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

September 14, 2011

# SEMI-ANNUAL GROUNDWATER MONITORING REPORT
# JUNE 2011 GROUNDWATER SAMPLING
# at
# Lim Family Property
# 250 8th Street
# Oakland, California

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

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## 1.0 INTRODUCTION

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

## 2.0 GROUNDWATER FLOW DIRECTION AND GRADIENT

On June 30, 2011, ASE measured the depth to water in monitoring wells MW-1 through MW-8 using an electric water level sounder. The surface of the groundwater was also checked for the presence of free-floating hydrocarbons or sheen. No free-floating hydrocarbons or sheen were present in any of the monitoring wells. This was the first sampling event where neither monitoring well MW-3 nor MW-4R contained free-floating hydrocarbons. Groundwater elevation data is presented in Table One.

A groundwater elevation (potentiometric surface) contour map is shown as Figure 2. The groundwater flow direction at the site is generally to the south with an approximate gradient of 0.01 feet/foot during this sampling period. The gradient and flow direction are generally consistent with previous findings, although there is slightly more flow components to the southeast and southwest than typical. This is likely due to slight groundwater mounding related to the beginning of groundwater remediation at the site.

## 3.0 MONITORING WELL SAMPLING

On June 30, 2011, ASE collected groundwater samples from all eight 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 A for copies of the well sampling field logs.

## 4.0 ANALYTICAL RESULTS FOR GROUNDWATER

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

## 5.0 CONCLUSIONS

- TPH-G and benzene concentrations in groundwater samples collected from monitoring well MW-1 increased and are at the highest concentrations in the past ten years. This is likely due to the beginning of sparging at the site and represents a slight shift in the water table from mounding. The TPH-G concentrations of 650 and benzene concentration of 1.9 ppb are still among the lowest concentrations detected at the site.
- TPH-G, toluene, ethyl benzene, and total xylene concentrations in groundwater samples collected from monitoring well MW-2 increased from the previous results and are at the highest concentrations for the last several years, while benzene concentrations decreased in the same sample. No oxygenates or lead scavengers were detected.
- No free-floating hydrocarbons were detected in monitoring well MW-3 this period. However, very high hydrocarbon concentrations (140,000 ppb TPH-G, 12,000 ppb benzene, 21,000 ppb toluene, 4,000 ppb ethylbenzene, and 17,000 ppb total xylenes) were detected in the groundwater sample collected from this monitoring well. No oxygenates or lead scavengers were detected.
- No free-floating hydrocarbons were detected in monitoring well MW-4R this period. However, very high hydrocarbon concentrations (190,000 ppb TPH-G, 3,800 ppb benzene, 11,000 ppb toluene, 2,900 ppb ethylbenzene, and 20,000 ppb total xylenes) were detected in the groundwater sample collected from this monitoring well. No oxygenates or lead scavengers were detected.
- TPH-G, TPH-D, toluene, ethylbenzene, total xylenes, and lead scavenger concentrations in groundwater samples collected from monitoring well MW-5 remained non-detectable during this sampling event. Benzene was detected for the first time since 2008 at 1.6 ppb. The only oxygenate concentration detected was 1.0 ppb DIPE.
- No hydrocarbons or oxygenates were detected in groundwater samples collected from monitoring well MW-6.
- TPH-G and ethylbenzene concentrations increased slightly from the previous sampling in groundwater samples collected from monitoring well MW-7, while benzene, toluene and total xylene concentrations decreased in the same sample. No oxygenates or lead scavengers were detected.
- No hydrocarbons were detected in groundwater samples collected from monitoring well MW-8, indicating that the contamination has not reached the deeper water-bearing zones.

Concentrations in groundwater samples collected from the following wells exceeded Environmental Screening Levels (ESLs) for drinking water as presented in the "Screening For

Environmental Concerns at Sites With Contaminated Soil and Groundwater" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region dated May 2008:

- Concentrations of TPH-G, benzene, toluene, ethyl benzene, and xylenes in groundwater samples collected from monitoring wells MW-2 through MW-4 and MW-7 exceeded ESLs.

- Concentrations of TPH-G and/or benzene in groundwater samples collected from monitoring wells MW-1 and MW-5 exceeded the ESLs

## 6.0 RECOMMENDATIONS

ASE has installed an ozone-sparging and vapor extraction remediation system at the site and has begun operation of these remediation systems. ASE recommends continued operation of the remediation system.

Although the previous groundwater monitoring report for this site suggested that the site revert to quarterly monitoring for the first year of remediation system operation, ASE now recommends that the site remain on a semi-annual sampling schedule due to insufficient funding for the project from the California Underground Storage Tank Cleanup Fund to allow for an entire year of operation of the remediation system. With a semi-annual groundwater monitoring schedule, the next groundwater sampling event is scheduled for December 2011.

## 7.0 REPORT LIMITATIONS

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

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(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

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

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.


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

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

cc: Mr. Jerry Wickham, ACHCSA

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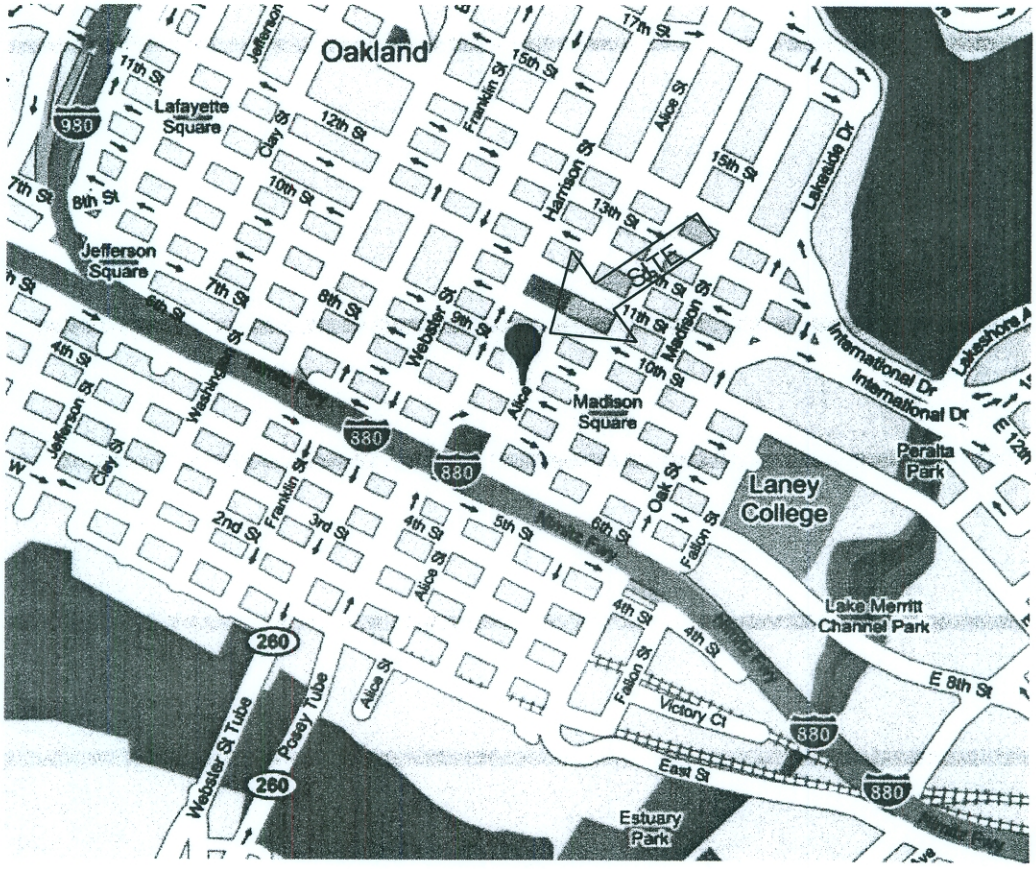
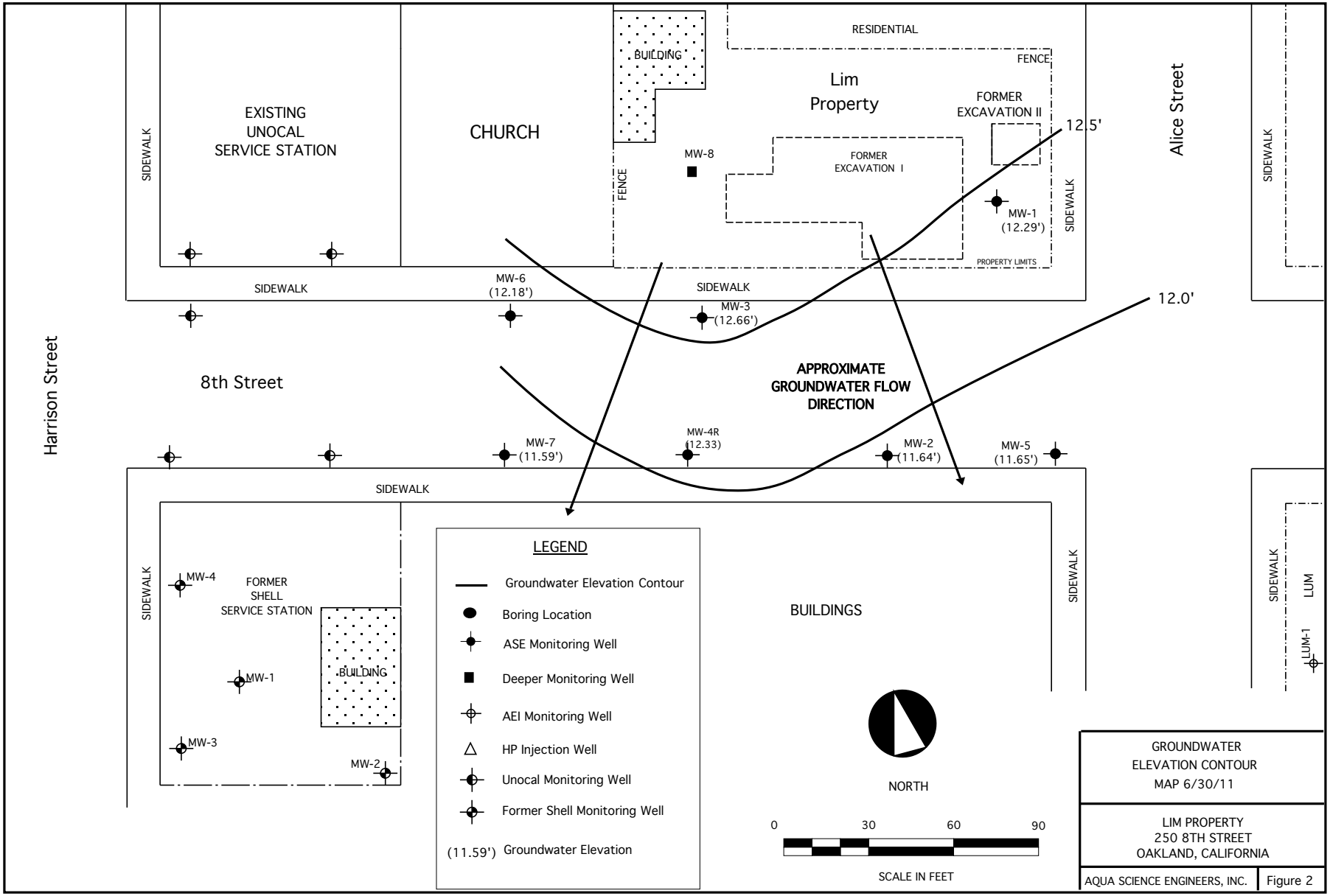
# FIGURES

NORTH




| LOCATION MAP | |
|---|---|
| LIM PROPERTY<br>250 8TH STREET<br>OAKLAND, CALIFORNIA | |
| AQUA SCIENCE ENGINEERS | FIGURE 1 |




GROUNDWATER
ELEVATION CONTOUR
MAP 6/30/11

LIM PROPERTY
250 8TH STREET
OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC. | Figure 2

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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** |

**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** |

**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-3 | 01/12/00 | 24.25 | 16.68 | 0.01 | 7.58* |
| | 04/24/00 | | 15.58 | 0.15 | 8.79* |
| | 07/20/00 | | 16.01 | 0.41 | 8.57* |
| | 10/24/00 | | 16.95 | 0.21 | 7.47* |
| | 01/18/01 | | 16.63 | 0.21 | 7.79* |
| | 04/05/01 | | 15.16 | 0.23 | 9.27* |
| | 07/17/01 | | 15.92 | 0.39 | 8.64* |
| | 10/25/01 | | 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** |

**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** |

**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** |

**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** |

# 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** |
| 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** |

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

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

# TABLE TWO

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

| Well/ Date Sampled | TPH Gasoline | TPH Diesel | Benzene | Toluene | Ethyl-benzene | Total Xylenes | MTBE | DIPE | TBA | Other Oxys | EDC | EDB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | < 5.0 | --- | --- | --- | --- | --- |
| 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 |
| **06/30/10** | **650** | **< 200** | **1.9** | **< 0.50** | **< 0.50** | **< 0.50** | **< 0.50** | **0.78** | **< 5.0** | **< 0.50** | **< 0.50** | **< 0.50** |

# TABLE TWO

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

| Well/ Date Sampled | TPH Gasoline | TPH Diesel | Benzene | Toluene | Ethyl-benzene | Total Xylenes | MTBE | DIPE | TBA | Other Oxys | EDC | EDB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-2 | | | | | | | | | | | | |
| 01/30/95 | 88,000 | 800 | 19,000 | 18,000 | 2,400 | 10,000 | -- | --- | --- | --- | --- | --- |
| 04/12/95 | 110,000 | 990 | 21,000 | 28,000 | 2,800 | 14,000 | -- | --- | --- | --- | --- | --- |
| 07/14/95 | 120,000 | 5,000 | 20,000 | 25,000 | 3,200 | 15,000 | -- | --- | --- | --- | --- | --- |
| 10/17/95 | 190,000 | 4,000 | 15,000 | 26,000 | 4,900 | 23,000 | -- | --- | --- | --- | --- | --- |
| 01/12/96 | 32,000 | 2,600 | 10,000 | 8,000 | 1,100 | 4,800 | < 2 | --- | --- | --- | --- | --- |
| 07/08/96 | 110,000 | 2,500 | 20,000 | 18,000 | 2,500 | 12,000 | < 500 | --- | --- | --- | --- | --- |
| 01/06/97 | 230,000 | 37,000 | 11,000 | 19,000 | 4,300 | 20,000 | < 1,200 | --- | --- | --- | --- | --- |
| 07/08/97 | 91,000 | 35,000 | 16,000 | 20,000 | 2,700 | 13,000 | < 1,000 | --- | --- | --- | < 0.5 | < 0.5 |
| 01/26/98 | 50,000 | 11,000 | 12,000 | 12,000 | 1,600 | 6,700 | < 250 | --- | --- | --- | 11 | < 0.5 |
| 07/23/98 | 50,000 | 8,100# | 11,000 | 8,300 | 1,800 | 7,000 | 1,100 | --- | --- | --- | 9.9 | < 0.5 |
| 01/05/99 | 50,000 | 7,600# | 12,000 | 12,000 | 2,300 | 9,600 | 1,300 | --- | --- | --- | < 50 | < 50 |
| 07/13/99 | 73,000 | 8,500 | 11,000 | 13,000 | 2,200 | 9,800 | < 500 | --- | --- | --- | 7.7 | < 0.5 |
| 01/12/00 | 63,000 | 11,000 | 10,000 | 12,000 | 1,800 | 7,800 | < 500 | --- | --- | --- | 8.8 | < 1.0 |
| 04/24/00 | 76,000 | 23,000* | 7,100 | 14,000 | 2,000 | 9,400 | < 500 | --- | --- | --- | 5.9 | < 5.0 |
| 07/20/00 | 68,000 | 5,300# | 11,000 | 14,000 | 2,300 | 11,000 | < 1,000 | --- | --- | --- | 6.7 | < 5.0 |
| 10/24/00 | 48,000 | 6,400* | 11,000 | 9,400 | 1,500 | 7,300 | < 500 | --- | --- | --- | < 5.0 | < 5.0 |
| 01/18/01 | 37,000 | 4,600* | 6,900 | 5,600 | 1,200 | 5,300 | < 500 | --- | --- | --- | < 5.0 | < 5.0 |
| 04/05/01 | 59,000 | 4,600* | 7,100 | 9,800 | 1,600 | 7,600 | < 500 | --- | --- | --- | 4.6 | < 5.0 |
| 07/17/01 | 90,000 | < 10,000 | 9,200 | 14,000 | 2,700 | 11,000 | < 50 | --- | --- | --- | < 50 | --- |
| 10/25/01 | 79,000 | < 3,800 | 9,200 | 14,000 | 2,400 | 11,000 | < 50 | --- | --- | --- | < 50 | < 50 |
| 01/22/02 | 76,000 | < 2,300 | 7,000 | 13,000 | 2,200 | 9,600 | < 50 | --- | --- | --- | < 50 | < 50 |
| 04/11/02 | 76,000 | < 1,500 | 7,800 | 11,000 | 2,900 | 12,000 | < 50 | --- | --- | --- | --- | --- |
| 06/11/02 | 72,000 | < 2,500 | 7,300 | 9,600 | 2,500 | 12,000 | < 50 | --- | --- | --- | --- | --- |
| 09/17/02 | 52,000 | < 3,000 | 5,000 | 5,400 | 2,100 | 9,100 | < 20 | --- | --- | --- | < 20 | < 20 |
| 12/18/02 | 46,000 | < 6,000 | 2,900 | 3,000 | 1,800 | 7,600 | 22 | --- | --- | --- | < 10 | < 10 |
| 03/25/03 | 87,000 | < 8,000 | 7,900 | 9,300 | 2,900 | 12,000 | < 50 | --- | --- | --- | < 50 | < 50 |
| 06/23/03 | 46,000 | < 3000 | 7,800 | 4,000 | 1,900 | 6,600 | < 50 | --- | --- | --- | < 50 | < 50 |
| 09/26/03 | 52,000 | < 3000 | 9,100 | 3,500 | 1,300 | 5,000 | < 50 | --- | --- | --- | < 50 | < 50 |
| 12/18/03 | 61,000 | < 4,000 | 13,000 | 3,500 | 1,600 | 5,600 | < 20 | --- | --- | --- | < 20 | < 20 |
| 03/12/04 | 53,000 | < 4,000 | 9,100 | 3,500 | 1,700 | 5,700 | < 25 | --- | --- | --- | < 25 | < 25 |
| 06/17/04 | 59,000 | < 3,000 | 7,100 | 4,000 | 1,700 | 7,300 | < 25 | --- | --- | --- | < 25 | < 25 |
| 09/17/04 | 33,000 | -- | 9,800 | 1,200 | 1,300 | 4,000 | < 20 | --- | --- | --- | --- | --- |
| 11/10/04*** | 44,000 | 3,600 | 13,000 | 4,400 | 1,600 | 6,000 | < 1000 | --- | --- | --- | --- | --- |
| 12/17/04 | 54,000 | < 3,000 | 7,900 | 2,200 | 1,700 | 3,900 | < 15 | --- | --- | --- | < 15 | < 15 |
| 04/28/05 | 81,000 | < 3,000 | 7,000 | 6,000 | 2,100 | 8,700 | < 15 | 90 | < 15 | < 15 | < 15 | < 15 |
| 07/19/05 | 59,000 | na | 7,900 | 4,400 | 1,900 | 7,000 | < 15 | < 15 | 77 | < 15 | < 15 | < 15 |
| 10/03/05 | 34,000 | < 800 | 7,800 | 810 | 1,000 | 2,800 | < 15 | < 15 | < 70 | < 15 | < 15 | < 15 |
| 12/06/05 | 26,000 | < 800 | 6,100 | 940 | 770 | 2,000 | < 15 | --- | --- | --- | --- | --- |
| 03/15/06 | 33,000 | < 1,500 | 7,700 | 2,600 | 1,400 | 4,200 | < 15 | < 15 | < 15 | < 15 | < 15 | < 15 |
| 06/28/06 | 96,000 | < 4,000 | 10,000 | 14,000 | 2,900 | 12,000 | < 15 | < 15 | < 5.0 | < 15 | 33 | < 15 |
| 8/31/06 | 47,000 | < 3,000 | 5,800 | 5,100 | 2,200 | 8,700 | < 15 | < 15 | 81 | < 15 | < 15 | < 15 |
| 11/21/06 | 51,000 | < 1,500 | 6,800 | 3,400 | 1,700 | 6,200 | < 15 | < 15 | 82 | < 15 | < 15 | < 15 |
| 02/23/07 | 38,000 | < 1,500 | 7,800 | 2,000 | 1,500 | 4,600 | < 15 | < 15 | 190 | < 15 | < 15 | < 15 |
| 05/02/07 | 55,000 | < 3,000 | 6,500 | 5,100 | 2,400 | 8,600 | < 15 | < 15 | 110 | < 15 | < 15 | < 15 |
| 08/09/07 | 39,000 | < 3,000 | 6,600 | 2,200 | 1,600 | 4,900 | < 15 | < 15 | 81 | < 15 | < 15 | < 15 |
| 12/06/07 | 20,000 | < 1,500 | 7,400 | 510 | 680 | 1,200 | < 15 | < 15 | 120 | < 15 | < 15 | < 15 |
| 02/26/08 | 43,000 | < 4,000 | 8,200 | 940 | 1,400 | 3,700 | < 15 | < 15 | 70 | < 15 | < 15 | < 15 |
| 05/30/08 | 31,000 | < 1,000 | 11,000 | 620 | 1,100 | 2,300 | < 15 | < 15 | 84 | < 15 | < 15 | < 15 |
| 08/28/08 | 38,000 | < 3,000 | 11,000 | 630 | 1,400 | 3,800 | < 25 | < 25 | < 150 | < 25 | --- | --- |
| 12/11/08 | 32,000 | < 2,000 | 11,000 | 610 | 1,000 | 2,700 | < 25 | < 25 | < 150 | < 25 | --- | --- |
| 03/31/09 | 44,000 | < 4,000 | 6,500 | 3,300 | 1,700 | 5,600 | < 9.0 | < 9.0 | 56 | < 9.0 | < 9.0 | < 9.0 |
| 12/31/09 | 36,000 | < 4,000 | 9,700 | 350 | 1,600 | 3,800 | < 9.0 | 13 | 56 | < 9.0 | < 9.0 | < 9.0 |
| 06/03/10 | 53,000 | < 10,000 | 8,600 | 2,600 | 2,500 | 8,000 | < 5.0 | 8.9 | 69 | < 5.0 | < 5.0 | < 5.0 |
| 12/20/10 | 39,000 | < 4,000 | 13,000 | 530 | 1,600 | 3,600 | < 15 | 21 | < 70 | < 15 | < 15 | < 15 |
| **06/30/10** | **65,000** | **< 6,000** | **7,300** | **5,900** | **2,400** | **10,000** | **< 20** | **< 20** | **< 90** | **< 20** | **< 20** | **< 20** |

# TABLE TWO

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

| Well/ Date Sampled | TPH Gasoline | TPH Diesel | Benzene | Toluene | Ethyl-benzene | Total Xylenes | MTBE | DIPE | TBA | Other Oxys | EDC | EDB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-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/ 35,000 | 52,000/ 87,000 | 5,700/ 18,000 | 28,000/ 84,000 | < 5,000 | --- | --- | --- | --- | --- |
| 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 | | | | | | | | | | | |
| **06/30/10** | **140,000** | **< 40,000** | **12,000** | **21,000** | **4,000** | **17,000** | **< 20** | **< 20** | **< 90** | **< 20** | **< 20** | **< 20** |

# TABLE TWO

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

| Well/ Date Sampled | TPH Gasoline | TPH Diesel | Benzene | Toluene | Ethyl-benzene | Total Xylenes | MTBE | DIPE | TBA | Other Oxys | EDC | EDB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-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 <5,000 | --- | --- | --- | < 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 < 500 | --- | --- | --- | < 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 | | | | | | | | | | | |
| **06/30/10** | **190,000** | **< 30,000** | **3,800** | **11,000** | **2,900** | **20,000** | **< 25** | **< 25** | **< 150** | **< 25** | **< 25** | **< 25** |

# TABLE TWO

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

| Well/ Date Sampled | TPH Gasoline | TPH Diesel | Benzene | Toluene | Ethyl-benzene | Total Xylenes | MTBE | DIPE | TBA | Other Oxys | EDC | EDB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-5 | | | | | | | | | | | | |
| 06/11/02 | < 50 | < 50 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 28 | --- | --- | --- | < 0.5 | < 0.5 |
| 09/17/02 | < 50 | 110 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 4.8 | --- | --- | --- | < 0.5 | < 0.5 |
| 12/18/02 | < 50 | 140 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 1.8 | --- | --- | --- | < 0.5 | < 0.5 |
| 03/25/03 | < 50 | 130 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 7.4 | --- | --- | --- | < 0.5 | < 0.5 |
| 06/23/03 | < 50 | 390 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 17 | --- | --- | --- | < 0.5 | < 0.5 |
| 09/26/03 | < 50 | 700 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 21 | --- | --- | --- | < 0.5 | < 0.5 |
| 12/18/03 | < 50 | 550 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 16 | --- | --- | --- | < 0.5 | < 0.5 |
| 03/12/04 | < 50 | 490 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 9.1 | --- | --- | --- | < 40 | < 40 |
| 06/17/04 | < 50 | 510 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 9.8 | --- | --- | --- | < 0.5 | < 0.5 |
| 09/17/04 | < 50 | -- | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 5.5 | --- | --- | --- | --- | --- |
| 11/10/04*** | < 50 | 370 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 5.0 | --- | --- | --- | --- | --- |
| 12/17/04 | < 50 | 120 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 9.2 | --- | --- | --- | < 0.5 | < 0.5 |
| 04/28/05 | < 50 | < 50 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 2.2 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 |
| 07/19/05 | < 50 | na | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 6.1 | 2.1 | < 5.0 | < 0.5 | < 0.5 | < 0.5 |
| 10/03/05 | < 50 | < 50 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 2.4 | 1.7 | < 5.0 | < 0.5 | < 0.5 | < 0.5 |
| 12/06/05 | < 50 | < 50 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 5.0 | --- | --- | --- | --- | --- |
| 03/15/06 | < 50 | < 50 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 3.3 | < 0.5 | < 5.0 | < 0.5 | < 0.5 | < 0.5 |
| 06/28/06 | < 50 | < 50 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | 1.8 | < 0.5 | < 5.0 | < 0.5 | < 0.5 | < 0.5 |
| 08/31/06 | < 50 | < 50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | 3.4 | < 0.50 | < 5.0 | < 0.50 | < 0.50 | < 0.50 |
| 12/05/06 | < 50 | < 50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | 5.2 | 1.7 | 5.4 | < 0.50 | < 0.50 | < 0.50 |
| 02/23/07 | < 50 | < 50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | 6.0 | 1.4 | < 5.0 | < 0.50 | < 0.50 | < 0.50 |
| 05/02/07 | < 50 | < 50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | 3.8 | 1.3 | < 5.0 | < 0.50 | < 0.50 | < 0.50 |
| 08/09/07 | < 50 | < 50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | 5.5 | 1.3 | < 5.0 | < 0.50 | < 0.50 | < 0.50 |
| 12/06/07 | < 50 | < 50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | 1.8 | 1.5 | < 5.0 | < 0.50 | < 0.50 | < 0.50 |
| 02/26/08 | 260 | < 50 | 32 | 1.3 | 0.62 | 0.92 | 3.4 | 5.6 | 7.7 | < 0.50 | 0.60 | < 0.50 |
| 05/30/08 | 71 | < 50 | 1.8 | < 0.50 | < 0.50 | < 0.50 | 2.4 | 3.1 | < 5.0 | < 0.50 | < 0.50 | < 0.50 |
| 08/28/08 | < 50 | < 50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | 2.1 | 2.2 | < 5.0 | < 0.50 | --- | --- |
| 12/11/08 | < 50 | < 50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | 2.2 | 2.5 | < 5.0 | < 0.50 | --- | --- |
| 03/31/09 | < 50 | < 50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | 1.2 | 1.3 | < 5.0 | < 0.50 | < 0.50 | < 0.50 |
| 12/31/09 | < 50 | < 50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | 1.9 | 1.5 | < 5.0 | < 0.50 | < 0.50 | < 0.50 |
| 06/03/10 | < 50 | < 50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | 0.56 | < 0.50 | < 5.0 | < 0.50 | < 0.50 | < 0.50 |
| 12/20/10 | < 50 | < 50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | 0.61 | 0.67 | < 5.0 | < 0.50 | < 0.50 | < 0.50 |
| **06/30/10** | **< 50** | **< 50** | **1.6** | **< 0.50** | **< 0.50** | **< 0.50** | **< 0.50** | **1.0** | **< 5.0** | **< 0.50** | **< 0.50** | **< 0.50** |

# TABLE TWO

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

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

# TABLE TWO

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

| Well/ Date Sampled | TPH Gasoline | TPH Diesel | Benzene | Toluene | Ethyl-benzene | Total Xylenes | MTBE | DIPE | TBA | Other Oxys | EDC | EDB |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-7 | | | | | | | | | | | | |
| 06/25/02 | 38,000 | < 2,000 | 890 | 5,100 | 1,200 | 5,200 | < 20 | --- | --- | --- | < 20 | < 20 |
| 09/17/02 | 26,000 | < 2,000 | 590 | 3,600 | 880 | 4,000 | < 20 | --- | --- | --- | < 20 | < 20 |
| 12/18/02 | NOT SAMPLED - CAR PARKED OVER WELL | | | | | | | | | | | |
| 03/25/03 | 39,000 | < 2,900 | 410 | 7,700 | 1,000 | 6,400 | < 5.0 | --- | --- | --- | < 2.5 | < 2.5 |
| 06/23/03 | 17,000 | < 1,000 | 440 | 2,600 | 630 | 2,600 | < 10 | --- | --- | --- | < 10 | < 10 |
| 09/26/03 | 17,000 | < 1,000 | 230 | 1,800 | 470 | 2,200 | < 5.0 | --- | --- | --- | < 5.0 | < 5.0 |
| 12/18/03 | 20,000 | < 1,000 | 290 | 2,500 | 590 | 2,900 | < 5.0 | --- | --- | --- | < 5.0 | < 5.0 |
| 03/12/04 | 20,000 | < 1,500 | 300 | 3,000 | 760 | 3,200 | < 10 | --- | --- | --- | < 10 | < 10 |
| 06/17/04 | 12,000 | < 800 | 250 | 1,800 | 450 | 1,900 | < 5.0 | --- | --- | --- | < 5.0 | < 5.0 |
| 09/17/04 | 9,900 | -- | 200 | 1,500 | 450 | 1,800 | < 5.0 | --- | --- | --- | --- | --- |
| 11/10/04*** | 20,000 | 1,900 | 550 | 4,200 | 920 | 4,000 | < 500 | --- | --- | --- | --- | --- |
| 12/17/04 | 14,000 | < 800 | 220 | 1,700 | 530 | 2,000 | < 3.0 | --- | --- | --- | < 3.0 | < 3.0 |
| 04/28/05 | 13,000 | < 300 | 84 | 1,000 | 660 | 2,200 | < 2.5 | < 2.5 | < 2.5 | < 2.5 | < 2.5 | < 2.5 |
| 07/19/05 | 16,000 | na | 170 | 1,800 | 540 | 2,200 | < 2.5 | < 2.5 | < 5.0 | < 2.5 | < 2.5 | < 2.5 |
| 10/03/05 | 7,400 | < 200 | 140 | 710 | 350 | 1,100 | < 0.50 | < 0.50 | < 5.0 | < 0.50 | < 0.50 | < 0.50 |
| 12/06/05 | 22,000 | < 600 | 240 | 2,300 | 800 | 3,400 | < 5.0 | --- | --- | --- | --- | --- |
| 03/15/06 | 3,800 | < 200 | 4.6 | 160 | 120 | 620 | < 0.50 | < 0.50 | < 5.0 | < 0.50 | < 0.50 | < 0.50 |
| 06/28/06 | 6,400 | < 500 | 19.0 | 340 | 490 | 940 | < 0.90 | < 0.50 | < 5.0 | < 0.50 | < 0.90 | < 0.90 |
| 08/31/06 | 20,000 | < 600 | 160 | 2,200 | 1,300 | 3,500 | < 2.5 | 1.4 | < 15 | < 5.0 | < 2.5 | < 2.5 |
| 11/21/06 | 21,000 | < 1,000 | 240 | 2,500 | 880 | 3,400 | < 5.0 | < 5.0 | < 25 | < 5.0 | < 5.0 | < 5.0 |
| 02/23/07 | 10,000 | < 200 | 150 | 1,300 | 580 | 2,400 | < 2.5 | < 2.5 | < 15 | < 2.5 | < 2.5 | < 2.5 |
| 05/02/07 | 26,000 | < 1,000 | 300 | 2,400 | 1,800 | 6,700 | < 2.5 | < 2.5 | < 50 | < 2.5 | < 2.5 | < 2.5 |
| 08/09/07 | 13,000 | < 800 | 250 | 800 | 1,000 | 3,000 | < 2.5 | < 2.5 | < 15 | < 2.5 | < 2.5 | < 2.5 |
| 12/06/07 | 9,600 | < 1,000 | 160 | 850 | 530 | 2,000 | < 2.5 | < 2.5 | 45 | < 2.5 | < 2.5 | < 2.5 |
| 02/26/08 | 14,000 | < 800 | 190 | 1,000 | 740 | 3,000 | < 2.5 | < 2.5 | 69 | < 2.5 | < 2.5 | < 2.5 |
| 05/30/08 | 9,900 | < 200 | 160 | 620 | 590 | 2,300 | < 2.5 | < 2.5 | < 15 | < 2.5 | < 2.5 | < 2.5 |
| 08/28/08 | 11,000 | < 800 | 180 | 500 | 650 | 2,400 | < 2.5 | < 2.5 | < 15 | < 2.5 | --- | --- |
| 12/11/08 | 8,000 | < 500 | 160 | 300 | 540 | 1,600 | < 2.5 | < 2.5 | < 15 | < 2.5 | --- | --- |
| 03/31/09 | 5,600 | < 300 | 82 | 190 | 360 | 1,000 | < 1.5 | < 1.5 | < 7.0 | < 1.5 | < 1.5 | < 1.5 |
| 12/31/09 | 16,000 | < 800 | 140 | 1,200 | 750 | 2,800 | < 0.5 | < 0.50 | 10 | < 0.50 | < 0.50 | < 0.50 |
| 06/03/10 | 22,000 | < 2,000 | 160 | 1,000 | 1,300 | 3,500 | < 5.0 | < 5.0 | < 25 | < 5.0 | < 5.0 | < 5.0 |
| 12/20/10 | 23,000 | < 1,000 | 230 | 820 | 1,500 | 4,900 | < 5.0 | < 5.0 | < 25 | < 5.0 | < 5.0 | < 5.0 |
| **06/30/10** | **26,000** | **< 4,000** | **190** | **310** | **1,800** | **3,900** | **< 5.0** | **< 5.0** | **< 25** | **< 5.0** | **< 5.0** | **< 5.0** |
| MW-8 | | | | | | | | | | | | |
| 02/26/08 | < 50 | < 50 | 0.51 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 5.0 | < 0.50 | < 0.50 | < 0.50 |
| 05/30/08 | < 50 | < 50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 5.0 | < 0.50 | < 0.50 | < 0.50 |
| 08/28/08 | < 50 | < 50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 5.0 | < 0.50 | --- | --- |
| 12/11/08 | < 50 | < 50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 5.0 | < 0.50 | --- | --- |
| 03/31/09 | < 50 | < 50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 5.0 | < 0.50 | < 0.50 | < 0.50 |
| 12/31/09 | < 50 | < 50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 5.0 | < 0.50 | < 0.50 | < 0.50 |
| 06/03/10 | < 50 | < 50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 5.0 | < 0.50 | < 0.50 | < 0.50 |
| 12/20/10 | < 50 | < 50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 0.50 | < 5.0 | < 0.50 | < 0.50 | < 0.50 |
| **06/30/10** | **< 50** | **< 50** | **< 0.50** | **< 0.50** | **< 0.50** | **< 0.50** | **< 0.50** | **< 0.50** | **< 5.0** | **< 0.50** | **< 0.50** | **< 0.50** |
| ESL | 100 | 100 | 1 | 40 | 30 | 20 | 5 | | | | | |

Notes:

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

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

***= Grab sample - Not purged

# = Estimated concentration reported due to overlapping fuel patterns.

/ = Results separated by a slash represent results from two different laboratory methods (8020/8260)
na = not analyzed

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

Most recent data in bold.
ESL = Environmental screening levels presented in the "Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (May 2008)" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region.

TPH = Total petroleum hydrocarbons

MTBE = Methyl tertiary butyl ether

DIPE = Diisopropyl ether

TBA = Tery-butanol

Oxy = Oxygenates

EDC = 1,2-Dichloroethane

EDB = 1,2-Dibromoethane

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

| Date Sampled & Compound Analyzed | MW-1 | MW-2 | MW-3 | MW-4 | MW-5 | MW-6 | MW-7 | MW-8 |
|---|---|---|---|---|---|---|---|---|
| 7/8/97 | | | | | | | | |
| Hydrocarbon Oil and Grease | - | < 1,000 | - | - | - | - | - | - |
| Tetrachloroethane (PCE) | 0.9 | < 0.5 | - | - | - | - | - | - |
| Other VOCs | < 0.5 - < 3 | < 0.5 - < 3 | - | - | - | - | - | - |
| 1/26/98 | | | | | | | | |
| Hydrocarbon Oil and Grease | - | < 1,000 | - | - | - | - | - | - |
| Trichloroethene | 0.7 | < 5.0 | - | - | - | - | - | - |
| Tetrachloroethene | 10 | < 5.0 | - | - | - | - | - | - |
| 1,2-Dichloroethane | < 0.5 | 11 | - | - | - | - | - | - |
| Other VOCs | < 0.5 - < 50 | < 0.5 - < 50 | - | - | - | - | - | - |
| 7/23/98 | | | | | | | | |
| Hydrocarbon Oil and Grease | - | < 1,000 | - | - | - | - | - | - |
| Tetrachloroethene | 4 | 4.6 | - | - | - | - | - | - |
| 1,2-Dichloroethane | < 2 | 9.9 | - | - | - | - | - | - |
| Other VOCs | < 2 - < 10 | < 0.5 - < 5.0 | - | - | - | - | - | - |
| 1/5/99 | | | | | | | | |
| Hydrocarbon Oil and Grease | - | < 1,000 | - | - | - | - | - | - |
| Tetrachloroethene | 5.1 | < 50 | - | - | - | - | - | - |
| Trichloroethene | 0.52 | < 50 | - | - | - | - | - | - |
| 1,1,2,2-Tetrachloroethane | 0.58 | < 50 | - | - | - | - | - | - |
| Chloroform | 8.2 | < 50 | - | - | - | - | - | - |
| Other VOCs | < 0.5 - < 5 | < 50 - < 500 | - | - | - | - | - | - |
| 7/13/99 | | | | | | | | |
| Hydrocarbon Oil and Grease | - | < 1,000 | - | - | - | - | - | - |
| Tetrachloroethene | 1.5 | 0.68 | - | - | - | - | - | - |
| Chloroform | 4.6 | < 50 | - | - | - | - | - | - |
| 1,2-Dichloroethane | <0.50 | 7.7 | - | - | - | - | - | - |
| Other VOCs | < 0.5 - < 5 | < 0.5 - < 500 | - | - | - | - | - | - |
| 1/12/00 | | | | | | | | |
| Hydrocarbon Oil and Grease | - | < 1,000 | < 1,000 | < 1,000 | - | - | - | - |
| Tetrachloroethene | 0.8 | < 1.0 | < 100 | < 50 | - | - | - | - |
| Chloroform | 3.2 | < 1.0 | < 100 | < 50 | - | - | - | - |
| 1,2-Dichloroethane | <0.50 | 8.8 | 120 | 140 | - | - | - | - |
| Acetone | - | - | 25,000 | 6,400 | - | - | - | - |
| Naphthalene | - | - | 550 | 540 | - | - | - | - |
| Isopropylbenzene | - | - | 120 | 89 | - | - | - | - |
| Other VOCs | < 0.5 - < 5.0 | < 1.0 - < 4.0 | < 100 - < 10,000 | < 50 - < 5,000 | - | - | - | - |
| 4/24/00 | | | | | | | | |
| Hydrocarbon Oil and Grease | - | <1,000 | 4,100 | < 1,000 | - | - | - | - |
| 1,2-Dichloroethane | < 0.5 | 5.9 | < 1,000 | < 250 | - | - | - | - |
| Naphthalene | - | - | 3,800 | 590 | - | - | - | - |
| Isopropylbenzene | - | - | 1,200 | < 250 | - | - | - | - |
| Other VOCs | < 0.5 - < 5.0 | < 5.0 - < 20 | 1,000 - < 100,00 | < 250 - < 25,000 | - | - | - | - |
| 7/20/00 | | | | | | | | |
| Hydrocarbon Oil and Grease | - | < 1,000 | | < 1,000 | - | - | - | - |
| Tetrachloroethene | 0.59 | < 5.0 | FREE | < 200 | - | - | - | - |
| Chloroform | 2.1 | < 5.0 | PRODUCT | < 200 | - | - | - | - |
| 1,2-Dichloroethane | < 0.5 | 6.7 | --- | < 200 | - | - | - | - |
| Acetone | - | - | NOT | < 20,000 | - | - | - | - |
| Naphthalene | - | - | SAMPLED | 730 | - | - | - | - |
| Other VOCs | < 0.5 - < 20 | < 5.0 - < 20 | | < 250 - < 20,000 | - | - | - | - |
| 10/24/00 | | | FREE | | | | | |
| Hydrocarbon Oil and Grease | - | < 1,000 | PRODUCT | < 1,000 | - | - | - | - |
| Tetrachloroethene | < 0.5 | < 5.0 | --- | < 250 | - | - | - | - |
| Chloroform | 1.0 | < 5.0 | NOT | < 250 | - | - | - | - |
| Other VOCs | < 0.5 - < 20 | < 5.0 - < 20 | SAMPLED | < 250 - < 25,000 | - | - | - | - |
| 1/18/01 | | | FREE | | | | | |
| Hydrocarbon Oil and Grease | - | 2,100 | PRODUCT | 1,300 | - | - | - | - |
| Tetrachloroethene | 1.3 | < 5.0 | --- | < 250 | - | - | - | - |
| Chloroform | 6.4 | < 5.0 | NOT | < 250 | - | - | - | - |
| Other VOCs | < 0.5 - < 20 | < 5.0 - < 20 | SAMPLED | < 250 - < 25,000 | - | - | - | - |

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

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

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# APPENDIX A

Well Sampling Field Log

# AQUA SCIENCE ENGINEERS

## WELL SAMPLING FIELD LOG

PROJECT NAME Lim

JOB NUMBER 2808 DATE OF SAMPLING 06-30-11

WELL ID. MW-1 SAMPLER DA

TOTAL DEPTH OF WELL 26.80 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 17.43 TIME OF MEASUREMENT

PRODUCT THICKNESS 0

DEPTH OF WELL CASING IN WATER 9.37

NUMBER OF GALLONS PER WELL CASING VOLUME 1.5

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 4.5

EQUIPMENT USED TO PURGE WELL NEW DISPOSABLE BAILER

TIME EVACUATION STARTED 1005 TIME EVACUATION COMPLETED 1015

TIME SAMPLES WERE COLLECTED 1017

DID WELL GO DRY NO AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 5

SAMPLING DEVICE NEW DISPOSABLE BAILER

SAMPLE COLOR CLEAR ODOR/SEDIMENT NO / NO

### CHEMICAL DATA

| VOLUME PURGED | TEMPERATURE | PH | CONDUCTIVITY |
|---|---|---|---|
| 1 | 19.8 | 6.4 | 570 |
| 2 | 19.9 | 6.4 | 570 |
| 3 | 19.9 | 6.4 | 580 |

### SAMPLES COLLECTED

| SAMPLE | # OF CONTAINERS | SIZE AND TYPE OF CONTAINER | ANALYSIS | PRESERVED |
|---|---|---|---|---|
| MW-1 | 5 | 40 ML VOA | 8015/8260 | ✓ |
| | | | | |
| | | | | |

# AQUA SCIENCE ENGINEERS

## WELL SAMPLING FIELD LOG

PROJECT NAME LIM

JOB NUMBER 2808 DATE OF SAMPLING 06.30.11

WELL ID. MW-2 SAMPLER DA

TOTAL DEPTH OF WELL 26.80 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 16.55 TIME OF MEASUREMENT

PRODUCT THICKNESS 0

DEPTH OF WELL CASING IN WATER 10.25

NUMBER OF GALLONS PER WELL CASING VOLUME 1.64

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 4.92

EQUIPMENT USED TO PURGE WELL (NEW DISPOSABLE BAILER)

TIME EVACUATION STARTED 0655 TIME EVACUATION COMPLETED 0702

TIME SAMPLES WERE COLLECTED 0705

DID WELL GO DRY NO AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 5

SAMPLING DEVICE (NEW DISPOSABLE BAILER)

SAMPLE COLOR LT GRAY ODOR/SEDIMENT NONE HC / SLIGHT

### CHEMICAL DATA

| VOLUME PURGED | TEMPERATURE | PH | CONDUCTIVITY |
|---|---|---|---|
| 1 | 18.3 | 6.6 | 700 |
| 2 | 18.1 | 6.7 | 710 |
| 3 | 18.1 | 6.7 | 710 |

### SAMPLES COLLECTED

| SAMPLE | # OF CONTAINERS | SIZE AND TYPE OF CONTAINER | ANALYSIS | PRESERVED |
|---|---|---|---|---|
| MW-2 | 5 | 40 ML VOA | 8015/8260 | ✓ |
| | | | | |
| | | | | |

# AQUA SCIENCE ENGINEERS

## WELL SAMPLING FIELD LOG

PROJECT NAME LIM

JOB NUMBER 2808 DATE OF SAMPLING 06.30.11

WELL ID. MW-3 SAMPLER DA

TOTAL DEPTH OF WELL 30.0 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 15.92 TIME OF MEASUREMENT

PRODUCT THICKNESS 0

DEPTH OF WELL CASING IN WATER 14.08

NUMBER OF GALLONS PER WELL CASING VOLUME 2.25

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 6.75

EQUIPMENT USED TO PURGE WELL (NEW DISPOSABLE BAILER)

TIME EVACUATION STARTED 0850 TIME EVACUATION COMPLETED 0906

TIME SAMPLES WERE COLLECTED 0910

DID WELL GO DRY NO AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 7

SAMPLING DEVICE (NEW DISPOSABLE BAILER)

SAMPLE COLOR LT GRAY ODOR/SEDIMENT STRONG HC / SLIGHT

## CHEMICAL DATA

| VOLUME PURGED | TEMPERATURE | PH | CONDUCTIVITY |
|---|---|---|---|
| 1 | 20.2 | 6.4 | 820 |
| 2 | 20.3 | 6.5 | 810 |
| 3 | 20.3 | 6.5 | 820 |

## SAMPLES COLLECTED

| SAMPLE | # OF CONTAINERS | SIZE AND TYPE OF CONTAINER | ANALYSIS | PRESERVED |
|---|---|---|---|---|
| MW-3 | 5 | 40 ML VOA | 8015/8260 | ✓ |
| | | | | |
| | | | | |

# AQUA SCIENCE ENGINEERS

## WELL SAMPLING FIELD LOG

PROJECT NAME LIM

JOB NUMBER 2808 DATE OF SAMPLING 06-30-11

WELL ID. MW-4 SAMPLER DA

TOTAL DEPTH OF WELL 28.0 WELL DIAMETER 4

DEPTH TO WATER PRIOR TO PURGING 16.45 TIME OF MEASUREMENT

PRODUCT THICKNESS 0

DEPTH OF WELL CASING IN WATER 11.55

NUMBER OF GALLONS PER WELL CASING VOLUME 3.46

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 10

EQUIPMENT USED TO PURGE WELL (NEW DISPOSABLE BAILER)

TIME EVACUATION STARTED 0755 TIME EVACUATION COMPLETED 0815

TIME SAMPLES WERE COLLECTED 0818

DID WELL GO DRY NO AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 10

SAMPLING DEVICE (NEW DISPOSABLE BAILER)

SAMPLE COLOR LT GRAY ODOR/SEDIMENT STR HC / SLIGHT

### CHEMICAL DATA

| VOLUME PURGED | TEMPERATURE | PH | CONDUCTIVITY |
|---|---|---|---|
| 1 | 19.0 | 6.6 | 600 |
| 2 | 18.8 | 6.7 | 610 |
| 3 | 18.8 | 6.7 | 610 |

### SAMPLES COLLECTED

| SAMPLE | # OF CONTAINERS | SIZE AND TYPE OF CONTAINER | ANALYSIS | PRESERVED |
|---|---|---|---|---|
| MW-4 | 5 | 40 ML VOA | 8015/8260 | ✓ |
| | | | | |
| | | | | |

# AQUA SCIENCE ENGINEERS

## WELL SAMPLING FIELD LOG

PROJECT NAME LIM

JOB NUMBER 2808 DATE OF SAMPLING 06.30.11

WELL ID. MW-5 SAMPLER DA

TOTAL DEPTH OF WELL 29.6 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 16.75 TIME OF MEASUREMENT

PRODUCT THICKNESS 0

DEPTH OF WELL CASING IN WATER 12.85

NUMBER OF GALLONS PER WELL CASING VOLUME 2

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 6

EQUIPMENT USED TO PURGE WELL (NEW DISPOSABLE BAILER)

TIME EVACUATION STARTED 0715 TIME EVACUATION COMPLETED 0725

TIME SAMPLES WERE COLLECTED 0727

DID WELL GO DRY NO AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 6

SAMPLING DEVICE (NEW DISPOSABLE BAILER)

SAMPLE COLOR LT BRN ODOR/SEDIMENT NO / SLIGHT

### CHEMICAL DATA

| VOLUME PURGED | TEMPERATURE | PH | CONDUCTIVITY |
|---|---|---|---|
| 1 | 18.3 | 6.9 | 560 |
| 2 | 18.3 | 6.7 | 520 |
| 3 | 18.4 | 6.7 | 520 |

### SAMPLES COLLECTED

| SAMPLE | # OF CONTAINERS | SIZE AND TYPE OF CONTAINER | ANALYSIS | PRESERVED |
|---|---|---|---|---|
| MW-5 | 5 | 40 ML VOA | 8015/8260 | ✓ |
| | | | | |
| | | | | |

# AQUA SCIENCE ENGINEERS

## WELL SAMPLING FIELD LOG

PROJECT NAME LIM

JOB NUMBER 2808 DATE OF SAMPLING 06.30.11

WELL ID. MW-6 SAMPLER DA

TOTAL DEPTH OF WELL 29.5 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 17.02 TIME OF MEASUREMENT

PRODUCT THICKNESS ~~0~~

DEPTH OF WELL CASING IN WATER 12.48

NUMBER OF GALLONS PER WELL CASING VOLUME 2

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 6

EQUIPMENT USED TO PURGE WELL (NEW DISPOSABLE BAILER)

TIME EVACUATION STARTED 0825 TIME EVACUATION COMPLETED 0834

TIME SAMPLES WERE COLLECTED 0837

DID WELL GO DRY NO AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 6

SAMPLING DEVICE (NEW DISPOSABLE BAILER)

SAMPLE COLOR BRN ODOR/SEDIMENT NO / SLIGHT

### CHEMICAL DATA

| VOLUME PURGED | TEMPERATURE | PH | CONDUCTIVITY |
|---|---|---|---|
| 1 | 19.0 | 6.6 | 200 |
| 2 | 19.0 | 6.5 | 220 |
| 3 | 19.0 | 6.4 | 230 |

### SAMPLES COLLECTED

| SAMPLE | # OF CONTAINERS | SIZE AND TYPE OF CONTAINER | ANALYSIS | PRESERVED |
|---|---|---|---|---|
| MW-6 | 5 | 40 ML VOA | 8015/8260 | ✓ |
| | | | | |
| | | | | |

# AQUA SCIENCE ENGINEERS

## WELL SAMPLING FIELD LOG

PROJECT NAME LIM

JOB NUMBER 2808 DATE OF SAMPLING 06.30.11

WELL ID. MW-7 SAMPLER DA

TOTAL DEPTH OF WELL 28.0 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 17.36 TIME OF MEASUREMENT

PRODUCT THICKNESS 0

DEPTH OF WELL CASING IN WATER 10.64

NUMBER OF GALLONS PER WELL CASING VOLUME 1.7

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 5.1

EQUIPMENT USED TO PURGE WELL (NEW DISPOSABLE BAILER)

TIME EVACUATION STARTED 0735 TIME EVACUATION COMPLETED 0745

TIME SAMPLES WERE COLLECTED ~~0747~~ 0747

DID WELL GO DRY NO AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 5.1

SAMPLING DEVICE (NEW DISPOSABLE BAILER)

SAMPLE COLOR LT GRAY ODOR/SEDIMENT MOD HC/SLIGHT

### CHEMICAL DATA

| VOLUME PURGED | TEMPERATURE | PH | CONDUCTIVITY |
|---|---|---|---|
| 1 | 18.7 | 6.7 | 640 |
| 2 | 18.8 | 6.7 | 650 |
| 3 | 18.8 | 6.7 | 660 |

### SAMPLES COLLECTED

| SAMPLE | # OF CONTAINERS | SIZE AND TYPE OF CONTAINER | ANALYSIS | PRESERVED |
|---|---|---|---|---|
| MW-7 | 5 | 40 ML VOA | 8015/8260 | ✓ |
| | | | | |
| | | | | |

# AQUA SCIENCE ENGINEERS

## WELL SAMPLING FIELD LOG

PROJECT NAME Lim

JOB NUMBER 2808 DATE OF SAMPLING 06.30.11

WELL ID. MW-8 SAMPLER DA

TOTAL DEPTH OF WELL 49.00 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 21.95 TIME OF MEASUREMENT

PRODUCT THICKNESS 0

DEPTH OF WELL CASING IN WATER 27.05

NUMBER OF GALLONS PER WELL CASING VOLUME 4.3

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 13

EQUIPMENT USED TO PURGE WELL (NEW DISPOSABLE BAILER)

TIME EVACUATION STARTED 0930 TIME EVACUATION COMPLETED 0945

TIME SAMPLES WERE COLLECTED 0950

DID WELL GO DRY NO AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 13

SAMPLING DEVICE (NEW DISPOSABLE BAILER)

SAMPLE COLOR CLEAR ODOR/SEDIMENT NO/NO

### CHEMICAL DATA

| VOLUME PURGED | TEMPERATURE | PH | CONDUCTIVITY |
|---|---|---|---|
| 1 | 20.3 | 8.1 | 520 |
| 2 | 20.1 | 8.2 | 510 |
| 3 | 20.1 | 8.2 | 500 |

### SAMPLES COLLECTED

| SAMPLE | # OF CONTAINERS | SIZE AND TYPE OF CONTAINER | ANALYSIS | PRESERVED |
|---|---|---|---|---|
| MW-8 | 5 | 40 ML VOA | 8015/8260 | ✓ |
| | | | | |
| | | | | |

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

# APPENDIX B

Certified Analytical Report
and
Chain of Custody Documentation

KIFF Analytical LLC

Report Number : 78028
Date : 07/14/2011

# Laboratory Results

David Allen
Aqua Science Engineers, Inc.
55 Oak Court, Suite 220
Danville, CA 94526

Subject : 8 Water Samples
Project Name : LIM
Project Number : 2808

Dear Mr. Allen,

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

Sincerely,

Joel Kiff

KIFF Analytical LLC

Report Number : 78028
Date : 07/14/2011

Subject : 8 Water Samples
Project Name : LIM
Project Number : 2808

# Case Narrative

Sample MW-2 was analyzed outside of hold time for Method EPA 8260B. The hydrochloric acid (HCl) preservation was insufficient to maintain a pH of 2.0 or less required to extend sample hold time from 7 to 14 days.

KIFF Analytical LLC

Report Number : 78028
Date : 07/14/2011

Project Name : **LIM**
Project Number : **2808**

Sample : **MW-1** Matrix : Water Lab Number : 78028-01
Sample Date :06/30/2011

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date/Time Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **1.9** | 0.50 | ug/L | EPA 8260B | 07/09/11 00:24 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/09/11 00:24 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/09/11 00:24 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/09/11 00:24 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/09/11 00:24 |
| **Diisopropyl ether (DIPE)** | **0.78** | 0.50 | ug/L | EPA 8260B | 07/09/11 00:24 |
| Ethyl-t-butyl ether (ETBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/09/11 00:24 |
| Tert-amyl methyl ether (TAME) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/09/11 00:24 |
| Tert-Butanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 07/09/11 00:24 |
| **TPH as Gasoline** | **650** | 50 | ug/L | EPA 8260B | 07/09/11 00:24 |
| 1,2-Dichloroethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/09/11 00:24 |
| 1,2-Dibromoethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/09/11 00:24 |
| 1,2-Dichloroethane-d4 (Surr) | 95.0 | | % Recovery | EPA 8260B | 07/09/11 00:24 |
| Toluene - d8 (Surr) | 102 | | % Recovery | EPA 8260B | 07/09/11 00:24 |
| TPH as Diesel (Silica Gel) | < 200 | 200 | ug/L | M EPA 8015 | 07/13/11 01:51 |
| (Note: MRL increased due to interference from Gasoline-range hydrocarbons.) | | | | | |
| Octacosane (Silica Gel Surr) | 111 | | % Recovery | M EPA 8015 | 07/13/11 01:51 |

KIFF Analytical LLC

Report Number : 78028
Date : 07/14/2011

Project Name : **LIM**
Project Number : **2808**

Sample : **MW-2** Matrix : Water Lab Number : 78028-02
Sample Date :06/30/2011

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date/Time Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **7300** | 20 | ug/L | EPA 8260B | 07/09/11 04:57 |
| **Toluene** | **5900** | 20 | ug/L | EPA 8260B | 07/09/11 04:57 |
| **Ethylbenzene** | **2400** | 20 | ug/L | EPA 8260B | 07/09/11 04:57 |
| **Total Xylenes** | **10000** | 20 | ug/L | EPA 8260B | 07/09/11 04:57 |
| Methyl-t-butyl ether (MTBE) | < 20 | 20 | ug/L | EPA 8260B | 07/09/11 04:57 |
| Diisopropyl ether (DIPE) | < 20 | 20 | ug/L | EPA 8260B | 07/09/11 04:57 |
| Ethyl-t-butyl ether (ETBE) | < 20 | 20 | ug/L | EPA 8260B | 07/09/11 04:57 |
| Tert-amyl methyl ether (TAME) | < 20 | 20 | ug/L | EPA 8260B | 07/09/11 04:57 |
| Tert-Butanol | < 90 | 90 | ug/L | EPA 8260B | 07/09/11 04:57 |
| **TPH as Gasoline** | **65000** | 2000 | ug/L | EPA 8260B | 07/09/11 04:57 |
| 1,2-Dichloroethane | < 20 | 20 | ug/L | EPA 8260B | 07/09/11 04:57 |
| 1,2-Dibromoethane | < 20 | 20 | ug/L | EPA 8260B | 07/09/11 04:57 |
| 1,2-Dichloroethane-d4 (Surr) | 97.0 | | % Recovery | EPA 8260B | 07/09/11 04:57 |
| Toluene - d8 (Surr) | 99.0 | | % Recovery | EPA 8260B | 07/09/11 04:57 |
| TPH as Diesel (Silica Gel) | < 6000 | 6000 | ug/L | M EPA 8015 | 07/13/11 09:01 |
| (Note: MRL increased due to interference from Gasoline-range hydrocarbons.) | | | | | |
| Octacosane (Silica Gel Surr) | 99.5 | | % Recovery | M EPA 8015 | 07/13/11 09:01 |

KIFF Analytical LLC

Report Number : 78028
Date : 07/14/2011

Project Name : **LIM**
Project Number : **2808**

Sample : **MW-3** Matrix : Water Lab Number : 78028-03
Sample Date :06/30/2011

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date/Time Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **12000** | 20 | ug/L | EPA 8260B | 07/09/11 05:33 |
| **Toluene** | **21000** | 50 | ug/L | EPA 8260B | 07/12/11 00:19 |
| **Ethylbenzene** | **4000** | 20 | ug/L | EPA 8260B | 07/09/11 05:33 |
| **Total Xylenes** | **17000** | 50 | ug/L | EPA 8260B | 07/12/11 00:19 |
| Methyl-t-butyl ether (MTBE) | < 20 | 20 | ug/L | EPA 8260B | 07/09/11 05:33 |
| Diisopropyl ether (DIPE) | < 20 | 20 | ug/L | EPA 8260B | 07/09/11 05:33 |
| Ethyl-t-butyl ether (ETBE) | < 20 | 20 | ug/L | EPA 8260B | 07/09/11 05:33 |
| Tert-amyl methyl ether (TAME) | < 20 | 20 | ug/L | EPA 8260B | 07/09/11 05:33 |
| Tert-Butanol | < 90 | 90 | ug/L | EPA 8260B | 07/09/11 05:33 |
| **TPH as Gasoline** | **140000** | 2000 | ug/L | EPA 8260B | 07/09/11 05:33 |
| 1,2-Dichloroethane | < 20 | 20 | ug/L | EPA 8260B | 07/09/11 05:33 |
| 1,2-Dibromoethane | < 20 | 20 | ug/L | EPA 8260B | 07/09/11 05:33 |
| 1,2-Dichloroethane-d4 (Surr) | 102 | | % Recovery | EPA 8260B | 07/09/11 05:33 |
| Toluene - d8 (Surr) | 97.7 | | % Recovery | EPA 8260B | 07/09/11 05:33 |
| TPH as Diesel (Silica Gel) | < 40000 | 40000 | ug/L | M EPA 8015 | 07/13/11 03:02 |
| (Note: MRL increased due to interference from Gasoline-range hydrocarbons.) | | | | | |
| Octacosane (Silica Gel Surr) | 105 | | % Recovery | M EPA 8015 | 07/13/11 03:02 |

KIFF Analytical LLC

Report Number : 78028
Date : 07/14/2011

Project Name : **LIM**
Project Number : **2808**

Sample : **MW-4** Matrix : Water Lab Number : 78028-04
Sample Date :06/30/2011

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date/Time Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **3800** | 25 | ug/L | EPA 8260B | 07/09/11 06:12 |
| **Toluene** | **11000** | 25 | ug/L | EPA 8260B | 07/09/11 06:12 |
| **Ethylbenzene** | **2900** | 25 | ug/L | EPA 8260B | 07/09/11 06:12 |
| **Total Xylenes** | **20000** | 25 | ug/L | EPA 8260B | 07/09/11 06:12 |
| Methyl-t-butyl ether (MTBE) | < 25 | 25 | ug/L | EPA 8260B | 07/09/11 06:12 |
| Diisopropyl ether (DIPE) | < 25 | 25 | ug/L | EPA 8260B | 07/09/11 06:12 |
| Ethyl-t-butyl ether (ETBE) | < 25 | 25 | ug/L | EPA 8260B | 07/09/11 06:12 |
| Tert-amyl methyl ether (TAME) | < 25 | 25 | ug/L | EPA 8260B | 07/09/11 06:12 |
| Tert-Butanol | < 150 | 150 | ug/L | EPA 8260B | 07/09/11 06:12 |
| **TPH as Gasoline** | **190000** | 2500 | ug/L | EPA 8260B | 07/09/11 06:12 |
| 1,2-Dichloroethane | < 25 | 25 | ug/L | EPA 8260B | 07/09/11 06:12 |
| 1,2-Dibromoethane | < 25 | 25 | ug/L | EPA 8260B | 07/09/11 06:12 |
| 1,2-Dichloroethane-d4 (Surr) | 102 | | % Recovery | EPA 8260B | 07/09/11 06:12 |
| Toluene - d8 (Surr) | 99.7 | | % Recovery | EPA 8260B | 07/09/11 06:12 |
| TPH as Diesel (Silica Gel) | < 30000 | 30000 | ug/L | M EPA 8015 | 07/13/11 03:37 |
| (Note: MRL increased due to interference from Gasoline-range hydrocarbons.) | | | | | |
| Octacosane (Silica Gel Surr) | 105 | | % Recovery | M EPA 8015 | 07/13/11 03:37 |

KIFF Analytical LLC

Report Number : 78028
Date : 07/14/2011

Project Name : **LIM**
Project Number : **2808**

Sample : **MW-5** Matrix : Water Lab Number : 78028-05

Sample Date :06/30/2011

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date/Time Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **1.6** | 0.50 | ug/L | EPA 8260B | 07/13/11 02:34 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/13/11 02:34 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/13/11 02:34 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/13/11 02:34 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/13/11 02:34 |
| **Diisopropyl ether (DIPE)** | **1.0** | 0.50 | ug/L | EPA 8260B | 07/13/11 02:34 |
| Ethyl-t-butyl ether (ETBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/13/11 02:34 |
| Tert-amyl methyl ether (TAME) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/13/11 02:34 |
| Tert-Butanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 07/13/11 02:34 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 07/13/11 02:34 |
| 1,2-Dichloroethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/13/11 02:34 |
| 1,2-Dibromoethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/13/11 02:34 |
| 1,2-Dichloroethane-d4 (Surr) | 101 | | % Recovery | EPA 8260B | 07/13/11 02:34 |
| Toluene - d8 (Surr) | 94.3 | | % Recovery | EPA 8260B | 07/13/11 02:34 |
| TPH as Diesel (Silica Gel) | < 50 | 50 | ug/L | M EPA 8015 | 07/13/11 06:40 |
| Octacosane (Silica Gel Surr) | 110 | | % Recovery | M EPA 8015 | 07/13/11 06:40 |

KIFF Analytical LLC

Report Number : 78028
Date : 07/14/2011

Project Name : **LIM**
Project Number : **2808**

Sample : **MW-6** Matrix : Water Lab Number : 78028-06

Sample Date :06/30/2011

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date/Time Analyzed |
|---|---|---|---|---|---|
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/11 14:21 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/11 14:21 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/11 14:21 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/11 14:21 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/11 14:21 |
| Diisopropyl ether (DIPE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/11 14:21 |
| Ethyl-t-butyl ether (ETBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/11 14:21 |
| Tert-amyl methyl ether (TAME) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/11 14:21 |
| Tert-Butanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 07/11/11 14:21 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 07/11/11 14:21 |
| 1,2-Dichloroethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/11 14:21 |
| 1,2-Dibromoethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/11 14:21 |
| 1,2-Dichloroethane-d4 (Surr) | 99.3 | | % Recovery | EPA 8260B | 07/11/11 14:21 |
| Toluene - d8 (Surr) | 99.5 | | % Recovery | EPA 8260B | 07/11/11 14:21 |
| TPH as Diesel (Silica Gel) | < 50 | 50 | ug/L | M EPA 8015 | 07/13/11 23:54 |
| Octacosane (Silica Gel Surr) | 106 | | % Recovery | M EPA 8015 | 07/13/11 23:54 |

KIFF Analytical LLC

Report Number : 78028
Date : 07/14/2011

Project Name : **LIM**
Project Number : **2808**

Sample : **MW-7** Matrix : Water Lab Number : 78028-07
Sample Date :06/30/2011

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date/Time Analyzed |
|---|---|---|---|---|---|
| **Benzene** | **190** | 5.0 | ug/L | EPA 8260B | 07/09/11 01:53 |
| **Toluene** | **310** | 5.0 | ug/L | EPA 8260B | 07/09/11 01:53 |
| **Ethylbenzene** | **1800** | 5.0 | ug/L | EPA 8260B | 07/09/11 01:53 |
| **Total Xylenes** | **3900** | 5.0 | ug/L | EPA 8260B | 07/09/11 01:53 |
| Methyl-t-butyl ether (MTBE) | < 5.0 | 5.0 | ug/L | EPA 8260B | 07/09/11 01:53 |
| Diisopropyl ether (DIPE) | < 5.0 | 5.0 | ug/L | EPA 8260B | 07/09/11 01:53 |
| Ethyl-t-butyl ether (ETBE) | < 5.0 | 5.0 | ug/L | EPA 8260B | 07/09/11 01:53 |
| Tert-amyl methyl ether (TAME) | < 5.0 | 5.0 | ug/L | EPA 8260B | 07/09/11 01:53 |
| Tert-Butanol | < 25 | 25 | ug/L | EPA 8260B | 07/09/11 01:53 |
| **TPH as Gasoline** | **26000** | 500 | ug/L | EPA 8260B | 07/09/11 01:53 |
| 1,2-Dichloroethane | < 5.0 | 5.0 | ug/L | EPA 8260B | 07/09/11 01:53 |
| 1,2-Dibromoethane | < 5.0 | 5.0 | ug/L | EPA 8260B | 07/09/11 01:53 |
| 1,2-Dichloroethane-d4 (Surr) | 98.3 | | % Recovery | EPA 8260B | 07/09/11 01:53 |
| Toluene - d8 (Surr) | 96.1 | | % Recovery | EPA 8260B | 07/09/11 01:53 |
| TPH as Diesel (Silica Gel) | < 4000 | 4000 | ug/L | M EPA 8015 | 07/13/11 07:50 |
| (Note: MRL increased due to interference from Gasoline-range hydrocarbons.) | | | | | |
| Octacosane (Silica Gel Surr) | 106 | | % Recovery | M EPA 8015 | 07/13/11 07:50 |

KIFF Analytical LLC

Report Number : 78028
Date : 07/14/2011

Project Name : **LIM**
Project Number : **2808**

Sample : **MW-8** Matrix : Water Lab Number : 78028-08

Sample Date :06/30/2011

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date/Time Analyzed |
|---|---|---|---|---|---|
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/11 14:56 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/11 14:56 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/11 14:56 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/11 14:56 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/11 14:56 |
| Diisopropyl ether (DIPE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/11 14:56 |
| Ethyl-t-butyl ether (ETBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/11 14:56 |
| Tert-amyl methyl ether (TAME) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/11 14:56 |
| Tert-Butanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 07/11/11 14:56 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 07/11/11 14:56 |
| 1,2-Dichloroethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/11 14:56 |
| 1,2-Dibromoethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/11 14:56 |
| 1,2-Dichloroethane-d4 (Surr) | 99.2 | | % Recovery | EPA 8260B | 07/11/11 14:56 |
| Toluene - d8 (Surr) | 99.2 | | % Recovery | EPA 8260B | 07/11/11 14:56 |
| TPH as Diesel (Silica Gel) | < 50 | 50 | ug/L | M EPA 8015 | 07/13/11 08:26 |
| Octacosane (Silica Gel Surr) | 112 | | % Recovery | M EPA 8015 | 07/13/11 08:26 |

Report Number : 78028

Date : 07/14/2011

**QC Report : Method Blank Data**

Project Name : **LIM**

Project Number : **2808**

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| TPH as Diesel (Silica Gel) | < 50 | 50 | ug/L | M EPA 8015 | 07/12/2011 |
| Octacosane (Silica Gel Surr) | 74.6 | | % | M EPA 8015 | 07/12/2011 |
| TPH as Diesel (Silica Gel) | < 50 | 50 | ug/L | M EPA 8015 | 07/14/2011 |
| Octacosane (Silica Gel Surr) | 111 | | % | M EPA 8015 | 07/14/2011 |
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/08/2011 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/08/2011 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/08/2011 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/08/2011 |
| Diisopropyl ether (DIPE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/08/2011 |
| Ethyl-t-butyl ether (ETBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/08/2011 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/08/2011 |
| Tert-Butanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 07/08/2011 |
| Tert-amyl methyl ether (TAME) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/08/2011 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 07/08/2011 |
| 1,2-Dibromoethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/08/2011 |
| 1,2-Dichloroethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/08/2011 |
| 1,2-Dichloroethane-d4 (Surr) | 95.2 | | % | EPA 8260B | 07/08/2011 |
| Toluene - d8 (Surr) | 102 | | % | EPA 8260B | 07/08/2011 |

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/12/2011 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/12/2011 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/12/2011 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/12/2011 |
| Diisopropyl ether (DIPE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/12/2011 |
| Ethyl-t-butyl ether (ETBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/12/2011 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/12/2011 |
| Tert-Butanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 07/12/2011 |
| Tert-amyl methyl ether (TAME) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/12/2011 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 07/12/2011 |
| 1,2-Dibromoethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/12/2011 |
| 1,2-Dichloroethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/12/2011 |
| 1,2-Dichloroethane-d4 (Surr) | 101 | | % | EPA 8260B | 07/12/2011 |
| Toluene - d8 (Surr) | 100 | | % | EPA 8260B | 07/12/2011 |
| Benzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/2011 |
| Ethylbenzene | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/2011 |
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/2011 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/2011 |
| Diisopropyl ether (DIPE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/2011 |
| Ethyl-t-butyl ether (ETBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/2011 |
| Methyl-t-butyl ether (MTBE) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/2011 |
| Tert-Butanol | < 5.0 | 5.0 | ug/L | EPA 8260B | 07/11/2011 |
| Tert-amyl methyl ether (TAME) | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/2011 |
| TPH as Gasoline | < 50 | 50 | ug/L | EPA 8260B | 07/11/2011 |
| 1,2-Dibromoethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/2011 |
| 1,2-Dichloroethane | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/2011 |
| 1,2-Dichloroethane-d4 (Surr) | 98.8 | | % | EPA 8260B | 07/11/2011 |
| Toluene - d8 (Surr) | 99.5 | | % | EPA 8260B | 07/11/2011 |



KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 78028

**QC Report : Method Blank Data**

Date : 07/14/2011

Project Name : **LIM**

Project Number : **2808**

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|
| Toluene | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/2011 |
| Total Xylenes | < 0.50 | 0.50 | ug/L | EPA 8260B | 07/11/2011 |

| Parameter | Measured Value | Method Reporting Limit | Units | Analysis Method | Date Analyzed |
|---|---|---|---|---|---|



KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 78028

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Date : 07/14/2011

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 | | | | | | | | | | | | | | |
| | 78028-01 | <0.50 | 39.6 | 39.4 | 38.0 | 39.3 | ug/L | EPA 8260B | 7/9/11 | 96.1 | 99.6 | 3.58 | 80-120 | 25 |
| 1,2-Dichloroethane | | | | | | | | | | | | | | |
| | 78028-01 | <0.50 | 39.8 | 39.6 | 39.1 | 38.9 | ug/L | EPA 8260B | 7/9/11 | 98.3 | 98.2 | 0.183 | 75.7-122 | 25 |
| Benzene | | | | | | | | | | | | | | |
| | 78028-01 | 1.9 | 39.8 | 39.6 | 40.1 | 39.4 | ug/L | EPA 8260B | 7/9/11 | 96.0 | 94.7 | 1.36 | 80-120 | 25 |
| Diisopropyl ether | | | | | | | | | | | | | | |
| | 78028-01 | 0.78 | 39.4 | 39.2 | 38.2 | 39.3 | ug/L | EPA 8260B | 7/9/11 | 95.2 | 98.2 | 3.10 | 80-120 | 25 |
| Ethyl-tert-butyl ether | | | | | | | | | | | | | | |
| | 78028-01 | <0.50 | 39.7 | 39.5 | 35.9 | 36.4 | ug/L | EPA 8260B | 7/9/11 | 90.6 | 92.0 | 1.62 | 76.5-120 | 25 |
| Ethylbenzene | | | | | | | | | | | | | | |
| | 78028-01 | <0.50 | 39.8 | 39.6 | 41.4 | 41.6 | ug/L | EPA 8260B | 7/9/11 | 104 | 105 | 1.05 | 80-120 | 25 |
| Methyl-t-butyl ether | | | | | | | | | | | | | | |
| | 78028-01 | <0.50 | 40.0 | 39.8 | 37.0 | 38.4 | ug/L | EPA 8260B | 7/9/11 | 92.6 | 96.4 | 4.01 | 69.7-121 | 25 |
| P + M Xylene | | | | | | | | | | | | | | |
| | 78028-01 | <0.50 | 39.8 | 39.6 | 38.8 | 39.2 | ug/L | EPA 8260B | 7/9/11 | 97.7 | 99.1 | 1.49 | 76.8-120 | 25 |
| Tert-Butanol | | | | | | | | | | | | | | |
| | 78028-01 | <5.0 | 192 | 192 | 212 | 202 | ug/L | EPA 8260B | 7/9/11 | 110 | 105 | 4.59 | 80-120 | 25 |
| Tert-amyl-methyl ether | | | | | | | | | | | | | | |
| | 78028-01 | <0.50 | 39.7 | 39.5 | 37.1 | 38.5 | ug/L | EPA 8260B | 7/9/11 | 93.7 | 97.4 | 3.97 | 78.9-120 | 25 |



KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 78028

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Date : 07/14/2011

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 | | | | | | | | | | | | | | |
| | 78028-01 | <0.50 | 39.8 | 39.6 | 39.2 | 39.4 | ug/L | EPA 8260B | 7/9/11 | 98.6 | 99.6 | 0.997 | 80-120 | 25 |
| 1,2-Dibromoethane | | | | | | | | | | | | | | |
| | 78093-03 | <0.50 | 39.8 | 39.8 | 42.4 | 39.7 | ug/L | EPA 8260B | 7/12/11 | 106 | 99.7 | 6.61 | 80-120 | 25 |
| 1,2-Dichloroethane | | | | | | | | | | | | | | |
| | 78093-03 | <0.50 | 40.0 | 40.0 | 42.1 | 39.3 | ug/L | EPA 8260B | 7/12/11 | 105 | 98.4 | 6.86 | 75.7-122 | 25 |
| Benzene | | | | | | | | | | | | | | |
| | 78093-03 | <0.50 | 40.0 | 40.0 | 42.1 | 39.6 | ug/L | EPA 8260B | 7/12/11 | 105 | 99.0 | 6.12 | 80-120 | 25 |
| Diisopropyl ether | | | | | | | | | | | | | | |
| | 78093-03 | <0.50 | 39.6 | 39.6 | 42.3 | 39.5 | ug/L | EPA 8260B | 7/12/11 | 107 | 99.7 | 6.76 | 80-120 | 25 |
| Ethyl-tert-butyl ether | | | | | | | | | | | | | | |
| | 78093-03 | <0.50 | 39.9 | 39.9 | 41.0 | 38.9 | ug/L | EPA 8260B | 7/12/11 | 103 | 97.4 | 5.32 | 76.5-120 | 25 |
| Ethylbenzene | | | | | | | | | | | | | | |
| | 78093-03 | <0.50 | 40.0 | 40.0 | 43.6 | 40.6 | ug/L | EPA 8260B | 7/12/11 | 109 | 102 | 7.07 | 80-120 | 25 |
| Methyl-t-butyl ether | | | | | | | | | | | | | | |
| | 78093-03 | <0.50 | 40.2 | 40.2 | 40.2 | 37.6 | ug/L | EPA 8260B | 7/12/11 | 99.9 | 93.4 | 6.70 | 69.7-121 | 25 |
| P + M Xylene | | | | | | | | | | | | | | |
| | 78093-03 | <0.50 | 40.0 | 40.0 | 42.7 | 39.0 | ug/L | EPA 8260B | 7/12/11 | 107 | 97.6 | 8.85 | 76.8-120 | 25 |



KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 78028

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Date : 07/14/2011

Project Name : **LIM**

Project Number : **2808**

| Parameter | Spiked Sample | Sample Value | Spike Level | Spike Dup. Level | Spiked Sample Value | Duplicate Spiked Sample Value | Units | Analysis Method | Date Analyzed | Spiked Sample Percent Recov. | Duplicate Spiked Sample Percent Recov. | Relative Percent Diff. | Spiked Sample Percent Recov. Limit | Relative Percent Diff. Limit |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tert-Butanol | | | | | | | | | | | | | | |
| | 78093-03 | <5.0 | 193 | 193 | 212 | 201 | ug/L | EPA 8260B | 7/12/11 | 110 | 104 | 5.45 | 80-120 | 25 |
| Tert-amyl-methyl ether | | | | | | | | | | | | | | |
| | 78093-03 | <0.50 | 39.9 | 39.9 | 42.7 | 39.9 | ug/L | EPA 8260B | 7/12/11 | 107 | 100 | 6.59 | 78.9-120 | 25 |
| Toluene | | | | | | | | | | | | | | |
| | 78093-03 | <0.50 | 40.0 | 40.0 | 42.4 | 39.6 | ug/L | EPA 8260B | 7/12/11 | 106 | 99.0 | 6.78 | 80-120 | 25 |
| 1,2-Dibromoethane | | | | | | | | | | | | | | |
| | 78059-01 | <0.50 | 39.8 | 39.8 | 39.3 | 37.5 | ug/L | EPA 8260B | 7/11/11 | 98.6 | 94.2 | 4.51 | 80-120 | 25 |
| 1,2-Dichloroethane | | | | | | | | | | | | | | |
| | 78059-01 | <0.50 | 40.0 | 40.0 | 35.6 | 33.8 | ug/L | EPA 8260B | 7/11/11 | 89.1 | 84.5 | 5.31 | 75.7-122 | 25 |
| Benzene | | | | | | | | | | | | | | |
| | 78059-01 | <0.50 | 40.0 | 40.0 | 37.0 | 35.0 | ug/L | EPA 8260B | 7/11/11 | 92.4 | 87.4 | 5.48 | 80-120 | 25 |
| Diisopropyl ether | | | | | | | | | | | | | | |
| | 78059-01 | <0.50 | 39.6 | 39.6 | 38.5 | 36.6 | ug/L | EPA 8260B | 7/11/11 | 97.3 | 92.5 | 5.02 | 80-120 | 25 |
| Ethyl-tert-butyl ether | | | | | | | | | | | | | | |
| | 78059-01 | <0.50 | 39.9 | 39.9 | 37.6 | 36.0 | ug/L | EPA 8260B | 7/11/11 | 94.1 | 90.3 | 4.16 | 76.5-120 | 25 |
| Ethylbenzene | | | | | | | | | | | | | | |
| | 78059-01 | <0.50 | 40.0 | 40.0 | 38.4 | 36.2 | ug/L | EPA 8260B | 7/11/11 | 95.9 | 90.5 | 5.77 | 80-120 | 25 |



KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 78028

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Date : 07/14/2011

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 | | | | | | | | | | | | | | |
| | 78059-01 | <0.50 | 40.2 | 40.2 | 34.7 | 33.0 | ug/L | EPA 8260B | 7/11/11 | 86.3 | 82.1 | 5.04 | 69.7-121 | 25 |
| P + M Xylene | | | | | | | | | | | | | | |
| | 78059-01 | <0.50 | 40.0 | 40.0 | 38.7 | 36.8 | ug/L | EPA 8260B | 7/11/11 | 96.7 | 91.9 | 5.08 | 76.8-120 | 25 |
| Tert-Butanol | | | | | | | | | | | | | | |
| | 78059-01 | <5.0 | 193 | 193 | 195 | 186 | ug/L | EPA 8260B | 7/11/11 | 101 | 95.9 | 5.01 | 80-120 | 25 |
| Tert-amyl-methyl ether | | | | | | | | | | | | | | |
| | 78059-01 | <0.50 | 39.9 | 39.9 | 37.9 | 35.9 | ug/L | EPA 8260B | 7/11/11 | 95.0 | 90.0 | 5.31 | 78.9-120 | 25 |
| Toluene | | | | | | | | | | | | | | |
| | 78059-01 | <0.50 | 40.0 | 40.0 | 37.3 | 35.5 | ug/L | EPA 8260B | 7/11/11 | 93.3 | 88.8 | 5.00 | 80-120 | 25 |
| P + M Xylene | | | | | | | | | | | | | | |
| | 78070-02 | <0.50 | 40.0 | 40.0 | 38.4 | 38.1 | ug/L | EPA 8260B | 7/11/11 | 96.0 | 95.2 | 0.768 | 76.8-120 | 25 |
| Toluene | | | | | | | | | | | | | | |
| | 78070-02 | <0.50 | 40.0 | 40.0 | 36.9 | 36.6 | ug/L | EPA 8260B | 7/11/11 | 92.4 | 91.6 | 0.821 | 80-120 | 25 |
| TPH-D (Si Gel) | | | | | | | | | | | | | | |
| | BLANK | <50 | 1000 | 1000 | 894 | 941 | ug/L | M EPA 8015 | 7/12/11 | 89.4 | 94.1 | 5.15 | 70-130 | 25 |
| TPH-D (Si Gel) | | | | | | | | | | | | | | |
| | BLANK | <50 | 1000 | 1000 | 1000 | 1050 | ug/L | M EPA 8015 | 7/13/11 | 100 | 105 | 4.98 | 70-130 | 25 |



KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

**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 | 39.8 | ug/L | EPA 8260B | 7/8/11 | 96.7 | 80-120 |
| 1,2-Dichloroethane | 40.0 | ug/L | EPA 8260B | 7/8/11 | 100 | 75.7-122 |
| Benzene | 40.0 | ug/L | EPA 8260B | 7/8/11 | 98.1 | 80-120 |
| Diisopropyl ether | 39.6 | ug/L | EPA 8260B | 7/8/11 | 99.0 | 80-120 |
| Ethyl-tert-butyl ether | 39.9 | ug/L | EPA 8260B | 7/8/11 | 93.3 | 76.5-120 |
| Ethylbenzene | 40.0 | ug/L | EPA 8260B | 7/8/11 | 107 | 80-120 |
| Methyl-t-butyl ether | 40.2 | ug/L | EPA 8260B | 7/8/11 | 95.9 | 69.7-121 |
| P + M Xylene | 40.0 | ug/L | EPA 8260B | 7/8/11 | 100 | 76.8-120 |
| Tert-Butanol | 193 | ug/L | EPA 8260B | 7/8/11 | 107 | 80-120 |
| Tert-amyl-methyl ether | 39.9 | ug/L | EPA 8260B | 7/8/11 | 102 | 78.9-120 |
| Toluene | 40.0 | ug/L | EPA 8260B | 7/8/11 | 103 | 80-120 |
| 1,2-Dibromoethane | 39.6 | ug/L | EPA 8260B | 7/12/11 | 104 | 80-120 |
| 1,2-Dichloroethane | 39.8 | ug/L | EPA 8260B | 7/12/11 | 104 | 75.7-122 |
| Benzene | 39.8 | ug/L | EPA 8260B | 7/12/11 | 104 | 80-120 |
| Diisopropyl ether | 39.4 | ug/L | EPA 8260B | 7/12/11 | 106 | 80-120 |
| Ethyl-tert-butyl ether | 39.7 | ug/L | EPA 8260B | 7/12/11 | 103 | 76.5-120 |
| Ethylbenzene | 39.8 | ug/L | EPA 8260B | 7/12/11 | 108 | 80-120 |
| Methyl-t-butyl ether | 40.0 | ug/L | EPA 8260B | 7/12/11 | 98.9 | 69.7-121 |
| P + M Xylene | 39.8 | ug/L | EPA 8260B | 7/12/11 | 106 | 76.8-120 |
| TPH as Gasoline | 504 | ug/L | EPA 8260B | 7/12/11 | 99.1 | 70.0-130 |
| Tert-Butanol | 192 | ug/L | EPA 8260B | 7/12/11 | 108 | 80-120 |
| Tert-amyl-methyl ether | 39.7 | ug/L | EPA 8260B | 7/12/11 | 106 | 78.9-120 |



KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

**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 |
|---|---|---|---|---|---|---|
| Toluene | 39.8 | ug/L | EPA 8260B | 7/12/11 | 105 | 80-120 |
| | | | | | | |
| 1,2-Dibromoethane | 39.9 | ug/L | EPA 8260B | 7/11/11 | 97.3 | 80-120 |
| 1,2-Dichloroethane | 40.1 | ug/L | EPA 8260B | 7/11/11 | 87.4 | 75.7-122 |
| Benzene | 40.1 | ug/L | EPA 8260B | 7/11/11 | 90.6 | 80-120 |
| Diisopropyl ether | 39.7 | ug/L | EPA 8260B | 7/11/11 | 94.9 | 80-120 |
| Ethyl-tert-butyl ether | 40.0 | ug/L | EPA 8260B | 7/11/11 | 91.7 | 76.5-120 |
| Ethylbenzene | 40.1 | ug/L | EPA 8260B | 7/11/11 | 94.5 | 80-120 |
| Methyl-t-butyl ether | 40.3 | ug/L | EPA 8260B | 7/11/11 | 85.0 | 69.7-121 |
| P + M Xylene | 40.1 | ug/L | EPA 8260B | 7/11/11 | 95.5 | 76.8-120 |
| TPH as Gasoline | 501 | ug/L | EPA 8260B | 7/11/11 | 97.8 | 70.0-130 |
| Tert-Butanol | 194 | ug/L | EPA 8260B | 7/11/11 | 97.9 | 80-120 |
| Tert-amyl-methyl ether | 40.0 | ug/L | EPA 8260B | 7/11/11 | 92.5 | 78.9-120 |
| Toluene | 40.1 | ug/L | EPA 8260B | 7/11/11 | 91.4 | 80-120 |
| | | | | | | |
| P + M Xylene | 39.9 | ug/L | EPA 8260B | 7/11/11 | 98.0 | 76.8-120 |
| Toluene | 39.9 | ug/L | EPA 8260B | 7/11/11 | 94.5 | 80-120 |



KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Aqua Science Engineers, Inc.
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Danville, CA 94526
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FAX (925) 837-4853

# Chain of Custody 78028

PAGE 1 of 1

SAMPLER (SIGNATURE) D. Allen

PROJECT NAME LIM JOB NO. 2868

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) w/Silica GEL CLEANUP | 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) Pb SCAV | 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 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 6/30/11 | 1017 | W | 5 | | Y | | | | | | | | Y | | | | | Y | 01 |
| MW-2 | | 0705 | | | | Y | | | | | | | | Y | | | | | Y | 02 |
| MW-3 | | 0910 | | | | Y | | | | | | | | Y | | | | | Y | 03 |
| MW-4 | | 0818 | | | | Y | | | | | | | | Y | | | | | Y | 04 |
| MW-5 | | 0727 | | | | Y | | | | | | | | Y | | | | | Y | 05 |
| MW-6 | | 0837 | | | | Y | | | | | | | | Y | | | | | Y | 06 |
| MW-7 | | 0747 | | | | Y | | | | | | | | Y | | | | | Y | 07 |
| MW-8 | | 0950 | | | | Y | | | | | | | | Y | | | | | Y | 08 |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

| RELINQUISHED BY: | RECEIVED BY: | RELINQUISHED BY: | RECEIVED BY LABORATORY: |
|---|---|---|---|
| (signature) 1640 (time) | (signature) (time) | (signature) (time) | (signature) 1241 (time) |
| D. Allen 6/30/11 (printed name) (date) | (printed name) (date) | (printed name) (date) | Timothy Bremer 070711 (printed name) (date) |
| Company-ASE, INC. | Company- | Company- | Company- Kiff Analytical LLC |

COMMENTS:

TURN AROUND TIME

STANDARD 24Hr 48Hr 72Hr

OTHER:

KIFF Analytical LLC

# SAMPLE RECEIPT CHECKLIST

RECEIVER: TJB (Initials)

SRG#: 78028 Date: 070711

Project ID: LIM

Method of Receipt: [X] Courier [ ] Over-the-counter [ ] Shipper

**COC Inspection**

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

**Sample Inspection**

Coolant Present: [X] Yes [ ] No (includes water)

Temperature °C 1.4 Therm. ID# IR-5 Initial TJB Date/Time 070711/1706 [ ] N/A

| | | | | |
|---|---|---|---|---|
| Are there custody seals on sample containers? | [ ] Intact | [ ] Broken | [X] Not present | |
| Do containers match COC? [X] 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 | [X] No | | |
| Are any sample containers broken, leaking or damaged? | [ ] Yes | [X] No | | |
| Are preservatives indicated? [X] Yes, on sample containers | [ ] Yes, on COC | [ ] Not indicated | [ ] N/A | |
| Are preservatives correct for analyses requested? | [X] Yes | [ ] No | [ ] N/A | |
| Are samples within holding time for analyses requested? | [X] Yes | [ ] No | | |
| Are the correct sample containers used for the analyses requested? | [X] Yes | [ ] No | | |
| Is there sufficient sample to perform testing? | [X] Yes | [ ] No | | |

Does any sample contain product, have strong odor or are otherwise suspected to be hot? [ ] Yes [X] No

Receipt Details

| | | |
|---|---|---|
| Matrix WA | 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: 070711 Time: 1717

**Quicklog**

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

**COMMENTS:**