM**,
- 2) QC data for the above sample, and
- 3) A copy of the chain of custody.

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

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McC Campbell Analytical, Inc.

The analytical results relate only to the items tested.

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

Chain of Custody

1301728

PAGE 1 of 1

SAMPLER (SIGNATURE)


PROJECT NAME LIM
 ADDRESS 250 8th ST, OAKLAND

JOB NO. 2808

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:


SAMPLE ID.	DATE	TIME	MATRIX	QUANTITY	TPH-GAS / MTBE & BTEX (EPA 5030/8015-8020)	TPH-DIESEL (EPA 3510/8015)	TPH-DIESEL & MOTOR OIL (EPA 3510/8015)	CAM 17 METALS (EPA 6010+7000)	SEMI-VOLATILE ORGANICS (EPA 625/8270)	Pb (TOTAL or DISSOLVED) (EPA 6010)	PESTICIDES (EPA 8081)	FUEL OXYGENATES (EPA 8260)	PURGEABLE HALOCARBONS (EPA 601/8010)	TPH-G/BTEX/5 OXYS (EPA METHOD 8260)	MULTI-RANGE HYDROCARBONS WITH SILICA GEL CLEANUP (EPA 8015)	VOLATILE ORGANICS (EPA 624/8240/8260)	LIFT METALS (5) (EPA 6010+7000)	COMPOSITE 4:1	EDF	
																				LIM-1.29.13


ICETT ~~2/13~~ ✓
 GOOD CONDITION ✓
 HEAD SPACE ABSENT ✓
 DECHLORINATED IN LAB. PRESERVED IN LAB. ✓
 APPROPRIATE CONTAINERS ✓
 PRESERVATION VOAS | O&G | METALS | OTHER

RELINQUISHED BY:

 (signature) (time)

RECEIVED BY:
 1800
 (signature) (time)

RELINQUISHED BY:
 1840
 (signature) (time)

RECEIVED BY LABORATORY:
 1840
 (signature) (time)

COMMENTS:
PRE-DILUTION

DAVID ALLEN 1/30/13
 (printed name) (date)

1/30
 (printed name) (date)

1/30
 (printed name) (date)

1/30
 (printed name) (date)

TURN AROUND TIME
 STANDARD 24Hr 48Hr 72Hr
 OTHER:

Company-ASE, INC.

Company-

Company-

Company-



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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1301728

ClientCode: ASED

- WaterTrax
 WriteOn
 EDF
 Excel
 EQUIS
 Email
 HardCopy
 ThirdParty
 J-flag

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

Email: dallen@aquascienceengineers.com
 cc:
 PO:
 ProjectNo: #2808; LIM

Bill to:
 Diane Schiell
 Aqua Science Engineers, Inc.
 217 Wild Flower Drive
 Roseville, CA 95678
 deezthng22@yahoo.com

Requested TAT: 5 days

Date Received: 01/30/2013

Date Printed: 01/30/2013

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)													
					1	2	3	4	5	6	7	8	9	10	11	12		
1301728-001	LIM-1.29.13	Air	1/29/2013 12:30	<input type="checkbox"/>	A													

Test Legend:

1	G-MBTX_AIR	2		3		4		5	
6		7		8		9		10	
11		12							

The following SampID: 001A contains testgroup.

Prepared by: Jena Alfaro

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
 Hazardous samples will be returned to client or disposed of at client expense.



Sample Receipt Checklist

Client Name: **Aqua Science Engineers, Inc.**

Date and Time Received: **1/30/2013 7:23:38 PM**

Project Name: **#2808; LIM**

LogIn Reviewed by: **Jena Alfaro**

WorkOrder N°: **1301728** Matrix: Air

Carrier: Benjamin Yslas (MAI Courier)

Chain of Custody (COC) Information

Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sample IDs noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Date and Time of collection noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sampler's name noted on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper containers/bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature	Cooler Temp:		NA <input checked="" type="checkbox"/>
Water - VOA vials have zero headspace / no bubbles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Sample labels checked for correct preservation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Metal - pH acceptable upon receipt (pH<2)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Samples Received on Ice?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	

* NOTE: If the "No" box is checked, see comments below.

 Comments:



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Air

QC Matrix: Water

BatchID: 74422

WorkOrder: 1301728

EPA Method: SW8021B/8015Bm		Extraction: SW5030B					Spiked Sample ID: 1301725-001A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) £	ND	60	111	114	2.82	116	70 - 130	20	70 - 130	
MTBE	ND	10	95.2	96.2	1.03	91.6	70 - 130	20	70 - 130	
Benzene	ND	10	103	109	4.80	104	70 - 130	20	70 - 130	
Toluene	ND	10	104	109	4.37	104	70 - 130	20	70 - 130	
Ethylbenzene	ND	10	104	110	5.47	107	70 - 130	20	70 - 130	
Xylenes	ND	30	107	113	5.79	113	70 - 130	20	70 - 130	
%SS:	92	10	89	93	4.43	88	70 - 130	20	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 74422 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1301728-001A	01/29/13 12:30 PM	01/31/13	01/31/13 2:11 PM	1301728-001A	01/29/13 12:30 PM	01/31/13	01/31/13 2:11 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 % Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 £ TPH(btex) = sum of BTEX areas from the FID.
 # cluttered chromatogram; sample peak coelutes with surrogate peak.
 N/A = not 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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(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

APPENDIX B

FIELD LOGS

**LIM PROPERTY - 250 8TH STREET, OAKLAND, CALIFORNIA
VAPOR-EXTRACTION SYSTEM LOG**

DATE	CAT-OX SYSTEM		VAPOR-EXTRACTION WELLS PID CONCENTRATION IN PPMV										
	FLOW IN CFM	INFLUENT IN PPMV	VE-1	VE-2	VE-3	VE-4	VE-5	VE-6	VE-7	VE-8	VE-9	MW-3	MW-4
4/22/11	130	1096	240	34	119	125	440					465	570
4/25/11	130	986	185	28	95	130	400					390	565
4/25/11	100	923	210	26	100	100	350					450	442
4/26/11	90	912	230	25	98	86	410					422	388
4/27/11	78	747	210	32	112	56	360					364	224
4/29/11	65	790	320	30	90	45	320					320	312
5/2/11	58	879	350	28	88	66	400					420	246
5/4/11	52	916	520	25	98	48	365					310	300
5/6/11	52	892	590	26	119	30	328					263	265
5/9/11	52	1079	610	22	234	45	290	85	80	140	15	200	240
5/12/11	50	1016	556	40	185	40	265	80	84	135	11	216	235
5/16/11	48	1155	764	32	156	36	213	75	70	124	10	310	310
5/20/11	52	1158	810	26	164	38	312	92	88	156	14	186	220
5/23/11	50	1013	564	26	242	28	286	94	102	140	9	165	186
5/25/11	46	1169	686	28	310	42	310	90	95	125	15	220	205
5/27/11	52	1031	712	35	126	58	268	110	115	120	22	165	143
5/30/11	50	923	572	34	164	29	345	102	99	133	13	120	68
6/3/11	48	948	660	30	135	20	320	86	95	144	11	110	112
6/6/11	43	981	742	25	133	14	285	95	90	126	8	123	142
6/8/11	48	983	762	26	142	25	246	84	84	139	7	120	152
6/10/11	48	944	688	22	139	28	288	116	96	120	8	105	106
6/13/11	52	1152	884	24	115	32	296	125	102	144	9	134	229
6/16/11	50	1183	920	24	135	18	305	102	114	152	5	130	245
6/20/11	46	1277	1122	28	128	22	308	96	84	132	11	125	266
6/22/11	42	1180	952	18	130	24	264	85	98	130	6	128	310
6/24/11	55	1105	878	20	134	26	277	118	102	148	5	106	195
6/27/11	52	1141	765	26	127	26	263	102	100	122	6	144	393
7/8/11	49	926	555	25	130	18	298	99	90	130	9	132	222
7/12/11	45	788	500	24	125	15	287	101	89	133	8	124	252
7/18/11	46	745	541	21	124	14	302	85	88	125	8	142	244
7/25/11	47	688	488	22	124	17	278	87	95	126	7	133	232

Continued on Next Page

**LIM PROPERTY - 250 8TH STREET, OAKLAND, CALIFORNIA
VAPOR-EXTRACTION SYSTEM LOG**

DATE	CAT-OX SYSTEM		VAPOR-EXTRACTION WELLS PID CONCENTRATION IN PPMV										
	FLOW IN CFM	INFLUENT IN PPMV	VE-1	VE-2	VE-3	VE-4	VE-5	VE-6	VE-7	VE-8	VE-9	MW-3	MW-4
8/1/11	52	655	600	26	132	12	273	96	93	144	6	125	235
8/9/11	51	725	553	21	111	14	263	80	93	112	5	126	226
8/15/11	53	718	523	21	110	13	255	75	92	132	5	131	212
8/24/11	45	802	514	24	141	14	264	68	88	123	6	134	238
8/29/11	46	644	506	21	123	15	270	88	89	130	4	129	230
9/7/11	56	640	488	26	111	11	266	99	96	112	6	111	211
9/12/11	55	636	478	25	100	10	255	90	95	11	5	110	212
9/20/11	52	632	465	24	102	12	254	88	95	123	4	122	210
9/27/11	50	622	412	25	101	14	232	87	96	120	6	114	223
10/3/11	55	612	400	22	98	9	211	96	90	119	5	100	232
10/10/11	50	621	412	21	114	11	224	92	90	11	3	98	216
10/18/11	51	602	388	23	121	12	222	98	91	114	6	103	222
10/25/11	51	611	377	22	102	15	200	87	91	102	7	110	232
11/1/11	49	598	366	20	100	8	214	78	88	90	6	105	208
11/7/11	48	588	365	13	98	8	211	74	88	90	5	106	214
11/14/11	48	586	385	19	97	7	225	78	88	95	5	105	210
11/22/11	48	574	364	17	106	11	223	89	87	92	5	99	211
11/30/11	47	545	344	22	97	10	208	95	88	81	4	98	219
12/5/11	47	588	355	20	99	9	211	95	85	81	3	100	203
12/12/11	49	541	323	18	111	9	195	90	83	83	4	111	200
12/20/11	48	540	311	17	105	7	196	91	81	75	4	99	201
12/30/11	48	532	302	18	101	7	188	83	76	78	5	92	199
1/5/12	49	485	302	11	99	6	174	88	77	85	6	92	199
1/10/12	51	487	311	14	99	6	175	84	74	77	5	92	203
1/16/12	50	465	312	15	98	8	165	85	77	74	3	95	195
1/23/12	48	455	310	14	98	7	166	87	78	78	4	94	188
1/31/12	47	444	311	11	95	7	152	78	75	86	5	99	187

Continued on Next Page

**LIM PROPERTY - 250 8TH STREET, OAKLAND, CALIFORNIA
VAPOR-EXTRACTION SYSTEM LOG**

DATE	CAT-OX SYSTEM		VAPOR-EXTRACTION WELLS PID CONCENTRATION IN PPMV										
	FLOW IN CFM	INFLUENT IN PPMV	VE-1	VE-2	VE-3	VE-4	VE-5	VE-6	VE-7	VE-8	VE-9	MW-3	MW-4
2/7/12	47	420	299	9	93	8	140	70	77	85	6	95	177
2/13/12	44	388	290	8	90	7	141	66	71	88	5	96	165
2/20/12	41	355	295	9	77	8	133	62	71	81	4	95	158
2/27/12	45	356	295	9	75	8	132	63	71	84	6	88	145
3/6/12	42	354	288	11	77	OFF	125	61	68	84	6	87	165
3/12/12	40	338	290	9	74	OFF	125	60	68	81	5	87	157
3/19/12	41	334	290	7	75	OFF	111	55	71	78	5	85	180
3/26/12	43	321	277	9	77	OFF	105	58	70	77	7	84	174
4/2/12	45	333	255	8	68	OFF	99	61	59	78	5	81	166
4/9/12	41	311	255	8	68	OFF	95	61	59	72	4	80	165
4/16/12	39	310	241	7	74	OFF	95	62	58	71	4	86	184
4/25/12	39	300	243	OFF	73	OFF	96	60	57	74	4	77	177
5/4/12	40	288	225	OFF	71	OFF	88	60	56	74	4	78	174
5/8/12	40	275	233	OFF	65	OFF	87	55	55	75	5	78	175
5/14/12	40	280	241	OFF	58	OFF	95	57	58	74	6	79	181
5/22/12	41	256	211	OFF	55	OFF	75	58	61	69	5	95	166
5/29/12	41	255	205	OFF	54	OFF	77	51	62	69	4	94	158
6/4/12	40	241	195	OFF	54	OFF	81	51	60	63	4	99	144
6/12/12	38	222	188	OFF	52	OFF	66	50	60	62	4	103	158
6/18/12	38	232	175	OFF	51	OFF	63	52	61	60	4	102	180
6/28/12	38	195	170	OFF	46	OFF	51	48	55	58	4	111	165
7/9/12	37	180	150	OFF	36	OFF	44	44	50	55	4	99	144
7/18/12	35	175	144	OFF	41	OFF	43	39	44	54	5	94	128
7/26/12	37	165	143	OFF	29	OFF	29	40	41	49	4	96	180
8/2/12	35	152	129	OFF	44	OFF	32	44	41	48	4	102	119
8/10/12	38	144	111	OFF	34	OFF	25	38	37	44	3	101	120
8/15/12	40	141	113	OFF	38	OFF	19	29	32	47	4	92	87
8/23/12	41	129	109	OFF	29	OFF	21	31	29	36	3	88	83
9/7/12	38	116	65	OFF	33	OFF	13	22	18	28	4	101	81
9/13/12	41	96	71	OFF	28	OFF	11	24	16	22	3	95	75
9/21/12	40	79	58	OFF	26	OFF	9	19	12	20	4	93	73
9/28/12	39	58	44	OFF	24	OFF	10	15	14	18	5	102	68

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LIM PROPERTY - 250 8TH STREET, OAKLAND, CALIFORNIA
VAPOR-EXTRACTION SYSTEM LOG

DATE	ASE VE SYSTEM		VAPOR-EXTRACTION WELLS PID CONCENTRATION IN PPMV										
	FLOW IN CFM	INFLUENT IN PPMV	VE-1	VE-2	VE-3	VE-4	VE-5	VE-6	VE-7	VE-8	VE-9	MW-3	MW-4
11/12/12	50	12	33	4	20	5	8	15	11	22	6	111	75
11/28/12	50	14	29	4	18	2	6	12	15	19	4	109	72
12/5/12	50	11	27	6	18	2	7	13	15	17	4	99	64
12/13/12	50	11	23	3	15	2	5	19	18	21	5	87	62
12/20/12	50	9	19	3	11	4	8	12	21	17	4	113	66
1/7/13	50	19	17	2	9	2	7	11	12	16	3	101	71
1/14/13	50	11	16	5	9	3	5	16	13	15	4	99	66
1/24/13	50	8	12	3	10	2	6	18	13	15	4	97	69
1/29/13	50	12	11	4	9	3	5	17	15	12	3	96	70
2/6/13	50	16	12	3	6	3	5	9	9	12	3	94	68

LIM PROPERTY - 250 8TH STREET, OAKLAND, CALIFORNIA

HYDROCARBON VAPOR MEASUREMENT LOG

HYDROCARBON CONCENTRATIONS IN PPMV* MEASURED WITH ORGANIC VAPOR METER																
DATE	VAPOR MONITORING POINTS		METER BOXES (SITE SIDE OF 8TH STREET)			METER BOXES (OPPOSITE SIDE OF 8TH STREET)										
	VMP-1	VMP-1	PIPING MANIFOLD	PG&E BOX	EBMUD BOX	GAS METER 1	GAS METER 2	GAS METER 3	EBMUD BOX 1	EBMUD BOX 2	OS-8/VE-6 WELL BOX	OS-9/VE-7 WELL BOX	OS-10/VE-8 WELL BOX	OS-11 WELL BOX	OS-12/VE-9 WELL BOX	
1/18/11	0	0	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
1/19/11	0	0	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
1/20/11	0	0	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
1/21/11	11	21	NM	NM	NM	10	8	11	5	7	NM	NM	NM	NM	NM	NM
1/22/11	3	7	NM	NM	NM	12	11	8	4	6	NM	NM	NM	NM	NM	NM
1/23/11	0	0	NM	NM	NM	0	0	0	0	0	NM	NM	NM	NM	NM	NM
1/28/11	0	0	NM	NM	NM	0	0	0	0	0	NM	NM	NM	NM	NM	NM
2/15/11	0	0	NM	NM	NM	0	0	0	0	0	NM	NM	NM	NM	NM	NM
2/28/11	0	0	NM	NM	NM	0	0	0	0	0	NM	NM	NM	NM	NM	NM
3/8/11	0	0	NM	NM	NM	0	0	0	0	0	NM	NM	NM	NM	NM	NM
3/29/11	0	0	NM	NM	NM	0	0	0	0	0	NM	NM	NM	NM	NM	NM
4/12/11	0	0	NM	NM	NM	0	0	0	0	0	NM	NM	NM	NM	NM	NM
4/25/11	0	0	NM	NM	NM	0	0	0	0	0	NM	NM	NM	NM	NM	NM
5/13/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/16/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/20/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/23/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/25/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/27/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5/30/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/3/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/6/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/8/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/10/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/13/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/16/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/20/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/22/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/24/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/27/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NM = Not Measured

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LIM PROPERTY - 250 8TH STREET, OAKLAND, CALIFORNIA

HYDROCARBON VAPOR MEASUREMENT LOG

HYDROCARBON CONCENTRATIONS IN PPMV* MEASURED WITH ORGANIC VAPOR METER															
DATE	VAPOR MONITORING POINTS		METER BOXES (SITE SIDE OF 8TH STREET)			METER BOXES (OPPOSITE SIDE OF 8TH STREET)									
	VMP-1	VMP-1	PIPING MANIFOLD	PG&E BOX	EBMUD BOX	GAS METER 1	GAS METER 2	GAS METER 3	EBMUD BOX 1	EBMUD BOX 2	OS-8/VE-6 WELL BOX	OS-9/VE-7 WELL BOX	OS-10/VE-8 WELL BOX	OS-11 WELL BOX	OS-12/VE-9 WELL BOX
	7/8/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/12/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/18/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7/25/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/1/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/9/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/15/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/24/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8/29/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/7/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/12/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/20/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9/27/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/3/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/10/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/18/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/25/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/1/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/7/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/14/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/22/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/30/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/5/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/12/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/20/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/30/11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/5/12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/10/12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/16/12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/23/12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1/31/12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/7/12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/13/12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/20/12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2/27/12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/6/12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/12/12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/19/12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3/26/12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Continued on Next Page

MASS EXTRACTION CALCULATIONS
 LIM PROPERTY VAPOR EXTRACTION SYSTEM
 250 8TH STREET, OAKLAND, CALIFORNIA

AIR BAG SAMPLE COLLECTED ON 6/20/12														
AVERAGE VAPOR EXTRACTION FLOW RATE	MULTIPLY	VOLUME CONVERSION FACTOR	MULTIPLY	TIME CONVERSION FACTOR	MULTIPLY	TPH-G CONCENTRATION IN INFLUENT SAMPLE	DIVIDE	MASS CONVERSION FACTOR	DIVIDE	MASS CONVERSION FACTOR	EQUALS	MASS TPH-G EXTRACTION RATE	EQUALS	MASS TPH-G EXTRACTION RATE
CFM		l/cu. ft.		min/day		ug/l		ugs/gm		gms/lb		lbs/day		gallons/day
50		28.32		1,200		38		1,000,000		454		0.14		0.02

AIR BAG SAMPLE COLLECTED ON 1/29/13														
AVERAGE VAPOR EXTRACTION FLOW RATE	MULTIPLY	VOLUME CONVERSION FACTOR	MULTIPLY	TIME CONVERSION FACTOR	MULTIPLY	TPH-G CONCENTRATION IN INFLUENT SAMPLE	DIVIDE	MASS CONVERSION FACTOR	DIVIDE	MASS CONVERSION FACTOR	EQUALS	MASS TPH-G EXTRACTION RATE	EQUALS	MASS TPH-G EXTRACTION RATE
CFM		l/cu. ft.		min/day		ug/l		ugs/gm		gms/lb		lbs/day		gallons/day
50		28.32		1,200		190		1,000,000		454		0.71		0.11

USING AN AVERAGE OF THE JUNE 2012 AND JANUARY 2013 ANALYTICAL RESULTS

AVERAGE OF AIR BAG SAMPLES COLLECTED ON 6/20/12 AND 1/29/13														
AVERAGE VAPOR EXTRACTION FLOW RATE	MULTIPLY	VOLUME CONVERSION FACTOR	MULTIPLY	TIME CONVERSION FACTOR	MULTIPLY	TPH-G CONCENTRATION IN INFLUENT SAMPLE	DIVIDE	MASS CONVERSION FACTOR	DIVIDE	MASS CONVERSION FACTOR	EQUALS	MASS TPH-G EXTRACTION RATE	EQUALS	MASS TPH-G EXTRACTION RATE
CFM		l/cu. ft.		min/day		ug/l		ugs/gm		gms/lb		lbs/day		gallons/day
50		28.32		1,200		114		1,000,000		454		0.43		0.07

GASOLINE EXTRACTION LOG

LIM FAMILY PROPERTY

250 8th Street, Oakland, California

DATE	TPH-G CONCENTRATION (ug/l) IN INFLUENT VAPOR SAMPLE	GALLONS OF GASOLINE EXTRACTED, PER DAY	NUMBER OF DAYS VE SYSTEM OPERATED IN MONTH	GALLONS OF GASOLINE EXTRACTED IN MONTH
4/28/11	4600	2.75	30	82.50
5/26/11	4100	2.45	31	75.95
6/30/11	4900	2.93	30	87.90
7/31/11	NA	2.75*	31	85.25
8/31/11	NA	2.57*	31	79.67
9/30/11	NA	2.39*	30	71.70
10/31/11	NA	2.21*	31	68.51
11/30/11	NA	2.03*	30	60.90
12/20/11	3100	1.85	31	57.38
1/31/12	NA	1.55*	31	48.05
2/29/12	NA	1.25*	29	36.25
3/31/12	NA	0.95*	31	29.45
4/30/12	NA	0.65*	30	19.50
5/31/12	NA	0.35*	31	10.85
6/20/12	38	0.02	30	0.60
TOTAL GALLONS OF GASOLINE REMOVED FROM VADOSE ZONE SINCE UP TO JUNE 2012				814.46

6/20/12	38	0.02		
1/29/13	190	0.11		
AVERAGE**	114*	0.07**	145***	10.15
TOTAL GALLONS OF GASOLINE REMOVED FROM VADOSE ZONE SINCE JUNE 2012				10.15

TOTAL GALLONS OF GASOLINE REMOVED FROM VADOSE ZONE SINCE SYSTEM START-UP 824.61

NOTES:

NA means "not applicable." This is due to the fact that an air bag sample of the influent vapor stream was not collected on a monthly basis.

The asterisk symbol (*) means this number is an estimate. Actual air bag TPH-G concentrations were not available due to lack of sampling.

The double asterisk symbol (**) means this number is an average of the 6/20/12 air bag sample and the 1/29/13 air bag sample.

The triple asterisk symbol (***) is the number of days the VE system operated from July 1, 2012 through February 6, 2013, taking into account the off days during swap-out of the Catalytic Oxidizer with the GAC canisters, and weekend and Holiday shut-downs.

A Flowrate of 50 cubic feet per minute was used to calculate daily extraction volumes.



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APPENDIX C

MONITORING WELL SAMPLING LOGS

AQUA SCIENCE ENGINEERS

WELL SAMPLING FIELD LOG

PROJECT NAME LIM

JOB NUMBER 2808 DATE OF SAMPLING 12.13.12

WELL ID. MW-1 SAMPLER DA

TOTAL DEPTH OF WELL 26.8 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 17.32 TIME OF MEASUREMENT

PRODUCT THICKNESS None

DEPTH OF WELL CASING IN WATER 9.48

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 9:30 TIME EVACUATION COMPLETED 9:40

TIME SAMPLES WERE COLLECTED 9:40

DID WELL GO DRY No AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 4.8 gal

SAMPLING DEVICE NEW DISPOSABLE BAILER

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

CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
1	19.9	8.5	470
2	20.9	8.4	460
3	20.9	8.4	460

SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
MW-1	5	40 ml VOA	8015/8260B	142

AQUA SCIENCE ENGINEERS

WELL SAMPLING FIELD LOG

PROJECT NAME LIM

JOB NUMBER 2808 DATE OF SAMPLING 12.13.12

WELL ID. MW-2 SAMPLER DT

TOTAL DEPTH OF WELL 26.8 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 16.24 TIME OF MEASUREMENT

PRODUCT THICKNESS None

DEPTH OF WELL CASING IN WATER 10.56

NUMBER OF GALLONS PER WELL CASING VOLUME 1.8

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 5.4 gal

EQUIPMENT USED TO PURGE WELL NEW DISPOSABLE BAILER

TIME EVACUATION STARTED 915 TIME EVACUATION COMPLETED 922

TIME SAMPLES WERE COLLECTED 922

DID WELL GO DRY No AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 5.4 gal

SAMPLING DEVICE NEW DISPOSABLE BAILER

SAMPLE COLOR light brown ODOR/SEDIMENT None^{PC} slight hc / slightly silty

CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
1	19.7	8.2	690 us
2	19.7	8.2	680
3	19.7	8.2	680

SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
<u>MW-2</u>	<u>5</u>	<u>40 ml VOA</u>	<u>8015/8260B</u>	<u>420</u>

AQUA SCIENCE ENGINEERS

WELL SAMPLING FIELD LOG

PROJECT NAME LIM

JOB NUMBER 2808 DATE OF SAMPLING 12.13.12

WELL ID. MW-3 SAMPLER DA

TOTAL DEPTH OF WELL 30.0 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 16.24 TIME OF MEASUREMENT

PRODUCT THICKNESS None

DEPTH OF WELL CASING IN WATER 13.76

NUMBER OF GALLONS PER WELL CASING VOLUME 2.3

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 6.9 gal

EQUIPMENT USED TO PURGE WELL NEW DISPOSABLE BAILER

TIME EVACUATION STARTED 1025 TIME EVACUATION COMPLETED 1038

TIME SAMPLES WERE COLLECTED 1040

DID WELL GO DRY NO AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 7

SAMPLING DEVICE NEW DISPOSABLE BAILER

SAMPLE COLOR GRAY ODOR/SEDIMENT SMOKE HC / SMOKE

CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
1	20.6	8.6	1000
2	20.2	8.6	980
3	20.1	8.7	990

SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
MW-3	5	40 ml VOA	8015/8260B	1420

AQUA SCIENCE ENGINEERS

WELL SAMPLING FIELD LOG

PROJECT NAME LIM

JOB NUMBER 2808 DATE OF SAMPLING 12.13.12

WELL ID. MW-4R SAMPLER DA

TOTAL DEPTH OF WELL 28.0 WELL DIAMETER 4

DEPTH TO WATER PRIOR TO PURGING 16.61 TIME OF MEASUREMENT

PRODUCT THICKNESS None

DEPTH OF WELL CASING IN WATER 11.39

NUMBER OF GALLONS PER WELL CASING VOLUME 7.5 gal

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 22.5 gal

EQUIPMENT USED TO PURGE WELL NEW DISPOSABLE BAILER

TIME EVACUATION STARTED 7:00 TIME EVACUATION COMPLETED 7:35

TIME SAMPLES WERE COLLECTED 7:35

DID WELL GO DRY NO AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 22.5 gal

SAMPLING DEVICE NEW DISPOSABLE BAILER

SAMPLE COLOR yellow brown ODOR/SEDIMENT strong h.c. odor / slight silt

CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
1	21.1	8.0	870
2	21.0	8.0	760
3	21.0	8.0	

SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
<u>MW-4R</u>	<u>5</u>	<u>40 ml VOA</u>	<u>8015/8260B</u>	<u>Heel</u>

AQUA SCIENCE ENGINEERS

WELL SAMPLING FIELD LOG

PROJECT NAME LIM

JOB NUMBER 2808 DATE OF SAMPLING 12.13.12

WELL ID. MW-5 SAMPLER DT

TOTAL DEPTH OF WELL 29.6 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 16.46 TIME OF MEASUREMENT

PRODUCT THICKNESS None

DEPTH OF WELL CASING IN WATER 13.14

NUMBER OF GALLONS PER WELL CASING VOLUME 2.2

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 6.6 gal

EQUIPMENT USED TO PURGE WELL NEW DISPOSABLE BAILER

TIME EVACUATION STARTED 855 TIME EVACUATION COMPLETED 905

TIME SAMPLES WERE COLLECTED 905

DID WELL GO DRY No AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 6.6 gal

SAMPLING DEVICE NEW DISPOSABLE BAILER

SAMPLE COLOR clear ODOR/SEDIMENT None to slight / clear
orish like

CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
1	19.3	8.3	510 us
2	19.6	8.5	520
3	19.6	8.5	520

SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
MW-5	5	40 ml VOA	8015/82608	142

AQUA SCIENCE ENGINEERS

WELL SAMPLING FIELD LOG

PROJECT NAME LIM

JOB NUMBER 2808 DATE OF SAMPLING 12.13.12

WELL ID. MW-6 SAMPLER DT

TOTAL DEPTH OF WELL 29.5 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 16.77 TIME OF MEASUREMENT

PRODUCT THICKNESS None

DEPTH OF WELL CASING IN WATER 12.73

NUMBER OF GALLONS PER WELL CASING VOLUME 2.2

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 6.6 gal

EQUIPMENT USED TO PURGE WELL NEW DISPOSABLE BAILER

TIME EVACUATION STARTED 830 TIME EVACUATION COMPLETED 840

TIME SAMPLES WERE COLLECTED 840

DID WELL GO DRY No AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 6.6 gal

SAMPLING DEVICE NEW DISPOSABLE BAILER

SAMPLE COLOR yellow brown ODOR/SEDIMENT None / small amount silt

CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
1	19.9	8.8	310 <i>ms</i>
2	20.0	8.6	310
3	20.0	8.4	310

SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
<u>MW-6</u>	<u>5</u>	<u>40 ml VOA</u>	<u>8015/8260B</u>	<u>142</u>

LIM

AQUA SCIENCE ENGINEERS

WELL SAMPLING FIELD LOG

PROJECT NAME LIM

JOB NUMBER 2808 DATE OF SAMPLING 12.13.12

WELL ID. MW-7 SAMPLER DA

TOTAL DEPTH OF WELL 28.0 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 17.01 TIME OF MEASUREMENT

PRODUCT THICKNESS None - slight sheen

DEPTH OF WELL CASING IN WATER 10.99

NUMBER OF GALLONS PER WELL CASING VOLUME 1.9

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 5.7 gal

EQUIPMENT USED TO PURGE WELL NEW DISPOSABLE BAILER

TIME EVACUATION STARTED 800 TIME EVACUATION COMPLETED 810

TIME SAMPLES WERE COLLECTED 810

DID WELL GO DRY No AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 5.7 gal

SAMPLING DEVICE NEW DISPOSABLE BAILER

SAMPLE COLOR slight gray ODOR/SEDIMENT strong hc / slightly silty

CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
1	19.7	8.1	1080
2	19.8	8.1	1040
3	19.8	8.1	1070

SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
<u>MW-7</u>	<u>5</u>	<u>40 ml VOA</u>	<u>8015/8260B</u>	<u>142</u>

AQUA SCIENCE ENGINEERS

WELL SAMPLING FIELD LOG

PROJECT NAME LIM

JOB NUMBER 2808 DATE OF SAMPLING 12.13.12

WELL ID. MW-8 SAMPLER DA

TOTAL DEPTH OF WELL 49.0 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 21.89 TIME OF MEASUREMENT

PRODUCT THICKNESS None

DEPTH OF WELL CASING IN WATER 27.11

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 gal

EQUIPMENT USED TO PURGE WELL NEW DISPOSABLE BAILER

TIME EVACUATION STARTED 950 TIME EVACUATION COMPLETED 1010

TIME SAMPLES WERE COLLECTED 1010

DID WELL GO DRY No AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 13.8 gal

SAMPLING DEVICE NEW DISPOSABLE BAILER

SAMPLE COLOR clear ODOR/SEDIMENT no/no

CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
1	21.4	8.6	450
2	19.6	9.0	430
3	19.5	9.0	480

SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
<u>MW-8</u>	<u>5</u>	<u>40 ml VOA</u>	<u>8015/8260B</u>	<u>142</u>



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APPENDIX D

CERTIFIED ANALYTICAL REPORT
AND CHAIN OF CUSTODY DOCUMENTATION
FOR GROUNDWATER SAMPLES



Laboratory Results

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

Subject : 8 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 and TNI 2009 standards. 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,

A handwritten signature in black ink that reads "Troy G. Turpen". The signature is written in a cursive style.

Troy Turpen

Project Name : **Lim**

Project Number : **2808**

Sample : **MW-1**

Matrix : Water

Lab Number : 83569-01

Sample Date :12/13/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	2.6	0.50	ug/L	EPA 8260B	12/23/12 20:18
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 20:18
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 20:18
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 20:18
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 20:18
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 20:18
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 20:18
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 20:18
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/23/12 20:18
TPH as Gasoline	180	50	ug/L	EPA 8260B	12/23/12 20:18
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 20:18
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 20:18
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	12/23/12 20:18
Toluene - d8 (Surr)	94.2		% Recovery	EPA 8260B	12/23/12 20:18
TPH as Diesel (Silica Gel)	90	50	ug/L	M EPA 8015	12/28/12 11:59
(Note: Some hydrocarbons lower-boiling, some higher-boiling than Diesel.)					
Octacosane (Silica Gel Surr)	102		% Recovery	M EPA 8015	12/28/12 11:59

Project Name : **Lim**

Project Number : **2808**

Sample : **MW-2**

Matrix : Water

Lab Number : 83569-02

Sample Date :12/13/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	890	1.5	ug/L	EPA 8260B	12/26/12 13:33
Toluene	4.1	0.50	ug/L	EPA 8260B	12/23/12 21:28
Ethylbenzene	9.6	0.50	ug/L	EPA 8260B	12/23/12 21:28
Total Xylenes	16	0.50	ug/L	EPA 8260B	12/23/12 21:28
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 21:28
Diisopropyl ether (DIPE)	5.4	0.50	ug/L	EPA 8260B	12/23/12 21:28
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 21:28
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 21:28
Tert-Butanol	17	5.0	ug/L	EPA 8260B	12/23/12 21:28
TPH as Gasoline	2400	50	ug/L	EPA 8260B	12/23/12 21:28
1,2-Dichloroethane	1.4	0.50	ug/L	EPA 8260B	12/23/12 21:28
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 21:28
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	12/23/12 21:28
Toluene - d8 (Surr)	94.1		% Recovery	EPA 8260B	12/23/12 21:28
TPH as Diesel (Silica Gel)	66	50	ug/L	M EPA 8015	12/28/12 12:33
Octacosane (Silica Gel Surr)	90.6		% Recovery	M EPA 8015	12/28/12 12:33

Project Name : **Lim**

Project Number : **2808**

Sample : **MW-3**

Matrix : Water

Lab Number : 83569-03

Sample Date :12/13/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	5800	10	ug/L	EPA 8260B	12/26/12 15:55
Toluene	5800	10	ug/L	EPA 8260B	12/26/12 15:55
Ethylbenzene	2100	10	ug/L	EPA 8260B	12/26/12 15:55
Total Xylenes	11000	10	ug/L	EPA 8260B	12/26/12 15:55
Methyl-t-butyl ether (MTBE)	< 10	10	ug/L	EPA 8260B	12/26/12 15:55
Diisopropyl ether (DIPE)	< 10	10	ug/L	EPA 8260B	12/26/12 15:55
Ethyl-t-butyl ether (ETBE)	< 10	10	ug/L	EPA 8260B	12/26/12 15:55
Tert-amyl methyl ether (TAME)	< 10	10	ug/L	EPA 8260B	12/26/12 15:55
Tert-Butanol	60	50	ug/L	EPA 8260B	12/26/12 15:55
TPH as Gasoline	99000	1000	ug/L	EPA 8260B	12/26/12 15:55
1,2-Dichloroethane	< 10	10	ug/L	EPA 8260B	12/26/12 15:55
1,2-Dibromoethane	< 10	10	ug/L	EPA 8260B	12/26/12 15:55
1,2-Dichloroethane-d4 (Surr)	97.0		% Recovery	EPA 8260B	12/26/12 15:55
Toluene - d8 (Surr)	99.3		% Recovery	EPA 8260B	12/26/12 15:55
TPH as Diesel (Silica Gel)	< 12000	12000	ug/L	M EPA 8015	12/27/12 12:04
(Note: MRL increased due to interference from Gasoline-range hydrocarbons.)					
Octacosane (Silica Gel Surr)	114		% Recovery	M EPA 8015	12/27/12 12:04

Project Name : **Lim**

Project Number : **2808**

Sample : **MW-4R**

Matrix : Water

Lab Number : 83569-04

Sample Date :12/13/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	97	0.50	ug/L	EPA 8260B	12/23/12 22:03
Toluene	76	0.50	ug/L	EPA 8260B	12/23/12 22:03
Ethylbenzene	50	0.50	ug/L	EPA 8260B	12/23/12 22:03
Total Xylenes	590	1.5	ug/L	EPA 8260B	12/26/12 12:58
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 22:03
Diisopropyl ether (DIPE)	1.0	0.50	ug/L	EPA 8260B	12/23/12 22:03
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 22:03
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 22:03
Tert-Butanol	41	5.0	ug/L	EPA 8260B	12/23/12 22:03
TPH as Gasoline	3700	150	ug/L	EPA 8260B	12/26/12 12:58
1,2-Dichloroethane	2.5	0.50	ug/L	EPA 8260B	12/23/12 22:03
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 22:03
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	12/23/12 22:03
Toluene - d8 (Surr)	96.8		% Recovery	EPA 8260B	12/23/12 22:03
TPH as Diesel (Silica Gel)	< 200	200	ug/L	M EPA 8015	12/27/12 12:33
(Note: MRL increased due to interference from Gasoline-range hydrocarbons.)					
Octacosane (Silica Gel Surr)	110		% Recovery	M EPA 8015	12/27/12 12:33

Project Name : **Lim**

Project Number : **2808**

Sample : **MW-5**

Matrix : Water

Lab Number : 83569-05

Sample Date :12/13/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	2.7	0.50	ug/L	EPA 8260B	12/24/12 10:11
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/24/12 10:11
Ethylbenzene	0.86	0.50	ug/L	EPA 8260B	12/24/12 10:11
Total Xylenes	0.74	0.50	ug/L	EPA 8260B	12/24/12 10:11
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/24/12 10:11
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/24/12 10:11
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/24/12 10:11
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/24/12 10:11
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/24/12 10:11
TPH as Gasoline	79	50	ug/L	EPA 8260B	12/24/12 10:11
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	12/24/12 10:11
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	12/24/12 10:11
1,2-Dichloroethane-d4 (Surr)	99.8		% Recovery	EPA 8260B	12/24/12 10:11
Toluene - d8 (Surr)	107		% Recovery	EPA 8260B	12/24/12 10:11
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/27/12 13:02
Octacosane (Silica Gel Surr)	115		% Recovery	M EPA 8015	12/27/12 13:02

Project Name : **Lim**

Project Number : **2808**

Sample : **MW-6**

Matrix : Water

Lab Number : 83569-06

Sample Date :12/13/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/24/12 17:11
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/24/12 17:11
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/24/12 17:11
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/24/12 17:11
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/24/12 17:11
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/24/12 17:11
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/24/12 17:11
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/24/12 17:11
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/24/12 17:11
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/24/12 17:11
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	12/24/12 17:11
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	12/24/12 17:11
1,2-Dichloroethane-d4 (Surr)	99.7		% Recovery	EPA 8260B	12/24/12 17:11
Toluene - d8 (Surr)	106		% Recovery	EPA 8260B	12/24/12 17:11
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/27/12 13:31
Octacosane (Silica Gel Surr)	112		% Recovery	M EPA 8015	12/27/12 13:31

Project Name : **Lim**

Project Number : **2808**

Sample : **MW-7**

Matrix : Water

Lab Number : 83569-07

Sample Date :12/13/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	78	2.5	ug/L	EPA 8260B	12/26/12 13:23
Toluene	80	2.5	ug/L	EPA 8260B	12/26/12 13:23
Ethylbenzene	1000	2.5	ug/L	EPA 8260B	12/26/12 13:23
Total Xylenes	940	2.5	ug/L	EPA 8260B	12/26/12 13:23
Methyl-t-butyl ether (MTBE)	< 2.5	2.5	ug/L	EPA 8260B	12/26/12 13:23
Diisopropyl ether (DIPE)	< 2.5	2.5	ug/L	EPA 8260B	12/26/12 13:23
Ethyl-t-butyl ether (ETBE)	< 2.5	2.5	ug/L	EPA 8260B	12/26/12 13:23
Tert-amyl methyl ether (TAME)	< 2.5	2.5	ug/L	EPA 8260B	12/26/12 13:23
Tert-Butanol	< 15	15	ug/L	EPA 8260B	12/26/12 13:23
TPH as Gasoline	16000	250	ug/L	EPA 8260B	12/26/12 13:23
1,2-Dichloroethane	< 2.5	2.5	ug/L	EPA 8260B	12/26/12 13:23
1,2-Dibromoethane	< 2.5	2.5	ug/L	EPA 8260B	12/26/12 13:23
1,2-Dichloroethane-d4 (Surr)	97.1		% Recovery	EPA 8260B	12/26/12 13:23
Toluene - d8 (Surr)	106		% Recovery	EPA 8260B	12/26/12 13:23
TPH as Diesel (Silica Gel)	610	50	ug/L	M EPA 8015	12/28/12 10:35
(Note: Some hydrocarbons lower-boiling, some higher-boiling than Diesel.)					
Octacosane (Silica Gel Surr)	126		% Recovery	M EPA 8015	12/28/12 10:35

Project Name : **Lim**

Project Number : **2808**

Sample : **MW-8**

Matrix : Water

Lab Number : 83569-08

Sample Date :12/13/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 21:55
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 21:55
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 21:55
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 21:55
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 21:55
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 21:55
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 21:55
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 21:55
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/23/12 21:55
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/23/12 21:55
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 21:55
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	12/23/12 21:55
1,2-Dichloroethane-d4 (Surr)	98.8		% Recovery	EPA 8260B	12/23/12 21:55
Toluene - d8 (Surr)	107		% Recovery	EPA 8260B	12/23/12 21:55
TPH as Diesel (Silica Gel) (Note: Hydrocarbons are higher-boiling than typical Diesel Fuel.)	56	50	ug/L	M EPA 8015	12/28/12 10:06
Octacosane (Silica Gel Surr)	115		% Recovery	M EPA 8015	12/28/12 10:06

QC Report : Method Blank Data

Project Name : Lim

Project Number : 2808

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed	Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/27/2012	Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/23/2012
Octacosane (Silica Gel Surr)	93.6		%	M EPA 8015	12/27/2012	Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/23/2012
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/23/2012	Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/23/2012
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/23/2012	Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/23/2012
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/23/2012	Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/2012
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/23/2012	Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/2012
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/2012	Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/2012
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/2012	Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/23/2012
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/23/2012	Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/23/2012
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/23/2012	TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/23/2012
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/23/2012	1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	12/23/2012
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/23/2012	1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	12/23/2012
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	12/23/2012	1,2-Dichloroethane-d4 (Surr)	99.2		%	EPA 8260B	12/23/2012
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	12/23/2012	Toluene - d8 (Surr)	107		%	EPA 8260B	12/23/2012
1,2-Dichloroethane-d4 (Surr)	102		%	EPA 8260B	12/23/2012	Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/24/2012
Toluene - d8 (Surr)	99.0		%	EPA 8260B	12/23/2012	Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/24/2012
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012	Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/24/2012
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012	Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/24/2012
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/26/2012	Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/24/2012
						Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/24/2012
						Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/24/2012
						Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/24/2012
						Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/24/2012
						TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/24/2012
						1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	12/24/2012
						1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	12/24/2012
						1,2-Dichloroethane-d4 (Surr)	99.8		%	EPA 8260B	12/24/2012
						Toluene - d8 (Surr)	106		%	EPA 8260B	12/24/2012

QC Report : Method Blank Data

Project Name : **Lim**

Project Number : **2808**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/26/2012
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/26/2012
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
1,2-Dichloroethane-d4 (Surr)	99.6		%	EPA 8260B	12/26/2012
Toluene - d8 (Surr)	107		%	EPA 8260B	12/26/2012
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/26/2012
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/26/2012
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
1,2-Dichloroethane-d4 (Surr)	99.0		%	EPA 8260B	12/26/2012
Toluene - d8 (Surr)	100		%	EPA 8260B	12/26/2012

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	12/26/2012
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/26/2012
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	12/26/2012
1,2-Dichloroethane-d4 (Surr)	99.0		%	EPA 8260B	12/26/2012
Toluene - d8 (Surr)	100		%	EPA 8260B	12/26/2012

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
1,2-Dibromoethane	83635-04	<0.50	40.0	40.0	39.9	40.0	ug/L	EPA 8260B	12/23/12	99.9	100	0.222	80-120	25
1,2-Dichloroethane	83635-04	<0.50	40.0	40.0	36.9	36.6	ug/L	EPA 8260B	12/23/12	92.4	91.5	0.934	75.7-122	25
Benzene	83635-04	<0.50	40.0	40.0	41.2	40.4	ug/L	EPA 8260B	12/23/12	103	101	1.78	80-120	25
Diisopropyl ether	83635-04	<0.50	39.4	39.4	40.9	40.7	ug/L	EPA 8260B	12/23/12	104	103	0.619	80-120	25
Ethyl-tert-butyl ether	83635-04	<0.50	40.6	40.6	39.8	39.4	ug/L	EPA 8260B	12/23/12	98.1	97.0	1.11	76.5-120	25
Ethylbenzene	83635-04	<0.50	40.0	40.0	43.9	43.5	ug/L	EPA 8260B	12/23/12	110	109	0.794	80-120	25
Methyl-t-butyl ether	83635-04	<0.50	40.1	40.1	38.8	38.5	ug/L	EPA 8260B	12/23/12	96.8	96.2	0.620	69.7-121	25
P + M Xylene	83635-04	<0.50	40.0	40.0	42.8	42.4	ug/L	EPA 8260B	12/23/12	107	106	0.883	76.8-120	25
Tert-Butanol	83635-04	<5.0	201	201	203	204	ug/L	EPA 8260B	12/23/12	101	101	0.428	80-120	25
Tert-amyl-methyl ether	83635-04	<0.50	40.4	40.4	39.2	38.8	ug/L	EPA 8260B	12/23/12	97.1	96.2	0.877	78.9-120	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
Toluene														
	83635-04	<0.50	40.0	40.0	42.0	41.4	ug/L	EPA 8260B	12/23/12	105	103	1.46	80-120	25
Benzene														
	83579-02	32	40.0	40.0	73.6	71.8	ug/L	EPA 8260B	12/26/12	103	98.2	4.62	80-120	25
P + M Xylene														
	83579-02	2.0	40.0	40.0	43.9	42.8	ug/L	EPA 8260B	12/26/12	105	102	2.52	76.8-120	25
1,2-Dibromoethane														
	83635-03	<0.50	40.0	40.0	44.3	44.5	ug/L	EPA 8260B	12/23/12	111	111	0.491	80-120	25
1,2-Dichloroethane														
	83635-03	<0.50	40.0	40.0	44.4	44.1	ug/L	EPA 8260B	12/23/12	111	110	0.677	75.7-122	25
Benzene														
	83635-03	<0.50	40.0	40.0	41.1	40.7	ug/L	EPA 8260B	12/23/12	103	102	0.852	80-120	25
Diisopropyl ether														
	83635-03	<0.50	39.4	39.4	43.0	43.4	ug/L	EPA 8260B	12/23/12	109	110	0.770	80-120	25
Ethyl-tert-butyl ether														
	83635-03	<0.50	40.6	40.6	42.7	42.7	ug/L	EPA 8260B	12/23/12	105	105	0.0322	76.5-120	25
Ethylbenzene														
	83635-03	<0.50	40.0	40.0	42.1	42.0	ug/L	EPA 8260B	12/23/12	105	105	0.346	80-120	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
Methyl-t-butyl ether	83635-03	<0.50	40.1	40.1	43.6	43.9	ug/L	EPA 8260B	12/23/12	109	110	0.675	69.7-121	25
P + M Xylene	83635-03	<0.50	40.0	40.0	41.4	41.2	ug/L	EPA 8260B	12/23/12	104	103	0.466	76.8-120	25
Tert-Butanol	83635-03	5.9	201	201	217	215	ug/L	EPA 8260B	12/23/12	105	104	1.00	80-120	25
Tert-amyl-methyl ether	83635-03	<0.50	40.4	40.4	43.7	44.1	ug/L	EPA 8260B	12/23/12	108	109	0.915	78.9-120	25
Toluene	83635-03	<0.50	40.0	40.0	44.3	44.1	ug/L	EPA 8260B	12/23/12	111	110	0.515	80-120	25
1,2-Dibromoethane	83569-05	<0.50	40.0	40.0	44.0	43.9	ug/L	EPA 8260B	12/24/12	110	110	0.219	80-120	25
1,2-Dichloroethane	83569-05	<0.50	40.0	40.0	43.9	42.9	ug/L	EPA 8260B	12/24/12	110	107	2.46	75.7-122	25
Benzene	83569-05	2.7	40.0	40.0	43.0	41.9	ug/L	EPA 8260B	12/24/12	101	97.9	2.75	80-120	25
Diisopropyl ether	83569-05	<0.50	39.4	39.4	43.6	43.2	ug/L	EPA 8260B	12/24/12	111	110	1.05	80-120	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
Ethyl-tert-butyl ether	83569-05	<0.50	40.6	40.6	42.9	42.9	ug/L	EPA 8260B	12/24/12	106	106	0.0986	76.5-120	25
Ethylbenzene	83569-05	0.86	40.0	40.0	43.5	42.2	ug/L	EPA 8260B	12/24/12	107	103	3.19	80-120	25
Methyl-t-butyl ether	83569-05	<0.50	40.1	40.1	43.7	44.4	ug/L	EPA 8260B	12/24/12	109	111	1.50	69.7-121	25
P + M Xylene	83569-05	0.74	40.0	40.0	42.6	41.2	ug/L	EPA 8260B	12/24/12	105	101	3.56	76.8-120	25
Tert-Butanol	83569-05	<5.0	201	201	213	212	ug/L	EPA 8260B	12/24/12	106	105	0.620	80-120	25
Tert-amyl-methyl ether	83569-05	<0.50	40.4	40.4	43.7	43.8	ug/L	EPA 8260B	12/24/12	108	108	0.191	78.9-120	25
Toluene	83569-05	<0.50	40.0	40.0	44.3	43.0	ug/L	EPA 8260B	12/24/12	111	108	2.78	80-120	25
1,2-Dibromoethane	83583-01	<0.50	40.0	40.0	42.3	42.2	ug/L	EPA 8260B	12/26/12	106	106	0.243	80-120	25
1,2-Dichloroethane	83583-01	<0.50	40.0	40.0	42.5	42.2	ug/L	EPA 8260B	12/26/12	106	106	0.567	75.7-122	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
Benzene	83583-01	<0.50	40.0	40.0	39.1	38.8	ug/L	EPA 8260B	12/26/12	97.8	97.1	0.710	80-120	25
Diisopropyl ether	83583-01	<0.50	39.4	39.4	41.6	41.8	ug/L	EPA 8260B	12/26/12	106	106	0.397	80-120	25
Ethyl-tert-butyl ether	83583-01	<0.50	40.6	40.6	39.6	39.4	ug/L	EPA 8260B	12/26/12	97.6	97.1	0.521	76.5-120	25
Ethylbenzene	83583-01	<0.50	40.0	40.0	40.9	40.5	ug/L	EPA 8260B	12/26/12	102	101	1.08	80-120	25
Methyl-t-butyl ether	83583-01	<0.50	40.1	40.1	44.7	42.3	ug/L	EPA 8260B	12/26/12	112	106	5.43	69.7-121	25
P + M Xylene	83583-01	<0.50	40.0	40.0	40.0	40.0	ug/L	EPA 8260B	12/26/12	100	100	0.0265	76.8-120	25
Tert-Butanol	83583-01	750	201	201	927	927	ug/L	EPA 8260B	12/26/12	88.0	87.9	0.160	80-120	25
Tert-amyl-methyl ether	83583-01	<0.50	40.4	40.4	41.0	40.8	ug/L	EPA 8260B	12/26/12	102	101	0.357	78.9-120	25
Toluene	83583-01	<0.50	40.0	40.0	42.5	42.1	ug/L	EPA 8260B	12/26/12	106	105	0.902	80-120	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
1,2-Dibromoethane	83583-03	<0.50	40.0	40.0	40.5	39.8	ug/L	EPA 8260B	12/26/12	101	99.6	1.61	80-120	25
1,2-Dichloroethane	83583-03	2.8	40.0	40.0	47.3	46.1	ug/L	EPA 8260B	12/26/12	111	108	2.62	75.7-122	25
Benzene	83583-03	40	40.0	40.0	78.7	76.0	ug/L	EPA 8260B	12/26/12	96.1	89.4	7.13	80-120	25
Diisopropyl ether	83583-03	<0.50	39.4	39.4	42.1	41.2	ug/L	EPA 8260B	12/26/12	107	104	2.34	80-120	25
Ethyl-tert-butyl ether	83583-03	<0.50	40.6	40.6	41.3	40.8	ug/L	EPA 8260B	12/26/12	102	100	1.24	76.5-120	25
Ethylbenzene	83583-03	2.3	40.0	40.0	41.8	40.2	ug/L	EPA 8260B	12/26/12	98.8	94.7	4.25	80-120	25
Methyl-t-butyl ether	83583-03	120	40.1	40.1	168	166	ug/L	EPA 8260B	12/26/12	116	110	5.24	69.7-121	25
P + M Xylene	83583-03	6.0	40.0	40.0	44.8	42.5	ug/L	EPA 8260B	12/26/12	97.1	91.3	6.21	76.8-120	25
Tert-Butanol	83583-03	580	201	201	790	784	ug/L	EPA 8260B	12/26/12	106	103	2.89	80-120	25
Tert-amyl-methyl ether	83583-03	<0.50	40.4	40.4	41.8	41.2	ug/L	EPA 8260B	12/26/12	104	102	1.56	78.9-120	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
Toluene	83583-03	4.1	40.0	40.0	45.6	43.9	ug/L	EPA 8260B	12/26/12	104	99.5	4.04	80-120	25
TPH-D (Si Gel)	BLANK	<50	1000	1000	882	874	ug/L	M EPA 8015	12/27/12	88.2	87.4	0.888	70-130	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	39.9	ug/L	EPA 8260B	12/23/12	100	80-120
1,2-Dichloroethane	39.9	ug/L	EPA 8260B	12/23/12	91.3	75.7-122
Benzene	39.9	ug/L	EPA 8260B	12/23/12	103	80-120
Diisopropyl ether	39.3	ug/L	EPA 8260B	12/23/12	103	80-120
Ethyl-tert-butyl ether	40.5	ug/L	EPA 8260B	12/23/12	97.7	76.5-120
Ethylbenzene	39.9	ug/L	EPA 8260B	12/23/12	108	80-120
Methyl-t-butyl ether	40.0	ug/L	EPA 8260B	12/23/12	96.4	69.7-121
P + M Xylene	39.9	ug/L	EPA 8260B	12/23/12	107	76.8-120
TPH as Gasoline	497	ug/L	EPA 8260B	12/23/12	93.7	70.0-130
Tert-Butanol	201	ug/L	EPA 8260B	12/23/12	98.9	80-120
Tert-amyl-methyl ether	40.3	ug/L	EPA 8260B	12/23/12	96.5	78.9-120
Toluene	39.9	ug/L	EPA 8260B	12/23/12	105	80-120
Benzene	39.8	ug/L	EPA 8260B	12/26/12	100	80-120
P + M Xylene	39.8	ug/L	EPA 8260B	12/26/12	106	76.8-120
TPH as Gasoline	498	ug/L	EPA 8260B	12/26/12	94.0	70.0-130
1,2-Dibromoethane	40.1	ug/L	EPA 8260B	12/23/12	106	80-120
1,2-Dichloroethane	40.1	ug/L	EPA 8260B	12/23/12	105	75.7-122
Benzene	40.1	ug/L	EPA 8260B	12/23/12	98.2	80-120
Diisopropyl ether	39.5	ug/L	EPA 8260B	12/23/12	106	80-120
Ethyl-tert-butyl ether	40.7	ug/L	EPA 8260B	12/23/12	97.8	76.5-120

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
Ethylbenzene	40.1	ug/L	EPA 8260B	12/23/12	101	80-120
Methyl-t-butyl ether	40.1	ug/L	EPA 8260B	12/23/12	104	69.7-121
P + M Xylene	40.1	ug/L	EPA 8260B	12/23/12	99.9	76.8-120
TPH as Gasoline	495	ug/L	EPA 8260B	12/23/12	102	70.0-130
Tert-Butanol	202	ug/L	EPA 8260B	12/23/12	102	80-120
Tert-amyl-methyl ether	40.4	ug/L	EPA 8260B	12/23/12	101	78.9-120
Toluene	40.1	ug/L	EPA 8260B	12/23/12	106	80-120
1,2-Dibromoethane	40.2	ug/L	EPA 8260B	12/24/12	108	80-120
1,2-Dichloroethane	40.2	ug/L	EPA 8260B	12/24/12	106	75.7-122
Benzene	40.2	ug/L	EPA 8260B	12/24/12	98.5	80-120
Diisopropyl ether	39.6	ug/L	EPA 8260B	12/24/12	106	80-120
Ethyl-tert-butyl ether	40.8	ug/L	EPA 8260B	12/24/12	100	76.5-120
Ethylbenzene	40.2	ug/L	EPA 8260B	12/24/12	102	80-120
Methyl-t-butyl ether	40.2	ug/L	EPA 8260B	12/24/12	105	69.7-121
P + M Xylene	40.2	ug/L	EPA 8260B	12/24/12	100	76.8-120
TPH as Gasoline	496	ug/L	EPA 8260B	12/24/12	105	70.0-130
Tert-Butanol	202	ug/L	EPA 8260B	12/24/12	103	80-120
Tert-amyl-methyl ether	40.6	ug/L	EPA 8260B	12/24/12	104	78.9-120
Toluene	40.2	ug/L	EPA 8260B	12/24/12	107	80-120
1,2-Dibromoethane	40.2	ug/L	EPA 8260B	12/26/12	106	80-120
1,2-Dichloroethane	40.2	ug/L	EPA 8260B	12/26/12	106	75.7-122

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
Benzene	40.2	ug/L	EPA 8260B	12/26/12	98.3	80-120
Diisopropyl ether	39.6	ug/L	EPA 8260B	12/26/12	106	80-120
Ethyl-tert-butyl ether	40.8	ug/L	EPA 8260B	12/26/12	85.0	76.5-120
Ethylbenzene	40.2	ug/L	EPA 8260B	12/26/12	104	80-120
Methyl-t-butyl ether	40.2	ug/L	EPA 8260B	12/26/12	99.7	69.7-121
P + M Xylene	40.2	ug/L	EPA 8260B	12/26/12	102	76.8-120
TPH as Gasoline	494	ug/L	EPA 8260B	12/26/12	99.9	70.0-130
Tert-Butanol	202	ug/L	EPA 8260B	12/26/12	105	80-120
Tert-amyl-methyl ether	40.5	ug/L	EPA 8260B	12/26/12	90.4	78.9-120
Toluene	40.2	ug/L	EPA 8260B	12/26/12	108	80-120
1,2-Dibromoethane	40.0	ug/L	EPA 8260B	12/26/12	101	80-120
1,2-Dichloroethane	40.0	ug/L	EPA 8260B	12/26/12	110	75.7-122
Benzene	40.0	ug/L	EPA 8260B	12/26/12	104	80-120
Diisopropyl ether	39.4	ug/L	EPA 8260B	12/26/12	106	80-120
Ethyl-tert-butyl ether	40.6	ug/L	EPA 8260B	12/26/12	101	76.5-120
Ethylbenzene	40.0	ug/L	EPA 8260B	12/26/12	99.1	80-120
Methyl-t-butyl ether	40.1	ug/L	EPA 8260B	12/26/12	102	69.7-121
P + M Xylene	40.0	ug/L	EPA 8260B	12/26/12	97.3	76.8-120
TPH as Gasoline	496	ug/L	EPA 8260B	12/26/12	94.1	70.0-130
Tert-Butanol	201	ug/L	EPA 8260B	12/26/12	102	80-120
Tert-amyl-methyl ether	40.4	ug/L	EPA 8260B	12/26/12	103	78.9-120
Toluene	40.0	ug/L	EPA 8260B	12/26/12	104	80-120

83569

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

Chain of Custody

PAGE 1 of 1

SAMPLER (SIGNATURE)

PROJECT NAME Lim

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 3510/8015) <u>W/1/2 cu</u> <u>G+1 cu</u>	TPH-DIESEL & MOTOR OIL (EPA 3510/8015)	CAM 17 METALS (EPA 6010+7000)	SEMI-VOLATILE ORGANICS (EPA 625/8270)	Pb (TOTAL or DISSOLVED) (EPA 6010)	PESTICIDES (EPA 8081)	FUEL OXYGENATES (EPA 8260)	PURGEABLE HALOCARBONS (EPA 601/8010)	TPH-G/BTEX/5 OXYS / Pb <u>3-cuV</u> (EPA METHOD 8260)	MULT-RANGE HYDROCARBONS WITH SILICA GEL CLEANUP (EPA 8015)	VOLATILE ORGANICS (EPA 624/8240/8260)	LUFT METALS (5) (EPA 6010+7000)	COMPOSITE 4:1	EDF	
MW-2		922				X								X					X	02
MW-3		1040				X								X					X	03
MW-4R		735				X								X					X	04
MW-5		905				X								X					X	05
MW-6		840				X								X					X	06
MW-7		810				X								X					X	07
MW-8		1010				X								X					X	08

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY LABORATORY:

COMMENTS:

Robert E. Kitey
(signature) (time)

[Signature]
(signature) (time)

[Signature]
(signature) (time)

Harold Brown 1150
(signature) (time)

Robert E. Kitey
(printed name) (date)

[Signature]
(printed name) (date)

[Signature]
(printed name) (date)

Harold Brown 12/8/12
(printed name) (date)

TURN AROUND TIME
STANDARD 24Hr 48Hr 72Hr

Company-ASE, INC.

Company-

Company-

Company-Buff analytical

OTHER:

CZ 10.27 a6p-1

SAMPLE RECEIPT CHECKLIST

RECEIVER
TJB for HB
Initials

SRG#: 83569 Date: 121812

Project ID: Lim

Method of Receipt: Courier Over-the-counter Shipper

Shipping Only: FedEx * OnTrac * Greyhound Other *Service level if not Priority or Sunrise (M-F): _____

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 8.6 Therm. ID# IR-3 Initial TJB Date/Time 121812/1721 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 LM Container type VOA # of containers received 40

Matrix _____ Container type _____ # of containers received _____

Matrix _____ Container type _____ # of containers received _____

Date and Time Sample Put into Temp Storage Date: 121812 Time: 1727

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:
