# Groundwater Monitoring and Soil-Vapor Extraction/Air Sparging System Operation Report for the Period October 1 through December 31, 2009 Former Pacific Electric Motors Site 1009 66th Avenue, Oakland, California (Fuel Leak Case Number RO0000411)

**February 12, 2010**
**RV009155.0004**

Prepared for:
Aspire Public Schools
1001 22nd Avenue Suite 100
Oakland, California 94606

I Aspire to... make a difference

February 12, 2010

Mr. Paresh Khatri
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Groundwater Monitoring Report and Soil-Vapor Extraction/Air Sparging System Operation Report for the Period October 1 through December 31, 2009, Former Pacific Electric Motors Site, 1009 66th Avenue, Oakland, California (Fuel Leak Case Number RO0000411)

Dear Mr. Khatri:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions or comments, please call Charles Robitaille at 925-698-1118, Ron Goloubow of LFR at 510-596-9550, or me at (510) 434-5000.

Sincerely,

Jonathan Faustine
Chief Operating Officer
Aspire Public Schools

LFR an ARCADIS company

February 12, 2010 RV009155.0004

Mr. Paresh Khatri
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1131 Harbor Bay Parkway, Suite 250
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Dear Mr. Khatri:

LFR Inc. an ARCADIS company (LFR, now fully integrated and known as ARCADIS) has prepared this combination groundwater monitoring report and soil-vapor extraction/air sparging (SVE/AS) operation report, on behalf of Aspire Public Schools, to summarize the activities conducted during the monitoring period from July 1 through September 30, 2009 at the former Pacific Electric Motors site located at 1009 66th Avenue, Oakland, California ("the Site").

In preparation for the start of the excavation activities to be conducted at the Site as presented in the "Revised Corrective Action Plan, Proposed Aspire School Site, 1009 66$^{th}$ Avenue, Oakland, California," dated July 17, 2009 ("the Revised CAP"), the SVE/AS was shut down on October 27, 2009 and disassembled. As a result, the SVE/AS operated for 27 days during the monitoring period. Groundwater monitoring was performed on October 21 and 22, 2009, with slight modifications relative to the Groundwater Monitoring Plan that was prepared for the Site and submitted to Alameda County Environmental Health on March 4, 2009. The purpose of the periodic groundwater monitoring and reporting is to provide data that will be used to assess the groundwater quality over time and the effectiveness of the groundwater remediation that is taking place at the Site.

As provided in this report, the initial results of the groundwater samples collected after the operation of the SVE/AS for approximately 52 days indicate that the remediation system is operating effectively and the concentrations of fuel and fuel-related compounds in groundwater are decreasing as a result of the operation of the SVE/AS.

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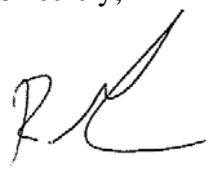
Sincerely,



Ron Goloubow, P.G.
Senior Associate Geologist

Attachment

cc: Mr. Charles P. Robitaille – Pacific Charter School Development
Mr. Michael Barr – Aspire Public Schools

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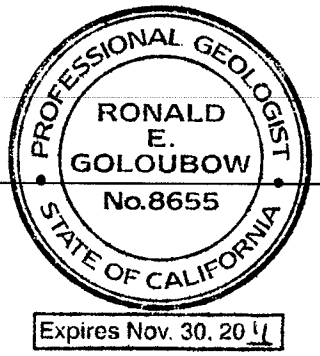
# CERTIFICATION

All hydrogeologic and geologic information, conclusions, and recommendations in this document have been prepared under the supervision of and reviewed by an ARCADIS U.S., Inc., California Professional Geologist .*




2-12-2010

Ron Goloubow, P.G.
Senior Associate Geologist
California Professional Geologist (8655)

Date

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# 1.0 INTRODUCTION

LFR Inc. an ARCADIS Company (LFR, now fully integrated and known as ARCADIS) has prepared this periodic groundwater monitoring and soil-vapor extraction/air sparging (SVE/AS) extended pilot test system report on behalf of Aspire Public Schools ("Aspire"). The report provides a summary of activities conducted during the monitoring period from October 1, 2009 through December 31, 2009 ("the reporting quarter") at the former Pacific Electric Motors (PEM) site located at 1009 66th Avenue, Oakland, California ("the Site"; Alameda County Environmental Health [ACEH] Fuel Leak Case Number RO0000411; Figures 1 and 2).

In preparation for the start of the excavation activities that are being conducted at the Site as presented in the "Revised Corrective Action Plan, Proposed Aspire School Site, 1009 66th Avenue, Oakland, California," dated July 17, 2009 ("the Revised CAP"; LFR 2009b) the SVE/AS was shut down on October 27, 2009 and disassembled. As a result, the SVE/AS operated for 27 days during the monitoring period. Groundwater monitoring was performed on October 21 and 22, 2009 with slight modifications relative to the Groundwater Monitoring Plan (GMP) that was prepared for the Site and submitted to Alameda County Environmental Health on March 4, 2009.

## 1.1 Purpose of the Report

The purpose of the periodic groundwater monitoring and SVE/AS operation report is to provide data that will be used to assess the groundwater quality over time and the effectiveness of the groundwater remediation at the Site.

During this sampling period, LFR operated the SVE/AS pilot test system from October 1 to October 27, 2009 for remediation of groundwater and soil vapor that are affected by total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX compounds), methyl tertiary-butyl ether (MTBE), and tertiary-butyl alcohol (TBA). As of October 27, 2009 LFR ceased the operation of the SVE/AS pilot test system to allow for implementation of the Revised CAP, which requires remedial soil excavation.

As presented in Revised CAP, chemicals of concern (COC) at the Site in groundwater include TPHg, BTEX, MTBE, and TBA.

## 1.2 Background

The Site is located on the northwestern side of 66th Avenue between East 14th Street and San Leandro Street (Figures 1 and 2). The area around the Site is developed with a mixture of commercial, industrial, government, and multi-family residential buildings. The Site is currently owned by Aspire.

Additional historical land use information for the Site was presented in LFR's report entitled "Revised Corrective Action Plan, Proposed Aspire School Site, 1009 66th Avenue, Oakland, California," dated July 17, 2009 ("the Revised CAP"; LFR 2009b).

The first industrial development of the property was in about 1948 when the two buildings currently present on the Site were constructed by PEM. PEM occupied the Site from 1948 to 2001. Activities conducted at the Site by PEM included manufacturing specialty magnets, power supplies, and components; and repairing motors, generators, transformers, and magnets. A 2,000-gallon gasoline underground storage tank (UST) was reportedly installed at the Site by PEM in 1975. In addition, the gasoline shed in the fueling area may have stored vehicle lubricants and oil for vehicle maintenance.

The on-site buildings were occupied by Bay Area Powder Coatings in 2001. Bay Area Powder Coatings declared bankruptcy and ceased operations at the Site; however, some equipment belonging to this company was still present on the Site in 2005. No details are available as to the specific processes of Bay Area Powder Coatings.

Landeros Iron Works ("Landeros"), which subleased the property from Bay Area Powder Coatings, conducted its operations in and around the warehouse until December 2008. Landeros' operation was primarily welding and metal structure fabrication. Landeros moved off site in June 2009.

## 1.3 Previous Investigations

Several phases of investigation have been completed at the Site. According to descriptions of soil samples collected during the drilling of soil borings for groundwater monitoring wells installed at the Site, three groundwater-bearing zones designated as the "shallow zone," "intermediate zone," and "deep zone" have been identified at the Site (LFR 2008b). The sediments from the ground surface to approximately 8 feet below ground surface (bgs) consist of an interval of fine-grained sediment (silt and clay) with relatively thin intervals of coarser grained sediments (sand, less than 1 foot thick). These coarser grained sediments represent the interval of "shallow zone." This is the interval in which the soil-vapor system is to be operated. Groundwater has been observed in this interval during the winter months of any year that has normal or above normal rainfall. The presence of groundwater in this interval may impede the operation of the SVE system during the months of November through February.

Discontinuous intervals of relatively thin, more permeable fine- to coarse-grained sand and gravels have generally been encountered between approximately 12 and 17 feet bgs. This interval of sediments contains the first groundwater at the Site, and represents the interval of "intermediate-zone" groundwater at the Site.

An interval of poorly graded, coarser grained sediments comprised of fine sand and gravel was consistently encountered from approximately 21 to 34 feet bgs. This

interval of coarser grained sediments contains groundwater and represents the "deep zone."

The investigations conducted at the Site have also included the following:

- Collection of approximately 280 soil samples throughout the Site. The majority of these samples were collected from 0.5 or 5 feet bgs and analyzed for petroleum hydrocarbons, semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and/or metals.
- Installation and monitoring of four shallow groundwater monitoring wells (MW-1 through MW-4) and three shallow/intermediate/deep monitoring well clusters (nested wells NW-1 through NW-3), and collection of grab groundwater samples from 20 soil borings. Monitoring of wells MW-1 through MW-4 has been performed intermittently since 1997.
- Completion of two investigations to assess soil-gas quality at the Site in March and August 2008. The results of these investigations were presented in the Revised CAP (LFR 2009b).
- Completion of an SVE/AS pilot test at the Site in accordance with LFR's "Work Plan to Conduct an Air Injection and Soil-Vapor Extraction Pilot Test," dated September 23, 2008 (LFR 2008a).
- Installation of seven SVE wells (SVE-2 through SVE-8), seven intermediate-zone AS wells (AS-2I through AS-8I), seven deep-zone AS wells (AS-2D through AS-8D), three SVE monitoring wells (SVMW-3 through SVMW-5), three intermediate-zone AS monitoring wells (ASMW-3I through ASMW-5I), and three deep-zone AS monitoring wells (ASMW-3D through ASMW-5D), from December 29, 2008 to January 9, 2009.
- Initial start-up of the SVE/AS extended pilot test system occurred on August 17, 2009. The system operated until October 27, 2009, at which time operations were ceased to allow for implementation of the Revised CAP, which requires remedial soil excavation. The system operated a total of 52 days, from August 17, 2009 to October 27, 2009, and removed approximately 480 pounds of mass quantified as TPHg. For additional information and system design and start-up of the SVE/AS, please refer to the previous quarterly report prepared for this project (LFR 2009d).

## 1.4 Revised Corrective Action Plan

LFR prepared the Revised CAP for the implementation of site remedies (LFR 2009b). The Revised CAP summarized the results of previous investigations, presented the site conceptual model, quantified the baseline risk of COCs, developed site-specific risk-based cleanup goals, evaluated potential remedies, and presented an implementation plan for the selected remedies.

The Revised CAP recommended excavation and off-site disposal of affected shallow soils with SVE/AS to remediate affected soil, groundwater, and soil vapors (LFR

2009b). The Revised CAP also recommended conducting an extended SVE/AS pilot test including ozone injection, if appropriate.

As of January 5, 2010, a total of approximately 3,910 tons of affected soil has been removed from the Site and confirmation soil samples documenting the successful removal of the affected soil have been collected at various locations across the Site. Of this total, approximately 970 tons of PCB-affected soil and concrete was disposed of as Toxic Substance Control Act (TSCA) waste at Waste Management's Kettleman Hills Class I Landfill located in Kettleman City, California.

A total of approximately 2,940 tons of affected soil were also excavated from the Site. This soil was excavated from the Site and temporarily stockpiled and subsequently disposed of at Republic Waste's Vasco Road Class II Landfill located in Livermore, California. In addition, approximately 249 tons of concrete and asphalt were removed and disposed of at Republic Waste's Keller Canyon Class II Landfill located in Pittsburg, California. Currently the excavation activities are being delayed due to rain that occurred in January 2010.

# 2.0 GROUNDWATER MONITORING

To monitor the performance of the SVE/AS at the Site, groundwater monitoring was performed with slight modifications relative to the GMP and the Revised CAP (LFR 2009b). Groundwater samples were collected on October 21 and 22, 2009, prior to disassembling the SVE/AS, to monitor the performance of SVE/AS operations. Prior to conducting the groundwater monitoring, the SVE/AS was shut down for approximately 48 hours in order to collect groundwater level measurements and groundwater samples under non-injection conditions.

The following sections describe the groundwater monitoring activities for this reporting quarter.

## 2.1 Groundwater Monitoring Scope of Work

The following groundwater monitoring activities were performed during this reporting quarter:

- Measured depth to groundwater in 11 monitoring wells.
- Collected SVE/AS system baseline groundwater samples from 11 monitoring wells on October 21 and 22, 2009.
- Collected quarterly groundwater samples and two-month SVE/AS system performance data on October 21 and 22, 2009.
- Submitted groundwater samples for laboratory analyses.

## 2.2 Groundwater Monitoring Wells

The current groundwater monitoring well network at the Site includes 21 groundwater monitoring wells (Figure 2).

- Four groundwater monitoring wells (MW-1 through MW-4) are screened from approximately 5 to 20 feet bgs.
- Three shallow-zone groundwater monitoring wells (NW-1S, NW-2S, and NW-3S; part of the triple-nested groundwater monitoring wells) are completed with screens at approximately 3 to 5 feet bgs.
- Four intermediate-zone groundwater monitoring wells (ASMW-2I through ASMW-5I) are screened from approximately 10 to 17 feet bgs.
- Three intermediate-zone groundwater monitoring wells (NW-1I, NW-2I, and NW-3I; part of the triple-nested groundwater monitoring wells) are screened from approximately 15 to 18 feet bgs.
- Three deep-zone groundwater monitoring wells (NW-1D, NW-2D and NW-3D; part of the triple-nested groundwater monitoring wells) are completed with screens at approximately 25 to 30 feet bgs.
- Four deep-zone groundwater monitoring wells (ASMW-2D, ASMW-3D, ASMW-4D, and ASMW-5D) are screened from approximately 19 to 27 feet bgs.

## 2.3 Groundwater Elevations

Groundwater elevations were gauged on October 21, 2009. The depth to groundwater was measured in 11 monitoring wells using an electronic water level indicator. The water level indicator was lowered into the well until a tone signaled that the indicator had contacted water. The depth to groundwater was measured to the surveyed elevation mark on the top of the casing of the monitoring well. The installation of the SVE/AS system piping obscured the exact location of the surveyed elevation marks on wells AS-2I, AS-2D, AS-7I, and AS-8I; thus, the groundwater elevations for these wells is estimated.

The groundwater elevation in each well was calculated by subtracting the depth to water from the surveyed top-of-casing elevation. The groundwater elevation results are summarized in Table 1. Groundwater elevation data and contours for the intermediate and deep groundwater zones are presented on Figures 3 and 4, respectively. Groundwater elevation data were not collected for the shallow groundwater zone.

## 2.4 Groundwater Sampling

Groundwater samples were collected using low-flow groundwater sampling techniques (Puls and Barcelona 1996). The intake of the low-flow pump was placed in the middle of the screened interval and purged continuously until groundwater parameters (pH, conductivity, temperature, oxidation-reduction potential, and dissolved oxygen)

stabilized, or until the well had been purged for approximately 30 minutes or of two gallons. Wells that purged dry were allowed to recharge to approximately 80% of original depth to groundwater before samples were collected.

Groundwater samples were collected directly from the hose of the pump and conveyed into laboratory-supplied sample containers. The containers were labeled with the well identification number, the time and date of collection, the analysis requested, and the initials of the sampler. The samples were stored in an ice-chilled cooler and maintained under strict chain-of-custody protocols as they were submitted to the laboratory for analysis.

## 2.5 Groundwater Sample Analyses

Ongoing monitoring and analysis of groundwater samples for TPHg, BTEX, TBA, and MTBE was conducted to assess the quality of groundwater affected by these COCs and the effectiveness of the SVE/AS system.

Groundwater samples were analyzed for arsenic, hexavalent chromium, total chromium, and selenium, to evaluate if operation of the SVE/AS system caused a change in site conditions that would make these metals more soluble in groundwater.

The groundwater samples were submitted to Curtis & Tompkins, Ltd., a state-certified laboratory located in Berkeley, California, and analyzed for one or more of the following:

- TPHg by U.S. Environmental Protection Agency (EPA) Method 8260B
- BTEX, TBA, and MTBE by EPA Method 8260B
- Arsenic, total chromium, and selenium by EPA Method 6010B
- Hexavalent chromium by EPA method 7199

Analytical results of groundwater samples are summarized in Tables 2 and 3. Table 4 summarizes the groundwater monitoring parameters. Figures 5 and 6 present the analytical results of TPHg, BTEX, and fuel oxygenates in the intermediate and deep groundwater zones, respectively. Copies of the laboratory data sheets and chain-of-custody documents are presented in Appendix A. Copies of the monitoring well purge and sampling forms are presented in Appendix B.

# 3.0 SVE/AS SYSTEM OPERATION AND DEMOBILIZATION

This section of the report provides a summary of the operation and demobilization of the SVE/AS extended pilot test system at the Site. The operation of the SVE/AS extended pilot test system was terminated on October 27, 2009 to allow for the excavation of affected soil as presented in the Revised CAP.

The overall objective of the extended pilot test is to evaluate the effectiveness of SVE/AS in reducing concentrations of TPHg, BTEX, TBA, and MTBE in

groundwater, soil, and soil gas. Details regarding the operation of the system were provided in the Groundwater Monitoring Report and Soil-Vapor Extraction/Air Sparging System Construction and Initial Operation Report submitted on November 13, 2009 (LFR 2009d).

## 3.1 SVE/AS System Operation

LFR inspected the SVE/AS system on a weekly schedule in accordance with the Revised CAP. Weekly inspections were conducted to monitor system operation time and system performance, and to perform routine maintenance. Performance monitoring included recording the system's operating mode, SVE and AS system flow rates, and pressures at each sparge well. Operational field logs were presented in the Groundwater Monitoring Report and Soil-Vapor Extraction/Air Sparging System Construction and Initial Operation Report submitted on November 13, 2009 (LFR 2009d).

## 3.2 SVE/AS System Demobilization

The SVE/AS system operated in accordance with the Revised CAP (LFR 2009b) from August 17, 2009 to October 27, 2009. As of October 27, 2009 the system was shut down and demobilized to allow for remedial soil excavation activities. The SVE/AS system will not resume operations until the excavations activities are completed. Currently, the estimated time frame for the SVE/AS to resume operations is anticipated to be in late February or early March 2010.

## 3.3 Waste Management

Waste streams from operation of the SVE/AS system include spent GAC used for vapor abatement and wastewater extracted by the SVE system. During the operations of the SVE/AS system (August through October 2009), approximately 6,000 pounds of GAC were used for abatement of extracted soil vapors. The spent GAC was transported off site and disposed of or reactivated as non-hazardous solid waste by Baker Industries of Pittsburg, California.

Water extracted during operation of the SVE/AS was separated from the vapor stream and temporarily stored in a 3,000-gallon polyethylene storage tank. During the operations of the SVE/AS system (August through October 2009), approximately 10,850 gallons of water were extracted. The wastewater was transported off site by Warren E. Gomes Excavation, Inc., for treatment or disposal as non-hazardous liquid waste by InStrat, Inc., of Rio Vista, California.

# 4.0 RESULTS AND DISCUSSION

Groundwater samples were collected in October 2009 to provide data to evaluate the effects the operation of the SVE/AS system had on groundwater quality at the Site after operating for approximately two months and before the SVE/AS was demobilized and

soil excavation activities commenced. Analytical results for groundwater samples previously collected in March, May, and August 2009 were used to provide the baseline concentrations for TPHg, BTEX, and fuel oxygenates prior to starting the SVE/AS. Baseline groundwater samples for metals and inorganic parameters were collected in August 2009. Groundwater samples were collected again in September and October 2009 to evaluate the effect of operation of the SVE/AS system.

The following sections summarize the analytical results of the groundwater samples collected during previous monitoring events and compare baseline results to the results of groundwater samples collected after one month of SVE/AS system operation.

## 4.1 Groundwater Elevations and Gradients

Table 1 presents a summary of groundwater elevations. The groundwater elevation data and contours for the intermediate and deep zones are presented on Figures 3 and 4, respectively.

Groundwater elevations in the shallow groundwater zone were not measured during the current quarter.

Groundwater elevations in the intermediate groundwater zone ranged from 5.26 to 9.51 feet above mean sea level (msl). The groundwater elevation contours indicate that the direction of groundwater flow in the intermediate zone radiated from the east and the north, primarily to the northeast. The gradient of groundwater flow in the intermediate zone ranged from 0.035 to 0.059 vertical feet per linear feet.

Groundwater elevations in the deep groundwater zone range from 6.40 to 9.55 feet above msl. The groundwater elevation contours indicate that the direction of groundwater flow in the deep zone was from north to northeast with a gradient from approximately 0.053 to 0.148 vertical feet to linear feet.

Based on the water-level elevations measured in October 2009, the operation of the SVE/AS system appears to have caused a local variation in groundwater elevations. In the previous quarterly report (LFR 2009d) groundwater gradients and flow direction were relatively flat and generally consistent with the historical gradient and flow direction observed at the Site by LFR during previous monitoring investigations. However, the groundwater elevation data measured on October 21, 2009 indicate that operations related to the SVE/AS system may have lowered the groundwater elevation. The lowered groundwater elevations were evident at wells NW2I and ASMW2I in the intermediate zone and ASMW2D and MW4 in the deep zone. These decreases in the water level elevation were likely the result of the extraction of groundwater by the SVE/AS in the treatment area.

## 4.2 Analytical Results for TPHg, BTEX, TBA, and MTBE

Groundwater samples were collected from a total of 11 groundwater monitoring and air sparging wells to provide data regarding the progress and effectiveness of remediation of groundwater affected by TPHg, BTEX, TBA, and MTBE at the Site. The wells selected include wells being sampled in accordance with the GWP, as well as wells recently installed to monitor the SVE/AS system. The wells selected include wells screened in the intermediate and deep groundwater zones.

The analytical results of the baseline groundwater samples and samples collected after approximately two months of SVE/AS system operation are summarized in Table 2. The analytical results of groundwater samples collected for TPHg, BTEX, and fuel oxygenates, metals, and inorganic compounds during this monitoring period are summarized in the following sections.

### 4.2.1 Shallow Zone

Groundwater samples were not collected for shallow-zone wells during the current sampling quarter. Analytical results of samples collected from these wells were provided in the previous quarterly report (LFR 2009d).

### 4.2.2 Intermediate Zone

Groundwater samples were collected from five intermediate-zone wells following the operation of the SVE/AS for two months. The analytical results for TPHg, BTEX, TBA, and MTBE are summarized in Table 2 and posted for intermediate-zone wells on Figure 5. Elevated concentrations of TPHg, BTEX, MTBE, and/or TBA were present in five of the seven baseline groundwater samples collected from intermediate-zone wells prior to the operation of the SVE/AS. The baseline concentrations of fuel-related compounds detected in the samples collected from wells NW-2I, ASMW-2I, and ASMW-5I, located hydraulically downgradient from the former UST, are consistent with some of the highest concentrations of fuel-related compounds detected in groundwater samples collected at the Site. The analytical results of the groundwater samples collected from these wells after two months of SVE/AS system operation indicate TPHg concentrations were significantly reduced by approximately 91%, 99%, and 69%, respectively (Table 2 and Figure 5).

The data indicate BTEX concentrations were also significantly reduced in each of the samples collected from the five intermediate-zone wells after the SVE/AS operated for two months (Table 2 and Figure 5). Concentrations of TBA significantly decreased in the samples collected from well ASMW2I and remained relatively consistent in samples collected from the other four intermediate-zone wells. It should be noted that the concentrations of BTEX in groundwater at the Site has been reduced as a result of the operation of the SVE/AS.

Concentrations of MTBE deceased by 89% in the samples collected from well NW2I in October relative to September 2009. Concentrations of MTBE remained consistent in samples collected from the other intermediate-zone wells (Table 2 and Figure 5).As with TPHg and BTEX concentrations in groundwater, concentrations of MTBE in groundwater at the Site (other than in the samples collected at well AS6I in September 2009) have been reduced as a result of the operation of the SVE/AS.

### 4.2.3 Deep Zone

Baseline, one-month, and two-month system operation samples were collected from six deep-zone wells. The analytical results for TPHg, BTEX, TBA, and MTBE are summarized in Table 2 and posted for deep-zone wells on Figure 6. TPHg was not detected above the laboratory reporting limit in any of the samples collected from the deep-zone wells during this monitoring period. BTEX compounds were not detected above the laboratory reporting limit or at concentrations that decreased after the operation of the SVE/AS.

Elevated concentrations of TBA and/or MTBE were present in four of the baseline groundwater samples collected from deep-zone wells (NW2D, MW4, ASMW5D, and ASMW2D; Figure 6). The analytical results of the samples collected from these wells indicate elevated TBA concentrations were significantly reduced to below the laboratory reporting limit in the three wells that previously contained elevated concentrations (NW-2D, ASMW-2D, and ASMW-5D) after the SVE/AS system operation. Concentrations of MTBE decreased in two wells but increased slightly in three wells. MTBE concentrations significantly decreased in the samples collected from wells NW2D, MW4, and ASMW2D located within the treatment area. The analytical results for groundwater samples collected from wells ASMW3D, ASMW4D, and ASMW5D that showed minor fluctuations or increases of MTBE concentrations are located outside the treatment area (Table 2 and Figure 6). These trends will be assessed during future groundwater monitoring events.

## 4.3 Analytical Results for Metals in Groundwater Samples

Groundwater in ASMW-2D was analyzed for arsenic, hexavalent chromium, total chromium, and selenium to evaluate if operation of the SVE/AS system caused a change in site conditions that would make these metals more soluble in groundwater. The analytical results for metals in the baseline groundwater samples and samples collected after two months of SVE/AS system operation are summarized in Table 3. The analytical results of groundwater samples collected for arsenic, hexavalent chromium, total chromium, and selenium during this monitoring period are summarized in the following sections.

### 4.3.1 Arsenic

Arsenic was not detected above the laboratory reporting limit in the ASMW-2D sample after two months of SVE/AS system operation. Overall, operation of the SVE/AS system appears to reduce concentrations of arsenic in groundwater at the Site.

### 4.3.2 Total Chromium and Hexavalent Chromium

Total chromium was detected above the laboratory reporting limit in only one of the 23 baseline or one-month operations samples collected during the previous sampling period (LFR 2009d). Total chromium was detected in the baseline sample collected in August of 2009 from ASMW-2I at a concentration of 6.3 micrograms per liter ($\mu$g/L). Total chromium was not detected in this well in the groundwater sample collected after one month of operation in September 2009 nor was it detected during the current reporting quarter.

Hexavalent chromium was detected above the laboratory reporting limit in the groundwater sample collected from well ASMW-2D. Hexavalent chromium was detected in the groundwater sample collected from ASMW-2D after two months of system operation at a concentration of 1.1 $\mu$g/L. Overall, the analytical results for total and hexavalent chromium indicate the groundwater samples collected after two months of system operation are consistent with the baseline groundwater samples. Operation of the SVE/AS system does not appear to affect the solubility of total chromium or hexavalent chromium, nor does it appear that operation of the SVE/AS system causes total chromium to convert to hexavalent chromium.

### 4.3.3 Selenium

Selenium was not detected above the laboratory reporting limit in any of the baseline groundwater samples. In the previous sampling quarter selenium was detected in groundwater samples collected after one month of system operation in two wells (ASMW-3I and ASMW-2D) at trace levels (10 $\mu$g/L and 13 $\mu$g/L, respectively). Selenium was not detected above laboratory limits in the groundwater sample collected after two months of system operation in ASMW-2D.

Overall, the analytical results for selenium indicate the groundwater samples collected after two months of system operation are consistent with the baseline groundwater samples. Operation of the SVE/AS system does not appear to affect the solubility of selenium in groundwater at the Site.

## 5.0 CONCLUSIONS

Based on the baseline analytical results of the groundwater samples collected at the Site, the highest concentrations of COCs have been detected in samples collected from wells constructed in the intermediate zone that are located closest to the former UST (Figures 5 and 6). The results of groundwater samples collected from these wells after

two months of operation indicate the SVE/AS system is significantly reducing the concentrations of COCs in groundwater. The results of the SVE/AS system monitoring also indicate the system has removed approximately 480 lbs of mass quantified as TPHg in 52 days of operation.

The analytical results of groundwater samples analyzed for metals indicate that operation of the SVE/AS system does not appear to be causing any additional adverse impacts to groundwater quality.

## 6.0 RECOMMENDATIONS

Upon completion of demolition and remedial excavation activities (estimated to be in early March 2010), Aspire is planning to restart the SVE/AS system as part of the extended pilot test.

In addition, the extent of fuel-affected groundwater south of well ASMW-51 will be evaluated to assess if additional SVE and AS wells would be needed to remediate groundwater in that portion of the Site.

## 7.0 SUMMARY AND SCHEDULE

The SVE/AS system was shut down on October 27, 2009 to allow access for site demolition and remedial actions beginning on November 2, 2009. LFR will collect groundwater samples before restarting the SVE/AS system to evaluate for any rebounding of COC concentrations in groundwater. In an effort to reduce project costs and still provide defensible project data LFR is assessing the use of passive diffusion bag samplers to collect the next round of groundwater samples.

The SVE/AS system is tentatively scheduled to be reassembled and restarted after the excavations activities are completed. Currently, the estimated time frame for the SVE/AS to resume operations is anticipated to be in late February or early March 2010. After restarting the system, LFR will resume weekly and monthly system monitoring of extracted soil vapors and groundwater. The monitoring results will be reported in the quarterly monitoring report for October through December 2009, which will be submitted on or before February 15, 2010.

## 8.0 LIMITATIONS

The opinions and recommendations presented in this report are based upon the scope of services, information obtained through the performance of the services, and the schedule as agreed upon by LFR and the party for whom this report was originally prepared. This report is an instrument of professional service and was prepared in accordance with the generally accepted standards and level of skill and care under similar conditions and circumstances established by the environmental consulting industry. No representation, warranty, or guarantee, expressed or implied, is intended or given. To the extent that LFR relied upon any information prepared by other parties

not under contract to LFR, LFR makes no representation as to the accuracy or completeness of such information. This report is expressly for the sole and exclusive use of the party for whom this report was originally prepared for a particular purpose. Only the party for whom this report was originally prepared and/or other specifically named parties have the right to make use of and rely upon this report. Reuse of this report or any portion thereof for other than its intended purpose, or if modified, or if used by third parties, shall be at the user's sole risk.

Results of any investigations or testing and any findings presented in this report apply solely to conditions existing at the time when LFR's investigative work was performed. It must be recognized that any such investigative or testing activities are inherently limited and do not represent a conclusive or complete characterization. Conditions in other parts of the Site may vary from those at the locations where data were collected. LFR's ability to interpret investigation results is related to the availability of the data and the extent of the investigation activities. As such, 100% confidence in environmental investigation conclusions cannot reasonably be achieved.

LFR, therefore, does not provide any guarantees, certifications, or warranties regarding any conclusions regarding environmental contamination of any such property. Furthermore, nothing contained in this document shall relieve any other party of its responsibility to abide by contract documents and applicable laws, codes, regulations, or standards.

## 9.0 REFERENCES

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Puls, Robert W., and Michael J. Barcelona. 1996. Ground Water Issue Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures. EPA/540/S-95/504. April.

# Table 1
# Groundwater Elevations
# Former Pacific Electric Motors Facility
# 1009 66th Avenue, Oakland, California

| Sample Location | Date Collected | Top-of-Casing Elevation [(1)] | Depth to Groundwater [(2)] | Groundwater Elevation [(1)] |
|---|---|---|---|---|
| **Shallow-Zone Groundwater Monitoring Wells** | | | | |
| NW-1S | 11-Mar-09 | 13.88 | 2.15 | 11.73 |
| | 26-May-09 | | 3.53 | 10.35 |
| | 21-Sep-09 | | 4.70 | 9.18 |
| NW-2S | 11-Mar-09 | 13.77 | 3.77 | 10.00 |
| | 26-May-09 | | 3.63 | 10.14 |
| | 21-Sep-09 | | 3.98 | 9.79 |
| NW-3S | 11-Mar-09 | 13.19 | NM | NM |
| | 26-May-09 | | 2.98 | 10.21 |
| | 21-Sep-09 | | 3.57 | 9.62 |
| SVMW-3 | 21-Sep-09 | 13.76 | 4.41 | 9.35 |
| SVMW-4 | 21-Sep-09 | 13.23 | 4.67 | 8.56 |
| **Intermediate-Zone Groundwater Monitoring Wells[1]** | | | | |
| NW-1I[1] | 11-Mar-09 | 13.83 | 2.40 | 11.43 |
| | 26-May-09 | | 3.71 | 10.12 |
| | 21-Sep-09 | | NM | NM |
| NW-2I[1] | 11-Mar-09 | 13.80 | 5.86 | 7.94 |
| | 26-May-09 | | 4.08 | 9.72 |
| | 10-Aug-09 | | 5.96 | 7.84 |
| | 21-Sep-09 | | 5.21 | 8.59 |
| | 21-Oct-09 | | 8.54 | 5.26 |
| NW-3I[1] | 11-Mar-09 | 13.11 | NM | NM |
| | 26-May-09 | | 3.27 | 9.84 |
| | 21-Sep-09 | | 4.48 | 8.63 |
| ASMW-2I | 11-Mar-09 | 13.90 | 2.67 | 11.23 |
| | 26-May-09 | | 4.02 | 9.88 |
| | 10-Aug-09 | | 4.77 | 9.13 |
| | 21-Sep-09 | | 5.39 | 8.51 |
| | 21-Oct-09 | | 7.8 | 6.10 |
| ASMW-3I | 11-Mar-09 | 13.73 | 2.72 | 11.01 |
| | 26-May-09 | | 3.88 | 9.85 |
| | 10-Aug-09 | | 4.63 | 9.10 |
| | 21-Sep-09 | | 5.38 | 8.35 |
| | 21-Oct-09 | | 5.74 | 7.99 |
| ASMW-4I | 11-Mar-09 | 13.09 | 2.06 | 11.03 |
| | 26-May-09 | | 3.22 | 9.87 |
| | 10-Aug-09 | | 3.96 | 9.13 |
| | 21-Sep-09 | | 4.44 | 8.65 |
| | 21-Oct-09 | | 3.58 | 9.51 |
| ASMW-5I | 11-Mar-09 | 13.16 | 2.14 | 11.02 |
| | 26-May-09 | | 3.26 | 9.90 |
| | 10-Aug-09 | | 3.95 | 9.21 |
| | 21-Sep-09 | | 4.43 | 8.73 |
| | 21-Oct-09 | | 6.86 | 6.30 |
| AS-1I | 26-May-09 | NS | 3.87 | -- |

# Table 1
## Groundwater Elevations
## Former Pacific Electric Motors Facility
## 1009 66th Avenue, Oakland, California

| Sample Location | Date Collected | Top-of-Casing Elevation [1] | Depth to Groundwater [2] | Groundwater Elevation [1] |
|---|---|---|---|---|
| AS-2I | 26-May-09 | 14.09 | 4.20 | 9.89 |
| | 21-Sep-09 | (*) | 10.30 | 3.79 |
| AS-3I | 26-May-09 | 14.10 | 4.07 | 10.03 |
| AS-4I | 26-May-09 | 13.52 | 3.68 | 9.84 |
| AS-5I | 26-May-09 | 13.63 | 3.84 | 9.79 |
| AS-6I | 26-May-09 | 13.10 | 3.14 | 9.96 |
| | 21-Sep-09 | (*) | 3.96 | 9.14 |
| AS-7I | 26-May-09 | 13.44 | 3.56 | 9.88 |
| | 21-Sep-09 | (*) | 5.13 | 8.31 |
| AS-8I | 26-May-09 | 13.45 | 3.56 | 9.89 |
| | 21-Sep-09 | (*) | 4.79 | 8.66 |
| **Deep-Zone Groundwater Monitoring Wells** | | | | |
| MW-1 | 11-Mar-09 | 14.19 | 2.25 | 11.94 |
| | 26-May-09 | | 3.82 | 10.37 |
| MW-2 | 11-Mar-09 | 13.31 | 2.13 | 11.18 |
| | 26-May-09 | | 3.45 | 9.86 |
| | 21-Sep-09 | | 4.67 | 8.64 |
| MW-3 | 11-Mar-09 | 13.43 | 2.32 | 11.11 |
| | 26-May-09 | | 3.62 | 9.81 |
| | 21-Sep-09 | | 4.86 | 8.57 |
| MW-4 | 11-Mar-09 | 13.78 | 2.63 | 11.15 |
| | 26-May-09 | | 3.91 | 9.87 |
| | 10-Aug-09 | | 4.71 | 9.07 |
| | 21-Sep-09 | | 5.18 | 8.60 |
| | 21-Oct-09 | | 6.28 | 7.50 |
| NW-1D | 11-Mar-09 | 13.84 | 2.81 | 11.03 |
| | 26-May-09 | | 3.65 | 10.19 |
| NW-2D | 11-Mar-09 | 13.79 | 2.68 | 11.11 |
| | 26-May-09 | | 3.97 | 9.82 |
| | 10-Aug-09 | | 4.73 | 9.06 |
| | 21-Sep-09 | | 5.13 | 8.66 |
| | 21-Oct-09 | | 4.13 | 9.66 |
| NW-3D | 11-Mar-09 | 13.16 | NM | NM |
| | 26-May-09 | | 3.32 | 9.84 |
| | 21-Sep-09 | | 4.51 | 8.65 |
| ASMW-2D | 11-Mar-09 | 13.90 | 3.06 | 10.84 |
| | 26-May-09 | | 4.15 | 9.75 |
| | 10-Aug-09 | | 4.92 | 8.98 |
| | 21-Sep-09 | | 5.22 | 8.68 |
| | 21-Oct-09 | | 7.5 | 6.40 |
| ASMW-3D | 11-Mar-09 | 13.94 | 2.98 | 10.96 |
| | 26-May-09 | | 4.32 | 9.62 |
| | 11-Aug-09 | | 4.97 | 8.97 |
| | 21-Sep-09 | | 5.36 | 8.58 |
| | 21-Oct-09 | | 4.65 | 9.29 |

# Table 1
## Groundwater Elevations
## Former Pacific Electric Motors Facility
## 1009 66th Avenue, Oakland, California

| Sample Location | Date Collected | Top-of-Casing Elevation [1] | Depth to Groundwater [2] | Groundwater Elevation [1] |
|---|---|---|---|---|
| ASMW-4D | 11-Mar-09 | 13.07 | 1.93 | 11.14 |
| | 26-May-09 | | 3.22 | 9.85 |
| | 11-Aug-09 | | 4.01 | 9.06 |
| | 21-Sep-09 | | 4.45 | 8.62 |
| | 21-Oct-09 | | 3.52 | 9.55 |
| ASMW-5D | 11-Mar-09 | 13.01 | 1.88 | 11.13 |
| | 26-May-09 | | 3.16 | 9.85 |
| | 10-Aug-09 | | 3.93 | 9.08 |
| | 21-Sep-09 | | 4.30 | 8.71 |
| | 21-Oct-09 | | 3.56 | 9.45 |
| AS-1D | 26-May-09 | NS | 3.75 | -- |
| AS-2D | 26-May-09 | 14.16 | 4.35 | 9.81 |
| | 21-Sep-09 | (*) | 5.46 | 8.70 |
| AS-3D | 26-May-09 | 13.79 | 3.96 | 9.83 |
| AS-4D | 26-May-09 | 13.70 | 3.88 | 9.82 |
| AS-5D | 26-May-09 | 14.06 | 4.26 | 9.80 |
| AS-6D | 26-May-09 | 13.25 | NM | NM |
| AS-7D | 26-May-09 | 13.67 | 3.82 | 9.85 |
| AS-8D | 26-May-09 | 13.35 | 3.55 | 9.80 |

**Notes:**

NM = water level not measured

NS = not surveyed

(*) Top of casing obscured by sparge/extraction fitting; top-of-casing value estimated

(1) Top-of-casing elevation surveyed by Tronoff & Associates licensed land surveyor number 6415; top-of-casing and groundwater elevations are in North American vertical datum 1988 (feet)

(2) feet below the top of well casing

**Table 2**
**Analytical Results for Volatile Organic Compounds**
**Former Pacific Electric Motors Facility**
**1009 66th Avenue, Oakland, California**
*(concentrations in micrograms per liter [µg/L])*

| Sample Location | Date Collected | Notes | TPHg | TBA | MTBE | Benzene | Toluene | Ethyl-benzene | m,p-Xylenes | o-Xylenes | Total Xylenes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Shallow-Zone Groundwater Monitoring Wells** | | | | | | | | | | | |
| NW-1S | 27-Dec-05 | | <50 | NA | 0.55 | <0.50 | <0.50 | <0.50 | NA | NA | <0.50 |
| | 13-Mar-09 | | <50 | <10 | 0.55 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 23-Sep-09 | | <50 | <10 | <0.50 | <0.50 | 0.69 | <0.50 | 0.59 | <0.50 | 0.59 |
| NW-2S | 27-Dec-05 | | 7,100 | NA | 1,600 | 570 | 570 | 62 | NA | NA | 1,530 |
| | 13-Mar-09 | | 1,800 | 1,900 | 130 | 520 | <4.2 | 120 | 20 | <4.2 | 20 |
| | 23-Sep-09 | | 15,000 | 5,100 | 11,000 | 610 | 800 | 41 | 1,500 | 2,300 | 3,800 |
| NW-3S | 26-May-09 | | <50 | <10 | 2.6 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 21-Sep-09 | | <50 | <10 | 4.1 | <0.50 | 0.58 | <0.50 | <0.50 | <0.50 | <0.50 |
| **Intermediate-Zone Groundwater Monitoring Wells** | | | | | | | | | | | |
| ASMW-2I | 13-Mar-09 | | 49,000 | 3,200 | 1,100 | 18,000 | 17,000 | 1,600 | 5,100 | 3,100 | 8,200 |
| | 23-Sep-09 | | <1,000 | 13,000 | 290 | <10 | 13 | <10 | 39 | 31 | 70 |
| | 22-Oct-09 | | <50 | 370 | 290 | <0.50 | 4.6 | <0.50 | 9 | 11 | 20 |
| ASMW-3I | 11-Mar-09 | | <50 | <10 | 1.4 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 22-Sep-09 | | <50 | <10 | 3.4 | <0.50 | 1.4 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 22-Oct-09 | | <50 | <10 | 6.9 | <0.50 | 1.4 | <0.50 | <0.50 | <0.50 | <0.50 |
| ASMW-4I | 11-Mar-09 | | 9,200 | <130 | <6.3 | 38 | <6.3 | 570 | 1,800 | 230 | 2,030 |
| | 23-Sep-09 | | 1,900 | <130 | <6.3 | 8.1 | <6.3 | 130 | 120 | 26 | 146 |
| | 22-Oct-09 | | 1,900 | <10 | <0.50 | 4.0 | 1 | 75 | 110 | 23 | 133 |
| ASMW-5I | 11-Mar-09 | | 72,000 | <1,400 | 76 | 11,000 | 3,600 | 3,800 | 13,000 | 5,400 | 18,400 |
| | 10-Aug-09 | | 59,000 | <1400 | 91 | 9,100 | 1,800 | 2,400 | 8,300 | 3,900 | 12,200 |
| | 22-Sep-09 | | 15,000 | 210 | 78 | 1,100 | 250 | 280 | 2,000 | 1,200 | 3,200 |
| | 22-Oct-09 | | 22,000 | 330 | 110 | 560 | 330 | 240 | 3,000 | 1,600 | 4,600 |
| NW-2I | 27-Dec-05 | | 120,000 | NA | 120,000 | 22,000 | 24,000 | 2,100 | NA | NA | 12,800 |
| | 13-Mar-09 | | 49,000 | NA | 1,100 | 18,000 | 17,000 | 1,600 | NA | NA | 8,200 |
| | 23-Sep-09 | | 12,000 | 5,500 | 3,000 | 980 | 820 | 220 | 1,200 | 660 | 1,860 |
| | 22-Oct-09 | | 4,200 | 3,300 | 330 | 110 | 110 | 5.8 | 400 | 250 | 650 |
| NW-3I | 27-Dec-05 | | <50 | NA | <2.0 | <0.50 | <0.50 | <0.50 | NA | NA | <0.50 |

**Table 2**
**Analytical Results for Volatile Organic Compounds**
**Former Pacific Electric Motors Facility**
**1009 66th Avenue, Oakland, California**
*(concentrations in micrograms per liter [µg/L])*

| Sample Location | Date Collected | Notes | TPHg | TBA | MTBE | Benzene | Toluene | Ethyl-benzene | m,p-Xylenes | o-Xylenes | Total Xylenes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 15-Feb-06 | | <50 | NA | <2.0 | <0.50 | <0.50 | <0.50 | NA | NA | <0.50 |
| | 15-Feb-06 | | <50 | NA | <2.0 | <0.50 | <0.50 | <0.50 | NA | NA | <0.50 |
| | 16-Feb-06 | | <50 | NA | <2.0 | <0.50 | <0.50 | <0.50 | NA | NA | <0.50 |
| | 21-Sep-09 | | <50 | <10 | 1.3 | <0.50 | 0.54 | <0.50 | <0.50 | <0.50 | <0.50 |
| AS-2I | 22-Sep-09 | | <8,300 | 2,900 | 11,000 | 460 | 120 | <83 | 130 | <83 | 130 |
| AS-6I | 26-May-09 | | 42,000 | <1,000 | 170 | 11,000 | 780 | 2,400 | 7,300 | 2,900 | 10,200 |
| | 23-Sep-09 | | 26,000 | 330 | 1,600 | 1,000 | 400 | 230 | 4,000 | 1,300 | 5,300 |
| AS-7I | 26-May-09 | | <50 | 35 | 2.5 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 23-Sep-09 | | <50 | <10 | 0.8 | <0.50 | 0.95 | <0.50 | <0.50 | <0.50 | <0.50 |
| AS-8I | 23-Sep-09 | | <50 | <10 | 1.0 | <0.50 | 1.6 | <0.50 | <0.50 | <0.50 | <0.50 |
| **Deep-Zone Groundwater Monitoring Wells** | | | | | | | | | | | |
| ASMW-2D | 11-Mar-09 | | <1,300 | 1,900 | 1,300 | <13 | <13 | <13 | <13 | <13 | <13 |
| | 23-Sep-09 | | <360 | <71 | 460 | <3.6 | <3.6 | <3.6 | 5.7 | 4.7 | 10.4 |
| | 22-Oct-09 | | <50 | <10 | 1.9 | <0.50 | 1.4 | <0.50 | 1.9 | 2.1 | 4 |
| ASMW-3D | 11-Mar-09 | | <50 | 34 | 91 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 22-Sep-09 | (4) | <50 | 28 | 280 | <0.50 | 1.1 | <0.50 | 0.68 | 0.87 | 1.55 |
| | 22-Oct-09 | | <50 | <10 | 310 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| ASMW-4D | 11-Mar-09 | | <50 | <10 | 1.4 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 21-Sep-09 | (1) | <50 | <10 | 5.4 | <0.50 | 1.5 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 22-Oct-09 | | <50 | <10 | 6.1 | <0.50 | 0.5 | <0.50 | <0.50 | <0.50 | <0.50 |
| ASMW-5D | 11-Mar-09 | (2) | 87 | 1,700 | <0.50 | 84 | <0.50 | 5.2 | 5.9 | 1.5 | 7.4 |
| | 21-Sep-09 | | <50 | <10 | 72 | <0.50 | 2.8 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 22-Oct-09 | | <50 | <10 | 76 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| duplicate | 22-Oct-09 | | <50 | <10 | 5.1 | <0.50 | 0.8 | <0.50 | <0.50 | <0.50 | <0.50 |
| AS-2D | 22-Sep-09 | | <50 | <10 | 13 | <0.50 | 0.8 | <0.50 | <0.50 | <0.50 | <0.50 |
| NW-1D | 27-Dec-05 | | <50 | NA | 37 | <0.50 | <0.50 | <0.50 | NA | NA | <0.50 |
| | 13-Mar-09 | | <50 | <10 | 1.4 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |

**Table 2**
**Analytical Results for Volatile Organic Compounds**
**Former Pacific Electric Motors Facility**
**1009 66th Avenue, Oakland, California**
*(concentrations in micrograms per liter [µg/L])*

| Sample Location | Date Collected | Notes | TPHg | TBA | MTBE | Benzene | Toluene | Ethyl-benzene | m,p-Xylenes | o-Xylenes | Total Xylenes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NW-2D | 27-Dec-05 | | 1,400 | NA | 1,600 | 300 | 13 | <2.5 | NA | NA | 178 |
| | 13-Mar-09 | | <250 | 17,000 | 310 | 120 | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 |
| | 22-Sep-09 | (3) | <50 | <10 | 9.8 | 0.5 | 2.5 | <0.50 | 2.0 | 2.1 | 4.1 |
| duplicate | 22-Sep-09 | | <50 | <10 | 12 | <0.50 | 1.4 | <0.50 | 1.9 | 1.3 | 3.2 |
| | 22-Oct-09 | | <50 | <10 | <0.50 | <0.50 | 0.8 | <0.50 | <0.50 | <0.50 | <0.50 |
| NW-3D | 27-Dec-05 | | <50 | NA | <2.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 15-Feb-06 | | <50 | NA | <2.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 15-Feb-06 | | <50 | NA | 2.1 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 16-Feb-06 | | <50 | NA | <2.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 21-Sep-09 | | <50 | <10 | 1.0 | <0.50 | 0.67 | <0.50 | <0.50 | <0.50 | <0.50 |
| MW-1 | 19-Jun-97 | | 18,000 | NA | 4,900 | 3,300 | 200.0 | 1,100 | NA | NA | <250 |
| | 29-Sep-97 | | 29,000 | NA | 3,500 | 4,800 | <25 | 2,000 | NA | NA | <250 |
| | 16-Dec-97 | | <0.050 | NA | 0.7 | 1.3 | <0.5 | 0.6 | NA | NA | <5.0 |
| | 10-Mar-98 | | 190 | NA | 1.7 | 2 | <0.5 | 5.7 | NA | NA | <5.0 |
| | 19-Jan-99 | | 100 | NA | 68.0 | 40 | <0.5 | 18.0 | NA | NA | 8.3 |
| | 15-Apr-99 | | <0.050 | NA | 0.87 | 0.92 | 0.9 | 0.7 | NA | NA | <5.0 |
| | 30-Jul-99 | | 1,400 | NA | 120 | 60 | <0.5 | 63 | NA | NA | 13.0 |
| | 15-Nov-99 | | 3,600 | NA | 620 | 120 | <0.5 | 150 | NA | NA | <5.0 |
| | 24-Mar-00 | | <0.050 | NA | <0.5 | <0.5 | <0.5 | <0.5 | NA | NA | <5.0 |
| | 18-May-00 | | 1,300 | NA | 130.0 | 10 | 1.2 | 38.0 | NA | NA | 8.6 |
| | 26-Jul-00 | | 6,400 | NA | 680 | 100 | 7.4 | 260 | NA | NA | <5.0 |
| | 30-Oct-00 | | 600 | NA | 950 | 130 | 14 | 330 | NA | NA | <100 |
| | 24-Jul-01 | | 1,200 | NA | 39 | 13 | <0.5 | 70 | NA | NA | 13 |
| | 28-Nov-01 | | 1,800 | NA | 160 | 27 | 0.93 | 72 | NA | NA | <5.0 |
| | 18-Feb-02 | | 2,400 | NA | 200 | 18 | <2.5 | 89 | NA | NA | <25 |
| | 11-Dec-02 | | 8,400 | NA | 640 | 83 | 9.2 | 320 | NA | NA | <0.5 |
| | 26-Feb-03 | | 8,300 | NA | 720 | 12 | <10 | 240 | NA | NA | <10 |
| | 16-May-03 | | 5,600 | NA | 490 | 22 | <5.0 | 240 | NA | NA | <5.0 |
| | 8-Mar-05 | | 230 | NA | <0.5 | <0.5 | <0.5 | <0.5 | NA | NA | <5.0 |
| | 13-Mar-09 | | <50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |

**Table 2**
**Analytical Results for Volatile Organic Compounds**
**Former Pacific Electric Motors Facility**
**1009 66th Avenue, Oakland, California**
*(concentrations in micrograms per liter [µg/L])*

| Sample Location | Date Collected | Notes | TPHg | TBA | MTBE | Benzene | Toluene | Ethyl-benzene | m,p-Xylenes | o-Xylenes | Total Xylenes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 26-May-09 | | <50 | <10 | <0.50 | <0.50 | 0.67 | <0.50 | <0.50 | <0.50 | <0.50 |
| duplicate | 26-May-09 | | <50 | <10 | <0.50 | <0.50 | 0.62 | <0.50 | <0.50 | <0.50 | <0.50 |
| MW-2 | 19-Jun-97 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 29-Sep-97 | | -- | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 16-Dec-97 | | -- | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 10-Mar-98 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 19-Jan-99 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 15-Apr-99 | | <50 | NA | <5.0 | 0.75 | 0.64 | <0.5 | NA | NA | 0.74 |
| | 30-Jul-99 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 15-Nov-99 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 24-Mar-00 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 18-May-00 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 26-Jul-00 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 30-Oct-00 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 24-Jul-01 | | <50 | NA | 7.6 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 28-Nov-01 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 18-Feb-02 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 11-Dec-02 | | <50 | NA | 5.8 | <0.5 | <0.5 | <0.5 | NA | NA | <1.0 |
| | 26-Feb-03 | | <50 | NA | 10 | <0.5 | <0.5 | <0.5 | NA | NA | <1.0 |
| | 16-May-03 | | <50 | NA | 16 | <0.5 | <0.5 | <0.5 | NA | NA | <1.0 |
| | 9-Mar-05 | | <50 | NA | 15 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 15-Feb-06 | | <50 | NA | 19 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 15-Feb-06 | | <50 | NA | 6.8 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 16-Feb-06 | | <50 | NA | 5.6 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 13-Mar-09 | | <50 | <10 | 2.0 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 26-May-09 | | <50 | <10 | 3.5 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| | 21-Sep-09 | | <50 | <10 | 3.4 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 |
| MW-3 | 19-Jun-97 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 29-Sep-97 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 16-Dec-97 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |

**Table 2**
**Analytical Results for Volatile Organic Compounds**
**Former Pacific Electric Motors Facility**
**1009 66th Avenue, Oakland, California**
*(concentrations in micrograms per liter [µg/L])*

| Sample Location | Date Collected | Notes | TPHg | TBA | MTBE | Benzene | Toluene | Ethyl-benzene | m,p-Xylenes | o-Xylenes | Total Xylenes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10-Mar-98 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 19-Jan-99 | | <50 | NA | 8.7 | 0.78 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 15-Apr-99 | | <50 | NA | 23 | 5.4 | 3.9 | 1.7 | NA | NA | 5.6 |
| | 30-Jul-99 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 15-Nov-99 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 24-Mar-00 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 18-May-00 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 26-Jul-00 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 30-Oct-00 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 24-Jul-01 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 28-Nov-01 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 18-Feb-02 | | <50 | NA | <5.0 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 11-Dec-02 | | <50 | NA | 0.78 | <0.5 | <0.5 | <0.5 | NA | NA | <1.0 |
| | 26-Feb-03 | | <50 | NA | <0.5 | <0.5 | <0.5 | <0.5 | NA | NA | <1.0 |
| | 16-May-03 | | <50 | NA | 2.6 | <0.5 | <0.5 | <0.5 | NA | NA | <1.0 |
| | 8-Mar-05 | | <50 | NA | <2 | <0.5 | <0.5 | <0.5 | NA | NA | <0.5 |
| | 13-Mar-09 | | <50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | 0.97 | <0.50 | 0.97 |
| | 22-Sep-09 | | <50 | <10 | 0.89 | <0.50 | 1.1 | <0.5 | <0.5 | <0.50 | <0.50 |
| MW-4 | 15-Sep-98 | | 170,000 | NA | 26,000 | 26,000 | 32,000 | 2,900 | NA | NA | 18,000 |
| | 19-Jan-99 | | 2,600 | NA | 13,000 | 1,700 | 3.8 | 25 | NA | NA | 29 |
| | 15-Apr-99 | | 210,000 | NA | 52,000 | 28,000 | 15,000 | 3,700 | NA | NA | 19,000 |
| | 30-Jul-99 | | 91,000 | NA | 68,000 | 16,000 | 7,500 | 2,300 | NA | NA | 8,500 |
| | 15-Nov-99 | | 63,000 | NA | 57,000 | 8,500 | 2,400 | 1,400 | NA | NA | 4,000 |
| | 24-Mar-00 | | 95,000 | NA | 44,000 | 16,000 | 13,000 | 2,500 | NA | NA | 12,000 |
| | 18-May-00 | | 91,000 | NA | 64,000 | 15,000 | 10,000 | 2,200 | NA | NA | 9,600 |
| | 26-Jul-00 | | 130,000 | NA | 80,000 | 11,000 | 6,400 | 1,700 | NA | NA | 6,500 |
| | 30-Oct-00 | | 59,000 | NA | 68,000 | 6,700 | 2,200 | 750 | NA | NA | 3,100 |
| | 24-Jul-01 | | 180,000 | NA | 44,000 | 25,000 | 23,000 | 3,500 | NA | NA | 20,000 |
| | 28-Nov-01 | | 67,000 | NA | 57,000 | 8,100 | 3,300 | 1,400 | NA | NA | 5,600 |
| | 18-Feb-02 | | 98,000 | NA | 47,000 | 20,000 | 12,000 | 2,300 | NA | NA | 15,000 |

**Table 2**
**Analytical Results for Volatile Organic Compounds**
**Former Pacific Electric Motors Facility**
**1009 66th Avenue, Oakland, California**
*(concentrations in micrograms per liter [µg/L])*

| Sample Location | Date Collected | Notes | TPHg | TBA | MTBE | Benzene | Toluene | Ethyl-benzene | m,p-Xylenes | o-Xylenes | Total Xylenes |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 11-Dec-02 | | 200,000 | NA | 17,000 | 340 | <5.00 | 590 | NA | NA | 1,000 |
| | 26-Feb-03 | | 63,000 | NA | 30,000 | 8,100 | 4,400 | 1,900 | NA | NA | 8,200 |
| | 16-May-03 | | 530,000 | NA | 42,000 | 24,000 | 20,000 | 12,000 | NA | NA | 63,000 |
| | 9-Mar-05 | | 152,237 | NA | 5,841 | 22,053 | 17,310 | 3,981 | NA | NA | 13,969 |
| | 9-Mar-05 | | 162,863 | NA | 6,026 | 21,536 | 16,547 | 3,900 | NA | NA | 13,786 |
| | 13-Mar-09 | | 55,000 | <1,400 | 950 | 19,000 | 7,200 | 2,300 | 8,500 | 3,500 | 12,000 |
| | 23-Sep-09 | | 250 | 730 | 49 | 51 | 3.7 | 8.6 | 37 | 16 | 53 |
| | 22-Oct-09 | | <50 | <10 | 3.7 | <.50 | 1.3 | <0.50 | <0.50 | <0.50 | <0.50 |

**Notes:**

NA = not analyzed

TPHg = total petroleum hydrocarbons as gasoline

TBA = tertiary-butyl alcohol

MTBE = methyl tertiary-butyl ether

1,2-DCA = 1,2-dichloroethane

"<" = not detected above the laboratory reporting limit given

Samples collected in March 2009 were analyzed by Curtis & Tompkins, Ltd.

(1) 1,2-DCA results = 0.79 µg/L

(2) 1,2-DCA results = 0.88 µg/L

(3) 1,2-DCA results = 0.58 µg/L

(4) 1,2-DCA results = 0.77 µg/L

**Table 3**
**Analytical Results for Metals in Groundwater**
**Former Pacific Electric Motors Facility**
**1009 66th Avenue, Oakland, California**
*(concentrations in micrograms per liter)*

| Sample Location | Date Collected | Total Chromium | Hexavalent Chromium | Total Iron | Ferrous Iron | Ferric Iron | Arsenic | Selenium | Manganese |
|---|---|---|---|---|---|---|---|---|---|
| **Shallow-Zone Groundwater Monitoring Wells** | | | | | | | | | |
| NW-1S | NS | -- | -- | -- | -- | -- | -- | -- | -- |
| NW-2S | NS | -- | -- | -- | -- | -- | -- | -- | -- |
| NW-3 S | NS | -- | -- | -- | -- | -- | -- | -- | -- |
| **Intermediate-Zone Groundwater Monitoring Wells** | | | | | | | | | |
| ASMW-2I | 10-Aug-09 | 6.3 | <0.5 | 26,000 | 25,000 | 390 | 23 | <10 | 15,000 |
| | 23-Sep-09 | <5 | <0.5 | <100 | <100 | <100 | <5.0 | <10 | <5.0 |
| ASMW-3I | 11-Aug-09 | <5.0 | <0.5 | <100 | <100 | <100 | <5.0 | <10 | 7,500 |
| | 22-Sep-09 | <5.0 | <0.5 | <100 | <100 | <100 | 11 | 10 | 6,000 |
| ASMW-4I | 11-Aug-09 | <5.0 | <0.5 | 2,000 | 950 | 1,100 | 16 | <10 | 3,600 |
| | 23-Sep-09 | <5 | <0.5 | 3,300 | 2,800 | 460 | 11 | <10 | 4,200 |
| ASMW-5I | 10-Aug-09 | <5.0 | <0.5 | 7,300 | 5,200 | 2,100 | 14 | <10 | 7,000 |
| | 22-Sep-09 | <5.0 | <0.5 | 770 | 610 | 150 | 10 | <10 | 4,000 |
| NW-2I | 11-Aug-09 | <5.0 | <0.5 | 11,000 | 11,000 | 480 | 17 | <10 | 1,800 |
| | 23-Sep-09 | <5 | <0.5 | 18,000 | 4,300 | 14,000 | 15 | <10 | 4,000 |
| **Deep-Zone Groundwater Monitoring Wells** | | | | | | | | | |
| ASMW-2D | 10-Aug-09 | <5 | <0.5 | <100 | <100 | <100 | 9.8 | <10 | 4,400 |
| | 23-Sep-09 | <5 | 1.7 | <100 | <100 | <100 | 12 | 13 | 7,200 |
| | 22-Oct-09 | <5 | 1.1 | NS | NS | NS | <5.0 | <10 | NS |
| ASMW-3D | 11-Aug-09 | <5.0 | <0.5 | 350 | <100 | 350 | <5.0 | <10 | 3,400 |
| | 22-Sep-09 | <5.0 | <0.5 | <100 | <100 | <100 | 9.7 | <10 | 460 |
| ASMW-4D | 11-Aug-09 | <5.0 | <0.5 | <100 | <100 | <100 | <5.0 | <10 | 1,200 |
| | 21-Sep-09 | <5.0 | <0.5 | <100 | <100 | <100 | <5.0 | <10 | 610 |
| ASMW-5D | 11-Aug-09 | <5.0 | <0.5 | 170 | <100 | 170 | <5.0 | <10 | 2,200 |
| | 21-Sep-09 | <0.5 | <0.5 | <100 | <100 | <100 | <5.0 | <10 | 7.2 |
| NW-2D | 10-Aug-09 | <5.0 | <0.5 | <100 | <100 | <100 | <5.0 | <10 | 800 |
| | 22-Sep-09 | <5.0 | <0.5 | <100 | <100 | <100 | <5.0 | <10 | <5.0 |
| | 22-Sep-09 (duplicate) | <5.0 | <0.5 | <100 | <100 | <100 | <5.0 | <10 | <5.0 |
| MW-4 | 10-Aug-09 | <5.0 | <0.5 | 8,200 | 6,900 | 1,300 | <5.0 | <10 | 2,200 |
| | 23-Sep-09 | <5 | <0.5 | 1,000 | 1,100 | <100 | 7.5 | <10 | 2,300 |

**Note:**

NS = not sampled

**Table 4**
**Field Parameters**
**Former Pacific Electric Motors Facility**
**1009 66th Avenue, Oakland, California**
*(concentrations in micrograms per liter)*

| Sample Location | Date Collected | Temperature (degrees Celsius) | Conductivity (mmhos/cm) | pH (units) | Oxygen Reduction Potential millivolts (mV) | Dissolved Oxygen (percent) |
|---|---|---|---|---|---|---|
| **Shallow-Zone Groundwater Monitoring Wells** | | | | | | |
| NW-1S | 23-Sep-09 | 23.84 | 764 | 6.42 | -14.00 | 0.31 |
| NW-2S | 23-Sep-09 | 25.55 | 1,696 | 6.67 | -30.10 | 0.20 |
| NW-3S | 21-Sep-09 | 21.60 | 681 | 6.43 | 118.90 | 0.75 |
| **Intermediate-Zone Groundwater Monitoring Wells** | | | | | | |
| ASMW-2I | 10-Aug-09 | 23.49 | 4,195 | 6.21 | -61.1 | 0.18 |
| | 23-Sep-09 | 21.89 | 6,769 | 6.85 | 170.1 | 5.33 |
| | 22-Oct-09 | 22.35 | 6,742 | 7.14 | 240.6 | 5.83 |
| ASMW-3I | 11-Aug-09 | 22.72 | 8,284 | 6.42 | 62.4 | 0.20 |
| | 22-Sep-09 | 23.57 | 5,342 | 6.58 | 122.4 | 0.36 |
| | 22-Oct-09 | 23.49 | 5,232 | 6.64 | 101.8 | 0.71 |
| ASMW-4I | 11-Aug-09 | 21.11 | 939 | 6.79 | -95.2 | 0.19 |
| | 23-Sep-98 | 21.82 | 969 | 6.76 | -127.1 | 0.19 |
| | 22-Oct-09 | 21.74 | 910 | 6.74 | -59.3 | 0.14 |
| ASMW-5I | 10-Aug-09 | 24.39 | 1,296 | 6.59 | -74.7 | 0.38 |
| | 21-Sep-09 | 23.46 | 1,183 | 6.71 | -3.1 | 0.11 |
| | 22-Oct-09 | 23.33 | 951 | 6.85 | -6.6 | 0.46 |
| AS-2I | 22-Sep-09 | 23.85 | 4,803 | 7.10 | 55.0 | 0.94 |
| AS-6I | 23-Sep-09 | 23.21 | 872 | 7.09 | 16.7 | 0.16 |
| AS-7I | 23-Sep-09 | 21.51 | 3,137 | 7.33 | 186.9 | 5.73 |
| AS-8I | 23-Sep-09 | 21.91 | 755 | 7.91 | 149.1 | 4.81 |
| NW-2I | 11-Aug-09 | 23.63 | 2,800 | 6.43 | -73.0 | 0.38 |
| | 23-Sep-09 | 23.92 | 1,511 | 7.44 | -34.7 | 0.38 |
| | 22-Oct-09 | 23.54 | 1,336 | 7.65 | 193.9 | 3.45 |
| MW-3I | 21-Sep-09 | 20.49 | 1,772 | 6.74 | 191.5 | 0.49 |
| **Deep-Zone Groundwater Monitoring Wells** | | | | | | |
| ASMW-2D | 10-Aug-09 | 22.62 | 10,240 | 6.27 | 192.2 | 0.33 |
| | 23-Sep-09 | 22.15 | 1,850 | 7.27 | 164.9 | 9.12 |

**Table 4**
**Field Parameters**
**Former Pacific Electric Motors Facility**
**1009 66th Avenue, Oakland, California**
*(concentrations in micrograms per liter)*

| Sample Location | Date Collected | Temperature (degrees Celsius) | Conductivity (mmhos/cm) | pH (units) | Oxygen Reduction Potential millivolts (mV) | Dissolved Oxygen (percent) |
|---|---|---|---|---|---|---|
| | 22-Oct-09 | 21.27 | 1,157 | 7.30 | 140.5 | 9.20 |
| ASMW-3D | 11-Aug-09 | 20.37 | 9,767 | 6.25 | 122.9 | 0.20 |
| | 22-Sep-09 | 20.92 | 9,727 | 6.37 | 162.0 | 1.57 |
| | 22-Oct-09 | 20.69 | 7,757 | 6.39 | 252.0 | 1.77 |
| ASMW-4D | 11-Aug-09 | 19.70 | 1,408 | 6.67 | 172.9 | 0.15 |
| | 21-Sep-09 | 20.79 | 1,804 | 6.70 | 172.3 | 0.17 |
| | 22-Oct-09 | 20.17 | 1,889 | 6.85 | 331.8 | 0.32 |
| ASMW-5D | 11-Aug-09 | 20.18 | 1,876 | 6.58 | 47.8 | 0.11 |
| | 21-Sep-09 | 21.74 | 1,751 | 6.70 | 133.4 | 2.85 |
| | 22-Oct-09 | 20.87 | 1,766 | 6.82 | 2330.0 | 4.44 |
| AS-2D | 22-Sep-09 | 20.48 | 1,151 | 7.36 | 142.9 | 8.61 |
| NW-2D | 10-Aug-09 | 22.06 | 1,179 | 6.37 | 93.2 | 0.22 |
| | 22-Sep-09 | 22.19 | 759 | 6.63 | 174.1 | 4.55 |
| | 22-Oct-09 | 21.48 | 199 | 6.70 | 175.0 | 6.40 |
| NW-3D | 21-Sep-09 | 19.53 | 821 | 6.87 | 198.8 | 0.24 |
| MW-2 | 21-Sep-09 | 19.39 | 1,052 | 6.74 | 149.6 | 0.25 |
| MW-3 | 22-Sep-09 | 19.62 | 3,104 | 6.67 | 113.3 | 0.15 |
| MW-4 | 10-Aug-09 | 23.99 | 1,309 | 6.50 | -82.4 | 0.28 |
| | 23-Sep-09 | 21.94 | 1,394 | 6.79 | -36.7 | 0.41 |
| | 22-Oct-09 | 22.12 | 1,289 | 7.19 | 229.1 | 4.35 |
| SVMW-3 | 22-Sep-09 | 24.56 | 4,719 | 6.54 | 27.8 | 0.40 |
| SVMW-4 | 21-Sep-09 | 24.38 | 2,034 | 6.86 | -14.0 | 0.68 |

**Notes:**
ORP = oxidation-reduction potential
mmhos/cm = milliohms per centimeter


MAP SOURCE: Copyright 1995, Thomas Bros. Map ALAMEDA COUNTY 2002 Edition

0 2,000 4,000 FEET

1009 66TH AVENUE, OAKLAND, CALIFORNIA

## SITE VICINITY MAP

ARCADIS

FIGURE 1

DESIGN\003\09155\Figure 1 Site Vicinity - 003-09155.cdr

**EXPLANATION:**

- MW-1 — Monitoring Well
- NW-1 — Nested Monitoring Wells
- AS-4D — Air Injection Well
- ASMW-3I — Air Injection Monitoring Well
- SVE-4 — SVE or SVE Monitoring Well
- Property Line

NOTES:
SVE = soil-vapor extraction

APPROXIMATE LIMITS OF 1995 EXCAVATION

WAREHOUSE BUILDING

MW-1

NW-1S, 1I, 1D

APPROXIMATE LOCATION OF FORMER GAS SHED AND 2,000-GALLON GASOLINE UST

SVE-4
AS-4D
AS-4I

EW-1

SVE-2
AS-2D
AS-2I

SVE-3
AS-3D
AS-3I

NW-2S, 2I, 2D

SVE-5
AS-5D
AS-5I

SVMW-2
ASMW-2D

SVE-1
AS-1D
AS-1I
ASMW-2I

MW-4

SVE-6
AS-6D
AS-6I

SVMW-3
ASMW-3D
ASMW-3I

SVMW-5
ASMW-5D
ASMW-5I

SVE-7
AS-7D
AS-7I

SVE-8
AS-8D
AS-8I

SVMW-4
ASMW-4D
ASMW-4I

MW-3

NW-3S, 3I, 3D

MW-2

APPROXIMATE LIMITS OF 2002 EXCAVATION

N

0 20 FEET
(SCALE: 1" = 20')

1009 66TH AVENUE, OAKLAND, CALIFORNIA

**SITE PLAN**

ARCADIS

FIGURE
**2**

**EXPLANATION:**

- MW-1 — Monitoring Well
- NW-1 — Nested Monitoring Wells
- AS-4D — Air Injection Well
- ASMW-3I — Air Injection Monitoring Well
- SVE-4 — SVE or SVE Monitoring Well
- Property Line
- 9.81 — Groundwater Elevation Data
- Groundwater Elevation Contour
- Direction of Groundwater Flow

NOTE:

SVE = soil-vapor extraction

APPROXIMATE LIMITS OF 1995 EXCAVATION

WAREHOUSE BUILDING

MW-1

NW-1S, 1I, 1D

SVE-4
AS-4D
AS-4I
EW-1

SVE-2
AS-2D
AS-2I

SVE-3
AS-3D
AS-3I

NW-2S, 2I, 2D
5.26
SVE-1
AS-1D
AS-1I

SVE-5
AS-5D
AS-5I

SVMW-2
ASMW-2D
ASMW-2I
6.10

MW-4

SVE-6
AS-6D
AS-6I

SVMW-3
ASMW-3D
ASMW-3I
7.99

SVE-7
AS-7D
AS-7I

SVE-8
AS-8D
AS-8I

SVMW-5
ASMW-5D
ASMW-5I
6.30

SVMW-4
ASMW-4D
ASMW-4I
9.51

MW-3

NW-3S, 3I, 3D

MW-2

6.0
7.0
8.0
9.0

APPROXIMATE LOCATION OF FORMER GAS SHED AND 2,000-GALLON GASOLINE UST

0 20 FEET
(SCALE: 1" = 20')

APPROXIMATE LIMITS OF 2002 EXCAVATION

1009 66TH AVENUE, OAKLAND, CALIFORNIA

**GROUNDWATER ELEVATION CONTOUR MAP INTERMEDIATE ZONE OCTOBER 2009**

ARCADIS

FIGURE 3

**EXPLANATION:**

- MW-1 — Monitoring Well
- NW-1 — Nested Monitoring Wells
- AS-4D — Air Injection Well
- ASMW-3I — Air Injection Monitoring Well
- SVE-4 — SVE or SVE Monitoring Well
- Property Line
- 9.81 — Groundwater Elevation Data
- Groundwater Elevation Contour (dashed where inferred)
- Direction of Groundwater Flow

NOTE:

SVE = soil-vapor extraction

APPROXIMATE LIMITS OF 1995 EXCAVATION

WAREHOUSE BUILDING

MW-1

NW-1S, 1I, 1D

APPROXIMATE LOCATION OF FORMER GAS SHED AND 2,000-GALLON GASOLINE UST

SVE-4
AS-4D
AS-4I
EW-1

SVE-2
AS-2D
AS-2I

SVE-3
AS-3D
AS-3I

NW-2S, 2I, 2D 9.66
SVE-1
AS-1D
AS-1I

SVE-5
AS-5D
AS-5I

SVMW-2
ASMW-2I
ASMW-2D 6.40

MW-4 7.50

SVE-6
AS-6D
AS-6I

SVMW-3
ASMW-3D 9.29
ASMW-3I

SVMW-5
ASMW-5D 9.45
ASMW-5I

SVE-7
AS-7D
AS-7I

SVE-8
AS-8D
AS-8I

SVMW-4
ASMW-4D 9.55
ASMW-4I

NW-3S, 3I, 3D

MW-2

MW-3

7.0
8.0
9.0

0 20 FEET
(SCALE: 1" = 20')

APPROXIMATE LIMITS OF 2002 EXCAVATION

1009 66TH AVENUE, OAKLAND, CALIFORNIA

**GROUNDWATER ELEVATION CONTOUR MAP DEEP ZONE OCTOBER 2009**

ARCADIS

FIGURE 4

**EXPLANATION:**

- MW-1 — Monitoring Well
- NW-1 — Nested Monitoring Wells
- AS-4D — Air Injection Well
- ASMW-3I — Air Injection Monitoring Well
- SVE-4 — SVE or SVE Monitoring Well
- Property Line
- LOCATION ID
- Date sample taken

| AS-7I | 26-May-09 |
|---|---|
| TPHg | <50 |

- Concentration in micrograms per liter
- Chemical
- 22-Sept-09 — Denotes sample collected after the soil vapor extraction air sparging groundwater treatment system began operation

NOTES:

TPHg = total petroleum hydrocarbons as gasoline
TBA = tertiary butyl alcohol
MTBE = methyl tertiary-butyl ether
"<" = not detected above the laboratory reporting limit given
SVE = soil-vapor extraction
VOCs = volatile organic compounds

APPROXIMATE LIMITS OF 1995 EXCAVATION

WAREHOUSE BUILDING

MW-1

NW-1S, 1I, 1D

APPROXIMATE LOCATION OF FORMER GAS SHED AND 2,000-GALLON GASOLINE UST

| NW-2I | 13-Mar-09 | 23-Sept-09 | 22-Oct-09 |
|---|---|---|---|
| TPHg | 49,000 | 12,000 | 4,200 |
| TBA | NA | 5,500 | 3,300 |
| MTBE | 1,100 | 3,000 | 330 |
| Benzene | 18,000 | 980 | 110 |
| Toluene | 17,000 | 820 | 110 |
| Ethylbenzene | 1,600 | 220 | 5.8 |
| Xylenes | 8,200 | 1,860 | 650 |

| AS-2I | 22-Sept-09 |
|---|---|
| TPHg | <8,300 |
| TBA | 2,900 |
| MTBE | 11,000 |
| Benzene | 460 |
| Toluene | 120 |
| Ethylbenzene | <83 |
| Xylenes | 130 |

| ASMW-3I | 11-Mar-09 | 22-Sept-09 | 22-Oct-09 |
|---|---|---|---|
| TPHg | <50 | <50 | <50 |
| TBA | <10 | <10 | <10 |
| MTBE | 1.4 | 3.4 | 6.9 |
| Benzene | <0.50 | <0.50 | <0.50 |
| Toluene | <0.50 | 1.4 | 1.4 |
| Ethylbenzene | <0.50 | <0.50 | <0.50 |
| Xylenes | <0.50 | <0.50 | <0.50 |

SVE-2, AS-2D, AS-2I

SVE-3, AS-3D, AS-3I

SVE-4, AS-4D, AS-4I

EW-1

| AS-6I | 26-May-09 | 23-Sept-09 |
|---|---|---|
| TPHg | 42,000 | 26,000 |
| TBA | <1,000 | 330 |
| MTBE | 170 | 1,600 |
| Benzene | 11,000 | 1,000 |
| Toluene | 780 | 400 |
| Ethylbenzene | 2,400 | 230 |
| Xylenes | 10,200 | 5,300 |

NW-2S, 2I, 2D

SVE-5, AS-5D, AS-5I

SVMW-2, ASMW-2D, ASMW-2I

SVE-1, AS-1D, AS-1I

MW-4

SVE-6, AS-6D, AS-6I

SVMW-3, ASMW-3D, ASMW-3I

SVMW-5, ASMW-5D, ASMW-5I

| ASMW-5I | 11-Mar-09 | 10-Aug-09 | 22-Sept-09 | 22-Oct-09 |
|---|---|---|---|---|
| TPHg | 72,000 | 59,000 | 15,000 | 22,000 |
| TBA | <1,400 | <1,400 | 210 | 330 |
| MTBE | 76 | 91 | 78 | 110 |
| Benzene | 11,000 | 9,100 | 1,100 | 560 |
| Toluene | 3,600 | 1,800 | 250 | 330 |
| Ethylbenzene | 3,800 | 2,400 | 280 | 240 |
| Xylenes | 18,400 | 12,200 | 3,200 | 4,600 |

SVE-7, AS-7D, AS-7I

SVE-8, AS-8D, AS-8I

| AS-7I | 26-May-09 | 23-Sept-09 |
|---|---|---|
| TPHg | <50 | <50 |
| TBA | 35 | <10 |
| MTBE | 2.5 | 0.8 |
| Benzene | <0.50 | <0.50 |
| Toluene | <0.50 | 0.95 |
| Ethylbenzene | <0.50 | <0.50 |
| Xylenes | <0.50 | <0.50 |

| ASMW-4I | 11-Mar-09 | 23-Sept-09 | 22-Oct-09 |
|---|---|---|---|
| TPHg | 9,200 | 1,900 | 1,900 |
| TBA | <130 | <130 | <10 |
| MTBE | <6.3 | <6.3 | <0.50 |
| Benzene | 38 | 8.1 | 4.0 |
| Toluene | <6.3 | <6.3 | 1.0 |
| Ethylbenzene | 570 | 130 | 75 |
| Xylenes | 2,030 | 146 | 133 |

SVMW-4, ASMW-4D, ASMW-4I

| ASMW-2I | 13-Mar-09 | 23-Sept-09 | 22-Oct-09 |
|---|---|---|---|
| TPHg | 49,000 | <1,000 | <50 |
| TBA | 3,200 | 13,000 | 370 |
| MTBE | 1,100 | 290 | 290 |
| Benzene | 18,000 | <10 | <0.50 |
| Toluene | 17,000 | 13 | 4.6 |
| Ethylbenzene | 1,600 | <10 | <0.50 |
| Xylenes | 8,200 | 70 | 20 |

MW-3

| AS-8I | 23-Sept-09 |
|---|---|
| TPHg | <50 |
| TBA | <10 |
| MTBE | 1.0 |
| Benzene | <0.50 |
| Toluene | 1.6 |
| Ethylbenzene | <0.50 |
| Xylenes | <0.50 |

NW-3S, 3I, 3D

| NW-3I | 21-Sept-09 |
|---|---|
| TPHg | <50 |
| TBA | <10 |
| MTBE | 1.3 |
| Benzene | <0.50 |
| Toluene | 0.54 |
| Ethylbenzene | <0.50 |
| Xylenes | <0.50 |

MW-2

APPROXIMATE LIMITS OF 2002 EXCAVATION

N

0 20 FEET

(SCALE: 1" = 20')

1009 66TH AVENUE, OAKLAND, CALIFORNIA

# ANALYTICAL RESULTS FOR TPHg AND VOCs IN INTERMEDIATE-ZONE GROUNDWATER SAMPLES

ARCADIS

FIGURE 5

**EXPLANATION:**

- MW-1 — Monitoring Well
- NW-1 — Nested Monitoring Wells
- AS-4D — Air Injection Well
- ASMW-3I — Air Injection Monitoring Well
- SVE-4 — SVE or SVE Monitoring Well
- Property Line

LOCATION ID

Date sample taken

| AS-7I | 26-May-09 |
|---|---|
| TPHg | <50 |

Concentration in micrograms per liter

Chemical

22-Sept-09 — Denotes sample collected after the soil vapor extraction air sparging groundwater treatment system began operation

NOTES:

TPHg = total petroleum hydrocarbons as gasoline

TBA = tertiary butyl alcohol

MTBE = methyl tertiary-butyl ether

"<" = not detected above the laboratory reporting limit given

SVE = soil-vapor extraction

VOCs = volatile organic compounds

APPROXIMATE LIMITS OF 1995 EXCAVATION

WAREHOUSE BUILDING

MW-1

| MW-1 | 13-Mar-09 | 26-May-09 | May (DUP) |
|---|---|---|---|
| TPHg | <50 | <50 | <50 |
| TBA | <10 | <10 | <10 |
| MTBE | <0.50 | <0.50 | <0.50 |
| Benzene | <0.50 | <0.50 | <0.50 |
| Toluene | <0.50 | 0.67 | 0.62 |
| Ethylbenzene | <0.50 | <0.50 | <0.50 |
| Xylenes | <0.50 | <0.50 | <0.50 |

NW-1S, 1I, 1D

| NW-1D | 13-Mar-09 |
|---|---|
| TPHg | <50 |
| TBA | <10 |
| MTBE | 1.4 |
| Benzene | <0.50 |
| Toluene | <0.50 |
| Ethylbenzene | <0.50 |
| Xylenes | <0.50 |

| NW-2D | 13-Mar-09 | 22-Sept-09 | Sept (DUP) | 22-Oct-09 |
|---|---|---|---|---|
| TPHg | <250 | <50 | <50 | <50 |
| TBA | 17,000 | <10 | <10 | <10 |
| MTBE | 310 | 9.8 | 12 | <0.50 |
| Benzene | 120 | <0.50 | <0.50 | <0.50 |
| Toluene | <2.5 | 2.5 | 1.4 | 0.80 |
| Ethylbenzene | <2.5 | <0.50 | <0.50 | <0.50 |
| Xylenes | <2.5 | 4.1 | 3.2 | <0.50 |

| AS-2D | 22-Sept-09 |
|---|---|
| TPHg | <50 |
| TBA | <10 |
| MTBE | 13 |
| Benzene | <0.50 |
| Toluene | 0.8 |
| Ethylbenzene | <0.50 |
| Xylenes | <0.50 |

APPROXIMATE LOCATION OF FORMER GAS SHED AND 2,000-GALLON GASOLINE UST

SVE-2, AS-2D, AS-2I

SVE-3, AS-3D, AS-3I

SVE-4, AS-4D, AS-4I

EW-1

NW-2S, 2I, 2D

SVE-5, AS-5D, AS-5I

SVMW-2, ASMW-2D, ASMW-2I

SVE-1, AS-1D, AS-1I

MW-4

SVE-6, AS-6D, AS-6I

| MW-4 | 13-Mar-09 | 23-Sept-09 | 22-Oct-09 |
|---|---|---|---|
| TPHg | 55,000 | 250 | <50 |
| TBA | <1,400 | 730 | <10 |
| MTBE | 950 | 49 | 3.7 |
| Benzene | 19,000 | 51 | <0.50 |
| Toluene | 7,200 | 3.7 | 1.3 |
| Ethylbenzene | 2,300 | 8.6 | <0.50 |
| Xylenes | 12,000 | 53 | <0.50 |

| ASMW-5D | 11-Mar-09 | 21-Sept-09 | 22-Oct-09 |
|---|---|---|---|
| TPHg | 87 | <50 | <50 |
| TBA | 1,700 | <10 | <10 |
| MTBE | <0.50 | 72 | 76 |
| Benzene | 84 | <0.50 | <0.50 |
| Toluene | <0.50 | 2.8 | <0.50 |
| Ethylbenzene | 5.2 | <0.50 | <0.50 |
| Xylenes | 7.4 | <0.50 | <0.50 |

SVMW-5, ASMW-5D, ASMW-5I

SVMW-3, ASMW-3D, ASMW-3I

SVE-7, AS-7D, AS-7I

SVE-8, AS-8D, AS-8I

| ASMW-3D | 11-Mar-09 | 22-Sept-09 | 22-Oct-09 |
|---|---|---|---|
| TPHg | <50 | <50 | <50 |
| TBA | 34 | 28 | <10 |
| MTBE | 91 | 280 | 310 |
| Benzene | <0.50 | <0.50 | <0.50 |
| Toluene | <0.50 | 1.1 | <0.50 |
| Ethylbenzene | <0.50 | <0.50 | <0.50 |
| Xylenes | <0.50 | 1.55 | <0.50 |

| ASMW-2D | 11-Mar-09 | 21-Sept-09 | 22-Oct-09 |
|---|---|---|---|
| TPHg | <1,300 | <360 | <50 |
| TBA | 1,900 | <71 | <10 |
| MTBE | 1,300 | 460 | 1.9 |
| Benzene | <13 | <3.6 | <0.50 |
| Toluene | <13 | <3.6 | 1.4 |
| Ethylbenzene | <13 | <3.6 | <0.50 |
| Xylenes | <13 | 10.4 | 4 |

SVMW-4, ASMW-4D, ASMW-4I

| MW-2 | 13-Mar-09 | 26-May-09 | 21-Sept-09 |
|---|---|---|---|
| TPHg | <50 | <50 | <50 |
| TBA | <10 | <10 | <10 |
| MTBE | 2.0 | 3.5 | 3.4 |
| Benzene | <0.50 | <0.50 | <0.50 |
| Toluene | <0.50 | <0.50 | <0.50 |
| Ethylbenzene | <0.50 | <0.50 | <0.50 |
| Xylenes | <0.50 | <0.50 | <0.50 |

| MW-3 | 13-Mar-09 | 21-Sept-09 |
|---|---|---|
| TPHg | <50 | <50 |
| TBA | <10 | <10 |
| MTBE | <0.50 | 0.89 |
| Benzene | <0.50 | <0.50 |
| Toluene | <0.50 | 1.1 |
| Ethylbenzene | <0.50 | <0.50 |
| Xylenes | 0.97 | <0.50 |

MW-3

| ASMW-4D | 11-Mar-09 | 21-Sept-09 | 22-Oct-09 |
|---|---|---|---|
| TPHg | <50 | <50 | <50 |
| TBA | <10 | <10 | <10 |
| MTBE | 1.4 | 5.4 | 6.1 |
| Benzene | <0.50 | <0.50 | <0.50 |
| Toluene | <0.50 | 1.5 | 0.5 |
| Ethylbenzene | <0.50 | <0.50 | <0.50 |
| Xylenes | <0.50 | <0.50 | <0.50 |

NW-3S, 3I, 3D

| NW-3D | 21-Sept-09 |
|---|---|
| TPHg | <50 |
| TBA | <10 |
| MTBE | 1.0 |
| Benzene | <0.50 |
| Toluene | 0.67 |
| Ethylbenzene | <0.50 |
| Xylenes | <0.50 |

MW-2

APPROXIMATE LIMITS OF 2002 EXCAVATION

N

0 20 FEET

(SCALE: 1" = 20')

1009 66TH AVENUE, OAKLAND, CALIFORNIA

**ANALYTICAL RESULTS FOR TPHg AND VOCs IN DEEP-ZONE GROUNDWATER SAMPLES**

ARCADIS

FIGURE 6

# APPENDIX A

## Laboratory Analytical Reports


Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

**Laboratory Job Number 215916**
**ANALYTICAL REPORT**

| | |
|---|---|
| LFR Levine Fricke | Project : 003-09155-02 |
| 1900 Powell Street | Location : Aspire Schools |
| Emeryville, CA 94608 | Level : II |

| Sample ID | Lab ID |
|---|---|
| NW-2I | 215916-001 |
| ASMW-2I | 215916-002 |
| ASMW-3I | 215916-003 |
| ASMW-4I | 215916-004 |
| ASMW-5I | 215916-005 |
| MW-4 | 215916-006 |
| NW-2D | 215916-007 |
| ASMW-2D | 215916-008 |
| ASMW-3D | 215916-009 |
| ASMW-4D | 215916-010 |
| ASMW-5D | 215916-011 |
| DUP-1 | 215916-012 |
| TRIP BLANK | 215916-013 |

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Trig Bobor Date: 10/28/2009
Project Manager

NELAP # 01107CA

Curtis & Tompkins, Ltd.

# CASE NARRATIVE

| | |
|---|---|
| Laboratory number: | **215916** |
| Client: | **LFR Levine Fricke** |
| Project: | **003-09155-02** |
| Location: | **Aspire Schools** |
| Request Date: | **10/22/09** |
| Samples Received: | **10/22/09** |

This data package contains sample and QC results for twelve water samples, requested for the above referenced project on 10/22/09. The samples were received cold and intact. All data were e-mailed to Eric Ehlers on 10/28/09.

**Volatile Organics by GC/MS (EPA 8260B):**
High surrogate recoveries were observed for toluene-d8 in ASMW-3D (lab # 215916-009) and the method blank/BS/BSD for batch 156462. No other analytical problems were encountered.

**Curtis & Tompkins, Ltd.**
Analytical Laboratory Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510) 486-0900 Phone
(510) 486-0532 Fax

# CHAIN OF CUSTODY



**C & T LOGIN #:** 215916

**Project No.:** 003-09155-02
**Project Name:** Aspire Schools
**Project P.O.:**
**Turnaround Time:** standard

**Sampler:** K. Johnson
**Report To:** Eric Ehlers
**Company:** LFR
**Telephone:** 510-596-9555
**Fax:**

| Lab No. | Sample ID. | Sampling Date (2009) | Time | Matrix: Soil | Water | Waste | # of Containers | Preservative: HCL | $H_2SO_4$ | $HNO_3$ | ICE | Analysis: TPH g -8260 d | BTXE -8260 d | Fuel Oxygenate -8260 d |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | NW-2I | 10/22 | 0920 | | X | | 3 | X | | | X | X | X | X |
| 2 | ASMW-2I | 10/21 | 1100 | | | | | | | | | | | |
| 3 | ASMW-3I | 10/21 | 1220 | | | | | | | | | | | |
| 4 | ASMW-4I | 10/22 | 1115 | | | | | | | | | | | |
| 5 | ASMW-5I | 10/22 | 0935 | | | | | | | | | | | |
| 6 | MW-4 | 10/21 | 1015 | | | | | | | | | | | |
| 7 | NW-2D | 10/21 | 1335 | | | | | | | | | | | |
| 8 | ASMW-2D | 10/22 | 1220 | | | | | | | | | | | |
| 9 | ASMW-3D | 10/21 | 1140 | | | | | | | | | | | |
| 10 | ASMW-4D | 10/22 | 1030 | | | | | | | | | | | |
| 11 | ASMW-5D | 10/21 | 1450 | | | | | | | | | | | |
| 12 | Dup-1 | 10/21 | 0800 | | | | | | | | | | | |
| 13 | Trip Blank | - | - | | | | 2 | | | | | | | |

**Notes:**

SAMPLE RECEIPT
☐ Intact ☐ Cold
☒ On Ice ☐ Ambient
Preservative Correct?
☐ Yes ☐ No ☐ N/A

**RELINQUISHED BY:**
K. Johnson 10/22 1440 DATE / TIME
DATE / TIME
DATE / TIME

**RECEIVED BY:**
Pat Hanly 10/22/09 14:40 DATE / TIME
DATE / TIME
DATE / TIME

SIGNATURE

**COOLER RECEIPT CHECKLIST** Curtis & Tompkins, Ltd.

Login # 215916 Date Received 10-22 Number of coolers 1
Client LFR Project Aspire Schools

Date Opened 10-22 By (print) Elias T (sign) Elias Tsadik
Date Logged in 10-22 By (print) Elias T (sign) Elias Tsadik

1. Did cooler come with a shipping slip (airbill, etc) _____ YES (NO)
Shipping info _____

2A. Were custody seals present? ... ☐ YES (circle) on cooler on samples ☒ NO
How many _____ Name _____ Date _____
2B. Were custody seals intact upon arrival? _____ YES NO N/A
3. Were custody papers dry and intact when received? _____ YES NO
4. Were custody papers filled out properly (ink, signed, etc)? _____ YES NO
5. Is the project identifiable from custody papers? (If so fill out top of form) ___ YES NO
6. Indicate the packing in cooler: (if other, describe) _____

☐ Bubble Wrap ☒ Foam blocks ☐ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation:

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) _____

☒ Samples Received on ice & cold without a temperature blank

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES (NO)
If YES, what time were they transferred to freezer? _____
9. Did all bottles arrive unbroken/unopened? _____ YES NO
10. Are samples in the appropriate containers for indicated tests? _____ YES NO
11. Are sample labels present, in good condition and complete? _____ YES NO
12. Do the sample labels agree with custody papers? _____ YES NO
13. Was sufficient amount of sample sent for tests requested? _____ YES NO
14. Are the samples appropriately preserved? _____ YES NO N/A
15. Are bubbles > 6mm absent in VOA samples? _____ YES NO N/A
16. Was the client contacted concerning this sample delivery? _____ YES NO
If YES, Who was called? _____ By _____ Date: _____

COMMENTS

_____
_____
_____
_____
_____
_____
_____
_____

Curtis & Tompkins, Ltd.

# Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Field ID: | NW-2I | Diln Fac: | 4.000 |
| Lab ID: | 215916-001 | Sampled: | 10/22/09 |
| Matrix: | Water | Received: | 10/22/09 |
| Units: | ug/L | | |

| Analyte | Result | RL | Batch# | Analyzed |
|---|---|---|---|---|
| Gasoline C7-C12 | 4,200 | 200 | 156462 | 10/26/09 |
| tert-Butyl Alcohol (TBA) | 3,300 | 40 | 156508 | 10/27/09 |
| Isopropyl Ether (DIPE) | ND | 2.0 | 156508 | 10/27/09 |
| Ethyl tert-Butyl Ether (ETBE) | ND | 2.0 | 156508 | 10/27/09 |
| Methyl tert-Amyl Ether (TAME) | ND | 2.0 | 156508 | 10/27/09 |
| MTBE | 330 | 2.0 | 156508 | 10/27/09 |
| 1,2-Dichloroethane | ND | 2.0 | 156508 | 10/27/09 |
| Benzene | 110 | 2.0 | 156508 | 10/27/09 |
| Toluene | 110 | 2.0 | 156508 | 10/27/09 |
| 1,2-Dibromoethane | ND | 2.0 | 156508 | 10/27/09 |
| Ethylbenzene | 5.8 | 2.0 | 156508 | 10/27/09 |
| m,p-Xylenes | 400 | 2.0 | 156508 | 10/27/09 |
| o-Xylene | 250 | 2.0 | 156508 | 10/27/09 |

| Surrogate | %REC | Limits | Batch# | Analyzed |
|---|---|---|---|---|
| Dibromofluoromethane | 108 | 81-124 | 156508 | 10/27/09 |
| 1,2-Dichloroethane-d4 | 109 | 73-140 | 156508 | 10/27/09 |
| Toluene-d8 | 100 | 88-113 | 156508 | 10/27/09 |
| Bromofluorobenzene | 98 | 80-127 | 156508 | 10/27/09 |

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

# Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Field ID: | ASMW-2I | Diln Fac: | 3.333 |
| Lab ID: | 215916-002 | Sampled: | 10/21/09 |
| Matrix: | Water | Received: | 10/22/09 |
| Units: | ug/L | | |

| Analyte | Result | RL | Batch# | Analyzed |
|---|---|---|---|---|
| Gasoline C7-C12 | ND | 170 | 156462 | 10/26/09 |
| tert-Butyl Alcohol (TBA) | 370 | 33 | 156508 | 10/27/09 |
| Isopropyl Ether (DIPE) | ND | 1.7 | 156508 | 10/27/09 |
| Ethyl tert-Butyl Ether (ETBE) | ND | 1.7 | 156508 | 10/27/09 |
| Methyl tert-Amyl Ether (TAME) | ND | 1.7 | 156508 | 10/27/09 |
| MTBE | 290 | 1.7 | 156508 | 10/27/09 |
| 1,2-Dichloroethane | ND | 1.7 | 156508 | 10/27/09 |
| Benzene | ND | 1.7 | 156508 | 10/27/09 |
| Toluene | 4.6 | 1.7 | 156508 | 10/27/09 |
| 1,2-Dibromoethane | ND | 1.7 | 156508 | 10/27/09 |
| Ethylbenzene | ND | 1.7 | 156508 | 10/27/09 |
| m,p-Xylenes | 9.0 | 1.7 | 156508 | 10/27/09 |
| o-Xylene | 11 | 1.7 | 156508 | 10/27/09 |

| Surrogate | %REC | Limits | Batch# | Analyzed |
|---|---|---|---|---|
| Dibromofluoromethane | 108 | 81-124 | 156508 | 10/27/09 |
| 1,2-Dichloroethane-d4 | 112 | 73-140 | 156508 | 10/27/09 |
| Toluene-d8 | 99 | 88-113 | 156508 | 10/27/09 |
| Bromofluorobenzene | 101 | 80-127 | 156508 | 10/27/09 |

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

# Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Field ID: | ASMW-3I | Batch#: | 156399 |
| Lab ID: | 215916-003 | Sampled: | 10/21/09 |
| Matrix: | Water | Received: | 10/22/09 |
| Units: | ug/L | Analyzed: | 10/23/09 |
| Diln Fac: | 1.000 | | |

| Analyte | Result | RL |
|---|---|---|
| Gasoline C7-C12 | ND | 50 |
| tert-Butyl Alcohol (TBA) | ND | 10 |
| Isopropyl Ether (DIPE) | ND | 0.50 |
| Ethyl tert-Butyl Ether (ETBE) | ND | 0.50 |
| Methyl tert-Amyl Ether (TAME) | ND | 0.50 |
| MTBE | 6.9 | 0.50 |
| 1,2-Dichloroethane | ND | 0.50 |
| Benzene | ND | 0.50 |
| Toluene | 1.4 | 0.50 |
| 1,2-Dibromoethane | ND | 0.50 |
| Ethylbenzene | ND | 0.50 |
| m,p-Xylenes | ND | 0.50 |
| o-Xylene | ND | 0.50 |

| Surrogate | %REC | Limits |
|---|---|---|
| Dibromofluoromethane | 102 | 81-124 |
| 1,2-Dichloroethane-d4 | 111 | 73-140 |
| Toluene-d8 | 111 | 88-113 |
| Bromofluorobenzene | 103 | 80-127 |

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

# Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Field ID: | ASMW-4I | Units: | ug/L |
| Lab ID: | 215916-004 | Sampled: | 10/22/09 |
| Matrix: | Water | Received: | 10/22/09 |

| Analyte | Result | RL | Diln Fac | Batch# | Analyzed |
|---|---|---|---|---|---|
| Gasoline C7-C12 | 1,900 | 100 | 2.000 | 156399 | 10/23/09 |
| tert-Butyl Alcohol (TBA) | ND | 10 | 1.000 | 156461 | 10/26/09 |
| Isopropyl Ether (DIPE) | ND | 0.50 | 1.000 | 156461 | 10/26/09 |
| Ethyl tert-Butyl Ether (ETBE) | ND | 0.50 | 1.000 | 156461 | 10/26/09 |
| Methyl tert-Amyl Ether (TAME) | ND | 0.50 | 1.000 | 156461 | 10/26/09 |
| MTBE | ND | 0.50 | 1.000 | 156461 | 10/26/09 |
| 1,2-Dichloroethane | ND | 0.50 | 1.000 | 156461 | 10/26/09 |
| Benzene | 4.0 | 0.50 | 1.000 | 156461 | 10/26/09 |
| Toluene | 1.4 | 0.50 | 1.000 | 156461 | 10/26/09 |
| 1,2-Dibromoethane | ND | 0.50 | 1.000 | 156461 | 10/26/09 |
| Ethylbenzene | 75 | 0.50 | 1.000 | 156461 | 10/26/09 |
| m,p-Xylenes | 110 | 0.50 | 1.000 | 156461 | 10/26/09 |
| o-Xylene | 23 | 0.50 | 1.000 | 156461 | 10/26/09 |

| Surrogate | %REC | Limits | Diln Fac | Batch# | Analyzed |
|---|---|---|---|---|---|
| Dibromofluoromethane | 107 | 81-124 | 1.000 | 156461 | 10/26/09 |
| 1,2-Dichloroethane-d4 | 118 | 73-140 | 1.000 | 156461 | 10/26/09 |
| Toluene-d8 | 100 | 88-113 | 1.000 | 156461 | 10/26/09 |
| Bromofluorobenzene | 97 | 80-127 | 1.000 | 156461 | 10/26/09 |

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

# Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Field ID: | ASMW-5I | Diln Fac: | 25.00 |
| Lab ID: | 215916-005 | Sampled: | 10/22/09 |
| Matrix: | Water | Received: | 10/22/09 |
| Units: | ug/L | | |

| Analyte | Result | RL | Batch# | Analyzed |
|---|---|---|---|---|
| Gasoline C7-C12 | 22,000 | 1,300 | 156462 | 10/26/09 |
| tert-Butyl Alcohol (TBA) | 330 | 250 | 156508 | 10/27/09 |
| Isopropyl Ether (DIPE) | ND | 13 | 156508 | 10/27/09 |
| Ethyl tert-Butyl Ether (ETBE) | ND | 13 | 156508 | 10/27/09 |
| Methyl tert-Amyl Ether (TAME) | ND | 13 | 156508 | 10/27/09 |
| MTBE | 110 | 13 | 156508 | 10/27/09 |
| 1,2-Dichloroethane | ND | 13 | 156508 | 10/27/09 |
| Benzene | 560 | 13 | 156508 | 10/27/09 |
| Toluene | 330 | 13 | 156508 | 10/27/09 |
| 1,2-Dibromoethane | ND | 13 | 156508 | 10/27/09 |
| Ethylbenzene | 240 | 13 | 156508 | 10/27/09 |
| m,p-Xylenes | 3,000 | 13 | 156508 | 10/27/09 |
| o-Xylene | 1,600 | 13 | 156508 | 10/27/09 |

| Surrogate | %REC | Limits | Batch# | Analyzed |
|---|---|---|---|---|
| Dibromofluoromethane | 109 | 81-124 | 156508 | 10/27/09 |
| 1,2-Dichloroethane-d4 | 108 | 73-140 | 156508 | 10/27/09 |
| Toluene-d8 | 100 | 88-113 | 156508 | 10/27/09 |
| Bromofluorobenzene | 100 | 80-127 | 156508 | 10/27/09 |

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

# Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Field ID: | MW-4 | Diln Fac: | 1.000 |
| Lab ID: | 215916-006 | Sampled: | 10/21/09 |
| Matrix: | Water | Received: | 10/22/09 |
| Units: | ug/L | | |

| Analyte | Result | RL | Batch# | Analyzed |
|---|---|---|---|---|
| Gasoline C7-C12 | ND | 50 | 156462 | 10/26/09 |
| tert-Butyl Alcohol (TBA) | ND | 10 | 156508 | 10/27/09 |
| Isopropyl Ether (DIPE) | ND | 0.50 | 156508 | 10/27/09 |
| Ethyl tert-Butyl Ether (ETBE) | ND | 0.50 | 156508 | 10/27/09 |
| Methyl tert-Amyl Ether (TAME) | ND | 0.50 | 156508 | 10/27/09 |
| MTBE | 3.7 | 0.50 | 156508 | 10/27/09 |
| 1,2-Dichloroethane | ND | 0.50 | 156508 | 10/27/09 |
| Benzene | ND | 0.50 | 156508 | 10/27/09 |
| Toluene | 1.3 | 0.50 | 156508 | 10/27/09 |
| 1,2-Dibromoethane | ND | 0.50 | 156508 | 10/27/09 |
| Ethylbenzene | ND | 0.50 | 156508 | 10/27/09 |
| m,p-Xylenes | ND | 0.50 | 156508 | 10/27/09 |
| o-Xylene | ND | 0.50 | 156508 | 10/27/09 |

| Surrogate | %REC | Limits | Batch# | Analyzed |
|---|---|---|---|---|
| Dibromofluoromethane | 110 | 81-124 | 156508 | 10/27/09 |
| 1,2-Dichloroethane-d4 | 107 | 73-140 | 156508 | 10/27/09 |
| Toluene-d8 | 99 | 88-113 | 156508 | 10/27/09 |
| Bromofluorobenzene | 99 | 80-127 | 156508 | 10/27/09 |

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

## Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Field ID: | NW-2D | Diln Fac: | 1.000 |
| Lab ID: | 215916-007 | Sampled: | 10/21/09 |
| Matrix: | Water | Received: | 10/22/09 |
| Units: | ug/L | | |

| Analyte | Result | RL | Batch# | Analyzed |
|---|---|---|---|---|
| Gasoline C7-C12 | ND | 50 | 156399 | 10/23/09 |
| tert-Butyl Alcohol (TBA) | ND | 10 | 156461 | 10/26/09 |
| Isopropyl Ether (DIPE) | ND | 0.50 | 156461 | 10/26/09 |
| Ethyl tert-Butyl Ether (ETBE) | ND | 0.50 | 156461 | 10/26/09 |
| Methyl tert-Amyl Ether (TAME) | ND | 0.50 | 156461 | 10/26/09 |
| MTBE | ND | 0.50 | 156461 | 10/26/09 |
| 1,2-Dichloroethane | ND | 0.50 | 156461 | 10/26/09 |
| Benzene | ND | 0.50 | 156461 | 10/26/09 |
| Toluene | 0.78 | 0.50 | 156461 | 10/26/09 |
| 1,2-Dibromoethane | ND | 0.50 | 156461 | 10/26/09 |
| Ethylbenzene | ND | 0.50 | 156461 | 10/26/09 |
| m,p-Xylenes | ND | 0.50 | 156461 | 10/26/09 |
| o-Xylene | ND | 0.50 | 156461 | 10/26/09 |

| Surrogate | %REC | Limits | Batch# | Analyzed |
|---|---|---|---|---|
| Dibromofluoromethane | 109 | 81-124 | 156461 | 10/26/09 |
| 1,2-Dichloroethane-d4 | 113 | 73-140 | 156461 | 10/26/09 |
| Toluene-d8 | 95 | 88-113 | 156461 | 10/26/09 |
| Bromofluorobenzene | 103 | 80-127 | 156461 | 10/26/09 |

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

# Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Field ID: | ASMW-2D | Diln Fac: | 1.000 |
| Lab ID: | 215916-008 | Sampled: | 10/22/09 |
| Matrix: | Water | Received: | 10/22/09 |
| Units: | ug/L | | |

| Analyte | Result | RL | Batch# | Analyzed |
|---|---|---|---|---|
| Gasoline C7-C12 | ND | 50 | 156462 | 10/26/09 |
| tert-Butyl Alcohol (TBA) | ND | 10 | 156508 | 10/27/09 |
| Isopropyl Ether (DIPE) | ND | 0.50 | 156508 | 10/27/09 |
| Ethyl tert-Butyl Ether (ETBE) | ND | 0.50 | 156508 | 10/27/09 |
| Methyl tert-Amyl Ether (TAME) | ND | 0.50 | 156508 | 10/27/09 |
| MTBE | 1.9 | 0.50 | 156508 | 10/27/09 |
| 1,2-Dichloroethane | ND | 0.50 | 156508 | 10/27/09 |
| Benzene | ND | 0.50 | 156508 | 10/27/09 |
| Toluene | 1.4 | 0.50 | 156508 | 10/27/09 |
| 1,2-Dibromoethane | ND | 0.50 | 156508 | 10/27/09 |
| Ethylbenzene | ND | 0.50 | 156508 | 10/27/09 |
| m,p-Xylenes | 1.9 | 0.50 | 156508 | 10/27/09 |
| o-Xylene | 2.1 | 0.50 | 156508 | 10/27/09 |

| Surrogate | %REC | Limits | Batch# | Analyzed |
|---|---|---|---|---|
| Dibromofluoromethane | 109 | 81-124 | 156508 | 10/27/09 |
| 1,2-Dichloroethane-d4 | 111 | 73-140 | 156508 | 10/27/09 |
| Toluene-d8 | 100 | 88-113 | 156508 | 10/27/09 |
| Bromofluorobenzene | 100 | 80-127 | 156508 | 10/27/09 |

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

# Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Field ID: | ASMW-3D | Batch#: | 156462 |
| Lab ID: | 215916-009 | Sampled: | 10/21/09 |
| Matrix: | Water | Received: | 10/22/09 |
| Units: | ug/L | Analyzed: | 10/26/09 |
| Diln Fac: | 5.000 | | |

| Analyte | Result | RL |
|---|---|---|
| Gasoline C7-C12 | ND | 250 |
| tert-Butyl Alcohol (TBA) | ND | 50 |
| Isopropyl Ether (DIPE) | ND | 2.5 |
| Ethyl tert-Butyl Ether (ETBE) | ND | 2.5 |
| Methyl tert-Amyl Ether (TAME) | ND | 2.5 |
| MTBE | 310 | 2.5 |
| 1,2-Dichloroethane | ND | 2.5 |
| Benzene | ND | 2.5 |
| Toluene | ND | 2.5 |
| 1,2-Dibromoethane | ND | 2.5 |
| Ethylbenzene | ND | 2.5 |
| m,p-Xylenes | ND | 2.5 |
| o-Xylene | ND | 2.5 |

| Surrogate | %REC | Limits |
|---|---|---|
| Dibromofluoromethane | 100 | 81-124 |
| 1,2-Dichloroethane-d4 | 113 | 73-140 |
| Toluene-d8 | 120 * | 88-113 |
| Bromofluorobenzene | 102 | 80-127 |

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

# Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Field ID: | ASMW-4D | Diln Fac: | 1.000 |
| Lab ID: | 215916-010 | Sampled: | 10/22/09 |
| Matrix: | Water | Received: | 10/22/09 |
| Units: | ug/L | | |

| Analyte | Result | RL | Batch# | Analyzed |
|---|---|---|---|---|
| Gasoline C7-C12 | ND | 50 | 156399 | 10/23/09 |
| tert-Butyl Alcohol (TBA) | ND | 10 | 156461 | 10/26/09 |
| Isopropyl Ether (DIPE) | ND | 0.50 | 156461 | 10/26/09 |
| Ethyl tert-Butyl Ether (ETBE) | ND | 0.50 | 156461 | 10/26/09 |
| Methyl tert-Amyl Ether (TAME) | ND | 0.50 | 156461 | 10/26/09 |
| MTBE | 6.1 | 0.50 | 156461 | 10/26/09 |
| 1,2-Dichloroethane | ND | 0.50 | 156461 | 10/26/09 |
| Benzene | ND | 0.50 | 156461 | 10/26/09 |
| Toluene | 0.54 | 0.50 | 156461 | 10/26/09 |
| 1,2-Dibromoethane | ND | 0.50 | 156461 | 10/26/09 |
| Ethylbenzene | ND | 0.50 | 156461 | 10/26/09 |
| m,p-Xylenes | ND | 0.50 | 156461 | 10/26/09 |
| o-Xylene | ND | 0.50 | 156461 | 10/26/09 |

| Surrogate | %REC | Limits | Batch# | Analyzed |
|---|---|---|---|---|
| Dibromofluoromethane | 108 | 81-124 | 156461 | 10/26/09 |
| 1,2-Dichloroethane-d4 | 114 | 73-140 | 156461 | 10/26/09 |
| Toluene-d8 | 98 | 88-113 | 156461 | 10/26/09 |
| Bromofluorobenzene | 105 | 80-127 | 156461 | 10/26/09 |

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

# Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Field ID: | ASMW-5D | Batch#: | 156399 |
| Lab ID: | 215916-011 | Sampled: | 10/21/09 |
| Matrix: | Water | Received: | 10/22/09 |
| Units: | ug/L | Analyzed: | 10/23/09 |
| Diln Fac: | 1.000 | | |

| Analyte | Result | RL |
|---|---|---|
| Gasoline C7-C12 | ND | 50 |
| tert-Butyl Alcohol (TBA) | ND | 10 |
| Isopropyl Ether (DIPE) | ND | 0.50 |
| Ethyl tert-Butyl Ether (ETBE) | ND | 0.50 |
| Methyl tert-Amyl Ether (TAME) | ND | 0.50 |
| MTBE | 76 | 0.50 |
| 1,2-Dichloroethane | ND | 0.50 |
| Benzene | ND | 0.50 |
| Toluene | 0.74 | 0.50 |
| 1,2-Dibromoethane | ND | 0.50 |
| Ethylbenzene | ND | 0.50 |
| m,p-Xylenes | ND | 0.50 |
| o-Xylene | ND | 0.50 |

| Surrogate | %REC | Limits |
|---|---|---|
| Dibromofluoromethane | 102 | 81-124 |
| 1,2-Dichloroethane-d4 | 114 | 73-140 |
| Toluene-d8 | 111 | 88-113 |
| Bromofluorobenzene | 105 | 80-127 |

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

# Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Field ID: | DUP-1 | Batch#: | 156399 |
| Lab ID: | 215916-012 | Sampled: | 10/21/09 |
| Matrix: | Water | Received: | 10/22/09 |
| Units: | ug/L | Analyzed: | 10/23/09 |
| Diln Fac: | 1.000 | | |

| Analyte | Result | RL |
|---|---|---|
| Gasoline C7-C12 | ND | 50 |
| tert-Butyl Alcohol (TBA) | ND | 10 |
| Isopropyl Ether (DIPE) | ND | 0.50 |
| Ethyl tert-Butyl Ether (ETBE) | ND | 0.50 |
| Methyl tert-Amyl Ether (TAME) | ND | 0.50 |
| MTBE | 5.1 | 0.50 |
| 1,2-Dichloroethane | ND | 0.50 |
| Benzene | ND | 0.50 |
| Toluene | 0.79 | 0.50 |
| 1,2-Dibromoethane | ND | 0.50 |
| Ethylbenzene | ND | 0.50 |
| m,p-Xylenes | ND | 0.50 |
| o-Xylene | ND | 0.50 |

| Surrogate | %REC | Limits |
|---|---|---|
| Dibromofluoromethane | 103 | 81-124 |
| 1,2-Dichloroethane-d4 | 112 | 73-140 |
| Toluene-d8 | 112 | 88-113 |
| Bromofluorobenzene | 106 | 80-127 |

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

## Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Type: | BLANK | Diln Fac: | 1.000 |
| Lab ID: | QC518001 | Batch#: | 156399 |
| Matrix: | Water | Analyzed: | 10/23/09 |
| Units: | ug/L | | |

| Analyte | Result | RL |
|---|---|---|
| Gasoline C7-C12 | ND | 50 |
| tert-Butyl Alcohol (TBA) | ND | 10 |
| Isopropyl Ether (DIPE) | ND | 0.50 |
| Ethyl tert-Butyl Ether (ETBE) | ND | 0.50 |
| Methyl tert-Amyl Ether (TAME) | ND | 0.50 |
| MTBE | ND | 0.50 |
| 1,2-Dichloroethane | ND | 0.50 |
| Benzene | ND | 0.50 |
| Toluene | ND | 0.50 |
| 1,2-Dibromoethane | ND | 0.50 |
| Ethylbenzene | ND | 0.50 |
| m,p-Xylenes | ND | 0.50 |
| o-Xylene | ND | 0.50 |

| Surrogate | %REC | Limits |
|---|---|---|
| Dibromofluoromethane | 102 | 81-124 |
| 1,2-Dichloroethane-d4 | 114 | 73-140 |
| Toluene-d8 | 113 | 88-113 |
| Bromofluorobenzene | 105 | 80-127 |

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

## Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Matrix: | Water | Batch#: | 156399 |
| Units: | ug/L | Analyzed: | 10/23/09 |
| Diln Fac: | 1.000 | | |

Type: BS Lab ID: QC518002

| Analyte | Spiked | Result | %REC | Limits |
|---|---|---|---|---|
| tert-Butyl Alcohol (TBA) | 125.0 | 106.9 | 86 | 36-156 |
| Isopropyl Ether (DIPE) | 25.00 | 23.87 | 95 | 54-139 |
| Ethyl tert-Butyl Ether (ETBE) | 25.00 | 25.14 | 101 | 64-133 |
| Methyl tert-Amyl Ether (TAME) | 25.00 | 25.70 | 103 | 73-124 |
| MTBE | 25.00 | 22.22 | 89 | 61-123 |
| 1,2-Dichloroethane | 25.00 | 26.86 | 107 | 66-141 |
| Benzene | 25.00 | 25.42 | 102 | 81-122 |
| Toluene | 25.00 | 27.86 | 111 | 82-122 |
| 1,2-Dibromoethane | 25.00 | 26.33 | 105 | 81-122 |
| Ethylbenzene | 25.00 | 28.84 | 115 | 86-125 |
| m,p-Xylenes | 50.00 | 57.60 | 115 | 83-127 |
| o-Xylene | 25.00 | 27.78 | 111 | 81-122 |

| Surrogate | %REC | Limits |
|---|---|---|
| Dibromofluoromethane | 103 | 81-124 |
| 1,2-Dichloroethane-d4 | 112 | 73-140 |
| Toluene-d8 | 110 | 88-113 |
| Bromofluorobenzene | 101 | 80-127 |

Type: BSD Lab ID: QC518003

| Analyte | Spiked | Result | %REC | Limits | RPD | Lim |
|---|---|---|---|---|---|---|
| tert-Butyl Alcohol (TBA) | 125.0 | 103.5 | 83 | 36-156 | 3 | 23 |
| Isopropyl Ether (DIPE) | 25.00 | 23.30 | 93 | 54-139 | 2 | 11 |
| Ethyl tert-Butyl Ether (ETBE) | 25.00 | 23.62 | 94 | 64-133 | 6 | 11 |
| Methyl tert-Amyl Ether (TAME) | 25.00 | 23.79 | 95 | 73-124 | 8 | 11 |
| MTBE | 25.00 | 21.03 | 84 | 61-123 | 6 | 11 |
| 1,2-Dichloroethane | 25.00 | 25.77 | 103 | 66-141 | 4 | 12 |
| Benzene | 25.00 | 24.85 | 99 | 81-122 | 2 | 12 |
| Toluene | 25.00 | 27.90 | 112 | 82-122 | 0 | 12 |
| 1,2-Dibromoethane | 25.00 | 25.79 | 103 | 81-122 | 2 | 11 |
| Ethylbenzene | 25.00 | 28.79 | 115 | 86-125 | 0 | 12 |
| m,p-Xylenes | 50.00 | 58.35 | 117 | 83-127 | 1 | 13 |
| o-Xylene | 25.00 | 28.04 | 112 | 81-122 | 1 | 12 |

| Surrogate | %REC | Limits |
|---|---|---|
| Dibromofluoromethane | 103 | 81-124 |
| 1,2-Dichloroethane-d4 | 110 | 73-140 |
| Toluene-d8 | 113 | 88-113 |
| Bromofluorobenzene | 103 | 80-127 |

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

## Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Matrix: | Water | Batch#: | 156399 |
| Units: | ug/L | Analyzed: | 10/23/09 |
| Diln Fac: | 1.000 | | |

Type: BS Lab ID: QC518050

| Analyte | Spiked | Result | %REC | Limits |
|---|---|---|---|---|
| Gasoline C7-C12 | 750.0 | 793.8 | 106 | 74-124 |

| Surrogate | %REC | Limits |
|---|---|---|
| Dibromofluoromethane | 102 | 81-124 |
| 1,2-Dichloroethane-d4 | 111 | 73-140 |
| Toluene-d8 | 112 | 88-113 |
| Bromofluorobenzene | 102 | 80-127 |

Type: BSD Lab ID: QC518051

| Analyte | Spiked | Result | %REC | Limits | RPD | Lim |
|---|---|---|---|---|---|---|
| Gasoline C7-C12 | 750.0 | 796.6 | 106 | 74-124 | 0 | 13 |

| Surrogate | %REC | Limits |
|---|---|---|
| Dibromofluoromethane | 102 | 81-124 |
| 1,2-Dichloroethane-d4 | 112 | 73-140 |
| Toluene-d8 | 112 | 88-113 |
| Bromofluorobenzene | 104 | 80-127 |

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

## Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Type: | BLANK | Diln Fac: | 1.000 |
| Lab ID: | QC518225 | Batch#: | 156461 |
| Matrix: | Water | Analyzed: | 10/26/09 |
| Units: | ug/L | | |

| Analyte | Result | RL |
|---|---|---|
| Gasoline C7-C12 | NA | |
| tert-Butyl Alcohol (TBA) | ND | 10 |
| Isopropyl Ether (DIPE) | ND | 0.50 |
| Ethyl tert-Butyl Ether (ETBE) | ND | 0.50 |
| Methyl tert-Amyl Ether (TAME) | ND | 0.50 |
| MTBE | ND | 0.50 |
| 1,2-Dichloroethane | ND | 0.50 |
| Benzene | ND | 0.50 |
| Toluene | ND | 0.50 |
| 1,2-Dibromoethane | ND | 0.50 |
| Ethylbenzene | ND | 0.50 |
| m,p-Xylenes | ND | 0.50 |
| o-Xylene | ND | 0.50 |

| Surrogate | %REC | Limits |
|---|---|---|
| Dibromofluoromethane | 107 | 81-124 |
| 1,2-Dichloroethane-d4 | 118 | 73-140 |
| Toluene-d8 | 102 | 88-113 |
| Bromofluorobenzene | 107 | 80-127 |

NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

## Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Matrix: | Water | Batch#: | 156461 |
| Units: | ug/L | Analyzed: | 10/26/09 |
| Diln Fac: | 1.000 | | |

Type: BS Lab ID: QC518226

| Analyte | Spiked | Result | %REC | Limits |
|---|---|---|---|---|
| tert-Butyl Alcohol (TBA) | 125.0 | 118.7 | 95 | 36-156 |
| Isopropyl Ether (DIPE) | 25.00 | 25.46 | 102 | 54-139 |
| Ethyl tert-Butyl Ether (ETBE) | 25.00 | 24.60 | 98 | 64-133 |
| Methyl tert-Amyl Ether (TAME) | 25.00 | 24.04 | 96 | 73-124 |
| MTBE | 25.00 | 24.23 | 97 | 61-123 |
| 1,2-Dichloroethane | 25.00 | 30.48 | 122 | 66-141 |
| Benzene | 25.00 | 27.03 | 108 | 81-122 |
| Toluene | 25.00 | 28.15 | 113 | 82-122 |
| 1,2-Dibromoethane | 25.00 | 27.96 | 112 | 81-122 |
| Ethylbenzene | 25.00 | 27.94 | 112 | 86-125 |
| m,p-Xylenes | 50.00 | 57.11 | 114 | 83-127 |
| o-Xylene | 25.00 | 27.95 | 112 | 81-122 |

| Surrogate | %REC | Limits |
|---|---|---|
| Dibromofluoromethane | 105 | 81-124 |
| 1,2-Dichloroethane-d4 | 109 | 73-140 |
| Toluene-d8 | 99 | 88-113 |
| Bromofluorobenzene | 96 | 80-127 |

Type: BSD Lab ID: QC518227

| Analyte | Spiked | Result | %REC | Limits | RPD | Lim |
|---|---|---|---|---|---|---|
| tert-Butyl Alcohol (TBA) | 125.0 | 121.1 | 97 | 36-156 | 2 | 23 |
| Isopropyl Ether (DIPE) | 25.00 | 24.25 | 97 | 54-139 | 5 | 11 |
| Ethyl tert-Butyl Ether (ETBE) | 25.00 | 24.01 | 96 | 64-133 | 2 | 11 |
| Methyl tert-Amyl Ether (TAME) | 25.00 | 25.62 | 102 | 73-124 | 6 | 11 |
| MTBE | 25.00 | 23.81 | 95 | 61-123 | 2 | 11 |
| 1,2-Dichloroethane | 25.00 | 30.98 | 124 | 66-141 | 2 | 12 |
| Benzene | 25.00 | 27.42 | 110 | 81-122 | 1 | 12 |
| Toluene | 25.00 | 26.57 | 106 | 82-122 | 6 | 12 |
| 1,2-Dibromoethane | 25.00 | 28.34 | 113 | 81-122 | 1 | 11 |
| Ethylbenzene | 25.00 | 27.24 | 109 | 86-125 | 3 | 12 |
| m,p-Xylenes | 50.00 | 57.52 | 115 | 83-127 | 1 | 13 |
| o-Xylene | 25.00 | 27.26 | 109 | 81-122 | 2 | 12 |

| Surrogate | %REC | Limits |
|---|---|---|
| Dibromofluoromethane | 105 | 81-124 |
| 1,2-Dichloroethane-d4 | 115 | 73-140 |
| Toluene-d8 | 98 | 88-113 |
| Bromofluorobenzene | 94 | 80-127 |

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

## Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Type: | BLANK | Diln Fac: | 1.000 |
| Lab ID: | QC518228 | Batch#: | 156462 |
| Matrix: | Water | Analyzed: | 10/26/09 |
| Units: | ug/L | | |

| Analyte | Result | RL |
|---|---|---|
| Gasoline C7-C12 | NA | |
| tert-Butyl Alcohol (TBA) | ND | 10 |
| Isopropyl Ether (DIPE) | ND | 0.50 |
| Ethyl tert-Butyl Ether (ETBE) | ND | 0.50 |
| Methyl tert-Amyl Ether (TAME) | ND | 0.50 |
| MTBE | ND | 0.50 |
| 1,2-Dichloroethane | ND | 0.50 |
| Benzene | ND | 0.50 |
| Toluene | ND | 0.50 |
| 1,2-Dibromoethane | ND | 0.50 |
| Ethylbenzene | ND | 0.50 |
| m,p-Xylenes | ND | 0.50 |
| o-Xylene | ND | 0.50 |

| Surrogate | %REC | Limits |
|---|---|---|
| Dibromofluoromethane | 101 | 81-124 |
| 1,2-Dichloroethane-d4 | 112 | 73-140 |
| Toluene-d8 | 117 * | 88-113 |
| Bromofluorobenzene | 106 | 80-127 |

*= Value outside of QC limits; see narrative
NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

## Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Matrix: | Water | Batch#: | 156462 |
| Units: | ug/L | Analyzed: | 10/26/09 |
| Diln Fac: | 1.000 | | |

Type: BS Lab ID: QC518229

| Analyte | Spiked | Result | %REC | Limits |
|---|---|---|---|---|
| tert-Butyl Alcohol (TBA) | 125.0 | 115.3 | 92 | 36-156 |
| Isopropyl Ether (DIPE) | 25.00 | 23.18 | 93 | 54-139 |
| Ethyl tert-Butyl Ether (ETBE) | 25.00 | 23.75 | 95 | 64-133 |
| Methyl tert-Amyl Ether (TAME) | 25.00 | 24.61 | 98 | 73-124 |
| MTBE | 25.00 | 21.45 | 86 | 61-123 |
| 1,2-Dichloroethane | 25.00 | 25.93 | 104 | 66-141 |
| Benzene | 25.00 | 24.78 | 99 | 81-122 |
| Toluene | 25.00 | 27.62 | 110 | 82-122 |
| 1,2-Dibromoethane | 25.00 | 25.56 | 102 | 81-122 |
| Ethylbenzene | 25.00 | 28.68 | 115 | 86-125 |
| m,p-Xylenes | 50.00 | 56.90 | 114 | 83-127 |
| o-Xylene | 25.00 | 26.96 | 108 | 81-122 |

| Surrogate | %REC | Limits |
|---|---|---|
| Dibromofluoromethane | 101 | 81-124 |
| 1,2-Dichloroethane-d4 | 107 | 73-140 |
| Toluene-d8 | 110 | 88-113 |
| Bromofluorobenzene | 100 | 80-127 |

Type: BSD Lab ID: QC518230

| Analyte | Spiked | Result | %REC | Limits | RPD | Lim |
|---|---|---|---|---|---|---|
| tert-Butyl Alcohol (TBA) | 125.0 | 112.4 | 90 | 36-156 | 3 | 23 |
| Isopropyl Ether (DIPE) | 25.00 | 22.07 | 88 | 54-139 | 5 | 11 |
| Ethyl tert-Butyl Ether (ETBE) | 25.00 | 23.06 | 92 | 64-133 | 3 | 11 |
| Methyl tert-Amyl Ether (TAME) | 25.00 | 23.85 | 95 | 73-124 | 3 | 11 |
| MTBE | 25.00 | 21.13 | 85 | 61-123 | 2 | 11 |
| 1,2-Dichloroethane | 25.00 | 24.68 | 99 | 66-141 | 5 | 12 |
| Benzene | 25.00 | 23.64 | 95 | 81-122 | 5 | 12 |
| Toluene | 25.00 | 26.70 | 107 | 82-122 | 3 | 12 |
| 1,2-Dibromoethane | 25.00 | 26.06 | 104 | 81-122 | 2 | 11 |
| Ethylbenzene | 25.00 | 28.07 | 112 | 86-125 | 2 | 12 |
| m,p-Xylenes | 50.00 | 57.09 | 114 | 83-127 | 0 | 13 |
| o-Xylene | 25.00 | 27.23 | 109 | 81-122 | 1 | 12 |

| Surrogate | %REC | Limits |
|---|---|---|
| Dibromofluoromethane | 102 | 81-124 |
| 1,2-Dichloroethane-d4 | 107 | 73-140 |
| Toluene-d8 | 112 | 88-113 |
| Bromofluorobenzene | 101 | 80-127 |

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

## Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Matrix: | Water | Batch#: | 156462 |
| Units: | ug/L | Analyzed: | 10/26/09 |
| Diln Fac: | 1.000 | | |

Type: BS Lab ID: QC518248

| Analyte | Spiked | Result | %REC | Limits |
|---|---|---|---|---|
| Gasoline C7-C12 | 1,000 | 1,099 | 110 | 74-124 |

| Surrogate | %REC | Limits |
|---|---|---|
| Dibromofluoromethane | 100 | 81-124 |
| 1,2-Dichloroethane-d4 | 108 | 73-140 |
| Toluene-d8 | 114 * | 88-113 |
| Bromofluorobenzene | 101 | 80-127 |

Type: BSD Lab ID: QC518249

| Analyte | Spiked | Result | %REC | Limits | RPD | Lim |
|---|---|---|---|---|---|---|
| Gasoline C7-C12 | 1,000 | 1,043 | 104 | 74-124 | 5 | 13 |

| Surrogate | %REC | Limits |
|---|---|---|
| Dibromofluoromethane | 99 | 81-124 |
| 1,2-Dichloroethane-d4 | 109 | 73-140 |
| Toluene-d8 | 116 * | 88-113 |
| Bromofluorobenzene | 103 | 80-127 |

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

## Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Type: | BLANK | Diln Fac: | 1.000 |
| Lab ID: | QC518440 | Batch#: | 156508 |
| Matrix: | Water | Analyzed: | 10/27/09 |
| Units: | ug/L | | |

| Analyte | Result | RL |
|---|---|---|
| Gasoline C7-C12 | NA | |
| tert-Butyl Alcohol (TBA) | ND | 10 |
| Isopropyl Ether (DIPE) | ND | 0.50 |
| Ethyl tert-Butyl Ether (ETBE) | ND | 0.50 |
| Methyl tert-Amyl Ether (TAME) | ND | 0.50 |
| MTBE | ND | 0.50 |
| 1,2-Dichloroethane | ND | 0.50 |
| Benzene | ND | 0.50 |
| Toluene | ND | 0.50 |
| 1,2-Dibromoethane | ND | 0.50 |
| Ethylbenzene | ND | 0.50 |
| m,p-Xylenes | ND | 0.50 |
| o-Xylene | ND | 0.50 |

| Surrogate | %REC | Limits |
|---|---|---|
| Dibromofluoromethane | 106 | 81-124 |
| 1,2-Dichloroethane-d4 | 109 | 73-140 |
| Toluene-d8 | 98 | 88-113 |
| Bromofluorobenzene | 98 | 80-127 |

NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

## Gasoline by GC/MS

| | | | |
|---|---|---|---|
| Lab #: | 215916 | Location: | Aspire Schools |
| Client: | LFR Levine Fricke | Prep: | EPA 5030B |
| Project#: | 003-09155-02 | Analysis: | EPA 8260B |
| Matrix: | Water | Batch#: | 156508 |
| Units: | ug/L | Analyzed: | 10/27/09 |
| Diln Fac: | 1.000 | | |

Type: BS Lab ID: QC518441

| Analyte | Spiked | Result | %REC | Limits |
|---|---|---|---|---|
| tert-Butyl Alcohol (TBA) | 125.0 | 133.6 | 107 | 36-156 |
| Isopropyl Ether (DIPE) | 25.00 | 25.89 | 104 | 54-139 |
| Ethyl tert-Butyl Ether (ETBE) | 25.00 | 25.09 | 100 | 64-133 |
| Methyl tert-Amyl Ether (TAME) | 25.00 | 24.30 | 97 | 73-124 |
| MTBE | 25.00 | 25.09 | 100 | 61-123 |
| 1,2-Dichloroethane | 25.00 | 26.36 | 105 | 66-141 |
| Benzene | 25.00 | 26.19 | 105 | 81-122 |
| Toluene | 25.00 | 24.55 | 98 | 82-122 |
| 1,2-Dibromoethane | 25.00 | 25.06 | 100 | 81-122 |
| Ethylbenzene | 25.00 | 26.48 | 106 | 86-125 |
| m,p-Xylenes | 50.00 | 52.25 | 104 | 83-127 |
| o-Xylene | 25.00 | 26.03 | 104 | 81-122 |

| Surrogate | %REC | Limits |
|---|---|---|
| Dibromofluoromethane | 108 | 81-124 |
| 1,2-Dichloroethane-d4 | 105 | 73-140 |
| Toluene-d8 | 101 | 88-113 |
| Bromofluorobenzene | 99 | 80-127 |

Type: BSD Lab ID: QC518442

| Analyte | Spiked | Result | %REC | Limits | RPD | Lim |
|---|---|---|---|---|---|---|
| tert-Butyl Alcohol (TBA) | 125.0 | 126.7 | 101 | 36-156 | 5 | 23 |
| Isopropyl Ether (DIPE) | 25.00 | 26.40 | 106 | 54-139 | 2 | 11 |
| Ethyl tert-Butyl Ether (ETBE) | 25.00 | 25.71 | 103 | 64-133 | 2 | 11 |
| Methyl tert-Amyl Ether (TAME) | 25.00 | 24.47 | 98 | 73-124 | 1 | 11 |
| MTBE | 25.00 | 25.40 | 102 | 61-123 | 1 | 11 |
| 1,2-Dichloroethane | 25.00 | 25.99 | 104 | 66-141 | 1 | 12 |
| Benzene | 25.00 | 26.67 | 107 | 81-122 | 2 | 12 |
| Toluene | 25.00 | 25.34 | 101 | 82-122 | 3 | 12 |
| 1,2-Dibromoethane | 25.00 | 25.86 | 103 | 81-122 | 3 | 11 |
| Ethylbenzene | 25.00 | 27.33 | 109 | 86-125 | 3 | 12 |
| m,p-Xylenes | 50.00 | 54.22 | 108 | 83-127 | 4 | 13 |
| o-Xylene | 25.00 | 26.58 | 106 | 81-122 | 2 | 12 |

| Surrogate | %REC | Limits |
|---|---|---|
| Dibromofluoromethane | 109 | 81-124 |
| 1,2-Dichloroethane-d4 | 102 | 73-140 |
| Toluene-d8 | 100 | 88-113 |
| Bromofluorobenzene | 97 | 80-127 |

RPD= Relative Percent Difference

Data File: \\Gcmsserver\DD\chem\MSVOA09.i\102609.b\IJQ17TVH.D



Date : 26-OCT-2009 17:58

Client ID: DYNA P&T

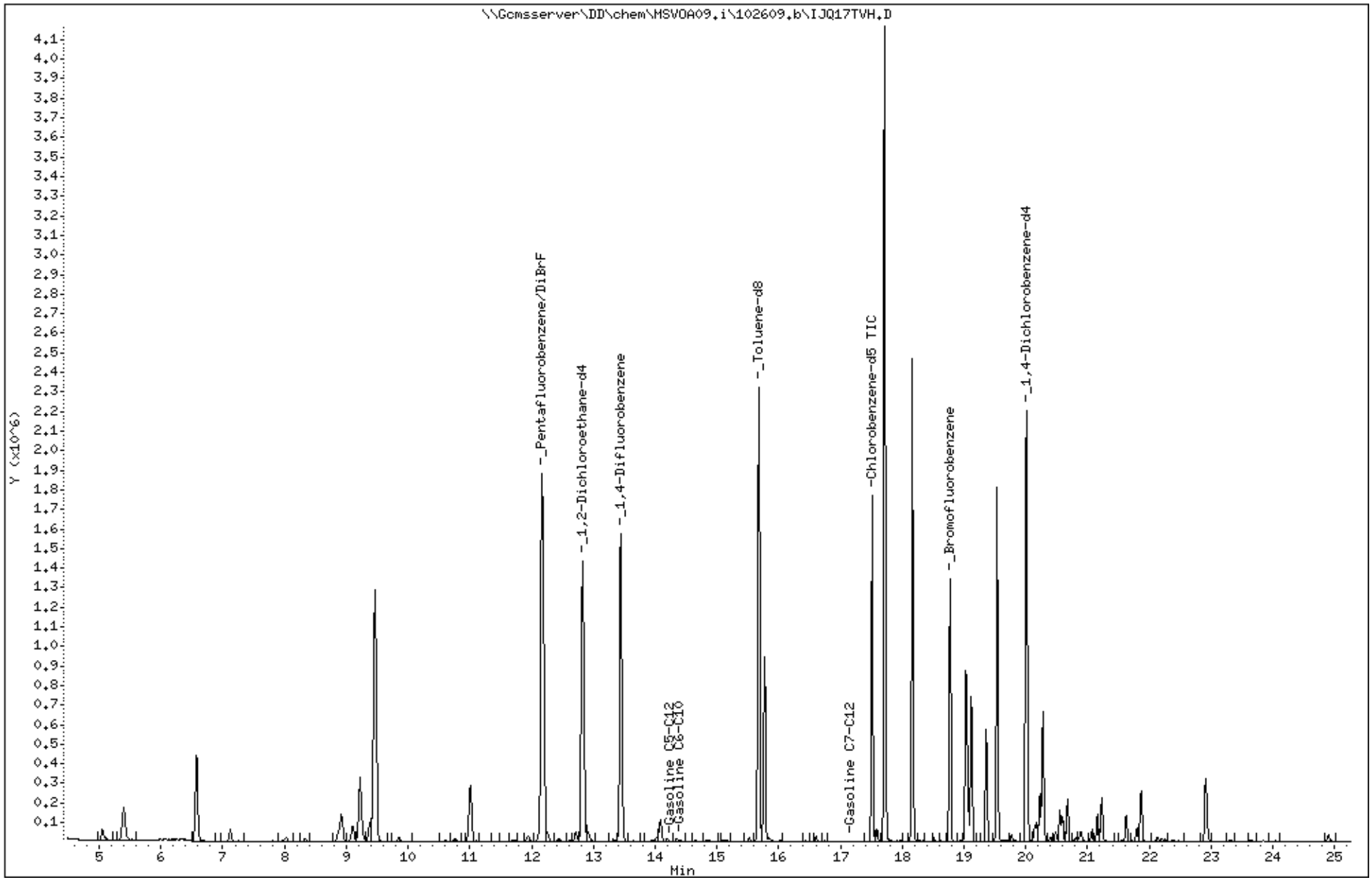
Instrument: MSVOA09.i

Sample Info: S,215916-001

Operator: VOC

Column phase:

Column diameter: 2.00



Data File: \\Gcmsserver\DD\chem\MSVOA09.i\102309.b\IJN15TVH.D



Date : 23-OCT-2009 20:31

Client ID: DYNA P&T

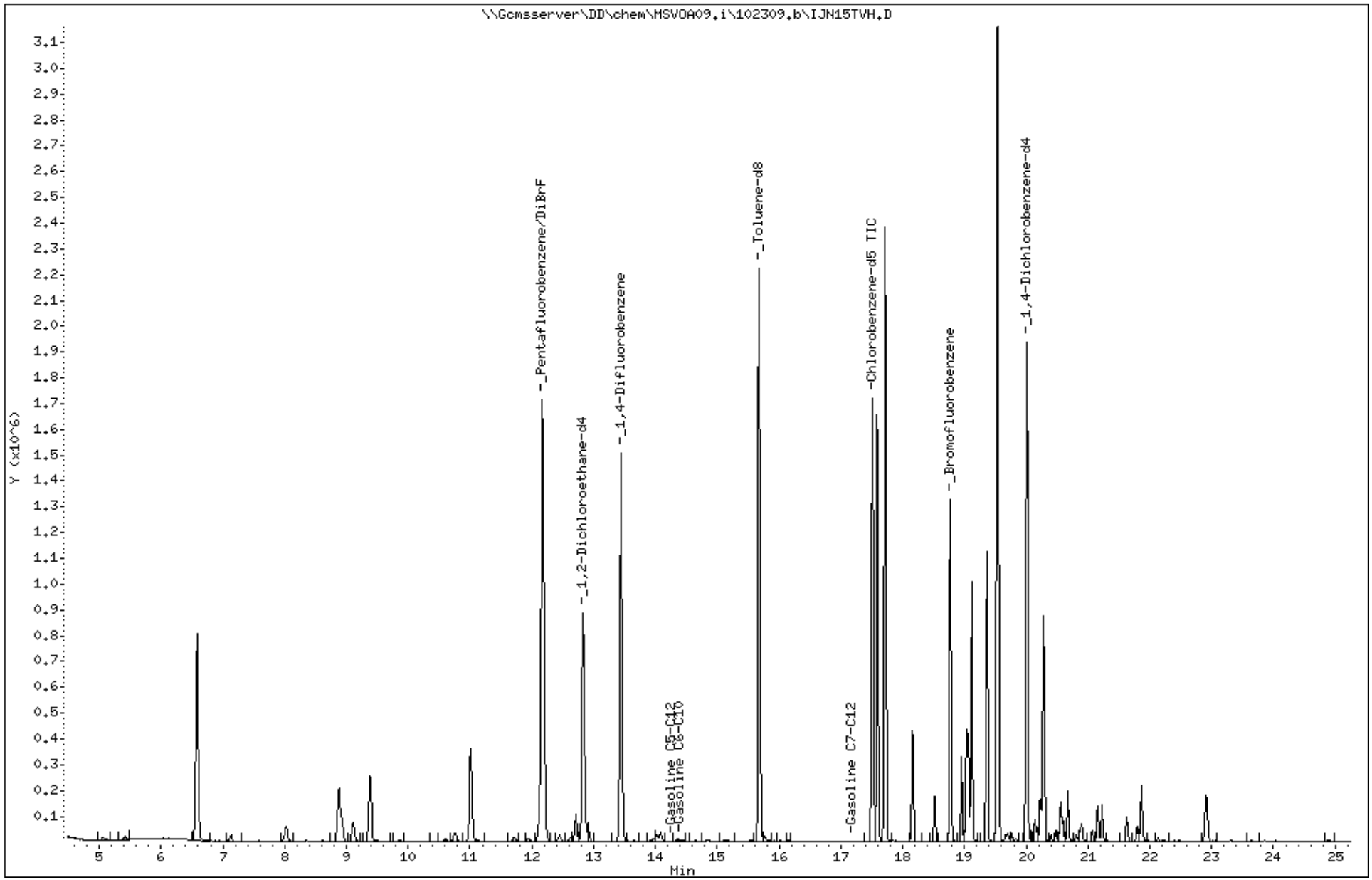
Instrument: MSVOA09.i

Sample Info: S,215916-004

Operator: VOC

Column phase:

Column diameter: 2.00



Data File: \\Gcmsserver\DD\chem\MSVOA09.i\102609.b\IJQ20TVH.D



Date : 26-OCT-2009 19:39

Client ID: DYNA P&T

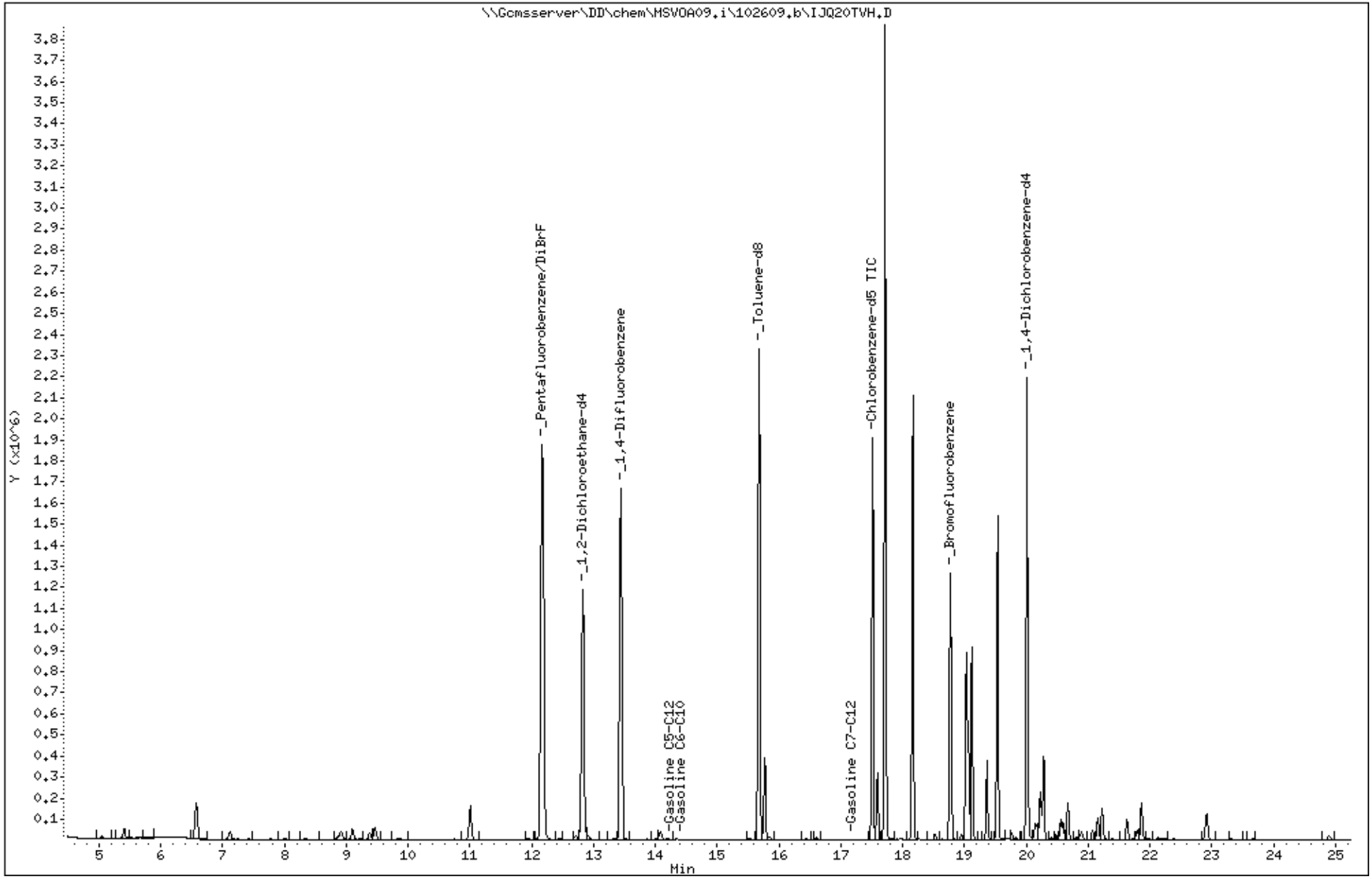
Instrument: MSVOA09.i

Sample Info: S,215916-005

Operator: VOC

Column phase:

Column diameter: 2.00



Data File: \\Gcmsserver\DD\chem\MSVOA09.i\102309.b\IJN05TVH.D



Date : 23-OCT-2009 10:55

Client ID: DYNA P&T

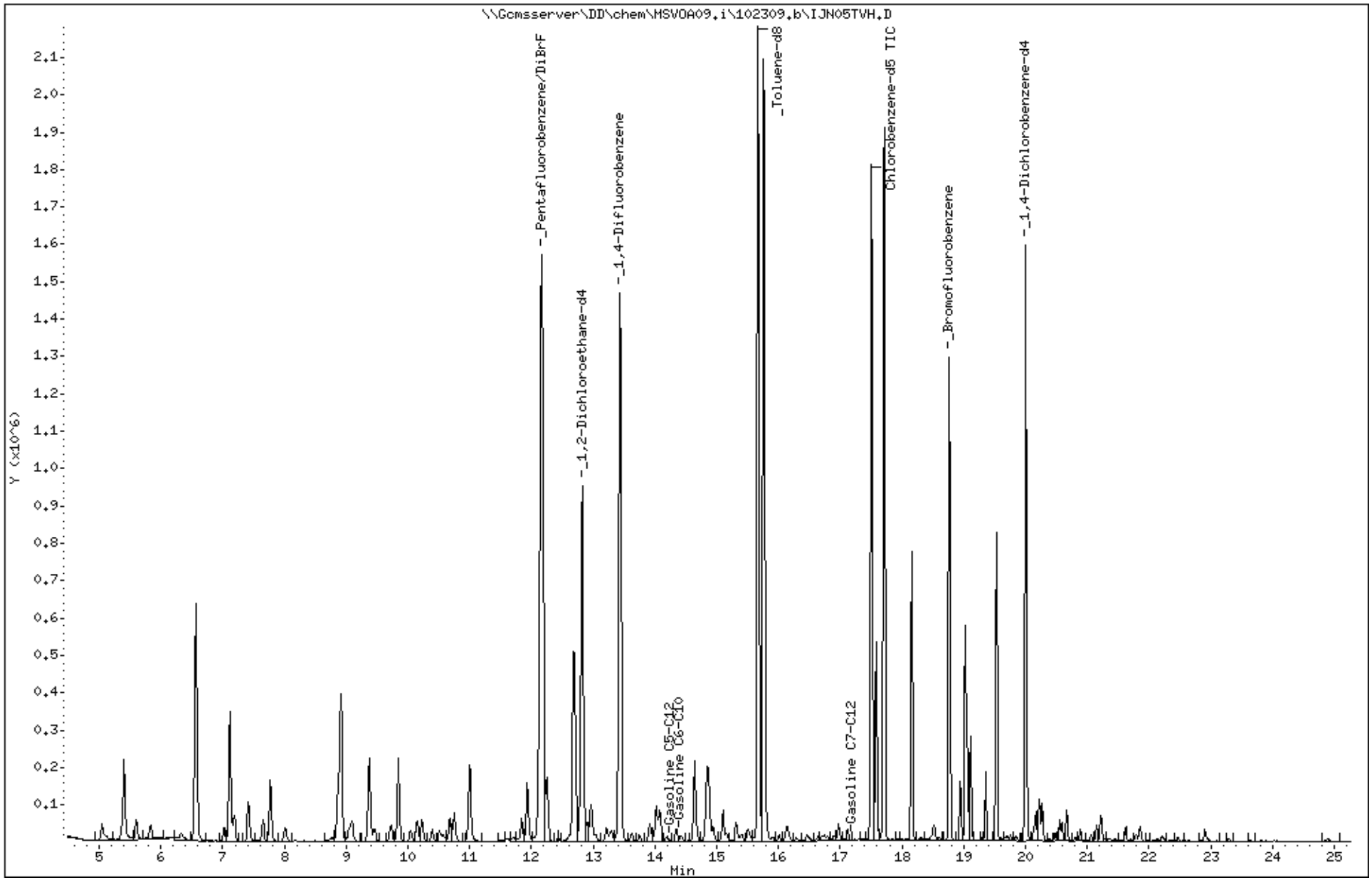
Instrument: MSVOA09.i

Sample Info: CCV/BS,QC517787,156347,1/1,S12208,13333X

Operator: VOC

Column phase:

Column diameter: 2.00



# APPENDIX B

## Field Logs

LFR LEVINE•FRICKE

# WATER-QUALITY SAMPLING LOG

Project No. 003-09155-02-002 Date: 10/21/09, 10/22/09 Page 1 of 1

Project Name: Aspire Schools Sampling Location:

Sampler's Name: K. Johnson Sample No.: ☐ FB

Sampling Plan By: Dated: C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Storage Location: onsite tank

Date Purge Water Disposed: Where Disposed:

| Analyses Requested | No. and Type of Bottles Used |
|---|---|
| | |
| | |

Lab Name: C+T

Delivery By ☐ Courier ☑ Hand

Well No. NW-2I Depth of Water 14.21 (measured last event)

Well Diameter: Well Depth → 12.07 on 10/21/09

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume

80% DTW

*Continue remarks on reverse, if needed.*

| Time | Inlet Depth | Depth to Water | Volume Purged (gal) | DO (mg/L) | Temperature (C°) | PH (SU) | Cond (uS/cm) | ORP (mv) | Turb (NTU) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 1350 | | 8.54 | | | | | | | very muddy | Start purge |
| 1355 | | 10.85 | 0.7 | 2.71 | 23.91 | 7.94 | 1291 | 216.2 | " | |
| 1400 | | 11.19 | 1.2 | 3.19 | 23.41 | 7.69 | 1224 | 207.8 | " | |
| 1403 | | 11.65 | 1.7 | 2.78 | 23.53 | 7.66 | 1273 | 202.5 | " | |
| 1407 | | 12.05 | 2.0 | 3.45 | 23.54 | 7.65 | 1336 | 193.9 | " | well dry |
| 10/22/09 0917 | | 4.04 | — | — | — | — | — | — | clear | |
| 0920 | | | | | | | | | | Sample |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
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| | | | | | | | | | | |

LFR LEVINE•FRICKE

# WATER-QUALITY SAMPLING LOG

Project No. 003-09155-02-002 Date: 10-21-09 Page 1 of 1

Project Name: Aspire Sampling Location:

Sampler's Name: K. Johnson Sample No.: ☐ FB

Sampling Plan By: Dated: C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Storage Location: onsite tank

Date Purge Water Disposed: Where Disposed:

| Analyses Requested | No. and Type of Bottles Used |
|---|---|
| | |
| | |

Lab Name: C+T

Delivery By ☐ Courier ☑ Hand

Well No. ASMW-2I Depth of Water 8.05 → 7.80 after depressurizing

Well Diameter: Well Depth 16.89 (from last event)

☑ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume

80% DTW

*Continue remarks on reverse, if needed.*

| Time | Inlet Depth | Depth to Water | Volume Purged (gal) | DO (mg/L) | Temperature (C°) | PH (SU) | Cond (uS/cm) | ORP (mv) | Turb (NTU) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 1025 | | 7.80 | | | | | | | brown | start purge |
| 1035 | | 9.81 | 1.0 | 7.15 | 22.69 | 7.53 | 6138 | 232.7 | | |
| 1038 | | 10.03 | 1.1 | 7.03 | 22.66 | 7.45 | 6229 | 234.8 | | Reduce flow rate |
| 1043 | | 10.03 | 1.6 | 6.53 | 22.46 | 7.30 | 6565 | 238.0 | | |
| 1046 | | 10.04 | 1.8 | 6.22 | 22.42 | 7.23 | 6626 | 239.4 | | |
| 1049 | | 10.05 | 2.0 | 6.05 | 22.38 | 7.20 | 6645 | 239.6 | | |
| 1052 | | 10.05 | 2.3 | 5.85 | 22.36 | 7.16 | 6678 | 240.4 | | |
| 1055 | | 10.04 | 2.5 | 5.83 | 22.35 | 7.14 | 6742 | 240.6 | | |
| 1100 | | | | | | | | | | Sample |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

LFR LEVINE•FRICKE

# WATER-QUALITY SAMPLING LOG

Project No. 003-09155-02-002 Date: 10/21/09 Page 1 of 1

Project Name: Aspire Schools Sampling Location: _____

Sampler's Name: K. Johnson Sample No.: _____ ☐ FB

Sampling Plan By: _____ Dated: _____ C.O.C. No.: _____ ☑ DUP Dup-1

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other _____

Purge Water Storage Container Type: _____ Storage Location: on site tank

Date Purge Water Disposed: _____ Where Disposed:

| Analyses Requested | No. and Type of Bottles Used |
|---|---|
| | |
| | |

Lab Name: C+T

Delivery By ☐ Courier _____ ☑ Hand _____

Well No. ASMW-3I Depth of Water 5.74

Well Diameter: _____ Well Depth _____

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height _____

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume _____

80% DTW _____

*Continue remarks on reverse, if needed.*

| Time | Inlet Depth | Depth to Water | Volume Purged (gal) | DO (mg/L) | Temperature (C°) | PH (SU) | Cond (uS/cm) | ORP (mv) | Turb (NTU) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 1149 | | 5.74 | | | | | | | slightly cloudy | start purge |
| 1200 | | 8.82 | 1.2 | 0.47 | 23.48 | 6.66 | 5292 | 83.0 | clear | |
| 1203 | | 9.10 | 1.4 | 0.54 | 23.54 | 6.66 | 5229 | 89.1 | | Reduce flow rate |
| 1206 | | 8.94 | 1.6 | 0.61 | 23.63 | 6.66 | 5202 | 94.4 | | |
| 1209 | | 8.88 | 1.9 | 0.76 | 23.57 | 6.67 | 5216 | 97.5 | | |
| 1212 | | 8.88 | 2.2 | 0.78 | 23.53 | 6.66 | 5221 | 99.6 | | |
| 1215 | | 8.90 | 2.4 | 0.71 | 23.49 | 6.64 | 5232 | 101.8 | | |
| 1220 | | | | | | | | | | Sample |
| 1225 | | | | | | | | | | sample Dup-1 (mark time of 0800 on COC) |
| | | | | | | | | | | |
| | | | | | | | | | | |
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LFR LEVINE•FRICKE

# WATER-QUALITY SAMPLING LOG

Project No. 003-09155-02-002 Date: 10.22.09 Page 1 of 1

Project Name: Aspire Schools Sampling Location:

Sampler's Name: K. Johnson Sample No.: ☐ FB

Sampling Plan By: Dated: C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Storage Location: onsite tank

Date Purge Water Disposed: Where Disposed:

| Analyses Requested | No. and Type of Bottles Used |
|---|---|
| | |
| | |

Lab Name: LFR

Delivery By ☐ Courier ☑ Hand

Well No. ASMW-4I Depth of Water

Well Diameter: Well Depth

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume

80% DTW

*Continue remarks on reverse, if needed.*

| Time | Inlet Depth | Depth to Water | Volume Purged (gal) | DO (mg/L) | Temperature (C°) | PH (SU) | Cond (uS/cm) | ORP (mv) | Turb (NTU) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 1045 | | 3.58 | | | | | | | milky | start purge |
| 1056 | | 6.22 | 1.2 | 0.27 | 21.71 | 6.80 | 952 | -80.6 | clear | |
| 1101 | | 6.45 | 1.6 | 0.20 | 21.72 | 6.79 | 937 | -79.7 | " | reduce flow rate |
| 1105 | | 6.45 | 1.8 | 0.18 | 21.80 | 6.77 | 926 | -70.6 | " | |
| 1108 | | 6.45 | 2.0 | 0.17 | 21.73 | 6.76 | 918 | -63.4 | " | |
| 1111 | | 6.49 | 2.2 | 0.15 | 21.70 | 6.75 | 918 | -61.1 | " | |
| 1114 | | 6.51 | 2.5 | 0.14 | 21.74 | 6.74 | 910 | -59.3 | " | |
| 1115 | | | | | | | | | | sample |
| | | | | | | | | | | |
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LFR LEVINE•FRICKE

# WATER-QUALITY SAMPLING LOG

Project No. 003-09155-02-002 Date: 10/21/09, 10/22/09 Page 1 of 1

Project Name: Aztec Schools Sampling Location:

Sampler's Name: K. Johnson Sample No.: ☐ FB

Sampling Plan By: Dated: C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Storage Location: onsite tank

Date Purge Water Disposed: Where Disposed:

| Analyses Requested | No. and Type of Bottles Used |
|---|---|
| | |
| | |

Lab Name: CTT

Delivery By ☐ Courier ☑ Hand

Well No. ASMW-5I Depth of Water

Well Diameter: Well Depth 12.34 (last event)

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume

80% DTW

*Continue remarks on reverse, if needed.*

| Time | Inlet Depth | Depth to Water | Volume Purged (gal) | DO (mg/L) | Temperature (C°) | PH (SU) | Cond (uS/cm) | ORP (mv) | Turb (NTU) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 1455 | | 6.86 | | | | | | | | start purge |
| 1505 | | 9.09 | 0.8 | 0.70 | 23.75 | 6.83 | 913 | -23.7 | clear | |
| 1509 | | 9.43 | 1.2 | 0.40 | 23.72 | 6.82 | 925 | -15.4 | " | increase flow rate |
| 1514 | | 10.21 | 1.8 | 2.20 | 23.47 | 6.80 | 970 | -4.7 | " | |
| 1519 | | 12.10 | 2.8 | 0.46 | 23.33 | 6.85 | 951 | -6.6 | " | well dewatered |
| 10/22/09 0929 | | 3.04 | - | - | - | - | - | - | clear | ~~st~~ start pumping |
| 0935 | | | | | | | | | | sample |
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LFR LEVINE • FRICKE

# WATER-QUALITY SAMPLING LOG

Project No. 003-09155-02-002 Date: 10-21-09 Page 1 of 1

Project Name: Aspire Sampling Location:

Sampler's Name: K. Johnson Sample No.: MW-4 ☐ FB

Sampling Plan By: Dated: C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☑ Other

Purge Water Storage Container Type: Storage Location: onsite tank

Date Purge Water Disposed: Where Disposed:

| Analyses Requested | No. and Type of Bottles Used |
|---|---|
| | |
| | |

Lab Name: C+T

Delivery By ☐ Courier ☑ Hand

Well No. MW-4 Depth of Water 4.21

Well Diameter: Well Depth 24.65 (measured last event)

☑ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume

80% DTW

*Continue remarks on reverse, if needed.*

| Time | Inlet Depth | Depth to Water | Volume Purged (gal) | DO (mg/L) | Temperature (C°) | PH (SU) | Cond (uS/cm) | ORP (mv) | Turb (NTU) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 0940 | | | | | | | | | | |
| 0947 | | 6.28 | 0.4 | 5.80 | 22.05 | 7.22 | 1285 | 272.6 | clear | decrease flow rate |
| 0950 | | 6.65 | 0.6 | 5.50 | 22.30 | 7.23 | 1286 | 263.7 | | |
| 0954 | | 6.89 | 0.8 | 5.35 | 22.17 | 7.24 | 1284 | 251.7 | | |
| 0958 | | 7.00 | 1.0 | 5.27 | 22.22 | 7.25 | 1281 | 245.1 | | flow rate set to min |
| 1001 | | 6.99 | 1.2 | 4.95 | 22.22 | 7.23 | 1280 | 239.5 | | |
| 1004 | | 6.95 | 1.5 | 4.83 | 22.29 | 7.20 | 1279 | 236.6 | | |
| 1007 | | 6.95 | 1.7 | 4.40 | 22.30 | 7.20 | 1288 | 230.6 | | |
| 1010 | | 6.96 | 1.8 | 4.31 | 22.28 | 7.20 | 1288 | 230.3 | | |
| 1013 | | 7.08 | 1.9 | 4.35 | 22.12 | 7.19 | 1289 | 229.1 | | |
| 1015 | | | | | | | | | | sample |
| | | | | | | | | | | |
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LFR LEVINE•FRICKE

# WATER-QUALITY SAMPLING LOG

Project No. 003-09155-02-002 Date: 10-21-09 Page 1 of 1

Project Name: Aggie Schools Sampling Location:

Sampler's Name: K. Johnson Sample No.: ☐ FB

Sampling Plan By: Dated: C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Storage Location: onsite tank

Date Purge Water Disposed: Where Disposed:

| Analyses Requested | No. and Type of Bottles Used |
|---|---|
| | |
| | |

Lab Name: C+T

Delivery By ☐ Courier ☑ Hand

Well No. NW-2D Depth of Water 4.13

Well Diameter: Well Depth

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume

weighted bottom of tubing for sampling. Removed weight afterwards.

80% DTW

Continue remarks on reverse, if needed.

| Time | Inlet Depth | Depth to Water | Volume Purged (gal) | DO (mg/L) | Temperature (C°) | PH (SU) | Cond (uS/cm) | ORP (mv) | Turb (NTU) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 1312 | | 4.13 | | | | | | | | start purge |
| 1315 | | 4.13 | 1.4 | 6.69 | 20.85 | 6.71 | 700 | 157.6 | brown | |
| 1318 | | 4.13 | 1.7 | 6.42 | 21.23 | 6.70 | 698 | 161.9 | slightly | brown |
| 1325 | | 4.12 | 2.2 | 6.49 | 21.38 | 6.70 | 700 | 170.1 | | |
| 1328 | | 4.11 | 2.5 | 6.50 | 21.32 | 6.70 | 700 | 172.9 | | |
| 1331 | | 4.11 | 2.7 | 6.40 | 21.48 | 6.70 | 699 | 175.0 | | |
| 1335 | | | | | | | | | | sample |
| | | | | | | | | | | |
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LFR LEVINE•FRICKE

# WATER-QUALITY SAMPLING LOG

Project No. 003 - 09155 -02-002 Date: 10.22.09 Page 1 of 1

Project Name: Aspire Schools Sampling Location: _____

Sampler's Name: K. Johnson Sample No.: _____ ☐ FB

Sampling Plan By: _____ Dated: _____ C.O.C. No.: _____ ☐ DUP ___

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other _____

Purge Water Storage Container Type: _____ Storage Location: onsite tank

Date Purge Water Disposed: _____ Where Disposed:

| Analyses Requested | No. and Type of Bottles Used |
|---|---|
| | |
| | |

Lab Name: CHT

Delivery By ☐ Courier _____ ☑ Hand _____

Well No. ASMW-2D Depth of Water _____

Well Diameter: _____ Well Depth _____

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height _____

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume _____

80% DTW _____

*Continue remarks on reverse, if needed.*

| Time | Inlet Depth | Depth to Water | Volume Purged (gal) | DO (mg/L) | Temperature (C°) | PH (SU) | Cond (uS/cm) | ORP (mv) | Turb (NTU) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 1148 | | 7.50 | | | | | | | brown | |
| 1200 | | 5.81 | 1.8 | 9.86 | 20.95 | 7.31 | 1147 | 115.4 | " | reduce flow rate |
| 1204 | | 5.38 | 2.1 | 9.41 | 21.27 | 7.31 | 1148 | 122.8 | " | |
| 1208 | | 5.22 | 2.4 | 9.30 | 21.18 | 7.31 | 1153 | 129.7 | " | |
| 1211 | | 5.12 | 2.6 | 9.22 | 21.20 | 7.31 | 1153 | 134.1 | " | |
| 1214 | | 5.10 | 2.7 | 9.19 | 21.24 | 7.30 | 1153 | 137.6 | " | |
| 1217 | | 5.10 | 2.9 | 9.20 | 21.27 | 7.30 | 1157 | 140.5 | " | |
| 1220 | | | | | | | | | | Sample |
| | | | | | | | | | | |
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LFR LEVINE•FRICKE

# WATER-QUALITY SAMPLING LOG

Project No. 003 - 09155 -02 - 002 Date: 10/21/09 Page 1 of 1

Project Name: Aspire Schools Sampling Location:

Sampler's Name: K. Johnson Sample No.: ☐ FB

Sampling Plan By: Dated: C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Storage Location: onsite tank

Date Purge Water Disposed: Where Disposed:

| Analyses Requested | No. and Type of Bottles Used |
|---|---|
| | |
| | |

Lab Name: C+T

Delivery By ☐ Courier ☑ Hand

Well No. ASMW-3D Depth of Water 4.65

Well Diameter: Well Depth

☑ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume

well box flooded, seal OK

80% DTW

*Continue remarks on reverse, if needed.*

| Time | Inlet Depth | Depth to Water | Volume Purged (gal) | DO (mg/L) | Temperature (C°) | PH (SU) | Cond (uS/cm) | ORP (mv) | Turb (NTU) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 1111 | | 4.65 | | | | | | | brown | start purge |
| 1121 | | 4.75 | 1.1 | 2.08 | 20.17 | 6.40 | 7749 | 249.7 | " | Reduce flow rate |
| 1130 | | 4.65 | 1.9 | 1.85 | 20.60 | 6.39 | 7758 | 252.3 | " | |
| 1133 | | 4.64 | 2.1 | 1.79 | 20.65 | 6.39 | 7761 | 252.0 | " | |
| 1136 | | 4.64 | 2.3 | 1.77 | 20.69 | 6.39 | 7757 | 252.0 | " | |
| 1140 | | | | | | | | | | Sample |
| | | | | | | | | | | |
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LFR LEVINE•FRICKE

# WATER-QUALITY SAMPLING LOG

Project No. 003-09155-02-002 Date: 10/22/09 Page 1 of 1

Project Name: Aztec Schools Sampling Location: _____

Sampler's Name: K. Johnson Sample No.: _____ ☐ FB

Sampling Plan By: _____ Dated: _____ C.O.C. No.: _____ ☐ DUP ___

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other _____

Purge Water Storage Container Type: _____ Storage Location: onsite tank

Date Purge Water Disposed: _____ Where Disposed:

| Analyses Requested | No. and Type of Bottles Used |
|---|---|
| | |
| | |

Lab Name: C+T

Delivery By ☐ Courier _____ ☑ Hand _____

Well No. AGMW-4D Depth of Water _____

Well Diameter: _____ Well Depth _____

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height _____

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume _____

80% DTW _____

*Continue remarks on reverse, if needed.*

| Time | Inlet Depth | Depth to Water | Volume Purged (gal) | DO (mg/L) | Temperature (C°) | PH (SU) | Cond (uS/cm) | ORP (mv) | Turb (NTU) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 1004 | | 3.52 | | | | | | | brown | |
| 1019 | | 3.70 | 1.4 | 0.54 | 20.18 | 6.86 | 1889 | 339.8 | " | |
| 1022 | | 3.70 | 1.8 | 0.39 | 20.15 | 6.85 | 1888 | 336.6 | " | |
| 1025 | | 3.71 | 2.1 | 0.36 | 20.16 | 6.84 | 1889 | 335.1 | " | |
| 1028 | | 3.71 | 2.5 | 0.32 | 20.17 | 6.85 | 1889 | 331.8 | slightly brown | |
| 1030 | | | | | | | | | | Sample |
| | | | | | | | | | | |
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LFR LEVINE•FRICKE

# WATER-QUALITY SAMPLING LOG

Project No. 003 - 09155 - 02-002 Date: 10/21/09 Page 1 of 1

Project Name: Aspire School Sampling Location:

Sampler's Name: K. Johnson Sample No.: ☐ FB

Sampling Plan By: Dated: C.O.C. No.: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☐ Other

Purge Water Storage Container Type: Storage Location: onsite tank

Date Purge Water Disposed: Where Disposed:

| Analyses Requested | No. and Type of Bottles Used |
|---|---|
| | |
| | |

Lab Name: CT

Delivery By ☐ Courier ☑ Hand

Well No. ASMW-5D Depth of Water 3.56

Well Diameter: Well Depth

☐ 2" (0.16 gal/feet) ☐ 5" (1.02 gal/feet) Water Column Height

☐ 4" (0.65 gal/feet) ☐ 6" (1.47 gal/feet) Well Volume

80% DTW

*Continue remarks on reverse, if needed.*

| Time | Inlet Depth | Depth to Water | Volume Purged (gal) | DO (mg/L) | Temperature (C°) | PH (SU) | Cond (uS/cm) | ORP (mv) | Turb (NTU) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|
| 1420 | | 3.56 | | | | | | | brown | start purge |
| 1432 | | 3.37 | 0.9 | 4.22 | 20.62 | 6.80 | 1772 | 234.3 | cloudy | |
| 1439 | | 3.35 | 1.8 | 4.40 | 20.78 | 6.82 | 1770 | 233.7 | " | |
| 1442 | | 3.35 | 2.4 | 4.45 | 20.82 | 6.82 | 1768 | 233.5 | " | |
| 1445 | | 3.35 | 2.6 | 4.44 | 20.87 | 6.82 | 1766 | 233.0 | " | |
| 1450 | | | | | | | | | | Sample |
| | | | | | | | | | | |
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**Curtis & Tompkins, Ltd.**
Analytical Laboratory Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510) 486-0900 Phone
(510) 486-0532 Fax

# CHAIN OF CUSTODY



**C & T LOGIN #:** _____

**Project No.:** 003-09155-02
**Project Name:** Aspire Schools
**Project P.O.:**
**Turnaround Time:** Standard (24 hr)

**Sampler:** K. Johnson
**Report To:** Eric Ehlers
**Company:** LFR
**Telephone:** 510-596-9555
**Fax:**

| Lab No. | Sample ID. | Sampling Date Time (2009) | Matrix: Soil | Water | Waste | # of Containers | Preservative: HCL | $H_2SO_4$ | $HNO_3$ | ICE | Analysis: As, Cr, Se - 6010b | Hex Cr - 7199 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ASMW-2D | 10/22 1220 | | X | | 2 | | | X | X | X | X |
| | | | | | | | | | | | | |
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**Notes:**

SAMPLE RECEIPT
☐ Intact ☐ Cold
☒ On Ice ☐ Ambient
Preservative Correct?
☐ Yes ☐ No ☐ N/A

**RELINQUISHED BY:**
K. Johnson 10/22 1440 DATE / TIME
DATE / TIME
DATE / TIME

**RECEIVED BY:**
Pat Hogan 10/22/09 14:10 DATE / TIME
DATE / TIME
DATE / TIME

SIGNATURE

**Curtis & Tompkins, Ltd.**
Analytical Laboratory Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510) 486-0900 Phone
(510) 486-0532 Fax

# CHAIN OF CUSTODY



C & T LOGIN #: _____

Sampler: K. Johnson

Project No.: 003-09155-02 Report To: Eric Ehlers

Project Name: Aspire Schools Company: LFR

Project P.O.: Telephone: 510-596-9555

Turnaround Time: Standard Fax:

| Lab No. | Sample ID. | Sampling Date Time (2009) | Matrix: Soil | Water | Waste | # of Containers | Preservative: HCL | $H_2SO_4$ | $HNO_3$ | ICE | Analysis: TPH g -8260 d | BTXE -8260 d | Fuel Oxygenate -8260 d |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | NW-2I | 10/22 0920 | | X | | 3 | X | | | X | X | X | X |
| | ASMW-2I | 10/21 1100 | | | | | | | | | | | |
| | ASMW-3I | 10/21 1220 | | | | | | | | | | | |
| | ASMW-4I | 10/22 1115 | | | | | | | | | | | |
| | ASMW-5I | 10/22 0935 | | | | | | | | | | | |
| | MW-4 | 10/21 1015 | | | | | | | | | | | |
| | NW-2D | 10/21 1335 | | | | | | | | | | | |
| | ASMW-2D | 10/22 1220 | | | | | | | | | | | |
| | ASMW-3D | 10/21 1140 | | | | | | | | | | | |
| | ASMW-4D | 10/22 1030 | | | | | | | | | | | |
| | ASMW-5D | 10/21 1450 | | | | | | | | | | | |
| | Dup-1 | 10/21 0800 | | | | | | | | | | | |
| | Trip Blank | - - | | | | 2 | | | | | | | |

**Notes:**

SAMPLE RECEIPT
☐ Intact ☐ Cold
☐ On Ice ☐ Ambient
Preservative Correct?
☐ Yes ☐ No ☐ N/A

**RELINQUISHED BY:**

K. Johnson 10/22 1440 DATE / TIME

DATE / TIME

DATE / TIME

SIGNATURE

**RECEIVED BY:**

Pat Hanly 10/22/09 14:40 DATE / TIME

DATE / TIME

DATE / TIME