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Groundwater Monitoring and Soil-Vapor Extraction/Air Sparging System Operation Report for the Period April 1 through June 30, 2010

Former Pacific Electric Motors Site
1009 66th Avenue, Oakland, California
(Fuel Leak Case Number RO0000411)

August 13, 2010

ARCADIS

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Senior Engineering Geologist

Groundwater Monitoring and Soil-Vapor Extraction/Air Sparging System Operation Report for the Period April 1 through June 30, 2010

Former Pacific Electric Motors Site, 1009 66th Avenue, Oakland, California

Prepared for:
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Our Ref.:
EM009155.0010.00002

Date:
August 13, 2010

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

ENVIRONMENT

Subject:
Groundwater Monitoring Report and Soil-Vapor Extraction/Air Sparging System Operation Report for the Period April 1 through June 30, 2010, Former Pacific Electric Motors Site, 1009 66th Avenue, Oakland, California (Fuel Leak Case Number RO0000411)

Date:
August 13, 2010

Contact:
Ron Goloubow

Phone:
510.596.9550

Email:
ron.goloubow@arcadis-us.com

Our ref:
EM009155.0010.00002

Dear Mr. Khatri:

ARCADIS has prepared this combined groundwater monitoring report and soil-vapor extraction/air sparging (SVE/AS) operation report, on behalf of College for Certain, LLC (CFC) to summarize the activities conducted during the monitoring period from April 1 through June 30, 2010 at the former Pacific Electric Motors site located at 1009 66th Avenue, Oakland, California ("the Site"). The majority of the environmental work conducted on behalf of CFC, was conducted by LFR Inc. (LFR). ARCADIS purchased LFR in December 2008 and LFR became fully integrated into ARCADIS in January 2010.

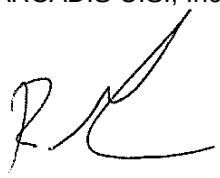
In preparation for the start of the site demolition and excavation activities to be conducted at the Site as presented in the "Revised Corrective Action Plan, Proposed Aspire School Site, 1009 66th Avenue, Oakland, California," dated July 17, 2009 ("the Revised CAP"), the SVE/AS system was shut down on October 27, 2009 and disassembled. The SVE/AS system was reassembled and restarted on June 16, 2010. Groundwater monitoring was performed on May 24 through May 26, 2010 prior to restarting the system, 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, groundwater samples were collected after the SVE/AS system did not operate for approximately 232 days. The results of these samples indicate that the remediation system was effective in reducing the concentrations of

fuel and fuel-related compounds, specifically benzene, in groundwater. The analytical results of samples collected from wells ASMW5I, ASMW2, and NW2I indicated that concentrations of fuel and the fuel-related constituents rebounded from the concentrations detected while the SVE/AS system was operating; however, the concentrations did not rebound to concentrations detected prior to operating the SVE/AS system. This trend will be further evaluated during the next monitoring event that is scheduled for July 26, 2010, after the system was restarted for approximately 40 days. If you have any questions or comments, please contact me at 510.652.4500 or Alan Gibbs at 916.786.8129.

Sincerely,

ARCADIS U.S., Inc.



Ron Goloubow, P.G.
Senior Associate Geologist

Copies:
Mr. Charles P. Robitaille – Pacific Charter School Development
Mr. Michael Barr – College for Certain, LLC

College for Certain, LLC
1001 22nd Avenue, Suite 100
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August 13, 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 April 1 through June 30, 2010, 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 ARCADIS at 510-596-9550, or me at 510-434-5000.

Sincerely,

Michael Barr
College for Certain, LLC

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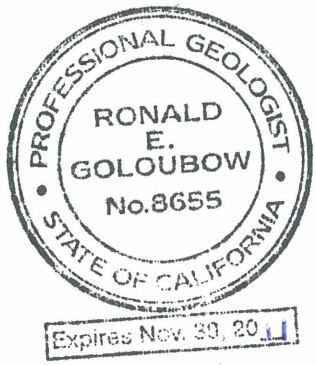
Certification

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 .*

8/13/10

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

Date



* A professional geologist's certification of conditions comprises a declaration of his or her professional judgment. It does not constitute a warranty or guarantee, expressed or implied, nor does it relieve any other party of its responsibility to abide by contract documents, applicable codes, standards, regulations, and ordinances.

1. Introduction

ARCADIS has prepared this periodic groundwater monitoring and soil-vapor extraction/air sparging (SVE/AS) extended pilot test system report on behalf of College for Certain, LLC (CFC). The majority of the environmental work conducted on behalf of CFC was conducted by LFR Inc. (LFR). ARCADIS purchased LFR in December 2008 and LFR became fully integrated into ARCADIS in January 2010. This report provides a summary of activities conducted during the monitoring period from April 1 through June 30, 2010 ("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 system was shut down on October 27, 2009 and disassembled. The SVE/AS system was restarted on June 16, 2010. In all the SVE/AS system did not operate at the Site for approximately 232 days. Groundwater monitoring was performed on May 24 through May 26, 2010 (prior to restarting SVE/AS) with slight modifications relative to the Groundwater Monitoring Plan (GMP) that was prepared for the Site and submitted to ACEH on March 4, 2009.

As reported in the previous groundwater monitoring report prepared for this Site, (ARCADIS 2010b), the groundwater monitoring wells (along with the air sparging and soil-vapor extraction wells) were inaccessible due to the presence of rainwater that had ponded in the northern portion of the Site (ARCADIS 2010b). Since the wells were inaccessible, groundwater monitoring did not take place during that monitoring period. Photos of the area were attached to the previous groundwater monitoring report.

In order to remove the ponded rainwater from the Site, CFC's remediation contractor Innovative Construction Solutions procured a permit from East Bay Municipal Utilities District and the City of Oakland Public Works Department to pump the water into the sanitary sewer system. The pumping took place between April 30 and March 15, 2010. Approximately 323,000 gallons of surface water were removed from the Site.

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 monitoring period, ARCADIS reassembled the SVE/AS pilot test system and operated the system from June 16th to June 30, 2010 and the system is still operating. As presented in Revised CAP, chemicals of concern (COCs) at the Site in groundwater include total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX compounds), methyl tertiary-butyl ether (MTBE), and tertiary-butyl alcohol (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 CFC. Additional historical land use information for the Site was presented in the Revised CAP (LFR 2009b).

The first industrial development of the property was in about 1948 when the two buildings 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.

The structures that were on the property were demolished between November 2009 and February 2010 and the Site is currently relatively flat, unpaved and vacant.

1.2.1 UST Removal and Remediation Activities

PEM removed the 2,000-gallon gasoline UST and associated pump island, piping, storage shed, and appurtenances in 1995. The UST was reportedly in good condition with no holes evident; however, free-phase gasoline product was observed on the water surface in the tank excavation (W.A. Craig, Inc. 1997). Approximately 1,500 cubic yards of soil were removed in two excavation iterations completed during 1995 and stockpiled on the northern portion of the Site. Approximately 116,000 gallons of petroleum hydrocarbon-affected groundwater were pumped from the excavation. Site investigation work during this time also included the drilling of GeoProbe borings (between excavation iterations) in an attempt to define the lateral and vertical extent of gasoline constituents. A dewatering sump used during soil excavation was later converted to an 8-inch-diameter well (thought to be WAC-1) during backfilling operations. Backfill reportedly consisted of clean imported fill material. Reports indicate that the stockpiled excavated soils were disposed of in 1997 (W.A. Craig, Inc. 1995a, 1995b, 1995c, 1997).

A 30-foot by 70-foot by 9-foot-deep excavation for the remediation of petroleum hydrocarbon-affected soils was completed in April 2002 to the south of the original UST remedial excavation (Decon 2002a, 2002b; Figure 2). Approximately 65,000 gallons of petroleum hydrocarbon-affected groundwater were removed from the excavation. Additional over-excavation was performed southeast of the 30-foot by 70-foot excavation. During backfill operations, an 8-inch-diameter extraction well was installed (EW-1). The excavation was backfilled with an unspecified depth of drain rock. Approximately 250 pounds of oxygen-releasing compound (ORC) slurry was mixed into the gravel fill. Clean, excavated native soil and imported Class II base rock comprised the balance of backfill. Approximately 219 tons of petroleum hydrocarbon-affected soil were disposed of at an off-site facility (Decon 2002a, 2002b).

In addition, in June 2002, a total of 25 soil borings were advanced to a depth of 13 feet below ground surface (bgs) in the area of the former gasoline UST. Each of these borings was backfilled with 8 pounds of ORC followed by neat cement. ORC socks were also installed in wells MW-1 and WAC-1 (Decon 2002a, 2002b).

1.3 Previous Investigations

Several phases of investigations 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 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, polychlorinated biphenyls, and/or metals.

- Installation and monitoring of four 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 system, 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 June 30, a total of approximately 8,662 tons of affected soil has been removed from the Site and transported to either Waste Management's Kettleman Hills Class I

Landfill located in Kettleman City, California or Republic Waste's Vasco Road Class II Landfill located in Livermore, California. Currently, there are two stockpiles of soil scheduled to be removed from the Site and transported to Waste Management's Kettleman Hills Class I Landfill.

2. Groundwater Monitoring

To monitor the performance of the SVE/AS system 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 May 24 through May 26, 2010, prior to restarting the SVE/AS system, to monitor current groundwater conditions and evaluate the "rebound" of COCs in groundwater following the shutdown of SVE/AS operations.

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 30 monitoring wells.
- Collected quarterly groundwater samples on May 24 through May 26, 2010.
- 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.

- Four deep-zone groundwater monitoring wells (ASMW-2D, ASMW-3D, ASMW 4D, and ASMW-5D) are screened from approximately 19 to 27 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.

In addition to the 21 monitoring wells, select wells from the network of SVE/AS treatment system wells have been sampled to evaluate the effectiveness of SVE/AS treatment of affected groundwater. The SVE/AS well network consists of the following wells (Figure 2).

- Eight vadose/shallow-zone SVE wells screened from approximately 3 to 8 feet bgs.

- Eight intermediate-zone AS wells (AS-1I to AS-8I) with 3-foot screens with bottoms set at depths ranging from approximately 13.5 to 19 feet bgs.

- Eight deep-zone AS wells (AS-1D to AS-8D) with 3-foot screens with bottoms set at depths ranging from approximately 29 to 32 feet bgs.

2.3 Groundwater Elevations

Groundwater elevations were gauged on May 24, 2010. The depth to groundwater was measured in 30 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 groundwater elevation in each well was calculated by subtracting the depth to water from the surveyed top-of-casing elevation.

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. In addition, during the excavation activities, the top of casings for wells NW-3I and AS-6I were damaged, altering the top-of-casing elevations. Therefore, these wells were not used in the water level elevation contour maps.

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 during this sampling event.

Groundwater elevations in the intermediate groundwater zone ranged from 8.62 to 11.47 feet above mean sea level (msl). The groundwater elevation contours indicate that the direction of groundwater flow in the intermediate zone radiated from the center or east of the Site to the southwest but primarily to the west. The gradient of groundwater flow in the intermediate zone ranged from 0.02 to 0.06 vertical foot per linear foot.

Groundwater elevations in the deep groundwater zone range from 9.44 to 10.06 feet above msl. The groundwater elevation contours indicate that the direction of groundwater flow in the deep zone radiated away from central portion of the Site, though primarily to the north to northeast and south to southeast. The gradient in the deep zone ranged from 0.02 to 0.008 vertical foot per linear foot.

The groundwater elevations and radial flow directions depicted on Figures 3 and 4 are not consistent with the historical gradient and flow direction observed at the Site prior to operating the SVE/AS system. The elevations measured in May 2010 are higher than previous measurements, which are attributed to the flooding and ponding of precipitation water in the central portion of the Site in the winter of 2009 to 2010 (ARCADIS 2010b). The groundwater elevation and flow directions will be further assessed in the next monitoring period.

2.4 Groundwater Sampling

Groundwater samples were collected from 13 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 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.

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.

The groundwater samples were submitted to TestAmerica Laboratories, a state-certified laboratory located in Pleasanton, 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

Analytical results of groundwater samples are summarized in Tables 2. Table 3 summarizes results for metals that were previously conducted but not during this sampling event. 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.

2.5 Analytical Results of Groundwater Samples and Discussion

Groundwater samples were collected in May 2010 to provide data to evaluate the effects the operation of the SVE/AS system had on groundwater quality at the Site after the SVE/AS was shut down for approximately 232 days. 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 system. 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 the current monitoring event and compare baseline results to the results of groundwater samples collected in May 2010.

2.5.1 Analytical Results for TPHg, BTEX, TBA, and MTBE

The wells selected include wells being sampled in accordance with the GMP, 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.

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).

2.5.2 Intermediate Zone

Groundwater samples were collected from ten intermediate-zone wells. The analytical results for TPHg, BTEX, TBA, and MTBE are summarized in Table 2 and posted for intermediate-zone wells on Figure 5. Prior to operating the SVE/AS system, elevated concentrations of TPHg, BTEX, MTBE, and/or TBA have been detected in groundwater samples previously collected from intermediate-zone wells at the Site. 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, have been 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 in October 2009 from NW-2I,

ASMW-2I, and ASMW 5I 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 analytical results of the groundwater samples collected during this monitoring event were intended to assess the concentrations of fuel-related compounds in groundwater after the SVE/AS system was not operating for 232 days.

The data indicate BTEX concentrations are significantly reduced in each of the samples collected from the ten intermediate-zone wells relative to concentrations detected prior to the operation of the SVE/AS system (Table 2 and Figure 5).

The highest concentrations of fuel and fuel-related constituents detected during this monitoring period were in the sample collected from well ASMW5I. The concentrations of TPHg, MTBE, benzene, ethylbenzene, and total xylenes did increase relative to the concentrations detected while the system was operating. However, the concentrations of these constituents were less than concentrations detected in samples collected from this well prior to the operation of the SVE/AS system. For example the concentration of benzene detected in the sample collected in May 2010 was reduced by approximately 79% relative to the concentration of benzene detected in August 2009, prior to the operation of the SVE/AS system.

The following table provides a summary of the decreases in the percentages of benzene and TPHg that were detected in the samples collected in May 2010 relative to concentrations of benzene that were detected prior to starting the SVE/AS system:

Percentage Decrease in Benzene Concentrations
Intermediate-Zone Groundwater Monitoring Wells
concentrations in micrograms per liter

Well ID	Data	Benzene	TPHg
ASMW-2I	13-Mar-09	18,000	49,000
	25-May-10	280	2,000
	Percent Decrease:	98%	96%
ASMW-4I	11-Mar-09	38	9,200
	26-May-10	4.6	1,800
	Percent Decrease:	88%	80%
ASMW-5I	11-Mar-09	11,000	72,000
	24-May-10	2,300	48,000
	Percent Decrease:	79%	33%

Percentage Decrease in Benzene Concentrations Intermediate-Zone Groundwater Monitoring Wells concentrations in micrograms per liter			
NW-2I	13-Mar-09	18,000	49,000
	25-May-10	360	8,600
	Percent Decrease:	98%	82%
AS-2I	22-Sep-09	460	8,300
	25-May-10	76	6,800
	Percent Decrease:	83%	18%
AS-6I	26-May-09	11,000	42,000
	25-May-10	23	840
	Percent Decrease:	99.8%	98%

Concentrations of MTBE and TBA detected in samples collected from intermediate-zone wells after the start-up of the SVE/AS system have also significantly decreased relative to the concentrations of these compounds detected in the samples collected prior to the operation of the SVE/AS system (see Table 2 and Figure 5). Concentrations of these compounds did slightly increase in samples collected from well ASMW5I after the SVE/AS was shut down. This trend will be further assessed in the future monitoring events.

2.5.3 Deep Zone

Groundwater samples were collected from three 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. Similar to the results of the samples collected from intermediate-zone wells, the analytical results indicated that the concentrations of some fuel-related compounds increased relative to the concentrations detected when the SVE/AS system was operating. However, the current concentrations of fuel or fuel-related constituents did not approach the concentrations detected prior to starting the SVE/AS system (Table 2 and Figure 6). These trends will be assessed during future groundwater monitoring events.

The sample collected from well MW4 contained TPHg at a concentration of 250 micrograms per liter (µg/L). This was the only sample collected from the deep zone that contained TPHg above laboratory reporting limit. This sample also contained benzene at 11 µg/L. The sample collected from deep-zone well ASMW-2D did not contain TPHg, TBA, or BTEX compounds above the laboratory reporting limits, while

MTBE was detected at 8.3 µg/L. The sample collected from deep-zone well ASMW-5D did not contain TPHg, benzene, toluene, or ethylbenzene, above the laboratory reporting limits, while TBA, MTBE and total xylenes were detected at 3,900, 14, and 6 µg/L, respectively.

With the exception of the TPH and MTBE detected in the sample collected from well MW5D, the concentrations of fuel and fuel constituents detected in samples collected from deep-zone wells in May 2010 are significantly less than the concentrations detected in the samples collected prior to starting the SVE/AS system.

3. SVE/AS System Operation and Demobilization

This section of the report provides a summary of the operation, demobilization, reconstruction, and restart of the SVE/AS extended pilot test system at the Site. 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.

The initial SVE/AS extended pilot test system operated from August 17, 2009 to October 27, 2009. The initial SVE/AS system was shut down on October 27, 2009 to be demobilized from the Site during building demolition and soil excavation activities in accordance with the Revised CAP (LFR 2009b). Details regarding the operation of the system before demobilization 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). Operation of the SVE/AS extended pilot test system was restarted on June 16, 2010.

This section provides an overview of the reconstruction of the SVE/AS system and the changes made to the system design and operation to accommodate site conditions. This section summarizes the performance of the system during the initial operations period, and is presented in accordance with the Revised CAP, as approved by ACEH in a letter dated August 13, 2009.

3.1 SVE/AS System Reconstruction

The SVE/AS system resumed operations on June 16, 2010. In order to accommodate the shallow depth to groundwater observed at the Site and to increase effectiveness of removing and capturing affected vapors, the SVE portion of the system was reconfigured using three soil-vapor extraction trenches. The treatment area was

covered by 6-milimeter-thick plastic sheeting and approximately 6 inches of fill soil to facilitate capture of sparge vapors. The layout of the extraction trenches and sparge wells is located on Figure 2. One other key revision to the SVE/AS system was the inclusion of wells ASMW-5I and ASMW-5D as sparge wells.

The revised SVE/AS system consists of the following components (see Figure 2):

- Six SVE trenches underneath a layer of 6-milimeter-thick plastic sheeting and cover soil
- Nine intermediate-zone sparge wells (AS-1I through AS-8I and ASMW-5I)
- Nine deep-zone sparge wells (AS-1D through AS-8D and ASMW-5D)
- SVE and AS conveyance piping
- SVE blower unit with catalytic oxidizer
- AS compressor unit

Figure 2 shows the locations of the SVE/AS system wells and a system schematic. The SVE/AS system components are comparable to the equipment described in the "Groundwater Monitoring and Soil-Vapor Extraction/Air Sparging System Construction and Initial Operation Report for the Period July 1 through September 30, 2009 Former Pacific Electric Motors Site, 1009 66th Avenue, Oakland, California," dated November 13, 2009 (LFR 2009d).

3.1.1 Vapor Abatement

In accordance with the Bay Area Air Quality Management District (BAAQMD) Permit to Operate (site number B9-464), the extracted soil vapors were required to be treated to abate benzene emissions to less than 4 pounds per year. The vapors are being abated using an electric catalytic oxidizer.

3.2 Vapor Monitoring

In accordance with the BAAQMD Permit to Operate, photoionization detector (PID) readings were collected from the SVE/AS system vapor abatement technology. While operating the catalytic oxidation for vapor abatement, the system was required to

maintain a temperature above approximately 600 degrees Fahrenheit. The PID readings were included as part of the daily and weekly monitoring program for the SVE/AS system, and a chart recorder was used to continuously record temperature readings.

In addition to PID monitoring, samples of the extracted soil vapors were collected at the influent to the SVE system. Influent vapor samples were collected at the start-up of the SVE system on June 18, 2010, and after approximately one month of operation on July 7, 2010. Influent vapor samples were collected in 1-liter SUMMA canisters. The vapor samples were submitted to TestAmerica, and analyzed for BTEX, TBA, and MTBE by EPA Method TO-15 and TPHg by EPA Method TO-3.

3.3 SVE/AS System Operation

ARACDIS 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).

3.4 SVE/AS System Yield

Based on PID monitoring of the total SVE system influent vapor stream concentrations, the SVE/AS system has captured approximately 39 pounds of fuel vapors between June 16 and July 1, 2010 when the SVE/AS system resumed operations (15 days). Combined with the yield from the operation of the initial system from August 17, 2009 to October 27, 2009, approximately 519 pounds of fuel vapors have been recovered from the Site in approximately 64 days of operation. Table 5 presents the summary of PID monitoring results and SVE/AS system yield calculations. Figure 7 shows a graph of system yield versus time.

4. 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 analytical results of groundwater samples collected from these wells after two months of operation indicate the SVE/AS system was effective in reducing the concentrations of COCs in groundwater.

The analytical results of the samples collected from intermediate and deep zone wells after the SVE/AS system did not operate for 232 days indicated that the concentrations of fuel and some fuel-related compounds increased relative to the concentrations detected when the SVE/AS system was operating. However, the current concentrations of fuel or fuel-related constituents in groundwater did not approach the concentrations detected prior to starting the SVE/AS system (Table 2 and Figures 5 and 6). This is a significant finding that indicates that the initial operation of the SVE/AS system was highly effective in removing the source of the fuel and fuel-related compounds in the groundwater. These trends will be assessed during future groundwater monitoring events.

5. Recommendations

ARCADIS recommends continued operation of the SVE/AS extended pilot test system and the collection of additional groundwater samples scheduled to take place in July 2010 to further evaluate the effectiveness of the SVE/AS system in reducing fuel and fuel-related constituents in soil, groundwater, and soil gas.

The current development plan for the Site includes the construction of a multi-purpose building near the area where the SVE/AS system is currently operating. This building will be equipped with vapor mitigation measures that are compliant with the “The California Department of Toxic Substances Control (DTSC) Vapor Intrusion Mitigation Advisory” (DTSC 2009). In accordance with the Revised CAP and the DTSC document, it is anticipated that the vapor mitigation measures for the multi-purpose building will include a sub-slab depressurization system and a vapor barrier. These vapor mitigation measures are being designed and will be presented to the ACEH under a separate cover.

6. Schedule

The SVE/AS system is scheduled to operate continuously. ARCADIS is scheduled to inspect the system a minimum of once a week to maintain the operation of the system and collect system performance data. The next periodic groundwater monitoring event is scheduled for July 26, 2010, which will represent the time interval of July 1 through

September 30, 2010. The report for the system operation data and the monitoring event will be submitted on or before October 31, 2010.

7. 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 ARCADIS 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 ARCADIS relied upon any information prepared by other parties not under contract to ARCADIS, ARCADIS 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 ARCADIS'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. ARCADIS'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.

ARCADIS, 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.

8. References

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LFR. 2009d. Groundwater Monitoring Report and Soil-Vapor Extraction/Air Sparging System Construction and Initial Operation Report for the Period July 1 through September 30, 2009, Former Pacific Electric Motors Site, 1009 66th Avenue, Oakland, California (Fuel Leak Case Number RO0000411). November 13.

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W.A. Craig, Inc. 1995b. Correspondence to ACDEH via facsimile. Attached soil and water sample results, and next phase of work due to contamination in the soil and pit water. March 31.

W.A. Craig, Inc. 1995c. Subsurface Environmental Investigation for Pacific Motor Co., 1009 66th Avenue, Oakland, CA 94621. May 16.

W.A. Craig, Inc. 1997. Excavation and Sampling Report for Pacific Electric Motor Co., 1009 66th Avenue, Oakland, CA 94621. May 12.

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
	24-May-10		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
	24-May-10		4.18	9.62
NW-3I[1]	11-Mar-09	13.11	NM	NM
	26-May-09		3.27	9.84
	21-Sep-09		4.48	8.63
	24-May-10	(**)	3.21	9.90
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
	24-May-10		3.63	10.27
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
	24-May-10		4.02	9.71
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
	24-May-10		NM	NM

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-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
	24-May-10		4.54	8.62
AS-1I	26-May-09	NS	3.87	--
	24-May-10		4.91	--
AS-2I	26-May-09	14.09	4.20	9.89
	21-Sep-09	(*)	10.30	3.79
	24-May-10		5.41	8.68
AS-3I	26-May-09	14.10	4.07	10.03
	24-May-10		4.10	10.00
AS-4I	26-May-09	13.52	3.68	9.84
	24-May-10		2.05	11.47
AS-5I	26-May-09	13.63	3.84	9.79
	24-May-10		3.90	9.73
AS-6I	26-May-09	13.10	3.14	9.96
	21-Sep-09	(*)	3.96	9.14
	24-May-10	(**)	NM	NM
AS-7I	26-May-09	13.44	3.56	9.88
	21-Sep-09	(*)	5.13	8.31
	24-May-10		2.49	10.95
AS-8I	26-May-09	13.45	3.56	9.89
	21-Sep-09	(*)	4.79	8.66
	24-May-10		3.63	9.82
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
	24-May-10		3.78	10.06
NW-2D	11-Mar-09	13.79	2.68	11.11
	26-May-09		3.97	9.82

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]
	10-Aug-09		4.73	9.06
	21-Sep-09		5.13	8.66
	21-Oct-09		4.13	9.66
	24-May-10		4.05	9.74
NW-3D	11-Mar-09	13.16	NM	NM
	26-May-09		3.32	9.84
	21-Sep-09		4.51	8.65
	24-May-10		3.33	9.83
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
	24-May-10		4	9.90
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
	24-May-10		4.32	9.62
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
	24-May-10		NM	NM
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
	24-May-10		3.24	9.77
AS-1D	26-May-09	NS	3.75	--
	24-May-10		3.80	--
AS-2D	26-May-09	14.16	4.35	9.81
	21-Sep-09	(*)	5.46	8.70
	24-May-10		4.56	9.60
AS-3D	26-May-09	13.79	3.96	9.83
	24-May-10		4.35	9.44
AS-4D	26-May-09	13.70	3.88	9.82
	24-May-10		3.86	9.84
AS-5D	26-May-09	14.06	4.26	9.80
	24-May-10		4.22	9.84
AS-6D	26-May-09	13.25	NM	NM
	24-May-10		3.24	10.01

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-7D	26-May-09	13.67	3.82	9.85
	24-May-10		3.64	10.03
AS-8D	26-May-09	13.35	3.55	9.80
	24-May-10		3.58	9.77

Notes:

NM = water level not measured

NS = not surveyed

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

(**) Top of the casing was destroyed during excavation activities; top-of-casing elevation is inaccurate

(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
	25-May-10		2,000	330	98	280	50	170	NA	NA	350
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
	26-May-10		1,800	<4	<0.50	4.6	<0.50	86	NA	NA	90
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
	24-May-10		48,000	310	120	2,300	150	2,000	NA	NA	12,000
duplicate	24-May-10		46,000	290	120	2,200	170	2,000	NA	NA	12,000
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
	25-May-10		8,600	17,000	770	360	35	400	NA	NA	8,600
NW-3I	27-Dec-05		<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
	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

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
	21-Sep-09		<50	<10	1.3	<0.50	0.54	<0.50	<0.50	<0.50	<0.50
	25-May-10		<50	<4	1.2	<0.50	<0.50	<0.50	NA	NA	1.7
AS-2I	22-Sep-09		<8,300	2,900	11,000	460	120	<83	130	<83	130
	25-May-10		6,800	5,600	8,000	76	<25	220	NA	NA	<50
AS-4I	25-May-10		310	1,500	110	2.7	<0.50	<0.50	NA	NA	<1.0
AS-5I	25-May-10		<50	130	10	<0.50	<0.50	<0.50	NA	NA	<1.0
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
	25-May-10		840	210	25	23	<0.50	14	NA	NA	1.5
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
	26-May-10		<50	<4	<0.50	<0.50	<0.50	<0.50	NA	NA	<1.0
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
	25-May-10		<50	<4	8.3	<0.50	<0.50	<0.50	NA	NA	<1.0
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
	24-May-10		<250	3,900	14	<2.5	<2.5	<2.5	NA	NA	6
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
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

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
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
	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

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
	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
	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

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
	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
	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
	24-May-10		250	180	21	11	<0.50	3.6	NA	NA	7.1

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

Sample Location	Date Collected	Temperature (degrees Celsius)	Conductivity (mmhos/cm)	pH (units)	ORP (mV)	Dissolved Oxygen (mg/L)
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
	25-May-10	18.43	8,599	6.84	-368.5	0.05
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
	26-May-10	16.89	1,556	6.85	-358.0	0.20
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
	24-May-10	17.96	1,941	6.75	-369.1	0.05
AS-2I	22-Sep-09	23.85	4,803	7.10	55.0	0.94
	25-May-10	17.87	10,680	6.84	-488.5	0.07
AS-4I	25-May-10	17.63	1,518	7.18	-266.8	0.32
AS-5I	25-May-10	18.25	15,930	6.80	-453.2	0.10
AS-6I	23-Sep-09	23.21	872	7.09	16.7	0.16
	25-May-10	17.06	834	7.53	-469.0	0.15
AS-7I	23-Sep-09	21.51	3,137	7.33	186.9	5.73
	26-May-10	17.66	7,628	8.00	108.4	4.97
AS-8I	23-Sep-09	21.91	755	7.91	149.1	4.81

Table 4
Field Parameters
Former Pacific Electric Motors Facility
1009 66th Avenue, Oakland, California

Sample Location	Date Collected	Temperature (degrees Celsius)	Conductivity (mmhos/cm)	pH (units)	ORP (mV)	Dissolved Oxygen (mg/L)
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
	25-May-10	17.89	2,773	6.88	-179.0	0.15
MW-3I	21-Sep-09	20.49	1,772	6.74	191.5	0.49
	24-May-10	17.71	1,455	7.02	-432.7	0.90
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
	22-Oct-09	21.27	1,157	7.30	140.5	9.20
	25-May-10	19.33	9,681	7.08	-437.2	1.68
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
	24-May-10	17.75	2,664	6.88	84.6	0.42
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

Table 4
Field Parameters
Former Pacific Electric Motors Facility
1009 66th Avenue, Oakland, California

Sample Location	Date Collected	Temperature (degrees Celsius)	Conductivity (mmhos/cm)	pH (units)	ORP (mV)	Dissolved Oxygen (mg/L)
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
	24-May-10	19.50	1,995	7.03	-536.4	0.03
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
mg/L = milligrams per liter

Table 5
Soil-Vapor Extraction/Air Sparge System Monitoring Results with System Yield and Abatement Efficiency Calculations
Former Pacific Electric Motors Facility
1009 66th Avenue, Oakland, California

Date-Time	Hour Meter Reading	Interval Operation Time (Days)	Total Operation Time (Days)	INF Flow (scfm)	INF Conc. (ppmv)	MID-GAC Conc. (ppmv)	EFF Conc. (ppm_v)	Molecular Weight (gasoline) (g/mol)	Conversion Factor ([mol*lb*l_{air}*min]/ [µl*g*ft^3*day])	Yield (lb/day)	Interval Yield (pounds)	Mass Removed (as lbs TPHg)	GAC1 Abatement Efficiency	Total Abatement Efficiency
8/13/09 10:30 AM		0.0	0	24.1	155	0	0	105	0.00000373	1.5	0.0	0.0	100.00%	100.00%
8/14/09 10:30 AM		1.0	1.0	23.9	210	0	0	105	0.00000373	2.0	2.0	2.0	100.00%	100.00%
				off for initial weekend										
8/17/09 1:20 PM		0.0	1.0	24.8	176	0	0	105	0.00000373	1.7	0.0	2.0	100.00%	100.00%
8/18/09 4:00 PM		1.1	2.1	25.5	320	0.6	0	105	0.00000373	3.2	3.6	5.5	99.81%	100.00%
8/19/09 1:30 PM		0.9	3.0	26.1	460	1.6	0	105	0.00000373	4.7	4.2	9.7	99.65%	100.00%
8/20/09 4:00 PM		1.1	4.1	25.8	780	0.8	0	105	0.00000373	7.9	8.7	18.4	99.90%	100.00%
8/21/09 10:00 AM		0.8	4.9	22.0	1,148	2.6	0	105	0.00000373	9.9	7.4	25.9	99.77%	100.00%
8/22/09 10:30 AM		1.0	5.9	22.2	1,110	1.3	0	105	0.00000373	9.7	9.9	35.7	99.88%	100.00%
8/23/09 11:30 AM		1.0	6.9	23.1	1,084	0.9	0	105	0.00000373	9.8	10.2	45.9	99.92%	100.00%
8/24/09 2:30 PM		1.1	8.0	22.0	1,104	1.6	0	105	0.00000373	9.5	10.7	56.6	99.86%	100.00%
8/25/09 9:58 AM		0.8	8.9	19.8	1,289	1.9	0	105	0.00000373	10.0	8.1	64.7	99.85%	100.00%
8/26/09 12:50 PM		1.1	10.0	23.1	955	4.2	0	105	0.00000373	8.6	9.7	74.4	99.56%	100.00%
8/27/09 12:35 PM		1.0	11.0	23.2	1,695	3.2	0	105	0.00000373	15.4	15.2	89.6	99.81%	100.00%
8/27/09 1:00 PM		0.02	11.0	47.0	2,850	1.9	0	105	0.00000373	52.5	0.9	90.6	99.93%	100.00%
8/27/09 2:00 PM		0.04	11.0	47.0	2,850	1.9	0	105	0.00000373	52.5	2.2	92.7	99.93%	100.00%
				off to complete water tank install										
8/28/09 10:30 AM		0.0	11.0	52.5	756	1.8	0	105	0.00000373	15.5	0.0	92.7	99.76%	100.00%
8/28/09 11:45 AM		0.05	11.1	52.5	756	1.8	0	105	0.00000373	15.5	0.8	93.5	99.76%	100.00%
8/29/09 10:30 AM		0.95	12.0	44.5	680	0.8	0	105	0.00000373	11.9	11.2	104.8	99.88%	100.00%
		0.0	12.0	off for high water level										
9/1/09 12:30 PM		0.0	12.0	36.6	634	0	0	105	0.00000373	9.1	0.0	104.8	100.00%	100.00%
9/1/09 1:20 PM		0.03	12.1	36.6	634	0	0	105	0.00000373	9.1	0.3	105.1	100.00%	100.00%
9/2/09 1:00 PM		0.99	13.0	38.8	520	110	0	105	0.00000373	7.9	7.8	112.9	**78.85%**	100.00%
				off for carbon change										
9/8/09 9:15 AM		0.0	13.0	45.1	1,089	0.1	0	105	0.00000373	19.2	0.0	112.9	99.99%	100.00%
9/8/09 9:25 AM		0.01	13.1	45.1	1,089	0.1	0	105	0.00000373	19.2	0.1	113.0	99.99%	100.00%
9/9/09 1:00 PM		1.15	14.2	30.1	568	0.92	0	105	0.00000373	6.7	7.7	120.7	99.84%	100.00%
9/10/09 10:15 AM		0.89	15.1	28.4	927	0.2	0	105	0.00000373	10.3	9.1	129.8	99.98%	100.00%
9/11/09 2:45 PM		1.19	16.3	28.5	953	0.1	0	105	0.00000373	10.6	12.6	142.5	99.99%	100.00%
9/12/09 7:45 AM		0.71	17.0	28.1	934	0.4	0	105	0.00000373	10.3	7.3	149.8	99.96%	100.00%
9/13/09 7:45 AM		1.00	18.0	24.6	915	0.9	0	105	0.00000373	8.8	8.8	158.6	99.90%	100.00%
9/14/09 2:00 PM		1.26	19.2	27.5	901	0.1	0	105	0.00000373	9.7	12.2	170.8	99.99%	100.00%
9/15/09 9:15 AM		0.80	20.0	35.7	950	1.1	0	105	0.00000373	13.3	10.7	181.5	99.88%	100.00%
9/16/09 7:30 AM		0.93	21.0	36.2	1,108	1.1	0	105	0.00000373	15.7	14.6	196.0	99.90%	100.00%
9/17/09 1:50 PM		1.26	22.2	27.6	1,064	487	0	105	0.00000373	11.5	14.5	210.6	**54.23%**	100.00%
				off for carbon change										
9/24/09 2:00 PM		0.0	22.2	47.0	503	0.2	0	105	0.00000373	9.3	0.0	210.6	99.96%	100.00%
9/25/09 7:30 AM		0.73	23.0	40.0	727	0.3	0	105	0.00000373	11.4	8.3	218.9	99.96%	100.00%
9/26/09 7:30 AM		1.00	24.0	39.3	766	0.8	0	105	0.00000373	11.8	11.8	230.7	99.90%	100.00%
9/27/09 7:30 AM		1.00	25.0	40.5	688	0.4	0	105	0.00000373	10.9	10.9	241.6	99.94%	100.00%
				off for high water level										
9/29/09 11:15 AM		0.0	25.0	41.5	557	0.2	0	105	0.00000373	9.1	0.0	241.6	99.96%	100.00%
9/30/09 9:00 AM		0.91	25.9	40.1	2,300	1.1	0	105	0.00000373	36.1	32.7	274.3	99.95%	100.00%
10/1/09 7:30 AM		0.94	26.8	28.0	660	0.4	0	105	0.00000373	7.2	6.8	281.1	99.94%	100.00%

Table 5
Soil-Vapor Extraction/Air Sparge System Monitoring Results with System Yield and Abatement Efficiency Calculations
Former Pacific Electric Motors Facility
1009 66th Avenue, Oakland, California

Date-Time	Hour Meter Reading	Interval Operation Time (Days)	Total Operation Time (Days)	INF Flow (scfm)	INF Conc. (ppmv)	MID-GAC Conc. (ppmv)	EFF Conc. (ppm_v)	Molecular Weight (gasoline) (g/mol)	Conversion Factor ([mol*lb*l_{air}*min]/ [µl*g*ft^3*day])	Yield (lb/day)	Interval Yield (pounds)	Mass Removed (as lbs TPHg)	GAC1 Abatement Efficiency	Total Abatement Efficiency
10/2/09 7:30 AM		1.00	27.8	28.1	720	0.6	0	105	0.00000373	7.9	7.9	289.0	99.92%	100.00%
10/3/09 11:00 AM		1.15	29.0	29.1	688	0.1	0	105	0.00000373	7.8	9.0	298.0	99.99%	100.00%
10/4/09 11:00 AM		1.00	30.0	32.5	710	0.2	0	105	0.00000373	9.0	9.0	307.0	99.97%	100.00%
10/5/09 8:00 AM		0.88	30.8	32.5	710	0.2	0	105	0.00000373	9.0	7.9	314.9	99.97%	100.00%
off to convert to catox														
10/5/09 4:10 PM		0.0	30.8	44.0	1,330	--	1.7	105	0.00000373	22.9	0.0	314.9	NA	99.87%
10/6/09 3:00 PM		0.95	31.8	37.1	1,250	--	12	105	0.00000373	18.2	17.3	332.2	NA	99.04%
10/13/09 8:30 AM		6.73	38.5	34.0	720	--	0	105	0.00000373	9.6	64.5	396.7	NA	100.00%
10/14/09 8:30 AM		1.00	39.5	34.0	800	--	0.9	105	0.00000373	10.7	10.7	407.4	NA	99.89%
10/20/09 9:30 AM		6.04	45.6	13.8	720	--	3.3	105	0.00000373	3.9	23.5	430.9	NA	99.54%
10/26/09 9:30 AM		6.00	51.6	38.3	445	--	2.5	105	0.00000373	6.7	40.1	471.0	NA	99.44%
10/27/09 11:00 AM		1.06	52.6	36.3	587	--	1.2	105	0.00000373	8.3	8.9	479.8	NA	99.80%
System off from October 29, 2009 to June 16, 2010														
System Re-Started on June 16, 2010 at 15:00														
6/16/10 3:00 PM	22751.3	0.0	52.6	201	6.8	--	0.0	105	0.00000373	0.5	0.0	479.8	NA	100.00%
6/17/10 12:45 PM	22772.9	0.9	53.5	194	77.2	--	3.1	105	0.00000373	5.9	5.3	485.1	NA	95.98%
6/18/10 15:30	22797.3	1.0	54.5	192	60.3	--	5.0	105	0.00000373	4.5	4.6	489.7	NA	91.71%
off - diesel fuel tank for generator empty														
6/21/10 12:50 PM	22846.9	0.0	54.5	190	74.0	--	0.0	105	0.00000373	5.5	0.0	489.7	NA	100.00%
6/23/10 1:10 PM	22895.3	2.0	56.6	191	107.0	--	0.0	105	0.00000373	8.0	16.1	505.9	NA	100.00%
6/25/10 2:30 PM	22944.3	2.0	58.6	167	84.0		6.0	105	0.00000373	5.5	11.2	517.1	NA	92.86%
7/1/10 12:00 AM	23050.8	4.4	63.0	117	10.0		0.7	105	0.00000373	0.5	2.0	519.1	NA	93.00%

Yield (lb/day) = Flow (scfm)*Concentration (ppm_v)*Molecular Weight (g/mol)*Conversion Factor ($3.73x10^{-6}$*[mol*lb*l_{air}*min]/[µl_{contam}*g*ft^3*day])

Conc.	= concentration
scfm	= standard cubic feet per minute (21.1 °F and 14.7 psi)
°F	= degrees Fahrenheit
psi	= pounds per square inch
ppm_v	= parts per million by volume
g	= gram
mol	= mole
lb	= pound
ft^3	= cubic feet
TPHg	= total petroleum hydrocarbons quantified as gasoline
l	= liter
µl	= microliter

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
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

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 (dashed where inferred)
- Direction of Groundwater Flow
- * Groundwater Elevation is Estimated, Installation of Sparge System Piping Obscured the Top of Casing.
- ** Groundwater Elevation Not Used for Contours. Groundwater Elevation Anomalous.

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
11.47
EW-1

SVE-2
AS-2D
AS-2I
8.68

SVE-3
AS-3D
AS-3I
10.00

NW-2S, 2I, 2D
9.62**

SVE-1
AS-1D
AS-1I

MW-4

SVE-5
AS-5D
AS-5I

SVMW-2
ASMW-2D
ASMW-2I
10.27

SVE-6
AS-6D
AS-6I

SVMW-3
ASMW-3D
ASMW-3I
9.71

SVMW-5
ASMW-5D
ASMW-5I
8.62

SVE-7
AS-7D
AS-7I
10.95*

SVE-8
AS-8D
AS-8I
9.82

SVMW-4
ASMW-4D
ASMW-4I

MW-3

NW-3S, 3I, 3D
9.90**

MW-2

APPROXIMATE LIMITS OF 2002 EXCAVATION

11.0
10.0
9.0

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

N

1009 66TH AVENUE, OAKLAND, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP INTERMEDIATE ZONE MAY 2010

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
- ** — Groundwater Elevation Not Used for Contours. Groundwater Elevation Anomalous.

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-2
AS-2D 9.60
AS-2I

SVE-3
AS-3D 9.44
AS-3I

SVE-4
AS-4D 9.84
AS-4I

EW-1

NW-2S, 2I, 2D 9.74

SVE-1
AS-1D
AS-1I

SVE-5
9.84 AS-5D
AS-5I

SVMW-2
ASMW-2I
ASMW-2D 9.90

MW-4

SVE-6
AS-6D 10.01
AS-6I

SVMW-3
ASMW-3D 9.62
ASMW-3I

SVMW-5
ASMW-5D 9.77
ASMW-5I

SVE-7
AS-7D 10.03
AS-7I

SVE-8
AS-8D 9.77
AS-8I

SVMW-4
ASMW-4D
ASMW-4I

MW-3

NW-3S, 3I, 3D

MW-2
9.83**

9.6 9.4 9.4 9.6 9.8 10.0 10.0 9.8

APPROXIMATE LIMITS OF 2002 EXCAVATION

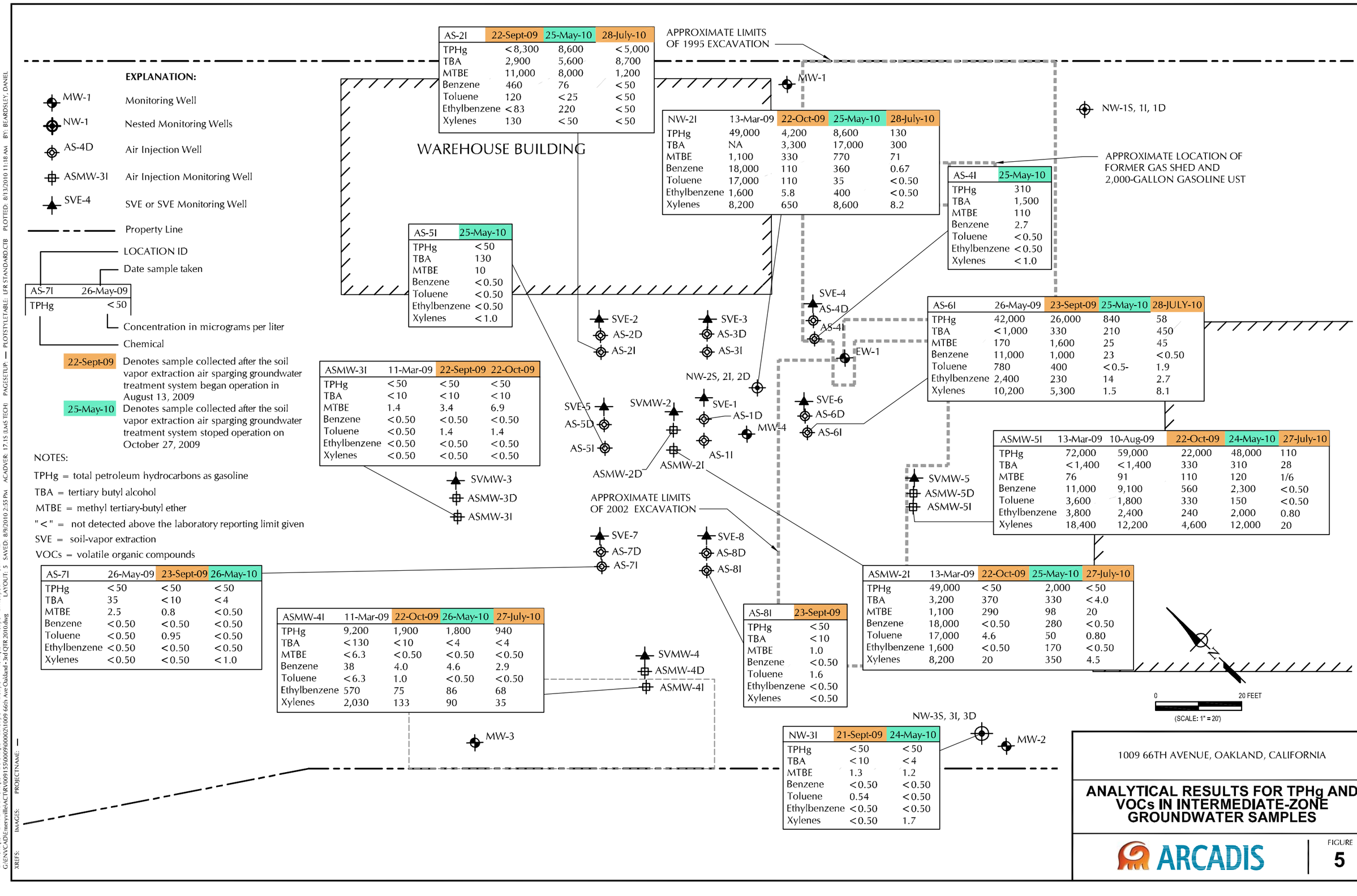
0 20 FEET
(SCALE: 1" = 20')

1009 66TH AVENUE, OAKLAND, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP DEEP ZONE MAY 2010

ARCADIS

FIGURE 4



AS-2I	22-Sept-09	25-May-10	28-July-10
TPHg	<8,300	8,600	<5,000
TBA	2,900	5,600	8,700
MTBE	11,000	8,000	1,200
Benzene	460	76	<50
Toluene	120	<25	<50
Ethylbenzene	<83	220	<50
Xylenes	130	<50	<50

NW-2I	13-Mar-09	22-Oct-09	25-May-10	28-July-10
TPHg	49,000	4,200	8,600	130
TBA	NA	3,300	17,000	300
MTBE	1,100	330	770	71
Benzene	18,000	110	360	0.67
Toluene	17,000	110	35	<0.50
Ethylbenzene	1,600	5.8	400	<0.50
Xylenes	8,200	650	8,600	8.2

AS-4I	25-May-10
TPHg	310
TBA	1,500
MTBE	110
Benzene	2.7
Toluene	<0.50
Ethylbenzene	<0.50
Xylenes	<1.0

AS-5I	25-May-10
TPHg	<50
TBA	130
MTBE	10
Benzene	<0.50
Toluene	<0.50
Ethylbenzene	<0.50
Xylenes	<1.0

AS-6I	26-May-09	23-Sept-09	25-May-10	28-JULY-10
TPHg	42,000	26,000	840	58
TBA	<1,000	330	210	450
MTBE	170	1,600	25	45
Benzene	11,000	1,000	23	<0.50
Toluene	780	400	<0.5-	1.9
Ethylbenzene	2,400	230	14	2.7
Xylenes	10,200	5,300	1.5	8.1

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

ASMW-5I	13-Mar-09	10-Aug-09	22-Oct-09	24-May-10	27-July-10
TPHg	72,000	59,000	22,000	48,000	110
TBA	<1,400	<1,400	330	310	28
MTBE	76	91	110	120	1/6
Benzene	11,000	9,100	560	2,300	<0.50
Toluene	3,600	1,800	330	150	<0.50
Ethylbenzene	3,800	2,400	240	2,000	0.80
Xylenes	18,400	12,200	4,600	12,000	20

AS-7I	26-May-09	23-Sept-09	26-May-10
TPHg	<50	<50	<50
TBA	35	<10	<4
MTBE	2.5	0.8	<0.50
Benzene	<0.50	<0.50	<0.50
Toluene	<0.50	0.95	<0.50
Ethylbenzene	<0.50	<0.50	<0.50
Xylenes	<0.50	<0.50	<1.0

ASMW-4I	11-Mar-09	22-Oct-09	26-May-10	27-July-10
TPHg	9,200	1,900	1,800	940
TBA	<130	<10	<4	<4
MTBE	<6.3	<0.50	<0.50	<0.50
Benzene	38	4.0	4.6	2.9
Toluene	<6.3	1.0	<0.50	<0.50
Ethylbenzene	570	75	86	68
Xylenes	2,030	133	90	35

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

ASMW-2I	13-Mar-09	22-Oct-09	25-May-10	27-July-10
TPHg	49,000	<50	2,000	<50
TBA	3,200	370	330	<4.0
MTBE	1,100	290	98	20
Benzene	18,000	<0.50	280	<0.50
Toluene	17,000	4.6	50	0.80
Ethylbenzene	1,600	<0.50	170	<0.50
Xylenes	8,200	20	350	4.5

NW-3I	21-Sept-09	24-May-10
TPHg	<50	<50
TBA	<10	<4
MTBE	1.3	1.2
Benzene	<0.50	<0.50
Toluene	0.54	<0.50
Ethylbenzene	<0.50	<0.50
Xylenes	<0.50	1.7

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 in August 13, 2009

25-May-10 — Denotes sample collected after the soil vapor extraction air sparging groundwater treatment system stoped operation on October 27, 2009

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

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

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

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	23-Sept-09	22-Oct-09	24-May-10
TPHg	250	< 50	250
TBA	730	< 10	180
MTBE	49	3.7	21
Benzene	51	< 0.50	11
Toluene	3.7	1.3	< 0.50
Ethylbenzene	8.6	< 0.50	3.6
Xylenes	53	< 0.50	7.1

ASMW-5D	11-Mar-09	21-Sept-09	22-Oct-09	24-May-10
TPHg	87	< 50	< 50	< 250
TBA	1,700	< 10	< 10	3,900
MTBE	< 0.50	72	76	14
Benzene	84	< 0.50	< 0.50	< 2.5
Toluene	< 0.50	2.8	< 0.50	< 2.5
Ethylbenzene	5.2	< 0.50	< 0.50	< 2.5
Xylenes	7.4	< 0.50	< 0.50	6

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	25-May-10
TPHg	< 1,300	< 360	< 50	< 50
TBA	1,900	< 71	< 10	< 4
MTBE	1,300	460	1.9	8.3
Benzene	< 13	< 3.6	< 0.50	< 0.50
Toluene	< 13	< 3.6	1.4	< 0.50
Ethylbenzene	< 13	< 3.6	< 0.50	< 0.50
Xylenes	< 13	10.4	4	< 1.0

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

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

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

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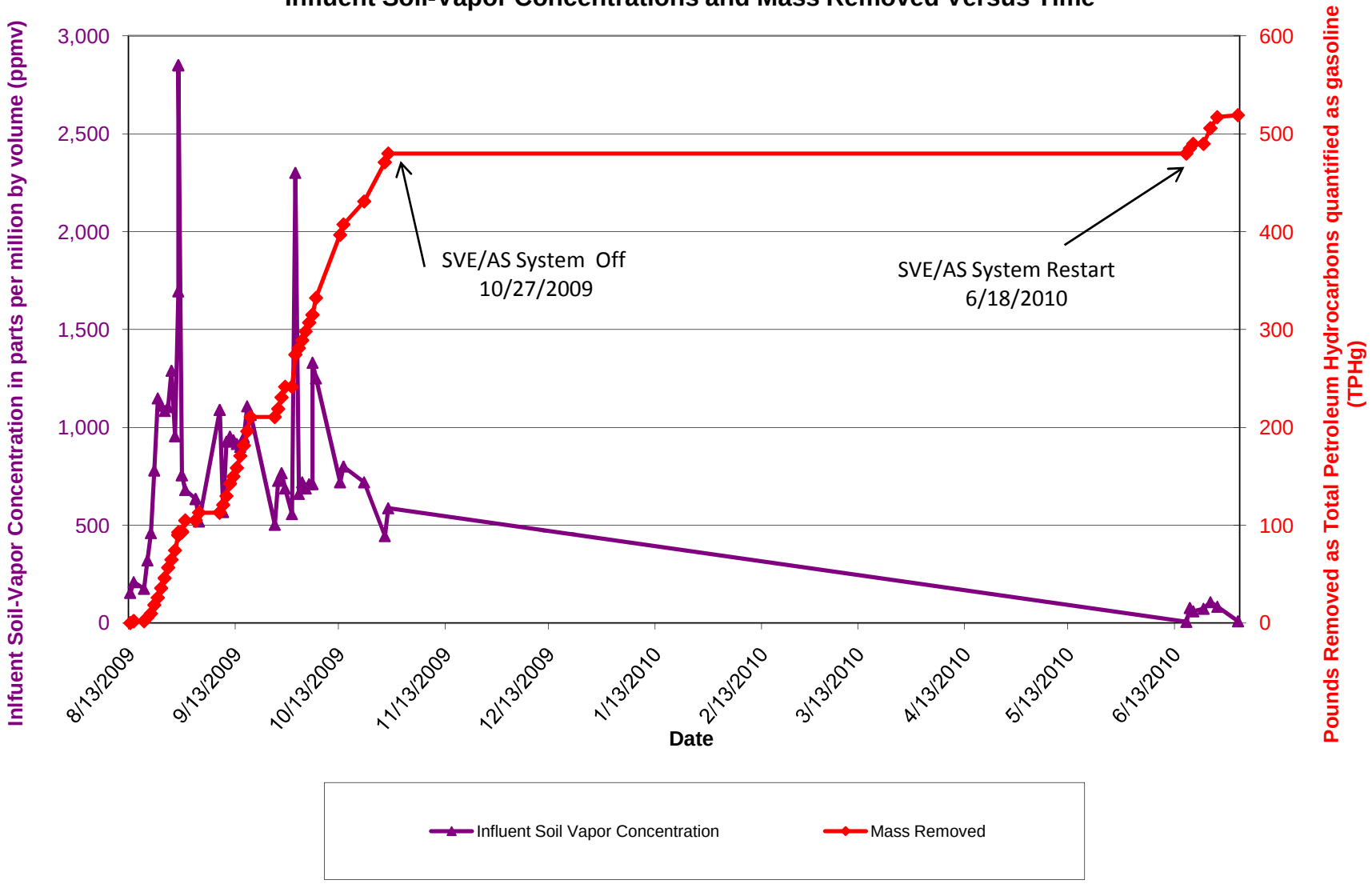
FIGURE 6

Figure 7
Influent Soil-Vapor Concentrations and Mass Removed Versus Time



ARCADIS

Appendix A

Laboratory Analytical Reports

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 720-28294-1

Job Description: Aspire Oakland

For:
ARCADIS U.S., Inc Formerly LFR, Inc.
1900 Powell St 12th Floor
Emeryville, CA 94608-1827

Attention: Mr. Ron Goloubow

Approved for release.
Afsaneh Salimpour
Project Manager I
6/1/2010 2:24 PM

Afsaneh Salimpour
Project Manager I
afsaneh.salimpour@testamericainc.com
06/01/2010

CA ELAP Certification # 2496
The Chain(s) of Custody are included and are an integral part of this report.

A trip blank is required to be provided for volatile analyses. If trip blank results are not included in the report, either the trip blank was not submitted or requested to be analyzed.

TestAmerica Laboratories, Inc.
TestAmerica San Francisco 1220 Quarry Lane, Pleasanton, CA 94566
Tel (925) 484-1919 Fax (925) 600-3002 www.testamericainc.com

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC/MS VOA
No analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28294-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-28294-1	**ASMW-5D**				
Methyl tert-butyl ether		14	2.5	ug/L	8260B/CA_LUFTMS
Xylenes, Total		6.3	5.0	ug/L	8260B/CA_LUFTMS
TBA		3900	20	ug/L	8260B/CA_LUFTMS
720-28294-2	**ASMW-5I**				
Methyl tert-butyl ether		120	25	ug/L	8260B/CA_LUFTMS
Benzene		2300	25	ug/L	8260B/CA_LUFTMS
Ethylbenzene		2000	25	ug/L	8260B/CA_LUFTMS
Toluene		150	25	ug/L	8260B/CA_LUFTMS
Xylenes, Total		12000	50	ug/L	8260B/CA_LUFTMS
Gasoline Range Organics (GRO)-C5-C12		48000	2500	ug/L	8260B/CA_LUFTMS
TBA		310	4.0	ug/L	8260B/CA_LUFTMS
720-28294-3	**NW-3I**				
Methyl tert-butyl ether		1.2	0.50	ug/L	8260B/CA_LUFTMS
Xylenes, Total		1.7	1.0	ug/L	8260B/CA_LUFTMS
720-28294-4	**ASMW-5I-D**				
Methyl tert-butyl ether		120	25	ug/L	8260B/CA_LUFTMS
Benzene		2200	25	ug/L	8260B/CA_LUFTMS
Ethylbenzene		2000	25	ug/L	8260B/CA_LUFTMS
Toluene		170	25	ug/L	8260B/CA_LUFTMS
Xylenes, Total		12000	50	ug/L	8260B/CA_LUFTMS
Gasoline Range Organics (GRO)-C5-C12		46000	2500	ug/L	8260B/CA_LUFTMS
TBA		290	4.0	ug/L	8260B/CA_LUFTMS
720-28294-5	**MW-4**				
Methyl tert-butyl ether		21	0.50	ug/L	8260B/CA_LUFTMS
Benzene		11	0.50	ug/L	8260B/CA_LUFTMS
Ethylbenzene		3.6	0.50	ug/L	8260B/CA_LUFTMS
Xylenes, Total		7.1	1.0	ug/L	8260B/CA_LUFTMS
Gasoline Range Organics (GRO)-C5-C12		250	50	ug/L	8260B/CA_LUFTMS
TBA		180	4.0	ug/L	8260B/CA_LUFTMS

METHOD SUMMARY

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28294-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
8260B / CA LUFT MS	TAL SF	SW846 8260B/CA_LUFTMS	
Purge and Trap	TAL SF		SW846 5030B

Lab References:

TAL SF = TestAmerica San Francisco

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28294-1

Method	Analyst	Analyst ID
SW846 8260B/CA_LUFTMS	Ali, Badri	BA

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28294-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-28294-1	ASMW-5D	Water	05/24/2010 1140	05/24/2010 1545
720-28294-2	ASMW-5I	Water	05/24/2010 1310	05/24/2010 1545
720-28294-3	NW-3I	Water	05/24/2010 1345	05/24/2010 1545
720-28294-4	ASMW-5I-D	Water	05/24/2010 1315	05/24/2010 1545
720-28294-5	MW-4	Water	05/24/2010 1440	05/24/2010 1545

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28294-1

Client Sample ID: ASMW-5D

Lab Sample ID: 720-28294-1 Date Sampled: 05/24/2010 1140
Client Matrix: Water Date Received: 05/24/2010 1545

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-72040	Instrument ID:	SAT 3900C	
Preparation:	5030B		Lab File ID:	28294-B-1 5-25-2010	
Dilution:	5.0		Initial Weight/Volume:	10	mL
Date Analyzed:	05/25/2010 2253		Final Weight/Volume:	10	mL
Date Prepared:	05/25/2010 2253				

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	14		2.5
Benzene	ND		2.5
Ethylbenzene	ND		2.5
Toluene	ND		2.5
Xylenes, Total	6.3		5.0
Gasoline Range Organics (GRO)-C5-C12	ND		250
TBA	3900		20

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	100		67 - 130
1,2-Dichloroethane-d4 (Surr)	100		67 - 130
Toluene-d8 (Surr)	96		70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28294-1

Client Sample ID: **ASMW-5I**

Lab Sample ID: 720-28294-2 Date Sampled: 05/24/2010 1310
Client Matrix: Water Date Received: 05/24/2010 1545

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-72040	Instrument ID:	SAT 3900C	
Preparation:	5030B		Lab File ID:	28294-A-2 5-25-2010	
Dilution:	1.0		Initial Weight/Volume:	10	mL
Date Analyzed:	05/25/2010 2008		Final Weight/Volume:	10	mL
Date Prepared:	05/25/2010 2008				

Analyte	Result (ug/L)	Qualifier	RL
TBA	310		4.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	107		67 - 130
1,2-Dichloroethane-d4 (Surr)	92		67 - 130
Toluene-d8 (Surr)	93		70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28294-1

Client Sample ID: **ASMW-5I**

Lab Sample ID: 720-28294-2 Date Sampled: 05/24/2010 1310
Client Matrix: Water Date Received: 05/24/2010 1545

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-72040	Instrument ID:	SAT 3900C	
Preparation:	5030B		Lab File ID:	28294-B-2 5-25-2010	
Dilution:	50		Initial Weight/Volume:	10	mL
Date Analyzed:	05/25/2010 2321		Final Weight/Volume:	10	mL
Date Prepared:	05/25/2010 2321				

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	120		25
Benzene	2300		25
Ethylbenzene	2000		25
Toluene	150		25
Xylenes, Total	12000		50
Gasoline Range Organics (GRO)-C5-C12	48000		2500

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	101		67 - 130
1,2-Dichloroethane-d4 (Surr)	101		67 - 130
Toluene-d8 (Surr)	93		70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28294-1

Client Sample ID: **NW-3I**

Lab Sample ID: 720-28294-3 Date Sampled: 05/24/2010 1345
Client Matrix: Water Date Received: 05/24/2010 1545

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-72040	Instrument ID:	SAT 3900C	
Preparation:	5030B		Lab File ID:	28294-B-3 5-25-2010	
Dilution:	1.0		Initial Weight/Volume:	10	mL
Date Analyzed:	05/25/2010 2225		Final Weight/Volume:	10	mL
Date Prepared:	05/25/2010 2225				

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	1.2		0.50
Benzene	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
Xylenes, Total	1.7		1.0
Gasoline Range Organics (GRO)-C5-C12	ND		50
TBA	ND		4.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	97		67 - 130
1,2-Dichloroethane-d4 (Surr)	102		67 - 130
Toluene-d8 (Surr)	95		70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28294-1

Client Sample ID: **ASMW-5I-D**

Lab Sample ID: 720-28294-4 Date Sampled: 05/24/2010 1315
Client Matrix: Water Date Received: 05/24/2010 1545

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-72040	Instrument ID:	SAT 3900C	
Preparation:	5030B		Lab File ID:	28294-A-4 5-25-2010	
Dilution:	1.0		Initial Weight/Volume:	10	mL
Date Analyzed:	05/25/2010 1912		Final Weight/Volume:	10	mL
Date Prepared:	05/25/2010 1912				

Analyte	Result (ug/L)	Qualifier	RL
TBA	290		4.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	100		67 - 130
1,2-Dichloroethane-d4 (Surr)	95		67 - 130
Toluene-d8 (Surr)	95		70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28294-1

Client Sample ID: **ASMW-5I-D**

Lab Sample ID: 720-28294-4 Date Sampled: 05/24/2010 1315
Client Matrix: Water Date Received: 05/24/2010 1545

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-72040	Instrument ID:	SAT 3900C	
Preparation:	5030B		Lab File ID:	28294-B-4 5-25-2010	
Dilution:	50		Initial Weight/Volume:	10	mL
Date Analyzed:	05/25/2010 2348		Final Weight/Volume:	10	mL
Date Prepared:	05/25/2010 2348				

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	120		25
Benzene	2200		25
Ethylbenzene	2000		25
Toluene	170		25
Xylenes, Total	12000		50
Gasoline Range Organics (GRO)-C5-C12	46000		2500

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	103		67 - 130
1,2-Dichloroethane-d4 (Surr)	100		67 - 130
Toluene-d8 (Surr)	92		70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28294-1

Client Sample ID: MW-4

Lab Sample ID: 720-28294-5 Date Sampled: 05/24/2010 1440
Client Matrix: Water Date Received: 05/24/2010 1545

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-72040	Instrument ID:	SAT 3900C	
Preparation:	5030B		Lab File ID:	28294-A-5 5-25-2010	
Dilution:	1.0		Initial Weight/Volume:	10	mL
Date Analyzed:	05/25/2010 1845		Final Weight/Volume:	10	mL
Date Prepared:	05/25/2010 1845				

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	21		0.50
Benzene	11		0.50
Ethylbenzene	3.6		0.50
Toluene	ND		0.50
Xylenes, Total	7.1		1.0
Gasoline Range Organics (GRO)-C5-C12	250		50
TBA	180		4.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	97		67 - 130
1,2-Dichloroethane-d4 (Surr)	97		67 - 130
Toluene-d8 (Surr)	92		70 - 130

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28294-1

Lab Section	Qualifier	Description
GC/MS VOA		
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28294-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:720-72040					
LCS 720-72040/5	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCS 720-72040/7	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCSD 720-72040/6	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
LCSD 720-72040/8	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
MB 720-72040/4	Method Blank	T	Water	8260B/CA_LUFT	
720-28294-A-1 MSDMSD	Matrix Spike Duplicate	T	Water	8260B/CA_LUFT	
720-28294-1	ASMW-5D	T	Water	8260B/CA_LUFT	
720-28294-1MS	Matrix Spike	T	Water	8260B/CA_LUFT	
720-28294-2	ASMW-5I	T	Water	8260B/CA_LUFT	
720-28294-3	NW-3I	T	Water	8260B/CA_LUFT	
720-28294-4	ASMW-5I-D	T	Water	8260B/CA_LUFT	
720-28294-5	MW-4	T	Water	8260B/CA_LUFT	

Report Basis
T = Total

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28294-1

Method Blank - Batch: 720-72040

Method: 8260B/CA_LUFTMS
Preparation: 5030B

Lab Sample ID: MB 720-72040/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/25/2010 1447
Date Prepared: 05/25/2010 1447

Analysis Batch: 720-72040
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: MB 5-25-2010 2;47;53 PM.
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Methyl tert-butyl ether	ND		0.50
Benzene	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
m-Xylene & p-Xylene	ND		1.0
o-Xylene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	ND		50
TBA	ND		4.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	94	67 - 130
1,2-Dichloroethane-d4 (Surr)	98	67 - 130
Toluene-d8 (Surr)	92	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28294-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-72040

Method: 8260B/CA_LUFTMS
Preparation: 5030B

LCS Lab Sample ID: LCS 720-72040/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/25/2010 1518
Date Prepared: 05/25/2010 1518

Analysis Batch: 720-72040
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: LCS 5-25-2010 3;18;21 PM
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-72040/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/25/2010 1545
Date Prepared: 05/25/2010 1545

Analysis Batch: 720-72040
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: LCSD 5-25-2010 3;45;51 PM
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methyl tert-butyl ether	106	104	62 - 130	2	20		
Benzene	106	100	82 - 127	5	20		
Ethylbenzene	105	107	86 - 135	2	20		
Toluene	103	103	83 - 129	1	20		
m-Xylene & p-Xylene	107	110	70 - 142	3	20		
o-Xylene	102	108	89 - 136	5	20		
TBA	110	114	82 - 116	4	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	91	93	67 - 130
1,2-Dichloroethane-d4 (Surr)	105	102	67 - 130
Toluene-d8 (Surr)	96	92	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28294-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-72040

Method: 8260B/CA_LUFTMS
Preparation: 5030B

LCS Lab Sample ID: LCS 720-72040/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/25/2010 1613
Date Prepared: 05/25/2010 1613

Analysis Batch: 720-72040
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: LCS G 5-25-2010 4;13;26 I
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-72040/8
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/25/2010 1641
Date Prepared: 05/25/2010 1641

Analysis Batch: 720-72040
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: LCSD G 5-25-2010 4;41;08 I
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Gasoline Range Organics (GRO)-C5-C12	87	90	59 - 111	4	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	104	97	67 - 130
1,2-Dichloroethane-d4 (Surr)	103	102	67 - 130
Toluene-d8 (Surr)	100	92	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28294-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-72040

Method: 8260B/CA_LUFTMS
Preparation: 5030B

MS Lab Sample ID:	720-28294-1	Analysis Batch:	720-72040	Instrument ID:	SAT 3900C
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	28294-A-1MS 5-25-2010
Dilution:	5.0			Initial Weight/Volume:	10 mL
Date Analyzed:	05/25/2010 2103			Final Weight/Volume:	10 mL
Date Prepared:	05/25/2010 2103				

MSD Lab Sample ID:	720-28294-A-1 MSD	Analysis Batch:	720-72040	Instrument ID:	SAT 3900C
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	28294-A-1MSD 5-25-2010
Dilution:	5.0			Initial Weight/Volume:	10 mL
Date Analyzed:	05/25/2010 2130			Final Weight/Volume:	10 mL
Date Prepared:	05/25/2010 2130				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Methyl tert-butyl ether	110	100	60 - 138	8	20		
Benzene	113	97	60 - 140	9	20		
Ethylbenzene	115	100	60 - 140	0	20		
Toluene	110	111	60 - 140	0	20		
m-Xylene & p-Xylene	126	85	60 - 140	4	20		
o-Xylene	113	93	60 - 140	2	20		
TBA	428	192	60 - 140	17	20	4	4

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene	94	99	67 - 130
1,2-Dichloroethane-d4 (Surr)	106	106	67 - 130
Toluene-d8 (Surr)	99	94	70 - 130

720-28294

124662

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

SAMPLE COLLECTOR:
LFR
1900 Powell Street, 12th Floor
Emeryville, California 94608
(510) 652-4500 Fax: (510) 652-2246

PROJECT NO.: RV00155.0010 | SECTION NO.: 00002 | DATE: 5/24/10 | SAMPLER'S INITIALS: MD | SERIAL Nº 5468

PROJECT NAME: Aspire. | SAMPLER (Signature): Dragan Mijo

06/01/2010

	SAMPLE ID.	DATE	TIME	Lab Sample No.	No. of Containers	TYPE: Soil	TYPE: Water	TPHd (EPA 8015M)	TPHmo (EPA 8015M)	TPHg (EPA 8015M) 8260	BTEX (EPA 8021/602) 8260	VOCs (EPA 8260/624)	Metals (EPA 6010/7000)	MTBE (8260)	TBA (8260)	TAT: Standard	TAT: RUSH:	TAT: HOLD	REMARKS
1	ASMW-5D	5/24	1140		3		X		X	X				X	X	X			
2	ASMW-5I		1310		3		X		↓	↓				↓	↓	↓			
3	NW-3I		1345		3		X												
4	ASMW-5[illegible]I-D		1315		3		X												
5	MW-4	↓	1440		3		X												
6	Trip Blank	5/24	—		2		X		↓	↓				↓	↓	↓			

Page 20 of 21

*VOCs: ☐ 8260 List ☐ 8240 List ☐ 8010 List ☐ 624 List
**Metals: ☐ CAM17 ☐ RCRA ☐ LUFT

SAMPLE RECEIPT: ☐ Intact ☐ Cold ☒ On Ice ☐ Ambient
Cooler Temp: 2.9°C
Cooler No:
Preservative Correct? ☐ Yes ☐ No ☐ N/A

METHOD OF SHIPMENT:
LAB REPORT NO.: Ron Golovbow
FAX COC CONFIRMATION TO:

RELINQUISHED BY: 1
(SIGNATURE) Dragan Mijo (DATE) 5/24/10
(PRINTED NAME) Miljan Draganic (TIME) 1445
(COMPANY) Arcadis

RELINQUISHED BY: 2
(SIGNATURE) (DATE) 5/24/10
(PRINTED NAME) Bryan Thomas (TIME) 1545
(COMPANY) TestAmerica

RELINQUISHED BY: 3
(SIGNATURE) (DATE)
(PRINTED NAME) (TIME)
(COMPANY)

ANALYTICAL LABORATORY: Test America.

FAX RESULTS TO:
SEND HARDCOPY TO:
SEND EDD TO: EMV.LABEDDS.COM

RECEIVED BY: 1
(SIGNATURE) (DATE) 5/24/10
(PRINTED NAME) Bryan Thomas (TIME) 1445
(COMPANY) TestAmerica

RECEIVED BY: 2
(SIGNATURE) (DATE)
(PRINTED NAME) (TIME)
(COMPANY)

RECEIVED BY (LABORATORY): 3
(SIGNATURE) John Mullen (DATE) 5-24-10
(PRINTED NAME) Mullen (TIME) 1545
(COMPANY) TestAmerica

Shipping Copy (White) File Copy (Yellow) Field Copy (Pink)

Login Sample Receipt Check List

Client: ARCADIS U.S., Inc Formerly LFR, Inc.

Job Number: 720-28294-1

Login Number: 28294
List Source: TestAmerica San Francisco
Creator: Mullen, Joan
List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified	True	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 720-28329-1

Job Description: Aspire

For:
ARCADIS U.S., Inc Formerly LFR, Inc.
1900 Powell St 12th Floor
Emeryville, CA 94608-1827

Attention: Mr. Ron Goloubow

Approved for release.
Afsaneh Salimpour
Project Manager I
6/2/2010 2:29 PM

Afsaneh Salimpour
Project Manager I
afsaneh.salimpour@testamericainc.com
06/02/2010

CA ELAP Certification # 2496
The Chain(s) of Custody are included and are an integral part of this report.

A trip blank is required to be provided for volatile analyses. If trip blank results are not included in the report, either the trip blank was not submitted or requested to be analyzed.

TestAmerica Laboratories, Inc.
TestAmerica San Francisco 1220 Quarry Lane, Pleasanton, CA 94566
Tel (925) 484-1919 Fax (925) 600-3002 www.testamericainc.com

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC/MS VOA
No analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-28329-1	**NW-2I**				
Methyl tert-butyl ether		770	10	ug/L	8260B/CA_LUFTMS
Benzene		360	10	ug/L	8260B/CA_LUFTMS
Ethylbenzene		400	10	ug/L	8260B/CA_LUFTMS
Toluene		35	10	ug/L	8260B/CA_LUFTMS
Xylenes, Total		1500	20	ug/L	8260B/CA_LUFTMS
Gasoline Range Organics (GRO)-C5-C12		8600	1000	ug/L	8260B/CA_LUFTMS
TBA		17000	80	ug/L	8260B/CA_LUFTMS
720-28329-2	**AS-4T**				
Methyl tert-butyl ether		110	0.50	ug/L	8260B/CA_LUFTMS
Benzene		2.7	0.50	ug/L	8260B/CA_LUFTMS
Gasoline Range Organics (GRO)-C5-C12		310	250	ug/L	8260B/CA_LUFTMS
TBA		1500	20	ug/L	8260B/CA_LUFTMS
720-28329-3	**ASMW-2I**				
Methyl tert-butyl ether		98	0.50	ug/L	8260B/CA_LUFTMS
Benzene		280	2.5	ug/L	8260B/CA_LUFTMS
Ethylbenzene		170	0.50	ug/L	8260B/CA_LUFTMS
Toluene		50	0.50	ug/L	8260B/CA_LUFTMS
Xylenes, Total		350	1.0	ug/L	8260B/CA_LUFTMS
Gasoline Range Organics (GRO)-C5-C12		2000	250	ug/L	8260B/CA_LUFTMS
TBA		330	20	ug/L	8260B/CA_LUFTMS
720-28329-4	**ASMW-2D**				
Methyl tert-butyl ether		8.3	0.50	ug/L	8260B/CA_LUFTMS
720-28329-5	**AS-2I**				
Methyl tert-butyl ether		8000	25	ug/L	8260B/CA_LUFTMS
Benzene		76	25	ug/L	8260B/CA_LUFTMS
Ethylbenzene		220	25	ug/L	8260B/CA_LUFTMS
Gasoline Range Organics (GRO)-C5-C12		6800	2500	ug/L	8260B/CA_LUFTMS
TBA		5600	200	ug/L	8260B/CA_LUFTMS
720-28329-6	**AS-5I**				
Methyl tert-butyl ether		10	0.50	ug/L	8260B/CA_LUFTMS
TBA		130	4.0	ug/L	8260B/CA_LUFTMS

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-28329-7	**AS-6I**				
Methyl tert-butyl ether		25	0.50	ug/L	8260B/CA_LUFTMS
Benzene		23	0.50	ug/L	8260B/CA_LUFTMS
Ethylbenzene		14	0.50	ug/L	8260B/CA_LUFTMS
Xylenes, Total		1.5	1.0	ug/L	8260B/CA_LUFTMS
Gasoline Range Organics (GRO)-C5-C12		840	50	ug/L	8260B/CA_LUFTMS
TBA		210	4.0	ug/L	8260B/CA_LUFTMS

METHOD SUMMARY

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
8260B / CA LUFT MS	TAL SF	SW846 8260B/CA_LUFTMS	
Purge and Trap	TAL SF		SW846 5030B

Lab References:

TAL SF = TestAmerica San Francisco

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Method	Analyst	Analyst ID
SW846 8260B/CA_LUFTMS	Ali, Badri	BA

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-28329-1	NW-2I	Water	05/25/2010 0855	05/25/2010 1830
720-28329-2	AS-4T	Water	05/25/2010 0915	05/25/2010 1830
720-28329-3	ASMW-2I	Water	05/25/2010 0955	05/25/2010 1830
720-28329-4	ASMW-2D	Water	05/25/2010 1050	05/25/2010 1830
720-28329-5	AS-2I	Water	05/25/2010 1130	05/25/2010 1830
720-28329-6	AS-5I	Water	05/25/2010 1245	05/25/2010 1830
720-28329-7	AS-6I	Water	05/25/2010 1325	05/25/2010 1830

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Client Sample ID: **NW-2I**

Lab Sample ID: 720-28329-1 Date Sampled: 05/25/2010 0855
Client Matrix: Water Date Received: 05/25/2010 1830

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-72216	Instrument ID:	SAT 3900C	
Preparation:	5030B		Lab File ID:	28329-A-1 5-28-2010	
Dilution:	20		Initial Weight/Volume:	10	mL
Date Analyzed:	05/28/2010 0022		Final Weight/Volume:	10	mL
Date Prepared:	05/28/2010 0022				

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	770		10
Benzene	360		10
Ethylbenzene	400		10
Toluene	35		10
Xylenes, Total	1500		20
Gasoline Range Organics (GRO)-C5-C12	8600		1000
TBA	17000		80

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	96		67 - 130
1,2-Dichloroethane-d4 (Surr)	97		67 - 130
Toluene-d8 (Surr)	95		70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Client Sample ID: AS-4T

Lab Sample ID: 720-28329-2 Date Sampled: 05/25/2010 0915
Client Matrix: Water Date Received: 05/25/2010 1830

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-72216	Instrument ID:	SAT 3900C	
Preparation:	5030B		Lab File ID:	28329-A-2 5-28-2010	
Dilution:	1.0		Initial Weight/Volume:	10	mL
Date Analyzed:	05/28/2010 0144		Final Weight/Volume:	10	mL
Date Prepared:	05/28/2010 0144				

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	110		0.50
Benzene	2.7		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	93		67 - 130
1,2-Dichloroethane-d4 (Surr)	93		67 - 130
Toluene-d8 (Surr)	89		70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Client Sample ID: AS-4T

Lab Sample ID: 720-28329-2 Date Sampled: 05/25/2010 0915
Client Matrix: Water Date Received: 05/25/2010 1830

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-72286	Instrument ID:	SAT 3900C	
Preparation:	5030B		Lab File ID:	28329-B-2 5-29-2010	
Dilution:	5.0		Initial Weight/Volume:	10	mL
Date Analyzed:	05/29/2010 0013		Final Weight/Volume:	10	mL
Date Prepared:	05/29/2010 0013				

Analyte	Result (ug/L)	Qualifier	RL
Gasoline Range Organics (GRO)-C5-C12	310		250
TBA	1500		20

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	99		67 - 130
1,2-Dichloroethane-d4 (Surr)	96		67 - 130
Toluene-d8 (Surr)	93		70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Client Sample ID: **ASMW-2I**

Lab Sample ID: 720-28329-3 Date Sampled: 05/25/2010 0955
Client Matrix: Water Date Received: 05/25/2010 1830

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-72216	Instrument ID:	SAT 3900C	
Preparation:	5030B		Lab File ID:	28329-A-3 5-28-2010	
Dilution:	1.0		Initial Weight/Volume:	10	mL
Date Analyzed:	05/28/2010 0212		Final Weight/Volume:	10	mL
Date Prepared:	05/28/2010 0212				

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	98		0.50
Ethylbenzene	170		0.50
Toluene	50		0.50
Xylenes, Total	350		1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	112		67 - 130
1,2-Dichloroethane-d4 (Surr)	95		67 - 130
Toluene-d8 (Surr)	92		70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Client Sample ID: **ASMW-2I**

Lab Sample ID: 720-28329-3 Date Sampled: 05/25/2010 0955
Client Matrix: Water Date Received: 05/25/2010 1830

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-72286	Instrument ID:	SAT 3900C	
Preparation:	5030B		Lab File ID:	28329-B-3 5-29-2010	
Dilution:	5.0		Initial Weight/Volume:	10	mL
Date Analyzed:	05/29/2010 0040		Final Weight/Volume:	10	mL
Date Prepared:	05/29/2010 0040				

Analyte	Result (ug/L)	Qualifier	RL
Benzene	280		2.5
Gasoline Range Organics (GRO)-C5-C12	2000		250
TBA	330		20

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	96		67 - 130
1,2-Dichloroethane-d4 (Surr)	97		67 - 130
Toluene-d8 (Surr)	92		70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Client Sample ID: ASMW-2D

Lab Sample ID: 720-28329-4 Date Sampled: 05/25/2010 1050
Client Matrix: Water Date Received: 05/25/2010 1830

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-72372	Instrument ID:	SAT 3900C	
Preparation:	5030B		Lab File ID:	28329-B-4 6-1-2010	
Dilution:	1.0		Initial Weight/Volume:	10	mL
Date Analyzed:	06/01/2010 2123		Final Weight/Volume:	10	mL
Date Prepared:	06/01/2010 2123				

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	8.3		0.50
Benzene	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	ND		50
TBA	ND		4.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	100		67 - 130
1,2-Dichloroethane-d4 (Surr)	98		67 - 130
Toluene-d8 (Surr)	95		70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Client Sample ID: AS-2I

Lab Sample ID: 720-28329-5 Date Sampled: 05/25/2010 1130
Client Matrix: Water Date Received: 05/25/2010 1830

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-72254	Instrument ID:	CHMSV2	
Preparation:	5030B		Lab File ID:	05281021.D	
Dilution:	50		Initial Weight/Volume:	10	mL
Date Analyzed:	05/28/2010 2058		Final Weight/Volume:	10	mL
Date Prepared:	05/28/2010 2058				

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	8000		25
Benzene	76		25
Ethylbenzene	220		25
Toluene	ND		25
Xylenes, Total	ND		50
Gasoline Range Organics (GRO)-C5-C12	6800		2500
TBA	5600		200

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	108		67 - 130
1,2-Dichloroethane-d4 (Surr)	96		67 - 130
Toluene-d8 (Surr)	93		70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Client Sample ID: AS-5I

Lab Sample ID: 720-28329-6 Date Sampled: 05/25/2010 1245
Client Matrix: Water Date Received: 05/25/2010 1830

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-72372	Instrument ID:	SAT 3900C	
Preparation:	5030B		Lab File ID:	28329-B-6 6-1-2010	
Dilution:	1.0		Initial Weight/Volume:	10	mL
Date Analyzed:	06/01/2010 2150		Final Weight/Volume:	10	mL
Date Prepared:	06/01/2010 2150				

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	10		0.50
Benzene	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	ND		50
TBA	130		4.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	94		67 - 130
1,2-Dichloroethane-d4 (Surr)	96		67 - 130
Toluene-d8 (Surr)	90		70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Client Sample ID: AS-6I

Lab Sample ID: 720-28329-7 Date Sampled: 05/25/2010 1325
Client Matrix: Water Date Received: 05/25/2010 1830

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-72372	Instrument ID:	SAT 3900C	
Preparation:	5030B		Lab File ID:	28329-B-7 6-1-2010	
Dilution:	1.0		Initial Weight/Volume:	10	mL
Date Analyzed:	06/01/2010 1638		Final Weight/Volume:	10	mL
Date Prepared:	06/01/2010 1638				

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	25		0.50
Benzene	23		0.50
Ethylbenzene	14		0.50
Toluene	ND		0.50
Xylenes, Total	1.5		1.0
Gasoline Range Organics (GRO)-C5-C12	840		50
TBA	210		4.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	104		67 - 130
1,2-Dichloroethane-d4 (Surr)	99		67 - 130
Toluene-d8 (Surr)	89		70 - 130

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Lab Section	Qualifier	Description
GC/MS VOA		
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	F	RPD of the MS and MSD exceeds the control limits

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:720-72216					
LCS 720-72216/12	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCS 720-72216/14	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCSD 720-72216/13	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
LCSD 720-72216/15	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
MB 720-72216/5	Method Blank	T	Water	8260B/CA_LUFT	
720-28329-1	NW-2I	T	Water	8260B/CA_LUFT	
720-28329-1MS	Matrix Spike	T	Water	8260B/CA_LUFT	
720-28329-1MSD	Matrix Spike Duplicate	T	Water	8260B/CA_LUFT	
720-28329-2	AS-4T	T	Water	8260B/CA_LUFT	
720-28329-3	ASMW-2I	T	Water	8260B/CA_LUFT	
Analysis Batch:720-72254					
LCS 720-72254/7	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCS 720-72254/9	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCSD 720-72254/10	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
LCSD 720-72254/8	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
MB 720-72254/6	Method Blank	T	Water	8260B/CA_LUFT	
720-28297-B-1 MS	Matrix Spike	T	Water	8260B/CA_LUFT	
720-28297-B-1 MSD	Matrix Spike Duplicate	T	Water	8260B/CA_LUFT	
720-28329-5	AS-2I	T	Water	8260B/CA_LUFT	
Analysis Batch:720-72286					
LCS 720-72286/6	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCS 720-72286/8	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCSD 720-72286/7	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
LCSD 720-72286/9	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
MB 720-72286/5	Method Blank	T	Water	8260B/CA_LUFT	
720-28329-2	AS-4T	T	Water	8260B/CA_LUFT	
720-28329-3	ASMW-2I	T	Water	8260B/CA_LUFT	
720-28329-A-7 MSMS	Matrix Spike	T	Water	8260B/CA_LUFT	
720-28329-A-7 MSDMSD	Matrix Spike Duplicate	T	Water	8260B/CA_LUFT	
Analysis Batch:720-72372					
LCS 720-72372/6	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCS 720-72372/8	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCSD 720-72372/7	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
LCSD 720-72372/9	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
MB 720-72372/5	Method Blank	T	Water	8260B/CA_LUFT	
720-28329-4	ASMW-2D	T	Water	8260B/CA_LUFT	
720-28329-6	AS-5I	T	Water	8260B/CA_LUFT	
720-28329-7	AS-6I	T	Water	8260B/CA_LUFT	
720-28432-A-2 MS	Matrix Spike	T	Water	8260B/CA_LUFT	
720-28432-A-2 MSD	Matrix Spike Duplicate	T	Water	8260B/CA_LUFT	

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch

Report Basis
T = Total

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Method Blank - Batch: 720-72216

Method: 8260B/CA_LUFTMS
Preparation: 5030B

Lab Sample ID: MB 720-72216/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/27/2010 1610
Date Prepared: 05/27/2010 1610

Analysis Batch: 720-72216
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: MB 5-27-2010 4;10;26 PM.
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Methyl tert-butyl ether	ND		0.50
Benzene	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
m-Xylene & p-Xylene	ND		1.0
o-Xylene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	ND		50
TBA	ND		4.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	92	67 - 130
1,2-Dichloroethane-d4 (Surr)	96	67 - 130
Toluene-d8 (Surr)	87	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-72216

Method: 8260B/CA_LUFTMS
Preparation: 5030B

LCS Lab Sample ID: LCS 720-72216/12
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/27/2010 1908
Date Prepared: 05/27/2010 1908

Analysis Batch: 720-72216
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: LCS 5-27-2010 7;08;29 PM
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-72216/13
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/27/2010 1936
Date Prepared: 05/27/2010 1936

Analysis Batch: 720-72216
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: LCSD 5-27-2010 7;36;03 PM
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methyl tert-butyl ether	103	100	62 - 130	3	20		
Benzene	103	100	82 - 127	4	20		
Ethylbenzene	102	102	86 - 135	0	20		
Toluene	101	102	83 - 129	1	20		
m-Xylene & p-Xylene	110	104	70 - 142	6	20		
o-Xylene	102	99	89 - 136	3	20		
TBA	95	96	82 - 116	1	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	90	95	67 - 130
1,2-Dichloroethane-d4 (Surr)	91	100	67 - 130
Toluene-d8 (Surr)	92	92	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-72216

Method: 8260B/CA_LUFTMS
Preparation: 5030B

LCS Lab Sample ID: LCS 720-72216/14
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/27/2010 2003
Date Prepared: 05/27/2010 2003

Analysis Batch: 720-72216
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: LCSG 5-27-2010 8;03;32 F
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-72216/15
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/27/2010 2031
Date Prepared: 05/27/2010 2031

Analysis Batch: 720-72216
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: LCSD G 5-27-2010 8;31;07 I
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Gasoline Range Organics (GRO)-C5-C12	86	89	59 - 111	3	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	95	97	67 - 130
1,2-Dichloroethane-d4 (Surr)	101	98	67 - 130
Toluene-d8 (Surr)	97	95	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-72216

Method: 8260B/CA_LUFTMS
Preparation: 5030B

MS Lab Sample ID:	720-28329-1	Analysis Batch: 720-72216	Instrument ID: SAT 3900C
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: 28329-A-1MS 5-28-2010
Dilution:	20		Initial Weight/Volume: 10 mL
Date Analyzed:	05/28/2010 0049		Final Weight/Volume: 10 mL
Date Prepared:	05/28/2010 0049		

MSD Lab Sample ID:	720-28329-1	Analysis Batch: 720-72216	Instrument ID: SAT 3900C
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: 28329-A-1MSD 5-28-2010
Dilution:	20		Initial Weight/Volume: 10 mL
Date Analyzed:	05/28/2010 0117		Final Weight/Volume: 10 mL
Date Prepared:	05/28/2010 0117		

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Methyl tert-butyl ether	78	90	60 - 138	4	20		
Benzene	90	96	60 - 140	3	20		
Ethylbenzene	103	109	60 - 140	3	20		
Toluene	107	103	60 - 140	3	20		
m-Xylene & p-Xylene	109	104	60 - 140	2	20		
o-Xylene	98	102	60 - 140	2	20		
TBA	37	183	60 - 140	15	20	4	4

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene	97	95	67 - 130
1,2-Dichloroethane-d4 (Surr)	99	99	67 - 130
Toluene-d8 (Surr)	92	93	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc.

Job Number: 720-28329-1

Method Blank - Batch: 720-72254

Method: 8260B/CA_LUFTMS
Preparation: 5030B

Lab Sample ID: MB 720-72254/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/28/2010 1227
Date Prepared: 05/28/2010 1227

Analysis Batch: 720-72254
Prep Batch: N/A
Units: ug/L

Instrument ID: CHMSV2
Lab File ID: 05281006.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Methyl tert-butyl ether	ND		0.50
Benzene	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
m-Xylene & p-Xylene	ND		1.0
o-Xylene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	ND		50
TBA	ND		4.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	95	67 - 130
1,2-Dichloroethane-d4 (Surr)	99	67 - 130
Toluene-d8 (Surr)	81	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-72254

Method: 8260B/CA_LUFTMS
Preparation: 5030B

LCS Lab Sample ID: LCS 720-72254/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/28/2010 1315
Date Prepared: 05/28/2010 1315

Analysis Batch: 720-72254
Prep Batch: N/A
Units: ug/L

Instrument ID: CHMSV2
Lab File ID: 05281007.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-72254/8
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/28/2010 1348
Date Prepared: 05/28/2010 1348

Analysis Batch: 720-72254
Prep Batch: N/A
Units: ug/L

Instrument ID: CHMSV2
Lab File ID: 05281008.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methyl tert-butyl ether	100	101	62 - 130	1	20		
Benzene	90	95	82 - 127	5	20		
Ethylbenzene	98	92	86 - 135	6	20		
Toluene	99	100	83 - 129	1	20		
m-Xylene & p-Xylene	94	91	70 - 142	4	20		
o-Xylene	102	90	89 - 136	12	20		
TBA	94	98	82 - 116	4	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	98	98	67 - 130
1,2-Dichloroethane-d4 (Surr)	96	95	67 - 130
Toluene-d8 (Surr)	96	97	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-72254

Method: 8260B/CA_LUFTMS
Preparation: 5030B

LCS Lab Sample ID: LCS 720-72254/9
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/28/2010 1420
Date Prepared: 05/28/2010 1420

Analysis Batch: 720-72254
Prep Batch: N/A
Units: ug/L

Instrument ID: CHMSV2
Lab File ID: 05281009.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-72254/10
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/28/2010 1452
Date Prepared: 05/28/2010 1452

Analysis Batch: 720-72254
Prep Batch: N/A
Units: ug/L

Instrument ID: CHMSV2
Lab File ID: 05281010.D
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Gasoline Range Organics (GRO)-C5-C12	76	73	59 - 111	4	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	96	103	67 - 130
1,2-Dichloroethane-d4 (Surr)	100	101	67 - 130
Toluene-d8 (Surr)	97	97	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-72254

Method: 8260B/CA_LUFTMS
Preparation: 5030B

MS Lab Sample ID:	720-28297-B-1 MS	Analysis Batch: 720-72254	Instrument ID: CHMSV2
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: 05281017.D
Dilution:	1.0		Initial Weight/Volume: 10 mL
Date Analyzed:	05/28/2010 1848		Final Weight/Volume: 10 mL
Date Prepared:	05/28/2010 1848		

MSD Lab Sample ID:	720-28297-B-1 MSD	Analysis Batch: 720-72254	Instrument ID: CHMSV2
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: 05281018.D
Dilution:	1.0		Initial Weight/Volume: 10 mL
Date Analyzed:	05/28/2010 1921		Final Weight/Volume: 10 mL
Date Prepared:	05/28/2010 1921		

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Methyl tert-butyl ether	104	105	60 - 138	1	20		
Benzene	93	95	60 - 140	3	20		
Ethylbenzene	94	97	60 - 140	4	20		
Toluene	87	89	60 - 140	3	20		
m-Xylene & p-Xylene	94	96	60 - 140	3	20		
o-Xylene	79	98	60 - 140	21	20		F
TBA	83	85	60 - 140	2	20		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene	92	88	67 - 130
1,2-Dichloroethane-d4 (Surr)	91	92	67 - 130
Toluene-d8 (Surr)	98	97	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc.

Job Number: 720-28329-1

Method Blank - Batch: 720-72286

Method: 8260B/CA_LUFTMS
Preparation: 5030B

Lab Sample ID: MB 720-72286/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/28/2010 1517
Date Prepared: 05/28/2010 1517

Analysis Batch: 720-72286
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: MB 5-28-2010 3;17;37 PM.
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Methyl tert-butyl ether	ND		0.50
Benzene	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
m-Xylene & p-Xylene	ND		1.0
o-Xylene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	ND		50
TBA	ND		4.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	94	67 - 130
1,2-Dichloroethane-d4 (Surr)	99	67 - 130
Toluene-d8 (Surr)	91	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-72286

Method: 8260B/CA_LUFTMS
Preparation: 5030B

LCS Lab Sample ID: LCS 720-72286/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/28/2010 1545
Date Prepared: 05/28/2010 1545

Analysis Batch: 720-72286
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: LCS 5-28-2010 3;45;07 PM
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-72286/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/28/2010 1612
Date Prepared: 05/28/2010 1612

Analysis Batch: 720-72286
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: LCSD 5-28-2010 4;12;43 PM
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methyl tert-butyl ether	109	102	62 - 130	7	20		
Benzene	103	103	82 - 127	0	20		
Ethylbenzene	106	103	86 - 135	3	20		
Toluene	106	101	83 - 129	5	20		
m-Xylene & p-Xylene	108	105	70 - 142	3	20		
o-Xylene	103	98	89 - 136	5	20		
TBA	96	102	82 - 116	6	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	98	97	67 - 130
1,2-Dichloroethane-d4 (Surr)	93	103	67 - 130
Toluene-d8 (Surr)	100	94	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-72286

Method: 8260B/CA_LUFTMS
Preparation: 5030B

LCS Lab Sample ID: LCS 720-72286/8
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/28/2010 1640
Date Prepared: 05/28/2010 1640

Analysis Batch: 720-72286
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: LCS G 5-28-2010 4;40;11 I
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-72286/9
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/28/2010 1707
Date Prepared: 05/28/2010 1707

Analysis Batch: 720-72286
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: LCSD G 5-28-2010 5;07;46 I
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Gasoline Range Organics (GRO)-C5-C12	84	88	59 - 111	5	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	97	96	67 - 130
1,2-Dichloroethane-d4 (Surr)	101	100	67 - 130
Toluene-d8 (Surr)	94	93	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-72286

Method: 8260B/CA_LUFTMS
Preparation: 5030B

MS Lab Sample ID:	720-28329-A-7 MS	Analysis Batch: 720-72286	Instrument ID: SAT 3900C
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: 28329-A-MS 5-28-2010
Dilution:	50		Initial Weight/Volume: 10 mL
Date Analyzed:	05/28/2010 2005		Final Weight/Volume: 10 mL
Date Prepared:	05/28/2010 2005		

MSD Lab Sample ID:	720-28329-A-7 MSD	Analysis Batch: 720-72286	Instrument ID: SAT 3900C
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: 28329-A-MSD 5-28-2010
Dilution:	50		Initial Weight/Volume: 10 mL
Date Analyzed:	05/28/2010 2032		Final Weight/Volume: 10 mL
Date Prepared:	05/28/2010 2032		

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Methyl tert-butyl ether	108	115	60 - 138	7	20		
Benzene	107	117	60 - 140	8	20		
Ethylbenzene	108	118	60 - 140	9	20		
Toluene	106	113	60 - 140	7	20		
m-Xylene & p-Xylene	109	119	60 - 140	8	20		
o-Xylene	101	110	60 - 140	9	20		
TBA	110	129	60 - 140	15	20		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene	99	96	67 - 130
1,2-Dichloroethane-d4 (Surr)	95	91	67 - 130
Toluene-d8 (Surr)	95	92	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc.

Job Number: 720-28329-1

Method Blank - Batch: 720-72372

Method: 8260B/CA_LUFTMS
Preparation: 5030B

Lab Sample ID: MB 720-72372/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/01/2010 1323
Date Prepared: 06/01/2010 1323

Analysis Batch: 720-72372
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: MB 6-1-2010 1;23;35 PM.d
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Methyl tert-butyl ether	ND		0.50
Benzene	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
m-Xylene & p-Xylene	ND		1.0
o-Xylene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	ND		50
TBA	ND		4.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	101	67 - 130
1,2-Dichloroethane-d4 (Surr)	97	67 - 130
Toluene-d8 (Surr)	93	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-72372

Method: 8260B/CA_LUFTMS
Preparation: 5030B

LCS Lab Sample ID: LCS 720-72372/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/01/2010 1351
Date Prepared: 06/01/2010 1351

Analysis Batch: 720-72372
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: LCS 6-1-2010 1;51;08 PM.
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-72372/7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/01/2010 1418
Date Prepared: 06/01/2010 1418

Analysis Batch: 720-72372
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: LCSD 6-1-2010 2;18;44 PM.
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methyl tert-butyl ether	103	102	62 - 130	1	20		
Benzene	112	102	82 - 127	10	20		
Ethylbenzene	109	106	86 - 135	3	20		
Toluene	110	106	83 - 129	4	20		
m-Xylene & p-Xylene	117	114	70 - 142	2	20		
o-Xylene	113	107	89 - 136	5	20		
TBA	105	102	82 - 116	2	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	99	101	67 - 130
1,2-Dichloroethane-d4 (Surr)	103	93	67 - 130
Toluene-d8 (Surr)	94	93	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-72372

Method: 8260B/CA_LUFTMS
Preparation: 5030B

LCS Lab Sample ID: LCS 720-72372/8
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/01/2010 1446
Date Prepared: 06/01/2010 1446

Analysis Batch: 720-72372
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: LCS G 6-1-2010 2;46;13 P
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-72372/9
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/01/2010 1513
Date Prepared: 06/01/2010 1513

Analysis Batch: 720-72372
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: LCSD G 6-1-2010 3;13;42 P
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Gasoline Range Organics (GRO)-C5-C12	91	82	59 - 111	10	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	102	100	67 - 130
1,2-Dichloroethane-d4 (Surr)	102	103	67 - 130
Toluene-d8 (Surr)	93	93	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28329-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-72372

Method: 8260B/CA_LUFTMS
Preparation: 5030B

MS Lab Sample ID:	720-28432-A-2 MS	Analysis Batch: 720-72372	Instrument ID: SAT 3900C
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: 28432-A-2MS 6-1-2010
Dilution:	100		Initial Weight/Volume: 10 mL
Date Analyzed:	06/01/2010 1951		Final Weight/Volume: 10 mL
Date Prepared:	06/01/2010 1951		

MSD Lab Sample ID:	720-28432-A-2 MSD	Analysis Batch: 720-72372	Instrument ID: SAT 3900C
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: 28432-A-2MSD 6-1-2010
Dilution:	100		Initial Weight/Volume: 10 mL
Date Analyzed:	06/01/2010 2019		Final Weight/Volume: 10 mL
Date Prepared:	06/01/2010 2019		

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Methyl tert-butyl ether	87	99	60 - 138	12	20		
Benzene	98	101	60 - 140	3	20		
Ethylbenzene	103	104	60 - 140	1	20		
Toluene	101	101	60 - 140	0	20		
m-Xylene & p-Xylene	109	110	60 - 140	1	20		
o-Xylene	103	104	60 - 140	2	20		
TBA	-32	-29	60 - 140	1	20	4	4

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene	100	94	67 - 130
1,2-Dichloroethane-d4 (Surr)	90	92	67 - 130
Toluene-d8 (Surr)	93	93	70 - 130

720-28329

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

124700

SAMPLE COLLECTOR:
LFR
1900 Powell Street, 12th Floor
Emeryville, California 94608
(510) 652-4500 Fax: (510) 652-2246

PROJECT NO.: RV009155.0010 | SECTION NO.: 00002 | DATE: 5/25/10 | SAMPLER'S INITIALS: MD
PROJECT NAME: Aspire | SAMPLER (Signature): Milan Draganic
SERIAL Nº 5466

SAMPLE | ANALYSES | REMARKS

SAMPLE ID.	DATE	TIME	Lab Sample No.	No. of Containers	TYPE: Soil	TYPE: Water	TPHd (EPA 8015M)	TPHmo (EPA 8015M)	TPHg (EPA ~~8015M~~)	BTEX (EPA ~~8021B~~/8260)	VOCs (EPA 8260/624)	Metals (EPA 6010/7000)	MTBE (8260)	TBA (8260)	TAT: Standard	TAT: RUSH	TAT: HOLD
NW-2I	5/25	0855		3	X			X	X			X	X	X			
AS-4I		0915		3													
ASMW-2I		0955		3													
ASMW-2D		1050		3													
AS-2I		1130		3													
AS-5I		1245		3													
AS-6I		1325		2													
Trip Blanck		—		2													

REMARKS: *VOCs: ☐ 8260 List ☐ 8240 List ☐ 8010 List ☐ 624 List | **Metals: ☐ CAM17 ☐ RCRA ☐ LUFT

3.1c

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

METHOD OF SHIPMENT:
LAB REPORT NO.:
FAX COC CONFIRMATION TO:

ANALYTICAL LABORATORY: Test America

FAX RESULTS TO: Ron Golubow
SEND HARDCOPY TO: Ron Golubow
SEND EDD TO: EMV.LABEDDS.COM

RELINQUISHED BY: 1
(SIGNATURE) Milan Draganic (DATE) 5/25/10
(PRINTED NAME) Milan Draganic (TIME) 1520
(COMPANY) Arcadis

RECEIVED BY: 1
(SIGNATURE) Ed Martinez (DATE) 5-25-10
(PRINTED NAME) Ed Martinez (TIME) 1520
(COMPANY) Test America

RELINQUISHED BY: 2
(SIGNATURE) Ed Martinez (DATE) 5-25-10
(PRINTED NAME) Ed Martinez (TIME) 1830
(COMPANY) TAL

RECEIVED BY: 2
(SIGNATURE) (DATE)
(PRINTED NAME) (TIME)
(COMPANY)

RELINQUISHED BY: 3
(SIGNATURE) (DATE)
(PRINTED NAME) (TIME)
(COMPANY)

RECEIVED BY (LABORATORY): 3
(SIGNATURE) John Mullen (DATE) 5-25-10
(PRINTED NAME) John Mullen (TIME) 1830
(COMPANY) Test America

Shipping Copy (White) File Copy (Yellow) Field Copy (Pink)

CHAIN OF CUSTODY - ANALYSES FORM.CDR 5/2003

1-NOA0507

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06/02/2010

Login Sample Receipt Check List

Client: ARCADIS U.S., Inc Formerly LFR, Inc.

Job Number: 720-28329-1

Login Number: 28329
List Source: TestAmerica San Francisco
Creator: Mullen, Joan
List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified	True	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 720-28359-1

Job Description: Aspire

For:
ARCADIS U.S., Inc Formerly LFR, Inc.
1900 Powell St 12th Floor
Emeryville, CA 94608-1827

Attention: Mr. Ron Goloubow

Approved for release.
Afsaneh Salimpour
Project Manager I
6/2/2010 2:33 PM

Afsaneh Salimpour
Project Manager I
afsaneh.salimpour@testamericainc.com
06/02/2010

CA ELAP Certification # 2496
The Chain(s) of Custody are included and are an integral part of this report.

A trip blank is required to be provided for volatile analyses. If trip blank results are not included in the report, either the trip blank was not submitted or requested to be analyzed.

TestAmerica Laboratories, Inc.
TestAmerica San Francisco 1220 Quarry Lane, Pleasanton, CA 94566
Tel (925) 484-1919 Fax (925) 600-3002 www.testamericainc.com

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC/MS VOA
No analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28359-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
720-28359-3	**ASMW-4I**				
Benzene		4.6	0.50	ug/L	8260B/CA_LUFTMS
Ethylbenzene		86	0.50	ug/L	8260B/CA_LUFTMS
Xylenes, Total		90	1.0	ug/L	8260B/CA_LUFTMS
Gasoline Range Organics (GRO)-C5-C12		1800	50	ug/L	8260B/CA_LUFTMS

METHOD SUMMARY

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28359-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
8260B / CA LUFT MS	TAL SF	SW846 8260B/CA_LUFTMS	
Purge and Trap	TAL SF		SW846 5030B

Lab References:

TAL SF = TestAmerica San Francisco

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28359-1

Method	Analyst	Analyst ID
SW846 8260B/CA_LUFTMS	Ali, Badri	BA

SAMPLE SUMMARY

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28359-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-28359-1TB	Trip Blank	Water	05/26/2010 0000	05/26/2010 1914
720-28359-2	AS-7I	Water	05/26/2010 1420	05/26/2010 1914
720-28359-3	ASMW-4I	Water	05/26/2010 1015	05/26/2010 1914

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28359-1

Client Sample ID: **Trip Blank**

Lab Sample ID: 720-28359-1TB Date Sampled: 05/26/2010 0000
Client Matrix: Water Date Received: 05/26/2010 1914

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-72286		Instrument ID:	SAT 3900C
Preparation:	5030B			Lab File ID:	28359-A-1 5-28-2010
Dilution:	1.0			Initial Weight/Volume:	10 mL
Date Analyzed:	05/28/2010 2345			Final Weight/Volume:	10 mL
Date Prepared:	05/28/2010 2345				

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	ND		0.50
Benzene	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	ND		50
TBA	ND		4.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	96		67 - 130
1,2-Dichloroethane-d4 (Surr)	98		67 - 130
Toluene-d8 (Surr)	90		70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28359-1

Client Sample ID: **AS-7I**

Lab Sample ID: 720-28359-2 Date Sampled: 05/26/2010 1420
Client Matrix: Water Date Received: 05/26/2010 1914

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-72372		Instrument ID:	SAT 3900C
Preparation:	5030B			Lab File ID:	28359-B-2 6-1-2010
Dilution:	1.0			Initial Weight/Volume:	10 mL
Date Analyzed:	06/01/2010 1706			Final Weight/Volume:	10 mL
Date Prepared:	06/01/2010 1706				

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	ND		0.50
Benzene	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	ND		50
TBA	ND		4.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	101		67 - 130
1,2-Dichloroethane-d4 (Surr)	101		67 - 130
Toluene-d8 (Surr)	96		70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28359-1

Client Sample ID: **ASMW-4I**

Lab Sample ID: 720-28359-3 Date Sampled: 05/26/2010 1015
Client Matrix: Water Date Received: 05/26/2010 1914

8260B/CA_LUFTMS 8260B / CA LUFT MS

Method:	8260B/CA_LUFTMS	Analysis Batch: 720-72372	Instrument ID:	SAT 3900C
Preparation:	5030B		Lab File ID:	28359-B-3 6-1-2010
Dilution:	1.0		Initial Weight/Volume:	10 mL
Date Analyzed:	06/01/2010 1734		Final Weight/Volume:	10 mL
Date Prepared:	06/01/2010 1734			

Analyte	Result (ug/L)	Qualifier	RL
Methyl tert-butyl ether	ND		0.50
Benzene	4.6		0.50
Ethylbenzene	86		0.50
Toluene	ND		0.50
Xylenes, Total	90		1.0
Gasoline Range Organics (GRO)-C5-C12	1800		50
TBA	ND		4.0

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	105		67 - 130
1,2-Dichloroethane-d4 (Surr)	103		67 - 130
Toluene-d8 (Surr)	95		70 - 130

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28359-1

Lab Section	Qualifier	Description
GC/MS VOA		
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28359-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:720-72286					
LCS 720-72286/6	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCS 720-72286/8	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCSD 720-72286/7	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
LCSD 720-72286/9	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
MB 720-72286/5	Method Blank	T	Water	8260B/CA_LUFT	
720-28329-A-7 MS	Matrix Spike	T	Water	8260B/CA_LUFT	
720-28329-A-7 MSD	Matrix Spike Duplicate	T	Water	8260B/CA_LUFT	
720-28359-1TB	Trip Blank	T	Water	8260B/CA_LUFT	
Analysis Batch:720-72372					
LCS 720-72372/6	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCS 720-72372/8	Lab Control Sample	T	Water	8260B/CA_LUFT	
LCSD 720-72372/7	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
LCSD 720-72372/9	Lab Control Sample Duplicate	T	Water	8260B/CA_LUFT	
MB 720-72372/5	Method Blank	T	Water	8260B/CA_LUFT	
720-28359-2	AS-7I	T	Water	8260B/CA_LUFT	
720-28359-3	ASMW-4I	T	Water	8260B/CA_LUFT	
720-28432-A-2 MS	Matrix Spike	T	Water	8260B/CA_LUFT	
720-28432-A-2 MSD	Matrix Spike Duplicate	T	Water	8260B/CA_LUFT	

Report Basis
T = Total

Client: ARCADIS U.S., Inc Formerly LFR, Inc.

Job Number: 720-28359-1

Method Blank - Batch: 720-72286

Method: 8260B/CA_LUFTMS
Preparation: 5030B

Lab Sample ID: MB 720-72286/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 05/28/2010 1517
Date Prepared: 05/28/2010 1517

Analysis Batch: 720-72286
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: MB 5-28-2010 3;17;37 PM.d
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Methyl tert-butyl ether	ND		0.50
Benzene	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
m-Xylene & p-Xylene	ND		1.0
o-Xylene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	ND		50
TBA	ND		4.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	94	67 - 130
1,2-Dichloroethane-d4 (Surr)	99	67 - 130
Toluene-d8 (Surr)	91	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28359-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-72286

Method: 8260B/CA_LUFTMS
Preparation: 5030B

LCS Lab Sample ID:	LCS 720-72286/6	Analysis Batch:	720-72286	Instrument ID:	SAT 3900C
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	LCS 5-28-2010 3;45;07 PM.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	10 mL
Date Analyzed:	05/28/2010 1545			Final Weight/Volume:	10 mL
Date Prepared:	05/28/2010 1545				

LCSD Lab Sample ID:	LCSD 720-72286/7	Analysis Batch:	720-72286	Instrument ID:	SAT 3900C
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	LCSD 5-28-2010 4;12;43 PM.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	10 mL
Date Analyzed:	05/28/2010 1612			Final Weight/Volume:	10 mL
Date Prepared:	05/28/2010 1612				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methyl tert-butyl ether	109	102	62 - 130	7	20		
Benzene	103	103	82 - 127	0	20		
Ethylbenzene	106	103	86 - 135	3	20		
Toluene	106	101	83 - 129	5	20		
m-Xylene & p-Xylene	108	105	70 - 142	3	20		
o-Xylene	103	98	89 - 136	5	20		
TBA	96	102	82 - 116	6	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	98	97	67 - 130
1,2-Dichloroethane-d4 (Surr)	93	103	67 - 130
Toluene-d8 (Surr)	100	94	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc.

Job Number: 720-28359-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-72286

Method: 8260B/CA_LUFTMS
Preparation: 5030B

LCS Lab Sample ID:	LCS 720-72286/8	Analysis Batch:	720-72286	Instrument ID:	SAT 3900C
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	LCS G 5-28-2010 4;40;11 PM
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	10 mL
Date Analyzed:	05/28/2010 1640			Final Weight/Volume:	10 mL
Date Prepared:	05/28/2010 1640				

LCSD Lab Sample ID:	LCSD 720-72286/9	Analysis Batch:	720-72286	Instrument ID:	SAT 3900C
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	LCSD G 5-28-2010 5;07;46 PM
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	10 mL
Date Analyzed:	05/28/2010 1707			Final Weight/Volume:	10 mL
Date Prepared:	05/28/2010 1707				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Gasoline Range Organics (GRO)-C5-C12	84	88	59 - 111	5	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	97	96	67 - 130
1,2-Dichloroethane-d4 (Surr)	101	100	67 - 130
Toluene-d8 (Surr)	94	93	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc.

Job Number: 720-28359-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-72286

Method: 8260B/CA_LUFTMS
Preparation: 5030B

MS Lab Sample ID:	720-28329-A-7 MS	Analysis Batch:	720-72286	Instrument ID:	SAT 3900C
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	28329-A-MS 5-28-2010
Dilution:	50			Initial Weight/Volume:	10 mL
Date Analyzed:	05/28/2010 2005			Final Weight/Volume:	10 mL
Date Prepared:	05/28/2010 2005				

MSD Lab Sample ID:	720-28329-A-7 MSD	Analysis Batch:	720-72286	Instrument ID:	SAT 3900C
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	28329-A-MSD 5-28-2010
Dilution:	50			Initial Weight/Volume:	10 mL
Date Analyzed:	05/28/2010 2032			Final Weight/Volume:	10 mL
Date Prepared:	05/28/2010 2032				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Methyl tert-butyl ether	108	115	60 - 138	7	20		
Benzene	107	117	60 - 140	8	20		
Ethylbenzene	108	118	60 - 140	9	20		
Toluene	106	113	60 - 140	7	20		
m-Xylene & p-Xylene	109	119	60 - 140	8	20		
o-Xylene	101	110	60 - 140	9	20		
TBA	110	129	60 - 140	15	20		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene	99	96	67 - 130
1,2-Dichloroethane-d4 (Surr)	95	91	67 - 130
Toluene-d8 (Surr)	95	92	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc.

Job Number: 720-28359-1

Method Blank - Batch: 720-72372

Method: 8260B/CA_LUFTMS
Preparation: 5030B

Lab Sample ID: MB 720-72372/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/01/2010 1323
Date Prepared: 06/01/2010 1323

Analysis Batch: 720-72372
Prep Batch: N/A
Units: ug/L

Instrument ID: SAT 3900C
Lab File ID: MB 6-1-2010 1;23;35 PM.d
Initial Weight/Volume: 10 mL
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Methyl tert-butyl ether	ND		0.50
Benzene	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
m-Xylene & p-Xylene	ND		1.0
o-Xylene	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	ND		50
TBA	ND		4.0

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	101	67 - 130
1,2-Dichloroethane-d4 (Surr)	97	67 - 130
Toluene-d8 (Surr)	93	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28359-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-72372

Method: 8260B/CA_LUFTMS
Preparation: 5030B

LCS Lab Sample ID:	LCS 720-72372/6	Analysis Batch:	720-72372	Instrument ID:	SAT 3900C
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	LCS 6-1-2010 1;51;08 PM.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	10 mL
Date Analyzed:	06/01/2010 1351			Final Weight/Volume:	10 mL
Date Prepared:	06/01/2010 1351				

LCSD Lab Sample ID:	LCSD 720-72372/7	Analysis Batch:	720-72372	Instrument ID:	SAT 3900C
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	LCSD 6-1-2010 2;18;44 PM.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	10 mL
Date Analyzed:	06/01/2010 1418			Final Weight/Volume:	10 mL
Date Prepared:	06/01/2010 1418				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methyl tert-butyl ether	103	102	62 - 130	1	20		
Benzene	112	102	82 - 127	10	20		
Ethylbenzene	109	106	86 - 135	3	20		
Toluene	110	106	83 - 129	4	20		
m-Xylene & p-Xylene	117	114	70 - 142	2	20		
o-Xylene	113	107	89 - 136	5	20		
TBA	105	102	82 - 116	2	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	99	101	67 - 130
1,2-Dichloroethane-d4 (Surr)	103	93	67 - 130
Toluene-d8 (Surr)	94	93	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc. Job Number: 720-28359-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-72372

Method: 8260B/CA_LUFTMS
Preparation: 5030B

LCS Lab Sample ID:	LCS 720-72372/8	Analysis Batch:	720-72372	Instrument ID:	SAT 3900C
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	LCS G 6-1-2010 2;46;13 PM.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	10 mL
Date Analyzed:	06/01/2010 1446			Final Weight/Volume:	10 mL
Date Prepared:	06/01/2010 1446				

LCSD Lab Sample ID:	LCSD 720-72372/9	Analysis Batch:	720-72372	Instrument ID:	SAT 3900C
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	LCSD G 6-1-2010 3;13;42 PM.d
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	10 mL
Date Analyzed:	06/01/2010 1513			Final Weight/Volume:	10 mL
Date Prepared:	06/01/2010 1513				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Gasoline Range Organics (GRO)-C5-C12	91	82	59 - 111	10	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	102	100	67 - 130
1,2-Dichloroethane-d4 (Surr)	102	103	67 - 130
Toluene-d8 (Surr)	93	93	70 - 130

Client: ARCADIS U.S., Inc Formerly LFR, Inc.

Job Number: 720-28359-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-72372

Method: 8260B/CA_LUFTMS
Preparation: 5030B

MS Lab Sample ID:	720-28432-A-2 MS	Analysis Batch:	720-72372	Instrument ID:	SAT 3900C
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	28432-A-2MS 6-1-2010
Dilution:	100			Initial Weight/Volume:	10 mL
Date Analyzed:	06/01/2010 1951			Final Weight/Volume:	10 mL
Date Prepared:	06/01/2010 1951				

MSD Lab Sample ID:	720-28432-A-2 MSD	Analysis Batch:	720-72372	Instrument ID:	SAT 3900C
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	28432-A-2MSD 6-1-2010
Dilution:	100			Initial Weight/Volume:	10 mL
Date Analyzed:	06/01/2010 2019			Final Weight/Volume:	10 mL
Date Prepared:	06/01/2010 2019				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Methyl tert-butyl ether	87	99	60 - 138	12	20		
Benzene	98	101	60 - 140	3	20		
Ethylbenzene	103	104	60 - 140	1	20		
Toluene	101	101	60 - 140	0	20		
m-Xylene & p-Xylene	109	110	60 - 140	1	20		
o-Xylene	103	104	60 - 140	2	20		
TBA	-32	-29	60 - 140	1	20	4	4

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
4-Bromofluorobenzene	100	94	67 - 130
1,2-Dichloroethane-d4 (Surr)	90	92	67 - 130
Toluene-d8 (Surr)	93	93	70 - 130

720-28359

124729

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

SAMPLE COLLECTOR:
LFR
1900 Powell Street, 12th Floor
Emeryville, California 94608
(510) 652-4500 Fax: (510) 652-2246

PROJECT NO.: RV009155.0010
SECTION NO.: 00002
DATE: 5/26/10
SAMPLER'S INITIALS: MD
SERIAL Nº 5470
PROJECT NAME: Aspire
SAMPLER (Signature): Draga Milja

SAMPLE ID.	DATE	TIME	Lab Sample No.	No. of Containers	TYPE: Soil	TYPE: Water	TPHd (EPA 8015M)	TPHmo (EPA 8015M)	TPHg (~~EPA 8015M~~) 8260	BTEX (~~EPA 8021/8020~~) 8260	VOCs (EPA 8260/624)	Metals (EPA 6010/7000)	HTBE (8260)	TBA (8260)	TAT: Standard	TAT: RUSH	TAT: HOLD	REMARKS
Trip Blank	5/26	—		2		X			X	X			X	X	X			
AS-7I	5/26	1420		3		X			X	X			X	X	X			
ASMW-4I	5/26	1015		3		X			X	X			X	X	X			

*VOCs: ☐ 8260 List ☐ 8240 List ☐ 8010 List ☐ 624 List
**Metals: ☐ CAM17 ☐ RCRA ☐ LUFT

SAMPLE RECEIPT: Cooler Temp: 2.9°C; ☐ Intact ☐ Cold ☒ On Ice ☐ Ambient; Cooler No:
Preservative Correct? ☐ Yes ☐ No ☐ N/A

ANALYTICAL LABORATORY: Test America

METHOD OF SHIPMENT:
LAB REPORT NO.:
FAX COC CONFIRMATION TO:
FAX RESULTS TO: Ron Golovbow
SEND HARDCOPY TO: Ron Golovbow
SEND EDD TO: EMV.LABEDDS.COM

RELINQUISHED BY: 1
(SIGNATURE) Draga Milja 5/26/10 (DATE)
(PRINTED NAME) Milian Draganic 1600 (TIME)
(COMPANY) Arcadis

RECEIVED BY: 1
(SIGNATURE) Ed Martinez 5-26-10 (DATE)
(PRINTED NAME) Ed Martinez 1600 (TIME)
(COMPANY) TAS-F

RELINQUISHED BY: 2
(SIGNATURE) Ed Martinez 5-26-10 (DATE)
(PRINTED NAME) Ed Martinez 1914 (TIME)
(COMPANY) Test America

RECEIVED BY: 2
(SIGNATURE) [signature] 5/26/10 (DATE)
(PRINTED NAME) T Nash 1914 (TIME)
(COMPANY) TAS-F

RELINQUISHED BY: 3
(SIGNATURE) (DATE)
(PRINTED NAME) (TIME)
(COMPANY)

RECEIVED BY (LABORATORY): 3
(SIGNATURE) (DATE)
(PRINTED NAME) (TIME)
(COMPANY)

CHAIN of CUSTODY - ANALYSES FORM.CDR 5/2003

White Copy (White) File Copy (Yellow) Field Copy (Pink)

06/02/2010

Login Sample Receipt Check List

Client: ARCADIS U.S., Inc Formerly LFR, Inc.

Job Number: 720-28359-1

Login Number: 28359

List Source: TestAmerica San Francisco

Creator: Hoang, Julie

List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified	True	

ARCADIS

Appendix B

Field Logs

ARCADIS

Water-Level Log

Project Name and No. Aspire RV001955.0009 Site Location Oakland, CA

Prepared By Miljan Draganic Date 5/24/2010

Well (s)	Depth to Water (ft)	Time	Remarks
NW-1D	3.78	0855	
NW-1I	——	0857	Dry
AS-4D	3.86	0900	
AS-4I	2.05	0902	
AS-3D	4.35	0905	
AS-3I	4.10	0908	
ASMW-5D	3.24	0928	
ASMW-5I	4.54	0930	
ASMW-3D	4.32	0937	
ASMW-3I	4.02	0939	
AS-7D	3.64	0941	
AS-7I	2.49	0943	
AS-8I	3.63	0945	
AS-8D	3.58	0947	
AS-2I	5.41	0948	
AS-2D	4.56	0949	
AS-5D	4.22	0950	
AS-5I	3.90	0951	
ASMW-2D	4.00	0953	
ASMW-2I	3.63	0955	
AS-1I	4.91	0956	
AS-1D	3.80	0958	
NW-2D	4.05	0959	
NW-2I	4.18	1000	
AS-6D	3.24	1002	
AS-6I	——	1004	Top of casing broken; well burried.
NW-3D	3.33	1005	" " " "
NW-3I	3.21	1007	" " " "
ASMW-4I	——	——	Well burried; no access
ASMW-4D	——	——	Well burried; no access

WATER-QUALITY SAMPLING LOG

Project No. RV009155.0004 Date: May 25, 2010 Page 1 of 1

Project Name: Aspire Sampling Location: Aspire, Oakland, CA

Sampler's Name: Miljan Draganic Sample No.: ASMW-2I ☐ FB

Sampling Plan By: Ron Goloubow Dated: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☒ Other Geo[redacted]pump

Purge Water Storage Container Type: Storage tank Storage Location: On site

Date Purge Water Disposed: Where Disposed:

Analyses Requested	No. and Type of Bottles Used
TPHg, TBA, MTBE, and BTEX	VOA with HCl (x3)

Lab Name: Test America

Delivery By: Currier

Well No. ASMW-2I Depth of Water 4.23

Well Diameter: 2" 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

Time	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temp (F°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
0923	4.23							Start purging
0933	5.95	~1.0	0.22	18.30	6.79	7379	-325.4	water is clear/odor
0936	6.08	~1.1	0.12	18.30	6.79	7534	-335.2	
0939	6.09	~1.3	0.07	18.29	6.80	7620	-344.7	
0942	6.09	~1.4	0.06	18.41	6.81	8000	-351.8	
0945	6.09	~1.5	0.06	18.45	6.82	8245	-352.6	
0948	6.09	~1.6	0.05	18.47	6.83	8376	-360.1	
0951	6.09	~1.7	0.04	18.46	6.83	8463	-366.8	
0954	6.08	~1.8	0.05	18.43	6.84	8599	-368.5	
0955								Sampling

Continue remarks on reverse, if needed.

WATER-QUALITY SAMPLING LOG

Project No. RV009155.0009 Date: May 26, 2010 Page 1 of 1

Project Name: Aspire Sampling Location: Aspire, Oakland, CA

Sampler's Name: Miljan Draganic Sample No.: ASMW-4I ☐ FB

Sampling Plan By: Ron Goloubow Dated: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☒ Other Geo[redacted] pump.

Purge Water Storage Container Type: Storage tank Storage Location: On site

Date Purge Water Disposed: Where Disposed:

Analyses Requested	No. and Type of Bottles Used
TPHg, TBA, MTBE, and BTEX	
	VOA with HCl (x3)

Lab Name: Test America

Delivery By: Currier.

Well No. ASMW-4I Depth of Water 3.55

Well Diameter: 2" 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

Time	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temp (F°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
0930	3.55							Start purging
0940	4.41	~0.9	0.18	16.71	6.88	1633	-237	Petroleum odor.
0947	4.51	~1.0	0.60	16.71	6.88	1582	-284.3	
0950	4.53	~1.1	0.69	16.76	6.87	1571	-294.6	
0953	4.53	~1.2	0.41	16.72	6.87	1570	-306.8	water clear.
0956	4.53	~1.3	0.29	16.77	6.87	1567	-322.9	
0959	4.53	~1.4	0.25	16.79	6.87	1566	-329.4	
1002	4.53	~1.5	0.24	16.81	6.87	1563	-340.2	
1005	4.52	~1.6	0.22	16.84	6.86	1560	-348.6	
1008	4.51	~1.7	0.21	16.87	6.85	1558	-354.1	
1011	4.50	~1.8	0.20	16.89	6.85	1556	-358.0	
1015								Sampling.

Continue remarks on reverse, if needed.

WATER-QUALITY SAMPLING LOG

Project No. RV009155.0004 Date: May 24, 2010 Page 1 of 1

Project Name: Aspire Sampling Location: Aspire, Oakland, CA

Sampler's Name: Miljan Draganic Sample No.: ASMW-5I ☐ FB

Sampling Plan By: Ron Goloubow Dated: ☒ DUP ASMW-5I-D

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☒ Other Geo~~probe~~ pump

Purge Water Storage Container Type: Storage tank Storage Location: On site

Date Purge Water Disposed: Where Disposed:

Analyses Requested	No. and Type of Bottles Used
TPHg, TBA, MTBE, and BTEX	VOA with HCl (x3)

Lab Name: Test America

Delivery By: Currier.

Well No. ASMW-5I Depth of Water 4.35

Well Diameter: 2" 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

Time	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temp (F°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
1225	4.49	—						Start purging.
1235	7.58	~1.0	0.44	17.57	6.69	1950	-154.3	Water cloudy
1238	7.79	—	0.35	17.69	6.76	1937	-206.9	Decreased pump rate.
1241	8.05	~ 1.1	0.26	17.76	6.75	1930	-245.9	
1244	8.24	~ 1.2	0.21	17.79	6.75	1928	-267.1	
1247	8.98	~ 1.3	0.18	17.62	6.75	1928	-294.4	
1250	9.05	~ 1.4	0.16	17.74	6.75	1928	-306.9	
1253	9.15	~ 1.5	0.13	17.72	6.76	1929	-327.3	water clear
1256	9.19	~ 1.6	0.11	17.74	6.75	1929	-333.8	↓
1259	9.22	~ 1.7	0.11	17.70	6.75	1933	-343.0	
1302	9.28	~ 1.8	0.07	17.81	6.76	1940	-359.7	
1305	9.33	~ 1.9	0.06	17.91	6.76	1942	-362.9	
1308	9.37	~ 2.0	0.05	17.96	6.75	1941	-369.1	
1310	—	—	—	—	—	—	—	Sampling.

1315 → Duplicate Sampling.

Continue remarks on reverse, if needed.

WATER-QUALITY SAMPLING LOG

Project No. RV009155.0004 Date: May 25, 2010 Page 1 of 1

Project Name: Aspire Sampling Location: Aspire, Oakland, CA

Sampler's Name: Miljan Draganic Sample No.: AS-2I ☐ FB

Sampling Plan By: Ron Goloubow Dated: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☒ Other Geo[redacted] pump.

Purge Water Storage Container Type: Storage tank Storage Location: On site

Date Purge Water Disposed: Where Disposed:

Analyses Requested	No. and Type of Bottles Used
TPHg, TBA, MTBE, and BTEX	VOA with HCl (x3)

Lab Name: Test America

Delivery By: Currier.

Well No. AS-2I Depth of Water 4.95

Well Diameter: 2" Well Depth 14.43

☒ 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

Time	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temp (F°)	PH (SU)	Cond (mS/cm C)	ORP (mV)	Remarks
1105	4.95							Start purging.
1117	7.20	~1.0	0.22	17.94	6.84	10.69	-461.4	Clear water
1120	8.07	~1.1	0.09	17.93	6.84	10.69	-475.4	Petroleum odor;
1124	8.77	~1.2	0.10	17.90	6.84	10.68	-484.6	decreased pump rate.
1127	9.15	~1.3	0.07	17.87	6.84	10.68	-488.5	
1130								Purge dry.
1410	6.04							Sampling.

Continue remarks on reverse, if needed.

WATER-QUALITY SAMPLING LOG

Project No. RV009155.0009 Date: May 25, 2010 Page 1 of 1

Project Name: Aspire Sampling Location: Aspire, Oakland, CA

Sampler's Name: Miljan Draganic Sample No.: AS-4I ☐ FB

Sampling Plan By: Ron Goloubow Dated: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☒ Other Geo[redacted] pump

Purge Water Storage Container Type: Storage tank Storage Location: On site

Date Purge Water Disposed: Where Disposed:

Analyses Requested	No. and Type of Bottles Used
TPHg, TBA, MTBE, and BTEX	VOA with HCl (x3)

Lab Name: Test America

Delivery By: Currier

Well No. AS-4I Depth of Water 3.61

Well Diameter: 2" 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

Time	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temp (F°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
0855	3.61							Start purging.
0905	5.07	~ 0.8	0.40	17.59	7.18	1520	-257.9	water is clear
0908	5.10	~ 0.9	0.36	17.61	7.18	1519	-262.4	
0911	5.15	~ 1.0	0.32	17.63	7.18	1518	-266.8	
0915								Sampling.

Continue remarks on reverse, if needed.

WATER-QUALITY SAMPLING LOG

Project No. RV009155.0004 Date: May 25, 2010 Page 1 of 1

Project Name: Aspire Sampling Location: Aspire, Oakland, CA

Sampler's Name: Miljan Draganic Sample No.: AS-5I ☐ FB

Sampling Plan By: Ron Goloubow Dated: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☒ Other Geo[redacted] pump

Purge Water Storage Container Type: Storage tank Storage Location: On site

Date Purge Water Disposed: Where Disposed:

Analyses Requested	No. and Type of Bottles Used
TPHg, TBA, MTBE, and BTEX	VOA with HCl (x3)

1602.0

Lab Name: Test America

Delivery By: Currier.

Well No. AS-5I Depth of Water 4.11

Well Diameter: 2" 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

Time	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temp (F°)	PH (SU)	Cond (~~mS~~/cm C) mS	ORP (mV)	Remarks
1145	4.11							Start purging
1155	6.38		0.36	18.29	6.77	14.80	-501.2	
1158	7.09		0.26	18.29	6.77	14.64	-494.1	
1201	7.73		0.21	18.32	6.77	14.66	-485.7	
1204	8.53		0.18	18.26	6.77	14.79	-477.6	
1211	8.87		0.14	18.24	6.77	14.96	-472.8	
1216	9.20		0.10	18.27	6.76	15.16	-468.9	
1221	9.30		0.10	18.30	6.76	15.38	-463.8	
1224	9.31		0.09	18.30	6.77	15.48	-462.4	
1230	9.39		0.12	18.30	6.79	16.02	-458.8	
1233	9.63		0.12	18.29	6.80	15.94	-455.7	
1236	9.66		0.09	18.27	6.80	15.91	-454.0	
1239	9.65		0.10	18.25	6.80	15.93	-453.2	
1245								Sampling.

Continue remarks on reverse, if needed.

WATER-QUALITY SAMPLING LOG

Project No. RV009155.0009 Date: May 25, 2010 Page 1 of 1

Project Name: Aspire Sampling Location: Aspire, Oakland, CA

Sampler's Name: Miljan Draganic Sample No.: AS-6I ☐ FB

Sampling Plan By: Ron Goloubow Dated: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☒ Other Geo[redacted] pump

Purge Water Storage Container Type: Storage tank Storage Location: On site

Date Purge Water Disposed: Where Disposed:

Analyses Requested	No. and Type of Bottles Used
TPHg, TBA, MTBE, and BTEX	VOA with HCl (x3)

Lab Name: Test America

Delivery By: Currier

Well No. AS-6I Depth of Water 1.70*

Well Diameter: 2" 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

* Top well casing destroyed and was burried (well). about 1 ft of top casing remaked, the rest of the well is fine. GW elevation measurement / calculation may be innacurate!

Time	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temp (F°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
1255	1.70						→	Begin purging
1305	1.75	~0.8	0.20	17.10	7.54	867	-455.1	
1312	1.78	~1.0	0.15	17.08	7.54	842	[redacted]	ORP (mV) = -458.9 ~~DH~~
1315	1.79	~1.1	0.14	17.08	7.53	838	-461.4	
1318	1.80	~1.2	0.16	17.09	7.53	835	-465.6	
1321	1.80	~1.3	0.15	17.06	7.53	834	-469.0	
1325							→	Sampling

Continue remarks on reverse, if needed.

WATER-QUALITY SAMPLING LOG

Project No. RV009155.0009 Date: May 26, 2010 Page 1 of 1

Project Name: Aspire Sampling Location: Aspire, Oakland, CA

Sampler's Name: Miljan Draganic Sample No.: AS-7I ☐ FB

Sampling Plan By: Ron Goloubow Dated: ☐ DUP

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

Purge Water Storage Container Type: Storage tank Storage Location: On site

Date Purge Water Disposed: Where Disposed:

Analyses Requested	No. and Type of Bottles Used
TPHg, TBA, MTBE, and BTEX	VOA with HCl (x3)

Lab Name: Test America

Delivery By: Currier.

Well No. AS-7I Depth of Water 3.46

Well Diameter: 2" Well Depth 11.35

☒ 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

Time	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temp (F°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
0820	3.46							Start purging.
								YSI calibration.
0841	7.04	~0.8	6.21	17.52	8.10	7557	214.0	water silty
0851	8.85	~1.3	5.37	17.55	8.03	7608	122.8	
0851	9.95	~1.4	4.93	17.67	8.00	7649	113.8	
0857	10.05	~1.5	4.97	17.66	8.00	7628	108.4	
0900								Well purged dry
1420	4.22							Sampling.

Continue remarks on reverse, if needed.

WATER-QUALITY SAMPLING LOG

Project No. RV009155.0009 Date: May 25, 2010 Page 1 of 1

Project Name: Aspire Sampling Location: Aspire, Oakland, CA

Sampler's Name: Miljan Draganic Sample No.: NW-2I ☐ FB

Sampling Plan By: Ron Goloubow Dated: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☒ Other Geo[redacted] pump

Purge Water Storage Container Type: Storage tank Storage Location: On site

Date Purge Water Disposed: Where Disposed:

Analyses Requested	No. and Type of Bottles Used
TPHg, TBA, MTBE, and BTEX	VOA with HCl (x3)

Lab Name: Test America

Delivery By: Currier

Well No. NW-2I Depth of Water 3.96

Well Diameter: 2" 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

Time	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temp (F°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
0805	3.96	—						Start purging.
0820	7.39	~1.0	0.68	17.68	6.85	2629	-32.0	Decreased flow rate
0823	7.33	~1.1	0.60	17.68	6.86	3032	-54.8	water is silty
0826	7.33	~1.2	0.54	17.69	6.86	3016	-67.3	
0829	7.32	~1.3	0.47	17.78	6.86	2963	-84.6	
0832	7.33	~1.4	0.26	17.85	6.85	2913	-106.2	
0835	7.37	~1.5	0.20	17.85	6.87	2875	-126.9	
0838	7.38	~1.6	0.17	17.79	6.88	2834	-134.9	
0841	7.38	~1.7	0.16	17.81	6.88	2801	-158.8	
0844	7.38	~1.8	0.16	17.78	6.88	2780	-169.6	
0847	7.38	~1.9	0.15	17.83	6.88	2764	-174.2	
0850	7.38	~2.0	0.15	17.89	6.88	2773	-179.0	
0855	—							Sampling.

Continue remarks on reverse, if needed.

WATER-QUALITY SAMPLING LOG

Project No. RV009155.0009 Date: May 24, 2010 Page 1 of 1

Project Name: Aspire Sampling Location: Aspire, Oakland, CA

Sampler's Name: Miljan Draganic Sample No.: NW-3I ☐ FB

Sampling Plan By: Ron Goloubow Dated: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☒ Other Geo~~pump~~ pump

Purge Water Storage Container Type: Storage tank Storage Location: On site

Date Purge Water Disposed: Where Disposed:

Analyses Requested	No. and Type of Bottles Used
TPHg, TBA, MTBE, and BTEX	VOA with HCl (x3)

Lab Name: Test America

Delivery By: Currier.

* Top of the well is destroyed (now even with ground surface). Unknown amount of well missing... therefore groundwater elevations calculations will be inaccurate. This is also true for NW-3D and NW-3S.

Well No. NW-3I Depth of Water 3.20 *

Well Diameter: 2" 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

Time	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temp (F°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
1320	3.20							Start purging.
1332	3.40	~.9	1.25	17.89	7.02	1460	-434.7	water is clear.
1335	3.40	~1.0	1.11	17.85	7.02	1457	-434.9	
1338	3.41	~1.1	0.99	17.77	7.02	1456	-433.8	
1341	3.41	~1.2	0.94	17.72	7.02	1456	-432.1	
1344	3.41	~1.3	0.90	17.71	7.02	1455	-432.7	
1345								Sampling.

Continue remarks on reverse, if needed.

WATER-QUALITY SAMPLING LOG

Project No. RV009155.0009 Date: May 25, 2010 Page 1 of 1

Project Name: Aspire Sampling Location: Aspire, Oakland, CA

Sampler's Name: Miljan Draganic Sample No.: ASMW-2D ☐ FB

Sampling Plan By: Ron Goloubow Dated: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☒ Other Geo[redacted] pump

Purge Water Storage Container Type: Storage tank Storage Location: On site

Date Purge Water Disposed: Where Disposed:

Analyses Requested	No. and Type of Bottles Used
TPHg, TBA, MTBE, and BTEX	VOA with HCl (x3)

Lab Name:

Delivery By:

Well No. ASMW-2D Depth of Water 3.88

Well Diameter: 2" 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

Time	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temp (F°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
1007	3.88							Start purging
1017	4.13	~1.0	2.23	18.62	7.10	7151	-399.7	
1020	4.17	~1.1	2.24	18.73	7.10	7278	-410.1	
1023	4.18	~1.2	2.26	18.80	7.10	7337	-418.5	
1026	4.18	~1.3	2.62	18.77	7.09	7415	-388.3	
1029	4.18	~1.4	2.81	18.76	7.10	8278	-418.2	
1032	4.18	~1.5	2.40	18.77	7.09	9082	-425.0	
1035	4.20	~1.6	2.02	18.63	7.07	9634	-427.3	
1038	4.20	~1.7	1.87	19.00	7.08	9661	-429.1	
1041	4.21	~1.8	1.75	19.23	7.08	9637	-430.7	
1044	4.22	~1.9	1.71	19.27	7.08	9656	-434.1	
1047	4.22	~2.0	1.68	19.33	7.08	9681	-437.2	
1050								Sampling.

Continue remarks on reverse, if needed.

WATER-QUALITY SAMPLING LOG

Project No. RV009155.0009 Date: May 24, 2010 Page 1 of 1

Project Name: Aspire Sampling Location: Aspire, Oakland, CA

Sampler's Name: Miljan Draganic Sample No.: ASMW-5D ☐ FB

Sampling Plan By: Ron Goloubow Dated: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☒ Other Geo[redacted] pump

Purge Water Storage Container Type: Storage tank Storage Location: On site

Date Purge Water Disposed: Where Disposed:

Analyses Requested	No. and Type of Bottles Used
TPHg, TBA, MTBE, and BTEX	
	VOA with HCl (x3)

Lab Name: Test America

Delivery By: Currier

Well No. ASMW-5D Depth of Water 3.30

Well Diameter: 2" 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

Time	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temp (F°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
1045	3.30							Start purging
1055	3.32	~1.5	1.18	18.10	6.90	2640	338.1	Water is murky
1058	3.32	1.6	0.90	18.13	6.89	2644	324.6	
1101	3.32	1.7	2.04	18.13	6.86	2649	294.3	
1104	3.32	1.8	1.05	18.13	6.87	2649	260.1	
1107	3.32	1.9	0.87	18.15	6.87	2648	235.0	
1110	3.32	2.0	0.78	18.09	6.87	2653	207.3	
1113	3.32	2.1	0.73	18.11	6.87	2650	190.8	
1116	3.32	2.3	0.67	18.10	6.87	2652	164.3	
1119	3.32	2.4	0.61	18.07	6.87	2656	147.1	
1122	3.32	2.5	0.57	18.02	6.87	2660	123.4	
1125	3.32	2.6	0.54	17.95	6.87	2662	108.1	
1128	3.32	2.7	0.46	17.89	6.88	2667	103.8	
1131	3.32	~2.8	0.45	17.82	6.88	2665	93.4	
1134	3.32	~2.9	0.44	17.78	6.88	2665	86.2	
1137	3.32	~3.0	0.42	17.75	6.88	2664	84.6	

Continue remarks on reverse, if needed.

1140 → Sampling.

WATER-QUALITY SAMPLING LOG

Project No. RV009155.0009 Date: May 24, 2010 Page 1 of 1

Project Name: Aspire Sampling Location: Aspire, Oakland, CA

Sampler's Name: Miljan Draganic Sample No.: MW-4 ☐ FB

Sampling Plan By: Ron Goloubow Dated: ☐ DUP

Purge Method: ☐ Centrifugal Pump ☐ Disposable Bailer ☐ Hand Bail ☐ Submersible Pump ☐ Teflon Bailer ☒ Other Geo[redacted] pump

Purge Water Storage Container Type: Storage tank Storage Location: On site

Date Purge Water Disposed: Where Disposed:

Analyses Requested	No. and Type of Bottles Used
TPHg, TBA, MTBE, and BTEX	VOA with HCl (x3)

Lab Name: Test America

Delivery By: Currier.

Well No. MW-4 Depth of Water 4.03

Well Diameter: 2" 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

Time	Depth to Water	Volume Purged (gal)	DO (mg/L)	Temp (F°)	PH (SU)	Cond (uS/cm C)	ORP (mV)	Remarks
1357	4.03							Start purging.
1407	5.90	~1.0	0.16	19.25	7.03	1895	-484.0	Water is clear.
1410	5.88	~1.2	0.11	19.27	7.02	1894	-477.2	
1413	5.83	~1.3	0.05	19.28	7.02	1898	-486.9	
1416	5.83	~1.4	0.05	19.32	7.03	1899	-497.9	
1419	5.83	~1.5	0.03	19.27	7.03	1899	-501.6	
1422	5.83	~1.6	0.02	19.38	7.02	1895	-512.9	
1425	5.83	~1.7	0.03	19.44	7.03	1897	-527.8	
1428	5.83	~1.8	0.03	19.45	7.03	1998	-534.8	
1431	5.83	~1.9	0.03	19.48	7.03	1996	-535.8	
1434	5.83	~2.0	0.03	19.50	7.03	1995	-536.4	
1440								Sampling.

Continue remarks on reverse, if needed.