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Subject:

**First Semi-annual 2008 Groundwater Monitoring Report
Former Chevron Bulk Plant 1001430, Former Texaco Bulk Plant 211815, Former
Unocal Bulk Plant 306456
418 Illinois Street, 410 Driveway Street, 328 ½ Illinois Street
Fairbanks, Alaska
File Numbers: 102.38.006, 102.38.005, 102.38.004**

Environmental

Date:
August 13, 2008

Dear Ms. Cardona-Marek:

Contact:
Greg Montgomery

On behalf of Chevron Environmental Management Company (Chevron), ARCADIS U.S., Inc. (ARCADIS) has prepared this report to document the first semi-annual 2008 sampling activities at former Chevron Bulk Plant 1001430, former Texaco Bulk Plant 211815, and former Unocal Bulk Plant 306456 located at 418 Illinois Street, 410 Driveway Street, and 328 ½ Illinois Street., respectively, in Fairbanks, Alaska. The site locations and surrounding area are shown on **Figure 1**.

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Site Descriptions

Our ref:
B0045505
B0045506
B0045512

Former bulk plants 1001430, 211815 and 306456 are located on adjacent properties. The Alaska Railroad Corporation (ARRC) has owned the properties since the early 1900's. The sites are located within the Fairbanks Area-Wide Industrial Reclamation (FAIR) Area which is bounded by Noyes Slough to the north and east and Chena River to the south. Land use in the area consists primarily of industrial activities including: railroad facilities, bulk fuel terminals, gasoline stations, miscellaneous light industrial and warehousing.

Former Chevron terminal 1001430 is located at 418 Illinois Street in Fairbanks, Alaska. Chevron leased the property and operated a bulk plant at the site from 1926 to 1985. Saupe Enterprises began operating a bulk plant at the site in 1985. Sourdough Fuels now operates a bulk plant at the site. Former facilities included several aboveground storage tanks (ASTs) of varying sizes, conveyance piping, pump house, loading racks, a warehouse, and an office. Current facilities include conveyance piping, pump house, loading racks, warehouse, an office, and a new

Imagine the result

horizontal AST farm located west of the original ASTs. Several of the original ASTs are now reportedly used for drum storage. In 1986, a groundwater extraction well was installed in the southwest corner of the site. From 1986 to 1990, the extraction well reportedly removed approximately 10,000 gallons of light non-aqueous phase liquid (LNAPL). Since 1982, 23 groundwater monitoring wells have been installed on and off-site. Several monitoring wells have been destroyed or abandoned due to site activities. There are currently 10 monitoring wells, MW-23, MW-25, TH-1, TH-2, TH-5, TH-7, TH-10, TH-13, TH-17, and TH-18, available and part of the sampling program for the Chevron site.

Site 211815 is located at 410 Driveway Street in Fairbanks, Alaska. Currently the site is leased from the ARRC by Unique Alaska. Unique Alaska has sub-leased the property to ABC General Contracting. Texaco leased the property and operated a bulk plant at the site from 1958 to 1982. Willner's Fuel Distribution then leased the site and operated a bulk plant from 1982 to 1993. A total of 12 ASTs, five 2,020-barrel capacity and seven 476-barrel capacity, were located on the southern portion of the site. The five larger ASTs were removed from the site in 1994 and historically contained No. 1 and No. 2 diesel, unleaded gasoline, and regular leaded gasoline. The smaller ASTs historically contained No. 10 oil. Information on their removal is unknown at this time. Two of the ASTs (one large and one small) were reportedly rented to a chemical company and contained silicone. The fuel holding and dispensing facilities were removed from the site sometime between 1994 and 2000. Eleven monitoring wells, AR-81, AR-85, MW-1 through MW-5, and MW-7 through MW-10, are currently available and part of the sampling program for the Texaco site.

Site 306456 is located on a 3.11 acre parcel at 328.5 Illinois Street in Fairbanks, Alaska. Unocal utilized the western 1.84 acres of the site to store and dispense fuel between 1952 and 1982, and added the western 1.27 acres onto the lease in 1961. Former fuel facilities included two 55,000-gallon and nine 20,000-gallon ASTs, underground pipelines, pumping facilities, a loading rack, and fuel dispensing pumps. Fuel stored on the site consisted of diesel and aviation gas. The Alaska Road Commission leased the eastern 1.27 acres of the site from 1941 to 1981. The entire site was leased by Interior Leasing from 1982 to 1989 and by CEM Leasing from 1989 to 2001. From 1982 to 2001, the facility was operated by Petroleum Sales. According to Phil Tannehill, co-owner of Petroleum Sales, the ASTs were removed in 1993, and the piping and dispensing equipment were removed in 1997. OK Lumber and Big State Logistics are currently leasing the property from the railroad. During a spring 2005 site visit, surface grading and fence alterations were noted. The site is now accessible from the north via the railroad right-of-way. The west warehouse

appears to contain some sort of small business (no further details are available). Site features and the locations of buildings onsite can be found on **Figure 2**. Nineteen monitoring wells, GEI-1 through GEI-12, K-5, K-7, MW-2, MW-4, MW-5, MW-6 and MW-13, are currently available and part of the sampling program for the Unocal site.

Groundwater monitoring is conducted on a semi-annual basis at each of these sites. Wells which have historically had light-non-aqueous phase liquid (LNAPL), are gauged, and LNAPL is recovered (when present) on a monthly basis. The gauging data are included in **Tables 1a, 1b, and 1c**.

Groundwater Monitoring

First semi-annual 2008 groundwater monitoring was conducted by Oasis in April 2008. Monitoring wells TH-1, TH-2, TH-5, TH-7, TH-10, TH-13, MW-23 and MW-25 (Chevron); AR-81, AR-85, MW-3, MW-4, MW-7 through MW-10 (Texaco); and GEI-1 through GEI-4, GEI-9 through GEI-12, MW-2, MW-4 through MW-6 and K-5 (Unocal); were gauged.

A decontaminated oil-water interface probe was used to gauge the water level and depth to LNAPL, if present. LNAPL was measured in monitoring wells MW-4 (Texaco); GEI-2, GEI-11 and GEI-12 (Unocal) with thickness ranging from 0.01 feet in monitoring well MW-4 (Texaco) to 0.44 feet in monitoring well GEI-11 (Unocal). Groundwater elevations were corrected for the presence of LNAPL using the following formula:

$$\text{Corrected Groundwater Elevation} = (\text{Top of Casing} - \text{Depth to Water}) + (\text{LNAPL Thickness} \times 0.8)$$

Wells were purged of three casing volumes of water using new disposable polyethylene bailer, a typhoon pump (MW-25), or a peristaltic pump (TH-13). Water quality parameters including temperature, pH and electrical conductivity were measured for each purge casing volume and are recorded on groundwater sample field data sheets presented in **Appendix A**.

Groundwater Flow

Groundwater elevations in site monitoring wells ranged from 426.24 feet above sea level (asl) in monitoring well MW-7 (Texaco) to 428.86 feet asl in monitoring well AR-85 (Texaco). Groundwater gauging data can be found in **Tables 1a, 1b** and **1c**. Groundwater flow direction in the first quarter 2008 was generally to the southwest as indicated by the potentiometric surface map and groundwater elevation contours seen on **Figure 2**. This is consistent with previous observations.

Laboratory Analyses

Samples collected from the site monitoring wells were analyzed for:

- Gasoline range organics (GRO) by Alaska Method AK 101;
- Diesel range organics (DRO) by Alaska Method AK 102;
- Residual range organics (RRO) by Alaska Method 103; and
- Benzene, toluene, ethylbenzene and total xylenes (BTEX) by EPA Method 8021B.

As requested by ADEC, the samples from the two most impacted wells without LNAPL at each site (TH-13 and TH-17 at the Chevron site, MW-2 and MW-3 at the Texaco site, and GEI-2 and GEI-12 at the Unocal site) were sampled for the following additional contaminants of potential concern (COPCs):

- Polycyclic aromatic hydrocarbons (PAHs) by 8270C;
- 1, 2-dibromoethane (EDB) using EPA Method 8011;
- Eight RCRA metals by EPA Methods 7470A (mercury only) and 6010B; and
- Seven volatile organic compounds (VOCs) by EPA Method 8260B.

Monitoring well GEI-11 was erroneously sampled for EDB using EPA Method 8011. Additionally, the following table displays the wells that were not sampled during the first semi-annual 2008 sampling event and the associated reason:

Well ID	Reason Not Sampled
Former Chevron 1001430	
TH-5	absorbent sock frozen in well
TH-17	well monument underwater
TH-18	well monument underwater
Former Texaco 211815	
MW-1	well monument underwater
MW-2	ice in well casing
MW-4	ice in well casing
MW-5	well monument underwater
Former Unocal 306456	
GEI-1	ice in well casing
GEI-5	well monument underwater
GEI-6	well monument underwater
GEI-7	ice in well casing
GEI-8	absorbent sock frozen in well
MW-13	ice in well casing
K-7	ice in well casing

Analytical Results

Samples collected from monitoring wells TH-7 and TH-10 (Chevron), AR-85 and MW-9 (Texaco), MW-2 and MW-4 (Unocal) did not contain target analytes at concentrations exceeding the applicable ADEC Table C groundwater cleanup levels (GCLs).

Concentrations of GRO, DRO and BTEX exceeded ADEC GCLs in groundwater samples at each of the three sites. RRO exceeded the GCL in groundwater samples collected at the former Chevron and former Unocal sites. None of the samples collected during this event exceeded the GCLs for PAHs or the seven VOCs by 8260B. The groundwater samples collected from monitoring wells GEI-2 and GEI-11 (Unocal) exceed the EDB GCL of 0.05 micrograms per liter (µg/L) with concentrations of 73.3 µg/L and 2.13 µg/L, respectively.

At least one RCRA metal (arsenic, selenium, cadmium and lead) exceeded the GCLs in the samples from monitoring wells TH-13 (Chevron), MW-3 (Texaco), GEI-2 and GEI-12 (Unocal). GCL exceedances for arsenic and selenium were due to elevated method detection limits (MDLs) which were higher than the applicable GCL; samples

were non-detect for those metals, but potentially exceeded the respective GCL at lower concentrations.

In general, the analytical results are consistent with historical groundwater monitoring results. The dissolved-phase concentrations of petroleum hydrocarbons appear to be relatively stable at the three sites. Analytical results are summarized in **Tables 2a, 2b, 2c, 3 and 4** and displayed on **Figure 3**.

Laboratory Data Quality Assurance Summary

As required by ADEC (Technical Memorandum 06-002, dated October 9, 2006), ARCADIS completed a laboratory data review checklist for each of the TestAmerica laboratory reports from the first semi-annual 2008 groundwater monitoring event. The laboratory reports are included as **Appendix B**. The data review checklists are included as **Appendix C**. The following quality assurance (QA) summary describes six parameters, related to the quality and usability of the data presented in this report.

1. Precision - Based on the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) relative percent differences, the data meet precision objectives with the exception of the dichlorodifluoromethane LCS and LCSD in the samples collected from the former Unocal site. The LCS and LCSD for this analyte were outside of the acceptable laboratory limits. Three groundwater field duplicate samples were collected and the analytes were within relative percent difference (RPD) limits (30% for water samples), except for the DRO duplicate from the former Texaco site, which had an RPD of 58.25%.
2. Accuracy - The data meet accuracy objectives as indicated by the laboratory quality control samples, which were within method/laboratory limits, with a few exceptions. 1,2,3-trichlorobenzene was detected in the method blank for VOC 8260B analysis for the samples submitted from the former Unocal site and the former Texaco site. Additionally, surrogate recoveries for the following analytes were outside of the acceptable laboratory limits due to matrix effects: GRO, DRO and RRO (former Unocal), GRO (former Chevron), and GRO (QA/QC duplicate, former Texaco). Analytes were not detected in the three trip blanks collected during groundwater monitoring.

3. Representativeness - The data appear to be representative of site conditions and are generally consistent with historical groundwater monitoring results and expected impacts to groundwater.
4. Comparability - Comparability is not applicable to these laboratory results.
5. Completeness - The results appear to be valid and usable, and thus, the laboratory results have 100% completeness.
6. Sensitivity - The sensitivity of the analyses was adequate for the samples as the method detection limits (MDLs) were less than the ADEC GCLs with the following exceptions. RRO MDLs for the samples collected from the former Unocal site were above the GCL with the exception of the samples collected from monitoring wells MW-2, MW-4 and MW-6. Arsenic, selenium, lead and cadmium MDLs for various samples collected from all three sites exceeded the respective GCLs.

Purge Water Disposal

Purge water generated during well sampling and equipment cleaning was collected into DOT-approved drums and temporarily stored onsite. The purge water drums were sampled and the samples were submitted to Lancaster Laboratories in Lancaster, Pennsylvania. The waste water was approved for disposal by ADEC and disposed of by Emerald Alaska.

Conclusions and Recommendations

During the first semi-annual 2008 event, analytical data from several monitoring wells showed concentrations of GRO, DRO, RRO, and BTEX were greater than ADEC GCLs at each of the three sites (with the exception of RRO at the former Texaco site). These analytical results are consistent with historical data. RCRA metals detected in samples from site wells may be related to regional hydrogeology, rather than former site operations. Monthly LNAPL gauging and recovery will continue.

ARCADIS reviewed the current groundwater sampling schedule and dissolved constituent trends in groundwater monitoring wells. ARCADIS recommends sampling several of the Unocal and Chevron wells on an annual basis rather than a semi-annual basis. These wells are generally located between up-gradient and down-gradient wells or are not impacted.

The table below reflects the recommended groundwater sampling schedule:

Site	Semi-annual	Annual
Chevron	MW-23, MW-25, TH-1, TH-2, TH-5, TH-10, and TH-13	TH-7, TH-17, and TH-18
Texaco	AR-81, AR-85, MW-1 through MW-5, and MW-7 through MW-10	
Unocal	GEI-1, GEI-2, GEI-3, GEI-5, GEI-6, GEI-7, GEI-10, GEI-11, GEI-12, K-5, MW-2, MW-5, MW-6 and MW-13	GEI-4, GEI-8, GEI-9, K-7, MW-4
Notes: (1) Semi-annual sampling is performed in March and September (2) Annual sampling is performed in September		

The COPC screening has been completed at the Chevron, Texaco, and Unocal sites. ARCADIS recommends eliminating the following analyses from the sampling program:

- PAHs by 8270C
- Volatiles by EPA Method 8260B (will continue BTEX analysis by 8021B)
- EDB using EPA Method 8011 (Chevron and Texaco only)

A PDF file of this document and an electronic copy of the laboratory deliverables are included on a CD with this report. Should you have any questions or comments regarding this report, please feel free to contact ARCADIS at 206.726.4742.

Sincerely,

ARCADIS

Michael L. Strickler, G.I.T.
Geologist I

Greg Montgomery
Project Scientist

Copies:

Dan Carrier, Chevron Environmental Management Company, Brea, California
Susan Schrader, ARRC, Anchorage, Alaska
OK Lumber, Fairbanks, Alaska
Sourdough Fuel, Inc., Anchorage, Alaska
Big State Logistics, Inc., Fairbanks, Alaska
Alaska Properties LLC, Fairbanks, Alaska

Attachments:

Table 1a	Groundwater Elevation Data (Former Chevron 1001430)
Table 1b	Groundwater Elevation Data (Former Texaco 211815)
Table 1c	Groundwater Elevation Data (Former Unocal 306456)
Table 2a	Groundwater Analytical Data (Former Chevron 1001430)
Table 2b	Groundwater Analytical Data (Former Texaco 211815)
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Table 3	Groundwater VOC and RCRA Metals Analytical Data
Table 4	Groundwater PAH Analytical Data
Figure 1	Site Location Map
Figure 2	Groundwater Elevation Contours – April 4, 2008
Figure 3	Analytical Summary Map
Appendix A	Groundwater Sampling Field Data Sheets
Appendix B	Laboratory Data Reports
Appendix C	ADEC Data Review Checklists

ARCADIS

Tables

**Table 1a
Groundwater Elevation Data**

Former Chevron 1001430
418 Illinois
Fairbanks, Alaska

Well	Date Sampled	Well Elevation (fast)	Depth to Water (feet from TOC)	Depth to LNAPL (feet)	Groundwater Elevation¹ (fast)
TH-1	06/24/02	440.41	17.80	--	422.61
	09/25/02		15.46	--	424.95
	04/29/03		17.95	--	422.46
	09/03/03		14.99	--	425.42
	03/10/04		18.06	--	422.35
	09/15/04		17.67	--	422.74
	04/19/05		18.55	--	421.86
	09/08/05		16.77	--	423.64
	04/20/06		18.58	--	421.83
	09/14/06		16.46	--	423.95
	03/14/07		18.57	--	421.84
	09/12/07	445.69	16.79	--	428.90
	04/04/08		18.78	--	426.91
TH-2	06/24/02	438.68	Well not sampled - frozen shut		
	09/25/02		13.77	--	424.91
	04/29/03		16.24	present	422.44
	09/03/03		13.22	--	425.46
	03/10/04		16.31	0.02	422.39
	09/15/04		15.92	0.04	422.79
	04/19/05		16.87	0.10	421.89
	09/08/05		15.03	0.03	423.67
	04/20/06		16.79	0.11	421.98
	09/14/06		14.70	--	423.98
	02/06/07		Well not sampled - monument cover frozen shut		
	03/14/07		Well not sampled - monument cover frozen shut		
	04/30/07		16.25	--	422.43
	05/18/07		16.00	--	422.68
	09/13/07	443.88	14.99	--	428.89
	10/15/07		15.51	--	428.37
	01/29/08		16.58	0.03	427.32
	02/13/08		16.68	0.04	427.23
	04/04/08		16.92	--	426.96
TH-4	06/24/02	436.92	13.67	--	423.25
	09/25/02		12.20	--	424.72
	04/29/03		14.70	--	422.22
	09/03/03		11.67	--	425.25
	03/10/04		14.86	--	422.06
	Well decommissioned for railroad construction on 8/19/2004				
TH-5	06/24/02	437.62	13.64	--	423.98
	09/25/02		12.79	present	424.83
	04/29/03		15.14	present	422.48
	09/03/03		12.17	present	425.45
	03/10/04		NM	0.03	NM
	09/15/04		14.84	--	422.78
	04/19/05		15.72	--	421.9
	09/08/05		13.95	0.02	423.69
	04/20/06		15.74	--	421.88
	09/14/06		13.63	--	423.99
	12/01/06		14.89	--	422.73
	12/22/06		15.12	--	422.5
	02/06/07		15.41	--	422.21
	03/14/07		15.68	--	421.94
	04/30/07		15.16	--	422.46
	05/18/07		14.95	--	422.67
	09/13/07	442.8	13.91	--	428.89
	10/15/07		14.41	--	428.39
	11/19/07		14.45	--	428.35
	01/29/08		16.49	--	426.31
02/13/08		15.58	--	427.22	
04/04/08		15.90	--	426.90	

**Table 1a
Groundwater Elevation Data**

Former Chevron 1001430
418 Illinois
Fairbanks, Alaska

Well	Date Sampled	Well Elevation (fasl)	Depth to Water (feet from TOC)	Depth to LNAPL (feet)	Groundwater Elevation¹ (fasl)
TH-7	06/25/02	440.18	16.31	--	423.87
	09/25/02		15.31	--	424.87
	04/29/03		17.79	--	422.39
	09/03/03		14.81	--	425.37
	03/10/04		17.92	--	422.26
	09/15/04		17.47	--	422.71
	04/19/05		18.37	--	421.81
	09/08/05		16.55	--	423.63
	04/20/06		18.35	--	421.83
	09/14/06		16.23	--	423.95
	03/14/07		18.33	--	421.85
	09/12/07	445.34	16.53	--	428.81
	04/04/08		18.57	--	426.77
TH-10	06/24/02	438.62	14.58	--	424.04
	09/25/02		13.62	--	425.00
	04/29/03		16.03	--	422.59
	09/03/03		13.13	--	425.49
	03/10/04		16.18	--	422.44
	09/15/04		15.80	--	422.82
	04/19/05		16.65	--	421.97
	09/08/05		14.88	--	423.74
	04/20/06		16.66	--	421.96
	09/13/06		14.53	--	424.09
	03/14/07		16.61	--	422.01
	09/12/07	443.81	14.84	--	428.97
	04/04/08		16.82	--	426.99
TH-13	06/24/02	436.74	13.09	--	423.65
	09/25/02		12.02	--	424.72
	04/29/03		14.50	--	422.24
	09/03/03		11.45	--	425.29
	03/10/04		14.66	--	422.08
	09/23/04		N/A	--	N/A
	04/19/05		15.10	--	421.64
	09/08/05		13.37	--	423.37
	04/20/06		Well not sampled - buried under ice, monument filled		
	09/14/06		12.99	--	423.75
	03/14/07		15.09	--	421.65
	09/13/07	441.94	13.30	--	428.64
	04/04/08		15.30	--	426.64
TH-17	06/24/02	435.38	11.60	--	423.78
	09/25/02		10.59	--	424.79
	04/29/03		11.20	--	424.18
	09/03/03		10.08	--	425.3
	03/10/04		13.20	--	422.18
	09/15/04		12.77	--	422.61
	04/19/05		Well not sampled - buried under ice, monument filled		
	09/08/05		11.87	--	423.51
	04/20/06		Well not sampled - buried under ice, monument filled		
	09/14/06		11.93	--	423.45
	03/14/07		13.65	--	421.73
	09/13/07	440.57	11.77	--	428.80
	04/04/08		Well not sampled - monument underwater		

**Table 1a
Groundwater Elevation Data**

Former Chevron 1001430
418 Illinois
Fairbanks, Alaska

Well	Date Sampled	Well Elevation (fasl)	Depth to Water (feet from TOC)	Depth to LNAPL (feet)	Groundwater Elevation¹ (fasl)	
TH-18	06/24/02	435.77	Well not sampled - frozen shut			
	09/25/02		11.01	--	424.76	
	04/29/03		Well not sampled - frozen shut			
	09/03/03		10.48	--	425.29	
	03/10/04		13.61	--	422.16	
	09/23/04		N/A	--	N/A	
	04/19/05		Well not sampled - buried under ice, monument filled			
	09/08/05		12.28	--	423.49	
	04/20/06		Well not sampled - buried under ice, monument filled			
	09/14/06		11.53	--	424.24	
	03/15/07		14.05	--	421.72	
	09/18/07		440.95	12.40	--	428.55
	04/04/08		Well not sampled - monument underwater			
	MW-23		06/25/02	436.67	14.32	--
09/25/02		11.80	--		424.87	
04/29/03		14.21	--		422.46	
09/03/03		11.30	--		425.37	
03/10/04		14.38	--		422.29	
09/15/04		13.97	--		422.70	
04/19/05		14.86	--		421.81	
09/08/05		13.06	--		423.61	
04/20/06		14.88	--		421.79	
09/13/06		12.73	--		423.94	
03/14/07		Well not sampled - under a large pile of lumber				
09/12/07		441.84	13.03		--	428.81
04/04/08		15.03	--		426.81	
MW-25		06/25/02	440.77		16.89	present
	09/25/02	15.94		present	424.83	
	04/29/03	18.40		present	422.37	
	09/03/03	15.40		present	425.37	
	03/10/04	18.46		0.05	422.35	
	09/15/04	18.03		0.15	422.86	
	04/19/05	19.05		0.16	421.85	
	09/08/05	17.23		0.13	423.64	
	04/20/06	18.93		0.15	421.96	
	09/13/06	17.16		0.13	423.71	
	12/01/06	18.16		--	422.61	
	12/22/06	18.34		--	422.43	
	02/06/07	18.63		0.03	422.16	
	03/14/07	18.88		0.01	421.90	
	04/30/07	18.40		--	422.37	
	05/18/07	18.15		--	422.62	
	09/13/07	445.85		17.08	--	428.77
	10/15/07	17.60		--	428.25	
	01/29/08	17.82		--	428.03	
	02/13/08	15.58		--	430.27	
04/04/08	19.08	--	426.77			

Notes:
 TOC = Top of casing
 fasl = feet above sea level
 N/A = Not applicable
 LNAPL = Light non-aqueous phase liquid
 Bold Type = Results of most recent sampling event
¹Where LNAPL was present, groundwater elevation were adjusted using an average specific gravity of 0.80.
 NM = Not Measured

**Table 2a
Groundwater Analytical Data**

Former Chevron 1001430
418 Illinois
Fairbanks, Alaska

Well	Date	GRO	DRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes
ADEC GCL:		1,300	1,500	1,100	5.0	1,000	700	10,000
TH-1	06/24/02	3,160	103,000	--	1.61	<2.50	56.1	317
	09/25/02	1,510	7,400	--	2.73	3.52	48.4	325
	04/29/03	1,500	33,000	2,900	<2.0	<0.5	27	120
	09/03/03	1,500	47,000	7,700	<2.0	<0.5	27	160
	03/10/04	2,300	31,000	3,800	<2.0	<0.5	30	160
	09/15/04	1,700	62,000	7,600	1.7	<0.5	21	120
	04/19/05	1,200	64,000	<3,900	<2.0	<0.5	15	68
	09/08/05	1,100	25,000	1,100	1.3	<0.5	16	95
	04/20/06	740	12,000	710	0.7	<0.5	11	45
	09/14/06	860	13,000	<490	1.1	<0.5	12	69
	03/14/07	600	4,400	<210	<2	<1	8	30
	03/14/07 ^D	600	5,100	<200	<2	<1	8	30
	09/12/07	600	8,600	<200	1	<1	7	30
	09/12/07 ^D	500	7,800	<200	1	<1	6	20
	04/08/08	455	5,570	<750	0.813	<0.500	7.30	26.2
TH-2	06/24/02	Well not sampled-frozen shut						
	09/25/02	38,900	15,300	--	1,540	5,220	1,030	6,600
	04/29/03	LNAPL present - well not sampled						
	09/03/03	37,000	190,000	150,000	730	3800	860	6,600
	03/10/04	LNAPL present - 0.02' - well not sampled						
	09/15/04	LNAPL present - 0.04' - well not sampled						
	04/19/05	LNAPL present - 0.1' - well not sampled						
	09/08/05	LNAPL present - 0.03' - well not sampled						
	04/20/06	LNAPL present - 0.11' - well not sampled						
	09/14/06	25,000	38,000	44,000	560	630	1,000	5,800
	03/14/07	Well not sampled-buried under ice						
09/13/07	30,000	98,000	62,000	600	2,300	800	5,600	
04/08/08	47,100	58,700	30,200	652	1,650	1,280	8,580	
TH-4	06/24/02	178	3,490	--	5.49	1.21	1.45	19.1
	09/25/02	8,020	9,350	--	903	542	90.7	965
	04/29/03	11,000	41,000	3,500	970	1,200	73	1,200
	09/03/03	7,100	120,000	8,100	420	680	35	880
	03/10/04	14,000	150,000	10,000	1,600	940	82	1,300
Well decommissioned for railroad construction on 8/19/2004								
TH-5	06/24/02	1,100	34,500	--	6.05	1.45	18.3	98.1
	09/25/02	LNAPL present - well not sampled						
	04/29/03	LNAPL present - well not sampled						
	09/03/03	LNAPL present - well not sampled						
	03/10/04	LNAPL present - 0.03' - well not sampled						
	09/15/04	1,300	77,000	24,000	6.6	1.5	24	140
	04/19/05	1,100	180,000	<10,000	3.2	1.1	19	100
	09/08/05	LNAPL present - 0.02' - well not sampled						
	04/20/06	1,300	250,000	100,000	2.5	0.9	17	130
	09/14/06	700	7,700	<500	2.0	0.6	9.0	56
	03/14/07	900	70,000	38,000	<10	<1	10	60
09/13/07	900	13,000	6,100	4	<1	7	40	
04/08/08	Well not sampled - ice in well							
TH-7	06/25/02	163	5,160	--	1.35	<0.500	1.00	4.67
	09/25/02	153	4,630	--	0.881	<0.500	<0.500	1.48
	04/29/03	260	12,000	2,800	1.0	<0.5	0.9	2.3
	09/03/03	140	8,000	3,300	1.6	<0.5	3.6	3.5
	03/10/04	250	8,900	2,300	<2.0	<0.5	0.7	<1.5
	09/15/04	210	14,000	2,800	0.6	<0.5	<0.5	<1.5
	04/19/05	210	15,000	560	0.7	<0.5	<0.5	<1.5
	09/08/05	120	1,800	1,300	<0.5	<0.5	<0.5	1.6
	04/20/06	91	3,700	2,300	<0.5	<0.5	<0.5	<1.5
	09/14/06	100	790	430	0.6	<0.5	<0.5	<1.5
	03/14/07	50	1,200	480	<1	<1	<1	<2
	09/12/07	100	1,100	540	<1	<1	<1	<2
	04/08/08	82.2	932	<750	<0.500	<0.500	<0.500	1.50

**Table 2a
Groundwater Analytical Data**

Former Chevron 1001430
418 Illinois
Fairbanks, Alaska

Well	Date	GRO	DRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	
ADEC GCL:		1,300	1,500	1,100	5.0	1,000	700	10,000	
TH-10	06/24/02	<50.0	236	--	<0.200	<0.500	<0.500	<1.00	
	09/25/02	<80.0	144	--	<0.500	<0.500	<0.500	<1.00	
	04/29/03	<10	320	1,800	<0.5	<0.5	<0.5	<1.5	
	04/29/03 ^D	<10	320	1,800	<0.5	<0.5	<0.5	<1.5	
	09/03/03	<10	230	1,600	<0.5	<0.5	<0.5	<1.5	
	09/3/03 ^D	<10	300	2,000	<0.5	<0.5	<0.5	<1.5	
	03/10/04	<10	300	1,600	<0.5	<0.5	<0.5	<1.5	
	03/10/04 ^D	<10	290	1,700	<0.5	<0.5	<0.5	<1.5	
	09/15/04	10	210	990	<0.5	<0.5	<0.5	<1.5	
	09/15/04 ^D	<10	220	1,100	<0.5	<0.5	<0.5	<1.5	
	04/19/05	<10	530	2,600	<0.5	<0.5	<0.5	<1.5	
	04/19/05 ^D	<10	490	2,500	<0.5	<0.5	<0.5	<1.5	
	09/08/05	<10	230	1,500	<0.5	<0.5	<0.5	<1.5	
	9/8/2005 ^D	<10	220	1,400	<0.5	<0.5	<0.5	<1.5	
	04/20/06	<10	1,100	5,500	<0.5	<0.5	<0.5	<1.5	
	04/20/06 ^D	<10	620	2,900	<0.5	<0.5	<0.5	<1.5	
	09/13/06	<10	110	600	<0.5	<0.5	<0.5	<1.5	
	09/13/06 ^D	<10	140	790	<0.5	<0.5	<0.5	<1.5	
	03/14/07	<10	350	1,200	<1	<1	<1	<2	
	09/12/07	<10	200	1,000	<1	<1	<1	<2	
04/08/08	<50.0	214	<743	<0.500	<0.500	<0.500	<1.00		
04/08/08 ^D	<50.0	182	<735	<0.500	<0.500	<0.500	<1.00		
TH-13	06/24/02	264	9,400	--	2.92	0.955	2.82	22.2	
	09/25/02	87.0	2,180	--	2.28	<0.500	0.953	5.23	
	04/29/03	1,100	16,000	2,100	84	1.3	5.8	30	
	09/03/03	360	8,800	1,400	8.3	<0.5	2	14	
	03/10/04	1,600	30,000	2,200	120	10	16	75	
	09/23/04	3,200	21,000	<400	200	36	43	190	
	04/19/05	1,700	110,000	<3,900	14	34	25	210	
	09/08/05	1,700	5,100	2,400	83	100	42	170	
	04/20/06	Well not sampled - buried under ice, monument filled							
	09/14/06	440	2,500	110	59	0.6	4.4	12	
	03/15/07	300	2,000	480	60	<1	1	2	
	09/13/07	500	3,000	<200	100	<1	4	7	
	04/10/08	548	5,360	<735	89.0	1.26	4.56	22.3	
	TH-17	06/24/02	1,820	10,500	--	175	<2.50	104	234
09/25/02		2,860	8,900	--	198	6.32	105	269	
04/29/03		5,000	23,000	6,900	57	9.5	270	860	
09/03/03		1,800	36,000	25,000	170	2.5	120	220	
03/10/04		1,200	44,000	10,000	17	3.5	79	150	
09/15/04		780	81,000	24,000	5.2	3.4	44	97	
04/19/05		Well not sampled - buried under ice, monument filled							
09/08/05		990	8,900	4,100	13	2.0	49	140	
04/20/06		Well not sampled - buried under ice, monument filled							
09/14/06		1,400	3,400	1,500	16	2.1	70	150	
03/15/07		1,500	4,100	580	4	2	50	100	
09/13/07		1,300	9,100	2,500	10	2	70		
04/04/08	Well not sampled - monument underwater								
TH-18	06/24/02	Well not sampled - frozen shut							
	09/25/02	1,930	4,730	--	277	<5.00	70.5	139	
	04/29/03	Well Frozen - well not sampled							
	09/03/03	2,600	3,300	860	290	5.4	120	210	
	03/10/04	2,600	2,700	1,400	87	3.8	140	240	
	09/23/04	1,100	1,300	470	17	0.7	64	72	
	04/19/05	Well not sampled - buried under ice, monument filled							
	09/08/05	1,300	1,400	510	56	2	71	140	
	04/20/06	Well not sampled - buried under ice, monument filled							
	09/14/06	2,200	1,300	<98	86	2.4	130	230	
	03/15/07	2,100	1,800	130	40	1	100	100	
	09/13/07	1,200	2,000	390	60	2	100	100	
04/04/08	Well not sampled - monument underwater								

**Table 2a
Groundwater Analytical Data**

Former Chevron 1001430
418 Illinois
Fairbanks, Alaska

Well	Date	GRO	DRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes
ADEC GCL:		1,300	1,500	1,100	5.0	1,000	700	10,000
MW-23	06/25/02	<50.0	1,370		0.230	<0.500	<0.500	<1.00
	09/25/02	<80.0	2,800		<0.500	<0.500	0.522	1.05
	04/29/03	48	2,800	800	0.6	<0.5	<0.5	<1.5
	09/03/03	77	1,100	660	<0.5	<0.5	3.2	2.3
	03/10/04	26	22,000	5,800	<0.5	<0.5	<0.5	<1.5
	09/15/04	31	9,300	2,600	<0.5	<0.5	<0.5	<1.5
	04/19/05	34	9,900	580	<0.5	<0.5	<0.5	<1.5
	09/08/05	31	1,000	580	<0.5	<0.5	<0.5	<1.5
	04/20/06				Well not sampled - monument flooded			
	09/13/06	38	1,000	440	<0.5	<0.5	<0.5	<1.5
	03/04/07				Well not sampled-under equipment			
	09/12/07	30	1,400	440	<1	<1	<1	<2
	04/08/08	<50.0	1,540	<758	<0.500	<0.500	<0.500	<1.00
	MW-25	06/25/02				LNAPL present - well not sampled		
09/25/02					LNAPL present - well not sampled			
04/29/03					LNAPL present - well not sampled			
09/03/03					LNAPL present - well not sampled			
03/10/04					LNAPL present - 0.05' - well not sampled			
09/15/04					LNAPL present - 0.15' - well not sampled			
04/19/05					LNAPL present - 0.16' - well not sampled			
09/08/05					LNAPL present - 0.13' - well not sampled			
04/20/06					LNAPL present - 0.15' - well not sampled			
09/13/06					LNAPL present - 0.13' - well not sampled			
03/14/07					LNAPL present - 0.01' - well not sampled			
09/13/07	1,300	1,700	210	10	2	30	100	
04/10/08	1,840	3,620	<721	11.3	3.50	36.8	142	
Trip Blank	04/29/03	<10	--	--	<0.5	<0.5	<0.5	<1.5
	09/03/03	<10	--	--	<0.5	<0.5	<0.5	<1.5
	03/10/04	<10	--	--	<0.5	<0.5	<0.5	<1.5
	09/15/04	<10	--	--	<0.5	<0.5	<0.5	<1.5
	04/19/05	<10	--	--	<0.5	<0.5	<0.5	<1.5
	09/08/05	<10	--	--	<0.5	<0.5	<0.5	<1.5
	04/19/06	<10	--	--	<0.5	<0.5	<0.5	<1.5
	09/13/06	<10	--	--	<0.5	<0.5	<0.5	<1.5
	03/14/07	<10	--	--	<1	<1	<1	<2
	09/12/07	<10	--	--	<1	<1	<1	<2
04/08/08	<50.0	--	--	<0.500	<0.500	<0.500	<1.00	
Notes:								
All results are reported in micrograms per liter (µg/l)								
GRO = Gasoline range organics								
DRO = Diesel range organics								
RRO = Residual range organics								
GCL = ADEC 18 AA 75 Groundwater Cleanup Level								
LNAPL = Light non-aqueous phase liquid								
Bold Type = Results of most recent sampling event								
Highlighted concentrations are greater than the applicable ADEC GCL.								
^o = Duplicate sample								
"--" = Analyte not included in sampling event								

**Table 1b
Groundwater Elevation Data**

Former Texaco 211815
410 Driveway Street
Fairbanks, Alaska

Well ID	Date Sampled	Well Elevation (fasl)	Depth to Groundwater (feet from TOC)	Depth to LNAPL (feet)	Groundwater Elevation ¹ (fasl)	
AR-81	06/25/02	436.99	13.28	--	423.71	
	09/24/02		12.34	--	424.65	
	04/29/03		14.82	--	422.17	
	09/03/03		11.83	--	425.16	
	03/10/04				Well Frozen	
	09/16/04		14.53	--	422.46	
	04/19/05		15.43	--	421.56	
	09/07/05		13.60	--	423.39	
	04/20/06		15.46	--	421.53	
	09/12/06		13.30	--	423.69	
	03/15/07		15.40	--	421.59	
	09/10/07		444.44	13.61	--	430.83
	04/04/08		15.62	--	428.82	
AR-82	06/25/02	437.47	13.64	--	423.83	
	09/24/02		12.69	--	424.78	
	04/29/03		15.13	--	422.34	
	09/03/03		12.17	--	425.30	
	Well Removed from Sampling Program in September 2003					
AR-85	06/25/02	437.23	13.45	--	423.78	
	09/24/02		12.49	--	424.74	
	04/29/03		15.00	--	422.23	
	09/03/03		12.00	--	425.23	
	03/10/04				Well Beneath Snow bank	
	09/16/04		14.68	--	422.55	
	04/19/05				Well buried and surrounded by equipment	
	09/07/05		13.79	--	423.44	
	04/20/06		15.61	--	421.62	
	09/12/06		13.45	--	423.78	
	03/14/07				Well buried under snow bank	
	09/10/07		444.65	13.74	--	430.91
	04/04/08		15.79	--	428.86	
MW-1	10/23/03	436.36	12.28	--	424.08	
	03/10/04		14.14	--	422.22	
	09/16/04		13.72	--	422.64	
	04/19/05				Well Beneath Snow bank	
	09/07/05		12.77	--	423.59	
	04/20/06				Well buried and surrounded by equipment	
	09/12/06		12.47	--	423.89	
	03/15/07		14.57	--	421.79	
	09/10/07		441.46	12.76	--	428.70
	04/04/08				Well not sampled - monument underwater	
MW-2	10/23/03	437.06	13.35	--	423.71	
	03/10/04		14.89	0.04	422.20	
	09/16/04		14.51	0.03	422.57	
	04/19/05		15.47	0.10	421.67	
	09/07/05		13.58	0.01	423.49	
	04/20/06				well not sampled - covered with snow and gravel	
	08/11/06		13.85	0.01	423.22	
	09/12/06		13.26	--	423.80	
	12/01/06		14.56	--	422.50	
	12/22/06		14.80	--	422.26	
	02/06/07		15.08	--	421.98	
	03/16/07		15.31	--	421.75	
	04/30/07				Well not sampled due to ice in well	
	05/18/07				Well not sampled due to ice in well	
	09/10/07		442.23	13.56	--	428.67
	10/15/07			14.04	--	428.19
	11/19/07			14.10	--	428.13
	01/29/08			15.18	--	427.05
	02/13/08			15.24	--	426.99
	04/04/08					Well not sampled - absorbent sock frozen

**Table 1b
Groundwater Elevation Data**

Former Texaco 211815
410 Driveway Street
Fairbanks, Alaska

Well ID	Date Sampled	Well Elevation (fasi)	Depth to Groundwater (feet from TOC)	Depth to LNAPL (feet)	Groundwater Elevation ¹ (fasi)	
MW-3	10/23/03	437.49	13.60	--	423.89	
	03/10/04		15.39	--	422.10	
	09/16/04		14.99	--	422.50	
	04/19/05		15.88	--	421.61	
	09/07/05		14.10	--	423.39	
	04/20/06		15.87	--	421.62	
	09/12/06		13.78	--	423.71	
	03/16/07		15.84	--	421.65	
	09/10/07		442.67	14.07	--	428.60
	04/04/08	16.06	--	426.61		
MW-4	10/22/03	437.33	13.70	Present	423.63	
	03/10/04		15.25	0.23	422.26	
	09/16/04		14.85	0.03	422.50	
	04/19/05		well not sampled - covered with ice, monument filled with ice and water			
	09/07/05		13.92	--	423.41	
	04/20/06		15.74	0.32	421.85	
	08/11/06		14.19	--	423.14	
	09/12/06		13.63	--	423.70	
	12/01/06		14.93	--	422.40	
	12/22/06		15.11	--	422.22	
	02/06/07		15.43	--	421.90	
	03/16/07		16.06	0.46	421.64	
	04/30/07		15.15	--	422.18	
	05/18/07		14.91	--	422.42	
	09/10/07	442.52	13.91	yes	428.61	
	10/15/07		14.45	--	428.07	
	11/19/07		Well not gauged - inaccessible			
01/29/08	Well not gauged - inaccessible					
02/13/08	Well not gauged - unable to locate					
04/04/08	15.81	15.80	426.72			
MW-5	10/23/03	436.37	12.58	--	423.79	
	03/10/04		14.34	--	422.03	
	09/16/04		13.92	--	422.45	
	04/19/05		well not sampled - covered with ice and ponded water			
	09/07/05		13.01	--	423.36	
	04/20/06		well not sampled - covered with ice and ponded water			
	09/12/06		12.70	--	423.67	
	03/15/07		15.78	--	420.59	
	09/10/07	441.54	13.00	--	428.54	
	04/04/08		Well not sampled - monument underwater			
MW-7	10/03/05	438.12	13.96	--	424.16	
	04/20/06		16.84	--	421.28	
	09/11/06		14.74	--	423.38	
	03/16/07		16.78	--	421.34	
	09/09/07		443.32	15.05	--	428.27
	04/04/08		17.08	--	426.24	
MW-8	10/03/05	436.51	12.32	--	424.19	
	04/20/06		15.23	--	421.28	
	09/11/06		13.12	--	423.39	
	03/16/07		15.18	--	421.33	
	09/09/07		441.69	13.41	--	428.28
	04/04/08		15.42	--	426.27	
MW-9	10/03/05	436.39	12.18	--	424.21	
	04/20/06		15.06	--	421.33	
	09/11/06		12.90	--	423.49	
	03/16/07		14.99	--	421.40	
	09/09/07		441.56	13.21	--	428.35
	04/04/08		15.28	--	426.28	
MW-10	10/03/05	437.32	12.98	--	424.34	
	04/20/06		15.82	--	421.50	
	09/11/06		13.66	--	423.66	
	03/14/07		Well buried under snow bank			
	09/09/07		442.52	13.98	--	428.54
	04/04/08		16.00	--	426.52	
Notes:						
TOC = Top of casing						
fasi = feet above sea level						
N/A = Not applicable						
LNAPL = Light non-aqueous phase liquid						
¹ Where LNAPL was present, groundwater elevation were adjusted using an average specific gravity of 0.80.						
Bold Type = Results of most recent sampling event						

**Table 2b
Groundwater Analytical Data**

Former Texaco 211815
410 Driveway Street
Fairbanks, Alaska

Well	Date	GRO	DRO	RRO	Benzene	Toluene	Ethylbenzene	Xylenes	
ADEC GCL:		1,300	1,500	1,100	5.0	1,000	700	10,000	
AR-81	06/25/02	<50.0	1,130	--	0.920	<0.500	0.520	<1.00	
	09/24/02	212	4,550	--	7.56	2.11	5.14	8.95	
	04/29/03	150	2,300	1,000	2.5	<0.5	1	1.8	
	09/03/03	140	2,000	2,400	3.1	<0.5	1.6	2.8	
	03/10/04	Well Frozen							
	09/16/04	69	2,200	3,200	1	<0.5	<0.5	<1.5	
	04/19/05	110	2,000	3,700	0.8	<0.5	0.6	1.6	
	09/07/05	68	1,400	1,200	0.5	<0.5	<0.5	<1.5	
	04/20/06	95	3,100	160	0.6	<0.5	<0.5	<1.5	
	09/12/06	100	900	310	0.7	<0.5	<0.5	<1.5	
	03/15/07	100	1,800	250	<1	<1	<1	<2	
	09/10/07	100	1,100	110	<1	<1	<1	<2	
	04/10/08	121	4,290	<714	0.623	<0.500	<0.500	1.18	
AR-82	06/25/02	219	72,800	--	0.200	<0.500	0.525	6.33	
	09/24/02	90.3	1,620	--	0.269	<0.500	<0.500	1.25	
	04/29/03	3,500	390,000	<20,000	<2.5	<2.5	2.5	<25	
	09/03/03	83	24,000	1,800	<0.5	1.1	2.9	8.6	
Well Removed from Sampling Program in September 2003									
AR-85	06/25/02	<50.0	964	--	<0.200	<0.500	<0.500	<1.00	
	09/24/02	<50.0	958	--	0.268	<0.500	<0.500	<1.00	
	04/29/03	<10	620	530	1	<0.5	<0.5	<1.5	
	09/03/03	<10	640	510	0.5	<0.5	<0.5	<1.5	
	09/03/03 ^D	<10	640	570	<0.5	<0.5	<0.5	<1.5	
	03/10/04	Well Beneath Snow bank							
	09/16/04	12	880	1,300	2.2	<0.5	<0.5	<1.5	
	09/16/04 ^D	13	900	1,300	2.2	<0.5	<0.5	<1.5	
	04/19/05	Well buried and surrounded by equipment							
	09/07/05	<10	450	350	<0.5	<0.5	<0.5	<1.5	
	9/7/2005 ^D	<10	630	910	<0.5	<0.5	<0.5	<1.5	
	04/20/06	<10	850	1,200	<0.5	<0.5	<0.5	<1.5	
	09/12/06	<10	480	200	<0.5	<0.5	<0.5	<1.5	
	03/15/07	Well not sampled-buried under snow bank							
09/10/07	<10	450	220	<1	<1	<1	<2		
04/10/08	<50.0	951	<735	<0.500	<0.500	<0.500	<1.00		
04/10/08^D	<50.0	522	<708	<0.500	<0.500	<0.500	<1.00		
MW-1	10/23/03	97	8,200	--	<0.5	<0.5	<0.5	<1.5	
	03/10/04	33	4,100	1,400	<0.5	<0.5	<0.5	<1.5	
	03/10/04 ^D	35	6,000	1,500	<0.5	<0.5	<0.5	<1.5	
	09/16/04	29	5,100	1,600	<0.5	<0.5	<0.5	<1.5	
	04/19/05	well not sampled - buried snow/ice (no access)							
	09/07/05	32	870	410	<0.5	<0.5	<0.5	<1.5	
	04/20/06	well not sampled - covered with ice and ponded water							
	09/12/06	23	470	210	<0.5	<0.5	<0.5	<1.5	
	03/15/07	<10	830	360	<1	<1	<1	<2	
	09/10/07	20	520	160	<1	<1	<1	<2	
	04/04/08	Well not sampled - monument underwater							

**Table 2b
Groundwater Analytical Data**

Former Texaco 211815
410 Driveway Street
Fairbanks, Alaska

Well	Date	GRO	DRO	RRO	Benzene	Toluene	Ethylbenzene	Xylenes
ADEC GCL:		1,300	1,500	1,100	5.0	1,000	700	10,000
MW-2	10/23/03	48,000	40,000	--	2,000	6,000	960	6,000
	03/10/04	LNAPL - 0.04' - well not sampled						
	09/16/04	LNAPL - 0.03' - well not sampled						
	04/19/05	LNAPL - 0.1' - well not sampled						
	09/07/05	LNAPL - 0.01' - well not sampled						
	04/20/06	well not sampled - covered with snow and gravel						
	09/12/06	8,000	22,000	<500	710	350	280	1,300
	03/15/07	6,600	7,100	170	500	100	200	900
	09/10/07	7,600	14,000	<200	700	600	200	1,400
	04/04/08	Well not sampled - absorbent sock frozen in well						
MW-3	10/23/03	36,000	11,000	--	1,600	2,500	570	6,300
	03/10/04	56,000	44,000	3,000	2,100	4,800	1,100	9,800
	09/16/04	38,000	59,000	<2,000	1,900	3,100	810	6,600
	04/19/05	13,000	40,000	<2,000	630	600	340	2,100
	09/07/05	17,000	24,000	2,900	1,400	1,200	330	2,400
	04/20/06	19,000	15,000	<500	1,100	960	500	3,100
	09/12/06	19,000	15,000	<490	1,400	1,000	520	3,200
	03/16/07	22,000	7,900	490	1,300	900	600	3,700
	09/10/07	11,000	17,000	<490	900	500	400	2,100
	04/10/08	33,300	11,000	942	1,540	2,080	923	6,000
MW-4	10/22/03	LNAPL - well not sampled						
	03/10/04	LNAPL - 0.23' - well not sampled						
	09/16/04	LNAPL - 0.03' - well not sampled						
	04/19/05	well not sampled - covered with ice, monument filled with ice and water						
	09/07/05	68,000	98,000	<2,000	3,200	7,700	1,300	10,000
	04/20/06	LNAPL - 0.32' - well not sampled						
	09/12/06	64,000	26,000	<980	3,300	8,200	1,400	9,600
	03/16/07	LNAPL - 0.46' - well not sampled						
	09/10/07	60,000	27,000	<490	3,000	7,900	1,400	9,800
	04/10/08	Well not sampled - ice in well						
MW-5	10/23/03	10,000	36,000		1,000	420	100	1,000
	03/10/04	22,000	9,800	2,000	1,200	1,800	320	3,000
	09/16/04	22,000	7,100	<200	970	2,000	370	3,500
	04/19/05	well not sampled - covered with ice and ponded water						
	09/07/05	10,000	5,200	220	870	590	200	1,600
	04/20/06	well not sampled - covered with ice and ponded water						
	09/12/06	9,700	2,900	<100	980	230	220	1,700
	09/12/06 ^D	9,500	3,000	<200	980	220	210	1,600
	03/15/07	16,000	6,900	<510	800	900	300	2,700
	03/15/07 ^D	16,000	7,900	<510	800	900	300	2,700
	09/10/07	6,500	5,200	<200	700	100	100	1,100
	09/10/07 ^D	6,000	5,000	<200	700	100	100	1,100
04/04/08	Well not sampled - monument underwater							
MW-7	10/03/05	7,100	2,200	<97	1,700	<5.0	240	300
	04/20/06	4,600	2,300	200	450	6.9	170	480
	09/11/06	8,100	2,000	<98	1,800	9.4	280	450
	03/16/07	7,600	2,500	<100	1,400	9	200	300
	09/09/07	8,100	3,500	<200	1,800	10	300	700
	04/10/08	8,650	4,730	<750	1,700	3.08	234	452
MW-8	10/03/05	2,900	1,500	720	390	39	96	290
	04/20/06	4,500	1,800	120	430	7.9	190	530
	09/11/06	3,300	1,400	300	410	16	120	330
	03/16/07	4,400	1,800	110	400	10	200	600
	09/09/07	2,200	2,000	210	300	20	100	300
	04/10/08	5,700	2,950	<750	458	6.92	191	525

**Table 2b
Groundwater Analytical Data**

Former Texaco 211815
410 Driveway Street
Fairbanks, Alaska

Well	Date	GRO	DRO	RRO	Benzene	Toluene	Ethylbenzene	Xylenes	
ADEC GCL:		1,300	1,500	1,100	5.0	1,000	700	10,000	
MW-9	10/03/05	26	240	390	1	<0.5	<0.5	<1.5	
	04/20/06	91	500	310	2.5	<0.5	<0.5	<1.5	
	09/11/06	31	63	40	<0.5	<0.5	<0.5		
	03/16/07	700	580	340	2.0	<1	<1	<2	
	09/09/07	<10	110	93	<1	<1	<1	<2	
	04/10/08	92.7	538	<750	1.61	<0.500	<0.500	<1.00	
MW-10	10/03/05	760	1,200	520	64	2	5	21	
	04/20/06	450	1,400	390	25	<0.5	<0.5	1.7	
	04/20/06 ^D	470	1,500	330	25	<0.5	<0.5	1.8	
	09/11/06	670	1,300	250	64	0.8	0.5	2.7	
	09/11/06 ^D	660	1,200	240	63	0.8	0.5	2.7	
	03/15/07	Well not sampled-buried under snow bank							
	09/09/07	700	1,500	240	70	<1	3	7	
	04/10/08	498	1,150	<765	24.1	<0.500	<0.500	3.60	
	Trip Blank	10/23/03	<10	--	--	<0.5	<0.5	<0.5	<1.5
03/10/04		<10	--	--	<0.5	<0.5	<0.5	<1.5	
09/16/04		<10	--	--	<0.5	<0.5	<0.5	<1.5	
04/19/05		Travel Blank submitted under COC for 1001430							
10/03/05		<10	--	--	<0.5	<0.5	<0.5	<1.5	
04/20/06		<10	--	--	<0.5	<0.5	<0.5	<1.5	
09/11/06		<10	--	--	<0.5	<0.5	<0.5	<1.5	
03/15/07		<10	--	--	<1	<1	<1	<2	
09/09/07		<10	--	--	<1	<1	<1	<2	
04/10/08		<50.0			<0.500	<0.500	<0.500	<1.00	

Notes:
All results are reported in micrograms per liter (µg/l)
GRO = gasoline range hydrocarbons
DRO = diesel range hydrocarbons
RRO = residual range hydrocarbons
LNAPL = Light non-aqueous phase liquid
GCL = ADEC 18 AA 75 Groundwater Cleanup Level
Highlighted concentrations are greater than the applicable ADEC GCL.
^D = Duplicate sample
Bold Type = Results of most recent sampling event
"--" = Indicates analyte not included in sampling event

**Table 1c
Groundwater Elevation Data**

Former Unocal 306456
328.5 Illinois Street
Fairbanks, Alaska

Well	Date Sampled	Well Elevation ¹ (fasl)	Depth to Water (feet from TOC)	Depth to LNAPL (feet)	Groundwater Elevation ² (fasl)	
GEI-1	10/07/02	443.88	15.20	--	428.68	
	09/03/03		13.83	0.01	430.06	
	04/23/04		17.41	--	426.47	
	09/16/04		17.22	0.01	426.67	
	04/20/05		18.13	--	425.75	
	10/01/05		14.08	--	429.80	
	04/18/06		Well not sampled			
	09/17/06		14.98	--	428.90	
	03/16/07		17.06	0.05	426.86	
	09/12/07	443.91	15.28	--	428.63	
	04/04/08		Well not sampled - ice in well			
	GEI-2	10/07/02	444.93	15.25	--	429.68
		09/03/03		13.94	--	430.99
04/23/04		17.44		--	427.49	
09/16/04		17.22		--	427.71	
04/20/05		18.05		--	426.88	
10/01/05		15.1		--	429.83	
04/18/06			Well not sampled			
09/17/06			15.92	--	429.01	
03/16/07			Well not sampled-covered with equipment			
09/12/07		444.84	16.21	--	428.63	
04/04/08			18.18	18.16	426.68	
GEI-3		10/07/02	444.29	14.7	--	429.59
		09/03/03		13.42	--	430.87
	04/23/04	16.78		--	427.51	
	09/16/04	16.65		--	427.64	
	04/20/05			Well not sampled		
	10/01/05	14.55		--	429.74	
	04/18/06		17.45	--	426.84	
	09/16/06		15.35	--	428.94	
	03/17/07		17.43	--	426.86	
	09/11/07	444.29	15.65	--	428.64	
	04/04/08		17.63	--	426.66	
	GEI-4	10/07/02	444.56	15.68	0.67	429.42
		09/03/03		13.64	0.01	430.93
04/23/04		17.2		--	427.36	
09/16/04		17.01		0.01	427.56	
04/20/05		17.8		--	426.76	
10/01/05		14.77		--	429.79	
04/18/06		17.72		--	426.84	
09/16/06		15.61		--	428.95	
11/30/06		16.88		0.02	427.70	
12/22/06		17.13		--	427.43	
02/06/07		17.39		--	427.17	
03/17/07		17.65		--	426.91	
04/30/07		17.07		--	427.49	
05/18/07		16.87		--	427.69	
09/11/07		15.98		--	428.58	
10/15/07		16.48		--	428.08	
11/19/07		16.18		--	428.38	
01/29/08		17.10		--	427.46	
02/13/08		17.33		--	427.23	
04/04/08	17.90	--	426.66			
GEI-5	10/07/02	441.93	12.35	--	429.58	
	09/03/03		11.11	--	430.82	
	04/23/04			Well not sampled		
	09/16/04		14.26	--	427.67	
	04/20/05		15.24	--	426.69	
	10/01/05		12.23	--	429.7	
	04/18/06			Well not sampled		
	09/16/06		12.98	--	428.95	
	03/16/07			Well not sampled due to damage		
	09/11/07			Well not sampled due to damage		
	04/04/08		Well not sampled - well underwater			

**Table 1c
Groundwater Elevation Data**

Former Unocal 306456
328.5 Illinois Street
Fairbanks, Alaska

Well	Date Sampled	Well Elevation ¹ (fasl)	Depth to Water (feet from TOC)	Depth to LNAPL (feet)	Groundwater Elevation ² (fasl)	
GEI-6	10/07/02	441.83	12.2	--	429.63	
	09/03/03		10.94	--	430.89	
	04/23/04		Well not sampled			
	09/16/04		14.15	--	427.68	
	04/20/05		Well not sampled			
	10/01/05		12.09	--	429.74	
	04/18/06		Well not sampled			
	09/16/06		12.82	--	429.01	
	03/17/07		14.87	--	426.96	
	09/11/07		441.97	13.11	--	428.86
	04/04/08	Well not sampled - well underwater				
GEI-7	09/03/03	444.26	13.24	0.01	431.03	
	04/23/04		17.07	0.41	427.52	
	09/16/04		16.55	0.09	427.78	
	04/20/05		18.11	0.93	426.89	
	10/01/05		14.44	0.01	429.83	
	04/18/06		Well not sampled			
	09/17/06		15.27	--	428.99	
	02/06/07		Well not sampled - Unable to locate			
	03/16/07		Well not sampled-covered with forklifts			
	04/30/07		16.69	--	427.57	
	05/18/07	16.48	--	427.78		
	09/12/07	444.22	15.56	--	428.66	
	10/15/07	16.14	--	428.08		
	11/19/07	16.01	--	428.21		
	01/29/08	17.19	0.09	427.10		
	02/13/08	17.37	0.21	427.02		
	04/04/08	Well not sampled - ice at 4.4 feet btoc				
GEI-8	09/03/03	444.55	13.64	--	430.91	
	04/23/04		17.15	--	427.4	
	09/16/04		16.95	--	427.6	
	04/20/05		17.77	0.14	426.89	
	10/01/05		14.73	--	429.82	
	04/18/06		17.71	--	426.84	
	09/16/06		15.92	--	428.63	
	11/30/06		16.85	0.01	427.71	
	12/22/06		17.07	--	427.48	
	02/06/07		17.35	--	427.2	
	03/16/07	17.60	--	426.95		
	04/30/07	Well not sampled due to ice				
	05/08/07	Well not sampled due to ice				
	09/11/07	444.54	15.87	--	428.67	
	10/15/07	16.47	--	428.07		
	01/29/08	17.48	0.04	427.09		
	02/13/08	17.57	0.04	427.00		
	04/04/08	Well not sampled - inaccessible				
	GEI-9	09/03/03	444.32	13.43	0.01	430.90
04/23/04		16.87		--	427.45	
09/16/04		16.67		--	427.65	
04/20/05		17.47		0.01	426.86	
10/01/05		14.53		--	429.79	
04/18/06		17.39		--	426.93	
09/16/06		15.37		--	428.95	
03/17/07		17.41		--	426.91	
09/11/07		444.32		15.63	--	428.69
04/04/08		17.62		--	426.70	
GEI-10		10/01/05	443.48	13.74	--	429.74
	04/18/06	16.73		--	426.75	
	09/16/06	14.29		--	429.19	
	03/16/07	Well not sampled-unable to locate				
	09/09/07	443.31	14.58	--	428.73	
	04/04/08	16.51	--	426.80		

**Table 1c
Groundwater Elevation Data**

Former Unocal 306456
328.5 Illinois Street
Fairbanks, Alaska

Well	Date Sampled	Well Elevation ¹ (fasl)	Depth to Water (feet from TOC)	Depth to LNAPL (feet)	Groundwater Elevation ² (fasl)	
GEI-11	10/01/05	443.81	14.10	--	429.71	
	04/18/06		17.58	--	426.23	
	09/17/06		14.91	--	428.90	
	11/30/06		16.30	0.14	427.62	
	12/24/06		16.44	--	427.37	
	02/06/07		16.69	--	427.12	
	03/16/07	443.78	16.96	0.02	426.87	
	04/30/07		16.73	0.47	427.46	
	05/18/07		16.30	0.20	427.67	
	09/12/07		15.22	--	428.56	
	10/15/07		15.81	--	427.97	
	11/19/07		15.71	--	428.07	
	01/29/08		16.83	0.03	426.97	
02/13/08	16.91	0.03	426.89			
04/04/08	17.55	17.11	426.58			
GEI-12	10/01/05	443.55	13.72	--	429.83	
	04/18/06		16.71	--	426.84	
	09/16/06		14.61	--	428.94	
	03/16/07	443.52	16.65	0.04	426.93	
	09/09/07		14.89	--	428.63	
	04/04/08		16.98	16.85	426.64	
MW-2	10/01/05	444.07	14.43	--	429.64	
	04/18/06		17.47	--	426.60	
	09/15/06		15.31	--	428.76	
	03/17/07	444.03	17.36	--	426.71	
	09/09/07		15.60	--	428.43	
	04/04/08		17.60	--	426.43	
MW-4	10/01/05	NS	Well not sampled			
	04/18/06		20.63	--	--	
	09/15/06		18.48	--	--	
	03/16/07		20.60	--	--	
	09/09/07		447.09	18.82	--	428.27
	04/04/08		20.82	--	426.27	
MW-5	10/01/05	444.05	14.3	--	429.75	
	04/18/06		17.33	--	426.72	
	09/15/06		15.11	--	428.94	
	03/16/07	444.01	17.31	--	426.74	
	09/12/07		15.42	--	428.59	
	04/04/08		17.44	--	426.57	
MW-6	10/01/05	NS	Well not sampled			
	04/18/06		20.26	--	--	
	09/15/06		18.11	--	--	
	03/16/07		20.23	--	--	
	09/11/07		446.92	18.53	--	428.39
	04/04/08		20.48	--	426.44	
MW-13	09/09/07	443.29	14.76	--	428.53	
	04/04/08	Well not sampled - ice at 4.5 feet btoc				
K-5	10/01/05	443.55	13.82	--	429.73	
	04/18/06		Well not sampled			
	09/17/06		15.14	--	428.41	
	03/16/07	Well not sampled-unable to open Robco cover				
	09/09/07	443.75	15.02	--	428.73	
	04/04/08	17.00	--	426.75		
K-7	10/01/05	442.49	12.72	--	429.77	
	04/18/06		16.92	--	425.57	
	09/16/06		13.49	--	429.00	
	03/16/07	Well not sampled-unable to locate				
	09/09/07	442.55	13.78	--	428.77	
	04/04/08	Well not sampled - ice in well				
Notes:						
TOC = Top of casing						
fasl = feet above sea level						
N/A = Not applicable						
NS = Not surveyed						
LNAPL = Light non-aqueous phase liquid						
Bold Type = Results of most recent sampling event						
btoc = below top of casing						
¹ Elevations are relative to an on-site Temporary Benchmark, based on vertical control point Fire Hydrant 08-05.						
² Where LNAPL was present, groundwater elevation were adjusted using an average specific gravity of 0.80.						

**Table 2c
Groundwater Analytical Data**

Former Unocal 306456
328.5 Illinois Ave.
Fairbanks, Alaska

Well	Date	GRO	DRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes
ADEC GCL:		1,300	1,500	1,100	5.0	1,000	700	10,000
GEI-1	10/07/02	31,700	218,000	--	5,630	6,770	704	3,860
	09/03/03	LNAPL present - 0.01' - well not sampled						
	04/23/04	26,600	11,200	--	2,910	5,300	582	2,990
	09/16/04	LNAPL present - 0.01' - well not sampled						
	04/20/05	35,300	307,000	--	4,300	6,300	649	3,620
	10/01/05	39,700	18,800	617	3,050	5,350	662	3,820
	04/18/06	Well not sampled - not accessible						
	09/17/06	31,000	29,000	<970	3,200	4,500	540	3,100
	03/17/07	LNAPL present - 0.05' - well not sampled						
	09/12/07	27,000	44,000	<2200	2,600	3,600	400	2,600
04/04/08	Well not sampled - ice in well							
GEI-2	10/07/02	170,000	86,500	--	15,100	56,200	3,810	22,000
	09/03/03	265,000	28,700	--	7,250	42,400	3,430	21,300
	04/23/04	150,000	17,900	--	7,500	39,700	3,140	17,900
	09/16/04	214,000	109,000	--	8,490	48,700	3,310	24,400
	04/20/05	196,000	88,700	--	7,520	49,800	3,490	23,100
	10/01/05	201,000	--	--	5,900	47,200	3,480	22,500
	04/18/06	219,000	33,100	904	5,510	46,200	3,380	24,100
	09/17/06	190,000	25,000	<970	6,000	42,000	3,300	22,000
	03/17/07	Well not sampled - buried under equipment						
	09/12/07	170,000	75,000	<1100	4,900	37,000	3,100	20,000
04/11/08	184,000	45,700	<3,750	4,530	49,300	3,520	22,200	
GEI-3	10/07/02	36,600	101,000	--	178	3,070	339	12,000
	09/03/03	35,800	82,700	--	86.0	1,070	122	7,840
	04/23/04	16,600	25,200	--	66.0	758	63.1	5,920
	09/16/04	23,000	52,300	--	44.0	903	138	9,640
	09/16/04	--	--	--	35.2	835	77.7	6,610
	04/20/05	Well not sampled - not accessible						
	10/01/05	18,200	58,300	1,500	30.1	485	67.8	5,940
	10/01/05	19,100	--	--	<50.0	468	<50.0	6,280
	04/18/06	21,700	70,300	1,220	28.3	1,290	173	6,970
	09/16/06	16,000	62,000	<2,000	20.0	280	61	5,100
	03/17/07	32,000	42,000	<2,000	30	1,200	200	6,700
	09/11/07	17,000	70,000	<2,000	20	800	200	5,500
	04/11/08	30,500	40,800	<3,540	<100	1,460	359	8,440
GEI-4	10/07/02	LNAPL present - 0.67' - well not sampled						
	09/03/03	LNAPL present - 0.01' - well not sampled						
	04/23/04	3,720	30,200	--	30.7	76.7	55.5	76.7
	09/16/04	LNAPL present - 0.01' - well not sampled						
	04/20/05	807	195,000	--	15.1	3.83	48.2	3.83
	10/01/05	2,560	44,000	601	13.4	<1.00	52.3	<1.00
	04/18/06	1,180	95,700	<8,060	15.2	2.18	66.4	2.18
	04/18/06	1,010	--	--	14.4	<0.500	53.6	<0.500
	09/16/06	1,400	39,000	<960	16	1.8	40	190
	03/17/07	1,400	54,000	<1,900	20	2	40	200
	09/11/07	2,700	100,000	<2,100	10	<10	70	300
	04/11/08	1,780	192,000	<4,120	15.0	<2.50	56.8	229
	04/11/08 ^D	2,140	215,000	<3,680	13.4	<10.0	60	268
GEI-5	10/07/02	12,400	47,600	--	2,310	813	119	1,660
	10/07/02	10,800	--	--	2,360	841	127	1,660
	09/03/03	10,100	68,000	--	1,420	205	32.9	650
	04/23/04	Well not sampled - not accessible.						
	09/16/04	12,000	18,000	--	2,330	549	66.3	1,200
	04/20/05	7,050	71,500	--	1,240	444	44.0	1,040
	10/01/05	10,700	67,400	2,020	1,430	239	37.8	922
	04/18/06	--	--	--	--	--	--	--
	09/16/06	6,200	22,000	<500	910	290	45	850
	03/17/07	Well not sampled due to damage						
	09/11/07	Well not sampled due to damage						
	04/04/08	Well not sampled - well underwater						

**Table 2c
Groundwater Analytical Data**

Former Unocal 306456
328.5 Illinois Ave.
Fairbanks, Alaska

Well	Date	GRO	DRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes
ADEC GCL:		1,300	1,500	1,100	5.0	1,000	700	10,000
GEI-6	10/07/02	58,800	5,790	--	1.26	1.95	<0.500	2.99
	09/03/03	<80	3,520	--	0.717	<0.500	<0.500	<1.00
	04/23/04	Well not sampled - not accessible.						
	09/16/04	58.8	7,580	--	0.758	<0.500	<0.500	1.72
	04/20/05	Well not sampled - not accessible.						
	10/01/05	<50	2,180	1,140	0.768	<0.500	<0.500	<1.50
	04/18/06	Well not sampled - not accessible.						
	09/16/06	51	3,400	2,300	1.0	<0.5	<0.5	<1.5
	03/17/07	<10	800	770	<1	<1	<1	<2
	09/11/07	20	2,200	1,000	<1	<1	<1	<2
04/04/08	Well not sampled - well underwater							
GEI-7	09/03/03	LNAPL present - 0.01' - well not sampled						
	04/23/04	LNAPL present - 0.41' - well not sampled						
	09/16/04	LNAPL present - 0.09' - well not sampled						
	04/20/05	LNAPL present - 0.93' - well not sampled						
	10/01/05	15,400	98,700	<4,240	299	2,180	246	2,560
	04/18/06	Well not sampled - not accessible.						
	09/17/06	15,000	110,000	<2,000	360	2,000	250	2,400
	03/17/07	Well not sampled - buried under equipment						
09/12/07	13,000	79,000	<2200	300	1,800	300	2,100	
04/04/08	Well not sampled - ice in well							
GEI-8	09/03/03	11,000	83,900	--	38.4	342	229	2,350
	04/23/04	8,850	107,000	--	152	834	161	1,930
	09/16/04	10,700	515,000	--	22.7	172	210	3,500
	04/20/05	6,920	571,000	--	14.9	189	136	1,740
	10/01/05	7,520	59,100	983	15.6	91.0	105	1,710
	04/18/06	4,870	43,600	1,110	14.8	131	148	1,620
	09/16/06	4,200	27,000	<960	14	93	89	1,200
	03/17/07	4,900	11,000	290	20	100	100	1,400
	09/11/07	4,000	48,000	<1000	20	100	100	1,300
	04/04/08	Well not sampled - inaccessible						
GEI-9	09/03/03	LNAPL present - 0.01' - well not sampled						
	04/23/04	1,030	51,600	--	5.01	29.0	12.2	161
	09/16/04	1,490	276,000	--	1.58	2.63	6.73	59.3
	04/20/05	1,480	517,000	--	1.70	<0.500	7.31	41.9
	10/01/05	1,090	93,900	<4,030	1.44	<0.500	5.68	43.3
	04/18/06	881	97,800	<7,940	2.02	<0.500	8.10	57.0
	09/16/06	410	56,000	<2,000	2.1	<0.5	6.6	36
	03/17/07	600	17,000	290	3	<1	10	70
	09/11/07	400	80,000	<1,900	<10	<10	<10	60
	04/11/08	397	34,100	<3,610	<2.50	<2.50	9.61	42.7
	GEI-10	10/01/05	551	45,800	412	<0.500	<0.500	7.71
04/18/06		689	43,400	510	<0.500	<0.500	40.0	135
09/16/06		500	23,000	<500	<0.5	<0.5	13.0	53
09/16/06 ^D		510	22,000	<500	<0.5	<0.5	13.0	
03/17/07		Well not sampled - unable to locate						
09/09/07		700	19,000	<200	<1	<1	10	40
09/09/07 ^D		400	32,000	<410	<10	<10	10	50
04/12/08		640	18,700	<3,570	<2.50	<2.50	16.4	66.9
GEI-11	10/01/05	161,000	61,900	2,810	8,060	21,500	1,340	8,570
	04/18/06	--	--	--	--	--	--	--
	09/17/06	92,000	55,000	<3,900	6,300	19,000	1,500	9,100
	03/17/07	LNAPL present - 0.02' - well not sampled						
	09/12/07	100,000	93,000	<1900	5,100	18,000	1,900	11,000
	04/12/08	101,000	439,000	<3,640	5,630	21,300	1,930	11,100
GEI-12	10/01/05	9,920	43,900	<410	233	478	290	2,040
	04/18/06	5,480	68,100	466	136	250	158	1,110
	09/16/06	6,200	56,000	<1,000	130	300	150	1,100
	03/17/07	LNAPL present - 0.04' - well not sampled						
	09/09/07	5,000	63,000	<2,000	100	300	100	1,100
	04/12/08	4,900	126,000	<3,610	86.3	102	145	979

**Table 2c
Groundwater Analytical Data**

Former Unocal 306456
328.5 Illinois Ave.
Fairbanks, Alaska

Well	Date	GRO	DRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes
ADEC GCL:		1,300	1,500	1,100	5.0	1,000	700	10,000
MW-2	10/01/05	94.4	<403	<403	<0.500	<0.500	<0.500	<1.50
	04/18/06	<500	918	<391	<0.500	<0.500	<0.500	<1.50
	09/15/06	14	260	490	<0.5	<0.5	<0.5	<1.5
	03/17/07	20	470	310	<1	<1	<1	<2
	09/09/07	<10	160	87	<1	<1	<1	<2
	09/09/07 ^D	<10	210	160	<1	<1	<1	<2
	04/12/08	<50.0	1,130	<708	<0.500	<0.500	<0.500	<1.00
MW-4	10/01/05	--	--	--	--	--	--	--
	04/18/06	<500	<407	<407	<0.500	<0.500	<0.500	<1.50
	09/15/06	<10	98	200	<0.5	<0.5	<0.5	<1.5
	03/16/07	60	85	110	30	<1	<1	<2
	09/09/07	<10	65	140	<1	<1	<1	<2
	04/11/08	<50.0	<106	<798	<0.500	<0.500	<0.500	<1.00
	MW-5	10/01/05	16,200	51,500	668	245	1,620	270
04/18/06		21,500	114,000	<7,810	287	3,220	498	3,910
09/15/06		18,000	42,000	<1,000	220	1,700	370	2,800
09/15/06 ^D		18,000	77,000	<1,900	230	1,900	410	3,400
03/17/07		Well not sampled - Sheen present						
09/12/07		14,000	53,000	<990	200	1,900	400	2,700
04/12/08		29,700	165,000	<3,540	152	2,530	627	6,030
MW-6		10/01/05	Well not sampled - not accessible.					
	04/18/06	624	1,120	<391	138	<0.500	10.0	7.50
	09/15/06	39	210	260	8.1	<0.5	1.0	<1.5
	03/16/07	200	280	170	30	<1	1	<2
	03/16/07 ^D	100	250	180	30	<1	1	<2
	09/11/07	40	300	280	7	<1	<1	<2
	04/11/08	77.1	1,100	<750	17.4	<0.500	<0.500	<1.00
MW-13	08/03/07	40	44	51	1	<1	<1	<2
	09/09/07	70	70	63	2	<1	<1	<2
	04/04/08	Well not sampled - ice in well						
K-5	10/01/05	18,100	86,600	<4,030	<0.500	<0.500	2.26	7.56
	04/18/06	--	--	--	--	--	--	--
	09/27/06	610	17,000	<480	<0.5	<0.5	0.5	<1.5
	03/17/07	Well not sampled - unable to remove cover						
	09/09/07	1,800	110,000	<1,900	<1	<1	2	10
	04/12/08	195	24,000	<3,680	<0.500	<0.500	0.758	2.80
	K-7	10/01/05	<50	421	<417	<0.500	<0.500	<0.500
04/18/06		429	--	--	<0.500	<0.500	1.71	5.28
09/16/06		<10	72	250	<0.5	<0.5	<0.5	<1.5
03/17/07		Well not sampled - unable to locate						
09/09/07		<100	71	240	<10	<10	<10	<20
04/04/08		Well not sampled - ice in well						
Trip Blank		04/18/06	<50	421	<417	<0.500	<0.500	<0.500
	09/14/06	<10	--	--	<0.5	<0.5	<0.5	<1.5
	09/14/06	<10	--	--	<0.5	<0.5	<0.5	<1.5
	03/17/07	<10	--	--	<1	<1	<1	<2
	09/09/07	<10	--	--	<1	<1	<1	<2
	04/11/08	<50.0	--	--	<0.500	<0.500	<0.500	<1.00

Notes:

All results are reported in micrograms per liter (µg/l)
 GRO = Gasoline range organics
 DRO = Diesel range organics
 RRO = Residual range organics
 LNAPL = Light non-aqueous phase liquid
 GCL = ADEC 18 AAC 75 Groundwater Cleanup Level
 Bold Type = Results of most recent sampling event
 Highlighted concentrations are greater than the applicable ADEC GCL.
^D = Duplicate sample
 "--" = Analyte not included in sampling event

Table 3
Groundwater VOC and RCRA Metals Analytical Data

Former Chevron 1004130, 418 Illinois Street
Former Texaco 211815, 401 Driveway Street
Former Unocal 306456, 328.5 Illinois Ave.
Fairbanks, Alaska

EPA Method:		8011				8260B				8021B	6010B/7470							
Well	Sample Date	1,2-dibromoethane	1,2-dibromoethane	1,1-dichloroethane	1,1,1-trichloroethane	carbon tetrachloride	1,2-dichloroethane	trichloroethene	tetrachloroethene	methyl tertiary butyl ether	Mercury	Arsenic	Selenium	Barium	Cadmium	Chromium	Lead	Silver
ADEC GCL:		0.05	0.05	3,650	200	NL	5	5	5	NL	2	50	50	2,000	5	100	15	180
Former Chevron 1001430																		
TH-13	10/03/05	<0.0094	<1	<1	<0.8	<1	<1	<1	<0.8	--	<0.062	14.0	<9.4	271	<0.97	<4.8	<8.4	<2.0
	09/14/06	<0.0095	<0.5	<0.5	<0.8	<1	<0.5	<1	<0.8	<2.5	<0.056	15.6	<9.4	258	<0.91	<2.3	<6.9	<1.6
	03/15/07	<0.0097	<1	<1	<0.8	<1	<1	<1	<0.8	--	<0.056	14.7	<9.4	283	<0.91	<2.3	<6.9	<1.6
	09/13/07	<0.0098	--	<1	<0.8	<1	<0.5	1	<0.8	--	19.6	<9.4	253.0	<9.0	2.3	<6.9	<1.6	--
	04/10/08	<0.010	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	--	<0.200	<100	<150	252	<5.00	<10.0	59.9	<10.0
TH-17	10/03/05	<0.0088	<1	<1	<0.8	<1	<1	<1	<0.8	--	<0.062	39.9	<9.4	330	<0.97	<4.8	<8.4	<2.0
	09/14/06	<0.0096	<0.5	<0.5	<0.8	<1	<0.5	<1	<0.8	<10	<0.056	33.3	<9.4	338	<0.91	4.7	<6.9	<1.6
	03/15/07	<0.0097	<1	<1	<0.8	<1	<1	1	<0.8	--	<0.056	31.9	<9.4	388	<0.91	5.5	<6.9	<1.6
	09/13/07	<0.0097	--	<1	<0.8	<1	<0.5	1	<0.8	--	36.7	<9.4	715.0	7.6	33.8	16.4	<1.6	--
	04/04/08	Well not sampled - monument underwater																
Trip Blank	10/03/05	<0.0094	<1	<1	<0.8	<1	<1	<1	<0.8	--	--	--	--	--	--	--	--	--
	04/20/06	<0.0096	<0.5	<1	<0.8	<1	<0.5	<1	<0.8	<2.5	--	--	--	--	--	--	--	--
	09/13/06	<0.0098	<0.5	<1	<0.8	<1	<0.5	<1	<0.8	--	--	--	--	--	--	--	--	--
	03/14/07	<0.0099	<1	<1	<0.8	<1	<1	<1	<0.8	--	--	--	--	--	--	--	--	--
	09/12/07	<0.0099	--	<1	<0.8	<1	<0.5	<1	<0.8	--	--	--	--	--	--	--	--	--
Former Texaco 211815																		
AR-81	04/20/06	--	--	--	--	--	--	--	--	<2.5	--	--	--	--	--	--	--	--
AR-85	04/20/06	--	--	--	--	--	--	--	--	<2.5	--	--	--	--	--	--	--	--
MW-2	03/16/07	<0.0099	<0.5	<1	<0.8	<1	<0.5	<1	<0.8	--	<0.056	55.0	<9.4	774	<0.91	26.2	23.3	<1.6
	09/10/07	<0.0099	--	<1	<0.8	<1	<0.5	<1	<0.8	--	<0.056	47.9	<9.4	521	3.4	13.6	19.2	<1.6
MW-3	10/03/05	<0.0094	<5	<5	<4	<5	<5	<5	<4	--	<0.062	40.2	<9.4	671	<0.97	36.2	37.3	<2.0
	04/20/06	<0.0097	<1	<2	<2	<2	<1	3	<2	<100	<0.062	22.9	<9.4	513	3.7	8.5	13.5	2.5
	09/12/06	<0.0096	<3	<5	<4	<5	<3	7	<4	<25	<0.056	27.3	<9.4	560	2.5	9.9	13	<1.6
	03/16/07	<0.0097	<1	<2	<2	<2	<1	<2	<2	--	<0.056	25.2	<9.4	601	<0.91	11.5	15.1	<1.6
	09/10/07	<0.0099	--	<2	<2	<2	<1	<2	<2	--	0.072	27.7	<9.4	533	3.7	10.9	13.9	1.8
04/10/08	0.010	<1.00	<1.00	<1.00	<1.00	10.2	2.33	<1.00	--	<0.200	<100	<150	429	<5.00	<10.0	76.0	<10.0	
MW-4	10/03/05	0.025	<10	<10	<8	<10	<10	<10	<8	--	0.075	56.3	<9.4	866	1.1	56.7	130	<2.0
	04/20/06	--	--	--	--	--	--	--	--	220	<0.056	25.8	<9.4	526	2.3	8.5	37.8	<1.6
09/12/06	0.039	<3	<5	<4	<5	<3	<5	<3	<2	--	<0.056	25.8	<9.4	526	2.3	8.5	37.8	<1.6
MW-7	10/03/05	<0.0094	<3	<3	<2	<3	<3	<3	<2	--	0.062	162.0	14.4	1,940	2.1	255	128	<2.0
	04/20/06	--	--	--	--	--	--	--	<50	--	--	--	--	--	--	--	--	--
MW-8	10/03/05	0.026	<1	<1	<0.8	<1	<1	<1	<0.8	--	<0.062	67.8	<9.4	1,300	3	140	114	<2.0
	04/20/06	--	--	--	--	--	--	--	--	<100	--	--	--	--	--	--	--	--
MW-9	10/03/05	<0.0094	<1	<1	<0.8	<1	<1	<1	<0.8	--	<0.062	28.8	<9.4	965	1.9	93.3	60.5	<2.0
	04/20/06	--	--	--	--	--	--	--	<2.5	--	--	--	--	--	--	--	--	--
MW-10	10/03/05	<0.0094	<1	<1	<0.8	<1	<1	<1	<0.8	--	<0.062	113	<9.4	1,760	3.0	317	154	<2.0
	04/20/06	--	--	--	--	--	--	--	<10	--	--	--	--	--	--	--	--	--
	04/20/06 ^D	--	--	--	--	--	--	--	<10	--	--	--	--	--	--	--	--	--
Trip Blank	09/11/06	<0.0098	<0.5	<1	<0.8	<1	<0.5	<1	<0.8	--	--	--	--	--	--	--	--	--
	03/15/07	--	<0.5	<1	<0.8	<1	<0.5	<1	<0.8	--	--	--	--	--	--	--	--	--
	09/09/07	<0.0099	<1	<1	<0.8	<1	<0.5	<1	<0.8	--	--	--	--	--	--	--	--	--

Table 3
Groundwater VOC and RCRA Metals Analytical Data

Former Chevron 1004130, 418 Illinois Street
Former Texaco 211815, 401 Driveway Street
Former Unocal 306456, 328.5 Illinois Ave.
Fairbanks, Alaska

EPA Method:		8011				8260B				8021B	6010B/7470							
Well	Sample Date	1,2-dibromoethane	1,2-dibromoethane	1,1-dichloroethane	1,1,1-trichloroethane	carbon tetrachloride	1,2-dichloroethane	trichloroethene	tetrachloroethene	methyl tertiary butyl ether	Mercury	Arsenic	Selenium	Barium	Cadmium	Chromium	Lead	Silver
ADEC GCL:		0.05	0.05	3,650	200	NL	5	5	5	NL	2	50	50	2,000	5	100	15	180
Former Unocal Bulk Plant 306456																		
GEI-2	09/17/06	120	140	<1.0	<0.8	<1.0	<0.5	<1.0	<0.8	<500	<0.56	42.2	<9.4	445	<0.91	17.8	89.5	<1.6
	09/12/07	96	--	<2	<2	<2	<1	<2	<2	--	<0.28	95.6	<9.4	1190	8.2	168	322	6.6
	04/11/08	73.3	--	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	--	<0.200	<100	<150	381	7.90	<10.0	<50.0	<10.0
GEI-7	09/12/07	3.1	--	2	<0.8	<1	<0.5	3	11	--	<0.056	90.6	<9.4	658	4.3	74.7	64.5	5.4
GEI-9	03/16/07	0.014	<0.5	<1	<0.8	<1	<0.5	<1	<0.8	--	<0.056	37.2	<9.4	341	<0.91	17.8	<6.9	1.6
GEI-11	09/17/06	1.9	2	<1.0	<0.8	<1.0	<0.5	<1.0	<0.8	<250	0.082	107	<9.4	1,110	1.3	30.9	63.9	<1.6
	04/12/08	2.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GEI-12	04/12/08	<0.010	--	--	<1.00	<1.00	<1.00	<1.00	<1.00	--	<0.200	<100	<150	527	<5.00	45.1	<50.0	<10.0
MW-13	09/09/07	<0.0098	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trip Blank	03/17/07	<0.0098	<0.5	<1	<0.8	<1	<0.5	<1	<0.8	--	--	--	--	--	--	--	--	--
	09/09/07	<0.0099	--	<1	<0.8	<1	<0.5	<1	<0.8	--	--	--	--	--	--	--	--	--

Notes:
All results are reported in micrograms per liter (µg/l)
VOC = volatile organic compounds; analyzed using EPA Method 8260B
RCRA = Resource Conservation and Recovery Act; samples analyzed using EPA Methods 7470 (mercury only) and 6010B
GCL = ADEC 18 AAC 75 Groundwater Cleanup Level
NL = A GCL is not currently listed.
Bold Type = Results of most recent sampling event
Highlighted concentrations are greater than the applicable ADEC GCL.
-- = sample was not analyzed for this compound
<25 = result did not exceed indicated method reporting limit; an elevated reporting limit indicates sample was diluted

Table 4
Groundwater PAH Analytical Data

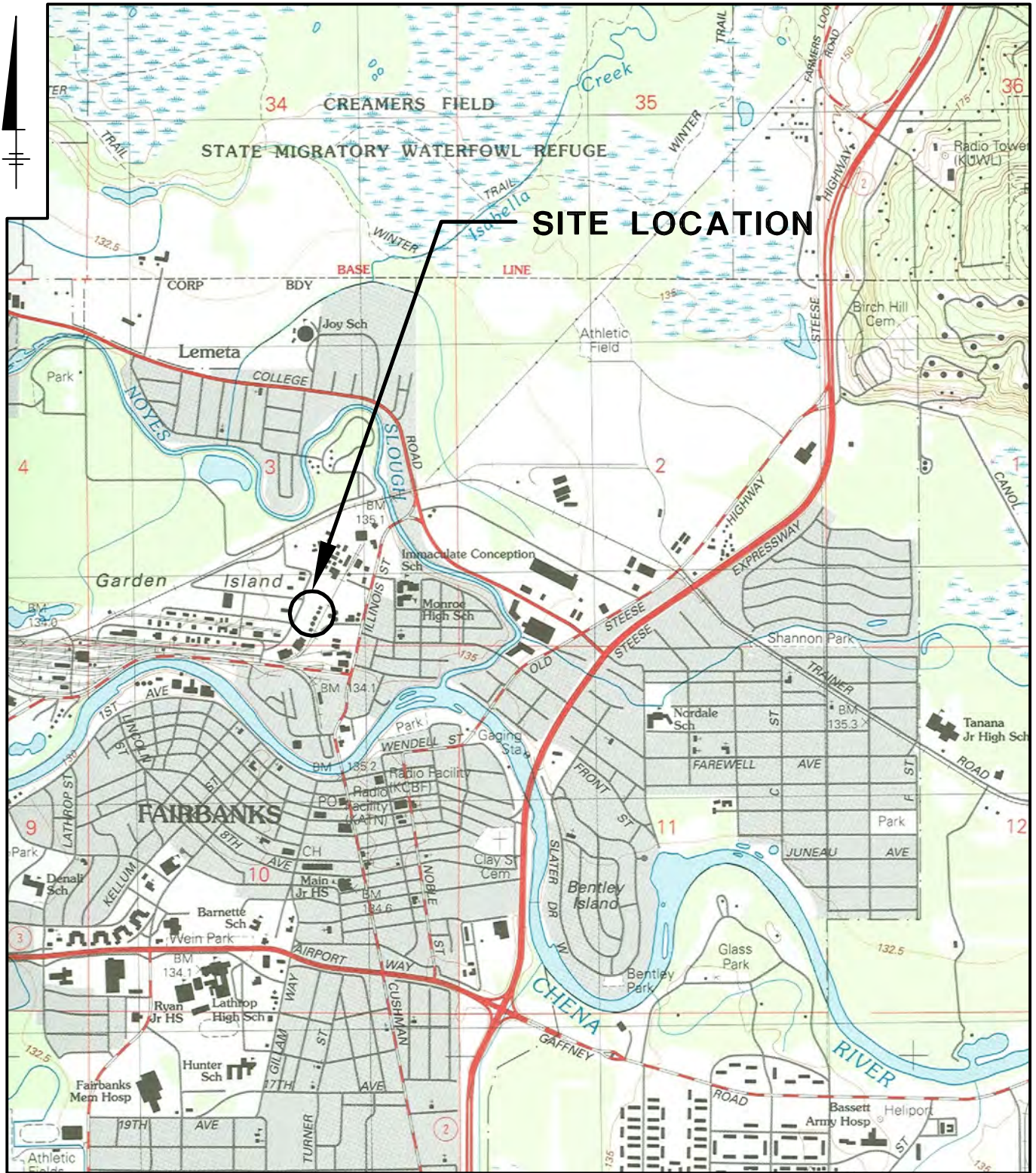
Former Chevron 1004130, 418 Illinois Street
Former Texaco 211815, 401 Driveway Street
Former Unocal 306456, 328.5 Illinois Ave.
Fairbanks, Alaska

Well	Sample Date	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)perylene	1-Methylnaphthalene	2-Methylnaphthalene	
ADEC GCL:		700	2,200	2,200	1,460	11,000	11,000	1,460	1,100	1	100	1	10	0.2	1	0.1	1,100	1,500	780	
Former Chevron 1004130																				
TH-13	10/03/05	18	<0.02	6	8	16	4	8	7	1	1	0.4	0.1	<0.02	<0.02	<0.02	<0.02	--	--	
	4/20/06	Well not sampled - buried under ice, monument filled																		
	09/14/06	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--
	03/15/07	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--
	09/13/07	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--
	04/10/08	<0.0971	0.466	0.505	<0.0971	<0.0971	<0.0971	<0.0971	<0.0971	<0.0971	<0.0971	<0.0971	<0.0971	<0.0971	<0.0971	<0.0971	<0.0971	<0.0971	<0.0971	<0.0971
TH-17	10/03/05	15	<0.02	0.6	1	0.4	0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	--	--	
	4/20/06	Well not sampled - buried under ice, monument filled																		
	09/14/06	19	<1	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--
	03/15/07	26	<1	<1	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--
	09/13/07	26	<1	<1	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--
	04/04/08	Well not sampled - monument underwater																		
Former Texaco 211815																				
MW-2	03/16/07	130	<1	3	6	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--
	09/10/07	140	1	2	7	6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--
MW-3	10/03/05	140	<0.2	4	6	9	3	0.1	0.3	<0.2	<0.2	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	--	--
	4/20/06	100	<1	<1	2	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--
	09/12/06	120	<1	2	3	3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--
	03/16/07	41	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--
	09/10/07	72	<1	<1	2	2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--
	04/10/08	112	<0.0990	<0.0990	1.19	1.25	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	40.2
MW-4	10/03/05	390	<0.2	6	14	25	3	0.9	0.6	<0.2	<0.2	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	--	--	
	4/20/06	LNAPL present - 0.32' - well not sampled																		
	09/12/06	400	3	4	12	16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--
	03/16/07	LNAPL present - 0.46' - well not sampled																		
MW-7	10/03/05	31	<0.02	0.3	<0.01	0.04	0.04	0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	--	--
MW-8	10/03/05	24	<0.02	0.2	0.1	0.1	0.03	0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	--	--
MW-9	10/03/05	0.2	<0.02	<0.01	<0.01	0.03	<0.02	0.01	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	--	--
MW-10	10/03/05	2	<0.02	0.5	0.4	0.05	0.03	0.04	0.03	<0.02	<0.02	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	--	--	
Former Unocal 306456																				
GEI-2	09/17/06	400	<10	<10	11	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	--	--
	09/12/07	560	<10	<10	28	19	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	--	--
	04/11/08	375	<5.00	<5.00	7.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	130	182
GEI-7	09/12/07	630	3	<1	9	4	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--
GEI-9	03/17/07	47	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	--	--
GEI-11	09/17/06	580	<10	<10	20	19	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	--	--
GEI-12	04/12/08	175	<0.943	<0.943	4.34	1.70	<0.943	<0.943	<0.943	<0.943	<0.943	<0.943	<0.943	<0.943	<0.943	<0.943	<0.943	<0.943	166	213
Notes:																				
All results are reported in micrograms per liter (µg/l)																				
PAH = Polycyclic Aromatic Hydrocarbons; analyzed using EPA Method 8270																				
GCL = ADEC 18 AAC 75 Groundwater Cleanup Level																				
Bold Type = Results of most recent sampling event																				
-- = sample was not analyzed for this compound																				
<25 = result did not exceed indicated method reporting limit; an elevated reporting limit indicates sample was diluted																				

ARCADIS

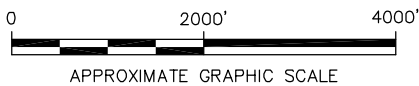
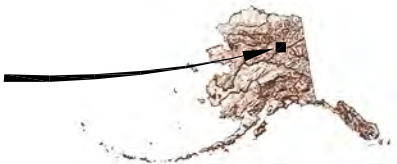
Figures

CITY: TMAFA-FL DIV/GROUP: P85 DB: AR LD: (Op) PIC: (Op) PM: M: Strickler TM: (Op) L: Y: (Op) ON: OFF: REF
 RY: R: 200805045572000100001015A06M45572001.dwg LAYOUT: 1 SAVED: 7/24/2008 11:00 AM ACADVER: 17.05 (LMS TECH) PAGESETUP: PDF-AP PLOTSTYLETABLE: PLT\FULL.CTB PLOTTED: 8/13/2008 1:16 PM BY: RICHARDS, JIM
 XREFS: IMAGES: ALASKA.jpg PROJECTNAME: FAIRBANKS-SE.jpg



SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE: FAIRBANKS (D-2) SE, AK., 1992, FAIRBANKS NORTH STAR BOROUGH, SECTION: 3, TOWNSHIP: 1S, RANGE: 1W

SITE LOCATION



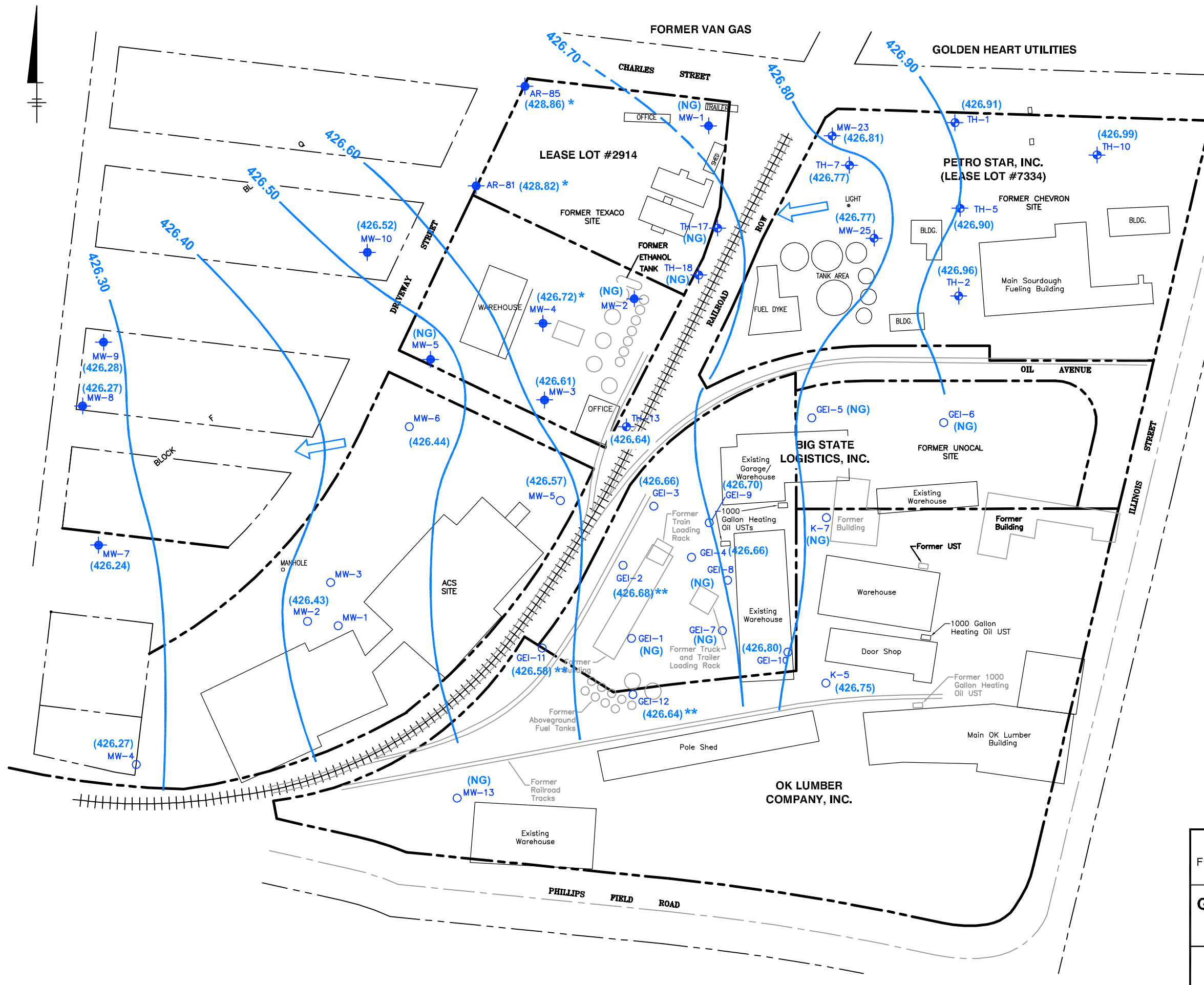
FORMER CHEVRON TERMINAL 1001430 - 418 ILLINOIS ST.
 FORMER TEXACO TERMINAL 211815 - 410 DRIVEWAY ST.
 FORMER UNOCAL BULK TERMINAL 306456 - 328.5 ILLINOIS ST.
 FAIRBANKS, ALASKA

SITE LOCATION MAP



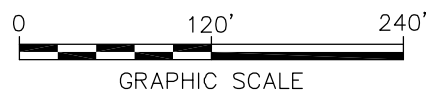
FIGURE
1

CITY: TMA-A, FL DIV: GROUP 386 DB: JAR LD: (DR) PIC: (DR) PNM: S: 3/15/08 LYR: (DR) ON: OFF=REF*
 RY: R_2008080455: 200011000011: SAUR: G: M: F: 4: 55: 2001: DWG LAYOUT: 2 SAVER: 8/13/2008 1:16 PM ACADVER: 17.05 (LMS TECH) PAGES: 1/1 PLT: FULL: CTB PLOTTED: 8/13/2008 1:16 PM BY: RICHARDS, JIM
 XREFS: IMAGES: PROJECTNAME: -



- LEGEND**
- Chevron Monitoring Well (TH)
 - Texaco Monitoring Well (AR)
 - Unocal Monitoring Well (GEI) (K)
 - WATER-TABLE ELEVATION CONTOUR
DASHED WHERE INFERRED
CONTOUR INTERVAL = 0.10 FEET
 - WATER-TABLE ELEVATION (FEET)
 - APPARENT DIRECTION OF GROUNDWATER FLOW
 - DATA NOT USED FOR CONTOURING
 - GROUNDWATER ELEVATION ADJUSTED FOR THE PRESENCE OF LNAPL

- NOTES:**
1. The coordinate system is a local grid. Elevations are State of Alaska TBM "X" NE bolt of fire hydrant on the south side of Phillips Field Road between Illinois Street and Driveway Street. Elevation is 446.59'.
 2. Property boundary and well locations provided by "KARABELNIKOFF SURVEYING", Date Nov. 12, 2007.

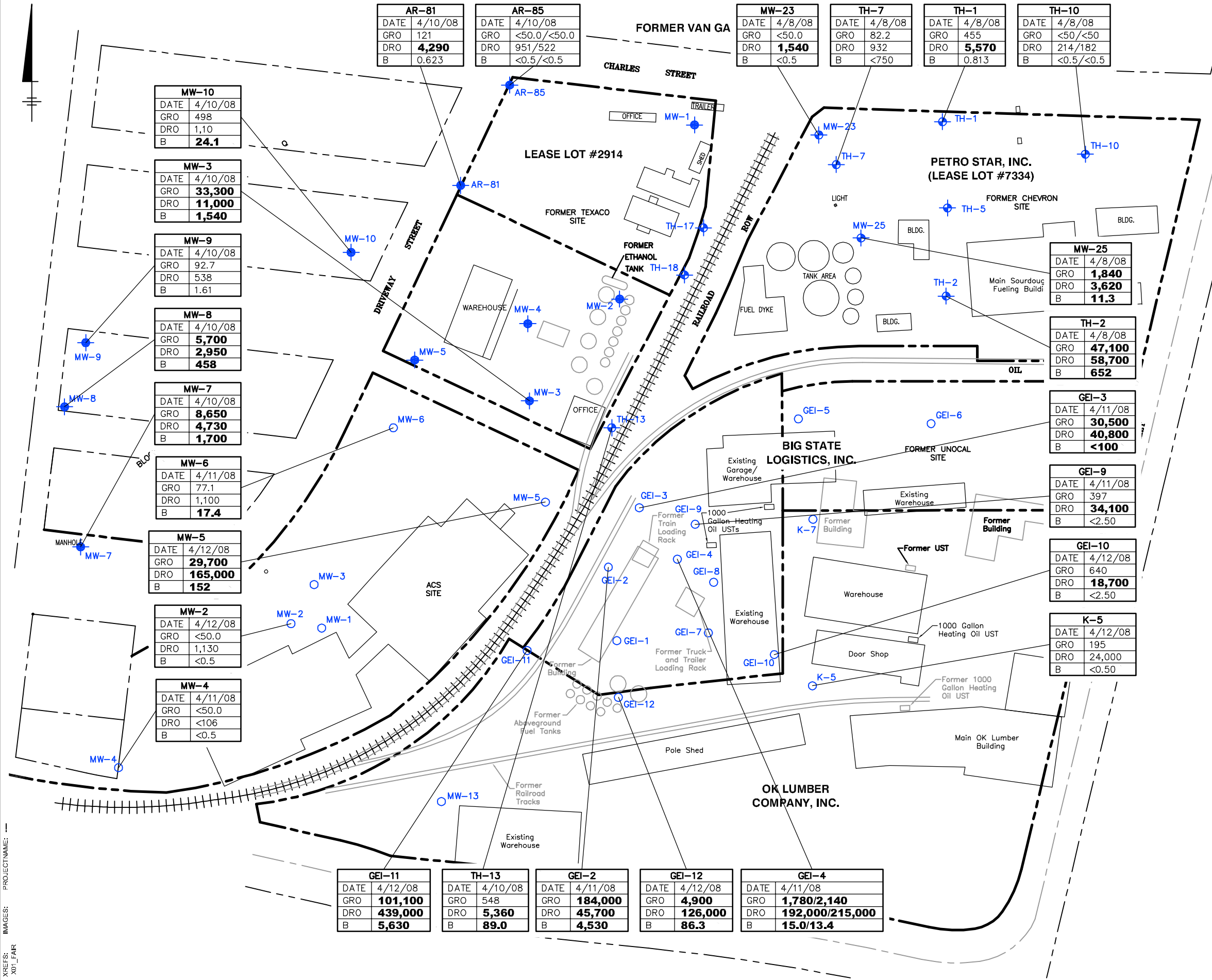


FORMER CHEVRON TERMINAL 1001430 - 418 ILLINOIS ST.
 FORMER TEXACO TERMINAL 211815 - 410 DRIVEWAY ST.
 FORMER UNOCAL BULK TERMINAL 306456 - 328.5 ILLINOIS ST.
 FAIRBANKS, ALASKA

**GROUNDWATER ELEVATION CONTOURS
 APRIL 4, 2008**



CITY: TMA-A, FL DIV: GROUP 36 DB: JAR LD: (OR) PIC: (OP) PNM: Sripaler TM: (OP) LYR: (OP) JON: OFF-REF
 RYR_2008B0046520001000011 SAURGNM4552001.dwg LAYOUT: 3 SAVER: 8/13/2008 3:54 PM ACADVER: 17.05 (LMS TECH) PAGESETUP: PDF-BL PLOTSTYLETABLE: PLT-FULL.CTB PLOTTED: 8/13/2008 3:54 PM BY: RICHARDS, JIM
 XREFS: X01_FAIR
 IMAGES: PROJECTNAME:



AR-81	
DATE	4/10/08
GRO	121
DRO	4,290
B	0.623

AR-85	
DATE	4/10/08
GRO	<50.0/<50.0
DRO	951/522
B	<0.5/<0.5

MW-23	
DATE	4/8/08
GRO	<50.0
DRO	1,540
B	<0.5

TH-7	
DATE	4/8/08
GRO	82.2
DRO	932
B	<750

TH-1	
DATE	4/8/08
GRO	455
DRO	5,570
B	0.813

TH-10	
DATE	4/8/08
GRO	<50/<50
DRO	214/182
B	<0.5/<0.5

MW-10	
DATE	4/10/08
GRO	498
DRO	1,10
B	24.1

MW-3	
DATE	4/10/08
GRO	33,300
DRO	11,000
B	1,540

MW-9	
DATE	4/10/08
GRO	92.7
DRO	538
B	1.61

MW-8	
DATE	4/10/08
GRO	5,700
DRO	2,950
B	458

MW-7	
DATE	4/10/08
GRO	8,650
DRO	4,730
B	1,700

MW-6	
DATE	4/11/08
GRO	77.1
DRO	1,100
B	17.4

MW-5	
DATE	4/12/08
GRO	29,700
DRO	165,000
B	152

MW-2	
DATE	4/12/08
GRO	<50.0
DRO	1,130
B	<0.5

MW-4	
DATE	4/11/08
GRO	<50.0
DRO	<106
B	<0.5

MW-25	
DATE	4/8/08
GRO	1,840
DRO	3,620
B	11.3

TH-2	
DATE	4/8/08
GRO	47,100
DRO	58,700
B	652

GEI-3	
DATE	4/11/08
GRO	30,500
DRO	40,800
B	<100

GEI-9	
DATE	4/11/08
GRO	397
DRO	34,100
B	<2.50

GEI-10	
DATE	4/12/08
GRO	640
DRO	18,700
B	<2.50

K-5	
DATE	4/12/08
GRO	195
DRO	24,000
B	<0.50

GEI-11	
DATE	4/12/08
GRO	101,100
DRO	439,000
B	5,630

TH-13	
DATE	4/10/08
GRO	548
DRO	5,360
B	89.0

GEI-2	
DATE	4/11/08
GRO	184,000
DRO	45,700
B	4,530

GEI-12	
DATE	4/12/08
GRO	4,900
DRO	126,000
B	86.3

GEI-4	
DATE	4/11/08
GRO	1,780/2,140
DRO	192,000/215,000
B	15.0/13.4

LEGEND

- + Chevron Monitoring Well (TH)
- * Texaco Monitoring Well (AR)
- o Unocal Monitoring Well (GEI) (K)

SAMPLE LOCATION	
DATE	SAMPLE DATE
GRO	GASOLINE RANGE ORGANICS
DRO	DIESEL RANGE ORGANICS
B	BENZENE

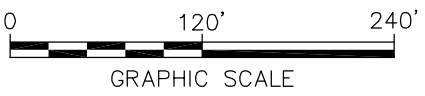
RESULTS REPORTED IN MICROGRAMS PER LITER (µg/L)

220/210 = DUPLICATE SAMPLE TAKEN

BOLD VALUE INDICATES CONCENTRATION GREATER THAN ADEC GROUNDWATER CLEANUP LEVELS 18 AAC 75.

NOTES:

1. The coordinate system is a local grid. Elevations are State of Alaska TBM "X" NE bolt of fire hydrant on the south side of Phillips Field Road between Illinois Street and Driveway Street. Elevation is 446.59'.
2. Property boundary and well locations provided by "KARABELNIKOFF SURVEYING", Date Nov. 12, 2007.



FORMER CHEVRON TERMINAL 1001430 - 418 ILLINOIS ST.
 FORMER TEXACO TERMINAL 211815 - 410 DRIVEWAY ST.
 FORMER UNOCAL BULK TERMINAL 306456 - 328.5 ILLINOIS ST.
 FAIRBANKS, ALASKA

**ANALYTICAL SUMMARY MAP
 APRIL 2008**



ARCADIS

Appendix A

Groundwater Sampling Field Data
Sheets

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45506 Sample Location (ie. MW-1): GEI-1
 Project Name: 328.5 Illinois Ave Sample ID (ie. MW-1-W-yymmdd): _____
 Client: Arcadis Date Sample Collected: 4/12/2008
 Sampler: Hannah, Weller Time gauged: _____

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): _____
 b) Water Depth (ft): _____
 Other: _____ c) Water Column (ft): _____
 d) Calc. Purge Vol. (gal): _____

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other

Total Volume Purged (Gallons): _____ Free Product (y/n): _____
 Odor: _____ Sheen (y/n): _____

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
 not gauged or sampled, ice in well

Duplicate Sample ID: _____ Analyses Requested: _____
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/12/2008
 Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45506 Sample Location (ie. MW-1): GEI-2
 Project Name: 328.5 Illinois Ave Sample ID (ie. MW-1-W-yymmdd): GEI-2-W-080411
 Client: Arcadis Date Sample Collected: 4/11/2008
 Sampler: Hannah, Weller Time gauged: 1800

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 20.02
 b) Water Depth (ft): 18.18
 Other: DTP 18.16' c) Water Column (ft): 1.84
 d) Calc. Purge Vol. (gal): 0.3

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1740	0.5	5.80	0.577	1.8	grey	turbid			
1745	0.75	6.02	0.590	2.2	grey				
1750	1.25	6.34	0.583	2.4					
1754	1.75	6.18	0.592	2.44					

Total Volume Purged (Gallons): 1.75 Free Product (y/n): n
 Odor: very heavy Sheen (y/n): deminimus sheen

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 421 ppm, slow recharge

Duplicate Sample ID: _____ Analyses Requested: GRO/BTEX/VOC's/EDB/DRO/RRO
 Split Sample ID: _____ PAH's/metals

Signed: Hannah, Weller Date: 4/11/2008
 Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45506 Sample Location (ie. MW-1): GEI-3
 Project Name: 328.5 Illinois Ave Sample ID (ie. MW-1-W-yymmdd): GEI-3-W-080411
 Client: Arcadis Date Sample Collected: 4/11/2008
 Sampler: Hannah, Weller Time gauged: 1715

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 20
 b) Water Depth (ft): 17.63
 Other: _____ c) Water Column (ft): 2.37
 d) Calc. Purge Vol. (gal): 0.4

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1707	0.5	6.70	0.486	1.9	cloudy				
1710	1	6.37	0.481	2.2					
1713	1.5	6.38	0.478	2.3					

Total Volume Purged (Gallons): 1.5 Free Product (y/n): n
 Odor: moderate odor Sheen (y/n): deminimus sheen

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 385

Duplicate Sample ID: _____ Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/11/2008
 Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45506 Sample Location (ie. MW-1): GEI-4
 Project Name: 328.5 Illinois Ave Sample ID (ie. MW-1-W-yymmdd): GEI-4-W-080411
 Client: Arcadis Date Sample Collected: 4/11/2008
 Sampler: Hannah, Weller Time gauged: 1900

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 20.05
 b) Water Depth (ft): 17.90
 Other: _____ c) Water Column (ft): 2.15
 d) Calc. Purge Vol. (gal): 0.3

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1850	0.5	6.93	0.446	2.3	cloudy				
1853	1	7.05	0.269	2.2	cloudy				
1856	1.5	6.67	0.438	2.2	cloudy				
1858	2	6.67	0.437	2.32	cloudy				

Total Volume Purged (Gallons): 2 Free Product (y/n): n
 Odor: heavy Sheen (y/n): n

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 5.4 ppm, sock in well

Duplicate Sample ID: DUP-1-W-080411 @ 0800 Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/11/2008
 Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45506 Sample Location (ie. MW-1): GEI-5
 Project Name: 328.5 Illinois Ave Sample ID (ie. MW-1-W-yymmdd): _____
 Client: Arcadis Date Sample Collected: 4/11/2008
 Sampler: Hannah, Weller Time gauged: _____

Well Information

Groundwater: X Casing Diameter (in): _____ a) Well Depth (ft): _____
 b) Water Depth (ft): _____
 Other: _____ c) Water Column (ft): _____
 d) Calc. Purge Vol. (gal): _____

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other

Total Volume Purged (Gallons): _____ Free Product (y/n): _____
 Odor: _____ Sheen (y/n): _____

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
 not sampled, under ice

Duplicate Sample ID: _____ Analyses Requested: _____
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/11/2008

Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45506 Sample Location (ie. MW-1): GEI-6
 Project Name: 328.5 Illinois Ave Sample ID (ie. MW-1-W-yymmdd): _____
 Client: Arcadis Date Sample Collected: 4/11/2008
 Sampler: Hannah, Weller Time gauged: _____

Well Information

Groundwater: X Casing Diameter (in): _____ a) Well Depth (ft): _____
 b) Water Depth (ft): _____
 Other: _____ c) Water Column (ft): _____
 d) Calc. Purge Vol. (gal): _____

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other

Total Volume Purged (Gallons): _____ Free Product (y/n): _____
 Odor: _____ Sheen (y/n): _____

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
 not sampled, under water

Duplicate Sample ID: _____ Analyses Requested: _____
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/11/2008
 Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45506 Sample Location (ie. MW-1): GEI-7
 Project Name: 328.5 Illinois Ave Sample ID (ie. MW-1-W-yymmdd): _____
 Client: Arcadis Date Sample Collected: 4/12/2008
 Sampler: Hannah, Weller Time gauged: N/A

Well Information

Groundwater: X Casing Diameter (in): 2" a) Well Depth (ft): _____
 b) Water Depth (ft): _____
 Other: _____ c) Water Column (ft): _____
 d) Calc. Purge Vol. (gal): _____

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other

Total Volume Purged (Gallons): _____ Free Product (y/n): _____
 Odor: _____ Sheen (y/n): _____

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
 PID 4.5 ppm, not sampled or gauged, ice at 4.4'

Duplicate Sample ID: _____ Analyses Requested: _____
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/11/2008
 Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45506 Sample Location (ie. MW-1): GEI-8
 Project Name: 328.5 Illinois Ave Sample ID (ie. MW-1-W-yymmdd): _____
 Client: Arcadis Date Sample Collected: 4/11/2008
 Sampler: Hannah, Weller Time gauged: _____

Well Information

Groundwater: X Casing Diameter (in): 2" a) Well Depth (ft): _____
 b) Water Depth (ft): _____
 Other: _____ c) Water Column (ft): _____
 d) Calc. Purge Vol. (gal): _____

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other

Total Volume Purged (Gallons): _____ Free Product (y/n): _____
 Odor: _____ Sheen (y/n): _____

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
 Not sampled or gauged, sock frozen in well

Duplicate Sample ID: _____ Analyses Requested: _____
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/11/2008
 Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45506 Sample Location (ie. MW-1): GEI-9
 Project Name: 328.5 Illinois Ave Sample ID (ie. MW-1-W-yymmdd): GEI-9-W-080411
 Client: Arcadis Date Sample Collected: 4/11/2008
 Sampler: Hannah, Weller Time gauged: 1935

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 19.1
 b) Water Depth (ft): 17.62
 Other: _____ c) Water Column (ft): 1.48
 d) Calc. Purge Vol. (gal): 0.3

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity
Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1925	0.5	6.45	0.20	1.9	cloudy				
1930	1	6.23	0.34	2.0					
1935	1.5	6.17	0.33	1.9					

Total Volume Purged (Gallons): 1.5 Free Product (y/n): No
 Odor: slight Sheen (y/n): No

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 2.0 ppm

Duplicate Sample ID: _____ Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45506 Sample Location (ie. MW-1): GEI-10
 Project Name: 328.5 Illinois Ave Sample ID (ie. MW-1-W-yymmdd): GEI-10-W-080412
 Client: Arcadis Date Sample Collected: 4/12/2008
 Sampler: Hannah, Weller Time gauged: 940

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 19.5
 b) Water Depth (ft): 16.51
 Other: _____ c) Water Column (ft): 2.99
 d) Calc. Purge Vol. (gal): 0.5

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity
Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
930	0.5	6.55	0.20	2.3	cloudy				
940	1	6.43	0.20	2.7	cloudy				
942	1.5	6.40	0.19	2.8	cloudy				

Total Volume Purged (Gallons): 1.5 Free Product (y/n): No

Odor: heavy odor Sheen (y/n): No

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 0.0 ppm

Duplicate Sample ID: _____ Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45506 Sample Location (ie. MW-1): GEI-11
 Project Name: 328.5 Illinois Ave Sample ID (ie. MW-1-W-yymmdd): GEI-11-W-080412
 Client: Arcadis Date Sample Collected: 4/12/2008
 Sampler: Hannah, Weller Time gauged: 1415

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 19.65
 b) Water Depth (ft): 17.58
 Other: DTP 17.11' c) Water Column (ft): 2.07
 d) Calc. Purge Vol. (gal): 0.3

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1410	3.5	6.59	0.43	3.0	cloudy				
1417	4.5	6.44	0.41	2.8					
1420	5	6.38	0.41	2.7					

Total Volume Purged (Gallons): 5 Free Product (y/n): y

Odor: heavy, heavy odor Sheen (y/n):

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 108 ppm, collected ~0.5 gal NAPL after purging 3 gal, did EDB on GEI-11 instead of MW-13 due to MW-13 being frozen

Duplicate Sample ID: _____ Analyses Requested: GRO/BETX/DRO/RRO/EDB
 Split Sample ID: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45506 Sample Location (ie. MW-1): GEI-12
 Project Name: 328.5 Illinois Ave Sample ID (ie. MW-1-W-yymmdd): GEI-12-W-080412
 Client: Arcadis Date Sample Collected: 4/12/2008
 Sampler: Hannah, Weller Time gauged: 1150

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 19.58
 b) Water Depth (ft): 16.98
 Other: DTP 16.85' c) Water Column (ft): 2.6
 d) Calc. Purge Vol. (gal): 0.4

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity
Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1140	1.5	6.68	0.22	2.3	grey				
1144	2	6.12	0.37	2.5	grey				
1146	2.5	6.13	0.35	2.6	grey				

Total Volume Purged (Gallons): 2.5 Free Product (y/n): y

Odor: heavy Sheen (y/n):

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 3.7 ppm, took "full suite" analyses on GEI-12 because GEI-7, GEI-1 can't be sampled, GEI-9 sampled on 4/11

Duplicate Sample ID: _____ Analyses Requested: GRO/BETX/DRO/RRO/EDB
 Split Sample ID: _____ VOC's/PAH's/Arsenic/Lead/metals

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45506 Sample Location (ie. MW-1): MW-2
 Project Name: 328.5 Illinois Ave Sample ID (ie. MW-1-W-yymmdd): MW-2-W-080412
 Client: Arcadis Date Sample Collected: 4/12/2008
 Sampler: Hannah, Weller Time gauged: 1535

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 21.93
 b) Water Depth (ft): 17.60
 Other: _____ c) Water Column (ft): 4.33
 d) Calc. Purge Vol. (gal): 0.7

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1525	1.5	7.33	0.31	4.3	rusty/cloudy				
1528	2.25	7.20	0.32	4.4					
1530	3	7.10	0.32	4.5					

Total Volume Purged (Gallons): 3 Free Product (y/n): No
 Odor: slight Sheen (y/n): No

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 0.0

Duplicate Sample ID: _____ Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45506 Sample Location (ie. MW-1): MW-4
 Project Name: 328.5 Illinois Ave Sample ID (ie. MW-1-W-yymmdd): MW-4-W-080412
 Client: Arcadis Date Sample Collected: 4/11/2008
 Sampler: Hannah, Weller Time gauged: 1550

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 24.15
 b) Water Depth (ft): 20.82
 Other: _____ c) Water Column (ft): 3.33
 d) Calc. Purge Vol. (gal): 0.5

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1540	1	8.55	0.64	3.4	tan				
1545	1.5	8.32	0.12	3.4					
1548	2	8.25	0.12	3.4					

Total Volume Purged (Gallons): 2 Free Product (y/n): No
 Odor: _____ Sheen (y/n): No

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
 teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
 teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
 PID 0.0 ppm

Duplicate Sample ID: _____ Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45506 Sample Location (ie. MW-1): MW-5
 Project Name: 328.5 Illinois Ave Sample ID (ie. MW-1-W-yymmdd): MW-5-W-080412
 Client: Arcadis Date Sample Collected: 4/12/2008
 Sampler: Hannah, Weller Time gauged: 1500

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 21.6
 b) Water Depth (ft): 17.44
 Other: _____ c) Water Column (ft): 4.16
 d) Calc. Purge Vol. (gal): 0.7

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity
Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1455	2	7.04	0.33	2.4	cloudy				
1457	2.75	6.83	0.33	2.5	cloudy				
1500	3.5	6.75	0.33	2.5					

Total Volume Purged (Gallons): 3.5 Free Product (y/n): No

Odor: heavy Sheen (y/n): y

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 0.0 ppm, emulsified product in bailer

Duplicate Sample ID: _____ Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45506 Sample Location (ie. MW-1): MW-6
 Project Name: 328.5 Illinois Ave Sample ID (ie. MW-1-W-yymmdd): MW-6-W-080411
 Client: Arcadis Date Sample Collected: 4/11/2008
 Sampler: Hannah, Weller Time gauged: 1640

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 25.25
 b) Water Depth (ft): 20.48
 Other: _____ c) Water Column (ft): 4.77
 d) Calc. Purge Vol. (gal): 0.8

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1630	1	6.70	0.53	3.0	clear				
1634	2	6.75	0.53	2.9	clear				
1637	3	6.55	0.52	2.9	clear				

Total Volume Purged (Gallons): 3 Free Product (y/n): No

Odor: heavy during gauging, none during purging Sheen (y/n): No

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 0.0 ppm

Duplicate Sample ID: _____ Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45506 Sample Location (ie. MW-1): K-5
 Project Name: 328.5 Illinois Ave Sample ID (ie. MW-1-W-yymmdd): K-5-W-080412
 Client: Arcadis Date Sample Collected: 4/12/2008
 Sampler: Hannah, Weller Time gauged: 1030

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 19.08
 b) Water Depth (ft): 17.00
 Other: _____ c) Water Column (ft): 2.08
 d) Calc. Purge Vol. (gal): 0.3

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1022	0.5	6.47	0.45	2.5	clear				
1028	1	6.48	0.45	2.7	clear				
1030	1.5	6.55	0.44	2.6	clear				

Total Volume Purged (Gallons): 1.5 Free Product (y/n): No
 Odor: heavy Sheen (y/n): y

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 4.4 ppm

Duplicate Sample ID: _____ Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45506 Sample Location (ie. MW-1): K-7
 Project Name: 328.5 Illinois Ave Sample ID (ie. MW-1-W-yymmdd): _____
 Client: Arcadis Date Sample Collected: 4/12/2008
 Sampler: Hannah, Weller Time gauged: _____

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): _____
 b) Water Depth (ft): _____
 Other: _____ c) Water Column (ft): _____
 d) Calc. Purge Vol. (gal): _____

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other

Total Volume Purged (Gallons): _____ Free Product (y/n): _____

Odor: _____ Sheen (y/n): _____

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
 PID 0.2 ppm, not sampled - ice blockage in casing

Duplicate Sample ID: _____ Analyses Requested: _____
 Split Sample ID: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45506 Sample Location (ie. MW-1): MW-13
 Project Name: 328.5 Illinois Ave Sample ID (ie. MW-1-W-yymmdd): _____
 Client: Arcadis Date Sample Collected: 4/12/2008
 Sampler: Hannah, Weller Time gauged: _____

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): _____
 b) Water Depth (ft): _____
 Other: _____ c) Water Column (ft): _____
 d) Calc. Purge Vol. (gal): _____

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other

Total Volume Purged (Gallons): _____ Free Product (y/n): _____

Odor: _____ Sheen (y/n): _____

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
 PID 0.0 ppm, not sampled - ice in casing

Duplicate Sample ID: _____ Analyses Requested: _____
 Split Sample ID: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45505.001 Sample Location (ie. MW-1): AR-81
 Project Name: 401 Driveway Street Sample ID (ie. MW-1-W-yymmdd): AR-81-W-080410
 Client: ARCADIS Date Sample Collected: 4/10/2008
 Sampler: Hannah, Weller Time sampled: 1555

Well Information

Groundwater: X Casing Diameter (in): 4 a) Well Depth (ft): 18.70
 b) Water Depth (ft): 15.62
 Other: _____ c) Water Column (ft): 3.02
 d) Calc. Purge Vol. (gal): 2.0

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1530	2	6.61	0.406	2.1	grey				
1540	4	6.59	0.411	2.1	grey				
1550	6	6.54	0.415	2.2	light grey				

Total Volume Purged (Gallons): 6 Free Product (y/n): n
 Odor: slight when gauging Sheen (y/n): n

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 0.0 ppm, slow to recharge

Duplicate Sample ID: _____ Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/10/2008
 Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45505.001 Sample Location (ie. MW-1): AR-85
 Project Name: 401 Driveway Street Sample ID (ie. MW-1-W-yymmdd): AR-85-W-080410
 Client: ARCADIS Date Sample Collected: 4/10/2008
 Sampler: Hannah, Weller Time sampled: 1450

Well Information

Groundwater: X Casing Diameter (in): 4 a) Well Depth (ft): 17.70
 b) Water Depth (ft): 15.79
 Other: _____ c) Water Column (ft): 1.91
 d) Calc. Purge Vol. (gal): 1.2

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1435	1.25	6.62	0.583	2.0					
1443	2.5	6.60	0.377	2.0					
1448	4	6.56	0.378	2.1					

Total Volume Purged (Gallons): 4 Free Product (y/n): n
 Odor: no odor Sheen (y/n): n

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 0.0 ppm

Duplicate Sample ID: DUP-1-W-080410 @ 0800 Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/10/2008
 Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45505.001 Sample Location (ie. MW-1): MW-1
 Project Name: 401 Driveway Street Sample ID (ie. MW-1-W-yymmdd): _____
 Client: ARCADIS Date Sample Collected: 4/10/2008
 Sampler: Hannah, Weller Time sampled: _____

Well Information

Groundwater: X Casing Diameter (in): _____ a) Well Depth (ft): _____
 b) Water Depth (ft): _____
 Other: _____ c) Water Column (ft): _____
 d) Calc. Purge Vol. (gal): _____

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other

Total Volume Purged (Gallons): _____ Free Product (y/n): _____

Odor: _____ Sheen (y/n): _____

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
 not sampled - underwater

Duplicate Sample ID: _____ Analyses Requested: _____
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/10/2008

Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45505.001 Sample Location (ie. MW-1): MW-2
 Project Name: 401 Driveway Street Sample ID (ie. MW-1-W-yymmdd): _____
 Client: ARCADIS Date Sample Collected: 4/10/2008
 Sampler: Hannah, Weller Time sampled: _____

Well Information

Groundwater: X Casing Diameter (in): _____ a) Well Depth (ft): _____
 b) Water Depth (ft): _____
 Other: _____ c) Water Column (ft): _____
 d) Calc. Purge Vol. (gal): _____

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other

Total Volume Purged (Gallons): _____ Free Product (y/n): _____

Odor: _____ Sheen (y/n): _____

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
 PID 307 ppm, can't sample sock frozen in well

Duplicate Sample ID: _____ Analyses Requested: _____
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/10/2008

Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45505.001 Sample Location (ie. MW-1): MW-3
 Project Name: 401 Driveway Street Sample ID (ie. MW-1-W-yymmdd): MW-3-W-080410
 Client: ARCADIS Date Sample Collected: 4/10/2008
 Sampler: Hannah, Weller Time sampled: 1650

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 19.70
 b) Water Depth (ft): 16.06
 Other: _____ c) Water Column (ft): 3.64
 d) Calc. Purge Vol. (gal): 0.6

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1640	1	6.40	0.480	2.7	light tan	low			
1643	2	6.37	0.458	2.4	clear				
1648	3	6.35	0.451	2.7	clear				

Total Volume Purged (Gallons): 3 Free Product (y/n): n
 Odor: moderate odor Sheen (y/n): n

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 4.2 ppm

Duplicate Sample ID: _____ Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____ VOC's/EDB/PAH's/metals

Signed: Hannah, Weller Date: 4/10/2008
 Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45505.001 Sample Location (ie. MW-1): MW-4
 Project Name: 401 Driveway Street Sample ID (ie. MW-1-W-yymmdd): _____
 Client: ARCADIS Date Sample Collected: 4/10/2008
 Sampler: Hannah, Weller Time sampled: _____

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 20.80
 b) Water Depth (ft): 15.81
 Other: DTP 15.80' c) Water Column (ft): 4.99
 d) Calc. Purge Vol. (gal): 0.8

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other

Total Volume Purged (Gallons): _____ Free Product (y/n): y
 Odor: heavy odor Sheen (y/n): _____

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 222 ppm, not sampled, ice in casing

Duplicate Sample ID: _____ Analyses Requested: _____
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/10/2008
 Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45505.001 Sample Location (ie. MW-1): MW-5
 Project Name: 401 Driveway Street Sample ID (ie. MW-1-W-yymmdd): _____
 Client: ARCADIS Date Sample Collected: 4/10/2008
 Sampler: Hannah, Weller Time sampled: _____

Well Information

Groundwater: X Casing Diameter (in): _____ a) Well Depth (ft): _____
 b) Water Depth (ft): _____
 Other: _____ c) Water Column (ft): _____
 d) Calc. Purge Vol. (gal): _____

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other

Total Volume Purged (Gallons): _____ Free Product (y/n): _____

Odor: _____ Sheen (y/n): _____

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
 not gauged or sampled, underwater

Duplicate Sample ID: _____ Analyses Requested: _____
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/10/2008

Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45505.001 Sample Location (ie. MW-1): MW-7
 Project Name: 401 Driveway Street Sample ID (ie. MW-1-W-yymmdd): MW-7-W-080410
 Client: ARCADIS Date Sample Collected: 4/10/2008
 Sampler: Hannah, Weller Time sampled: 1945

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 22.20
 b) Water Depth (ft): 17.08
 Other: _____ c) Water Column (ft): 5.12
 d) Calc. Purge Vol. (gal): 0.8

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1935	1	6.58	0.437	3.8	grey				
1938	2	6.51	0.444	3.9	grey				
1940	3	6.51	0.444	4.1					

Total Volume Purged (Gallons): 3 Free Product (y/n): n

Odor: no odor while guaging, slight odor while purging Sheen (y/n): n

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 0.0 ppm

Duplicate Sample ID: _____ Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/10/2008

Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45505.001 Sample Location (ie. MW-1): MW-8
 Project Name: 401 Driveway Street Sample ID (ie. MW-1-W-yymmdd): MW-8-W-080410
 Client: ARCADIS Date Sample Collected: 4/10/2008
 Sampler: Hannah, Weller Time sampled: 2005

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 21.65
 b) Water Depth (ft): 15.42
 Other: _____ c) Water Column (ft): 6.23
 d) Calc. Purge Vol. (gal): 1.0

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1957	1	6.41	0.410	2.2	grey	turbid			
2000	2	6.42	0.405	2.2	grey				
2002	3	6.42	0.412	2.3	light grey				

Total Volume Purged (Gallons): 3 Free Product (y/n): n
 Odor: moderate Sheen (y/n): n

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 0.0 ppm, slow to recharge

Duplicate Sample ID: _____ Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/10/2008
 Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45505.001 Sample Location (ie. MW-1): MW-9
 Project Name: 401 Driveway Street Sample ID (ie. MW-1-W-yymmdd): MW-9-W-080410
 Client: ARCADIS Date Sample Collected: 4/10/2008
 Sampler: Hannah, Weller Time sampled: 2025

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 21.70
 b) Water Depth (ft): 15.28
 Other: _____ c) Water Column (ft): 6.42
 d) Calc. Purge Vol. (gal): 1.0

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
2015	1	6.47	0.330	2.9	clear				
2017	2	6.46	0.332	2.9	clear				
2020	3	6.42	0.332	2.9	clear				

Total Volume Purged (Gallons): 3 Free Product (y/n): n

Odor: no odor Sheen (y/n): n

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 0.0 ppm

Duplicate Sample ID: _____ Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/10/2008

Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45505.001 Sample Location (ie. MW-1): MW-10
 Project Name: 401 Driveway Street Sample ID (ie. MW-1-W-yymmdd): MW-10-W-080410
 Client: ARCADIS Date Sample Collected: 4/10/2008
 Sampler: Hannah, Weller Time sampled: 2045

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 19.80
 b) Water Depth (ft): 16
 Other: _____ c) Water Column (ft): 3.8
 d) Calc. Purge Vol. (gal): 0.6

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
2037	0.75	6.45	0.403	2.9	light grey				
2040	1.5	6.47	0.402	2.9					
2042	2.25	6.46	0.403	3.0					

Total Volume Purged (Gallons): 2.25 Free Product (y/n): n

Odor: slight odor while gauging, mod. While purging Sheen (y/n): n

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 0.0 ppm

Duplicate Sample ID: _____ Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/10/2008

Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45512 Sample Location (ie. MW-1): MW-23
 Project Name: 418 Illinois Street Sample ID (ie. MW-1-W-yymmdd): MW-23-W-080408
 Client: ARCADIS Date Sample Collected: 4/8/2008
 Sampler: Hannah, Weller Time sampled: 1545

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 20.4
 b) Water Depth (ft): 15.03
 Other: _____ c) Water Column (ft): 5.37
 d) Calc. Purge Vol. (gal): 0.9

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.64
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1535	1	6.61	0.401	3.4	clear	very low			no odor
1538	2	6.57	0.415	3.4	clear	very low			no odor
1541	3	6.62	0.413	3.4	clear	very low			no odor

Total Volume Purged (Gallons): 3 Free Product (y/n): n
 Odor: slight while gauging Sheen (y/n): n

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 2.5 ppm

Duplicate Sample ID: _____ Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/8/2008
 Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45512 Sample Location (ie. MW-1): MW-25
 Project Name: 418 Illinois Street Sample ID (ie. MW-1-W-yymmdd): MW-25-W-080408
 Client: ARCADIS Date Sample Collected: 4/10/2008
 Sampler: Hannah Time sampled: 1000

Well Information

Groundwater: X Casing Diameter (in): 5 a) Well Depth (ft): 43.68
 b) Water Depth (ft): 19.08
 Other: _____ c) Water Column (ft): 24.6
 d) Calc. Purge Vol. (gal): 20.0

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.64
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
905	20	6.42	0.069	2.6	clear				
930	40	6.53	0.688	2.9	clear				
950	60	6.48	0.683	2.9	clear				

Total Volume Purged (Gallons): 60 Free Product (y/n): n
 Odor: strong Sheen (y/n): y

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
 typhoon pump

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
 teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
 PID 161 ppm, slight sheen in purge buckets, 4" sock in well

Duplicate Sample ID: _____ Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____

Signed: Hannah Date: 4/8/2008
 Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45512 Sample Location (ie. MW-1): TH-1
 Project Name: 418 Illinois Street Sample ID (ie. MW-1-W-yymmdd): TH-1-W-080408
 Client: ARCADIS Date Sample Collected: 4/8/2008
 Sampler: Hannah, Weller Time sampled: 1500

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 23.1
 b) Water Depth (ft): 18.78
 Other: _____ c) Water Column (ft): 4.32
 d) Calc. Purge Vol. (gal): 0.7

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.64
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1453	1	6.43	0.435	2.6	clear	black sand			no odor
1455	2	6.44	0.432	2.7	clear	none			no odor
1458	3	6.44	0.433	2.6	clear	none			no odor

Total Volume Purged (Gallons): 3 Free Product (y/n): n
 Odor: moderate while gauging Sheen (y/n): n

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 72.1 ppm

Duplicate Sample ID: _____ Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/8/2008
 Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45512 Sample Location (ie. MW-1): TH-2
 Project Name: 418 Illinois Street Sample ID (ie. MW-1-W-yymmdd): TH-2-W-080408
 Client: ARCADIS Date Sample Collected: 4/8/2008
 Sampler: Hannah, Weller Time sampled: 1635

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 21.08
 b) Water Depth (ft): 16.92
 Other: _____ c) Water Column (ft): 4.16
 d) Calc. Purge Vol. (gal): 0.7

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.64
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1625	7	6.64	0.471	2.5	light tan				very
1630	8.5	6.48	0.472	2.5	light tan				heavy
1633	9.5	6.47	0.467	2.4					odor

Total Volume Purged (Gallons): 10 Free Product (y/n): y - free product beads
 Odor: strong Sheen (y/n): n

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 101 ppm, purged until beads were not visible in bailer-no thickness on top - no separate layer on top, sock in well

Duplicate Sample ID: _____ Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/8/2008
 Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45512 Sample Location (ie. MW-1): TH-5
 Project Name: 418 Illinois Street Sample ID (ie. MW-1-W-yymmdd): _____
 Client: ARCADIS Date Sample Collected: 4/8/2008
 Sampler: Hannah, Weller Time sampled: _____

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 22.4
 b) Water Depth (ft): 15.9
 Other: _____ c) Water Column (ft): 6.5
 d) Calc. Purge Vol. (gal): 1.0

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.64
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other

Total Volume Purged (Gallons): _____ Free Product (y/n): _____
 Odor: strong when gauging Sheen (y/n): _____

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
 PID 43.7 ppm, sock is frozen inside well, can't remove cap - not sampled

Duplicate Sample ID: _____ Analyses Requested: _____
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/8/2008

Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45512 Sample Location (ie. MW-1): TH-7
 Project Name: 418 Illinois Street Sample ID (ie. MW-1-W-yymmdd): TH-7-W-080408
 Client: ARCADIS Date Sample Collected: 4/8/2008
 Sampler: Hannah, Weller Time sampled: 1525

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 23.57
 b) Water Depth (ft): 18.57
 Other: _____ c) Water Column (ft): 5
 d) Calc. Purge Vol. (gal): 0.8

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.64
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1520	1	6.57	0.351	3.4	clear	none			slight
1523	2	6.58	0.397	3.5	clear	none			
1525	3	6.58	0.398	3.5	clear	none			

Total Volume Purged (Gallons): 3 Free Product (y/n): n
 Odor: moderate when gauging Sheen (y/n): n

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
PID 0.6 ppm

Duplicate Sample ID: _____ Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/8/2008
 Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45512 Sample Location (ie. MW-1): TH-10
 Project Name: 418 Illinois Street Sample ID (ie. MW-1-W-yymmdd): TH-10-W-080408
 Client: ARCADIS Date Sample Collected: 4/8/2008
 Sampler: Hannah, Weller Time sampled: 1430

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 23.9
 b) Water Depth (ft): 16.82
 Other: _____ c) Water Column (ft): 7.08
 d) Calc. Purge Vol. (gal): 1.1

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.64
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1420	1	6.16	0.374	2.4	clear	none			no odor
1423	2.5	6.60	0.374	2.5	clear	none			no odor
1425	3.5	6.54	0.373	2.6	clear	none			no odor

Total Volume Purged (Gallons): 3.5 Free Product (y/n): n

Odor: _____ Sheen (y/n): n

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
 teflon bailer

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
 teflon bailer

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
 PID 0.0 ppm, ice in monument

Duplicate Sample ID: DUP-1-W-080408 @ 0800 Analyses Requested: GRO/BTEX/DRO/RRO

Split Sample ID: _____

Signed: Hannah, Weller Date: 4/8/2008

Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45512 Sample Location (ie. MW-1): TH-13
 Project Name: 418 Illinois Street Sample ID (ie. MW-1-W-yymmdd): TH-13-W-080410
 Client: ARCADIS Date Sample Collected: 4/10/2008
 Sampler: Hannah, Weller Time sampled: 1345

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): 20.62
 b) Water Depth (ft): 15.3
 Other: _____ c) Water Column (ft): 5.3
 d) Calc. Purge Vol. (gal): 0.9

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.64
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other
1320	1	6.23	0.655	3.1	clear	very low			no odor
1325	2	6.29	0.648	3.1	clear	very low			no odor
1330	3	6.28	0.649	3.1	clear	very low			no odor

Total Volume Purged (Gallons): 3 Free Product (y/n): n
 Odor: no odor Sheen (y/n): n

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)
peri pump

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)
peri pump

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)
some jacking, bottom of monument allows water in from sides, casing heaved sideways

Remarks (well recovery, unusual conditions/observations):
PID 0.0 ppm, peri pumped because heaved casing was under monument flange - bailer could not fit

Duplicate Sample ID: _____ Analyses Requested: GRO/BTEX/DRO/RRO
 Split Sample ID: _____ VOC's/EDB/metals/PAH's

Signed: Hannah, Weller Date: 4/8/2008
 Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45512 Sample Location (ie. MW-1): TH-17
 Project Name: 418 Illinois Street Sample ID (ie. MW-1-W-yymmdd): _____
 Client: ARCADIS Date Sample Collected: 4/8/2008
 Sampler: Hannah, Weller Time sampled: _____

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): _____
 b) Water Depth (ft): _____
 Other: _____ c) Water Column (ft): _____
 d) Calc. Purge Vol. (gal): _____

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.64
6	1.47

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other

Total Volume Purged (Gallons): _____ Free Product (y/n): _____

Odor: _____ Sheen (y/n): _____

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
 not sampled - underwater

Duplicate Sample ID: _____ Analyses Requested: _____
 Split Sample ID: _____

Signed: Hannah, Weller Date: 4/8/2008
 Signed/reviewer: _____ Date: _____

GROUNDWATER SAMPLE DATA SHEET

Project Number: 45512 Sample Location (ie. MW-1): TH-18
 Project Name: 418 Illinois Street Sample ID (ie. MW-1-W-yymmdd): _____
 Client: ARCADIS Date Sample Collected: 4/8/2008
 Sampler: Hannah, Weller Time sampled: _____

Well Information

Groundwater: X Casing Diameter (in): 2 a) Well Depth (ft): _____
 b) Water Depth (ft): _____
 Other: _____ c) Water Column (ft): _____
 d) Calc. Purge Vol. (gal): _____

Calculating Purge Volume

Well Casing Diameter	Multiply c) by:
2	0.16
4	0.64
6	1.47

Example 1- purging only well casing volume
 2-inch casing and 6-foot water column
 One Purge Volume= 0.16 X 6 = 0.96 gallons water

Sand Pack Diameter	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity
Example 2- purging well casing and sand pack volume
 2-inch casing, 8-inch sand pack, and 6-foot water column
 One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

FIELD MEASUREMENTS

Time	Volume (gallons)	pH	Conductivity (mS)	Temperature (C)	Color	Turbidity	Redox	Dissolved O ₂	Other

Total Volume Purged (Gallons): _____ Free Product (y/n): _____

Odor: _____ Sheen (y/n): _____

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.)

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.)

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.)

Remarks (well recovery, unusual conditions/observations):
 not sampled - underwater

Duplicate Sample ID: _____	Analyses Requested: _____
Split Sample ID: _____	

Signed: Hannah, Weller Date: 4/8/2008

Signed/reviewer: _____ Date: _____

ARCADIS

Appendix B

Laboratory Data Reports

June 10, 2008

Greg Montgomery
Arcadis, Geraghty, & Miller - Seattle
2300 Eastlake Avenue East, Suite 100
Seattle, WA/USA 98102

RE: 306456 (328.5 Illinois)

Enclosed are the results of analyses for samples received by the laboratory on 04/15/08 09:35.
The following list is a summary of the Work Orders contained in this report, generated on 06/10/08
16:15.

If you have any questions concerning this report, please feel free to contact me.

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
BRD0203	306456 (328.5 Illinois)	Chevron Alaska Sampling

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **306456 (328.5 Illinois)**
 Project Number: Chevron Alaska Sampling
 Project Manager: Greg Montgomery

Report Created:
 06/10/08 16:15

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GEI-2-W-080411	BRD0203-01	Water	04/11/08 18:00	04/15/08 09:35
GEI-3-W-080411	BRD0203-02	Water	04/11/08 17:15	04/15/08 09:35
GEI-4-W-080411	BRD0203-03	Water	04/11/08 19:00	04/15/08 09:35
GEI-9-W-080411	BRD0203-04	Water	04/11/08 19:35	04/15/08 09:35
GEI-10-W-080412	BRD0203-05	Water	04/12/08 09:40	04/15/08 09:35
GEI-11-W-080412	BRD0203-06	Water	04/12/08 14:15	04/15/08 09:35
GEI-12-W-080412	BRD0203-07	Water	04/12/08 11:50	04/15/08 09:35
MW-2-W-080412	BRD0203-08	Water	04/12/08 15:35	04/15/08 09:35
MW-4-W-080411	BRD0203-09	Water	04/11/08 15:50	04/15/08 09:35
MW-5-W-080412	BRD0203-10	Water	04/12/08 15:00	04/15/08 09:35
MW-6-W-080411	BRD0203-11	Water	04/11/08 16:40	04/15/08 09:35
K-5-W-080412	BRD0203-12	Water	04/12/08 10:30	04/15/08 09:35
DUP-1-W-080411	BRD0203-13	Water	04/11/08 08:00	04/15/08 09:35
QA-T-1-W-080411	BRD0203-14	Water	04/11/08 06:00	04/15/08 09:35

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
Seattle, WA/USA 98102

Project Name: **306456 (328.5 Illinois)**
Project Number: Chevron Alaska Sampling
Project Manager: Greg Montgomery

Report Created:
06/10/08 16:15

Analytical Case Narrative

TestAmerica - Seattle, WA

BRD0203

SAMPLE RECEIPT

The samples were received 04/15/08 by TestAmerica - Seattle. The temperature of the samples at the time of receipt was 2.1 degrees Celsius.

PREPARATIONS AND ANALYSIS

No additional anomalies, discrepancies, or issues were associated with sample preparation, analysis and quality control other than those already qualified in the data and described in the Notes and Definitions page at the end of the report.

Revised Report Issued 06/10/08

Per Client request sample MW-6-W-080412 was changed to MW-6-W-080411 and the sampling date was changed to 04/11/08. Sample MW-4-W-080412 was changed to MW-4-W-080411

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 306456 (328.5 Illinois)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: Chevron Alaska Sampling	06/10/08 16:15
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

Gasoline Range Hydrocarbons (n-Hexane to <n-Decane) by AK101
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0203-01 (GEI-2-W-080411)		Water			Sampled: 04/11/08 18:00						
Gasoline Range Hydrocarbons	AK 101	184000	----	10000	ug/l	200x	8D18044	04/18/08 16:02	04/18/08 21:23	KMT	
Surrogate(s): 4-BFB (FID)			90.0%		60 - 120 %	1x					"
BRD0203-02 (GEI-3-W-080411)		Water			Sampled: 04/11/08 17:15						
Gasoline Range Hydrocarbons	AK 101	30500	----	10000	ug/l	200x	8D18044	04/18/08 16:02	04/18/08 22:28	KMT	
Surrogate(s): 4-BFB (FID)			89.3%		60 - 120 %	1x					"
BRD0203-03RE1 (GEI-4-W-080411)		Water			Sampled: 04/11/08 19:00						
Gasoline Range Hydrocarbons	AK 101	1780	----	250	ug/l	5x	8D21031	04/21/08 12:29	04/22/08 07:12	KMT	Q8
Surrogate(s): 4-BFB (FID)			116%		60 - 120 %	1x					"
BRD0203-04RE1 (GEI-9-W-080411)		Water			Sampled: 04/11/08 19:35						
Gasoline Range Hydrocarbons	AK 101	1290	----	1000	ug/l	20x	8D20005	04/20/08 12:20	04/20/08 18:27	KMT	A-01, BQC, Q8
Surrogate(s): 4-BFB (FID)			91.1%		60 - 120 %	1x					"
BRD0203-04RE2 (GEI-9-W-080411)		Water			Sampled: 04/11/08 19:35						
Gasoline Range Hydrocarbons	AK 101	397	----	250	ug/l	5x	8D21031	04/21/08 12:29	04/22/08 07:44	KMT	Q8
Surrogate(s): 4-BFB (FID)			92.5%		60 - 120 %	1x					"
BRD0203-05RE1 (GEI-10-W-080412)		Water			Sampled: 04/12/08 09:40						
Gasoline Range Hydrocarbons	AK 101	ND	----	1000	ug/l	20x	8D20005	04/20/08 12:20	04/20/08 22:47	KMT	A-01, BQC
Surrogate(s): 4-BFB (FID)			91.6%		60 - 120 %	1x					"
BRD0203-05RE2 (GEI-10-W-080412)		Water			Sampled: 04/12/08 09:40						
Gasoline Range Hydrocarbons	AK 101	640	----	250	ug/l	5x	8D21031	04/21/08 12:29	04/22/08 08:17	KMT	Q8
Surrogate(s): 4-BFB (FID)			101%		60 - 120 %	1x					"
BRD0203-06 (GEI-11-W-080412)		Water			Sampled: 04/12/08 14:15						
Gasoline Range Hydrocarbons	AK 101	101000	----	10000	ug/l	200x	8D18044	04/18/08 16:02	04/19/08 03:56	KMT	
Surrogate(s): 4-BFB (FID)			91.0%		60 - 120 %	1x					"

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **306456 (328.5 Illinois)**

Project Number: Chevron Alaska Sampling

Project Manager: Greg Montgomery

Report Created:

06/10/08 16:15

Gasoline Range Hydrocarbons (n-Hexane to <n-Decane) by AK101

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0203-07RE1 (GEI-12-W-080412)		Water			Sampled: 04/12/08 11:50						
Gasoline Range Hydrocarbons	AK 101	4900	----	1000	ug/l	20x	8D20005	04/20/08 12:20	04/20/08 19:32	KMT	
Surrogate(s): 4-BFB (FID)		95.1%		60 - 120 %		1x					
BRD0203-08RE2 (MW-2-W-080412)		Water			Sampled: 04/12/08 15:35						
Gasoline Range Hydrocarbons	AK 101	ND	----	50.0	ug/l	1x	8D21031	04/21/08 12:29	04/22/08 05:02	KMT	
Surrogate(s): 4-BFB (FID)		90.0%		60 - 120 %		"					
BRD0203-09RE2 (MW-4-W-080411)		Water			Sampled: 04/11/08 15:50						
Gasoline Range Hydrocarbons	AK 101	ND	----	50.0	ug/l	1x	8D21031	04/21/08 12:29	04/22/08 05:34	KMT	
Surrogate(s): 4-BFB (FID)		88.4%		60 - 120 %		"					
BRD0203-10 (MW-5-W-080412)		Water			Sampled: 04/12/08 15:00						
Gasoline Range Hydrocarbons	AK 101	29700	----	10000	ug/l	200x	8D18044	04/18/08 16:02	04/19/08 08:51	KMT	
Surrogate(s): 4-BFB (FID)		95.2%		60 - 120 %		1x					
BRD0203-11RE1 (MW-6-W-080411)		Water			Sampled: 04/11/08 16:40						
Gasoline Range Hydrocarbons	AK 101	77.1	----	50.0	ug/l	1x	8D20005	04/20/08 12:20	04/21/08 04:45	KMT	
Surrogate(s): 4-BFB (FID)		85.8%		60 - 120 %		"					
BRD0203-12RE1 (K-5-W-080412)		Water			Sampled: 04/12/08 10:30						
Gasoline Range Hydrocarbons	AK 101	195	----	50.0	ug/l	1x	8D20005	04/20/08 12:20	04/21/08 05:18	KMT	Q8
Surrogate(s): 4-BFB (FID)		128%		60 - 120 %		"					ZX
BRD0203-13RE1 (DUP-1-W-080411)		Water			Sampled: 04/11/08 08:00						
Gasoline Range Hydrocarbons	AK 101	2140	----	1000	ug/l	20x	8D20005	04/20/08 12:20	04/21/08 00:58	KMT	Q8
Surrogate(s): 4-BFB (FID)		97.6%		60 - 120 %		1x					
BRD0203-14 (QA-T-1-W-080411)		Water			Sampled: 04/11/08 06:00						
Gasoline Range Hydrocarbons	AK 101	ND	----	50.0	ug/l	1x	8D18044	04/18/08 16:02	04/19/08 01:12	KMT	
Surrogate(s): 4-BFB (FID)		93.6%		60 - 120 %		"					

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **306456 (328.5 Illinois)**

Project Number: Chevron Alaska Sampling

Project Manager: Greg Montgomery

Report Created:

06/10/08 16:15

Diesel Hydrocarbons (C10-C25) and Heavy Oil (C25-C36) by AK102 and AK103

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0203-01 (GEI-2-W-080411)		Water			Sampled: 04/11/08 18:00						
Diesel Range Hydrocarbons	AK102_103	45.7	----	0.500	mg/l	5x	8D17016	04/17/08 09:18	04/21/08 15:01	EKK	
Residual Range Organics	"	ND	----	3.75	"	"	"	"	"	EKK	RL1
Surrogate(s): 2-FBP				251%		50 - 150 %	"			"	ZX
Octacosane				98.3%		50 - 150 %	"			"	
BRD0203-02 (GEI-3-W-080411)		Water			Sampled: 04/11/08 17:15						
Diesel Range Hydrocarbons	AK102_103	40.8	----	0.472	mg/l	5x	8D17016	04/17/08 09:18	04/21/08 15:26	EKK	
Residual Range Organics	"	ND	----	3.54	"	"	"	"	"	EKK	RL1
Surrogate(s): 2-FBP				179%		50 - 150 %	"			"	ZX
Octacosane				101%		50 - 150 %	"			"	
BRD0203-03 (GEI-4-W-080411)		Water			Sampled: 04/11/08 19:00						
Residual Range Organics	AK102_103	ND	----	4.12	mg/l	5x	8D17016	04/17/08 09:18	04/21/08 15:53	EKK	RL1
Surrogate(s): 2-FBP				266%		50 - 150 %	"			"	ZX
Octacosane				137%		50 - 150 %	"			"	
BRD0203-03RE1 (GEI-4-W-080411)		Water			Sampled: 04/11/08 19:00						
Diesel Range Hydrocarbons	AK102_103	192	----	2.20	mg/l	20x	8D17016	04/17/08 09:18	04/22/08 13:19	EKK	Q1
Surrogate(s): 2-FBP				223%		50 - 150 %	"			"	ZX
Octacosane				118%		50 - 150 %	"			"	
BRD0203-04 (GEI-9-W-080411)		Water			Sampled: 04/11/08 19:35						
Diesel Range Hydrocarbons	AK102_103	34.1	----	0.481	mg/l	5x	8D17016	04/17/08 09:18	04/21/08 16:19	EKK	Q1
Residual Range Organics	"	ND	----	3.61	"	"	"	"	"	EKK	RL1
Surrogate(s): 2-FBP				178%		50 - 150 %	"			"	ZX
Octacosane				97.3%		50 - 150 %	"			"	
BRD0203-05 (GEI-10-W-080412)		Water			Sampled: 04/12/08 09:40						
Diesel Range Hydrocarbons	AK102_103	18.7	----	0.476	mg/l	5x	8D17016	04/17/08 09:18	04/21/08 16:45	EKK	
Residual Range Organics	"	ND	----	3.57	"	"	"	"	"	EKK	RL1
Surrogate(s): 2-FBP				144%		50 - 150 %	"			"	
Octacosane				102%		50 - 150 %	"			"	

TestAmerica Seattle



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Arcadis, Geraghty, & Miller - Seattle	Project Name: 306456 (328.5 Illinois)	
2300 Eastlake Avenue East, Suite 100	Project Number: Chevron Alaska Sampling	Report Created:
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	06/10/08 16:15

Diesel Hydrocarbons (C10-C25) and Heavy Oil (C25-C36) by AK102 and AK103
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0203-06 (GEI-11-W-080412)		Water		Sampled: 04/12/08 14:15							
Residual Range Organics	AK102_103	ND	----	3.64	mg/l	5x	8D17016	04/17/08 09:18	04/21/08 17:11	EKK	RL1
<i>Surrogate(s): 2-FBP</i>				228%		50 - 150 %	"			"	ZX
<i>Octacosane</i>				110%		50 - 150 %	"			"	
BRD0203-06RE1 (GEI-11-W-080412)		Water		Sampled: 04/12/08 14:15							
Diesel Range Hydrocarbons	AK102_103	439	----	4.85	mg/l	50x	8D17016	04/17/08 09:18	04/22/08 13:48	EKK	Q1
<i>Surrogate(s): 2-FBP</i>				517%		50 - 150 %	"			"	ZX
<i>Octacosane</i>				101%		50 - 150 %	"			"	
BRD0203-07 (GEI-12-W-080412)		Water		Sampled: 04/12/08 11:50							
Residual Range Organics	AK102_103	ND	----	3.61	mg/l	5x	8D17016	04/17/08 09:18	04/21/08 17:38	EKK	RL1
<i>Surrogate(s): 2-FBP</i>				306%		50 - 150 %	"			"	ZX
<i>Octacosane</i>				197%		50 - 150 %	"			"	ZX
BRD0203-07RE1 (GEI-12-W-080412)		Water		Sampled: 04/12/08 11:50							
Diesel Range Hydrocarbons	AK102_103	126	----	1.92	mg/l	20x	8D17016	04/17/08 09:18	04/22/08 14:17	EKK	Q1
<i>Surrogate(s): 2-FBP</i>				133%		50 - 150 %	"			"	
<i>Octacosane</i>				255%		50 - 150 %	"			"	ZX
BRD0203-08 (MW-2-W-080412)		Water		Sampled: 04/12/08 15:35							
Diesel Range Hydrocarbons	AK102_103	1.13	----	0.0943	mg/l	1x	8D17016	04/17/08 09:18	04/21/08 18:04	EKK	Q11
Residual Range Organics	"	ND	----	0.708	"	"	"	"	"	EKK	
<i>Surrogate(s): 2-FBP</i>				82.7%		50 - 150 %	"			"	
<i>Octacosane</i>				104%		50 - 150 %	"			"	
BRD0203-09 (MW-4-W-080411)		Water		Sampled: 04/11/08 15:50							
Diesel Range Hydrocarbons	AK102_103	ND	----	0.106	mg/l	1x	8D17016	04/17/08 09:18	04/21/08 18:30	EKK	
Residual Range Organics	"	ND	----	0.798	"	"	"	"	"	EKK	
<i>Surrogate(s): 2-FBP</i>				85.2%		50 - 150 %	"			"	
<i>Octacosane</i>				99.5%		50 - 150 %	"			"	

TestAmerica Seattle



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Arcadis, Geraghty, & Miller - Seattle	Project Name: 306456 (328.5 Illinois)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: Chevron Alaska Sampling	06/10/08 16:15
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

Diesel Hydrocarbons (C10-C25) and Heavy Oil (C25-C36) by AK102 and AK103
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0203-10 (MW-5-W-080412)		Water			Sampled: 04/12/08 15:00						
Residual Range Organics	AK102_103	ND	----	3.54	mg/l	5x	8D17016	04/17/08 09:18	04/21/08 18:56	EKK	RL1
<i>Surrogate(s): 2-FBP</i>				307%		50 - 150 %	"			"	ZX
<i>Octacosane</i>				104%		50 - 150 %	"			"	
BRD0203-10RE1 (MW-5-W-080412)		Water			Sampled: 04/12/08 15:00						
Diesel Range Hydrocarbons	AK102_103	165	----	1.89	mg/l	20x	8D17016	04/17/08 09:18	04/22/08 14:46	EKK	Q1
<i>Surrogate(s): 2-FBP</i>				148%		50 - 150 %	"			"	
<i>Octacosane</i>				102%		50 - 150 %	"			"	
BRD0203-11 (MW-6-W-080411)		Water			Sampled: 04/11/08 16:40						
Diesel Range Hydrocarbons	AK102_103	1.10	----	0.100	mg/l	1x	8D17016	04/17/08 09:18	04/22/08 06:37	EKK	Q11
Residual Range Organics	"	ND	----	0.750	"	"	"	"	"	EKK	
<i>Surrogate(s): 2-FBP</i>				97.7%		50 - 150 %	"			"	
<i>Octacosane</i>				107%		50 - 150 %	"			"	
BRD0203-12 (K-5-W-080412)		Water			Sampled: 04/12/08 10:30						
Diesel Range Hydrocarbons	AK102_103	24.0	----	0.490	mg/l	5x	8D17016	04/17/08 09:18	04/22/08 07:03	EKK	Q1
Residual Range Organics	"	ND	----	3.68	"	"	"	"	"	EKK	RL1
<i>Surrogate(s): 2-FBP</i>				163%		50 - 150 %	"			"	ZX
<i>Octacosane</i>				114%		50 - 150 %	"			"	
BRD0203-13 (DUP-1-W-080411)		Water			Sampled: 04/11/08 08:00						
Residual Range Organics	AK102_103	ND	----	3.68	mg/l	5x	8D17016	04/17/08 09:18	04/22/08 07:29	EKK	RL1
<i>Surrogate(s): 2-FBP</i>				355%		50 - 150 %	"			"	ZX
<i>Octacosane</i>				151%		50 - 150 %	"			"	ZX
BRD0203-13RE1 (DUP-1-W-080411)		Water			Sampled: 04/11/08 08:00						
Diesel Range Hydrocarbons	AK102_103	215	----	4.90	mg/l	50x	8D17016	04/17/08 09:18	04/22/08 15:16	EKK	Q1
<i>Surrogate(s): 2-FBP</i>				268%		50 - 150 %	"			"	ZX
<i>Octacosane</i>				174%		50 - 150 %	"			"	ZX

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **306456 (328.5 Illinois)**
 Project Number: Chevron Alaska Sampling
 Project Manager: Greg Montgomery

Report Created:
 06/10/08 16:15

BTEX by EPA Method 8021B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0203-01 (GEI-2-W-080411)		Water			Sampled: 04/11/08 18:00						
Benzene	EPA 8021B	4530	----	100	ug/l	200x	8D18044	04/18/08 16:02	04/18/08 21:23	KMT	
Toluene	"	44900	----	100	"	"	"	"	"	KMT	E, BQC
Ethylbenzene	"	3520	----	100	"	"	"	"	"	KMT	
Xylenes (total)	"	22200	----	200	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)				103%	68 - 140 %		1x			"	
BRD0203-01RE1 (GEI-2-W-080411)		Water			Sampled: 04/11/08 18:00						
Toluene	EPA 8021B	49300	----	500	ug/l	1000 x	8D20005	04/20/08 12:20	04/21/08 02:03	KMT	
Surrogate(s): 4-BFB (PID)				99.4%	68 - 140 %		1x			"	
BRD0203-02 (GEI-3-W-080411)		Water			Sampled: 04/11/08 17:15						
Benzene	EPA 8021B	ND	----	100	ug/l	200x	8D18044	04/18/08 16:02	04/18/08 22:28	KMT	RL1
Toluene	"	1460	----	100	"	"	"	"	"	KMT	
Ethylbenzene	"	359	----	100	"	"	"	"	"	KMT	
Xylenes (total)	"	8440	----	200	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)				103%	68 - 140 %		1x			"	
BRD0203-03RE1 (GEI-4-W-080411)		Water			Sampled: 04/11/08 19:00						
Benzene	EPA 8021B	15.0	----	2.50	ug/l	5x	8D21031	04/21/08 12:29	04/22/08 07:12	KMT	
Toluene	"	ND	----	2.50	"	"	"	"	"	KMT	RL1
Ethylbenzene	"	56.8	----	2.50	"	"	"	"	"	KMT	
Xylenes (total)	"	229	----	5.00	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)				111%	68 - 140 %		1x			"	
BRD0203-04RE1 (GEI-9-W-080411)		Water			Sampled: 04/11/08 19:35						
Benzene	EPA 8021B	ND	----	10.0	ug/l	20x	8D20005	04/20/08 12:20	04/20/08 18:27	KMT	A-01, BQC
Toluene	"	ND	----	10.0	"	"	"	"	"	KMT	A-01, BQC
Ethylbenzene	"	54.6	----	10.0	"	"	"	"	"	KMT	A-01, BQC
Xylenes (total)	"	ND	----	20.0	"	"	"	"	"	KMT	A-01, BQC
Surrogate(s): 4-BFB (PID)				99.7%	68 - 140 %		1x			"	

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **306456 (328.5 Illinois)**
 Project Number: Chevron Alaska Sampling
 Project Manager: Greg Montgomery

Report Created:
 06/10/08 16:15

BTEX by EPA Method 8021B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0203-04RE2 (GEI-9-W-080411)		Water		Sampled: 04/11/08 19:35							
Benzene	EPA 8021B	ND	----	2.50	ug/l	5x	8D21031	04/21/08 12:29	04/22/08 07:44	KMT	RL1
Toluene	"	ND	----	2.50	"	"	"	"	"	KMT	RL1
Ethylbenzene	"	9.61	----	2.50	"	"	"	"	"	KMT	
Xylenes (total)	"	42.7	----	5.00	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)				101%	68 - 140 %		1x			"	
BRD0203-05RE1 (GEI-10-W-080412)		Water		Sampled: 04/12/08 09:40							
Benzene	EPA 8021B	ND	----	10.0	ug/l	20x	8D20005	04/20/08 12:20	04/20/08 22:47	KMT	A-01, BQC
Toluene	"	ND	----	10.0	"	"	"	"	"	KMT	A-01, BQC
Ethylbenzene	"	15.9	----	10.0	"	"	"	"	"	KMT	A-01, BQC
Xylenes (total)	"	68.7	----	20.0	"	"	"	"	"	KMT	A-01, BQC
Surrogate(s): 4-BFB (PID)				100%	68 - 140 %		1x			"	
BRD0203-05RE2 (GEI-10-W-080412)		Water		Sampled: 04/12/08 09:40							
Benzene	EPA 8021B	ND	----	2.50	ug/l	5x	8D21031	04/21/08 12:29	04/22/08 08:17	KMT	RL1
Toluene	"	ND	----	2.50	"	"	"	"	"	KMT	RL1
Ethylbenzene	"	16.4	----	2.50	"	"	"	"	"	KMT	
Xylenes (total)	"	66.9	----	5.00	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)				105%	68 - 140 %		1x			"	
BRD0203-06 (GEI-11-W-080412)		Water		Sampled: 04/12/08 14:15							
Benzene	EPA 8021B	5630	----	100	ug/l	200x	8D18044	04/18/08 16:02	04/19/08 03:56	KMT	
Ethylbenzene	"	1930	----	100	"	"	"	"	"	KMT	
Xylenes (total)	"	11100	----	200	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)				106%	68 - 140 %		1x			"	
BRD0203-06RE1 (GEI-11-W-080412)		Water		Sampled: 04/12/08 14:15							
Toluene	EPA 8021B	21300	----	500	ug/l	1000x	8D20005	04/20/08 12:20	04/21/08 02:35	KMT	
Surrogate(s): 4-BFB (PID)				98.9%	68 - 140 %		1x			"	

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **306456 (328.5 Illinois)**

Project Number: Chevron Alaska Sampling

Project Manager: Greg Montgomery

Report Created:

06/10/08 16:15

BTEX by EPA Method 8021B

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0203-07RE1 (GEI-12-W-080412)		Water			Sampled: 04/12/08 11:50						
Benzene	EPA 8021B	86.3	----	10.0	ug/l	20x	8D20005	04/20/08 12:20	04/20/08 19:32	KMT	
Toluene	"	102	----	10.0	"	"	"	"	"	KMT	
Ethylbenzene	"	145	----	10.0	"	"	"	"	"	KMT	
Xylenes (total)	"	979	----	20.0	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)		99.6%		68 - 140 %		1x					
BRD0203-08RE2 (MW-2-W-080412)		Water			Sampled: 04/12/08 15:35						
Benzene	EPA 8021B	ND	----	0.500	ug/l	1x	8D21031	04/21/08 12:29	04/22/08 05:02	KMT	
Toluene	"	ND	----	0.500	"	"	"	"	"	KMT	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	KMT	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)		99.9%		68 - 140 %		"					
BRD0203-09RE2 (MW-4-W-080411)		Water			Sampled: 04/11/08 15:50						
Benzene	EPA 8021B	ND	----	0.500	ug/l	1x	8D21031	04/21/08 12:29	04/22/08 05:34	KMT	
Toluene	"	ND	----	0.500	"	"	"	"	"	KMT	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	KMT	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)		99.4%		68 - 140 %		"					
BRD0203-10 (MW-5-W-080412)		Water			Sampled: 04/12/08 15:00						
Benzene	EPA 8021B	152	----	100	ug/l	200x	8D18044	04/18/08 16:02	04/19/08 08:51	KMT	
Toluene	"	2530	----	100	"	"	"	"	"	KMT	
Ethylbenzene	"	627	----	100	"	"	"	"	"	KMT	
Xylenes (total)	"	6030	----	200	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)		107%		68 - 140 %		1x					
BRD0203-11RE1 (MW-6-W-080411)		Water			Sampled: 04/11/08 16:40						
Benzene	EPA 8021B	17.4	----	0.500	ug/l	1x	8D20005	04/20/08 12:20	04/21/08 04:45	KMT	
Toluene	"	ND	----	0.500	"	"	"	"	"	KMT	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	KMT	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)		99.6%		68 - 140 %		"					

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 306456 (328.5 Illinois)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: Chevron Alaska Sampling	06/10/08 16:15
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

BTEX by EPA Method 8021B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0203-12RE1 (K-5-W-080412)		Water			Sampled: 04/12/08 10:30						
Benzene	EPA 8021B	ND	----	0.500	ug/l	1x	8D20005	04/20/08 12:20	04/21/08 05:18	KMT	
Toluene	"	ND	----	0.500	"	"	"	"	"	KMT	
Ethylbenzene	"	0.758	----	0.500	"	"	"	"	"	KMT	
Xylenes (total)	"	2.80	----	1.00	"	"	"	"	"	KMT	
<i>Surrogate(s): 4-BFB (PID)</i>		<i>117%</i>			<i>68 - 140 %</i>		<i>"</i>				
BRD0203-13RE1 (DUP-1-W-080411)		Water			Sampled: 04/11/08 08:00						
Benzene	EPA 8021B	13.4	----	10.0	ug/l	20x	8D20005	04/20/08 12:20	04/21/08 00:58	KMT	
Toluene	"	ND	----	10.0	"	"	"	"	"	KMT	RL1
Ethylbenzene	"	60.1	----	10.0	"	"	"	"	"	KMT	
Xylenes (total)	"	268	----	20.0	"	"	"	"	"	KMT	
<i>Surrogate(s): 4-BFB (PID)</i>		<i>104%</i>			<i>68 - 140 %</i>		<i>1x</i>	<i>"</i>			
BRD0203-14 (QA-T-1-W-080411)		Water			Sampled: 04/11/08 06:00						
Benzene	EPA 8021B	ND	----	0.500	ug/l	1x	8D18044	04/18/08 16:02	04/19/08 01:12	KMT	
Toluene	"	ND	----	0.500	"	"	"	"	"	KMT	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	KMT	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	KMT	
<i>Surrogate(s): 4-BFB (PID)</i>		<i>102%</i>			<i>68 - 140 %</i>		<i>"</i>				

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **306456 (328.5 Illinois)**

Project Number: Chevron Alaska Sampling

Project Manager: Greg Montgomery

Report Created:

06/10/08 16:15

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0203-01 (GEI-2-W-080411)		Water			Sampled: 04/11/08 18:00						
Arsenic	EPA 6010B	ND	----	0.100	mg/l	1x	8D16050	04/16/08 16:48	04/17/08 16:10		WAS
Barium	"	0.381	----	0.0500	"	"	"	"	"		WAS
Cadmium	"	0.00790	----	0.00500	"	"	"	"	"		WAS
Chromium	"	ND	----	0.0100	"	"	"	"	"		WAS
Lead	"	ND	----	0.0500	"	"	"	"	"		WAS
Mercury	EPA 7470A	ND	----	0.000200	"	"	8D16048	04/16/08 16:44	04/17/08 15:27		WAS
Selenium	EPA 6010B	ND	----	0.150	"	"	8D16050	04/16/08 16:48	04/17/08 16:10		WAS
Silver	"	ND	----	0.0100	"	"	"	"	"		WAS
BRD0203-07 (GEI-12-W-080412)		Water			Sampled: 04/12/08 11:50						
Arsenic	EPA 6010B	ND	----	0.100	mg/l	1x	8D16050	04/16/08 16:48	04/17/08 16:21		WAS
Barium	"	0.527	----	0.0500	"	"	"	"	"		WAS
Cadmium	"	ND	----	0.00500	"	"	"	"	"		WAS
Chromium	"	0.0451	----	0.0100	"	"	"	"	"		WAS
Lead	"	ND	----	0.0500	"	"	"	"	"		WAS
Mercury	EPA 7470A	ND	----	0.000200	"	"	8D16048	04/16/08 16:44	04/17/08 15:29		WAS
Selenium	EPA 6010B	ND	----	0.150	"	"	8D16050	04/16/08 16:48	04/17/08 16:21		WAS
Silver	"	ND	----	0.0100	"	"	"	"	"		WAS

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 306456 (328.5 Illinois)	
2300 Eastlake Avenue East, Suite 100	Project Number: Chevron Alaska Sampling	Report Created:
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	06/10/08 16:15

EDB and DBCP by EPA Method 8011
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0203-01RE1 (GEI-2-W-080411)		Water			Sampled: 04/11/08 18:00						
1,2-Dibromoethane (EDB)	EPA 8011M	73.3	----	5.00	ug/l	500x	8D15016	04/15/08 09:10	04/16/08 09:52	gma	
BRD0203-06RE1 (GEI-11-W-080412)		Water			Sampled: 04/12/08 14:15						
1,2-Dibromoethane (EDB)	EPA 8011M	2.13	----	0.200	ug/l	20x	8D15016	04/15/08 09:10	04/16/08 10:16	gma	
BRD0203-07 (GEI-12-W-080412)		Water			Sampled: 04/12/08 11:50						
1,2-Dibromoethane (EDB)	EPA 8011M	ND	----	0.010	ug/l	1x	8D15016	04/15/08 09:10	04/16/08 01:31	gma	

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **306456 (328.5 Illinois)**

Project Number: Chevron Alaska Sampling

Project Manager: Greg Montgomery

Report Created:

06/10/08 16:15

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0203-01 (GEI-2-W-080411)		Water			Sampled: 04/11/08 18:00						
Carbon tetrachloride	EPA 8260B	ND	----	1.00	ug/l	1x	8D15022	04/15/08 08:30	04/15/08 20:36	KPS	
1,2-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	KPS	
1,1-Dichloroethene	"	ND	----	1.00	"	"	"	"	"	KPS	
Tetrachloroethene	"	ND	----	1.00	"	"	"	"	"	KPS	
1,1,1-Trichloroethane	"	ND	----	1.00	"	"	"	"	"	KPS	
Trichloroethene	"	ND	----	1.00	"	"	"	"	"	KPS	
<i>Surrogate(s): 1,2-DCA-d4</i>				93.2%		70 - 130 %	"			"	
<i>Toluene-d8</i>				100%		75 - 125 %	"			"	
<i>4-BFB</i>				116%		75 - 125 %	"			"	

BRD0203-07 (GEI-12-W-080412)		Water			Sampled: 04/12/08 11:50						
Carbon tetrachloride	EPA 8260B	ND	----	1.00	ug/l	1x	8D15022	04/15/08 08:30	04/15/08 21:03	KPS	
1,2-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	KPS	
1,1-Dichloroethene	"	ND	----	1.00	"	"	"	"	"	KPS	
Tetrachloroethene	"	ND	----	1.00	"	"	"	"	"	KPS	
1,1,1-Trichloroethane	"	ND	----	1.00	"	"	"	"	"	KPS	
Trichloroethene	"	ND	----	1.00	"	"	"	"	"	KPS	
<i>Surrogate(s): 1,2-DCA-d4</i>				98.8%		70 - 130 %	"			"	
<i>Toluene-d8</i>				103%		75 - 125 %	"			"	
<i>4-BFB</i>				110%		75 - 125 %	"			"	

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 306456 (328.5 Illinois)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: Chevron Alaska Sampling	06/10/08 16:15
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0203-01 (GEI-2-W-080411)		Water					Sampled: 04/11/08 18:00				
Acenaphthene	EPA 8270C-SIM	ND	----	5.00	ug/l	50x	8D17013	04/17/08 09:11	04/25/08 15:16	BAT	
Acenaphthylene	"	ND	----	5.00	"	"	"	"	"	BAT	
Anthracene	"	ND	----	5.00	"	"	"	"	"	BAT	
Benzo (a) anthracene	"	ND	----	5.00	"	"	"	"	"	BAT	
Benzo (a) pyrene	"	ND	----	5.00	"	"	"	"	"	BAT	
Benzo (b) fluoranthene	"	ND	----	5.00	"	"	"	"	"	BAT	
Benzo (k) fluoranthene	"	ND	----	5.00	"	"	"	"	"	BAT	
Benzo (ghi) perylene	"	ND	----	5.00	"	"	"	"	"	BAT	
Chrysene	"	ND	----	5.00	"	"	"	"	"	BAT	
Dibenz (a,h) anthracene	"	ND	----	5.00	"	"	"	"	"	BAT	
Fluoranthene	"	ND	----	5.00	"	"	"	"	"	BAT	
Fluorene	"	7.00	----	5.00	"	"	"	"	"	BAT	
Indeno (1,2,3-cd) pyrene	"	ND	----	5.00	"	"	"	"	"	BAT	
1-Methylnaphthalene	"	130	----	5.00	"	"	"	"	"	BAT	
2-Methylnaphthalene	"	182	----	5.00	"	"	"	"	"	BAT	
Naphthalene	"	375	----	5.00	"	"	"	"	"	BAT	
Phenanthrene	"	ND	----	5.00	"	"	"	"	"	BAT	
Pyrene	"	ND	----	5.00	"	"	"	"	"	BAT	

Surrogate(s): p-Terphenyl-d14 60.0% 20 - 131 % " "

BRD0203-07 (GEI-12-W-080412)		Water					Sampled: 04/12/08 11:50				
Acenaphthene	EPA 8270C-SIM	ND	----	0.943	ug/l	10x	8D17013	04/17/08 09:11	04/25/08 15:48	BAT	
Acenaphthylene	"	ND	----	0.943	"	"	"	"	"	BAT	
Anthracene	"	ND	----	0.943	"	"	"	"	"	BAT	
Benzo (a) anthracene	"	ND	----	0.943	"	"	"	"	"	BAT	
Benzo (a) pyrene	"	ND	----	0.943	"	"	"	"	"	BAT	
Benzo (b) fluoranthene	"	ND	----	0.943	"	"	"	"	"	BAT	
Benzo (k) fluoranthene	"	ND	----	0.943	"	"	"	"	"	BAT	
Benzo (ghi) perylene	"	ND	----	0.943	"	"	"	"	"	BAT	
Chrysene	"	ND	----	0.943	"	"	"	"	"	BAT	
Dibenz (a,h) anthracene	"	ND	----	0.943	"	"	"	"	"	BAT	
Fluoranthene	"	ND	----	0.943	"	"	"	"	"	BAT	
Fluorene	"	4.34	----	0.943	"	"	"	"	"	BAT	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.943	"	"	"	"	"	BAT	
1-Methylnaphthalene	"	166	----	0.943	"	"	"	"	"	BAT	
2-Methylnaphthalene	"	213	----	0.943	"	"	"	"	"	BAT	
Naphthalene	"	175	----	0.943	"	"	"	"	"	BAT	

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle 2300 Eastlake Avenue East, Suite 100 Seattle, WA/USA 98102	Project Name:	306456 (328.5 Illinois)	Report Created:
	Project Number:	Chevron Alaska Sampling	06/10/08 16:15
	Project Manager:	Greg Montgomery	

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0203-07 (GEI-12-W-080412)		Water			Sampled: 04/12/08 11:50						
Phenanthrene	EPA 8270C-SIM	1.70	----	0.943	ug/l	10x	8D17013	04/17/08 09:11	04/25/08 15:48	BAT	
Pyrene	"	ND	----	0.943	"	"	"	"	"	BAT	
<i>Surrogate(s): p-Terphenyl-d14</i>				45.6%		20 - 131 %	"				"

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 306456 (328.5 Illinois)	
2300 Eastlake Avenue East, Suite 100	Project Number: Chevron Alaska Sampling	Report Created:
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	06/10/08 16:15

Gasoline Range Hydrocarbons (n-Hexane to <n-Decane) by AK101 - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D18044 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8D18044-BLK1)							Extracted: 04/18/08 16:02							
Gasoline Range Hydrocarbons	AK 101	ND	---	50.0	ug/l	1x	--	--	--	--	--	--	04/18/08 18:06	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 84.5%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/18/08 18:06</i>	
LCS (8D18044-BS1)							Extracted: 04/18/08 16:02							
Gasoline Range Hydrocarbons	AK 101	948	---	50.0	ug/l	1x	--	1000	94.8%	(60-120)	--	--	04/18/08 18:39	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 98.1%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/18/08 18:39</i>	
LCS Dup (8D18044-BSD1)							Extracted: 04/18/08 16:02							
Gasoline Range Hydrocarbons	AK 101	945	---	50.0	ug/l	1x	--	1000	94.5%	(60-120)	0.335% (20)		04/18/08 19:11	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 94.4%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/18/08 19:11</i>	
Duplicate (8D18044-DUP1)							QC Source: BRD0203-01		Extracted: 04/18/08 16:02					
Gasoline Range Hydrocarbons	AK 101	172000	---	10000	ug/l	200x	184000	--	--	--	6.64% (20)		04/18/08 21:55	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 85.9%</i>		<i>Limits: 60-120%</i>		<i>1x</i>							<i>04/18/08 21:55</i>	
Duplicate (8D18044-DUP2)							QC Source: BRD0203-02		Extracted: 04/18/08 16:02					
Gasoline Range Hydrocarbons	AK 101	30300	---	10000	ug/l	200x	30500	--	--	--	0.659% (20)		04/18/08 23:01	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 89.1%</i>		<i>Limits: 60-120%</i>		<i>1x</i>							<i>04/18/08 23:01</i>	
Matrix Spike (8D18044-MS1)							QC Source: BRD0203-01		Extracted: 04/18/08 16:02					
Gasoline Range Hydrocarbons	AK 101	400000	---	10000	ug/l	200x	184000	200000	108%	(60-120)	--	--	04/19/08 05:34	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 102%</i>		<i>Limits: 60-120%</i>		<i>1x</i>							<i>04/19/08 05:34</i>	

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 306456 (328.5 Illinois)	
2300 Eastlake Avenue East, Suite 100	Project Number: Chevron Alaska Sampling	Report Created:
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	06/10/08 16:15

Gasoline Range Hydrocarbons (n-Hexane to <n-Decane) by AK101 - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D20005 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
Blank (8D20005-BLK1)													Extracted: 04/20/08 12:20			
Gasoline Range Hydrocarbons	AK 101	ND	---	50.0	ug/l	1x	--	--	--	--	--	--	04/20/08 15:44			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 87.3%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/20/08 15:44</i>			
LCS (8D20005-BS1)													Extracted: 04/20/08 12:20			
Gasoline Range Hydrocarbons	AK 101	1030	---	50.0	ug/l	1x	--	1000	103%	(60-120)	--	--	04/20/08 16:16			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 94.4%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/20/08 16:16</i>			
LCS Dup (8D20005-BSD1)													Extracted: 04/20/08 12:20			
Gasoline Range Hydrocarbons	AK 101	986	---	50.0	ug/l	1x	--	1000	98.6%	(60-120)	4.21% (20)		04/20/08 16:49			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 95.8%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/20/08 16:49</i>			
Duplicate (8D20005-DUP1)													QC Source: BRD0203-04RE1		Extracted: 04/20/08 12:20	
Gasoline Range Hydrocarbons	AK 101	ND	---	1000	ug/l	20x	1290	--	--	--	107% (20)		04/20/08 19:00	R3		
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 90.1%</i>		<i>Limits: 60-120%</i>		<i>1x</i>							<i>04/20/08 19:00</i>			
Duplicate (8D20005-DUP2)													QC Source: BRD0203-05RE1		Extracted: 04/20/08 12:20	
Gasoline Range Hydrocarbons	AK 101	ND	---	1000	ug/l	20x	ND	--	--	--	11.0% (20)		04/20/08 23:20			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 89.7%</i>		<i>Limits: 60-120%</i>		<i>1x</i>							<i>04/20/08 23:20</i>			
Matrix Spike (8D20005-MS1)													QC Source: BRD0203-04RE1		Extracted: 04/20/08 12:20	
Gasoline Range Hydrocarbons	AK 101	21400	---	1000	ug/l	20x	1290	20000	100%	(60-120)	--	--	04/20/08 20:05			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 98.1%</i>		<i>Limits: 60-120%</i>		<i>1x</i>							<i>04/20/08 20:05</i>			

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2300 Eastlake Avenue East, Suite 100	Project Number: Chevron Alaska Sampling	06/10/08 16:15
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

Gasoline Range Hydrocarbons (n-Hexane to <n-Decane) by AK101 - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D21031 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
Blank (8D21031-BLK1)													Extracted: 04/21/08 12:29			
Gasoline Range Hydrocarbons	AK 101	ND	---	50.0	ug/l	1x	--	--	--	--	--	--	04/21/08 12:55			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 87.7%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/21/08 12:55</i>			
LCS (8D21031-BS1)													Extracted: 04/21/08 12:29			
Gasoline Range Hydrocarbons	AK 101	980	---	50.0	ug/l	1x	--	1000	98.0%	(60-120)	--	--	04/21/08 13:28			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 94.5%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/21/08 13:28</i>			
LCS Dup (8D21031-BSD1)													Extracted: 04/21/08 12:29			
Gasoline Range Hydrocarbons	AK 101	1000	---	50.0	ug/l	1x	--	1000	100%	(60-120)	2.26%	(20)	04/21/08 14:01			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 94.9%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/21/08 14:01</i>			
Duplicate (8D21031-DUP1)													QC Source: BRD0280-02		Extracted: 04/21/08 12:29	
Gasoline Range Hydrocarbons	AK 101	ND	---	50.0	ug/l	1x	ND	--	--	--	NR	(20)	04/21/08 16:21			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 89.6%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/21/08 16:21</i>			
Duplicate (8D21031-DUP2)													QC Source: BRD0183-01RE1		Extracted: 04/21/08 12:29	
Gasoline Range Hydrocarbons	AK 101	442	---	50.0	ug/l	1x	455	--	--	--	2.81%	(20)	04/22/08 01:14	ZX		
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 146%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/22/08 01:14</i>			
Matrix Spike (8D21031-MS1)													QC Source: BRD0280-02		Extracted: 04/21/08 12:29	
Gasoline Range Hydrocarbons	AK 101	1170	---	50.0	ug/l	1x	ND	1000	117%	(60-120)	--	--	04/21/08 16:54			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 95.8%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/21/08 16:54</i>			
Matrix Spike Dup (8D21031-MSD1)													QC Source: BRD0280-02		Extracted: 04/21/08 12:29	
Gasoline Range Hydrocarbons	AK 101	1140	---	50.0	ug/l	1x	ND	1000	114%	(60-120)	2.23%	(20)	04/21/08 17:27			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 96.5%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/21/08 17:27</i>			

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 306456 (328.5 Illinois)	
2300 Eastlake Avenue East, Suite 100	Project Number: Chevron Alaska Sampling	Report Created:
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	06/10/08 16:15

Diesel Hydrocarbons (C10-C25) and Heavy Oil (C25-C36) by AK102 and AK103 - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D17016 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8D17016-BLK1)										Extracted: 04/17/08 09:18				
Diesel Range Hydrocarbons	AK102_103	ND	---	0.100	mg/l	1x	--	--	--	--	--	--	04/21/08 11:57	
Residual Range Organics	"	ND	---	0.750	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery: 74.3%</i>		<i>Limits: 50-150%</i>		<i>"</i>						<i>04/21/08 11:57</i>		
<i>Octacosane</i>		<i>88.7%</i>		<i>50-150%</i>		<i>"</i>						<i>"</i>		
LCS (8D17016-BS1)										Extracted: 04/17/08 09:18				
Diesel Range Hydrocarbons	AK102_103	1.64	---	0.100	mg/l	1x	--	2.00	82.2%	(75-125)	--	--	04/21/08 12:23	
Residual Range Organics	"	1.70	---	0.750	"	"	--	"	85.0%	(60-120)	--	--	"	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery: 76.5%</i>		<i>Limits: 50-150%</i>		<i>"</i>						<i>04/21/08 12:23</i>		
<i>Octacosane</i>		<i>92.5%</i>		<i>50-150%</i>		<i>"</i>						<i>"</i>		
LCS Dup (8D17016-BSD1)										Extracted: 04/17/08 09:18				
Diesel Range Hydrocarbons	AK102_103	1.72	---	0.100	mg/l	1x	--	2.00	85.9%	(75-125)	4.36% (20)		04/21/08 12:50	
Residual Range Organics	"	1.70	---	0.750	"	"	--	"	85.1%	(60-120)	0.172% "		"	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery: 79.6%</i>		<i>Limits: 50-150%</i>		<i>"</i>						<i>04/21/08 12:50</i>		
<i>Octacosane</i>		<i>93.1%</i>		<i>50-150%</i>		<i>"</i>						<i>"</i>		

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 306456 (328.5 Illinois)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: Chevron Alaska Sampling	06/10/08 16:15
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

BTEX by EPA Method 8021B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D18044 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

Blank (8D18044-BLK1)

Extracted: 04/18/08 16:02

Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	04/18/08 18:06	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	

Surrogate(s): 4-BFB (PID) Recovery: 101% Limits: 68-140% " 04/18/08 18:06

LCS (8D18044-BS2)

Extracted: 04/18/08 16:02

Benzene	EPA 8021B	29.7	---	0.500	ug/l	1x	--	30.0	98.8%	(80-120)	--	--	04/18/08 19:44	
Toluene	"	29.7	---	0.500	"	"	--	"	98.9%	"	--	--	"	
Ethylbenzene	"	30.0	---	0.500	"	"	--	"	100%	"	--	--	"	
Xylenes (total)	"	90.7	---	1.00	"	"	--	90.0	101%	"	--	--	"	

Surrogate(s): 4-BFB (PID) Recovery: 104% Limits: 68-140% " 04/18/08 19:44

LCS Dup (8D18044-BSD2)

Extracted: 04/18/08 16:02

Benzene	EPA 8021B	28.5	---	0.500	ug/l	1x	--	30.0	95.1%	(80-120)	3.91%	(25)	04/18/08 20:17	
Toluene	"	30.4	---	0.500	"	"	--	"	101%	"	2.36%	"	"	
Ethylbenzene	"	31.4	---	0.500	"	"	--	"	105%	"	4.43%	"	"	
Xylenes (total)	"	94.9	---	1.00	"	"	--	90.0	105%	"	4.50%	"	"	

Surrogate(s): 4-BFB (PID) Recovery: 106% Limits: 68-140% " 04/18/08 20:17

Duplicate (8D18044-DUP1)

QC Source: BRD0203-01

Extracted: 04/18/08 16:02

Benzene	EPA 8021B	4350	---	100	ug/l	200x	4530	--	--	--	4.07%	(25)	04/18/08 21:55	
Toluene	"	46100	---	100	"	"	44900	--	--	--	2.71%	"	"	E
Ethylbenzene	"	3670	---	100	"	"	3520	--	--	--	4.36%	"	"	
Xylenes (total)	"	23300	---	200	"	"	22200	--	--	--	5.06%	"	"	

Surrogate(s): 4-BFB (PID) Recovery: 107% Limits: 68-140% 1x 04/18/08 21:55

Duplicate (8D18044-DUP2)

QC Source: BRD0203-02

Extracted: 04/18/08 16:02

Benzene	EPA 8021B	ND	---	100	ug/l	200x	ND	--	--	--	18.9%	(25)	04/18/08 23:01	RL1
Toluene	"	1420	---	100	"	"	1460	--	--	--	3.08%	"	"	
Ethylbenzene	"	377	---	100	"	"	359	--	--	--	4.67%	"	"	
Xylenes (total)	"	8410	---	200	"	"	8440	--	--	--	0.401%	"	"	

Surrogate(s): 4-BFB (PID) Recovery: 102% Limits: 68-140% 1x 04/18/08 23:01

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 306456 (328.5 Illinois)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: Chevron Alaska Sampling	06/10/08 16:15
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

BTEX by EPA Method 8021B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D18044 **Water Preparation Method: EPA 5030B (P/T)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike (8D18044-MS2)			QC Source: BRD0203-02				Extracted: 04/18/08 16:02							
Benzene	EPA 8021B	6560	---	100	ug/l	200x	26.6	6000	109%	(46-130)	--	--	04/19/08 06:07	
Toluene	"	7980	---	100	"	"	1460	"	109%	(60-124)	--	--	"	
Ethylbenzene	"	7090	---	100	"	"	359	"	112%	(56-141)	--	--	"	
Xylenes (total)	"	27900	---	200	"	"	8440	18000	108%	(66-132)	--	--	"	
Surrogate(s): 4-BFB (PID)		Recovery: 104%		Limits: 68-140%		1x		04/19/08 06:07						

QC Batch: 8D20005 **Water Preparation Method: EPA 5030B (P/T)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8D20005-BLK1)			QC Source: BRD0203-02				Extracted: 04/20/08 12:20							
Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	04/20/08 15:44	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)		Recovery: 97.8%		Limits: 68-140%		"		04/20/08 15:44						

LCS (8D20005-BS2) **Extracted: 04/20/08 12:20**

Benzene	EPA 8021B	30.0	---	0.500	ug/l	1x	--	30.0	100%	(80-120)	--	--	04/20/08 17:22	
Toluene	"	29.4	---	0.500	"	"	--	"	98.1%	"	--	--	"	
Ethylbenzene	"	29.4	---	0.500	"	"	--	"	98.1%	"	--	--	"	
Xylenes (total)	"	90.5	---	1.00	"	"	--	90.0	101%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		Recovery: 97.3%		Limits: 68-140%		"		04/20/08 17:22						

LCS Dup (8D20005-BSD2) **Extracted: 04/20/08 12:20**

Benzene	EPA 8021B	28.8	---	0.500	ug/l	1x	--	30.0	96.1%	(80-120)	4.15%	(25)	04/20/08 17:54	
Toluene	"	28.2	---	0.500	"	"	--	"	94.0%	"	4.22%	"	"	
Ethylbenzene	"	28.8	---	0.500	"	"	--	"	96.0%	"	2.13%	"	"	
Xylenes (total)	"	87.3	---	1.00	"	"	--	90.0	97.0%	"	3.65%	"	"	
Surrogate(s): 4-BFB (PID)		Recovery: 98.0%		Limits: 68-140%		"		04/20/08 17:54						

Duplicate (8D20005-DUP1) **QC Source: BRD0203-04RE1** **Extracted: 04/20/08 12:20**

Benzene	EPA 8021B	ND	---	10.0	ug/l	20x	ND	--	--	--	NR	(25)	04/20/08 19:00	
Toluene	"	ND	---	10.0	"	"	ND	--	--	--	NR	"	"	
Ethylbenzene	"	ND	---	10.0	"	"	54.6	--	--	--	141%	"	"	R3
Xylenes (total)	"	48.4	---	20.0	"	"	ND	--	--	--	"	"	"	
Surrogate(s): 4-BFB (PID)		Recovery: 99.8%		Limits: 68-140%		1x		04/20/08 19:00						

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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2300 Eastlake Avenue East, Suite 100	Project Number: Chevron Alaska Sampling	06/10/08 16:15
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

BTEX by EPA Method 8021B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D20005 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
Duplicate (8D20005-DUP2)			QC Source: BRD0203-05RE1					Extracted: 04/20/08 12:20							
Benzene	EPA 8021B	ND	---	10.0	ug/l	20x	ND	--	--	--	NR (25)		04/20/08 23:20		
Toluene	"	ND	---	10.0	"	"	ND	--	--	--	NR "		"		
Ethylbenzene	"	15.6	---	10.0	"	"	15.9	--	--	--	1.78% "		"		
Xylenes (total)	"	66.2	---	20.0	"	"	68.7	--	--	--	3.74% "		"		
Surrogate(s): 4-BFB (PID)		Recovery: 102%		Limits: 68-140% 1x			04/20/08 23:20								

Matrix Spike (8D20005-MS2)			QC Source: BRD0203-05RE1					Extracted: 04/20/08 12:20							
Benzene	EPA 8021B	667	---	10.0	ug/l	20x	ND	600	111%	(46-130)	--	--	04/20/08 20:37		
Toluene	"	642	---	10.0	"	"	ND	"	107%	(60-124)	--	--	"		
Ethylbenzene	"	665	---	10.0	"	"	15.9	"	108%	(56-141)	--	--	"		
Xylenes (total)	"	2060	---	20.0	"	"	68.7	1800	110%	(66-132)	--	--	"		
Surrogate(s): 4-BFB (PID)		Recovery: 98.8%		Limits: 68-140% 1x			04/20/08 20:37								

QC Batch: 8D21031 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
Blank (8D21031-BLK1)			QC Source: BRD0203-05RE1					Extracted: 04/21/08 12:29							
Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	04/21/08 12:55		
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"		
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"		
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"		
Surrogate(s): 4-BFB (PID)		Recovery: 99.4%		Limits: 68-140% "			04/21/08 12:55								

LCS (8D21031-BS2)			QC Source: BRD0203-05RE1					Extracted: 04/21/08 12:29							
Benzene	EPA 8021B	30.2	---	0.500	ug/l	1x	--	30.0	101%	(80-120)	--	--	04/21/08 14:34		
Toluene	"	29.7	---	0.500	"	"	--	"	98.9%	"	--	--	"		
Ethylbenzene	"	29.8	---	0.500	"	"	--	"	99.3%	"	--	--	"		
Xylenes (total)	"	91.8	---	1.00	"	"	--	90.0	102%	"	--	--	"		
Surrogate(s): 4-BFB (PID)		Recovery: 98.8%		Limits: 68-140% "			04/21/08 14:34								

LCS Dup (8D21031-BSD2)			QC Source: BRD0203-05RE1					Extracted: 04/21/08 12:29							
Benzene	EPA 8021B	28.8	---	0.500	ug/l	1x	--	30.0	96.1%	(80-120)	4.66% (25)		04/21/08 15:07		
Toluene	"	28.7	---	0.500	"	"	--	"	95.6%	"	3.41%		"		
Ethylbenzene	"	28.4	---	0.500	"	"	--	"	94.7%	"	4.72%		"		
Xylenes (total)	"	87.8	---	1.00	"	"	--	90.0	97.5%	"	4.53%		"		
Surrogate(s): 4-BFB (PID)		Recovery: 98.6%		Limits: 68-140% "			04/21/08 15:07								

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 306456 (328.5 Illinois)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: Chevron Alaska Sampling	06/10/08 16:15
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

BTEX by EPA Method 8021B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D21031 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
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Duplicate (8D21031-DUP1)

QC Source: BRD0280-02

Extracted: 04/21/08 12:29

Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	ND	--	--	--	9.30% (25)		04/21/08 16:21	
Toluene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Ethylbenzene	"	ND	---	0.500	"	"	ND	--	--	--	27.9%	"	"	R4
Xylenes (total)	"	ND	---	1.00	"	"	1.12	--	--	--	28.0%	"	"	R4

Surrogate(s): 4-BFB (PID) Recovery: 100% Limits: 68-140% " 04/21/08 16:21

Duplicate (8D21031-DUP2)

QC Source: BRD0183-01RE1

Extracted: 04/21/08 12:29

Benzene	EPA 8021B	0.751	---	0.500	ug/l	1x	0.813	--	--	--	7.93% (25)		04/22/08 01:14	
Toluene	"	ND	---	0.500	"	"	ND	--	--	--	21.4%	"	"	
Ethylbenzene	"	6.84	---	0.500	"	"	7.30	--	--	--	6.48%	"	"	
Xylenes (total)	"	24.6	---	1.00	"	"	26.2	--	--	--	6.43%	"	"	

Surrogate(s): 4-BFB (PID) Recovery: 121% Limits: 68-140% " 04/22/08 01:14

Matrix Spike (8D21031-MS2)

QC Source: BRD0183-01RE1

Extracted: 04/21/08 12:29

Benzene	EPA 8021B	33.1	---	0.500	ug/l	1x	0.813	30.0	108%	(46-130)	--	--	04/21/08 18:00	
Toluene	"	30.7	---	0.500	"	"	0.145	"	102%	(60-124)	--	--	"	
Ethylbenzene	"	38.4	---	0.500	"	"	7.30	"	104%	(56-141)	--	--	"	
Xylenes (total)	"	117	---	1.00	"	"	26.2	90.0	101%	(66-132)	--	--	"	

Surrogate(s): 4-BFB (PID) Recovery: 119% Limits: 68-140% " 04/21/08 18:00

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 306456 (328.5 Illinois)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: Chevron Alaska Sampling	06/10/08 16:15
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D16048	Water Preparation Method: EPA 7470A
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Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8D16048-BLK1)													Extracted: 04/16/08 16:44	
Mercury	EPA 7470A	ND	---	0.000200	mg/l	1x	--	--	--	--	--	--	04/17/08 14:57	
LCS (8D16048-BS1)													Extracted: 04/16/08 16:44	
Mercury	EPA 7470A	0.00512	---	0.000200	mg/l	1x	--	0.00500	102%	(80-120)	--	--	04/17/08 14:59	
LCS Dup (8D16048-BSD1)													Extracted: 04/16/08 16:44	
Mercury	EPA 7470A	0.00523	---	0.000200	mg/l	1x	--	0.00500	105%	(80-120)	2.25% (20)		04/17/08 15:02	
Duplicate (8D16048-DUP1)													QC Source: BRD0203-01 Extracted: 04/16/08 16:44	
Mercury	EPA 7470A	ND	---	0.000200	mg/l	1x	ND	--	--	--	NR (20)		04/17/08 15:24	
Matrix Spike (8D16048-MS1)													QC Source: BRD0203-01 Extracted: 04/16/08 16:44	
Mercury	EPA 7470A	0.00508	---	0.000200	mg/l	1x	0.0000310	0.00500	101%	(75-125)	--	--	04/17/08 15:04	

QC Batch: 8D16050	Water Preparation Method: EPA 3010A
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Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8D16050-BLK1)													Extracted: 04/16/08 16:48	
Arsenic	EPA 6010B	ND	---	0.100	mg/l	1x	--	--	--	--	--	--	04/17/08 15:43	
Barium	"	ND	---	0.0500	"	"	--	--	--	--	--	--	"	
Cadmium	"	ND	---	0.00500	"	"	--	--	--	--	--	--	"	
Selenium	"	ND	---	0.150	"	"	--	--	--	--	--	--	"	
Chromium	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Lead	"	ND	---	0.0500	"	"	--	--	--	--	--	--	"	
Silver	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
LCS (8D16050-BS1)													Extracted: 04/16/08 16:48	
Silver	EPA 6010B	1.05	---	0.0100	mg/l	1x	--	1.00	105%	(79-122)	--	--	04/17/08 15:46	
Barium	"	5.30	---	0.0500	"	"	--	5.00	106%	(80-120)	--	--	"	
Arsenic	"	5.40	---	0.100	"	"	--	"	108%	"	--	--	"	
Chromium	"	5.08	---	0.0100	"	"	--	"	102%	"	--	--	"	
Cadmium	"	5.22	---	0.00500	"	"	--	"	104%	"	--	--	"	
Lead	"	5.22	---	0.0500	"	"	--	"	104%	"	--	--	"	
Selenium	"	5.40	---	0.150	"	"	--	"	108%	"	--	--	"	

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 306456 (328.5 Illinois)	
2300 Eastlake Avenue East, Suite 100	Project Number: Chevron Alaska Sampling	Report Created:
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	06/10/08 16:15

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D16050 Water Preparation Method: EPA 3010A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (8D16050-DUP1)			QC Source: BRD0203-01				Extracted: 04/16/08 16:48							
Chromium	EPA 6010B	ND	---	0.0100	mg/l	1x	ND	--	--	--	NR (20)		04/17/08 15:53	
Barium	"	0.374	---	0.0500	"	"	0.381	--	--	--	1.83% (25)		"	
Cadmium	"	0.00800	---	0.00500	"	"	0.00790	--	--	--	1.26% (20)		"	
Lead	"	ND	---	0.0500	"	"	ND	--	--	--	2.97% "		"	
Silver	"	ND	---	0.0100	"	"	ND	--	--	--	NR (40)		"	
Selenium	"	ND	---	0.150	"	"	ND	--	--	--	11.4% (20)		"	
Arsenic	"	ND	---	0.100	"	"	ND	--	--	--	8.54% "		"	
Matrix Spike (8D16050-MS1)			QC Source: BRD0203-01				Extracted: 04/16/08 16:48							
Lead	EPA 6010B	5.11	---	0.0500	mg/l	1x	0.0308	5.00	102%	(80-120)	--	--	04/17/08 15:49	
Selenium	"	5.76	---	0.150	"	"	0.0139	"	115%	"	--	--	"	
Arsenic	"	5.77	---	0.100	"	"	0.0293	"	115%	"	--	--	"	
Barium	"	5.86	---	0.0500	"	"	0.381	"	110%	(60-136)	--	--	"	
Cadmium	"	5.49	---	0.00500	"	"	0.00790	"	110%	(80-120)	--	--	"	
Silver	"	1.08	---	0.0100	"	"	ND	1.00	108%	(78-125)	--	--	"	
Chromium	"	5.12	---	0.0100	"	"	ND	5.00	102%	(80-120)	--	--	"	

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 306456 (328.5 Illinois)	
2300 Eastlake Avenue East, Suite 100	Project Number: Chevron Alaska Sampling	Report Created:
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	06/10/08 16:15

EDB and DBCP by EPA Method 8011 - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D15016 Water Preparation Method: Solvent Extraction

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8D15016-BLK1)								Extracted: 04/15/08 09:10						
1,2-Dibromoethane (EDB)	EPA 8011M	ND	---	0.010	ug/l	1x	--	--	--	--	--	--	04/15/08 19:54	
LCS (8D15016-BS1)								Extracted: 04/15/08 09:10						
1,2-Dibromoethane (EDB)	EPA 8011M	0.053	---	0.010	ug/l	1x	--	0.0500	105%	(80-120)	--	--	04/15/08 20:18	
LCS (8D15016-BS4)								Extracted: 04/15/08 09:10						
1,2-Dibromoethane (EDB) [2C]	EPA 8011M	0.051	---	0.010	ug/l	1x	--	0.0500	102%	(80-120)	--	--	04/17/08 18:51	
LCS (8D15016-BS5)								Extracted: 04/15/08 09:10						
1,2-Dibromoethane (EDB) [2C]	EPA 8011M	0.104	---	0.010	ug/l	1x	--	0.100	104%	(80-120)	--	--	04/17/08 20:03	
LCS (8D15016-BS9)								Extracted: 04/15/08 09:10						
1,2-Dibromoethane (EDB)	EPA 8011M	0.046	---	0.010	ug/l	1x	--	0.0500	92.3%	(80-120)	--	--	04/24/08 17:02	
LCS (8D15016-BSA)								Extracted: 04/15/08 09:10						
1,2-Dibromoethane (EDB)	EPA 8011M	0.083	---	0.010	ug/l	1x	--	0.100	83.5%	(80-120)	--	--	04/24/08 19:03	
LCS Dup (8D15016-BSD1)								Extracted: 04/15/08 09:10						
1,2-Dibromoethane (EDB)	EPA 8011M	0.051	---	0.010	ug/l	1x	--	0.0500	103%	(80-120)	2.46% (20)		04/15/08 20:42	

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **306456 (328.5 Illinois)**
 Project Number: Chevron Alaska Sampling
 Project Manager: Greg Montgomery

Report Created:
 06/10/08 16:15

Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 8D15022

Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8D15022-BLK1)													Extracted: 04/15/08 09:30	
Acetone	EPA 8260B	ND	---	20.0	ug/l	1x	--	--	--	--	--	--	04/15/08 12:01	
Benzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Bromobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Bromochloromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Bromodichloromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Bromoform	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Bromomethane	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
2-Butanone	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
n-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
sec-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Carbon disulfide	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Carbon tetrachloride	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Chlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Chloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1-Chlorohexane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Chloroform	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Chloromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2-Chlorotoluene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
4-Chlorotoluene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Dibromochloromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2-Dibromo-3-chloropropane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2-Dibromoethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Dibromomethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2-Dichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3-Dichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Dichlorodifluoromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	L
1,1-Dichloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
cis-1,2-Dichloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
trans-1,2-Dichloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2-Dichloropropane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3-Dichloropropane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
2,2-Dichloropropane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,1-Dichloropropene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
cis-1,3-Dichloropropene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
trans-1,3-Dichloropropene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **306456 (328.5 Illinois)**

Project Number: Chevron Alaska Sampling

Project Manager: Greg Montgomery

Report Created:

06/10/08 16:15

Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 8D15022

Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes						
Blank (8D15022-BLK1)													Extracted: 04/15/08 09:30							
Ethylbenzene	EPA 8260B	ND	---	1.00	ug/l	1x	--	--	--	--	--	--	04/15/08 12:01							
Hexachlorobutadiene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"							
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	--	--	"							
n-Hexane	"	ND	---	2.00	"	"	--	--	--	--	--	--	"							
2-Hexanone	"	ND	---	10.0	"	"	--	--	--	--	--	--	"							
Isopropylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"							
p-Isopropyltoluene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"							
4-Methyl-2-pentanone	"	ND	---	10.0	"	"	--	--	--	--	--	--	"							
Methylene chloride	"	ND	---	5.00	"	"	--	--	--	--	--	--	"							
Naphthalene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"							
n-Propylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"							
Styrene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"							
1,2,3-Trichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	B						
1,2,4-Trichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"							
1,1,1,2-Tetrachloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"							
1,1,2,2-Tetrachloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"							
Tetrachloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"							
Toluene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"							
1,1,1-Trichloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"							
1,1,2-Trichloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"							
Trichloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"							
Trichlorofluoromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"							
1,2,3-Trichloropropane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"							
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"							
1,3,5-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"							
Vinyl chloride	"	ND	---	1.00	"	"	--	--	--	--	--	--	"							
o-Xylene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"							
m,p-Xylene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"							
Total Xylenes	"	ND	---	3.00	"	"	--	--	--	--	--	--	"							
<i>Surrogate(s): 1,2-DCA-d4</i>													<i>Recovery: 95.4%</i>		<i>Limits: 70-130%</i>		<i>"</i>		<i>04/15/08 12:01</i>	
<i>Toluene-d8</i>													<i>98.4%</i>		<i>75-125%</i>		<i>"</i>		<i>"</i>	
<i>4-BFB</i>													<i>99.4%</i>		<i>75-125%</i>		<i>"</i>		<i>"</i>	

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 306456 (328.5 Illinois)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: Chevron Alaska Sampling	06/10/08 16:15
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D15022 Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (8D15022-BS1)													Extracted: 04/15/08 09:30	
Benzene	EPA 8260B	38.1	---	1.00	ug/l	1x	--	40.0	95.3%	(80-120)	--	--	04/15/08 10:58	
Chlorobenzene	"	39.3	---	1.00	"	"	--	"	98.2%	"	--	--	"	
1,1-Dichloroethene	"	37.5	---	1.00	"	"	--	"	93.6%	(75-125)	--	--	"	
Methyl tert-butyl ether	"	34.8	---	2.00	"	"	--	"	87.0%	(75-126)	--	--	"	
Toluene	"	38.4	---	1.00	"	"	--	"	95.9%	(75-125)	--	--	"	
Trichloroethene	"	38.2	---	1.00	"	"	--	"	95.5%	"	--	--	"	
Total Xylenes	"	116	---	3.00	"	"	--	120	96.5%	"	--	--	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery: 96.4%</i>		<i>Limits: 70-130%</i>		<i>"</i>						<i>04/15/08 10:58</i>		
<i>Toluene-d8</i>		<i>97.7%</i>		<i>75-125%</i>		<i>"</i>						<i>"</i>		
<i>4-BFB</i>		<i>100%</i>		<i>75-125%</i>		<i>"</i>						<i>"</i>		

LCS Dup (8D15022-BSD1)													Extracted: 04/15/08 09:30	
Benzene	EPA 8260B	38.2	---	1.00	ug/l	1x	--	40.0	95.4%	(80-120)	0.0787% (20)		04/15/08 11:25	
Chlorobenzene	"	40.2	---	1.00	"	"	--	"	100%	"	2.27%	"	"	
1,1-Dichloroethene	"	38.0	---	1.00	"	"	--	"	95.0%	(75-125)	1.43%	"	"	
Methyl tert-butyl ether	"	35.4	---	2.00	"	"	--	"	88.4%	(75-126)	1.54%	"	"	
Toluene	"	39.8	---	1.00	"	"	--	"	99.6%	(75-125)	3.73%	"	"	
Trichloroethene	"	38.3	---	1.00	"	"	--	"	95.7%	"	0.157%	"	"	
Total Xylenes	"	118	---	3.00	"	"	--	120	98.3%	"	1.80%	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery: 97.8%</i>		<i>Limits: 70-130%</i>		<i>"</i>						<i>04/15/08 11:25</i>		
<i>Toluene-d8</i>		<i>98.8%</i>		<i>75-125%</i>		<i>"</i>						<i>"</i>		
<i>4-BFB</i>		<i>102%</i>		<i>75-125%</i>		<i>"</i>						<i>"</i>		

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **306456 (328.5 Illinois)**

Project Number: Chevron Alaska Sampling

Project Manager: Greg Montgomery

Report Created:

06/10/08 16:15

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 8D17013

Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8D17013-BLK2)													Extracted: 04/17/08 09:11	
Acenaphthene	EPA 8270C-SIM	ND	---	0.100	ug/l	1x	--	--	--	--	--	--	04/21/08 20:39	
Acenaphthylene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Anthracene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Benzo (a) anthracene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Benzo (a) pyrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Benzo (b) fluoranthene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Benzo (k) fluoranthene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Benzo (ghi) perylene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chrysene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Dibenz (a,h) anthracene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Fluoranthene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Fluorene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Indeno (1,2,3-cd) pyrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1-Methylnaphthalene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
2-Methylnaphthalene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Phenanthrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Pyrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	

Surrogate(s): p-Terphenyl-d14

Recovery: 101%

Limits: 20-131% "

04/21/08 20:39

LCS (8D17013-BS2)

Extracted: 04/17/08 09:11

Acenaphthene	EPA 8270C-SIM	16.8	---	0.100	ug/l	1x	--	20.0	84.2%	(68-129)	--	--	04/21/08 21:11	
Acenaphthylene	"	17.1	---	0.100	"	"	--	"	85.5%	(77-129)	--	--	"	
Anthracene	"	17.7	---	0.100	"	"	--	"	88.7%	(80-146)	--	--	"	
Benzo (a) anthracene	"	16.8	---	0.100	"	"	--	"	83.9%	(73-120)	--	--	"	
Benzo (a) pyrene	"	18.8	---	0.100	"	"	--	"	94.1%	(70-132)	--	--	"	
Benzo (b) fluoranthene	"	18.2	---	0.100	"	"	--	"	91.1%	(68-148)	--	--	"	
Benzo (k) fluoranthene	"	19.1	---	0.100	"	"	--	"	95.6%	(63-150)	--	--	"	
Benzo (b & k) fluoranthene	"	37.5	---	0.200	"	"	--	40.0	93.8%	"	--	--	"	
Benzo (ghi) perylene	"	13.6	---	0.100	"	"	--	20.0	68.2%	(46-142)	--	--	"	
Chrysene	"	19.3	---	0.100	"	"	--	"	96.6%	(80-132)	--	--	"	
Dibenz (a,h) anthracene	"	15.4	---	0.100	"	"	--	"	77.2%	(56-138)	--	--	"	
Fluoranthene	"	19.8	---	0.100	"	"	--	"	98.8%	(79-138)	--	--	"	
Fluorene	"	17.7	---	0.100	"	"	--	"	88.5%	(42-120)	--	--	"	
Indeno (1,2,3-cd) pyrene	"	14.6	---	0.100	"	"	--	"	72.8%	(53-136)	--	--	"	
1-Methylnaphthalene	"	15.3	---	0.100	"	"	--	"	76.4%	(41-120)	--	--	"	
2-Methylnaphthalene	"	14.9	---	0.100	"	"	--	"	74.5%	(43-122)	--	--	"	
Naphthalene	"	14.3	---	0.100	"	"	--	"	71.7%	(38-128)	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 306456 (328.5 Illinois)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: Chevron Alaska Sampling	06/10/08 16:15
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D17013 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (8D17013-BS2)													Extracted: 04/17/08 09:11	
Phenanthrene	EPA 8270C-SIM	16.7	---	0.100	ug/l	1x	--	20.0	83.3%	(77-123)	--	--	04/21/08 21:11	
Pyrene	"	17.6	---	0.100	"	"	--	"	88.1%	(60-150)	--	--	"	
<i>Surrogate(s): p-Terphenyl-d14</i>		<i>Recovery: 92.4%</i>		<i>Limits: 20-131%</i>		<i>"</i>						<i>04/21/08 21:11</i>		

LCS Dup (8D17013-BSD2)													Extracted: 04/17/08 09:11	
Acenaphthene	EPA 8270C-SIM	16.6	---	0.100	ug/l	1x	--	20.0	83.0%	(68-129)	1.44%	(30)	04/21/08 21:43	
Acenaphthylene	"	16.7	---	0.100	"	"	--	"	83.6%	(77-129)	2.25%	"	"	
Anthracene	"	17.4	---	0.100	"	"	--	"	87.1%	(80-146)	1.82%	"	"	
Benzo (a) anthracene	"	16.4	---	0.100	"	"	--	"	82.2%	(73-120)	2.05%	"	"	
Benzo (a) pyrene	"	18.4	---	0.100	"	"	--	"	92.0%	(70-132)	2.26%	"	"	
Benzo (b) fluoranthene	"	18.3	---	0.100	"	"	--	"	91.3%	(68-148)	0.219%	"	"	
Benzo (k) fluoranthene	"	18.6	---	0.100	"	"	--	"	92.9%	(63-150)	2.86%	"	"	
Benzo (ghi) perylene	"	13.4	---	0.100	"	"	--	"	67.0%	(46-142)	1.78%	"	"	
Chrysene	"	18.9	---	0.100	"	"	--	"	94.4%	(80-132)	2.30%	"	"	
Dibenz (a,h) anthracene	"	15.2	---	0.100	"	"	--	"	76.0%	(56-138)	1.57%	"	"	
Fluoranthene	"	19.5	---	0.100	"	"	--	"	97.6%	(79-138)	1.22%	"	"	
Fluorene	"	17.4	---	0.100	"	"	--	"	86.8%	(42-120)	1.94%	"	"	
Indeno (1,2,3-cd) pyrene	"	14.3	---	0.100	"	"	--	"	71.7%	(53-136)	1.52%	"	"	
1-Methylnaphthalene	"	14.8	---	0.100	"	"	--	"	74.1%	(41-120)	3.06%	"	"	
2-Methylnaphthalene	"	14.4	---	0.100	"	"	--	"	72.2%	(43-122)	3.14%	"	"	
Naphthalene	"	13.8	---	0.100	"	"	--	"	68.9%	(38-128)	3.98%	"	"	
Phenanthrene	"	16.5	---	0.100	"	"	--	"	82.3%	(77-123)	1.21%	"	"	
Pyrene	"	17.2	---	0.100	"	"	--	"	85.9%	(60-150)	2.53%	"	"	
<i>Surrogate(s): p-Terphenyl-d14</i>		<i>Recovery: 88.3%</i>		<i>Limits: 20-131%</i>		<i>"</i>						<i>04/21/08 21:43</i>		

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **306456 (328.5 Illinois)**
 Project Number: Chevron Alaska Sampling
 Project Manager: Greg Montgomery

Report Created:
 06/10/08 16:15

Notes and Definitions

Report Specific Notes:

- A-01 - Sample overdiluted.
- B - Analyte was detected in the associated Method Blank.
- BQC - Reported for batch QC purposes only. See re-analysis (RE) for final result.
- E - Concentration exceeds the calibration range and therefore result is semi-quantitative.
- L - Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
- Q1 - Does not match typical pattern
- Q11 - Detected hydrocarbons in the diesel range do not have a distinct diesel pattern and may be due to heavily weathered diesel.
- Q8 - Detected hydrocarbons in the gasoline range appear to be due to overlap of diesel range hydrocarbons.
- R3 - The RPD exceeded the acceptance limit due to sample matrix effects.
- R4 - Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.
- RL1 - Reporting limit raised due to sample matrix effects.
- ZX - Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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TestAmerica Seattle

11720 North Creek Parkway N
Suite 400
Bothell, WA 98011
phone 425.420.9200 fax 425.420.9210

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact		Project Manager: Greg Montgomery				Site Contact: Mike Strickler				Date: April 14, 2008				COC No:			
Arcadis						Lab Contact: Blake Meinert				Carrier: Fed Ex				1 of 4 COCs			
2300 Eastlake Ave East, Suite 200		Analysis Turnaround Time				Filtered Sample	GRO by AK101	BTEX by EPA 8021	Six VOCs by EPA 8260B	EDB by 8011	DRO by AK102	RRO by AK103	PAHs by 8270 SIMM	Total Metals by EPA 6010/7470			
Seattle, WA 98102		Calendar (C) or Work Days (W) _____															
206-726-4742		TAT if different from Below _____															
(xxx) xxx-xxxx FAX		<input checked="" type="checkbox"/> 2 weeks															
Project Name: Facility # 0208		<input type="checkbox"/> 1 week															
Site: 328.5 Illinois		<input type="checkbox"/> 2 days															
Project # Arcadis # 45506		<input type="checkbox"/> 1 day															
		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.											
Sample Identification																	
GEI-2-W-080411		4/11/2008	1800		W	12	X	X	X	X	X	X	X			only one PAH sample bottle-01	
GEI-3-W-080411		4/11/2008	1715		W	5	X	X		X	X					-02	
GEI-4-W-080411		4/11/2008	1900		W	5	X	X		X	X					-03	
GEI-9-W-080411		4/11/2008	1935		W	5	X	X		X	X					-04	
GEI-10-W-080412		4/12/2008	0940		W	5	X	X		X	X					-05	
GEI-11-W-080412		4/12/2008	1415		W	7	X	X	X	X	X					-06	
GEI-12-W-080412		4/12/2008	1150		W	13	X	X	X	X	X	X	X			-07	
MW-2-W-080412		4/12/2008	1535		W	5	X	X		X	X					-08	
MW-4-W-080412		4/12/2008	1550		W	5	X	X		X	X					-09	
MW-5-W-080412		4/12/2008	1500		W	5	X	X		X	X					-10	
MW-6-W-080412		4/11/2008	1640		W	5	X	X		X	X					-11	
K-5-W-080412		4/12/2008	1030		W	5	X	X		X	X					-12	
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____							2	2	2	1	2	2	1	4			
Possible Hazard Identification							Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)										
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/>							<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months										
Special Instructions/QC Requirements & Comments: Total Metals = Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver							VOCs = Carbon Tetrachloride, Tetrachloroethene, trichloroethene, 1,1-dichloroethene, 1,1,1-trichloroethane, 1,2-dichloroethane, (1,2-DCA)										
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:							
<i>Andrew Z Wilke</i>		OASIS		4/14/08/0930		<i>Christa Weaver</i>		TAL-Seattle		04.15.08/10935							
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:							
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:							

2.12 w/c

April 30, 2008

Greg Montgomery
Arcadis, Geraghty, & Miller - Seattle
2300 Eastlake Avenue East, Suite 100
Seattle, WA/USA 98102

RE: 1001430 (418 Illinois)

Enclosed are the results of analyses for samples received by the laboratory on 04/12/08 12:03.
The following list is a summary of the Work Orders contained in this report, generated on 04/30/08
17:40.

If you have any questions concerning this report, please feel free to contact me.

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
BRD0183	1001430 (418 Illinois)	45512

TestAmerica Seattle



Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle 2300 Eastlake Avenue East, Suite 100 Seattle, WA/USA 98102	Project Name:	1001430 (418 Illinois)	Report Created:
	Project Number:	45512	04/30/08 17:40
	Project Manager:	Greg Montgomery	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TH-1-W-080408	BRD0183-01	Water	04/08/08 15:00	04/12/08 12:03
TH-2-W-080408	BRD0183-02	Water	04/08/08 16:35	04/12/08 12:03
TH-7-W-080408	BRD0183-03	Water	04/08/08 15:25	04/12/08 12:03
TH-10-W-080408	BRD0183-04	Water	04/08/08 14:30	04/12/08 12:03
TH-13-W-080410	BRD0183-05	Water	04/10/08 13:45	04/12/08 12:03
MW-23-080408	BRD0183-06	Water	04/08/08 15:45	04/12/08 12:03
MW-25-080410	BRD0183-07	Water	04/10/08 10:00	04/12/08 12:03
DUP-1-W-080408	BRD0183-08	Water	04/08/08 08:00	04/12/08 12:03
QT-1-W-080408	BRD0183-09	Water	04/08/08 06:00	04/12/08 12:03

TestAmerica Seattle



Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
Seattle, WA/USA 98102

Project Name: **1001430 (418 Illinois)**

Project Number: 45512

Project Manager: Greg Montgomery

Report Created:

04/30/08 17:40

Analytical Case Narrative

TestAmerica - Seattle, WA

BRD0183

CASE NARRATIVE:

SAMPLE RECEIPT

The samples were received 4/12/08 by TestAmerica - Seattle. The temperature of the samples at the time of receipt was 5.9 degrees Celsius.

PREPARATIONS AND ANALYSIS

No additional anomalies, discrepancies, or issues were associated with sample preparation, analysis and quality control other than those already qualified in the data and described in the Notes and Definitions page at the end of the report.

TestAmerica Seattle



Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **1001430 (418 Illinois)**

Project Number: 45512

Project Manager: Greg Montgomery

Report Created:

04/30/08 17:40

Gasoline Range Hydrocarbons (n-Hexane to <n-Decane) by AK101

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0183-01RE1 (TH-1-W-080408)		Water			Sampled: 04/08/08 15:00						
Gasoline Range Hydrocarbons	AK 101	455	----	50.0	ug/l	1x	8D21031	04/21/08 12:29	04/22/08 00:41	KMT	Q8
Surrogate(s): 4-BFB (FID)		144%		60 - 120 %		"		"		ZX	
BRD0183-02 (TH-2-W-080408)		Water			Sampled: 04/08/08 16:35						
Gasoline Range Hydrocarbons	AK 101	47100	----	5000	ug/l	100x	8D17046	04/17/08 15:51	04/18/08 07:55	KMT	
Surrogate(s): 4-BFB (FID)		96.6%		60 - 120 %		1x		"			
BRD0183-03RE1 (TH-7-W-080408)		Water			Sampled: 04/08/08 15:25						
Gasoline Range Hydrocarbons	AK 101	82.2	----	50.0	ug/l	1x	8D21031	04/21/08 12:29	04/22/08 01:46	KMT	
Surrogate(s): 4-BFB (FID)		88.8%		60 - 120 %		"		"			
BRD0183-04 (TH-10-W-080408)		Water			Sampled: 04/08/08 14:30						
Gasoline Range Hydrocarbons	AK 101	ND	----	50.0	ug/l	1x	8D17046	04/17/08 15:51	04/17/08 17:16	KMT	
Surrogate(s): 4-BFB (FID)		89.4%		60 - 120 %		"		"			
BRD0183-05 (TH-13-W-080410)		Water			Sampled: 04/10/08 13:45						
Gasoline Range Hydrocarbons	AK 101	548	----	50.0	ug/l	1x	8D17046	04/17/08 15:51	04/17/08 18:21	KMT	
Surrogate(s): 4-BFB (FID)		96.6%		60 - 120 %		"		"			
BRD0183-06 (MW-23-080408)		Water			Sampled: 04/08/08 15:45						
Gasoline Range Hydrocarbons	AK 101	ND	----	50.0	ug/l	1x	8D17046	04/17/08 15:51	04/17/08 22:42	KMT	
Surrogate(s): 4-BFB (FID)		90.0%		60 - 120 %		"		"			
BRD0183-07RE1 (MW-25-080410)		Water			Sampled: 04/10/08 10:00						
Gasoline Range Hydrocarbons	AK 101	1840	----	50.0	ug/l	1x	8D21031	04/21/08 12:29	04/22/08 03:56	KMT	
Surrogate(s): 4-BFB (FID)		143%		60 - 120 %		"		"		ZX	
BRD0183-08 (DUP-1-W-080408)		Water			Sampled: 04/08/08 08:00						
Gasoline Range Hydrocarbons	AK 101	ND	----	50.0	ug/l	1x	8D17046	04/17/08 15:51	04/17/08 23:15	KMT	
Surrogate(s): 4-BFB (FID)		88.0%		60 - 120 %		"		"			

TestAmerica Seattle



Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle 2300 Eastlake Avenue East, Suite 100 Seattle, WA/USA 98102	Project Name:	1001430 (418 Illinois)	Report Created:
	Project Number:	45512	04/30/08 17:40
	Project Manager:	Greg Montgomery	

Gasoline Range Hydrocarbons (n-Hexane to <n-Decane) by AK101
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0183-09 (QT-1-W-080408)		Water			Sampled: 04/08/08 06:00						
Gasoline Range Hydrocarbons	AK 101	ND	----	50.0	ug/l	1x	8D17046	04/17/08 15:51	04/17/08 21:37	KMT	
<i>Surrogate(s): 4-BFB (FID)</i>			88.9%		60 - 120 %	"					"

TestAmerica Seattle



Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 1001430 (418 Illinois)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: 45512	04/30/08 17:40
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

Diesel Hydrocarbons (C10-C25) and Heavy Oil (C25-C36) by AK102 and AK103
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0183-01 (TH-1-W-080408)		Water			Sampled: 04/08/08 15:00						
Diesel Range Hydrocarbons	AK102_103	5.57	----	0.100	mg/l	1x	8D14014	04/14/08 09:27	04/15/08 23:49	EKK	
Residual Range Organics	"	ND	----	0.750	"	"	"	"	"	EKK	
Surrogate(s): 2-FBP				96.9%		50 - 150 %	"			"	
Octacosane				92.3%		50 - 150 %	"			"	
BRD0183-02RE2 (TH-2-W-080408)		Water			Sampled: 04/08/08 16:35						
Diesel Range Hydrocarbons	AK102_103	58.7	----	0.510	mg/l	5x	8D14014	04/14/08 09:27	04/17/08 15:45	EKK	
Residual Range Organics	"	ND	----	0.750	"	"	"	"	"	EKK	
Surrogate(s): 2-FBP				155%		50 - 150 %	"			"	ZX
Octacosane				97.4%		50 - 150 %	"			"	
BRD0183-02RE4 (TH-2-W-080408)		Water			Sampled: 04/08/08 16:35						
Residual Range Organics	AK102_103	30.2	----	7.65	mg/l	10x	8D14014	04/14/08 09:27	04/21/08 11:48	EKK	
Residual Range Organics	"	ND	----	0.750	"	"	"	"	"	EKK	
Surrogate(s): 2-FBP				156%		50 - 150 %	"			"	ZX
Octacosane				103%		50 - 150 %	"			"	
BRD0183-03 (TH-7-W-080408)		Water			Sampled: 04/08/08 15:25						
Diesel Range Hydrocarbons	AK102_103	0.932	----	0.100	mg/l	1x	8D14014	04/14/08 09:27	04/16/08 00:40	EKK	
Residual Range Organics	"	ND	----	0.750	"	"	"	"	"	EKK	
Surrogate(s): 2-FBP				83.8%		50 - 150 %	"			"	
Octacosane				91.7%		50 - 150 %	"			"	
BRD0183-04 (TH-10-W-080408)		Water			Sampled: 04/08/08 14:30						
Diesel Range Hydrocarbons	AK102_103	0.214	----	0.0990	mg/l	1x	8D14014	04/14/08 09:27	04/16/08 01:07	EKK	Q6
Residual Range Organics	"	ND	----	0.743	"	"	"	"	"	EKK	
Surrogate(s): 2-FBP				81.6%		50 - 150 %	"			"	
Octacosane				90.8%		50 - 150 %	"			"	
BRD0183-05 (TH-13-W-080410)		Water			Sampled: 04/10/08 13:45						
Diesel Range Hydrocarbons	AK102_103	5.36	----	0.0980	mg/l	1x	8D14014	04/14/08 09:27	04/16/08 01:32	EKK	
Residual Range Organics	"	ND	----	0.735	"	"	"	"	"	EKK	
Surrogate(s): 2-FBP				95.1%		50 - 150 %	"			"	
Octacosane				93.6%		50 - 150 %	"			"	

TestAmerica Seattle



Blake T. Meinert, Project Manager

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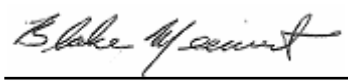


Arcadis, Geraghty, & Miller - Seattle	Project Name: 1001430 (418 Illinois)	
2300 Eastlake Avenue East, Suite 100	Project Number: 45512	Report Created:
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	04/30/08 17:40

Diesel Hydrocarbons (C10-C25) and Heavy Oil (C25-C36) by AK102 and AK103
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0183-06 (MW-23-080408)		Water			Sampled: 04/08/08 15:45						
Diesel Range Hydrocarbons	AK102_103	1.54	----	0.101	mg/l	1x	8D14014	04/14/08 09:27	04/16/08 01:58	EKK	
Residual Range Organics	"	ND	----	0.758	"	"	"	"	"	EKK	
Surrogate(s): 2-FBP				82.1%		50 - 150 %	"			"	
Octacosane				90.9%		50 - 150 %	"			"	
BRD0183-07 (MW-25-080410)		Water			Sampled: 04/10/08 10:00						
Diesel Range Hydrocarbons	AK102_103	3.62	----	0.0962	mg/l	1x	8D14014	04/14/08 09:27	04/16/08 02:24	EKK	
Residual Range Organics	"	ND	----	0.721	"	"	"	"	"	EKK	
Surrogate(s): 2-FBP				94.7%		50 - 150 %	"			"	
Octacosane				93.9%		50 - 150 %	"			"	
BRD0183-08 (DUP-1-W-080408)		Water			Sampled: 04/08/08 08:00						
Diesel Range Hydrocarbons	AK102_103	0.182	----	0.0980	mg/l	1x	8D14014	04/14/08 09:27	04/16/08 04:07	EKK	Q6
Residual Range Organics	"	ND	----	0.735	"	"	"	"	"	EKK	
Surrogate(s): 2-FBP				85.9%		50 - 150 %	"			"	
Octacosane				88.7%		50 - 150 %	"			"	

TestAmerica Seattle



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Arcadis, Geraghty, & Miller - Seattle	Project Name: 1001430 (418 Illinois)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: 45512	04/30/08 17:40
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

BTEX by EPA Method 8021B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0183-01RE1 (TH-1-W-080408)		Water			Sampled: 04/08/08 15:00						
Benzene	EPA 8021B	0.813	----	0.500	ug/l	1x	8D21031	04/21/08 12:29	04/22/08 00:41	KMT	
Toluene	"	ND	----	0.500	"	"	"	"	"	KMT	
Ethylbenzene	"	7.30	----	0.500	"	"	"	"	"	KMT	
Xylenes (total)	"	26.2	----	1.00	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)				121%		68 - 140 %	"				"
BRD0183-02 (TH-2-W-080408)		Water			Sampled: 04/08/08 16:35						
Benzene	EPA 8021B	652	----	50.0	ug/l	100x	8D17046	04/17/08 15:51	04/18/08 07:55	KMT	
Toluene	"	1650	----	50.0	"	"	"	"	"	KMT	
Ethylbenzene	"	1280	----	50.0	"	"	"	"	"	KMT	
Xylenes (total)	"	8580	----	100	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)				109%		68 - 140 %	1x				"
BRD0183-03RE1 (TH-7-W-080408)		Water			Sampled: 04/08/08 15:25						
Benzene	EPA 8021B	ND	----	0.500	ug/l	1x	8D21031	04/21/08 12:29	04/22/08 01:46	KMT	
Toluene	"	ND	----	0.500	"	"	"	"	"	KMT	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	KMT	
Xylenes (total)	"	1.50	----	1.00	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)				100%		68 - 140 %	"				"
BRD0183-04 (TH-10-W-080408)		Water			Sampled: 04/08/08 14:30						
Benzene	EPA 8021B	ND	----	0.500	ug/l	1x	8D17046	04/17/08 15:51	04/17/08 17:16	KMT	
Toluene	"	ND	----	0.500	"	"	"	"	"	KMT	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	KMT	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)				100%		68 - 140 %	"				"
BRD0183-05 (TH-13-W-080410)		Water			Sampled: 04/10/08 13:45						
Benzene	EPA 8021B	89.0	----	0.500	ug/l	1x	8D17046	04/17/08 15:51	04/17/08 18:21	KMT	
Toluene	"	1.26	----	0.500	"	"	"	"	"	KMT	
Ethylbenzene	"	4.56	----	0.500	"	"	"	"	"	KMT	
Xylenes (total)	"	22.3	----	1.00	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)				102%		68 - 140 %	"				"

TestAmerica Seattle



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2300 Eastlake Avenue East, Suite 100	Project Number: 45512	04/30/08 17:40
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

BTEX by EPA Method 8021B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
---------	--------	--------	------	-----	-------	-----	-------	----------	----------	---------	-------

BRD0183-06 (MW-23-080408)		Water			Sampled: 04/08/08 15:45						
Benzene	EPA 8021B	ND	----	0.500	ug/l	1x	8D17046	04/17/08 15:51	04/17/08 22:42	KMT	
Toluene	"	ND	----	0.500	"	"	"	"	"	KMT	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	KMT	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)				103%	68 - 140 %		"			"	

BRD0183-07RE1 (MW-25-080410)		Water			Sampled: 04/10/08 10:00						
Benzene	EPA 8021B	11.3	----	0.500	ug/l	1x	8D21031	04/21/08 12:29	04/22/08 03:56	KMT	
Toluene	"	3.50	----	0.500	"	"	"	"	"	KMT	
Ethylbenzene	"	36.8	----	0.500	"	"	"	"	"	KMT	
Xylenes (total)	"	142	----	1.00	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)				122%	68 - 140 %		"			"	

BRD0183-08 (DUP-1-W-080408)		Water			Sampled: 04/08/08 08:00						
Benzene	EPA 8021B	ND	----	0.500	ug/l	1x	8D17046	04/17/08 15:51	04/17/08 23:15	KMT	
Toluene	"	ND	----	0.500	"	"	"	"	"	KMT	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	KMT	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)				100%	68 - 140 %		"			"	

BRD0183-09 (QT-1-W-080408)		Water			Sampled: 04/08/08 06:00						
Benzene	EPA 8021B	ND	----	0.500	ug/l	1x	8D17046	04/17/08 15:51	04/17/08 21:37	KMT	
Toluene	"	ND	----	0.500	"	"	"	"	"	KMT	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	KMT	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)				101%	68 - 140 %		"			"	

TestAmerica Seattle



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	Project Number: 45512	04/30/08 17:40
	Project Manager: Greg Montgomery	

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0183-05 (TH-13-W-080410)											
		Water									
							Sampled: 04/10/08 13:45				
Arsenic	EPA 6010B	ND	----	0.100	mg/l	1x	8D14042	04/14/08 15:31	04/15/08 15:51	WAS	
Barium	"	0.252	----	0.0500	"	"	"	"	"	WAS	
Cadmium	"	ND	----	0.00500	"	"	"	"	"	WAS	
Chromium	"	ND	----	0.0100	"	"	"	"	"	WAS	
Lead	"	0.0599	----	0.0500	"	"	"	"	"	WAS	
Mercury	EPA 7470A	ND	----	0.000200	"	"	8D15026	04/15/08 10:25	04/15/08 14:35	WAS	
Selenium	EPA 6010B	ND	----	0.150	"	"	8D14042	04/14/08 15:31	04/15/08 15:51	WAS	
Silver	"	ND	----	0.0100	"	"	"	"	"	WAS	

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	Project Number:	45512	04/30/08 17:40
	Project Manager:	Greg Montgomery	

EDB and DBCP by EPA Method 8011
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0183-05 (TH-13-W-080410)		Water					Sampled: 04/10/08 13:45				
1,2-Dibromoethane (EDB)	EPA 8011M	ND	----	0.010	ug/l	1x	8D15016	04/15/08 09:10	04/15/08 23:31	gma	

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Arcadis, Geraghty, & Miller - Seattle 2300 Eastlake Avenue East, Suite 100 Seattle, WA/USA 98102	Project Name: 1001430 (418 Illinois)	Report Created:
	Project Number: 45512	04/30/08 17:40
	Project Manager: Greg Montgomery	

Volatile Organic Compounds by EPA Method 8260B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0183-05 (TH-13-W-080410)		Water			Sampled: 04/10/08 13:45						
Carbon tetrachloride	EPA 8260B	ND	----	1.00	ug/l	1x	8D15034	04/15/08 08:33	04/15/08 15:17	KPS	C
1,2-Dibromoethane	"	ND	----	1.00	"	"	"	"	"	KPS	
1,1-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	KPS	
1,2-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	KPS	
Tetrachloroethene	"	ND	----	1.00	"	"	"	"	"	KPS	
1,1,1-Trichloroethane	"	ND	----	1.00	"	"	"	"	"	KPS	
Trichloroethene	"	ND	----	1.00	"	"	"	"	"	KPS	
<i>Surrogate(s): 1,2-DCA-d4</i>				107%		70 - 130 %	"			"	
<i>Toluene-d8</i>				94.8%		75 - 125 %	"			"	
<i>4-BFB</i>				101%		75 - 125 %	"			"	

TestAmerica Seattle



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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **1001430 (418 Illinois)**

Project Number: 45512

Project Manager: Greg Montgomery

Report Created:

04/30/08 17:40

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0183-05 (TH-13-W-080410)		Water		Sampled: 04/10/08 13:45							
Acenaphthene	EPA 8270C-SIM	0.505	----	0.0971	ug/l	1x	8D15014	04/15/08 09:04	04/21/08 19:36	BAT	
Acenaphthylene	"	0.466	----	0.0971	"	"	"	"	"	BAT	
Anthracene	"	ND	----	0.0971	"	"	"	"	"	BAT	
Benzo (a) anthracene	"	ND	----	0.0971	"	"	"	"	"	BAT	
Benzo (a) pyrene	"	ND	----	0.0971	"	"	"	"	"	BAT	
Benzo (b) fluoranthene	"	ND	----	0.0971	"	"	"	"	"	BAT	
Benzo (k) fluoranthene	"	ND	----	0.0971	"	"	"	"	"	BAT	
Benzo (ghi) perylene	"	ND	----	0.0971	"	"	"	"	"	BAT	
Chrysene	"	ND	----	0.0971	"	"	"	"	"	BAT	
Dibenz (a,h) anthracene	"	ND	----	0.0971	"	"	"	"	"	BAT	
Fluoranthene	"	ND	----	0.0971	"	"	"	"	"	BAT	
Fluorene	"	ND	----	0.0971	"	"	"	"	"	BAT	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0971	"	"	"	"	"	BAT	
1-Methylnaphthalene	"	ND	----	0.0971	"	"	"	"	"	BAT	
2-Methylnaphthalene	"	ND	----	0.0971	"	"	"	"	"	BAT	
Naphthalene	"	ND	----	0.0971	"	"	"	"	"	BAT	
Phenanthrene	"	ND	----	0.0971	"	"	"	"	"	BAT	
Pyrene	"	ND	----	0.0971	"	"	"	"	"	BAT	

Surrogate(s): *p-Terphenyl-d14*

70.3%

20 - 131 %

"

"

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 1001430 (418 Illinois)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: 45512	04/30/08 17:40
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

Gasoline Range Hydrocarbons (n-Hexane to <n-Decane) by AK101 - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D17046 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
Blank (8D17046-BLK1)													Extracted: 04/17/08 13:00			
Gasoline Range Hydrocarbons	AK 101	ND	---	50.0	ug/l	1x	--	--	--	--	--	--	04/17/08 14:19			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 88.8%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/17/08 14:19</i>			
LCS (8D17046-BS1)													Extracted: 04/17/08 13:00			
Gasoline Range Hydrocarbons	AK 101	957	---	50.0	ug/l	1x	--	1000	95.7%	(60-120)	--	--	04/17/08 14:52			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 95.5%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/17/08 14:52</i>			
LCS Dup (8D17046-BSD1)													Extracted: 04/17/08 13:00			
Gasoline Range Hydrocarbons	AK 101	899	---	50.0	ug/l	1x	--	1000	89.9%	(60-120)	6.30% (20)		04/17/08 15:25			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 94.9%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/17/08 15:25</i>			
Duplicate (8D17046-DUP1)													QC Source: BRD0183-04		Extracted: 04/17/08 15:51	
Gasoline Range Hydrocarbons	AK 101	ND	---	50.0	ug/l	1x	ND	--	--	--	NR (20)		04/17/08 17:48			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 84.2%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/17/08 17:48</i>			
Duplicate (8D17046-DUP2)													QC Source: BRD0183-05		Extracted: 04/17/08 15:51	
Gasoline Range Hydrocarbons	AK 101	558	---	50.0	ug/l	1x	548	--	--	--	1.78% (20)		04/17/08 18:54			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 97.0%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/17/08 18:54</i>			
Matrix Spike (8D17046-MS1)													QC Source: BRD0183-04		Extracted: 04/17/08 15:51	
Gasoline Range Hydrocarbons	AK 101	1110	---	50.0	ug/l	1x	ND	1000	111%	(60-120)	--	--	04/17/08 19:26			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 94.5%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/17/08 19:26</i>			

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 1001430 (418 Illinois)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: 45512	04/30/08 17:40
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

Gasoline Range Hydrocarbons (n-Hexane to <n-Decane) by AK101 - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D21031 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8D21031-BLK1)													Extracted: 04/21/08 12:29	
Gasoline Range Hydrocarbons	AK 101	ND	---	50.0	ug/l	1x	--	--	--	--	--	--	04/21/08 12:55	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 87.7%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/21/08 12:55</i>	
LCS (8D21031-BS1)													Extracted: 04/21/08 12:29	
Gasoline Range Hydrocarbons	AK 101	980	---	50.0	ug/l	1x	--	1000	98.0%	(60-120)	--	--	04/21/08 13:28	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 94.5%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/21/08 13:28</i>	
LCS Dup (8D21031-BSD1)													Extracted: 04/21/08 12:29	
Gasoline Range Hydrocarbons	AK 101	1000	---	50.0	ug/l	1x	--	1000	100%	(60-120)	2.26%	(20)	04/21/08 14:01	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 94.9%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/21/08 14:01</i>	
Duplicate (8D21031-DUP1)													QC Source: BRD0280-02 Extracted: 04/21/08 12:29	
Gasoline Range Hydrocarbons	AK 101	ND	---	50.0	ug/l	1x	ND	--	--	--	NR	(20)	04/21/08 16:21	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 89.6%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/21/08 16:21</i>	
Duplicate (8D21031-DUP2)													QC Source: BRD0183-01RE1 Extracted: 04/21/08 12:29	
Gasoline Range Hydrocarbons	AK 101	442	---	50.0	ug/l	1x	455	--	--	--	2.81%	(20)	04/22/08 01:14	ZX
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 146%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/22/08 01:14</i>	
Matrix Spike (8D21031-MS1)													QC Source: BRD0280-02 Extracted: 04/21/08 12:29	
Gasoline Range Hydrocarbons	AK 101	1170	---	50.0	ug/l	1x	ND	1000	117%	(60-120)	--	--	04/21/08 16:54	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 95.8%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/21/08 16:54</i>	
Matrix Spike Dup (8D21031-MSD1)													QC Source: BRD0280-02 Extracted: 04/21/08 12:29	
Gasoline Range Hydrocarbons	AK 101	1140	---	50.0	ug/l	1x	ND	1000	114%	(60-120)	2.23%	(20)	04/21/08 17:27	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 96.5%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/21/08 17:27</i>	

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Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 1001430 (418 Illinois)	
2300 Eastlake Avenue East, Suite 100	Project Number: 45512	Report Created:
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	04/30/08 17:40

Diesel Hydrocarbons (C10-C25) and Heavy Oil (C25-C36) by AK102 and AK103 - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D14014 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8D14014-BLK1)										Extracted: 04/14/08 09:27				
Diesel Range Hydrocarbons	AK102_103	ND	---	0.100	mg/l	1x	--	--	--	--	--	--	04/15/08 22:32	
Residual Range Organics	"	ND	---	0.750	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery: 70.4%</i>		<i>Limits: 50-150%</i>		<i>"</i>						<i>04/15/08 22:32</i>		
<i>Octacosane</i>		<i>76.9%</i>		<i>50-150%</i>		<i>"</i>						<i>"</i>		
LCS (8D14014-BS1)										Extracted: 04/14/08 09:27				
Diesel Range Hydrocarbons	AK102_103	1.75	---	0.100	mg/l	1x	--	2.00	87.4%	(75-125)	--	--	04/15/08 22:57	
Residual Range Organics	"	1.59	---	0.750	"	"	--	"	79.5%	(60-120)	--	--	"	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery: 86.5%</i>		<i>Limits: 50-150%</i>		<i>"</i>						<i>04/15/08 22:57</i>		
<i>Octacosane</i>		<i>83.1%</i>		<i>50-150%</i>		<i>"</i>						<i>"</i>		
LCS Dup (8D14014-BSD1)										Extracted: 04/14/08 09:27				
Diesel Range Hydrocarbons	AK102_103	1.81	---	0.100	mg/l	1x	--	2.00	90.3%	(75-125)	3.25% (20)		04/15/08 23:23	
Residual Range Organics	"	1.66	---	0.750	"	"	--	"	82.9%	(60-120)	4.20%	"	"	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery: 86.0%</i>		<i>Limits: 50-150%</i>		<i>"</i>						<i>04/15/08 23:23</i>		
<i>Octacosane</i>		<i>86.0%</i>		<i>50-150%</i>		<i>"</i>						<i>"</i>		

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 1001430 (418 Illinois)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: 45512	04/30/08 17:40
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

BTEX by EPA Method 8021B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D17046 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

Blank (8D17046-BLK1)

Extracted: 04/17/08 13:00

Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	04/17/08 14:19	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)		Recovery: 98.6%	Limits: 68-140%		"								04/17/08 14:19	

LCS (8D17046-BS2)

Extracted: 04/17/08 13:00

Benzene	EPA 8021B	29.7	---	0.500	ug/l	1x	--	30.0	99.1%	(80-120)	--	--	04/17/08 15:57	
Toluene	"	29.3	---	0.500	"	"	--	"	97.6%	"	--	--	"	
Ethylbenzene	"	29.2	---	0.500	"	"	--	"	97.3%	"	--	--	"	
Xylenes (total)	"	90.1	---	1.00	"	"	--	90.0	100%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		Recovery: 99.1%	Limits: 68-140%		"								04/17/08 15:57	

LCS Dup (8D17046-BSD2)

Extracted: 04/17/08 13:00

Benzene	EPA 8021B	28.5	---	0.500	ug/l	1x	--	30.0	95.1%	(80-120)	4.08%	(25)	04/17/08 16:30	
Toluene	"	28.0	---	0.500	"	"	--	"	93.3%	"	4.51%	"	"	
Ethylbenzene	"	27.8	---	0.500	"	"	--	"	92.6%	"	4.92%	"	"	
Xylenes (total)	"	86.2	---	1.00	"	"	--	90.0	95.8%	"	4.40%	"	"	
Surrogate(s): 4-BFB (PID)		Recovery: 99.2%	Limits: 68-140%		"								04/17/08 16:30	

Duplicate (8D17046-DUP1)

QC Source: BRD0183-04

Extracted: 04/17/08 15:51

Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	ND	--	--	--	NR	(25)	04/17/08 17:48	
Toluene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Ethylbenzene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Xylenes (total)	"	ND	---	1.00	"	"	ND	--	--	--	NR	"	"	
Surrogate(s): 4-BFB (PID)		Recovery: 101%	Limits: 68-140%		"								04/17/08 17:48	

Duplicate (8D17046-DUP2)

QC Source: BRD0183-05

Extracted: 04/17/08 15:51

Benzene	EPA 8021B	89.0	---	0.500	ug/l	1x	89.0	--	--	--	0.00900	(25)	04/17/08 18:54	
Toluene	"	1.24	---	0.500	"	"	1.26	--	--	--	1.04%	"	"	
Ethylbenzene	"	4.57	---	0.500	"	"	4.56	--	--	--	0.329%	"	"	
Xylenes (total)	"	21.9	---	1.00	"	"	22.3	--	--	--	1.94%	"	"	
Surrogate(s): 4-BFB (PID)		Recovery: 102%	Limits: 68-140%		"								04/17/08 18:54	

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Blake T. Meinert

Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 1001430 (418 Illinois)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: 45512	04/30/08 17:40
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

BTEX by EPA Method 8021B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D17046 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike (8D17046-MS2)			QC Source: BRD0183-05				Extracted: 04/17/08 15:51							
Benzene	EPA 8021B	124	---	0.500	ug/l	1x	89.0	30.0	116%	(46-130)	--	--	04/18/08 02:30	M3
Toluene	"	32.3	---	0.500	"	"	1.26	"	103%	(60-124)	--	--	"	
Ethylbenzene	"	36.4	---	0.500	"	"	4.56	"	106%	(56-141)	--	--	"	
Xylenes (total)	"	122	---	1.00	"	"	22.3	90.0	110%	(66-132)	--	--	"	
Surrogate(s): 4-BFB (PID)		Recovery: 104%		Limits: 68-140%		"		04/18/08 02:30						

QC Batch: 8D21031 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8D21031-BLK1)			QC Source: BRD0183-05				Extracted: 04/21/08 12:29							
Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	04/21/08 12:55	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)		Recovery: 99.4%		Limits: 68-140%		"		04/21/08 12:55						

LCS (8D21031-BS2) Extracted: 04/21/08 12:29

Benzene	EPA 8021B	30.2	---	0.500	ug/l	1x	--	30.0	101%	(80-120)	--	--	04/21/08 14:34	
Toluene	"	29.7	---	0.500	"	"	--	"	98.9%	"	--	--	"	
Ethylbenzene	"	29.8	---	0.500	"	"	--	"	99.3%	"	--	--	"	
Xylenes (total)	"	91.8	---	1.00	"	"	--	90.0	102%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		Recovery: 98.8%		Limits: 68-140%		"		04/21/08 14:34						

LCS Dup (8D21031-BSD2) Extracted: 04/21/08 12:29

Benzene	EPA 8021B	28.8	---	0.500	ug/l	1x	--	30.0	96.1%	(80-120)	4.66%	(25)	04/21/08 15:07	
Toluene	"	28.7	---	0.500	"	"	--	"	95.6%	"	3.41%	"	"	
Ethylbenzene	"	28.4	---	0.500	"	"	--	"	94.7%	"	4.72%	"	"	
Xylenes (total)	"	87.8	---	1.00	"	"	--	90.0	97.5%	"	4.53%	"	"	
Surrogate(s): 4-BFB (PID)		Recovery: 98.6%		Limits: 68-140%		"		04/21/08 15:07						

Duplicate (8D21031-DUP1) QC Source: BRD0280-02 Extracted: 04/21/08 12:29

Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	ND	--	--	--	9.30%	(25)	04/21/08 16:21	
Toluene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Ethylbenzene	"	ND	---	0.500	"	"	ND	--	--	--	27.9%	"	"	R4
Xylenes (total)	"	ND	---	1.00	"	"	1.12	--	--	--	28.0%	"	"	R4
Surrogate(s): 4-BFB (PID)		Recovery: 100%		Limits: 68-140%		"		04/21/08 16:21						

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Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 1001430 (418 Illinois)	
2300 Eastlake Avenue East, Suite 100	Project Number: 45512	Report Created:
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	04/30/08 17:40

BTEX by EPA Method 8021B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D21031 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
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Duplicate (8D21031-DUP2)

QC Source: BRD0183-01RE1

Extracted: 04/21/08 12:29

Benzene	EPA 8021B	0.751	---	0.500	ug/l	1x	0.813	--	--	--	7.93% (25)		04/22/08 01:14	
Toluene	"	ND	---	0.500	"	"	ND	--	--	--	21.4%	"	"	
Ethylbenzene	"	6.84	---	0.500	"	"	7.30	--	--	--	6.48%	"	"	
Xylenes (total)	"	24.6	---	1.00	"	"	26.2	--	--	--	6.43%	"	"	

Surrogate(s): 4-BFB (PID)

Recovery: 121%

Limits: 68-140% "

04/22/08 01:14

Matrix Spike (8D21031-MS2)

QC Source: BRD0183-01RE1

Extracted: 04/21/08 12:29

Benzene	EPA 8021B	33.1	---	0.500	ug/l	1x	0.813	30.0	108%	(46-130)	--	--	04/21/08 18:00	
Toluene	"	30.7	---	0.500	"	"	0.145	"	102%	(60-124)	--	--	"	
Ethylbenzene	"	38.4	---	0.500	"	"	7.30	"	104%	(56-141)	--	--	"	
Xylenes (total)	"	117	---	1.00	"	"	26.2	90.0	101%	(66-132)	--	--	"	

Surrogate(s): 4-BFB (PID)

Recovery: 119%

Limits: 68-140% "

04/21/08 18:00

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Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 1001430 (418 Illinois)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: 45512	04/30/08 17:40
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D14042	Water Preparation Method: EPA 3010A
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Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

Blank (8D14042-BLK1)

Extracted: 04/14/08 15:31

Barium	EPA 6010B	ND	---	0.0500	mg/l	1x	--	--	--	--	--	--	04/15/08 15:24	
Selenium	"	ND	---	0.150	"	"	--	--	--	--	--	--	"	
Cadmium	"	ND	---	0.00500	"	"	--	--	--	--	--	--	"	
Silver	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Lead	"	ND	---	0.0500	"	"	--	--	--	--	--	--	"	
Chromium	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Arsenic	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	

LCS (8D14042-BS1)

Extracted: 04/14/08 15:31

Silver	EPA 6010B	1.05	---	0.0100	mg/l	1x	--	1.00	105%	(79-122)	--	--	04/15/08 15:38	
Barium	"	5.28	---	0.0500	"	"	--	5.00	106%	(80-120)	--	--	"	
Lead	"	5.24	---	0.0500	"	"	--	"	105%	"	--	--	"	
Cadmium	"	5.23	---	0.00500	"	"	--	"	105%	"	--	--	"	
Arsenic	"	5.33	---	0.100	"	"	--	"	107%	"	--	--	"	
Selenium	"	5.22	---	0.150	"	"	--	"	104%	"	--	--	"	
Chromium	"	5.29	---	0.0100	"	"	--	"	106%	"	--	--	"	

Duplicate (8D14042-DUP1)

QC Source: BRD0183-05

Extracted: 04/14/08 15:31

Chromium	EPA 6010B	ND	---	0.0100	mg/l	1x	ND	--	--	--	NR (20)		04/15/08 15:45	
Cadmium	"	ND	---	0.00500	"	"	ND	--	--	--	NR	"	"	
Selenium	"	ND	---	0.150	"	"	ND	--	--	--	NR	"	"	
Arsenic	"	ND	---	0.100	"	"	ND	--	--	--		"	"	
Lead	"	0.0639	---	0.0500	"	"	0.0599	--	--	--	6.46%	"	"	
Silver	"	ND	---	0.0100	"	"	ND	--	--	--	NR (40)	"	"	
Barium	"	0.268	---	0.0500	"	"	0.252	--	--	--	6.03% (25)	"	"	

Matrix Spike (8D14042-MS1)

QC Source: BRD0183-05

Extracted: 04/14/08 15:31

Arsenic	EPA 6010B	5.30	---	0.100	mg/l	1x	ND	5.00	106%	(80-120)	--	--	04/15/08 15:41	
Barium	"	5.37	---	0.0500	"	"	0.252	"	102%	(60-136)	--	--	"	
Cadmium	"	5.12	---	0.00500	"	"	ND	"	102%	(80-120)	--	--	"	
Lead	"	4.90	---	0.0500	"	"	0.0599	"	96.8%	"	--	--	"	
Silver	"	0.998	---	0.0100	"	"	ND	1.00	99.8%	(78-125)	--	--	"	
Selenium	"	5.19	---	0.150	"	"	ND	5.00	104%	(80-120)	--	--	"	
Chromium	"	5.01	---	0.0100	"	"	ND	"	100%	"	--	--	"	

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Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 1001430 (418 Illinois)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: 45512	04/30/08 17:40
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D14042 Water Preparation Method: EPA 3010A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
Post Spike (8D14042-PS1)			QC Source: BRD0183-05					Extracted: 04/14/08 15:31							
Cadmium	EPA 6010B	5.12	---		ug/ml	1x	0.000100	5.00	102%	(75-125)	--	--	04/15/08 15:48		
Silver	"	1.01	---		"	"	-0.00420	1.00	101%	"	--	--	"		
Barium	"	5.30	---		"	"	0.252	5.00	101%	"	--	--	"		
Chromium	"	5.04	---		"	"	0.000600	"	101%	"	--	--	"		
Lead	"	4.99	---		"	"	0.0599	"	98.6%	"	--	--	"		
Arsenic	"	5.28	---		"	"	0.00970	"	105%	"	--	--	"		

QC Batch: 8D15026 Water Preparation Method: EPA 7470A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
Blank (8D15026-BLK1)								Extracted: 04/15/08 10:25							
Mercury	EPA 7470A	ND	---	0.000200	mg/l	1x	--	--	--	--	--	--	04/15/08 14:05		
LCS (8D15026-BS1)								Extracted: 04/15/08 10:25							
Mercury	EPA 7470A	0.00525	---	0.000200	mg/l	1x	--	0.00500	105%	(80-120)	--	--	04/15/08 14:07		
LCS Dup (8D15026-BSD1)								Extracted: 04/15/08 10:25							
Mercury	EPA 7470A	0.00527	---	0.000200	mg/l	1x	--	0.00500	105%	(80-120)	0.430% (20)		04/15/08 14:10		
Duplicate (8D15026-DUP1)			QC Source: BRD0123-01					Extracted: 04/15/08 10:25							
Mercury	EPA 7470A	ND	---	0.000200	mg/l	1x	ND	--	--	--	69.9% (20)		04/15/08 14:30	R4	
Matrix Spike (8D15026-MS1)			QC Source: BRD0123-01					Extracted: 04/15/08 10:25							
Mercury	EPA 7470A	0.00493	---	0.000200	mg/l	1x	0.0000643	0.00500	97.3%	(75-125)	--	--	04/15/08 14:28		

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Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 1001430 (418 Illinois)	
2300 Eastlake Avenue East, Suite 100	Project Number: 45512	Report Created:
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	04/30/08 17:40

EDB and DBCP by EPA Method 8011 - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D15016 Water Preparation Method: Solvent Extraction

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8D15016-BLK1)													Extracted: 04/15/08 09:10	
1,2-Dibromoethane (EDB)	EPA 8011M	ND	---	0.010	ug/l	1x	--	--	--	--	--	--	04/15/08 19:54	
LCS (8D15016-BS1)													Extracted: 04/15/08 09:10	
1,2-Dibromoethane (EDB)	EPA 8011M	0.053	---	0.010	ug/l	1x	--	0.0500	105%	(80-120)	--	--	04/15/08 20:18	
LCS (8D15016-BS4)													Extracted: 04/15/08 09:10	
1,2-Dibromoethane (EDB) [2C]	EPA 8011M	0.051	---	0.010	ug/l	1x	--	0.0500	102%	(80-120)	--	--	04/17/08 18:51	
LCS (8D15016-BS5)													Extracted: 04/15/08 09:10	
1,2-Dibromoethane (EDB) [2C]	EPA 8011M	0.104	---	0.010	ug/l	1x	--	0.100	104%	(80-120)	--	--	04/17/08 20:03	
LCS (8D15016-BS9)													Extracted: 04/15/08 09:10	
1,2-Dibromoethane (EDB)	EPA 8011M	0.046	---	0.010	ug/l	1x	--	0.0500	92.3%	(80-120)	--	--	04/24/08 17:02	
LCS (8D15016-BSA)													Extracted: 04/15/08 09:10	
1,2-Dibromoethane (EDB)	EPA 8011M	0.083	---	0.010	ug/l	1x	--	0.100	83.5%	(80-120)	--	--	04/24/08 19:03	
LCS Dup (8D15016-BSD1)													Extracted: 04/15/08 09:10	
1,2-Dibromoethane (EDB)	EPA 8011M	0.051	---	0.010	ug/l	1x	--	0.0500	103%	(80-120)	2.46% (20)		04/15/08 20:42	

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Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 1001430 (418 Illinois)	
2300 Eastlake Avenue East, Suite 100	Project Number: 45512	Report Created:
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	04/30/08 17:40

Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D15034 Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8D15034-BLK1)													Extracted: 04/15/08 08:33	
Acetone	EPA 8260B	ND	---	20.0	ug/l	1x	--	--	--	--	--	--	04/15/08 13:50	
Benzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Bromobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Bromochloromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Bromodichloromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Bromoform	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Bromomethane	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
2-Butanone	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
n-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
sec-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Carbon disulfide	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Carbon tetrachloride	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	C
Chlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Chloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1-Chlorohexane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Chloroform	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Chloromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2-Chlorotoluene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
4-Chlorotoluene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Dibromochloromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2-Dibromo-3-chloropropane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2-Dibromoethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Dibromomethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2-Dichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3-Dichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Dichlorodifluoromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
cis-1,2-Dichloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
trans-1,2-Dichloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2-Dichloropropane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3-Dichloropropane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
2,2-Dichloropropane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	C5
1,1-Dichloropropene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
cis-1,3-Dichloropropene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
trans-1,3-Dichloropropene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	

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Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **1001430 (418 Illinois)**

Project Number: 45512

Project Manager: Greg Montgomery

Report Created:

04/30/08 17:40

Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 8D15034

Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8D15034-BLK1)													Extracted: 04/15/08 08:33	
Ethylbenzene	EPA 8260B	ND	---	1.00	ug/l	1x	--	--	--	--	--	--	04/15/08 13:50	
Hexachlorobutadiene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
n-Hexane	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
2-Hexanone	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
p-Isopropyltoluene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
4-Methyl-2-pentanone	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Methylene chloride	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Styrene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2,3-Trichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,1,1,2-Tetrachloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,1,2,2-Tetrachloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Tetrachloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,1,1-Trichloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,1,2-Trichloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Trichloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Trichlorofluoromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2,3-Trichloropropane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Vinyl chloride	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Total Xylenes	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
Surrogate(s):	1,2-DCA-d4	Recovery:	96.2%	Limits:	70-130%	"							04/15/08 13:50	
	Toluene-d8		94.8%		75-125%	"							"	
	4-BFB		103%		75-125%	"							"	

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Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 1001430 (418 Illinois)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: 45512	04/30/08 17:40
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D15034 Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (8D15034-BS1)													Extracted: 04/15/08 08:33	
Benzene	EPA 8260B	41.3	---	1.00	ug/l	1x	--	40.0	103%	(80-120)	--	--	04/15/08 12:14	
Chlorobenzene	"	36.5	---	1.00	"	"	--	"	91.3%	"	--	--	"	
1,1-Dichloroethene	"	47.0	---	1.00	"	"	--	"	117%	(75-125)	--	--	"	
Methyl tert-butyl ether	"	37.8	---	2.00	"	"	--	"	94.5%	(75-126)	--	--	"	
Toluene	"	36.5	---	1.00	"	"	--	"	91.4%	(75-125)	--	--	"	
Trichloroethene	"	40.2	---	1.00	"	"	--	"	101%	"	--	--	"	
Total Xylenes	"	120	---	3.00	"	"	--	120	99.6%	"	--	--	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery: 92.6%</i>		<i>Limits: 70-130%</i>		<i>"</i>						<i>04/15/08 12:14</i>		
<i>Toluene-d8</i>		<i>94.4%</i>		<i>75-125%</i>		<i>"</i>						<i>"</i>		
<i>4-BFB</i>		<i>99.8%</i>		<i>75-125%</i>		<i>"</i>						<i>"</i>		

LCS Dup (8D15034-BSD1)													Extracted: 04/15/08 08:33	
Benzene	EPA 8260B	42.1	---	1.00	ug/l	1x	--	40.0	105%	(80-120)	2.01% (20)		04/15/08 12:43	
Chlorobenzene	"	35.8	---	1.00	"	"	--	"	89.5%	"	2.02%	"	"	
1,1-Dichloroethene	"	48.3	---	1.00	"	"	--	"	121%	(75-125)	2.81%	"	"	
Methyl tert-butyl ether	"	37.1	---	2.00	"	"	--	"	92.8%	(75-126)	1.79%	"	"	
Toluene	"	35.9	---	1.00	"	"	--	"	89.7%	(75-125)	1.82%	"	"	
Trichloroethene	"	40.8	---	1.00	"	"	--	"	102%	"	1.33%	"	"	
Total Xylenes	"	117	---	3.00	"	"	--	120	97.6%	"	2.04%	"	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery: 93.0%</i>		<i>Limits: 70-130%</i>		<i>"</i>						<i>04/15/08 12:43</i>		
<i>Toluene-d8</i>		<i>92.0%</i>		<i>75-125%</i>		<i>"</i>						<i>"</i>		
<i>4-BFB</i>		<i>100%</i>		<i>75-125%</i>		<i>"</i>						<i>"</i>		

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Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 1001430 (418 Illinois)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: 45512	04/30/08 17:40
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D15014 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
Blank (8D15014-BLK2)													Extracted: 04/15/08 09:04			
Acenaphthene	EPA 8270C-SIM	ND	---	0.100	ug/l	1x	--	--	--	--	--	--	04/21/08 14:17			
Acenaphthylene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"			
Anthracene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"			
Benzo (a) anthracene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"			
Benzo (a) pyrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"			
Benzo (b) fluoranthene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"			
Benzo (k) fluoranthene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"			
Benzo (ghi) perylene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"			
Chrysene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"			
Dibenz (a,h) anthracene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"			
Fluoranthene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"			
Fluorene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"			
Indeno (1,2,3-cd) pyrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"			
1-Methylnaphthalene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"			
2-Methylnaphthalene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"			
Naphthalene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"			
Phenanthrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"			
Pyrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"			
<i>Surrogate(s): p-Terphenyl-d14</i>													<i>Recovery: 90.9%</i>	<i>Limits: 20-131%</i>	<i>"</i>	<i>04/21/08 14:17</i>

LCS (8D15014-BS2)													Extracted: 04/15/08 09:04	
Acenaphthene	EPA 8270C-SIM	16.0	---	0.100	ug/l	1x	--	20.0	80.1%	(68-129)	--	--	04/25/08 16:20	
Acenaphthylene	"	16.5	---	0.100	"	"	--	"	82.5%	(77-129)	--	--	"	
Anthracene	"	18.6	---	0.100	"	"	--	"	93.0%	(80-146)	--	--	"	
Benzo (a) anthracene	"	16.0	---	0.100	"	"	--	"	79.9%	(73-120)	--	--	"	
Benzo (a) pyrene	"	17.4	---	0.100	"	"	--	"	87.2%	(70-132)	--	--	"	
Benzo (b) fluoranthene	"	16.7	---	0.100	"	"	--	"	83.7%	(68-148)	--	--	"	
Benzo (k) fluoranthene	"	18.2	---	0.100	"	"	--	"	90.9%	(63-150)	--	--	"	
Benzo (ghi) perylene	"	16.7	---	0.100	"	"	--	"	83.7%	(46-142)	--	--	"	
Chrysene	"	18.5	---	0.100	"	"	--	"	92.6%	(80-132)	--	--	"	
Dibenz (a,h) anthracene	"	17.0	---	0.100	"	"	--	"	85.1%	(56-138)	--	--	"	
Fluoranthene	"	17.9	---	0.100	"	"	--	"	89.7%	(79-138)	--	--	"	
Fluorene	"	16.8	---	0.100	"	"	--	"	83.8%	(42-120)	--	--	"	
Indeno (1,2,3-cd) pyrene	"	16.3	---	0.100	"	"	--	"	81.5%	(53-136)	--	--	"	
1-Methylnaphthalene	"	13.9	---	0.100	"	"	--	"	69.4%	(41-120)	--	--	"	
2-Methylnaphthalene	"	13.5	---	0.100	"	"	--	"	67.4%	(43-122)	--	--	"	
Naphthalene	"	13.4	---	0.100	"	"	--	"	67.1%	(38-128)	--	--	"	
Phenanthrene	"	16.8	---	0.100	"	"	--	"	84.0%	(77-123)	--	--	"	

TestAmerica Seattle



Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 1001430 (418 Illinois)	
2300 Eastlake Avenue East, Suite 100	Project Number: 45512	Report Created:
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	04/30/08 17:40

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D15014 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

LCS (8D15014-BS2)

Extracted: 04/15/08 09:04

Pyrene	EPA 8270C-SIM	18.0	---	0.100	ug/l	1x	--	20.0	89.9%	(60-150)	--	--	04/25/08 16:20	
--------	---------------	------	-----	-------	------	----	----	------	-------	----------	----	----	----------------	--

Surrogate(s): *p-Terphenyl-d14* Recovery: 84.6% Limits: 20-131% " 04/25/08 16:20

LCS Dup (8D15014-BSD2)

Extracted: 04/15/08 09:04

Acenaphthene	EPA 8270C-SIM	15.6	---	0.100	ug/l	1x	--	20.0	77.9%	(68-129)	2.78%	(30)	04/25/08 16:51	
Acenaphthylene	"	16.0	---	0.100	"	"	--	"	80.2%	(77-129)	2.83%	"	"	
Anthracene	"	18.3	---	0.100	"	"	--	"	91.3%	(80-146)	1.84%	"	"	
Benzo (a) anthracene	"	15.4	---	0.100	"	"	--	"	77.2%	(73-120)	3.44%	"	"	
Benzo (a) pyrene	"	17.2	---	0.100	"	"	--	"	86.1%	(70-132)	1.27%	"	"	
Benzo (b) fluoranthene	"	18.3	---	0.100	"	"	--	"	91.4%	(68-148)	8.79%	"	"	
Benzo (k) fluoranthene	"	16.1	---	0.100	"	"	--	"	80.6%	(63-150)	12.0%	"	"	
Benzo (ghi) perylene	"	16.4	---	0.100	"	"	--	"	81.8%	(46-142)	2.30%	"	"	
Chrysene	"	18.0	---	0.100	"	"	--	"	89.8%	(80-132)	3.07%	"	"	
Dibenz (a,h) anthracene	"	16.7	---	0.100	"	"	--	"	83.7%	(56-138)	1.66%	"	"	
Fluoranthene	"	17.4	---	0.100	"	"	--	"	87.1%	(79-138)	2.94%	"	"	
Fluorene	"	16.5	---	0.100	"	"	--	"	82.3%	(42-120)	1.81%	"	"	
Indeno (1,2,3-cd) pyrene	"	16.0	---	0.100	"	"	--	"	80.1%	(53-136)	1.73%	"	"	
1-Methylnaphthalene	"	13.1	---	0.100	"	"	--	"	65.4%	(41-120)	5.93%	"	"	
2-Methylnaphthalene	"	12.6	---	0.100	"	"	--	"	63.2%	(43-122)	6.43%	"	"	
Naphthalene	"	12.5	---	0.100	"	"	--	"	62.6%	(38-128)	6.94%	"	"	
Phenanthrene	"	16.6	---	0.100	"	"	--	"	82.9%	(77-123)	1.32%	"	"	
Pyrene	"	17.7	---	0.100	"	"	--	"	88.6%	(60-150)	1.46%	"	"	

Surrogate(s): *p-Terphenyl-d14* Recovery: 83.5% Limits: 20-131% " 04/25/08 16:51

TestAmerica Seattle



Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **1001430 (418 Illinois)**

Project Number: 45512

Project Manager: Greg Montgomery

Report Created:

04/30/08 17:40

Notes and Definitions

Report Specific Notes:

- C - Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
- C5 - Calibration Verification recovery was below the method control limit for this analyte. An additional check standard was analyzed at the reporting limit to ensure instrument sensitivity at the reporting limit. Samples ND.
- M3 - Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
- Q6 - Results in the diesel organics range are primarily due to overlap from a heavy oil range product.
- Q8 - Detected hydrocarbons in the gasoline range appear to be due to overlap of diesel range hydrocarbons.
- R4 - Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.
- ZX - Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Seattle



Blake T. Meinert, Project Manager

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TestAmerica Seattle

11720 North Creek Parkway N
 Suite 400
 Bothell, WA 98011
 phone 425.420.9200 fax 425.420.9210

Chain of Custody Record

BRD0183

TestAmerica Laboratories, Inc.

Client Contact		Project Manager: Greg Montgomery			Site Contact: Mike Strickler			Date: April 10, 2008			COC No:											
Arcadis					Lab Contact: Blake Meinert			Carrier: Fed Ex			_____ of _____ COCs											
2300 Eastlake Ave East, Suite 200		Analysis Turnaround Time			Filtered Sample GRO by AKI01 BTEX by EPA 8021 Six VOCs by EPA 8260B EDB by 8011 DRO by AKI02 RRO by AKI03 PAHs by 8270 SIMM Total Metals by EPA 6010/7470						Job No.											
Seattle, WA 98102		Calendar (C) or Work Days (W) _____									SDG No.											
206-726-4742		TAT if different from Below _____									Sample Specific Notes:											
(xxx) xxx-xxxx FAX		<input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day																				
Project Name: Facility # 1001430																						
Site: 418 Illinois																						
Project # Arcadis # 45512																						
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.																
TH-1-W-080408		4/8/2008	1500		W	5	X	X		X	X											-01
TH-2-W-080408		4/8/2008	1635		W	5	X	X		X	X											Hot-MAY REQUIRE DILUTION -02
TH-7-W-080408		4/8/2008	1525		W	5	X	X		X	X											-03
TH-10-W-080408		4/8/2008	1430		W	5	X	X		X	X											-04
TH-13-W-080410		4/10/2008	1345		W	13	X	X	X	X	X	X	X									-05
MW-23-W-080408		4/8/2008	1545		W	5	X	X		X	X											-06
MW-25-W-080410		4/10/2008	1000		W	5	X	X		X	X											MAY REQUIRE DILUTION -07
DUP-1-W-080408		4/8/2008	0800		W	5	X	X		X	X											-08
QT-1-W-080408		4/8/2008	0600		W	5	X	X														Trip Blank -09
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____								2	2	2	1	2	2	1	4							
Possible Hazard Identification								Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)														
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown								<input type="checkbox"/> Return To Client			<input type="checkbox"/> Disposal By Lab			<input type="checkbox"/> Archive For _____ Months								
Special Instructions/QC Requirements & Comments: Total Metals = Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver								VOCs = Carbon Tetrachloride, Tetrachoroethene, trichloroethene, 1,1-dichloroethene, 1,1,1-trichloroethane, 1,2-dichloroethane, (1,2-DCA)														
Relinquished by: <i>matej...</i>		Company: <i>ASIS</i>			Date/Time: <i>4-10-08 10:00</i>			Received by: <i>Dwayne...</i>		Company: <i>Test America</i>			Date/Time: <i>1203 4-12-08</i>									
Relinquished by:		Company:			Date/Time:			Received by:		Company:			Date/Time:									
Relinquished by:		Company:			Date/Time:			Received by:		Company:			Date/Time:									

5.9c w/c

TAT: _____

Paperwork to PM - Date: _____ Time: _____

Non-Conformances?

Circle Y or N

(If Y, see other side)

TEST AMERICA SAMPLE RECEIPT CHECKLIST

323,345
312,336

Received By: _____
(applies to temp at receipt)

Logged-in By: _____

Unpacked/Labeled By: _____

Cooler ID: 240,349, (____ of ____)

Date: 4-12-08

Date: 04-14

Date: 04-14

Work Order No. BRD0183

Time: 12:03

Initials: CW

Initials: CW

Client: _____

Initials: DSA

Project: _____

Container Type:

COC Seals:

Packing Material

Cooler
 Box
 None/Other _____

Ship. Container _____ Sign By _____
 On Bottles _____ Date _____
 None

Bubble Bags _____ Styrofoam _____
 Foam Packs _____
 None/Other Other _____

Refrigerant:

Gel Ice Pack _____
 Loose Ice _____
 None/Other _____

None

Received Via: Bill# _____

Fed Ex _____ Client _____
 UPS _____ TA Courier _____
 DHL _____ Mid Valley _____
 Servoy _____ TDP _____
 GS _____ Other _____

Cooler Temperature (IR): 5.9 °C Plastic Glass (Frozen filters, Tedlars and aqueous Metals exempt) 5.9, 2.3, 2.2,
(circle one) 4.4, 3.1, 1.6

Temperature Blank? _____ °C or NA

Coolers did have temperature blanks but did not use

Trip Blank?

Y or N or NA

Sample Containers:

ID _____

ID _____

Intact? Y or N _____
Provided by TA? Y or N _____
Correct Type? Y or N _____
#Containers match COC? Y or N _____
IDs/time/date match COC? Y or N _____
Hold Times in hold? Y or N _____

Metals Preserved? Y or N or NA _____
Client QAPP Preserved? Y or N or NA _____
Adequate Volume? Y or N _____
(for tests requested)
Water VOAs: Headspace? Y or N or NA _____
Comments: _____

PROJECT MANAGEMENT

Is the Chain of Custody complete?

Y or N . If N, circle the items that were incomplete

Comments, Problems _____

Total access set up?
Has client been contacted regarding non-conformances?

Y or N
Y or N If Y, _____ / _____
Date Time

PM Initials: _____ Date: _____ Time: _____

NOTIFICATION OF DISCREPANCY

DATE: <u>14/4/08</u> TIME: <u>0750</u> PM: <u>Elike Meinert</u> SC INITIALS: <u>EW</u>		
Rush/Short Hold? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

- Project Not Set Up in ELM New Client COC Received ON HOLD
 Analysis Requested on COC – Not Listed for Project in ELM

PM To Add Analysis: _____

Clarification of Analysis: _____

Hold Time Expired: (Analysis) _____

Turnaround Time Not Checked: _____

Did Not Receive Sample(s) Listed on COC: _____

Received Extra Sample(s) Not Listed on COC: _____

Sample Description(s) or Date/Time Sampled Do Not Match COC:

Improper Preservative For method: _____

Sample Received Broken: _____

Insufficient Sample Volume: only received 125 ml ampoures (2) for 800 EDB.

Sample preserved upon receipt: _____

Temperature Outside recommended range ($4^{\circ}\text{C}\pm 2^{\circ}\text{C}$): _____

Received on-ice within 4 hours of collection, temperature between ambient to 2°C acceptable.

Other: _____

PROJECT MANAGER RESOLUTION:	(Date & Time when returned to SC)
Approval By:	Date: Time:

June 13, 2008

Greg Montgomery
Arcadis, Geraghty, & Miller - Seattle
2300 Eastlake Avenue East, Suite 100
Seattle, WA/USA 98102

RE: 211815 (410 Driveway)

Enclosed are the results of analyses for samples received by the laboratory on 04/12/08 12:03.
The following list is a summary of the Work Orders contained in this report, generated on 06/13/08
14:35.

If you have any questions concerning this report, please feel free to contact me.

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
BRD0184	211815 (410 Driveway)	45505

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle 2300 Eastlake Avenue East, Suite 100 Seattle, WA/USA 98102	Project Name:	211815 (410 Driveway)	Report Created:
	Project Number:	45505	06/13/08 14:35
	Project Manager:	Greg Montgomery	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AR-81-W-080410	BRD0184-01	Water	04/10/08 15:55	04/12/08 12:03
AR-85-W-080410	BRD0184-02	Water	04/10/08 14:50	04/12/08 12:03
MW-3-W-080410	BRD0184-03	Water	04/10/08 16:50	04/12/08 12:03
MW-7-W-080410	BRD0184-04	Water	04/10/08 19:45	04/12/08 12:03
MW-8-W-080410	BRD0184-05	Water	04/10/08 20:05	04/12/08 12:03
MW-9-W-080410	BRD0184-06	Water	04/10/08 20:25	04/12/08 12:03
MW-10-W-080410	BRD0184-07	Water	04/10/08 20:45	04/12/08 12:03
DUP-1-W-080410	BRD0184-08	Water	04/10/08 08:00	04/12/08 12:03
QA-T-080410	BRD0184-09	Water	04/10/08 06:00	04/12/08 12:03

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **211815 (410 Driveway)**

Project Number: 45505

Project Manager: Greg Montgomery

Report Created:

06/13/08 14:35

Gasoline Range Hydrocarbons (n-Hexane to <n-Decane) by AK101

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0184-01 (AR-81-W-080410)		Water		Sampled: 04/10/08 15:55							
Gasoline Range Hydrocarbons	AK 101	121	----	50.0	ug/l	1x	8D17046	04/17/08 15:51	04/17/08 23:47	KMT	
Surrogate(s): 4-BFB (FID)		96.3%		60 - 120 %		"		"		"	
BRD0184-02 (AR-85-W-080410)		Water		Sampled: 04/10/08 14:50							
Gasoline Range Hydrocarbons	AK 101	ND	----	50.0	ug/l	1x	8D17046	04/17/08 15:51	04/18/08 00:20	KMT	
Surrogate(s): 4-BFB (FID)		89.5%		60 - 120 %		"		"		"	
BRD0184-03 (MW-3-W-080410)		Water		Sampled: 04/10/08 16:50							
Gasoline Range Hydrocarbons	AK 101	33300	----	2500	ug/l	50x	8D17046	04/17/08 15:51	04/18/08 07:23	KMT	
Surrogate(s): 4-BFB (FID)		90.5%		60 - 120 %		1x		"		"	
BRD0184-04RE1 (MW-7-W-080410)		Water		Sampled: 04/10/08 19:45							
Gasoline Range Hydrocarbons	AK 101	8650	----	1000	ug/l	20x	8D21031	04/21/08 12:29	04/22/08 08:50	KMT	
Surrogate(s): 4-BFB (FID)		93.1%		60 - 120 %		1x		"		"	
BRD0184-05RE1 (MW-8-W-080410)		Water		Sampled: 04/10/08 20:05							
Gasoline Range Hydrocarbons	AK 101	5700	----	250	ug/l	5x	8D21031	04/21/08 12:29	04/22/08 06:39	KMT	
Surrogate(s): 4-BFB (FID)		107%		60 - 120 %		1x		"		"	
BRD0184-06RE1 (MW-9-W-080410)		Water		Sampled: 04/10/08 20:25							
Gasoline Range Hydrocarbons	AK 101	92.7	----	50.0	ug/l	1x	8D21031	04/21/08 12:29	04/22/08 04:29	KMT	
Surrogate(s): 4-BFB (FID)		87.8%		60 - 120 %		"		"		"	
BRD0184-07 (MW-10-W-080410)		Water		Sampled: 04/10/08 20:45							
Gasoline Range Hydrocarbons	AK 101	498	----	50.0	ug/l	1x	8D17046	04/17/08 15:51	04/18/08 01:57	KMT	
Surrogate(s): 4-BFB (FID)		108%		60 - 120 %		"		"		"	
BRD0184-08 (DUP-1-W-080410)		Water		Sampled: 04/10/08 08:00							
Gasoline Range Hydrocarbons	AK 101	ND	----	50.0	ug/l	1x	8D17046	04/17/08 15:51	04/18/08 04:40	KMT	
Surrogate(s): 4-BFB (FID)		88.3%		60 - 120 %		"		"		"	

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle 2300 Eastlake Avenue East, Suite 100 Seattle, WA/USA 98102	Project Name: 211815 (410 Driveway)	Report Created:
	Project Number: 45505	06/13/08 14:35
	Project Manager: Greg Montgomery	

Gasoline Range Hydrocarbons (n-Hexane to <n-Decane) by AK101
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0184-09 (QA-T-080410)		Water			Sampled: 04/10/08 06:00						
Gasoline Range Hydrocarbons	AK 101	ND	----	50.0	ug/l	1x	8D17046	04/17/08 15:51	04/17/08 22:10	KMT	
<i>Surrogate(s): 4-BFB (FID)</i>			88.5%		60 - 120 %	"					"

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **211815 (410 Driveway)**

Project Number: 45505

Project Manager: Greg Montgomery

Report Created:

06/13/08 14:35

Diesel Hydrocarbons (C10-C25) and Heavy Oil (C25-C36) by AK102 and AK103

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0184-01 (AR-81-W-080410)		Water			Sampled: 04/10/08 15:55						
Diesel Range Hydrocarbons	AK102_103	4.29	----	0.0952	mg/l	1x	8D14014	04/14/08 09:27	04/16/08 04:33	EKK	
Residual Range Organics	"	ND	----	0.714	"	"	"	"	"	EKK	
Surrogate(s): 2-FBP				93.3%	50 - 150 %						"
Octacosane				91.3%	50 - 150 %						"
BRD0184-02 (AR-85-W-080410)		Water			Sampled: 04/10/08 14:50						
Diesel Range Hydrocarbons	AK102_103	0.951	----	0.0980	mg/l	1x	8D14014	04/14/08 09:27	04/16/08 04:59	EKK	
Residual Range Organics	"	ND	----	0.735	"	"	"	"	"	EKK	
Surrogate(s): 2-FBP				89.6%	50 - 150 %						"
Octacosane				93.7%	50 - 150 %						"
BRD0184-03 (MW-3-W-080410)		Water			Sampled: 04/10/08 16:50						
Diesel Range Hydrocarbons	AK102_103	11.0	----	0.100	mg/l	1x	8D14014	04/14/08 09:27	04/16/08 05:25	EKK	Q10
Residual Range Organics	"	0.942	----	0.750	"	"	"	"	"	EKK	Q7
Surrogate(s): 2-FBP				100%	50 - 150 %						"
Octacosane				95.4%	50 - 150 %						"
BRD0184-04 (MW-7-W-080410)		Water			Sampled: 04/10/08 19:45						
Diesel Range Hydrocarbons	AK102_103	4.73	----	0.100	mg/l	1x	8D14014	04/14/08 09:27	04/16/08 05:51	EKK	Q10
Residual Range Organics	"	ND	----	0.750	"	"	"	"	"	EKK	
Surrogate(s): 2-FBP				86.7%	50 - 150 %						"
Octacosane				91.6%	50 - 150 %						"
BRD0184-05 (MW-8-W-080410)		Water			Sampled: 04/10/08 20:05						
Diesel Range Hydrocarbons	AK102_103	2.95	----	0.100	mg/l	1x	8D14014	04/14/08 09:27	04/16/08 06:16	EKK	Q10
Residual Range Organics	"	ND	----	0.750	"	"	"	"	"	EKK	
Surrogate(s): 2-FBP				87.5%	50 - 150 %						"
Octacosane				97.7%	50 - 150 %						"
BRD0184-06 (MW-9-W-080410)		Water			Sampled: 04/10/08 20:25						
Diesel Range Hydrocarbons	AK102_103	0.538	----	0.100	mg/l	1x	8D14014	04/14/08 09:27	04/16/08 06:42	EKK	
Residual Range Organics	"	ND	----	0.750	"	"	"	"	"	EKK	
Surrogate(s): 2-FBP				84.8%	50 - 150 %						"
Octacosane				92.1%	50 - 150 %						"

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle 2300 Eastlake Avenue East, Suite 100 Seattle, WA/USA 98102	Project Name: 211815 (410 Driveway)	Report Created:
	Project Number: 45505	06/13/08 14:35
	Project Manager: Greg Montgomery	

Diesel Hydrocarbons (C10-C25) and Heavy Oil (C25-C36) by AK102 and AK103
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0184-07 (MW-10-W-080410)		Water			Sampled: 04/10/08 20:45						
Diesel Range Hydrocarbons	AK102_103	1.15	----	0.102	mg/l	1x	8D14014	04/14/08 09:27	04/16/08 07:08	EKK	
Residual Range Organics	"	ND	----	0.765	"	"	"	"	"	EKK	
<i>Surrogate(s): 2-FBP</i>				90.1%		50 - 150 %	"			"	
<i>Octacosane</i>				92.8%		50 - 150 %	"			"	
BRD0184-08 (DUP-1-W-080410)		Water			Sampled: 04/10/08 08:00						
Diesel Range Hydrocarbons	AK102_103	0.522	----	0.0943	mg/l	1x	8D14014	04/14/08 09:27	04/16/08 07:34	EKK	
Residual Range Organics	"	ND	----	0.708	"	"	"	"	"	EKK	
<i>Surrogate(s): 2-FBP</i>				81.7%		50 - 150 %	"			"	
<i>Octacosane</i>				90.1%		50 - 150 %	"			"	

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **211815 (410 Driveway)**

Project Number: 45505

Project Manager: Greg Montgomery

Report Created:

06/13/08 14:35

BTEX by EPA Method 8021B

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
---------	--------	--------	------	-----	-------	-----	-------	----------	----------	---------	-------

BRD0184-01 (AR-81-W-080410)		Water				Sampled: 04/10/08 15:55					
Benzene	EPA 8021B	0.623	----	0.500	ug/l	1x	8D17046	04/17/08 15:51	04/17/08 23:47	KMT	
Toluene	"	ND	----	0.500	"	"	"	"	"	KMT	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	KMT	
Xylenes (total)	"	1.18	----	1.00	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)				105%	68 - 140 %		"			"	

BRD0184-02 (AR-85-W-080410)		Water				Sampled: 04/10/08 14:50					
Benzene	EPA 8021B	ND	----	0.500	ug/l	1x	8D17046	04/17/08 15:51	04/18/08 00:20	KMT	
Toluene	"	ND	----	0.500	"	"	"	"	"	KMT	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	KMT	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)				101%	68 - 140 %		"			"	

BRD0184-03 (MW-3-W-080410)		Water				Sampled: 04/10/08 16:50					
Benzene	EPA 8021B	1540	----	25.0	ug/l	50x	8D17046	04/17/08 15:51	04/18/08 07:23	KMT	
Toluene	"	2080	----	25.0	"	"	"	"	"	KMT	
Ethylbenzene	"	923	----	25.0	"	"	"	"	"	KMT	
Xylenes (total)	"	6000	----	50.0	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)				104%	68 - 140 %		1x			"	

BRD0184-04 (MW-7-W-080410)		Water				Sampled: 04/10/08 19:45					
Toluene	EPA 8021B	3.08	----	0.500	ug/l	1x	8D17046	04/17/08 15:51	04/18/08 05:13	KMT	
Surrogate(s): 4-BFB (PID)				131%	68 - 140 %		"			"	

BRD0184-04RE1 (MW-7-W-080410)		Water				Sampled: 04/10/08 19:45					
Benzene	EPA 8021B	1700	----	10.0	ug/l	20x	8D21031	04/21/08 12:29	04/22/08 08:50	KMT	
Ethylbenzene	"	234	----	10.0	"	"	"	"	"	KMT	
Xylenes (total)	"	452	----	20.0	"	"	"	"	"	KMT	
Surrogate(s): 4-BFB (PID)				97.8%	68 - 140 %		1x			"	

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Project Name: **211815 (410 Driveway)**

Project Number: 45505

Project Manager: Greg Montgomery

Report Created:

06/13/08 14:35

BTEX by EPA Method 8021B

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
---------	--------	--------	------	-----	-------	-----	-------	----------	----------	---------	-------

BRD0184-05 (MW-8-W-080410) Water Sampled: 04/10/08 20:05

Toluene	EPA 8021B	6.92	----	0.500	ug/l	1x	8D17046	04/17/08 15:51	04/18/08 00:52	KMT	
<i>Surrogate(s): 4-BFB (PID)</i>				96.7%		68 - 140 %	"				"

BRD0184-05RE1 (MW-8-W-080410) Water Sampled: 04/10/08 20:05

Benzene	EPA 8021B	458	----	2.50	ug/l	5x	8D21031	04/21/08 12:29	04/22/08 06:39	KMT	
Ethylbenzene	"	191	----	2.50	"	"	"	"	"	KMT	
Xylenes (total)	"	525	----	5.00	"	"	"	"	"	KMT	
<i>Surrogate(s): 4-BFB (PID)</i>				99.7%		68 - 140 %	1x				"

BRD0184-06 (MW-9-W-080410) Water Sampled: 04/10/08 20:25

Toluene	EPA 8021B	ND	----	0.500	ug/l	1x	8D17046	04/17/08 15:51	04/18/08 01:25	KMT	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	KMT	
<i>Surrogate(s): 4-BFB (PID)</i>				105%		68 - 140 %	"				"

BRD0184-06RE1 (MW-9-W-080410) Water Sampled: 04/10/08 20:25

Benzene	EPA 8021B	1.61	----	0.500	ug/l	1x	8D21031	04/21/08 12:29	04/22/08 04:29	KMT	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	KMT	
<i>Surrogate(s): 4-BFB (PID)</i>				99.5%		68 - 140 %	"				"

BRD0184-07 (MW-10-W-080410) Water Sampled: 04/10/08 20:45

Benzene	EPA 8021B	24.1	----	0.500	ug/l	1x	8D17046	04/17/08 15:51	04/18/08 01:57	KMT	
Toluene	"	ND	----	0.500	"	"	"	"	"	KMT	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	KMT	
Xylenes (total)	"	3.60	----	1.00	"	"	"	"	"	KMT	
<i>Surrogate(s): 4-BFB (PID)</i>				105%		68 - 140 %	"				"

BRD0184-08 (DUP-1-W-080410) Water Sampled: 04/10/08 08:00

Benzene	EPA 8021B	ND	----	0.500	ug/l	1x	8D17046	04/17/08 15:51	04/18/08 04:40	KMT	
Toluene	"	ND	----	0.500	"	"	"	"	"	KMT	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	KMT	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	KMT	
<i>Surrogate(s): 4-BFB (PID)</i>				105%		68 - 140 %	"				"

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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	Project Number:	45505	06/13/08 14:35
	Project Manager:	Greg Montgomery	

BTEX by EPA Method 8021B
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0184-09 (QA-T-080410)		Water			Sampled: 04/10/08 06:00						
Benzene	EPA 8021B	ND	----	0.500	ug/l	1x	8D17046	04/17/08 15:51	04/17/08 22:10	KMT	
Toluene	"	ND	----	0.500	"	"	"	"	"	KMT	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	KMT	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	KMT	
<i>Surrogate(s): 4-BFB (PID)</i>				101%		68 - 140 %	"			"	

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	Project Number: 45505	06/13/08 14:35
	Project Manager: Greg Montgomery	

Total Metals by EPA 6000/7000 Series Methods
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0184-03 (MW-3-W-080410)											
		Water									
		Sampled: 04/10/08 16:50									
Arsenic	EPA 6010B	ND	----	0.100	mg/l	1x	8D14042	04/14/08 15:31	04/15/08 15:55		WAS
Barium	"	0.429	----	0.0500	"	"	"	"	"		WAS
Cadmium	"	ND	----	0.00500	"	"	"	"	"		WAS
Chromium	"	ND	----	0.0100	"	"	"	"	"		WAS
Lead	"	0.0760	----	0.0500	"	"	"	"	"		WAS
Mercury	EPA 7470A	ND	----	0.000200	"	"	8D15026	04/15/08 10:25	04/15/08 14:38		WAS
Selenium	EPA 6010B	ND	----	0.150	"	"	8D14042	04/14/08 15:31	04/15/08 15:55		WAS
Silver	"	ND	----	0.0100	"	"	"	"	"		WAS

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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	Project Number:	45505	06/13/08 14:35
	Project Manager:	Greg Montgomery	

EDB and DBCP by EPA Method 8011
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0184-03 (MW-3-W-080410)		Water			Sampled: 04/10/08 16:50						
1,2-Dibromoethane (EDB)	EPA 8011M	0.010	----	0.010	ug/l	1x	8D15016	04/15/08 09:10	04/15/08 23:55	gma	

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **211815 (410 Driveway)**

Project Number: 45505

Project Manager: Greg Montgomery

Report Created:

06/13/08 14:35

Volatile Organic Compounds by EPA Method 8260B

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0184-03 (MW-3-W-080410)		Water		Sampled: 04/10/08 16:50							
Carbon tetrachloride	EPA 8260B	ND	----	1.00	ug/l	1x	8D15022	04/15/08 08:30	04/15/08 16:35	EC	
1,1-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	EC	
1,2-Dichloroethane	"	10.2	----	1.00	"	"	"	"	"	EC	
Tetrachloroethene	"	ND	----	1.00	"	"	"	"	"	EC	
1,1,1-Trichloroethane	"	ND	----	1.00	"	"	"	"	"	EC	
Trichloroethene	"	2.33	----	1.00	"	"	"	"	"	EC	
<i>Surrogate(s): 1,2-DCA-d4</i>				<i>90.4%</i>		<i>70 - 130 %</i>	<i>"</i>			<i>"</i>	
<i>Toluene-d8</i>				<i>96.8%</i>		<i>75 - 125 %</i>	<i>"</i>			<i>"</i>	
<i>4-BFB</i>				<i>103%</i>		<i>75 - 125 %</i>	<i>"</i>			<i>"</i>	

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2300 Eastlake Avenue East, Suite 100	Project Number: 45505	Report Created:
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	06/13/08 14:35

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM
 TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
BRD0184-03 (MW-3-W-080410)		Water			Sampled: 04/10/08 16:50						
Acenaphthene	EPA 8270C-SIM	ND	----	0.0990	ug/l	1x	8D15014	04/15/08 09:04	04/21/08 20:08	BAT	
Acenaphthylene	"	ND	----	0.0990	"	"	"	"	"	BAT	
Anthracene	"	ND	----	0.0990	"	"	"	"	"	BAT	
Benzo (a) anthracene	"	ND	----	0.0990	"	"	"	"	"	BAT	
Benzo (a) pyrene	"	ND	----	0.0990	"	"	"	"	"	BAT	
Benzo (b) fluoranthene	"	ND	----	0.0990	"	"	"	"	"	BAT	
Benzo (k) fluoranthene	"	ND	----	0.0990	"	"	"	"	"	BAT	
Benzo (ghi) perylene	"	ND	----	0.0990	"	"	"	"	"	BAT	
Chrysene	"	ND	----	0.0990	"	"	"	"	"	BAT	
Dibenz (a,h) anthracene	"	ND	----	0.0990	"	"	"	"	"	BAT	
Fluoranthene	"	ND	----	0.0990	"	"	"	"	"	BAT	
Fluorene	"	1.19	----	0.0990	"	"	"	"	"	BAT	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.0990	"	"	"	"	"	BAT	
1-Methylnaphthalene	"	36.7	----	0.0990	"	"	"	"	"	BAT	
Phenanthrene	"	1.25	----	0.0990	"	"	"	"	"	BAT	
Pyrene	"	ND	----	0.0990	"	"	"	"	"	BAT	

Surrogate(s): *p-Terphenyl-d14* 82.2% 20 - 131 % " "

BRD0184-03RE1 (MW-3-W-080410)		Water			Sampled: 04/10/08 16:50						
2-Methylnaphthalene	EPA 8270C-SIM	40.2	----	0.990	ug/l	10x	8D15014	04/15/08 09:04	04/25/08 14:44	BAT	
Naphthalene	"	112	----	0.990	"	"	"	"	"	BAT	

Surrogate(s): *p-Terphenyl-d14* 78.0% 20 - 131 % " "

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2300 Eastlake Avenue East, Suite 100	Project Number: 45505	06/13/08 14:35
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

Gasoline Range Hydrocarbons (n-Hexane to <n-Decane) by AK101 - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D17046 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
Blank (8D17046-BLK1)													Extracted: 04/17/08 13:00			
Gasoline Range Hydrocarbons	AK 101	ND	---	50.0	ug/l	1x	--	--	--	--	--	--	04/17/08 14:19			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 88.8%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/17/08 14:19</i>			
LCS (8D17046-BS1)													Extracted: 04/17/08 13:00			
Gasoline Range Hydrocarbons	AK 101	957	---	50.0	ug/l	1x	--	1000	95.7%	(60-120)	--	--	04/17/08 14:52			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 95.5%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/17/08 14:52</i>			
LCS Dup (8D17046-BSD1)													Extracted: 04/17/08 13:00			
Gasoline Range Hydrocarbons	AK 101	899	---	50.0	ug/l	1x	--	1000	89.9%	(60-120)	6.30% (20)		04/17/08 15:25			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 94.9%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/17/08 15:25</i>			
Duplicate (8D17046-DUP1)													QC Source: BRD0183-04		Extracted: 04/17/08 15:51	
Gasoline Range Hydrocarbons	AK 101	ND	---	50.0	ug/l	1x	ND	--	--	--	NR (20)		04/17/08 17:48			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 84.2%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/17/08 17:48</i>			
Duplicate (8D17046-DUP2)													QC Source: BRD0183-05		Extracted: 04/17/08 15:51	
Gasoline Range Hydrocarbons	AK 101	558	---	50.0	ug/l	1x	548	--	--	--	1.78% (20)		04/17/08 18:54			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 97.0%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/17/08 18:54</i>			
Matrix Spike (8D17046-MS1)													QC Source: BRD0183-04		Extracted: 04/17/08 15:51	
Gasoline Range Hydrocarbons	AK 101	1110	---	50.0	ug/l	1x	ND	1000	111%	(60-120)	--	--	04/17/08 19:26			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 94.5%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/17/08 19:26</i>			

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 211815 (410 Driveway)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: 45505	06/13/08 14:35
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

Gasoline Range Hydrocarbons (n-Hexane to <n-Decane) by AK101 - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D21031 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
Blank (8D21031-BLK1)													Extracted: 04/21/08 12:29			
Gasoline Range Hydrocarbons	AK 101	ND	---	50.0	ug/l	1x	--	--	--	--	--	--	04/21/08 12:55			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 87.7%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/21/08 12:55</i>			
LCS (8D21031-BS1)													Extracted: 04/21/08 12:29			
Gasoline Range Hydrocarbons	AK 101	980	---	50.0	ug/l	1x	--	1000	98.0%	(60-120)	--	--	04/21/08 13:28			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 94.5%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/21/08 13:28</i>			
LCS Dup (8D21031-BSD1)													Extracted: 04/21/08 12:29			
Gasoline Range Hydrocarbons	AK 101	1000	---	50.0	ug/l	1x	--	1000	100%	(60-120)	2.26%	(20)	04/21/08 14:01			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 94.9%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/21/08 14:01</i>			
Duplicate (8D21031-DUP1)													QC Source: BRD0280-02		Extracted: 04/21/08 12:29	
Gasoline Range Hydrocarbons	AK 101	ND	---	50.0	ug/l	1x	ND	--	--	--	NR	(20)	04/21/08 16:21			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 89.6%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/21/08 16:21</i>			
Duplicate (8D21031-DUP2)													QC Source: BRD0183-01RE1		Extracted: 04/21/08 12:29	
Gasoline Range Hydrocarbons	AK 101	442	---	50.0	ug/l	1x	455	--	--	--	2.81%	(20)	04/22/08 01:14	ZX		
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 146%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/22/08 01:14</i>			
Matrix Spike (8D21031-MS1)													QC Source: BRD0280-02		Extracted: 04/21/08 12:29	
Gasoline Range Hydrocarbons	AK 101	1170	---	50.0	ug/l	1x	ND	1000	117%	(60-120)	--	--	04/21/08 16:54			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 95.8%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/21/08 16:54</i>			
Matrix Spike Dup (8D21031-MSD1)													QC Source: BRD0280-02		Extracted: 04/21/08 12:29	
Gasoline Range Hydrocarbons	AK 101	1140	---	50.0	ug/l	1x	ND	1000	114%	(60-120)	2.23%	(20)	04/21/08 17:27			
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 96.5%</i>		<i>Limits: 60-120%</i>		<i>"</i>							<i>04/21/08 17:27</i>			

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 211815 (410 Driveway)	
2300 Eastlake Avenue East, Suite 100	Project Number: 45505	Report Created:
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	06/13/08 14:35

Diesel Hydrocarbons (C10-C25) and Heavy Oil (C25-C36) by AK102 and AK103 - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D14014 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8D14014-BLK1)										Extracted: 04/14/08 09:27				
Diesel Range Hydrocarbons	AK102_103	ND	---	0.100	mg/l	1x	--	--	--	--	--	--	04/15/08 22:32	
Residual Range Organics	"	ND	---	0.750	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery: 70.4%</i>		<i>Limits: 50-150%</i>		<i>"</i>						<i>04/15/08 22:32</i>		
<i>Octacosane</i>		<i>76.9%</i>		<i>50-150%</i>		<i>"</i>						<i>"</i>		
LCS (8D14014-BS1)										Extracted: 04/14/08 09:27				
Diesel Range Hydrocarbons	AK102_103	1.75	---	0.100	mg/l	1x	--	2.00	87.4%	(75-125)	--	--	04/15/08 22:57	
Residual Range Organics	"	1.59	---	0.750	"	"	--	"	79.5%	(60-120)	--	--	"	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery: 86.5%</i>		<i>Limits: 50-150%</i>		<i>"</i>						<i>04/15/08 22:57</i>		
<i>Octacosane</i>		<i>83.1%</i>		<i>50-150%</i>		<i>"</i>						<i>"</i>		
LCS Dup (8D14014-BSD1)										Extracted: 04/14/08 09:27				
Diesel Range Hydrocarbons	AK102_103	1.81	---	0.100	mg/l	1x	--	2.00	90.3%	(75-125)	3.25% (20)		04/15/08 23:23	
Residual Range Organics	"	1.66	---	0.750	"	"	--	"	82.9%	(60-120)	4.20%	"	"	
<i>Surrogate(s): 2-FBP</i>		<i>Recovery: 86.0%</i>		<i>Limits: 50-150%</i>		<i>"</i>						<i>04/15/08 23:23</i>		
<i>Octacosane</i>		<i>86.0%</i>		<i>50-150%</i>		<i>"</i>						<i>"</i>		

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 211815 (410 Driveway)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: 45505	06/13/08 14:35
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

BTEX by EPA Method 8021B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D17046 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

Blank (8D17046-BLK1)

Extracted: 04/17/08 13:00

Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	04/17/08 14:19	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (PID)		Recovery: 98.6%	Limits: 68-140%		"								04/17/08 14:19	

LCS (8D17046-BS2)

Extracted: 04/17/08 13:00

Benzene	EPA 8021B	29.7	---	0.500	ug/l	1x	--	30.0	99.1%	(80-120)	--	--	04/17/08 15:57	
Toluene	"	29.3	---	0.500	"	"	--	"	97.6%	"	--	--	"	
Ethylbenzene	"	29.2	---	0.500	"	"	--	"	97.3%	"	--	--	"	
Xylenes (total)	"	90.1	---	1.00	"	"	--	90.0	100%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		Recovery: 99.1%	Limits: 68-140%		"								04/17/08 15:57	

LCS Dup (8D17046-BSD2)

Extracted: 04/17/08 13:00

Benzene	EPA 8021B	28.5	---	0.500	ug/l	1x	--	30.0	95.1%	(80-120)	4.08%	(25)	04/17/08 16:30	
Toluene	"	28.0	---	0.500	"	"	--	"	93.3%	"	4.51%	"	"	
Ethylbenzene	"	27.8	---	0.500	"	"	--	"	92.6%	"	4.92%	"	"	
Xylenes (total)	"	86.2	---	1.00	"	"	--	90.0	95.8%	"	4.40%	"	"	
Surrogate(s): 4-BFB (PID)		Recovery: 99.2%	Limits: 68-140%		"								04/17/08 16:30	

Duplicate (8D17046-DUP1)

QC Source: BRD0183-04

Extracted: 04/17/08 15:51

Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	ND	--	--	--	NR	(25)	04/17/08 17:48	
Toluene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Ethylbenzene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Xylenes (total)	"	ND	---	1.00	"	"	ND	--	--	--	NR	"	"	
Surrogate(s): 4-BFB (PID)		Recovery: 101%	Limits: 68-140%		"								04/17/08 17:48	

Duplicate (8D17046-DUP2)

QC Source: BRD0183-05

Extracted: 04/17/08 15:51

Benzene	EPA 8021B	89.0	---	0.500	ug/l	1x	89.0	--	--	--	0.00900	(25)	04/17/08 18:54	
Toluene	"	1.24	---	0.500	"	"	1.26	--	--	--	1.04%	"	"	
Ethylbenzene	"	4.57	---	0.500	"	"	4.56	--	--	--	0.329%	"	"	
Xylenes (total)	"	21.9	---	1.00	"	"	22.3	--	--	--	1.94%	"	"	
Surrogate(s): 4-BFB (PID)		Recovery: 102%	Limits: 68-140%		"								04/17/08 18:54	

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 211815 (410 Driveway)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: 45505	06/13/08 14:35
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

BTEX by EPA Method 8021B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D17046 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
Matrix Spike (8D17046-MS2)			QC Source: BRD0183-05					Extracted: 04/17/08 15:51							
Benzene	EPA 8021B	124	---	0.500	ug/l	1x	89.0	30.0	116%	(46-130)	--	--	04/18/08 02:30	M3	
Toluene	"	32.3	---	0.500	"	"	1.26	"	103%	(60-124)	--	--	"		
Ethylbenzene	"	36.4	---	0.500	"	"	4.56	"	106%	(56-141)	--	--	"		
Xylenes (total)	"	122	---	1.00	"	"	22.3	90.0	110%	(66-132)	--	--	"		
Surrogate(s): 4-BFB (PID)		Recovery: 104%		Limits: 68-140%		"		04/18/08 02:30							

QC Batch: 8D21031 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
Blank (8D21031-BLK1)			QC Source: BRD0183-05					Extracted: 04/21/08 12:29							
Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	04/21/08 12:55		
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"		
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"		
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"		
Surrogate(s): 4-BFB (PID)		Recovery: 99.4%		Limits: 68-140%		"		04/21/08 12:55							

LCS (8D21031-BS2) Extracted: 04/21/08 12:29

Benzene	EPA 8021B	30.2	---	0.500	ug/l	1x	--	30.0	101%	(80-120)	--	--	04/21/08 14:34	
Toluene	"	29.7	---	0.500	"	"	--	"	98.9%	"	--	--	"	
Ethylbenzene	"	29.8	---	0.500	"	"	--	"	99.3%	"	--	--	"	
Xylenes (total)	"	91.8	---	1.00	"	"	--	90.0	102%	"	--	--	"	
Surrogate(s): 4-BFB (PID)		Recovery: 98.8%		Limits: 68-140%		"		04/21/08 14:34						

LCS Dup (8D21031-BSD2) Extracted: 04/21/08 12:29

Benzene	EPA 8021B	28.8	---	0.500	ug/l	1x	--	30.0	96.1%	(80-120)	4.66%	(25)	04/21/08 15:07	
Toluene	"	28.7	---	0.500	"	"	--	"	95.6%	"	3.41%	"	"	
Ethylbenzene	"	28.4	---	0.500	"	"	--	"	94.7%	"	4.72%	"	"	
Xylenes (total)	"	87.8	---	1.00	"	"	--	90.0	97.5%	"	4.53%	"	"	
Surrogate(s): 4-BFB (PID)		Recovery: 98.6%		Limits: 68-140%		"		04/21/08 15:07						

Duplicate (8D21031-DUP1) QC Source: BRD0280-02 Extracted: 04/21/08 12:29

Benzene	EPA 8021B	ND	---	0.500	ug/l	1x	ND	--	--	--	9.30%	(25)	04/21/08 16:21	
Toluene	"	ND	---	0.500	"	"	ND	--	--	--	NR	"	"	
Ethylbenzene	"	ND	---	0.500	"	"	ND	--	--	--	27.9%	"	"	R4
Xylenes (total)	"	ND	---	1.00	"	"	1.12	--	--	--	28.0%	"	"	R4
Surrogate(s): 4-BFB (PID)		Recovery: 100%		Limits: 68-140%		"		04/21/08 16:21						

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 211815 (410 Driveway)	
2300 Eastlake Avenue East, Suite 100	Project Number: 45505	Report Created:
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	06/13/08 14:35

BTEX by EPA Method 8021B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D21031 Water Preparation Method: EPA 5030B (P/T)

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
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Duplicate (8D21031-DUP2)

QC Source: BRD0183-01RE1

Extracted: 04/21/08 12:29

Benzene	EPA 8021B	0.751	---	0.500	ug/l	1x	0.813	--	--	--	7.93% (25)		04/22/08 01:14	
Toluene	"	ND	---	0.500	"	"	ND	--	--	--	21.4%	"	"	
Ethylbenzene	"	6.84	---	0.500	"	"	7.30	--	--	--	6.48%	"	"	
Xylenes (total)	"	24.6	---	1.00	"	"	26.2	--	--	--	6.43%	"	"	

Surrogate(s): 4-BFB (PID)

Recovery: 121%

Limits: 68-140% "

04/22/08 01:14

Matrix Spike (8D21031-MS2)

QC Source: BRD0183-01RE1

Extracted: 04/21/08 12:29

Benzene	EPA 8021B	33.1	---	0.500	ug/l	1x	0.813	30.0	108%	(46-130)	--	--	04/21/08 18:00	
Toluene	"	30.7	---	0.500	"	"	0.145	"	102%	(60-124)	--	--	"	
Ethylbenzene	"	38.4	---	0.500	"	"	7.30	"	104%	(56-141)	--	--	"	
Xylenes (total)	"	117	---	1.00	"	"	26.2	90.0	101%	(66-132)	--	--	"	

Surrogate(s): 4-BFB (PID)

Recovery: 119%

Limits: 68-140% "

04/21/08 18:00

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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2300 Eastlake Avenue East, Suite 100	Project Number: 45505	06/13/08 14:35
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D14042	Water Preparation Method: EPA 3010A
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Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
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Blank (8D14042-BLK1)

Extracted: 04/14/08 15:31

Cadmium	EPA 6010B	ND	---	0.00500	mg/l	1x	--	--	--	--	--	--	04/15/08 15:24	
Lead	"	ND	---	0.0500	"	"	--	--	--	--	--	--	"	
Arsenic	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Selenium	"	ND	---	0.150	"	"	--	--	--	--	--	--	"	
Chromium	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Silver	"	ND	---	0.0100	"	"	--	--	--	--	--	--	"	
Barium	"	ND	---	0.0500	"	"	--	--	--	--	--	--	"	

LCS (8D14042-BS1)

Extracted: 04/14/08 15:31

Silver	EPA 6010B	1.05	---	0.0100	mg/l	1x	--	1.00	105%	(79-122)	--	--	04/15/08 15:38	
Selenium	"	5.22	---	0.150	"	"	--	5.00	104%	(80-120)	--	--	"	
Arsenic	"	5.33	---	0.100	"	"	--	"	107%	"	--	--	"	
Barium	"	5.28	---	0.0500	"	"	--	"	106%	"	--	--	"	
Cadmium	"	5.23	---	0.00500	"	"	--	"	105%	"	--	--	"	
Chromium	"	5.29	---	0.0100	"	"	--	"	106%	"	--	--	"	
Lead	"	5.24	---	0.0500	"	"	--	"	105%	"	--	--	"	

Duplicate (8D14042-DUP1)

QC Source: BRD0183-05

Extracted: 04/14/08 15:31

Cadmium	EPA 6010B	ND	---	0.00500	mg/l	1x	ND	--	--	--	NR (20)		04/15/08 15:45	
Arsenic	"	ND	---	0.100	"	"	ND	--	--	--	"		"	
Barium	"	0.268	---	0.0500	"	"	0.252	--	--	--	6.03% (25)		"	
Chromium	"	ND	---	0.0100	"	"	ND	--	--	--	NR (20)		"	
Selenium	"	ND	---	0.150	"	"	ND	--	--	--	NR		"	
Lead	"	0.0639	---	0.0500	"	"	0.0599	--	--	--	6.46%		"	
Silver	"	ND	---	0.0100	"	"	ND	--	--	--	NR (40)		"	

Matrix Spike (8D14042-MS1)

QC Source: BRD0183-05

Extracted: 04/14/08 15:31

Selenium	EPA 6010B	5.19	---	0.150	mg/l	1x	ND	5.00	104%	(80-120)	--	--	04/15/08 15:41	
Chromium	"	5.01	---	0.0100	"	"	ND	"	100%	"	--	--	"	
Barium	"	5.37	---	0.0500	"	"	0.252	"	102%	(60-136)	--	--	"	
Silver	"	0.998	---	0.0100	"	"	ND	1.00	99.8%	(78-125)	--	--	"	
Arsenic	"	5.30	---	0.100	"	"	ND	5.00	106%	(80-120)	--	--	"	
Lead	"	4.90	---	0.0500	"	"	0.0599	"	96.8%	"	--	--	"	
Cadmium	"	5.12	---	0.00500	"	"	ND	"	102%	"	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 211815 (410 Driveway)	
2300 Eastlake Avenue East, Suite 100	Project Number: 45505	Report Created:
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	06/13/08 14:35

Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D14042 Water Preparation Method: EPA 3010A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
Post Spike (8D14042-PS1)			QC Source: BRD0183-05					Extracted: 04/14/08 15:31							
Silver	EPA 6010B	1.01	---		ug/ml	1x	-0.00420	1.00	101%	(75-125)	--	--	04/15/08 15:48		
Lead	"	4.99	---		"	"	0.0599	5.00	98.6%	"	--	--	"		
Arsenic	"	5.28	---		"	"	0.00970	"	105%	"	--	--	"		
Barium	"	5.30	---		"	"	0.252	"	101%	"	--	--	"		
Cadmium	"	5.12	---		"	"	0.000100	"	102%	"	--	--	"		
Chromium	"	5.04	---		"	"	0.000600	"	101%	"	--	--	"		

QC Batch: 8D15026 Water Preparation Method: EPA 7470A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
Blank (8D15026-BLK1)								Extracted: 04/15/08 10:25							
Mercury	EPA 7470A	ND	---	0.000200	mg/l	1x	--	--	--	--	--	--	04/15/08 14:05		
LCS (8D15026-BS1)								Extracted: 04/15/08 10:25							
Mercury	EPA 7470A	0.00525	---	0.000200	mg/l	1x	--	0.00500	105%	(80-120)	--	--	04/15/08 14:07		
LCS Dup (8D15026-BSD1)								Extracted: 04/15/08 10:25							
Mercury	EPA 7470A	0.00527	---	0.000200	mg/l	1x	--	0.00500	105%	(80-120)	0.430% (20)		04/15/08 14:10		
Duplicate (8D15026-DUP1)			QC Source: BRD0123-01					Extracted: 04/15/08 10:25							
Mercury	EPA 7470A	ND	---	0.000200	mg/l	1x	ND	--	--	--	69.9% (20)		04/15/08 14:30	R4	
Matrix Spike (8D15026-MS1)			QC Source: BRD0123-01					Extracted: 04/15/08 10:25							
Mercury	EPA 7470A	0.00493	---	0.000200	mg/l	1x	0.0000643	0.00500	97.3%	(75-125)	--	--	04/15/08 14:28		

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 211815 (410 Driveway)	
2300 Eastlake Avenue East, Suite 100	Project Number: 45505	Report Created:
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	06/13/08 14:35

EDB and DBCP by EPA Method 8011 - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D15016 Water Preparation Method: Solvent Extraction

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8D15016-BLK1)								Extracted: 04/15/08 09:10						
1,2-Dibromoethane (EDB)	EPA 8011M	ND	---	0.010	ug/l	1x	--	--	--	--	--	--	04/15/08 19:54	
LCS (8D15016-BS1)								Extracted: 04/15/08 09:10						
1,2-Dibromoethane (EDB)	EPA 8011M	0.053	---	0.010	ug/l	1x	--	0.0500	105%	(80-120)	--	--	04/15/08 20:18	
LCS (8D15016-BS4)								Extracted: 04/15/08 09:10						
1,2-Dibromoethane (EDB) [2C]	EPA 8011M	0.051	---	0.010	ug/l	1x	--	0.0500	102%	(80-120)	--	--	04/17/08 18:51	
LCS (8D15016-BS5)								Extracted: 04/15/08 09:10						
1,2-Dibromoethane (EDB) [2C]	EPA 8011M	0.104	---	0.010	ug/l	1x	--	0.100	104%	(80-120)	--	--	04/17/08 20:03	
LCS (8D15016-BS9)								Extracted: 04/15/08 09:10						
1,2-Dibromoethane (EDB)	EPA 8011M	0.046	---	0.010	ug/l	1x	--	0.0500	92.3%	(80-120)	--	--	04/24/08 17:02	
LCS (8D15016-BSA)								Extracted: 04/15/08 09:10						
1,2-Dibromoethane (EDB)	EPA 8011M	0.083	---	0.010	ug/l	1x	--	0.100	83.5%	(80-120)	--	--	04/24/08 19:03	
LCS Dup (8D15016-BSD1)								Extracted: 04/15/08 09:10						
1,2-Dibromoethane (EDB)	EPA 8011M	0.051	---	0.010	ug/l	1x	--	0.0500	103%	(80-120)	2.46% (20)		04/15/08 20:42	

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 211815 (410 Driveway)	
2300 Eastlake Avenue East, Suite 100	Project Number: 45505	Report Created:
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	06/13/08 14:35

Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D15022 Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8D15022-BLK1)													Extracted: 04/15/08 09:30	
Acetone	EPA 8260B	ND	---	20.0	ug/l	1x	--	--	--	--	--	--	04/15/08 12:01	
Benzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Bromobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Bromochloromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Bromodichloromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Bromoform	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Bromomethane	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
2-Butanone	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
n-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
sec-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Carbon disulfide	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Carbon tetrachloride	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Chlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Chloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1-Chlorohexane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Chloroform	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Chloromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2-Chlorotoluene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
4-Chlorotoluene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Dibromochloromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2-Dibromo-3-chloropropane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2-Dibromoethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Dibromomethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2-Dichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3-Dichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Dichlorodifluoromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
cis-1,2-Dichloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
trans-1,2-Dichloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2-Dichloropropane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3-Dichloropropane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
2,2-Dichloropropane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,1-Dichloropropene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
cis-1,3-Dichloropropene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
trans-1,3-Dichloropropene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **211815 (410 Driveway)**

Project Number: 45505

Project Manager: Greg Montgomery

Report Created:

06/13/08 14:35

Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 8D15022

Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8D15022-BLK1)													Extracted: 04/15/08 09:30	
Hexachlorobutadiene	EPA 8260B	ND	---	5.00	ug/l	1x	--	--	--	--	--	--	04/15/08 12:01	
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
n-Hexane	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
2-Hexanone	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
p-Isopropyltoluene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
4-Methyl-2-pentanone	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Methylene chloride	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Styrene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2,3-Trichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	B
1,2,4-Trichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,1,1,2-Tetrachloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,1,2,2-Tetrachloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Tetrachloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,1,1-Trichloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,1,2-Trichloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Trichloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Trichlorofluoromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2,3-Trichloropropane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Vinyl chloride	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Total Xylenes	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery:</i>	<i>95.4%</i>	<i>Limits:</i>	<i>70-130%</i>	<i>"</i>							<i>04/15/08 12:01</i>	
<i>Toluene-d8</i>		<i>98.4%</i>		<i>75-125%</i>	<i>"</i>								<i>"</i>	
<i>4-BFB</i>		<i>99.4%</i>		<i>75-125%</i>	<i>"</i>								<i>"</i>	

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Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 211815 (410 Driveway)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: 45505	06/13/08 14:35
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D15022 Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
LCS (8D15022-BS1)													Extracted: 04/15/08 09:30			
Benzene	EPA 8260B	38.1	---	1.00	ug/l	1x	--	40.0	95.3%	(80-120)	--	--	04/15/08 10:58			
Chlorobenzene	"	39.3	---	1.00	"	"	--	"	98.2%	"	--	--	"			
Methyl tert-butyl ether	"	34.8	---	2.00	"	"	--	"	87.0%	(75-126)	--	--	"			
Toluene	"	38.4	---	1.00	"	"	--	"	95.9%	(75-125)	--	--	"			
Trichloroethene	"	38.2	---	1.00	"	"	--	"	95.5%	"	--	--	"			
Total Xylenes	"	116	---	3.00	"	"	--	120	96.5%	"	--	--	"			
<i>Surrogate(s): 1,2-DCA-d4</i>													<i>Recovery: 96.4%</i>	<i>Limits: 70-130%</i>	<i>"</i>	<i>04/15/08 10:58</i>
<i>Toluene-d8</i>													<i>97.7%</i>	<i>75-125%</i>	<i>"</i>	<i>"</i>
<i>4-BFB</i>													<i>100%</i>	<i>75-125%</i>	<i>"</i>	<i>"</i>

LCS Dup (8D15022-BSD1)													Extracted: 04/15/08 09:30			
Benzene	EPA 8260B	38.2	---	1.00	ug/l	1x	--	40.0	95.4%	(80-120)	0.0787% (20)		04/15/08 11:25			
Chlorobenzene	"	40.2	---	1.00	"	"	--	"	100%	"	2.27%	"	"			
Methyl tert-butyl ether	"	35.4	---	2.00	"	"	--	"	88.4%	(75-126)	1.54%	"	"			
Toluene	"	39.8	---	1.00	"	"	--	"	99.6%	(75-125)	3.73%	"	"			
Trichloroethene	"	38.3	---	1.00	"	"	--	"	95.7%	"	0.157%	"	"			
Total Xylenes	"	118	---	3.00	"	"	--	120	98.3%	"	1.80%	"	"			
<i>Surrogate(s): 1,2-DCA-d4</i>													<i>Recovery: 97.8%</i>	<i>Limits: 70-130%</i>	<i>"</i>	<i>04/15/08 11:25</i>
<i>Toluene-d8</i>													<i>98.8%</i>	<i>75-125%</i>	<i>"</i>	<i>"</i>
<i>4-BFB</i>													<i>102%</i>	<i>75-125%</i>	<i>"</i>	<i>"</i>

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **211815 (410 Driveway)**

Project Number: 45505

Project Manager: Greg Montgomery

Report Created:

06/13/08 14:35

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 8D15014

Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8D15014-BLK2)													Extracted: 04/15/08 09:04	
Acenaphthene	EPA 8270C-SIM	ND	---	0.100	ug/l	1x	--	--	--	--	--	--	04/21/08 14:17	
Acenaphthylene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Anthracene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Benzo (a) anthracene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Benzo (a) pyrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Benzo (b) fluoranthene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Benzo (k) fluoranthene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Benzo (ghi) perylene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Chrysene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Dibenz (a,h) anthracene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Fluoranthene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Fluorene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Indeno (1,2,3-cd) pyrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
1-Methylnaphthalene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
2-Methylnaphthalene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Phenanthrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	
Pyrene	"	ND	---	0.100	"	"	--	--	--	--	--	--	"	

Surrogate(s): p-Terphenyl-d14

Recovery: 90.9%

Limits: 20-131% "

04/21/08 14:17

LCS (8D15014-BS2)

Extracted: 04/15/08 09:04

Acenaphthene	EPA 8270C-SIM	16.0	---	0.100	ug/l	1x	--	20.0	80.1%	(68-129)	--	--	04/25/08 16:20	
Acenaphthylene	"	16.5	---	0.100	"	"	--	"	82.5%	(77-129)	--	--	"	
Anthracene	"	18.6	---	0.100	"	"	--	"	93.0%	(80-146)	--	--	"	
Benzo (a) anthracene	"	16.0	---	0.100	"	"	--	"	79.9%	(73-120)	--	--	"	
Benzo (a) pyrene	"	17.4	---	0.100	"	"	--	"	87.2%	(70-132)	--	--	"	
Benzo (b) fluoranthene	"	16.7	---	0.100	"	"	--	"	83.7%	(68-148)	--	--	"	
Benzo (k) fluoranthene	"	18.2	---	0.100	"	"	--	"	90.9%	(63-150)	--	--	"	
Benzo (ghi) perylene	"	16.7	---	0.100	"	"	--	"	83.7%	(46-142)	--	--	"	
Chrysene	"	18.5	---	0.100	"	"	--	"	92.6%	(80-132)	--	--	"	
Dibenz (a,h) anthracene	"	17.0	---	0.100	"	"	--	"	85.1%	(56-138)	--	--	"	
Fluoranthene	"	17.9	---	0.100	"	"	--	"	89.7%	(79-138)	--	--	"	
Fluorene	"	16.8	---	0.100	"	"	--	"	83.8%	(42-120)	--	--	"	
Indeno (1,2,3-cd) pyrene	"	16.3	---	0.100	"	"	--	"	81.5%	(53-136)	--	--	"	
1-Methylnaphthalene	"	13.9	---	0.100	"	"	--	"	69.4%	(41-120)	--	--	"	
2-Methylnaphthalene	"	13.5	---	0.100	"	"	--	"	67.4%	(43-122)	--	--	"	
Naphthalene	"	13.4	---	0.100	"	"	--	"	67.1%	(38-128)	--	--	"	
Phenanthrene	"	16.8	---	0.100	"	"	--	"	84.0%	(77-123)	--	--	"	

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

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Arcadis, Geraghty, & Miller - Seattle	Project Name: 211815 (410 Driveway)	Report Created:
2300 Eastlake Avenue East, Suite 100	Project Number: 45505	06/13/08 14:35
Seattle, WA/USA 98102	Project Manager: Greg Montgomery	

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM - Laboratory Quality Control Results
 TestAmerica Seattle

QC Batch: 8D15014 Water Preparation Method: EPA 3520C

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

LCS (8D15014-BS2)

Extracted: 04/15/08 09:04

Pyrene	EPA 8270C-SIM	18.0	---	0.100	ug/l	1x	--	20.0	89.9%	(60-150)	--	--	04/25/08 16:20	
--------	---------------	------	-----	-------	------	----	----	------	-------	----------	----	----	----------------	--

Surrogate(s): *p-Terphenyl-d14* Recovery: 84.6% Limits: 20-131% " 04/25/08 16:20

LCS Dup (8D15014-BSD2)

Extracted: 04/15/08 09:04

Acenaphthene	EPA 8270C-SIM	15.6	---	0.100	ug/l	1x	--	20.0	77.9%	(68-129)	2.78%	(30)	04/25/08 16:51	
Acenaphthylene	"	16.0	---	0.100	"	"	--	"	80.2%	(77-129)	2.83%	"	"	
Anthracene	"	18.3	---	0.100	"	"	--	"	91.3%	(80-146)	1.84%	"	"	
Benzo (a) anthracene	"	15.4	---	0.100	"	"	--	"	77.2%	(73-120)	3.44%	"	"	
Benzo (a) pyrene	"	17.2	---	0.100	"	"	--	"	86.1%	(70-132)	1.27%	"	"	
Benzo (b) fluoranthene	"	18.3	---	0.100	"	"	--	"	91.4%	(68-148)	8.79%	"	"	
Benzo (k) fluoranthene	"	16.1	---	0.100	"	"	--	"	80.6%	(63-150)	12.0%	"	"	
Benzo (ghi) perylene	"	16.4	---	0.100	"	"	--	"	81.8%	(46-142)	2.30%	"	"	
Chrysene	"	18.0	---	0.100	"	"	--	"	89.8%	(80-132)	3.07%	"	"	
Dibenz (a,h) anthracene	"	16.7	---	0.100	"	"	--	"	83.7%	(56-138)	1.66%	"	"	
Fluoranthene	"	17.4	---	0.100	"	"	--	"	87.1%	(79-138)	2.94%	"	"	
Fluorene	"	16.5	---	0.100	"	"	--	"	82.3%	(42-120)	1.81%	"	"	
Indeno (1,2,3-cd) pyrene	"	16.0	---	0.100	"	"	--	"	80.1%	(53-136)	1.73%	"	"	
1-Methylnaphthalene	"	13.1	---	0.100	"	"	--	"	65.4%	(41-120)	5.93%	"	"	
2-Methylnaphthalene	"	12.6	---	0.100	"	"	--	"	63.2%	(43-122)	6.43%	"	"	
Naphthalene	"	12.5	---	0.100	"	"	--	"	62.6%	(38-128)	6.94%	"	"	
Phenanthrene	"	16.6	---	0.100	"	"	--	"	82.9%	(77-123)	1.32%	"	"	
Pyrene	"	17.7	---	0.100	"	"	--	"	88.6%	(60-150)	1.46%	"	"	

Surrogate(s): *p-Terphenyl-d14* Recovery: 83.5% Limits: 20-131% " 04/25/08 16:51

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.



Arcadis, Geraghty, & Miller - Seattle

2300 Eastlake Avenue East, Suite 100
 Seattle, WA/USA 98102

Project Name: **211815 (410 Driveway)**

Project Number: 45505

Project Manager: Greg Montgomery

Report Created:

06/13/08 14:35

Notes and Definitions

Report Specific Notes:

- B - Analyte was detected in the associated Method Blank.
- L - Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
- M3 - Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
- Q10 - Hydrocarbon pattern most closely resembles a blend of gasoline and diesel.
- Q7 - The heavy oil range organics present are due to hydrocarbons eluting primarily in the diesel range.
- R4 - Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.
- ZX - Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Seattle



Curtis D. Armstrong For Blake T. Meinert, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.



TestAmerica Seattle

11720 North Creek Parkway N
Suite 400
Bothell, WA 98011
phone 425.420.9200 fax 425.420.9210

Chain of Custody Record

BRDC0184

TestAmerica Laboratories, Inc.

Client Contact		Project Manager: Greg Montgomery				Site Contact: Mike Strickler				Date: April 10, 2008				COC No:			
Arcadis						Lab Contact: Blake Meinert				Carrier: Fed Ex				_____ of _____ COCs			
2300 Eastlake Ave East, Suite 200		Analysis Turnaround Time															
Seattle, WA 98102		Calendar (C) or Work Days (W) _____															
206-726-4742		TAT if different from Below _____															
(xxx) xxx-xxxx FAX		<input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day															
Project Name: Facility # 211815																	
Site: 401 Driveway																	
Project # Arcadis # 45505.001																	
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	GRO by AK101	BTEX by EPA 8021	Six VOCs by EPA 8260B	EDB by 8011	DRO by AK102	RRO by AK103	PAHs by 8270 SIMM	Total Metals by EPA 60107470	Sample Specific Notes:	
AR-81-W-080410		4/10/2008	1555		W	5	X	X				X	X				-01
AR-85-W-080410		4/10/2008	1450		W	5	X	X				X	X				-02
MW-3-W-080410		4/10/2008	1650		W	13	X	X	X	X	X	X	X	X	X		-03
MW-7-W-080410		4/10/2008	1945		W	5	X	X				X	X				-04
MW-8-W-080410		4/10/2008	2005		W	5	X	X				X	X				-05
MW-9-W-080410		4/10/2008	2025		W	5	X	X				X	X				-06
MW-10-W-080410		4/10/2008	2045		W	5	X	X				X	X				-07
DUP-1-W-080410		4/10/2008	0800		W	5	X	X				X	X				-08
QA-T-080410		4/10/2008	0600		W	3	X	X									trip blank -09
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____							2	2	2	1	2	2	1	4			
Possible Hazard Identification							Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)										
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown							<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months										
Special Instructions/QC Requirements & Comments: Total Metals = Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, Silver										VOCs = Carbon Tetrachloride, Tetrachloroethene, trichloroethene, 1,1-dichloroethene, 1,1,1-trichloroethane, 1,2-dichloroethane, (1,2-DCA)							
Relinquished by: <i>Andrew Z. Webb</i>		Company: OASIS Env.		Date/Time: 4/11/08/1100		Received by: <i>Dwayne Montgomery</i>		Company: Test America		Date/Time: 4.12.08		1203					
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:							
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:							

5.9c W/OS

ARCADIS

Appendix C

ADEC Data Review Checklists

Laboratory Data Review Checklist

Completed by:

Title: Date:

CS Report Name: Report Date:

Consultant Firm:

Laboratory Name: Laboratory Report Number:

ADEC File Number: ADEC RecKey Number:

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

Yes No

Comments:

b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

Yes No

Comments:

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?

Yes No

Comments:

b. Correct analyses requested?

Yes No

Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ}$ C)?

Yes No

Comments:

b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes No

Comments:

c. Sample condition documented - broken, leaking (Methanol), zero headspace (VOC vials)?

Yes No

Comments:

N/A

d. If there were any discrepancies, were they documented? - For example, incorrect sample containers/preservation, sample temperature outside of acceptance range, insufficient or missing samples, etc.?

Yes No

Comments:

Coolers did not have temperature blanks.

e. Data quality or usability affected? Explain.

Comments:

Data quality or usability does not appear to be affected.

4. Case Narrative

a. Present and understandable?

Yes No

Comments:

b. Discrepancies, errors or QC failures identified by the lab?

Yes No

Comments:

c. Were all corrective actions documented?

Yes No

Comments:

d. What is the effect on data quality/usability according to the case narrative?

Comments:

Data quality/usability does not appear to be affected.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes No

Comments:

b. All applicable holding times met?

Yes No

Comments:

c. All soils reported on a dry weight basis?

Yes No

Comments:

N/A

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

Yes No

Comments:

Arsenic, selenium and cadmium MDLs are above the applicable GCLs.

e. Data quality or usability affected? Explain.

Comments:

Data quality or usability does not appear to be affected. The above listed metals analyses are ND; however, due to the elevated MDL, the potential exceedances might exist at lower concentrations.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes No

Comments:

ii. All method blank results less than PQL?

Yes No

Comments:

1,2,3-Trichlorobenzene was detected in the VOCs by 8260B method blank.

iii. If above PQL, what samples are affected?

Comments:

VOCs by 8260B Method Blank

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No

Comments:

v. Data quality or usability affected? Explain.

Comments:

Data quality or usability does not appear to be affected.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics - One LCS/LCSD reported per matrix, analysis and 20 samples?

Yes No Comments:

ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes No Comments:

iii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes No Comments:

iv. Precision - All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes No Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

N/A

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined?

Yes No Comments:

N/A

vii. Data quality or usability affected? Explain.

Comments:

N/A

c. Surrogates - Organics Only

i. Are surrogate recoveries reported for organic analyses - field, QC and laboratory samples?

Yes No Comments:

ii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

Yes No

Comments:

GRO QA/QC duplicate was outside of acceptable limits due to sample matrix effects.

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

Yes No

Comments:

iv. Data quality or usability affected? Explain.

Comments:

Data quality or usability does not appear to be affected.

d. Trip Blank - Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and cooler?

Yes No

Comments:

ii. All results less than PQL?

Yes No

Comments:

iii. If above PQL, what samples are affected?

Comments:

N/A

iv. Data quality or usability affected? Explain.

Comments:

N/A

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes No

Comments:

ii. Submitted blind to lab?

Yes No

Comments:

iii. Precision - All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute Value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Yes No

Comments:

DRO RPD = 58.25%

iv. Data quality or usability affected? Explain.

Yes No

Comments:

Data quality or usability does not appear to be affected.

f. Decontamination or Equipment Blank (if applicable)

Yes No Not Applicable

i. All results less than PQL?

Yes No

Comments:

N/A

ii. If above PQL, what samples are affected?

Comments:

N/A

iii. Data quality or usability affected? Explain.

Comments:

N/A

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

Yes No

Comments:

N/A

Reset Form

Laboratory Data Review Checklist

Completed by:

Title: Date:

CS Report Name: Report Date:

Consultant Firm:

Laboratory Name: Laboratory Report Number:

ADEC File Number: ADEC RecKey Number:

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

Yes No

Comments:

b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

Yes No

Comments:

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?

Yes No

Comments:

b. Correct analyses requested?

Yes No

Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ}$ C)?

Yes No

Comments:

b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes No Comments:

c. Sample condition documented - broken, leaking (Methanol), zero headspace (VOC vials)?

Yes No Comments:

N/A

d. If there were any discrepancies, were they documented? - For example, incorrect sample containers/preservation, sample temperature outside of acceptance range, insufficient or missing samples, etc.?

Yes No Comments:

Insufficient sample volume for EDB by 8011.

e. Data quality or usability affected? Explain.

Comments:

Data quality or usability does not appear to be affected.

4. Case Narrative

a. Present and understandable?

Yes No Comments:

b. Discrepancies, errors or QC failures identified by the lab?

Yes No Comments:

c. Were all corrective actions documented?

Yes No Comments:

d. What is the effect on data quality/usability according to the case narrative?

Comments:

N/A

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes No Comments:

b. All applicable holding times met?

Yes No

Comments:

c. All soils reported on a dry weight basis?

Yes No

Comments:

N/A

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

Yes No

Comments:

MDLs for arsenic, selenium and cadmium are above the GCL.

e. Data quality or usability affected? Explain.

Comments:

Data quality or usability does not appear to be affected. Analyses for the above listed metals are ND; however, there are potential exceedances of the GCL at low concentrations.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes No

Comments:

ii. All method blank results less than PQL?

Yes No

Comments:

iii. If above PQL, what samples are affected?

Comments:

N/A

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No

Comments:

N/A

v. Data quality or usability affected? Explain.

Comments:

N/A

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics - One LCS/LCSD reported per matrix, analysis and 20 samples?

Yes No Comments:

ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes No Comments:

iii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes No Comments:

iv. Precision - All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes No Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

N/A

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined?

Yes No Comments:

N/A

vii. Data quality or usability affected? Explain.

Comments:

N/A

c. Surrogates - Organics Only

i. Are surrogate recoveries reported for organic analyses - field, QC and laboratory samples?

Yes No Comments:

ii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

Yes No

Comments:

Due to sample matrix effects, the surrogate recovery for the MW-25 sample for GRO was outside of acceptable limits.

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

Yes No

Comments:

iv. Data quality or usability affected? Explain.

Comments:

Data quality or usability does not appear to be affected.

d. Trip Blank - Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and cooler?

Yes No

Comments:

ii. All results less than PQL?

Yes No

Comments:

iii. If above PQL, what samples are affected?

Comments:

N/A

iv. Data quality or usability affected? Explain.

Comments:

N/A

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes No

Comments:

ii. Submitted blind to lab?

Yes No

Comments:

iii. Precision - All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute Value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Yes No

Comments:

iv. Data quality or usability affected? Explain.

Yes No

Comments:

f. Decontamination or Equipment Blank (if applicable)

Yes No Not Applicable

i. All results less than PQL?

Yes No

Comments:

ii. If above PQL, what samples are affected?

Comments:

iii. Data quality or usability affected? Explain.

Comments:

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

Yes No

Comments:

Reset Form

Laboratory Data Review Checklist

Completed by:

Title: Date:

CS Report Name: Report Date:

Consultant Firm:

Laboratory Name: Laboratory Report Number:

ADEC File Number: ADEC RecKey Number:

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

Yes No

Comments:

b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

Yes No

Comments:

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?

Yes No

Comments:

b. Correct analyses requested?

Yes No

Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ}$ C)?

Yes No

Comments:

b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes No

Comments:

According to laboratory notification of discrepancy, the lab received 1L ambers and 250mL amber unpreserved but with HCl labels on them.

c. Sample condition documented - broken, leaking (Methanol), zero headspace (VOC vials)?

Yes No

Comments:

1 250 mL amber broken for GEI-12-W-080411

d. If there were any discrepancies, were they documented? - For example, incorrect sample containers/preservation, sample temperature outside of acceptance range, insufficient or missing samples, etc.?

Yes No

Comments:

According to the laboratory notification of discrepancy, COC says MW-6-W-080412 4/11/08 @ 1640, container says MW-6-W-080411 4/11/08 @ 1640, logged according to COC. COC says MW-4-W-080412 4/12/08 @ 1550 & container says MW-4-W-080411 4/11/08 @ 1550, logged according to COC - ARCADIS instructed TestAmerica to change the sample names to those on the bottles. COC requests DRO & RRO analyses for the QA sample; however, insufficient bottles were submitted for the laboratory to perform the analyses.

e. Data quality or usability affected? Explain.

Comments:

Data quality or usability not affected, analyses performed as requested. Samples have been changed per ARCADIS request to reflect sample date and ID written on containers. QA samples is ND for analyzed compounds.

4. Case Narrative

a. Present and understandable?

Yes No

Comments:

b. Discrepancies, errors or QC failures identified by the lab?

Yes No

Comments:

c. Were all corrective actions documented?

Yes No

Comments:

d. What is the effect on data quality/usability according to the case narrative?

Comments:

N/A

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes No Comments:

DRO & RRO analyses were requested for the QA sample (trip blank) but not performed by the laboratory.

b. All applicable holding times met?

Yes No Comments:

c. All soils reported on a dry weight basis?

Yes No Comments:

N/A

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

Yes No Comments:

RRO analyses are above the ADEC GCL for all samples with the exception of those samples from MW-2, MW-4 and MW-6. Arsenic, selenium and lead MDLs are above the applicable ADEC GCLs for various samples.

e. Data quality or usability affected? Explain.

Comments:

Samples for RRO are non-detect; however, the MDL is above the GCL indicating a potential exceedance of the GCL at lower concentrations. Samples for the various metals listed above are ND; however the MDLs are above the GCLs indicating a potential exceedance of the GCLs at lower concentrations.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes No Comments:

ii. All method blank results less than PQL?

Yes No Comments:

1,2,3-trichlorobenzene was detected in the method blank for VOC 8260B analysis.

iii. If above PQL, what samples are affected?

Comments:

N/A

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No

Comments:

v. Data quality or usability affected? Explain.

Comments:

Data quality or usability does not appear to be affected.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics - One LCS/LCSD reported per matrix, analysis and 20 samples?

Yes No

Comments:

ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes No

Comments:

iii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes No

Comments:

Dichlorodifluoromethane LCS and/or LCSD recovery was outside of the acceptable limits.

iv. Precision - All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes No

Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

According to the laboratory report, analyte was not detected (Dichlorodifluoromethane) and data is not affected.

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined?

Yes No

Comments:

vii. Data quality or usability affected? Explain.

Comments:

According to the laboratory report, data quality or usability not affected.

c. Surrogates - Organics Only

i. Are surrogate recoveries reported for organic analyses - field, QC and laboratory samples?

Yes No

Comments:

ii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

Yes No

Comments:

Multiple GRO, DRO & RRO surrogate percent recoveries were outside of the acceptable limits due to matrix effects.

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

Yes No

Comments:

iv. Data quality or usability affected? Explain.

Comments:

Data quality or usability does not appear to be affected.

d. Trip Blank - Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and cooler?

Yes No

Comments:

ii. All results less than PQL?

Yes No

Comments:

iii. If above PQL, what samples are affected?

Comments:

N/A

iv. Data quality or usability affected? Explain.

Comments:

DRO & RRO analyses requested but not performed for the trip blank. Data quality or usability does not appear to be affected.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes No

Comments:

ii. Submitted blind to lab?

Yes No

Comments:

iii. Precision - All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute Value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Yes No

Comments:

iv. Data quality or usability affected? Explain.

Yes No

Comments:

N/A

f. Decontamination or Equipment Blank (if applicable)

Yes No Not Applicable

i. All results less than PQL?

Yes No

Comments:

N/A

ii. If above PQL, what samples are affected?

Comments:

N/A

iii. Data quality or usability affected? Explain.

Comments:

N/A

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

Yes No

Comments:

N/A

Reset Form