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Chevron Environmental Management Company

Annual 2010 Groundwater Monitoring Report

Former Chevron Facility 301726
Lot 5A, Block 10, West Ramp
Fairbanks International Airport
Fairbanks, Alaska
Alaska File No. 100.38.066

April 19, 2011

ARCADIS

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Annual 2010 Groundwater Monitoring Report

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Alaska File No. 100.38.066

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1.0 Introduction

On behalf of Chevron Environmental Management Company (Chevron), ARCADIS US, Inc. (ARCADIS), has prepared this report to document the annual 2010 groundwater sampling event for former Chevron facility 301726 (the site) located at Lot 5A, Block 10, West Ramp at the Fairbanks International Airport. The site and surrounding area are shown on **Figure 1**. This report summarizes the groundwater gauging and sampling event conducted by ARCADIS on July 19 and 20, 2010. Work was conducted under the direction of a "qualified person" as defined in 18 Alaska Administrative Code (AAC) 75.990 (100), and 18 AAC 78.995 (118).

2.0 Groundwater Monitoring

2.1 Groundwater Gauging Methods

Annual 2010 groundwater gauging was conducted on July 19, 2010. Site monitoring wells were gauged with an oil/water interface probe to determine depth to water and to ascertain if light non-aqueous phase liquids (LNAPL) are present.

The wells were gauged in order from lowest historical concentrations of petroleum constituents to highest in order to prevent cross contamination. Non-disposable groundwater gauging equipment was decontaminated prior to and after each use with a detergent solution and rinsed in potable water. Field notes taken during the annual groundwater monitoring event and monthly gauging activities are included as **Appendix A**.

2.2 Groundwater Elevation and Flow Direction

On July 19, 2010, groundwater monitoring wells MW-1 through MW-6 were gauged for groundwater elevations and the presence of LNAPL. LNAPL was not present in any of the monitoring wells gauged during this event. During the July 2010 gauging event, depth to groundwater ranged between 7.46 feet below top of casing (btoc) in monitoring well MW-3 and 7.90 feet btoc in monitoring well MW-2. Groundwater elevations ranged from 418.83 feet above sea level (asl) to 419.70 feet asl in monitoring wells MW-2 and MW-3, respectively. Water table elevation data indicate groundwater flow direction is toward the south to southeast. The historical groundwater flow direction has seasonally fluctuated from the east toward the southwest. Current and historical groundwater elevation data are included in **Table 1**. The horizontal

hydraulic gradient present on site during the July 2010 event ranged from 0.0185 ft/ft (near MW-2) to 0.0083 ft/ft (near MW-1).

2.3 Monthly LNAPL Gauging

LNAPL was first observed in monitoring well MW-1 in October 2009. On May 25, 2010, 0.32 ft of LNAPL was again identified in MW-1. Gauging has continued on a monthly basis to monitor the presence of LNAPL in MW-1. LNAPL has not been identified in MW-1 since May of 2010. Historical LNAPL and groundwater elevations are presented in **Table 1**.

2.4 Groundwater Sampling Methods

The annual 2010 groundwater monitoring event was conducted on July 19 and 20, 2010. Groundwater samples were collected from monitoring wells MW-1 through MW-6, using no-purge sampling procedures in accordance with ADEC *Draft Field Sampling Guidance* (ADEC, 2010) and ARCADIS *Bailer-Grab Groundwater Sampling* (ARCADIS, 2009). A disposable Teflon® bailer was used to collect the samples. The bailer was lowered slowly into the water column to mitigate potential volatilization. The samples were then collected directly from the bailer, were labeled, stored in a cooler packed with ice, and submitted to Lancaster Laboratories (Lancaster) in Lancaster, Pennsylvania, under proper chain-of-custody procedures. Groundwater samples were submitted to the analytical laboratory for one or more of the following analyses:

- Gasoline range organics (GRO) by method AK101
- Diesel range organics (DRO) by method AK102
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX), by Environmental Protection Agency (EPA) method 8021B
- Residual Range Organics (RRO) by AK 103
- Dissolved Lead by EPA 200.8

Groundwater samples from monitoring wells MW-1, MW-3, and MW-5 were also submitted for one or more of the following analysis:

- Ethylene dibromide (EDB) by EPA 8011
- Polynuclear aromatic hydrocarbons (PAH) by EPA 8270
- Volatile organic compounds (VOCs) by EPA 8260B

A duplicate groundwater sample BD-1 was collected using a Hydrasleeve® from MW-1 and submitted blind to the laboratory for GRO, DRO, RRO, and BTEX, analysis.

At the request of ADEC, the groundwater samples collected from MW-1 and BD-1 will be used in a groundwater collection method comparison study to be summarized under a different cover. At the request of ADEC, a groundwater sample from monitoring well MW-1 was collected and analyzed for sulfolane by method EPA 8270. The sample was submitted to Pace Analytical (Pace) in Minneapolis, Minnesota under proper chain-of-custody procedures.

2.5 Groundwater Analytical Results

During the July 2010 annual groundwater monitoring event, groundwater sampled from monitoring well MW-1 contained concentrations of GRO greater than the ADEC groundwater cleanup level (GCL) (2,200 micrograms per liter [µg/L]), with concentrations of 4,700 µg/L. GRO was not detected above the GCL in the other monitoring well groundwater samples collected during the 2010 annual groundwater monitoring event.

Groundwater samples collected from monitoring wells MW-1 and MW-2 contained concentrations of DRO greater than the ADEC GCL (1,500 µg/L) with concentrations of 79,000 µg/L and 1,800 µg/L respectively. DRO was not detected above the GCL in the other monitoring well groundwater samples collected during the 2010 annual event.

RRO was not detected above the method detection limit (MDL) in the groundwater sample collected from monitoring well MW-1. The MDL for RRO analysis of the MW-1 groundwater sample was greater than the ADEC GCL (1,100 µg/L). RRO was not detected above the GCL in the other monitoring well groundwater samples collected during the 2010 annual event.

Groundwater samples collected from monitoring well MW-1 contained concentrations of benzene greater than the ADEC GCL (5 µg/L) at 150 µg/L (USEPA Method 8260). Concentrations of toluene, ethylbenzene, and total xylenes were not detected above the respective GCLs in the MW-1 2010 annual groundwater sample. Concentrations of BTEX constituents were below the respective ADEC GCLs for the remaining monitoring wells sampled during the event. Analytical results for petroleum hydrocarbons are presented in **Table 2** and on **Figure 3**. The USEPA Method 8260 data is summarized in **Table 3**.

Groundwater samples collected from monitoring wells MW-4 and MW-5 contained concentrations of dissolved lead greater than the ADEC GCL (15 µg/L) at 15.5 µg/L and 20.8 µg/L, respectively. The groundwater samples collected from wells MW-1, MW-2, MW-3, and MW-6 contained concentrations of dissolved lead less than the ADEC GCL (**see Table 2**).

The analysis of the July 2010 MW-1 groundwater sample was below the ADEC GCLs for all USEPA Method 8270 PAH analytes (USEPA Method 8270) with the exception of benzo(a)anthracene and benzo(b)fluoranthene. The July 2010 groundwater sample collected from MW-3 was non-detect and below ADEC GCL criteria for all of the PAH analytes. PAH analytical results are included in **Table 3** and shown on **Figure 4.**

The analysis of the July 2010 MW-1 groundwater sample was below the ADEC GCLs for all USEPA Method 8260 VOC analytes with the exception of benzene. Groundwater samples collected from monitoring wells MW-3 and MW-5 did not contain concentrations of any VOCs above the respective ADEC GCLs (see **Table 4** and **Figure 4**).

Groundwater samples collected from MW-1 did not contain concentrations of sulfolane greater than the laboratory MDL. The sulfolane analytical results are summarized in **Table 5**.

Historic DRO, GRO, RRO, and BTEX groundwater analytical results are summarized in **Table 6**.

3.0 Laboratory Data Quality Assurance Summary

As required by ADEC (Technical Memorandum dated March 2009), ARCADIS completed laboratory data review checklists for the Pace and Lancaster laboratories report during the annual 2010 reporting period. The laboratory reports are included in **Appendix B** and data review checklists are included in **Appendix C**. The following quality assurance (QA) summary describes six parameters related to the quality and usability of the data presented in this report.

3.1 Precision

The data meet precision objectives for laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) relative percent differences (RPDs).

3.2 Accuracy

Groundwater samples collected from monitoring wells MW-1, MW-3, and MW-5 were outside the specification for MS/MSD recovery for analytes 2-choloroethyl, vinyl ether, 1,2,4 trimethyl benzene, and 1,3,5,trimethyl benzene. This is not expected to affect the quality or usability of the data.

The laboratory MDL for the MW-1 sample analysis for RRO is above the ADEC GCL. The concentration of RRO in the MW-1 sample was not detected above the MDL. The MW-1 RRO data is not usable as a non-detect sample and cannot be identified as exceeding the ADEC GCL and is therefore not usable.

All remaining data meet accuracy objectives as indicated by the laboratory quality control samples, which were within method/laboratory limits. Analytes were not detected in the trip blanks submitted with the groundwater samples. The LCS recoveries were within respective limits.

3.3 Representativeness

The data appear to be representative of site conditions and are generally consistent with historical groundwater monitoring results and expected impacts to groundwater.

3.4 Comparability

The laboratory results are presented in the same units as previous reports to allow comparison.

3.5 Completeness

The results appear to be valid and usable, and thus, the laboratory results have 100% completeness.

3.6 Sensitivity

The sensitivity of the analyses was adequate for the samples as the detection limits were less than the ADEC GCLs for compounds which were not detected.

4.0 Conclusions and Recommendations

The groundwater elevation data collected during the 2010 annual monitoring event indicate groundwater flow direction and horizontal hydraulic gradient to be generally consistent with historical data. Concentrations of the constituents of concern in the groundwater samples collected during the 2010 annual event are generally consistent with historical data. DRO was detected in the MW-2 sample at concentrations higher than have been previously identified.

ARCADIS will continue sample the site on an annual basis using no-purge sampling techniques.

Annual 2010 groundwater sampling is scheduled to be conducted in June 2011 by ARCADIS. If you have any questions or would like to discuss this further, please contact ARCADIS at 206.726.4742.

5.0 References

ADEC. *Draft Field Sampling Guidance*. January, 2010

ASTM Standard E1943-98, 2004. *Standard Guide for Remediation of Ground Water by Natural Attenuation at Petroleum Release Sites*. ASTM International, West Conshohocken, PA. DOI:10.1520/E1943-98R04.

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Tables

TABLE 1
Groundwater Elevation and Gauging Data
Former Chevron Facility #301726
Lot 5A, Block 10 W. Ramp
Fairbanks, Alaska

Monitoring Well ID	Date Sampled	TOC (feet-amsl)	DTW (feet)	LNAPL Thickness (feet)	GWE (feet-amsl)
MW-1	08/19/04	426.84	6.37	--	420.47
	03/30/05		10.09	--	416.75
	09/19/05		8.12	--	418.72
	09/11/08		8.63	--	418.21
	05/10/09		8.56	--	418.28
	10/04/09		10.55	0.01	416.30
	05/25/10		11.55	0.32	415.55
	06/18/10		9.45	--	417.39
	07/19/10		**7.60**	**--**	**419.24**
	08/16/10		**7.25**	**--**	**419.59**
	09/27/10		**8.99**	**--**	**417.85**
	10/27/10		**11.09**	**--**	**415.75**
	12/15/10[2]		**--**	**--**	**--**
MW-2	08/19/04	426.73	6.29	--	420.44
	03/30/05		9.98	--	416.75
	09/19/05		8.02	--	418.71
	09/11/08		8.52	--	418.21
	09/11/08		--	--	--
	05/10/09		8.43	--	418.30
	10/04/09		10.48	--	416.25
	07/19/10		**7.9**		**418.83**
MW-3	08/19/04	427.16	6.73	--	420.43
	03/30/05		10.42	--	416.74
	09/19/05		8.47	--	418.69
	09/11/08		8.96	--	418.20
	5/10/09[1]		--	--	--
	10/04/09		10.90	--	416.26
	10/04/09		--	--	--
	07/19/10		**7.46**		**419.70**
MW-4	08/19/04	427.02	6.59	--	420.43
	03/30/05		10.29	--	416.73
	09/19/05		8.34	--	418.68
	09/11/08		8.71	--	418.31
	05/10/09		8.71	--	418.31
	05/10/09		8.71	--	418.31
	10/04/09		10.78	--	416.24
	07/19/10		**7.56**		**419.46**
MW-5	08/19/04	426.89	6.44	--	420.45
	03/30/05		10.16	--	416.73
	09/19/05		8.19	--	418.70
	09/11/08		8.70	--	418.19
	5/10/09[1]		--	--	--
	10/04/09		10.65	--	416.24
	07/19/10		**7.65**		**419.24**
MW-6	08/19/04	426.82	6.36	--	420.46
	03/30/05		10.08	--	416.74
	09/19/05		8.12	--	418.70
	09/11/08		8.66	--	418.16
	05/10/09		8.55	--	418.27
	10/04/09		10.63	--	416.19
	07/19/10		**7.69**	--	**419.13**

Notes:
[1]Monitoring well was not gauged due to well obstruction.
[2]Monitoring well was not gauged due extremely cold outdoor temperatures.
feet-amsl = feet above sea level
"--" = Indicates no depth measurement was taken, no LNAPL was present, and no groundwater elevation data is available.
Data associated with current monitoring event in **bold**.
TOC = Top of casing
DTW = Depth to water
GWE = Groundwater elevation
LNAPL = Light Non-Aqueous Phase Liquids

Table 2
Groundwater Analytical Results
Former Chevron Facility #301726
Lot5A, Block 10, W. Ramp
Fairbanks, Alaska

Location	Sample Date	GRO (ug/l)	DRO (ug/l)	RRO (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes, Total (ug/l)	Dibromomethane (Methylene bromide) (ug/l)	Lead (ug/l)
ADEC GCL		**2,200**	**1,500**	**1,100**	**5**	**1,000**	**700**	**10,000**	**470**	**15**
MW-1	9/11/2008	6,680	12,000	<708	357	413	124	815	--	--
	5/10/2009	3,960	980	<420	28	75.7	72.7	392	--	--
	7/20/2010	**4,700**	**79,000**	**<6,600**	**100**	**240**	**65**	**440**	**0.0097**	**9.8**
MW-2	9/11/2008	<50.0	<94.3	<708	<0.200	<0.500	<0.500	<1.00	--	--
	5/10/2009	<50.0	<403	<403	0.333	<0.500	<0.500	<1.00	--	--
	7/19/2010	**22**	**1,800**	**210**	**0.8**	**<0.5**	**0.7**	**<1.5**	**--**	**2.0**
MW-3	9/11/2008	60.3	12,000	<708	0.448	<0.500	0.653	1.96	--	--
	7/19/2010	**<10**	**88**	**160**	**<0.5**	**<0.5**	**<0.5**	**<1.5**	**0.0097**	**12.9**
MW-4	9/11/2008	<50.0	<94.3	<708	<0.200	<0.500	<0.500	<1.00	--	--
	5/10/2009	<50.0	<403	<403	<0.200	<0.500	<0.500	<1.00	--	--
	7/19/2010	**<10**	**210**	**460**	**<0.5**	**<0.5**	**<0.5**	**<1.5**	**--**	**15.5**
MW-5	9/11/2008	<50.0	150	<708	<0.200	<0.500	<0.500	<1.00	--	--
	7/20/2010	**<10**	**110**	**180**	**<0.5**	**<0.5**	**<0.5**	**<1.5**	**0.0097**	**20.8**
MW-6	9/11/2008	<50.0	<100	<750	<0.200	<0.500	<0.500	<1.00	--	--
	5/10/2009	<50.0	<427	<427	<0.200	<0.500	<0.500	<1.00	--	--
	7/19/2010	**<10**	**74**	**110**	**<0.5**	**<0.5**	**<0.5**	**<1.5**	**--**	**0.95**

Notes:
Diesel range organics (DRO) was analyzed by AK Method 102.
Residual range organics (RRO) was analyzed by AK Method 103.
Gasoline range organics (GRO) was analyzed by AK Method 101.
Benzene, toluene, ethylbenzene, and total xylenes (BTEX) were analyzed by EPA Method 8021B. BTEX is also included in the EPA Method 8260 scan which was also run on select well samples during the 2010 Annula Groundwater Monitoring Event. The highest concentration of the constituent of concern detected from the two scans, is mentioned in the results discussion of the report.
ADEC Groundwater Cleanup Levels (GCLs) per 18 AAC 75.345, Table C, Register 188, January 2009.
µg/L = micrograms per liter
"--" = Indicates analyte was not sampled or analyzed for above parameter
Highlighted cell indicates concentration exceeds ADEC GCL
"<" = Indicates analyte not detected greater than laboratory reporting limit indicated.
Data associated with current monitoring event in **bold**.
ADEC= Alaska Department of Environmental Conservation
EDB - Dibromomethane

Table 3
Groundwater Analytical Results - Polynuclear Aromatic Hydrocarbons (PAH)

Former Chevron Facility #301726
Lot 5A, Block 10 W. Ramp
Fairbanks, Alaska

Monitoring Well	Date Sampled	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(b)Fluoranthene	Chrysene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
ADEC Groundwater Cleanup Levels		2,200	2,200	11,000	1.20	1.20	120	1,500	1,500	730	11,000	1,100
Location	Sample Date	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
MW-1	7/20/2010	14	3.4	1.9	1.8	1.4	1.4	7.4	12	97	14	7.3
MW-3	7/19/2010	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<1	<0.0096	<0.0096

(a) Laboratory Reporting Limits were greater than the specified cleanup objective

µg/L = Micrograms per liter.

Highlighted values exceed the Alaska Department of Environmental Quality Groundwater Cleanup Level.

Table 4
Groundwater Analytical Results - Volatile Organic Compounds (VOCs)

Former Chevron Facility #301726
Lot 5A, Block 10 W. Ramp
Fairbanks, Alaska

Location	Sample Date	1,1-Dichloroethene (Dichloroethylene) (ug/l)	1,1,1-Trichloroethane (ug/l)	1,2,4-Trimethylbenzene (ug/l)	1,3,5-Trimethylbenzene (ug/l)	Benzene (ug/l)	Ethyl-benzene (ug/l)	Isopropyl-benzene (ug/l)	p-Isopropyl-toluene (ug/l)	n-Butyl-benzene (ug/l)	n-Propyl-benzene (ug/l)	Naphthalene (ug/l)	sec-Butyl-benzene (ug/l)	Toluene (ug/l)	Trichlorofluoromethane (Freon 11) (ug/l)	Xylenes, Total (ug/l)
ADEC Groundwater Cleanup Levels		**7,300**	**200**	**1,800**	**1,800**	**5**	**700**	**3,700**	**Not Established**	**370**	**370**	**730**	**370**	**1,000**	**11,000**	**10,000**
MW-1	9/11/2008	--	--	--	--	--	--	--	--	--	--	--	--	413	--	815
	5/10/2009	--	--	--	--	--	--	--	--	--	--	--	--	75.7	--	392
	7/20/2010[1]	**3**	**<0.8**	**120**	**53**	**150**	**97**	**9**	**5**	**4**	**10**	**97**	**3**	**320**	**3**	**440**
MW-3	9/11/2008	--	--	--	--	--	--	--	--	--	--	--	--	<0.500	--	1.96
	7/19/2010[1]	**1**	**1**	**<1**	**<1**	**<0.5**	**<0.5**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<0.5**	**12**	**<1**
MW-5	**7/20/2010[1]**	**2**	**<0.8**	**<1**	**<1**	**<0.5**	**<0.5**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<0.5**	**6**	**730**

(1) The July 2010 benzene, ethylbenzene, toluene, and xylene results in this table are concentrations detected in the USEPA Method 8260. An USEPA Method 8021 B scan was also run for BTEX analysis during the groundwater monitoring event.
The highest concentration of the overlapping BTEX constituent analytes will be discussed in the text of the report.
-- = Not analyzed.
µg/L = Micrograms per liter.
U = Analyte not detected above detection limit indicated.

Table 5
Sulfolane Groundwater Analytical Results
Former Chevron Facility #301726
Lot5A, Block 10, W. Ramp
Fairbanks, Alaska

Location	Sample Date	Sulfolane (ug/l)
MW-1	7/20/2010	ND [1]

Notes:
µg/L = Micrograms per liter.
[1.] Method detection limit (MDL) for Sulfolane was 10 ug/L

TABLE 6
Historical Groundwater Analytical Results

Former Chevron Facility #301726
Lot 5A, Block 10, West Ramp
Fairbanks International Airport
Fairbanks, Alaska

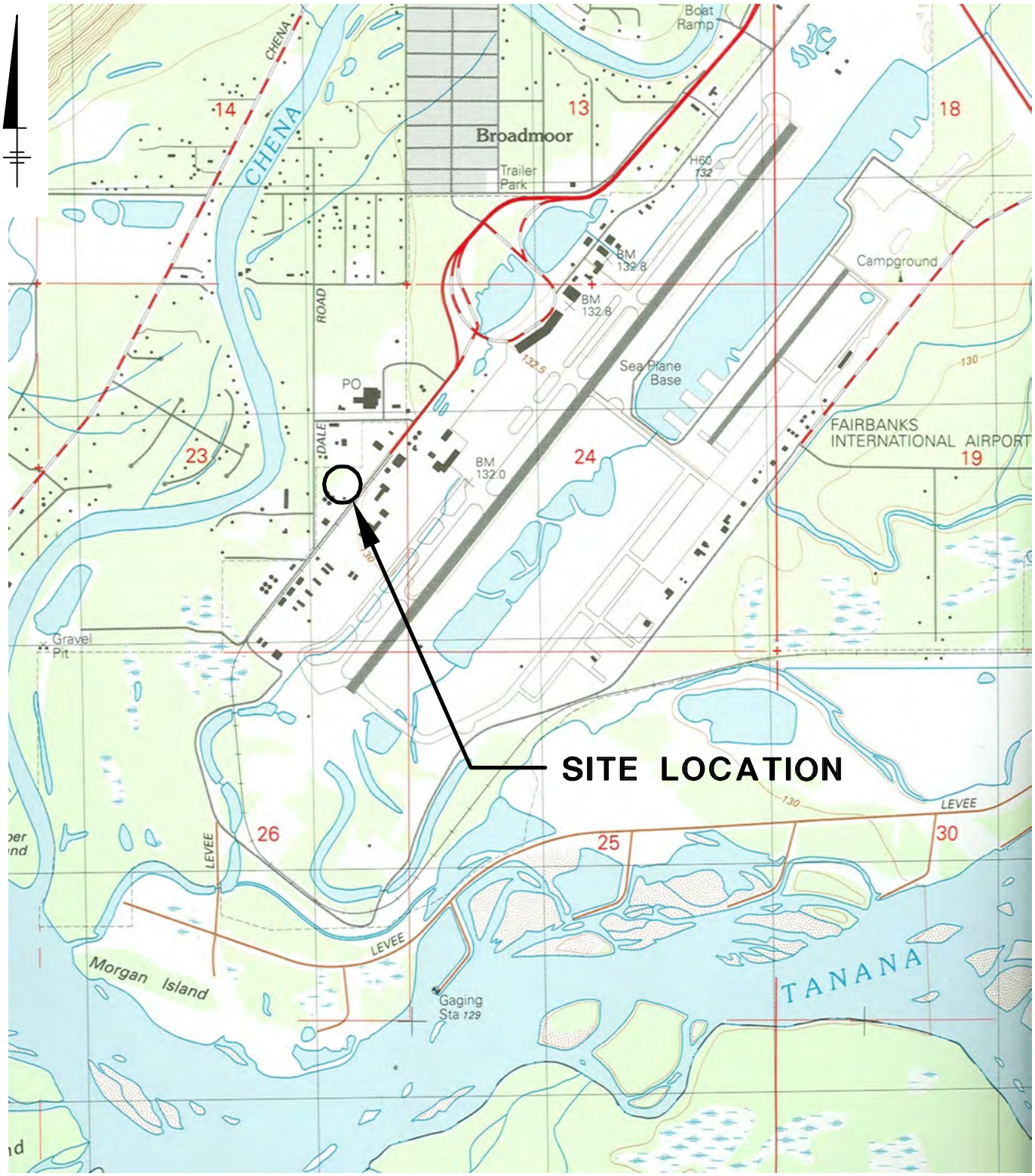
Monitoring Well ID	Date Sampled	DRO[1] (µg/L)	RRO[2] (µg/L)	GRO[3] (µg/L)	BTEX[4]			
					Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
ADEC GCLs[5] (µg/L)		1,500	1,100	2,200	5.0	1,000	700	10,000
MW-1	08/19/04	33,400	<480	27,200	1,770	3,790	261	3,750
	03/30/05	436	<388	9,000	729	343	186	936
	09/19/05	8,660	<397	<2,500	153	150	<25	116
	09/11/08	12,000	<708	6,680	357	413	124	815
	05/10/09	980	<420	3,960	28	75.7	72.7	392
	10/04/09	Not Sampled-LNAPL Detected						
MW-2	08/19/04	--	--	<50.0	<0.200	<0.500	<0.500	<1.00
	03/30/05	4,040	427	<50.0	<0.500	<0.500	<0.500	<1.50
	09/19/05	<417	<417	<50.0	<0.500	<0.500	<0.500	<1.50
	09/11/08	<94.3	<708	<50.0	<0.200	<0.500	<0.500	<1.00
	09/11/08 [D]	<95.2	<714	<50.0	<0.200	<0.500	<0.500	<1.00
	05/10/09	<403	<403	<50.0	0.333	<0.500	<0.500	<1.00
	10/04/09	<391	<391	<50.0	<0.500	<1.00	<1.00	<3.00
MW-3	08/19/04	1,190	<480	89.4	0.774	<0.500	5.83	3.18
	03/30/05	<391	<391	181	0.979	<0.500	24.1	6.94
	09/19/05	6,730	2,120	<50.0	0.556	<0.500	1.73	<1.50
	09/11/08	12,000	<708	60.3	0.448	<0.500	0.653	1.96
	10/04/09	1,290	438	<50.0	<0.500	<1.00	<1.00	<3.00
	10/04/09[D]	2,640	459	<50.0	<0.500	<1.00	<1.00	<3.00
MW-4	08/19/04	<400	<480	<50.0	0.3	<0.500	<0.500	<1.00
	03/30/05	<385	<385	<50.0	<0.500	<0.500	<0.500	<1.50
	09/19/05	1,310	815	<50.0	<0.500	<0.500	<0.500	<1.50
	09/11/08	<94.3	<708	<50.0	<0.200	<0.500	<0.500	<1.00
	05/10/09	<403	<403	<50.0	<0.200	<0.500	<0.500	<1.00
	05/10/09 [D]	<427	<427	<50.0	<0.200	<0.500	<0.500	<1.00
	10/04/09	<385	<385	<50.0	<0.500	<1.00	<1.00	<3.00
MW-5	08/19/04	<400	<480	<50.0	<0.2	<0.500	<0.500	<1.00
	03/30/05	3,310	435	<50.0	<0.500	<0.500	<0.500	<1.50
	09/19/05	<431	782	<50.0	<0.5	<0.500	<0.500	<1.50
	09/11/08	150	<708	<50.0	<0.2	<0.500	<0.500	<1.00
	10/04/09	559	<403	<50.0	<0.500	<1.00	<1.00	<3.00
MW-6	08/19/04	<400	<480	<50.0	0.351	<0.500	<0.500	<1.00
	03/30/05	<388	<388	<50.0	<0.5	<0.500	<0.500	<1.50
	09/19/05	<403	<403	<50.0	<0.5	<0.500	<0.500	<1.50
	09/11/08	<100	<750	<50.0	<0.2	<0.500	<0.500	<1.0
	05/10/09	<427	<427	<50.0	<0.200	<0.500	<0.500	<1.00
	10/04/09	<385	<385	<50.0	<0.500	<1.00	<1.00	<3.00

Notes:
Diesel range organics (DRO) was analyzed by AK Method 102.
Residual range organics (RRO) was analyzed by AK Method 103.
Gasoline range organics (GRO) was analyzed by AK Method 101.
Benzene, toluene, ethylbenzene, and total xylenes (BTEX) were analyzed by EPA Method 8021B.
ADEC Groundwater Cleanup Levels (GCLs) per 18 AAC 75.345, Table C, Register 188, January 2009.

µg/L = micrograms per liter
"--" = Indicates analyte was not sampled or analyzed
Highlighted cell indicates concentration exceeds groundwater cleanup level
"<" = Indicates analyte not detected greater than laboratory reporting limit indicated.
[D] = Indicates sample is a duplicate
Data associated with current monitoring event in **bold**.
ADEC= Alaska Department of Environmental Conservation

ARCADIS

Figures



SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE: FAIRBANKS (D-2) SW, AK., 1992, FAIRBANKS NORTH STAR BOROUGH, SECTION: 24, TOWNSHIP: 1S, RANGE: 2W

0 2000' 4000'

APPROXIMATE GRAPHIC SCALE

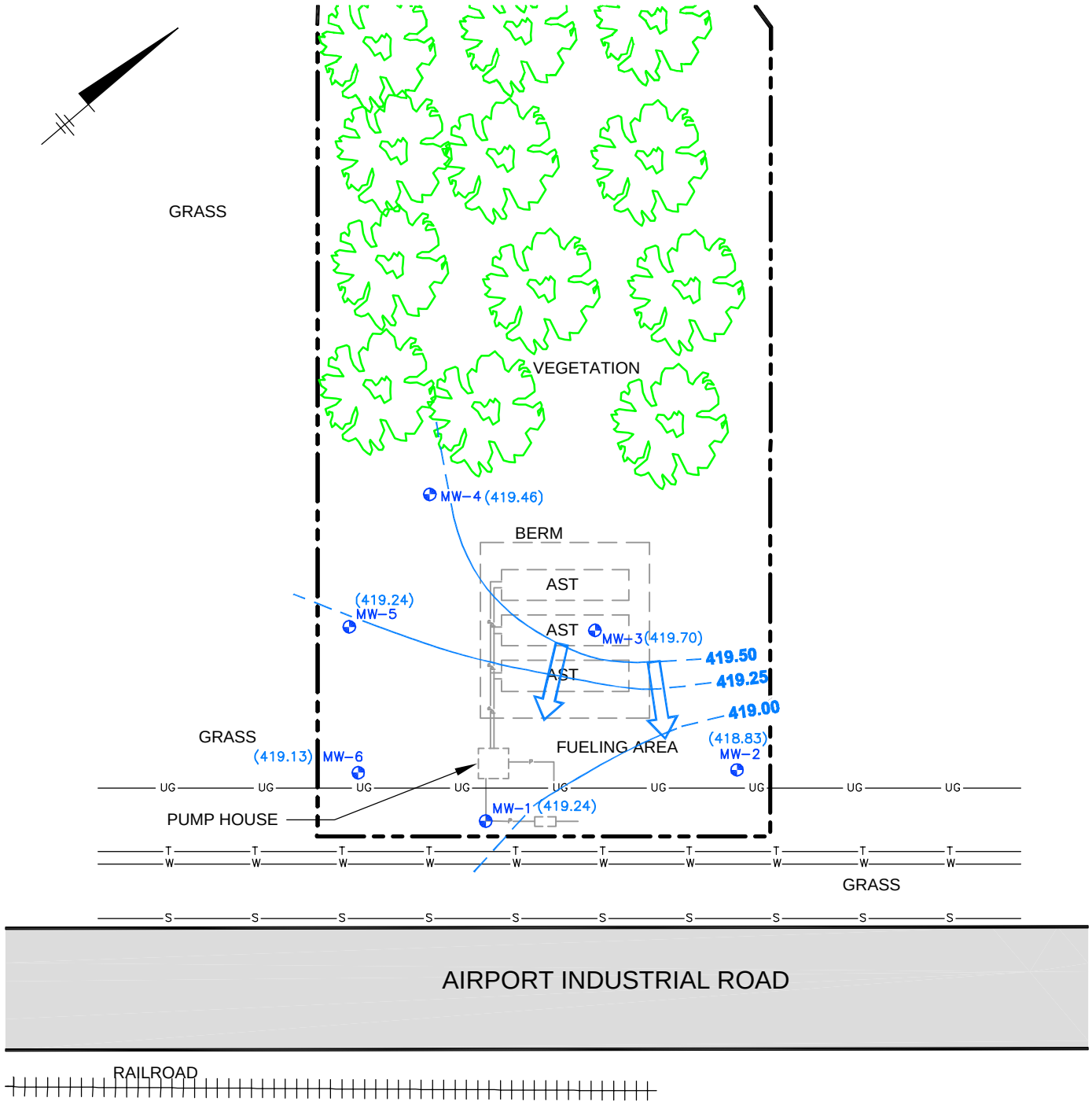
FORMER CHEVRON FACILITY NO. 301726
FAIRBANKS INT. AIRPORT, FAIRBANKS, ALASKA
ANNUAL GROUNDWATER MONITORING REPORT 2010

SITE LOCATION MAP

ARCADIS

FIGURE
1

CITY:TMAPA,FL DIV/GROUP:85 DB:JAR LD:(Opt) PIC:(Opt) PM:(Reqd) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\Tampa-BVACT\B0046269\0002\00001\Annual GWM Nov 2010\B0046269N01.dwg LAYOUT: 1SAVED: 11/1/2010 1:35 PM ACADVER: 18.0S (LMS TECH) PAGESETUP: PDF-AP PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 11/1/2010 1:35 PM BY: RICHARDS, JIM
XREFS: IMAGES: ALASKA.jpg Fairbanks-SW.jpg PROJECTNAME: ---



0 50' 100'

GRAPHIC SCALE

SOURCE: Base map digitized from "SAIC", Date 10/19/05, Scale 1"=30'

LEGEND

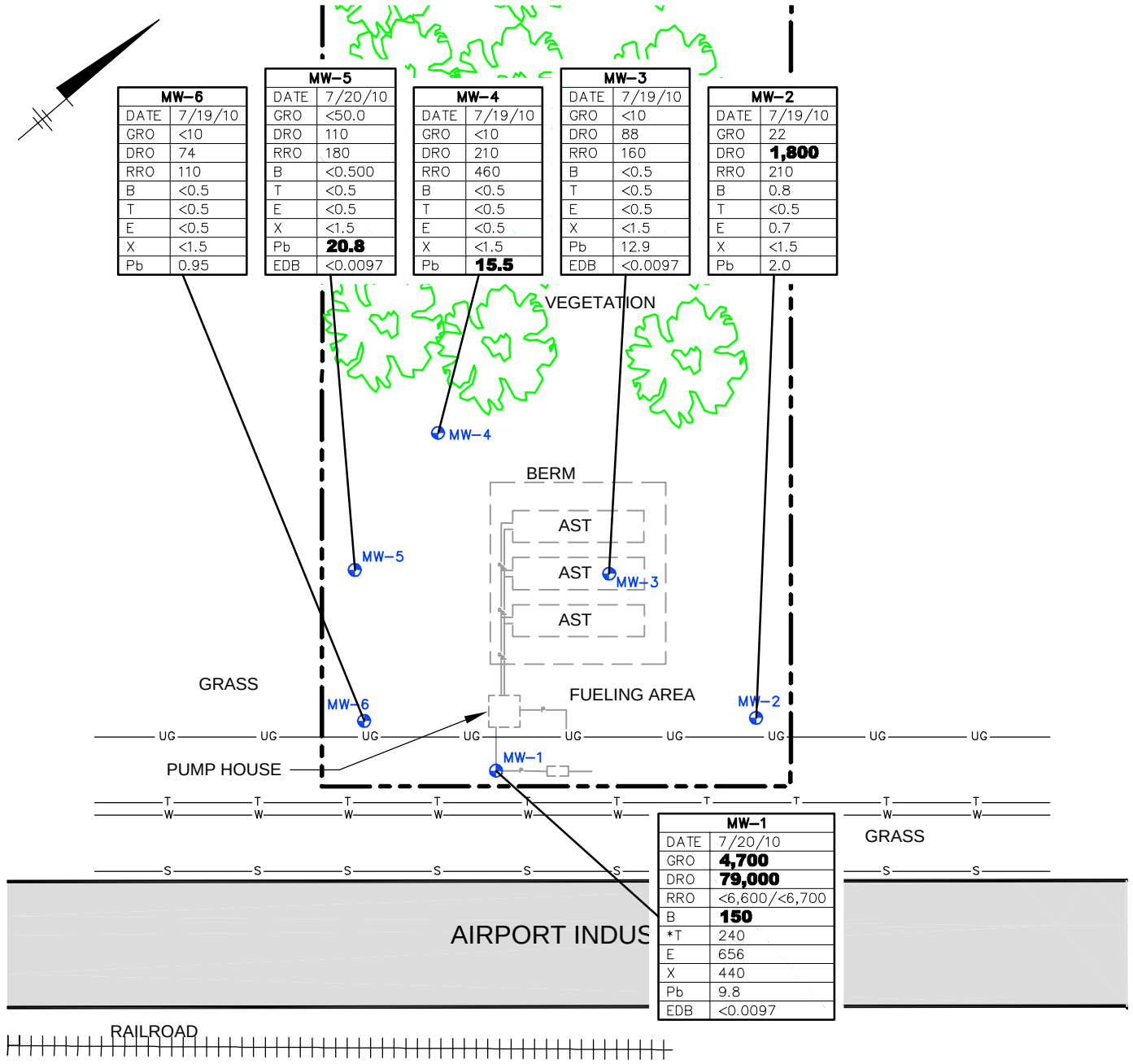
- MONITORING WELL
- BOUNDARY LINE
- 418.20 GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED) CONTOUR INTERVAL = 0.25 FEET
- (418.19) GROUNDWATER ELEVATION (FEET)
- APPARENT DIRECTION OF GROUNDWATER FLOW
- * GROUNDWATER ELEVATION ADJUSTED FOR THE PRESENCE OF LNAPL (LIGHT NON-AQUEOUS PHASE LIQUID)

FORMER CHEVRON FACILITY NO. 301726
FAIRBANKS INT. AIRPORT, FAIRBANKS, ALASKA
ANNUAL GROUNDWATER MONITORING REPORT 2010

GROUNDWATER ELEVATION CONTOUR MAP - JULY 19, 2010

ARCADIS

FIGURE 2



LEGEND

MONITORING WELL

BOUNDARY LINE

SAMPLE LOCATION	
DATE	Sample Date
GRO	Gasoline Range Organics
DRO	Diesel Range Organics
RRO	Residual Range Organics
B	Benzene
T	Toluene
E	Ethlybenzene
X	Total Xylenes
Pb	Lead
EDB	Ethylene Dibromide

RESULTS REPORTED IN MICROGRAMS PER LITER (µg/L)
BOLD INDICATES CONCENTRATION EXCEEDS RESPECTIVE GROUNDWATER CLEANUP LEVEL
* = BENZENE CONCENTRATION DETECTED IN USEPA METHOD 8260
ADEC = ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
NS = NOT SAMPLED
<1.00/<1.00 = DUPLICATE SAMPLE COLLECTED

SOURCE: Base map digitized from "SAIC", Date 10/19/05, Scale 1"=30'

0 50' 100'

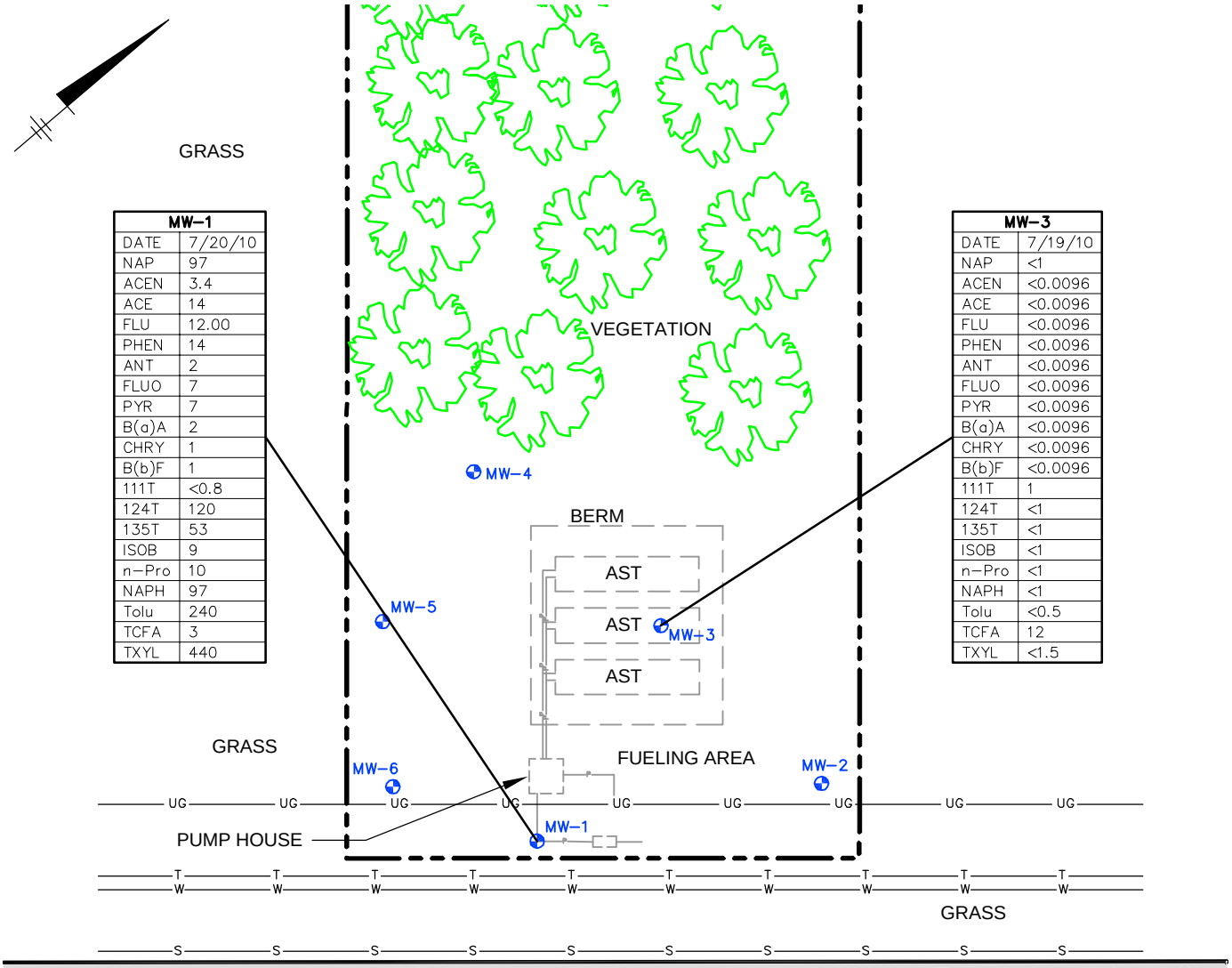
GRAPHIC SCALE

FORMER CHEVRON FACILITY NO. 301726
FAIRBANKS INT. AIRPORT, FAIRBANKS, ALASKA
ANNUAL GROUNDWATER MONITORING REPORT 2010

GROUNDWATER ANALYTICAL RESULTS PETROLEUM HYDROCARBONS JULY 19 & 20, 2010

ARCADIS

FIGURE 3



MW-1	
DATE	7/20/10
NAP	97
ACEN	3.4
ACE	14
FLU	12.00
PHEN	14
ANT	2
FLUO	7
PYR	7
B(a)A	2
CHRY	1
B(b)F	1
111T	<0.8
124T	120
135T	53
ISOB	9
n-Pro	10
NAPH	97
Tolu	240
TCFA	3
TXYL	440

MW-3	
DATE	7/19/10
NAP	<1
ACEN	<0.0096
ACE	<0.0096
FLU	<0.0096
PHEN	<0.0096
ANT	<0.0096
FLUO	<0.0096
PYR	<0.0096
B(a)A	<0.0096
CHRY	<0.0096
B(b)F	<0.0096
111T	1
124T	<1
135T	<1
ISOB	<1
n-Pro	<1
NAPH	<1
Tolu	<0.5
TCFA	12
TXYL	<1.5

AIRPORT INDUSTRIAL ROAD

RAILROAD

SAMPLE LOCATION	
DATE	Sample Date
NAP	Naphthalene
ACEN	Acenaphthylene
ACE	Acenaphthene
FLU	Fluorene
PHEN	Phenanthrene
ANT	Anthracene
FLUO	Fluoranthene
PYR	Pyrene
B(a)A	Benzo(a)anthraecne
CHRY	Chrysene
B(b)F	Benzo(b)fluoranthene
111T	1,1,1-Trichloroethane
124T	1,2,4-Trimethylbenzene
135T	1,3,5-Trimethylbenzene
ISOB	Isopropylbenzene
n-Pro	n-Propylbenzene
NAPH	Naphthalene
Tolu	Toluene
TCFA	Trichlorofluoroethane
TXYL	Total Xylenes

LEGEND

MONITORING WELL

BOUNDARY LINE

0 50' 100'

GRAPHIC SCALE

RESULTS REPORTED IN MICROGRAMS PER LITER (µg/L)

SOURCE: Base map digitized from "SAIC", Date 10/19/05, Scale 1"=30'

FORMER CHEVRON FACILITY NO. 301726
FAIRBANKS INT. AIRPORT, FAIRBANKS, ALASKA
ANNUAL GROUNDWATER MONITORING REPORT 2010

GROUNDWATER ANALYTICAL RESULTS PAGHs & VOCs - JULY 19 & 20, 2010

ARCADIS

FIGURE
4

ARCADIS

Appendix A

Field Notes

Location FIA Texaco Date 7/19/10

Project / Client #301726

Weather: Rain 60° / Fires by airport
Activity: GW Sampling Bail No purge
Personnel: D Berube Hydrasleeve duplicate

08:10 Load truck - coolers/equipment
08:20 Depart for Goldstreak - tools + pump
08:40 Arrive on site.
H+S meeting PTW/fires/raingear
Kevlars/mosquitoes/heavy lifting
Traffic-trucks from behind lot/

Note: MW-5 unable to locate. looked for 15 minutes. Appears to be under soil - driven over will call office to confirm renting metal detector to locate if time running short

09:00 Fresh air calibration PID

Note: MW-1 or MW-3 gets BD-1 hydrasleave if product sample MW-1 for LNAPL

10:00 call office to confirm Unocal MTBE + PAH
10:15 Rebecca returns call
10:20 M Strickler calls regarding PART

Location FIA Texaco Date 7/19/10

Project / Client # 301726

Well	DTW	DTB	DTP	PID	Sample
MW-6	7.69	14.3	—	0.2	9:25 7/19/10
MW-4	7.56	14.67	—	0.2	9:50 7/19/10
MW-2	7.90	14.07	—	0.5	9:40 7/19/10
MW-3	7.46	13.54	—	0.0	11:55 7/19/10
MW-1	7.6	14.0	—	11:30	9:00 7/20/10
MW-5	7.65	14.14	—	ϕ	9:40 7/20

- Put hydrasleeve in MW-1 @ 10:30 for BD-1
- 10:30 call hydrasleeve to confirm non shipment of order
- Note: Remved absorbent sock. Put in drum on site. Stage drum behind MW-4 nxt to tree. Note: Will have to get additional drum for FIA Unocal now.
- 11:00 leave site to obtain metal detector
- 11:25 Depart Independent for site
- 11:40 Arrive back @ site
- 12:10 Decon/Demob/Depart sit for FAIR

DM

Location FIA Texaco Date 7/20/10

Project / Client # 301726

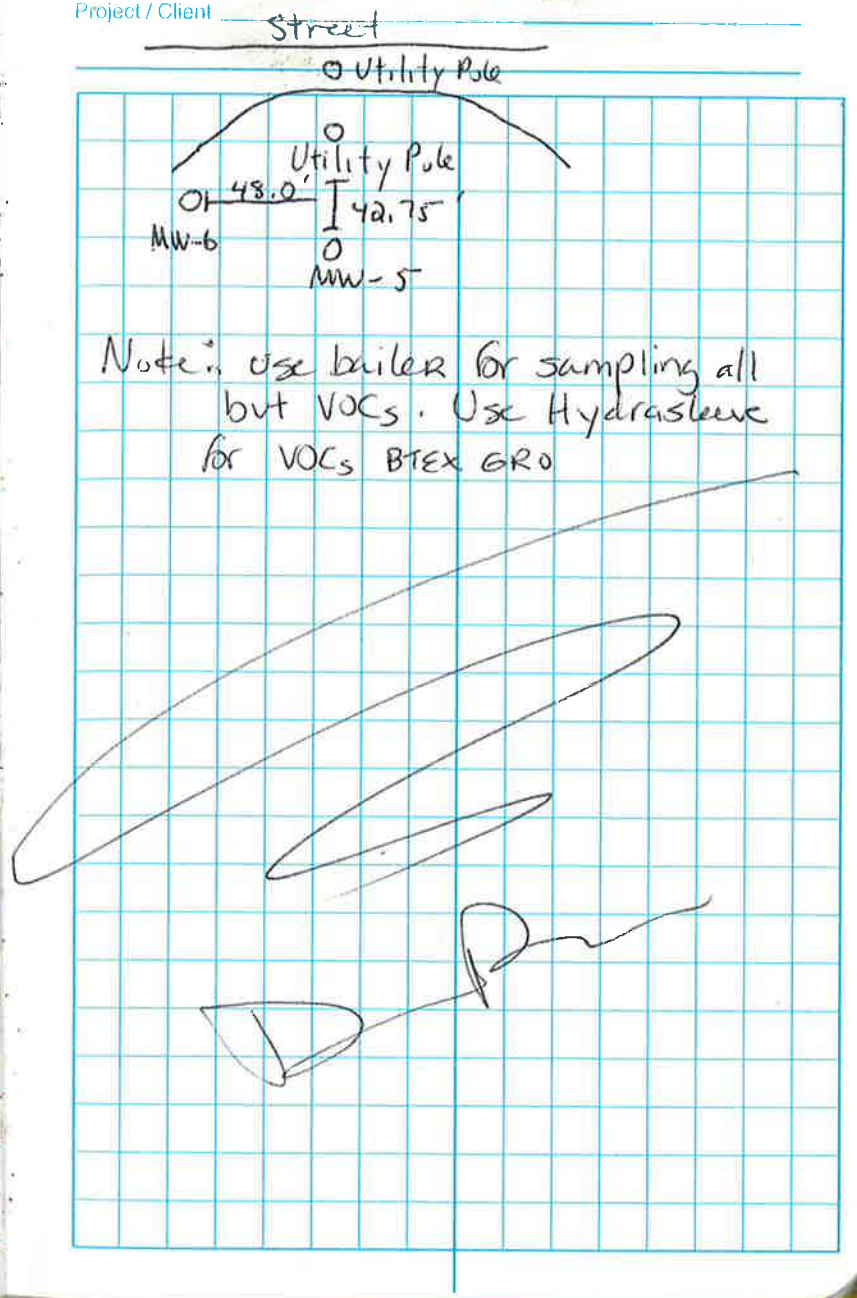
Weather: Rainy 65°
Activity: Continued sampling
Personnel: D Benke K Lim

07:20 Re ice coolers / load truck w/glassware
07:40 travel to hotel
07:50 pick up K Lim
08:07 arrive on site.
Conduct H+S meeting
PTW/PPE/ →see Haz ID sheet

08:44 conclude H+S meeting H+S site test
JLA review discuss LPO OE tenants
stop work / hydrasleeve protocol / matrix
09:00 sample MW-1 + BD-1
09:14 Begin search for MW-5
09:20 locate MW-5
calibrate PID fresh air + 100ppm isobutylene
9:40 sample MW-5
gauge MW-5. (7.65' bgs)
10.03 Depart site for FAIR chevron after swingtie + decon

Location FIA Texaco Date 7/20/10

Project / Client



Note: use bailer for sampling all but VOCs. Use Hydrasleeve for VOCs BTEX GRO

Location FIA Texaco Date 8/16/10

Project / Client # 301726

Weather: 75° overcast haze
Activity: Gauge MW-1
Personnel: DBenbe / D Beaudoin

15:08 Arrive on site. H+S meeting/ PTW/ light to no traffic/ trips slips falls/ hand safety/ radiation/ mosquites Bending/ lifting tool bag Fresh air calibration PID complete

Well ID	DTW	DTP	PID	Comment
MW-1	7.25	—	915	—

15:15 Demob/ Decon/ Depart site for Saupe

Location FIA Texaco Date 9/27/10

Project / Client # 301726

Weather: 22° sunny
Activity: Gaurge MW-1
Personnel: D Benbe/ D Beaudoin

11:13 Arrive on site. H+S meeting. PTW/ Trips slips falls/ PPE/ OE tenants/ sunscreen/ proper bending techniques Fresh air + isobutylene 100ppm calibration for PID.

Well ID	DTW	DTP	PID
MW-1	8.99	—	1102

11:30 Demob/ Decon/ Depart site for Saupe

Location FIA Texaco Date 10/27/10

Project / Client Lot SA Block 10 #307126

Weather: 19°

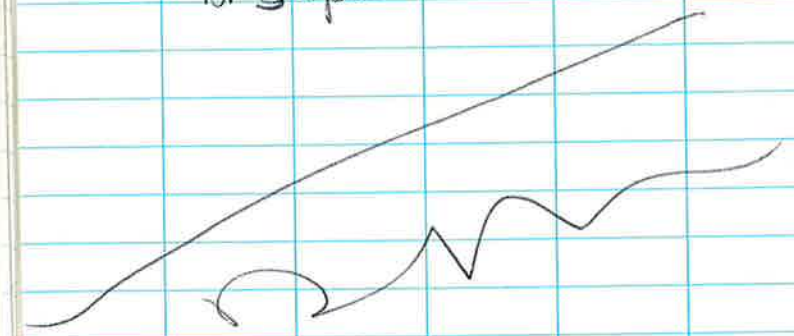
Activity: Gauging MW-1

Personnel: D Berube / M Strickler

15:07 Arrive on site from FAIR. PTW / HASP / no traffic / cold temperatures / wind burn / proper tools

Well ID	DTW	DTP	PID	
MW-1	11.09	—	19.28	Needs bolts ½"

15:15 Demob Dcon Depart site for Supe



Location FIA Texaco Date 12/15/10

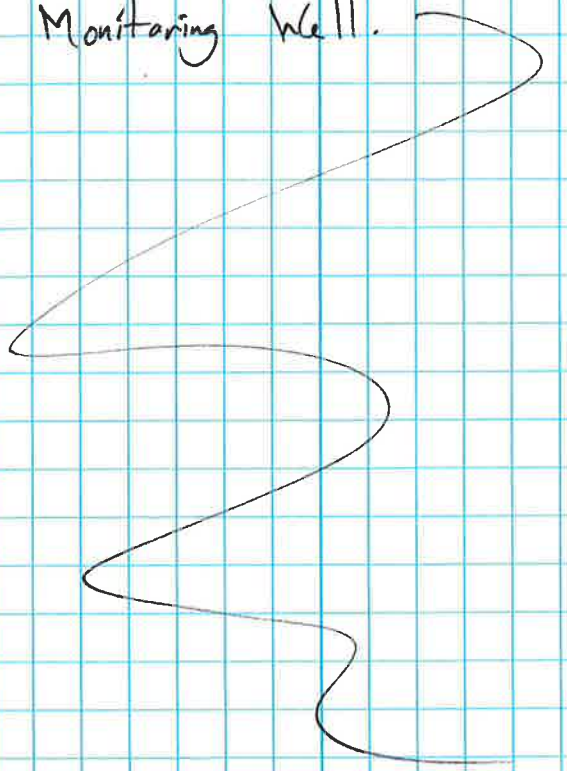
Project / Client Lot SA Block 10 #307126

Weather: -40° F

Activity: Gauging MW-1

Personnel: D. Berube, D. Beaudoin

Too Cold to Gauge Monitoring Well.



ARCADIS

Appendix B

Laboratory Analytical Reports

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

August 24, 2010

Project: 301726

Submittal Date: 07/22/2010
Group Number: 1204196
PO Number: 0015060864
Release Number: CARRIER
State of Sample Origin: AK

Client Sample Description	Lancaster Labs (LLI) #
Trip_Blank Water Sample	6038835
MW-6 Grab Water Sample	6038836
MW-4 Grab Water Sample	6038837
MW-2 Grab Water Sample	6038838
MW-3 Grab Water Sample	6038839
MW-1 Grab Water Sample	6038840
BD-1 Grab Water Sample	6038841
MW-5 Grab Water Sample	6038842

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	ARCADIS	Attn: Andrew Ohrt
ELECTRONIC COPY TO	ARCADIS	Attn: Michael Strickler
ELECTRONIC COPY TO	Arcadis US, Inc.	Attn: Rebecca Andresen
ELECTRONIC COPY TO	Arcadis	Attn: Russ Greisler
ELECTRONIC COPY TO	Arcadis	Attn: Vanessa Varbel
1 COPY TO	Data Package Group	

Lancaster Laboratories

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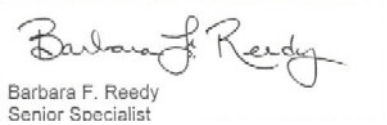
Analysis Report

Questions? Contact your Client Services Representative
Jill M Parker at (717) 656-2300 Ext. 1241

Respectfully Submitted,



Barbara F. Reedy
Senior Specialist

Lancaster Laboratories

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Analysis Report

Sample Description: Trip_Blank Water Sample
Facility# 301726
Block 10, Lot 5A - Fairbanks, AK

LLI Sample # WW 6038835
LLI Group # 1204196
Account # 11964

Project Name: 301726

Collected: 07/19/2010

Submitted: 07/22/2010 09:10
Reported: 08/24/2010 13:09
Discard: 09/24/2010

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

L5ATB SDG#: LSK86-01TB

CAT No.			CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles		**AK 101**		**mg/l**	**mg/l**	
01440	TPH-GRO AK water C6-C10		n.a.	N.D.	0.010	1
GC Volatiles		**SW-846 8021B**		**mg/l**	**mg/l**	
01588	Benzene		71-43-2	N.D.	0.0005	1
01588	Ethylbenzene		100-41-4	N.D.	0.0005	1
01588	Toluene		108-88-3	N.D.	0.0005	1
01588	Total xylenes		1330-20-7	N.D.	0.0015	1

General Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01440	TPH-GRO AK water C6-C10	AK 101	1	10206A53A	07/26/2010 14:15	Carrie E Miller	1
01146	GC VOA Water Prep	SW-846 5030B	1	10206A53A	07/26/2010 14:15	Carrie E Miller	1
01588	BTEX	SW-846 8021B	1	10206A53A	07/26/2010 14:15	Carrie E Miller	1

Lancaster Laboratories

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Analysis Report

Sample Description: MW-6 Grab Water Sample
Facility# 301726
Block 10, Lot 5A - Fairbanks, AK

LLI Sample # WW 6038836
LLI Group # 1204196
Account # 11964

Project Name: 301726

Collected: 07/19/2010 09:25 by DB

Submitted: 07/22/2010 09:10
Reported: 08/24/2010 13:09
Discard: 09/24/2010

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

L5AM6 SDG#: LSK86-02

CAT No.			CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles		**AK 101**		**mg/l**	**mg/l**	
01440	TPH-GRO AK water C6-C10		n.a.	N.D.	0.010	1
GC Volatiles		**SW-846 8021B**		**mg/l**	**mg/l**	
01588	Benzene		71-43-2	N.D.	0.0005	1
01588	Ethylbenzene		100-41-4	N.D.	0.0005	1
01588	Toluene		108-88-3	N.D.	0.0005	1
01588	Total xylenes		1330-20-7	N.D.	0.0015	1
GC Extractable TPH		**AK 102/103 4/08/02 modified**		**mg/l**	**mg/l**	
02923	C10-<C25 DRO		n.a.	0.074	0.048	1
02923	C25-C36 RRO		n.a.	0.11	0.067	1
Metals		**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	
06035	Lead		7439-92-1	0.00095	0.000050	1

General Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01440	TPH-GRO AK water C6-C10	AK 101	1	10206A53A	07/26/2010 18:42	Carrie E Miller	1
01146	GC VOA Water Prep	SW-846 5030B	1	10206A53A	07/26/2010 18:42	Carrie E Miller	1
01588	BTEX	SW-846 8021B	1	10206A53A	07/26/2010 18:42	Carrie E Miller	1
02923	TPH-DRO/RRO (AK) water	AK 102/103 4/08/02 modified	1	102040101A	07/27/2010 03:26	Heather E Williams	1
11185	AK DRO/ORO Waters Extraction	AK 102/AK 103 04/08/02	1	102040101A	07/24/2010 08:25	Karen R Rettew	1
06035	Lead	EPA 200.8 rev 5.4	1	102047050001A	07/26/2010 10:41	Choon Y Tian	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	102047050001	07/23/2010 11:04	James L Mertz	1

Lancaster Laboratories

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Analysis Report

Sample Description: MW-4 Grab Water Sample
Facility# 301726
Block 10, Lot 5A - Fairbanks, AK

LLI Sample # WW 6038837
LLI Group # 1204196
Account # 11964

Project Name: 301726

Collected: 07/19/2010 09:50 by DB

Submitted: 07/22/2010 09:10
Reported: 08/24/2010 13:09
Discard: 09/24/2010

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

L5AM4 SDG#: LSK86-03

CAT No.			CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles		**AK 101**		**mg/l**	**mg/l**	
01440	TPH-GRO AK water C6-C10		n.a.	N.D.	0.010	1
GC Volatiles		**SW-846 8021B**		**mg/l**	**mg/l**	
01588	Benzene		71-43-2	N.D.	0.0005	1
01588	Ethylbenzene		100-41-4	N.D.	0.0005	1
01588	Toluene		108-88-3	N.D.	0.0005	1
01588	Total xylenes		1330-20-7	N.D.	0.0015	1
GC Extractable TPH		**AK 102/103 4/08/02 modified**		**mg/l**	**mg/l**	
02923	C10-<C25 DRO		n.a.	0.21	0.047	1
02923	C25-C36 RRO		n.a.	0.46	0.066	1
Metals		**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	
06035	Lead		7439-92-1	0.0155	0.000050	1

General Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01440	TPH-GRO AK water C6-C10	AK 101	1	10206A53A	07/26/2010 14:39	Carrie E Miller	1
01146	GC VOA Water Prep	SW-846 5030B	1	10206A53A	07/26/2010 14:39	Carrie E Miller	1
01588	BTEX	SW-846 8021B	1	10206A53A	07/26/2010 14:39	Carrie E Miller	1
02923	TPH-DRO/RRO (AK) water	AK 102/103 4/08/02 modified	1	102040101A	07/27/2010 17:54	Heather E Williams	1
11185	AK DRO/ORO Waters Extraction	AK 102/AK 103 04/08/02	1	102040101A	07/24/2010 08:25	Karen R Rettew	1
06035	Lead	EPA 200.8 rev 5.4	1	102047050001A	07/26/2010 10:43	Choon Y Tian	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	102047050001	07/23/2010 11:04	James L Mertz	1

Lancaster Laboratories

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Analysis Report

Sample Description: MW-2 Grab Water Sample
Facility# 301726
Block 10, Lot 5A - Fairbanks, AK

LLI Sample # WW 6038838
LLI Group # 1204196
Account # 11964

Project Name: 301726

Collected: 07/19/2010 09:40 by DB

Submitted: 07/22/2010 09:10
Reported: 08/24/2010 13:09
Discard: 09/24/2010

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

L5AM2 SDG#: LSK86-04

CAT No.			CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles		**AK 101**		**mg/l**	**mg/l**	
01440	TPH-GRO AK water C6-C10		n.a.	0.022	0.010	1
GC Volatiles		**SW-846 8021B**		**mg/l**	**mg/l**	
01588	Benzene		71-43-2	0.0008	0.0005	1
01588	Ethylbenzene		100-41-4	0.0007	0.0005	1
01588	Toluene		108-88-3	N.D.	0.0005	1
01588	Total xylenes		1330-20-7	N.D.	0.0015	1
GC Extractable TPH		**AK 102/103 4/08/02 modified**		**mg/l**	**mg/l**	
02923	C10-<C25 DRO		n.a.	1.8	0.048	1
02923	C25-C36 RRO		n.a.	0.21	0.068	1
Metals		**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	
06035	Lead		7439-92-1	0.0020	0.000050	1

General Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01440	TPH-GRO AK water C6-C10	AK 101	1	10206A53A	07/26/2010 15:04	Carrie E Miller	1
01146	GC VOA Water Prep	SW-846 5030B	1	10206A53A	07/26/2010 15:04	Carrie E Miller	1
01588	BTEX	SW-846 8021B	1	10206A53A	07/26/2010 15:04	Carrie E Miller	1
02923	TPH-DRO/RRO (AK) water	AK 102/103 4/08/02 modified	1	102040101A	07/27/2010 03:53	Heather E Williams	1
11185	AK DRO/ORO Waters Extraction	AK 102/AK 103 04/08/02	1	102040101A	07/24/2010 08:25	Karen R Rettew	1
06035	Lead	EPA 200.8 rev 5.4	1	102047050001A	07/26/2010 10:48	Choon Y Tian	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	102047050001	07/23/2010 11:04	James L Mertz	1

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Analysis Report

Sample Description: MW-3 Grab Water Sample
Facility# 301726
Block 10, Lot 5A - Fairbanks, AK

LLI Sample # WW 6038839
LLI Group # 1204196
Account # 11964

Project Name: 301726

Collected: 07/19/2010 11:55 by DB

Submitted: 07/22/2010 09:10
Reported: 08/24/2010 13:09
Discard: 09/24/2010

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

L5AM3 SDG#: LSK86-05

CAT No.		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	
10905	Acetone	67-64-1	N.D.	0.006	1
10905	t-Amyl methyl ether	994-05-8	N.D.	0.0005	1
10905	Benzene	71-43-2	N.D.	0.0005	1
10905	Bromobenzene	108-86-1	N.D.	0.001	1
10905	Bromochloromethane	74-97-5	N.D.	0.001	1
10905	Bromodichloromethane	75-27-4	N.D.	0.001	1
10905	Bromoform	75-25-2	N.D.	0.001	1
10905	Bromomethane	74-83-9	N.D.	0.001	1
10905	2-Butanone	78-93-3	N.D.	0.003	1
10905	t-Butyl alcohol	75-65-0	N.D.	0.005	1
10905	n-Butylbenzene	104-51-8	N.D.	0.001	1
10905	sec-Butylbenzene	135-98-8	N.D.	0.001	1
10905	tert-Butylbenzene	98-06-6	N.D.	0.001	1
10905	Carbon Disulfide	75-15-0	N.D.	0.001	1
10905	Carbon Tetrachloride	56-23-5	N.D.	0.001	1
10905	Chlorobenzene	108-90-7	N.D.	0.0008	1
10905	Chloroethane	75-00-3	N.D.	0.001	1
10905	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	0.002	1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.				
10905	Chloroform	67-66-3	0.001	0.0008	1
10905	Chloromethane	74-87-3	N.D.	0.001	1
10905	2-Chlorotoluene	95-49-8	N.D.	0.001	1
10905	4-Chlorotoluene	106-43-4	N.D.	0.001	1
10905	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.002	1
10905	Dibromochloromethane	124-48-1	N.D.	0.001	1
10905	1,2-Dibromoethane	106-93-4	N.D.	0.0005	1
10905	Dibromomethane	74-95-3	N.D.	0.001	1
10905	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	1
10905	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	1
10905	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	1
10905	Dichlorodifluoromethane	75-71-8	N.D.	0.002	1
10905	1,1-Dichloroethane	75-34-3	N.D.	0.001	1
10905	1,2-Dichloroethane	107-06-2	N.D.	0.0005	1
10905	1,1-Dichloroethene	75-35-4	0.001	0.0008	1
10905	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0008	1
10905	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0008	1
10905	1,2-Dichloropropane	78-87-5	N.D.	0.001	1
10905	1,3-Dichloropropane	142-28-9	N.D.	0.001	1
10905	2,2-Dichloropropane	594-20-7	N.D.	0.001	1
10905	1,1-Dichloropropene	563-58-6	N.D.	0.001	1
10905	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.001	1
10905	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.001	1
10905	Ethanol	64-17-5	N.D.	0.050	1
10905	Ethyl t-butyl ether	637-92-3	N.D.	0.0005	1
10905	Ethylbenzene	100-41-4	N.D.	0.0005	1
10905	Freon 113	76-13-1	N.D.	0.002	1
10905	Hexachlorobutadiene	87-68-3	N.D.	0.002	1
10905	2-Hexanone	591-78-6	N.D.	0.003	1

Sample Description: MW-3 Grab Water Sample
Facility# 301726
Block 10, Lot 5A - Fairbanks, AK

LLI Sample # WW 6038839
LLI Group # 1204196
Account # 11964

Project Name: 301726

Collected: 07/19/2010 11:55 by DB

Submitted: 07/22/2010 09:10
Reported: 08/24/2010 13:09
Discard: 09/24/2010

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

L5AM3 SDG#: LSK86-05

CAT No.		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	
10905	di-Isopropyl ether	108-20-3	N.D.	0.0005	1
10905	Isopropylbenzene	98-82-8	N.D.	0.001	1
10905	p-Isopropyltoluene	99-87-6	N.D.	0.001	1
10905	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	1
10905	4-Methyl-2-pentanone	108-10-1	N.D.	0.003	1
10905	Methylene Chloride	75-09-2	N.D.	0.002	1
10905	Naphthalene	91-20-3	N.D.	0.001	1
10905	n-Propylbenzene	103-65-1	N.D.	0.001	1
10905	Styrene	100-42-5	N.D.	0.001	1
10905	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.001	1
10905	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.001	1
10905	Tetrachloroethene	127-18-4	N.D.	0.0008	1
10905	Toluene	108-88-3	N.D.	0.0005	1
10905	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.001	1
10905	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.001	1
10905	1,1,1-Trichloroethane	71-55-6	0.001	0.0008	1
10905	1,1,2-Trichloroethane	79-00-5	N.D.	0.0008	1
10905	Trichloroethene	79-01-6	N.D.	0.001	1
10905	Trichlorofluoromethane	75-69-4	0.012	0.002	1
10905	1,2,3-Trichloropropane	96-18-4	N.D.	0.001	1
10905	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	1
10905	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.001	1
10905	Vinyl Chloride	75-01-4	N.D.	0.001	1
10905	m+p-Xylene	n.a.	N.D.	0.0005	1
10905	o-Xylene	95-47-6	N.D.	0.0005	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	N.D.	0.0000096	1
08357	Acenaphthylene	208-96-8	N.D.	0.0000096	1
08357	Anthracene	120-12-7	N.D.	0.0000096	1
08357	Benzo(a)anthracene	56-55-3	N.D.	0.0000096	1
08357	Benzo(a)pyrene	50-32-8	N.D.	0.0000096	1
08357	Benzo(b)fluoranthene	205-99-2	N.D.	0.0000096	1
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0000096	1
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.0000096	1
08357	Chrysene	218-01-9	N.D.	0.0000096	1
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0000096	1
08357	Fluoranthene	206-44-0	N.D.	0.0000096	1
08357	Fluorene	86-73-7	N.D.	0.0000096	1
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0000096	1
08357	Naphthalene	91-20-3	N.D.	0.0000096	1
08357	Phenanthrene	85-01-8	N.D.	0.0000096	1
08357	Pyrene	129-00-0	N.D.	0.0000096	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	
01440	TPH-GRO AK water C6-C10	n.a.	N.D.	0.010	1
GC Volatiles	**SW-846 8021B**		**mg/l**	**mg/l**	

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Analysis Report

Sample Description: MW-3 Grab Water Sample
Facility# 301726
Block 10, Lot 5A - Fairbanks, AK

LLI Sample # WW 6038839
LLI Group # 1204196
Account # 11964

Project Name: 301726

Collected: 07/19/2010 11:55 by DB

Submitted: 07/22/2010 09:10
Reported: 08/24/2010 13:09
Discard: 09/24/2010

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

L5AM3 SDG#: LSK86-05

CAT No.		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	**SW-846 8021B**		**mg/l**	**mg/l**	
01588	Benzene	71-43-2	N.D.	0.0005	1
01588	Ethylbenzene	100-41-4	N.D.	0.0005	1
01588	Toluene	108-88-3	N.D.	0.0005	1
01588	Total xylenes	1330-20-7	N.D.	0.0015	1
GC Miscellaneous	**SW-846 8011**		**mg/l**	**mg/l**	
07879	Ethylene dibromide	106-93-4	N.D.	0.0000097	1
GC Extractable TPH	**AK 102/103 4/08/02 modified**		**mg/l**	**mg/l**	
02923	C10-<C25 DRO	n.a.	0.088	0.049	1
02923	C25-C36 RRO	n.a.	0.16	0.068	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	
06035	Lead	7439-92-1	0.0129	0.000050	1

General Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10905	8260 Full List w/ Sep. Xylenes	SW-846 8260B	1	W102072AA	07/26/2010 18:34	Emily R Styer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W102072AA	07/26/2010 18:34	Emily R Styer	1
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	10205WAD026	08/20/2010 14:21	Joseph M Gambler	1
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	10205WAD026	07/25/2010 06:30	Olivia Arosemena	1
01440	TPH-GRO AK water C6-C10	AK 101	1	10206A53A	07/26/2010 19:54	Carrie E Miller	1
01146	GC VOA Water Prep	SW-846 5030B	1	10206A53A	07/26/2010 19:54	Carrie E Miller	1
01588	BTEX	SW-846 8021B	1	10206A53A	07/26/2010 19:54	Carrie E Miller	1
07879	EDB in Wastewater	SW-846 8011	1	102050032A	07/27/2010 04:07	James H Place	1
07786	EDB Extraction	SW-846 8011	1	102050032A	07/25/2010 13:35	Edwin Ortiz	1
02923	TPH-DRO/RRO (AK) water	AK 102/103 4/08/02 modified	1	102040101A	07/27/2010 04:21	Heather E Williams	1
11185	AK DRO/ORO Waters Extraction	AK 102/AK 103 04/08/02	1	102040101A	07/24/2010 08:25	Karen R Rettew	1
06035	Lead	EPA 200.8 rev 5.4	1	102047050001A	07/26/2010 10:50	Choon Y Tian	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	102047050001	07/23/2010 11:04	James L Mertz	1

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Analysis Report

Sample Description: MW-1 Grab Water Sample
Facility# 301726
Block 10, Lot 5A - Fairbanks, AK

LLI Sample # WW 6038840
LLI Group # 1204196
Account # 11964

Project Name: 301726

Collected: 07/20/2010 09:00 by DB

Submitted: 07/22/2010 09:10
Reported: 08/24/2010 13:09
Discard: 09/24/2010

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

L5AM1 SDG#: LSK86-06

CAT No.		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	
10905	Acetone	67-64-1	N.D.	0.006	1
10905	t-Amyl methyl ether	994-05-8	N.D.	0.0005	1
10905	Benzene	71-43-2	0.15	0.0005	1
10905	Bromobenzene	108-86-1	N.D.	0.001	1
10905	Bromochloromethane	74-97-5	N.D.	0.001	1
10905	Bromodichloromethane	75-27-4	N.D.	0.001	1
10905	Bromoform	75-25-2	N.D.	0.001	1
10905	Bromomethane	74-83-9	N.D.	0.001	1
10905	2-Butanone	78-93-3	N.D.	0.003	1
10905	t-Butyl alcohol	75-65-0	N.D.	0.005	1
10905	n-Butylbenzene	104-51-8	0.004	0.001	1
10905	sec-Butylbenzene	135-98-8	0.003	0.001	1
10905	tert-Butylbenzene	98-06-6	N.D.	0.001	1
10905	Carbon Disulfide	75-15-0	N.D.	0.001	1
10905	Carbon Tetrachloride	56-23-5	N.D.	0.001	1
10905	Chlorobenzene	108-90-7	N.D.	0.0008	1
10905	Chloroethane	75-00-3	N.D.	0.001	1
10905	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	0.002	1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.				
10905	Chloroform	67-66-3	N.D.	0.0008	1
10905	Chloromethane	74-87-3	N.D.	0.001	1
10905	2-Chlorotoluene	95-49-8	N.D.	0.001	1
10905	4-Chlorotoluene	106-43-4	N.D.	0.001	1
10905	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.002	1
10905	Dibromochloromethane	124-48-1	N.D.	0.001	1
10905	1,2-Dibromoethane	106-93-4	N.D.	0.0005	1
10905	Dibromomethane	74-95-3	N.D.	0.001	1
10905	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	1
10905	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	1
10905	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	1
10905	Dichlorodifluoromethane	75-71-8	N.D.	0.002	1
10905	1,1-Dichloroethane	75-34-3	N.D.	0.001	1
10905	1,2-Dichloroethane	107-06-2	N.D.	0.0005	1
10905	1,1-Dichloroethene	75-35-4	0.003	0.0008	1
10905	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0008	1
10905	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0008	1
10905	1,2-Dichloropropane	78-87-5	N.D.	0.001	1
10905	1,3-Dichloropropane	142-28-9	N.D.	0.001	1
10905	2,2-Dichloropropane	594-20-7	N.D.	0.001	1
10905	1,1-Dichloropropene	563-58-6	N.D.	0.001	1
10905	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.001	1
10905	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.001	1
10905	Ethanol	64-17-5	N.D.	0.050	1
10905	Ethyl t-butyl ether	637-92-3	N.D.	0.0005	1
10905	Ethylbenzene	100-41-4	0.097	0.0005	1
10905	Freon 113	76-13-1	N.D.	0.002	1
10905	Hexachlorobutadiene	87-68-3	N.D.	0.002	1
10905	2-Hexanone	591-78-6	N.D.	0.003	1

Sample Description: MW-1 Grab Water Sample
Facility# 301726
Block 10, Lot 5A - Fairbanks, AK

LLI Sample # WW 6038840
LLI Group # 1204196
Account # 11964

Project Name: 301726

Collected: 07/20/2010 09:00 by DB

Submitted: 07/22/2010 09:10
Reported: 08/24/2010 13:09
Discard: 09/24/2010

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

L5AM1 SDG#: LSK86-06

CAT No.		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	
10905	di-Isopropyl ether	108-20-3	N.D.	0.0005	1
10905	Isopropylbenzene	98-82-8	0.009	0.001	1
10905	p-Isopropyltoluene	99-87-6	0.005	0.001	1
10905	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	1
10905	4-Methyl-2-pentanone	108-10-1	N.D.	0.003	1
10905	Methylene Chloride	75-09-2	N.D.	0.002	1
10905	Naphthalene	91-20-3	0.097	0.001	1
10905	n-Propylbenzene	103-65-1	0.01	0.001	1
10905	Styrene	100-42-5	N.D.	0.001	1
10905	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.001	1
10905	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.001	1
10905	Tetrachloroethene	127-18-4	N.D.	0.0008	1
10905	Toluene	108-88-3	0.32	0.005	10
10905	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.001	1
10905	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.001	1
10905	1,1,1-Trichloroethane	71-55-6	N.D.	0.0008	1
10905	1,1,2-Trichloroethane	79-00-5	N.D.	0.0008	1
10905	Trichloroethene	79-01-6	N.D.	0.001	1
10905	Trichlorofluoromethane	75-69-4	0.003	0.002	1
10905	1,2,3-Trichloropropane	96-18-4	N.D.	0.001	1
10905	1,2,4-Trimethylbenzene	95-63-6	0.12	0.001	1
10905	1,3,5-Trimethylbenzene	108-67-8	0.053	0.001	1
10905	Vinyl Chloride	75-01-4	N.D.	0.001	1
10905	m+p-Xylene	n.a.	0.49	0.0005	1
10905	o-Xylene	95-47-6	0.24	0.0005	1
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/l**	**mg/l**	
08357	Acenaphthene	83-32-9	0.014	0.00096	100
08357	Acenaphthylene	208-96-8	0.0034	0.00096	100
08357	Anthracene	120-12-7	0.0019	0.00096	100
08357	Benzo(a)anthracene	56-55-3	0.0018	0.00096	100
08357	Benzo(a)pyrene	50-32-8	N.D.	0.00096	100
08357	Benzo(b)fluoranthene	205-99-2	0.0014	0.00096	100
08357	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00096	100
08357	Benzo(k)fluoranthene	207-08-9	N.D.	0.00096	100
08357	Chrysene	218-01-9	0.0014	0.00096	100
08357	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00096	100
08357	Fluoranthene	206-44-0	0.0074	0.00096	100
08357	Fluorene	86-73-7	0.012	0.00096	100
08357	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00096	100
08357	Naphthalene	91-20-3	0.34	0.00096	100
08357	Phenanthrene	85-01-8	0.014	0.00096	100
08357	Pyrene	129-00-0	0.0073	0.00096	100
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	
01440	TPH-GRO AK water C6-C10	n.a.	4.7	0.010	1
GC Volatiles	**SW-846 8021B**		**mg/l**	**mg/l**	

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Analysis Report

Sample Description: MW-1 Grab Water Sample
Facility# 301726
Block 10, Lot 5A - Fairbanks, AK

LLI Sample # WW 6038840
LLI Group # 1204196
Account # 11964

Project Name: 301726

Collected: 07/20/2010 09:00 by DB

Submitted: 07/22/2010 09:10
Reported: 08/24/2010 13:09
Discard: 09/24/2010

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

L5AM1 SDG#: LSK86-06

CAT No.		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	**SW-846 8021B**		**mg/l**	**mg/l**	
01588	Benzene	71-43-2	0.10	0.0005	1
01588	Ethylbenzene	100-41-4	0.065	0.0005	1
01588	Toluene	108-88-3	0.24	0.0005	1
01588	Total xylenes	1330-20-7	0.44	0.0015	1
GC Miscellaneous	**SW-846 8011**		**mg/l**	**mg/l**	
07879	Ethylene dibromide	106-93-4	N.D.	0.0000097	1
GC Extractable TPH	**AK 102/103 4/08/02 modified**		**mg/l**	**mg/l**	
02923	C10-<C25 DRO	n.a.	79	4.7	100
02923	C25-C36 RRO	n.a.	N.D.	6.6	100
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	
06035	Lead	7439-92-1	0.0098	0.000050	1

General Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10905	8260 Full List w/ Sep. Xylenes	SW-846 8260B	1	W102072AA	07/26/2010 18:58	Emily R Styer	1
10905	8260 Full List w/ Sep. Xylenes	SW-846 8260B	1	W102072AA	07/26/2010 19:21	Emily R Styer	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W102072AA	07/26/2010 18:58	Emily R Styer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	W102072AA	07/26/2010 19:21	Emily R Styer	10
08357	PAHs in waters by SIM	SW-846 8270C SIM	1	10205WAD026	08/21/2010 09:50	Joseph M Gambler	100
10470	BNA Water Extraction (SIM)	SW-846 3510C	1	10205WAD026	07/25/2010 06:30	Olivia Arosemena	1
01440	TPH-GRO AK water C6-C10	AK 101	1	10206A53A	07/26/2010 20:18	Carrie E Miller	1
01146	GC VOA Water Prep	SW-846 5030B	1	10206A53A	07/26/2010 20:18	Carrie E Miller	1
01588	BTEX	SW-846 8021B	1	10206A53A	07/26/2010 20:18	Carrie E Miller	1
07879	EDB in Wastewater	SW-846 8011	1	102050032A	07/27/2010 04:36	James H Place	1
07786	EDB Extraction	SW-846 8011	1	102050032A	07/25/2010 13:35	Edwin Ortiz	1
02923	TPH-DRO/RRO (AK) water	AK 102/103 4/08/02 modified	1	102040101A	07/27/2010 16:05	Heather E Williams	100
11185	AK DRO/ORO Waters Extraction	AK 102/AK 103 04/08/02	1	102040101A	07/24/2010 08:25	Karen R Rettew	1
06035	Lead	EPA 200.8 rev 5.4	1	102047050001A	07/26/2010 10:52	Choon Y Tian	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	102047050001	07/23/2010 11:04	James L Mertz	1

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Analysis Report

Sample Description: BD-1 Grab Water Sample
Facility# 301726
Block 10, Lot 5A - Fairbanks, AK

LLI Sample # WW 6038841
LLI Group # 1204196
Account # 11964

Project Name: 301726

Collected: 07/20/2010 by DB

Submitted: 07/22/2010 09:10
Reported: 08/24/2010 13:09
Discard: 09/24/2010

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

L5ABD SDG#: LSK86-07FD

CAT No.			CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles		**AK 101**		**mg/l**	**mg/l**	
01440	TPH-GRO AK water C6-C10		n.a.	4.8	0.010	1
GC Volatiles		**SW-846 8021B**		**mg/l**	**mg/l**	
01588	Benzene		71-43-2	0.10	0.0005	1
01588	Ethylbenzene		100-41-4	0.066	0.0005	1
01588	Toluene		108-88-3	0.24	0.0005	1
01588	Total xylenes		1330-20-7	0.44	0.0015	1
GC Extractable TPH		**AK 102/103 4/08/02 modified**		**mg/l**	**mg/l**	
02923	C10-<C25 DRO		n.a.	54	4.8	100
02923	C25-C36 RRO		n.a.	N.D.	6.7	100

General Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01440	TPH-GRO AK water C6-C10	AK 101	1	10206A53A	07/26/2010 20:42	Carrie E Miller	1
01146	GC VOA Water Prep	SW-846 5030B	1	10206A53A	07/26/2010 20:42	Carrie E Miller	1
01588	BTEX	SW-846 8021B	1	10206A53A	07/26/2010 20:42	Carrie E Miller	1
02923	TPH-DRO/RRO (AK) water	AK 102/103 4/08/02 modified	1	102040101A	07/27/2010 16:32	Heather E Williams	100
11185	AK DRO/ORO Waters Extraction	AK 102/AK 103 04/08/02	1	102040101A	07/24/2010 08:25	Karen R Rettew	1

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Analysis Report

Sample Description: MW-5 Grab Water Sample
Facility# 301726
Block 10, Lot 5A - Fairbanks, AK

LLI Sample # WW 6038842
LLI Group # 1204196
Account # 11964

Project Name: 301726

Collected: 07/20/2010 09:40 by DB

Submitted: 07/22/2010 09:10
Reported: 08/24/2010 13:09
Discard: 09/24/2010

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

L5AM5 SDG#: LSK86-08*

CAT No.		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	
10905	Acetone	67-64-1	N.D.	0.006	1
10905	t-Amyl methyl ether	994-05-8	N.D.	0.0005	1
10905	Benzene	71-43-2	N.D.	0.0005	1
10905	Bromobenzene	108-86-1	N.D.	0.001	1
10905	Bromochloromethane	74-97-5	N.D.	0.001	1
10905	Bromodichloromethane	75-27-4	N.D.	0.001	1
10905	Bromoform	75-25-2	N.D.	0.001	1
10905	Bromomethane	74-83-9	N.D.	0.001	1
10905	2-Butanone	78-93-3	N.D.	0.003	1
10905	t-Butyl alcohol	75-65-0	N.D.	0.005	1
10905	n-Butylbenzene	104-51-8	N.D.	0.001	1
10905	sec-Butylbenzene	135-98-8	N.D.	0.001	1
10905	tert-Butylbenzene	98-06-6	N.D.	0.001	1
10905	Carbon Disulfide	75-15-0	N.D.	0.001	1
10905	Carbon Tetrachloride	56-23-5	N.D.	0.001	1
10905	Chlorobenzene	108-90-7	N.D.	0.0008	1
10905	Chloroethane	75-00-3	N.D.	0.001	1
10905	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	0.002	1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.				
10905	Chloroform	67-66-3	N.D.	0.0008	1
10905	Chloromethane	74-87-3	N.D.	0.001	1
10905	2-Chlorotoluene	95-49-8	N.D.	0.001	1
10905	4-Chlorotoluene	106-43-4	N.D.	0.001	1
10905	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.002	1
10905	Dibromochloromethane	124-48-1	N.D.	0.001	1
10905	1,2-Dibromoethane	106-93-4	N.D.	0.0005	1
10905	Dibromomethane	74-95-3	N.D.	0.001	1
10905	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	1
10905	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	1
10905	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	1
10905	Dichlorodifluoromethane	75-71-8	N.D.	0.002	1
10905	1,1-Dichloroethane	75-34-3	N.D.	0.001	1
10905	1,2-Dichloroethane	107-06-2	N.D.	0.0005	1
10905	1,1-Dichloroethene	75-35-4	0.002	0.0008	1
10905	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0008	1
10905	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0008	1
10905	1,2-Dichloropropane	78-87-5	N.D.	0.001	1
10905	1,3-Dichloropropane	142-28-9	N.D.	0.001	1
10905	2,2-Dichloropropane	594-20-7	N.D.	0.001	1
10905	1,1-Dichloropropene	563-58-6	N.D.	0.001	1
10905	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.001	1
10905	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.001	1
10905	Ethanol	64-17-5	N.D.	0.050	1
10905	Ethyl t-butyl ether	637-92-3	N.D.	0.0005	1
10905	Ethylbenzene	100-41-4	N.D.	0.0005	1
10905	Freon 113	76-13-1	N.D.	0.002	1
10905	Hexachlorobutadiene	87-68-3	N.D.	0.002	1
10905	2-Hexanone	591-78-6	N.D.	0.003	1

Sample Description: MW-5 Grab Water Sample
Facility# 301726
Block 10, Lot 5A - Fairbanks, AK

LLI Sample # WW 6038842
LLI Group # 1204196
Account # 11964

Project Name: 301726

Collected: 07/20/2010 09:40 by DB

Submitted: 07/22/2010 09:10
Reported: 08/24/2010 13:09
Discard: 09/24/2010

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

L5AM5 SDG#: LSK86-08*

CAT No.		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	
10905	di-Isopropyl ether	108-20-3	N.D.	0.0005	1
10905	Isopropylbenzene	98-82-8	N.D.	0.001	1
10905	p-Isopropyltoluene	99-87-6	N.D.	0.001	1
10905	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	1
10905	4-Methyl-2-pentanone	108-10-1	N.D.	0.003	1
10905	Methylene Chloride	75-09-2	N.D.	0.002	1
10905	Naphthalene	91-20-3	N.D.	0.001	1
10905	n-Propylbenzene	103-65-1	N.D.	0.001	1
10905	Styrene	100-42-5	N.D.	0.001	1
10905	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.001	1
10905	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.001	1
10905	Tetrachloroethene	127-18-4	N.D.	0.0008	1
10905	Toluene	108-88-3	N.D.	0.0005	1
10905	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.001	1
10905	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.001	1
10905	1,1,1-Trichloroethane	71-55-6	N.D.	0.0008	1
10905	1,1,2-Trichloroethane	79-00-5	N.D.	0.0008	1
10905	Trichloroethene	79-01-6	N.D.	0.001	1
10905	Trichlorofluoromethane	75-69-4	0.006	0.002	1
10905	1,2,3-Trichloropropane	96-18-4	N.D.	0.001	1
10905	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	1
10905	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.001	1
10905	Vinyl Chloride	75-01-4	N.D.	0.001	1
10905	m+p-Xylene	n.a.	N.D.	0.0005	1
10905	o-Xylene	95-47-6	N.D.	0.0005	1
GC Volatiles	**AK 101**		**mg/l**	**mg/l**	
01440	TPH-GRO AK water C6-C10	n.a.	N.D.	0.010	1
GC Volatiles	**SW-846 8021B**		**mg/l**	**mg/l**	
01588	Benzene	71-43-2	N.D.	0.0005	1
01588	Ethylbenzene	100-41-4	N.D.	0.0005	1
01588	Toluene	108-88-3	N.D.	0.0005	1
01588	Total xylenes	1330-20-7	N.D.	0.0015	1
GC Extractable TPH	**AK 102/103 4/08/02 modified**		**mg/l**	**mg/l**	
02923	C10-<C25 DRO	n.a.	0.11	0.048	1
02923	C25-C36 RRO	n.a.	0.18	0.068	1
Metals	**EPA 200.8 rev 5.4**		**mg/l**	**mg/l**	
06035	Lead	7439-92-1	0.0208	0.000050	1

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Analysis Report

Sample Description: MW-5 Grab Water Sample
Facility# 301726
Block 10, Lot 5A - Fairbanks, AK

LLI Sample # WW 6038842
LLI Group # 1204196
Account # 11964

Project Name: 301726

Collected: 07/20/2010 09:40 by DB

Submitted: 07/22/2010 09:10
Reported: 08/24/2010 13:09
Discard: 09/24/2010

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

L5AM5 SDG#: LSK86-08*

General Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10905	8260 Full List w/ Sep. Xylenes	SW-846 8260B	1	W102072AA	07/26/2010 19:44	Emily R Styer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W102072AA	07/26/2010 19:44	Emily R Styer	1
01440	TPH-GRO AK water C6-C10	AK 101	1	10206A53A	07/26/2010 21:07	Carrie E Miller	1
01146	GC VOA Water Prep	SW-846 5030B	1	10206A53A	07/26/2010 21:07	Carrie E Miller	1
01588	BTEX	SW-846 8021B	1	10206A53A	07/26/2010 21:07	Carrie E Miller	1
02923	TPH-DRO/RRO (AK) water	AK 102/103 4/08/02 modified	1	102040101A	07/27/2010 16:59	Heather E Williams	1
11185	AK DRO/ORO Waters Extraction	AK 102/AK 103 04/08/02	1	102040101A	07/24/2010 08:25	Karen R Rettew	1
06035	Lead	EPA 200.8 rev 5.4	1	102047050001A	07/26/2010 10:53	Choon Y Tian	1
07050	ICP/MS EPA-600 Digest	EPA 200.8 rev 5.4	1	102047050001	07/23/2010 11:04	James L Mertz	1

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Analysis Report

Quality Control Summary

Client Name: Chevron Group Number: 1204196
Reported: 08/24/10 at 01:09 PM

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W102072AA	Sample number(s): 6038839-6038840,6038842							
Acetone	N.D.	0.006	mg/l	99		49-234		
t-Amyl methyl ether	N.D.	0.0005	mg/l	89		77-120		
Benzene	N.D.	0.0005	mg/l	100		79-120		
Bromobenzene	N.D.	0.001	mg/l	97		80-120		
Bromochloromethane	N.D.	0.001	mg/l	90		80-120		
Bromodichloromethane	N.D.	0.001	mg/l	105		80-120		
Bromoform	N.D.	0.001	mg/l	91		61-120		
Bromomethane	N.D.	0.001	mg/l	69		44-120		
2-Butanone	N.D.	0.003	mg/l	95		66-151		
t-Butyl alcohol	N.D.	0.005	mg/l	106		73-120		
n-Butylbenzene	N.D.	0.001	mg/l	91		74-120		
sec-Butylbenzene	N.D.	0.001	mg/l	90		78-120		
tert-Butylbenzene	N.D.	0.001	mg/l	85		80-120		
Carbon Disulfide	N.D.	0.001	mg/l	94		62-120		
Carbon Tetrachloride	N.D.	0.001	mg/l	100		75-123		
Chlorobenzene	N.D.	0.0008	mg/l	99		80-120		
Chloroethane	N.D.	0.001	mg/l	68		49-129		
2-Chloroethyl Vinyl Ether	N.D.	0.002	mg/l	80		56-129		
Chloroform	N.D.	0.0008	mg/l	104		77-122		
Chloromethane	N.D.	0.001	mg/l	81		60-129		
2-Chlorotoluene	N.D.	0.001	mg/l	93		80-120		
4-Chlorotoluene	N.D.	0.001	mg/l	95		80-120		
1,2-Dibromo-3-chloropropane	N.D.	0.002	mg/l	87		66-120		
Dibromochloromethane	N.D.	0.001	mg/l	98		80-120		
1,2-Dibromoethane	N.D.	0.0005	mg/l	99		80-120		
Dibromomethane	N.D.	0.001	mg/l	100		80-120		
1,2-Dichlorobenzene	N.D.	0.001	mg/l	97		80-120		
1,3-Dichlorobenzene	N.D.	0.001	mg/l	97		80-120		
1,4-Dichlorobenzene	N.D.	0.001	mg/l	98		80-120		
Dichlorodifluoromethane	N.D.	0.002	mg/l	82		54-152		
1,1-Dichloroethane	N.D.	0.001	mg/l	101		79-120		
1,2-Dichloroethane	N.D.	0.0005	mg/l	109		70-130		
1,1-Dichloroethene	N.D.	0.0008	mg/l	99		74-123		
cis-1,2-Dichloroethene	N.D.	0.0008	mg/l	97		80-120		
trans-1,2-Dichloroethene	N.D.	0.0008	mg/l	97		80-120		
1,2-Dichloropropane	N.D.	0.001	mg/l	101		78-120		
1,3-Dichloropropane	N.D.	0.001	mg/l	101		80-120		
2,2-Dichloropropane	N.D.	0.001	mg/l	102		77-124		
1,1-Dichloropropene	N.D.	0.001	mg/l	95		80-120		
cis-1,3-Dichloropropene	N.D.	0.001	mg/l	99		80-120		
trans-1,3-Dichloropropene	N.D.	0.001	mg/l	104		79-120		
Ethanol	N.D.	0.050	mg/l	121		40-158		
Ethyl t-butyl ether	N.D.	0.0005	mg/l	89		76-120		
Ethylbenzene	N.D.	0.0005	mg/l	98		79-120		
Freon 113	N.D.	0.002	mg/l	93		69-128		
Hexachlorobutadiene	N.D.	0.002	mg/l	71		58-120		

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron Group Number: 1204196
Reported: 08/24/10 at 01:09 PM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2-Hexanone	N.D.	0.003	mg/l	90		65-136		
di-Isopropyl ether	N.D.	0.0005	mg/l	98		71-124		
Isopropylbenzene	N.D.	0.001	mg/l	91		77-120		
p-Isopropyltoluene	N.D.	0.001	mg/l	88		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.0005	mg/l	97		76-120		
4-Methyl-2-pentanone	N.D.	0.003	mg/l	87		70-121		
Methylene Chloride	N.D.	0.002	mg/l	104		80-120		
Naphthalene	N.D.	0.001	mg/l	72		62-120		
n-Propylbenzene	N.D.	0.001	mg/l	101		80-120		
Styrene	N.D.	0.001	mg/l	99		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.001	mg/l	96		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.001	mg/l	99		71-120		
Tetrachloroethene	N.D.	0.0008	mg/l	95		80-121		
Toluene	N.D.	0.0005	mg/l	101		79-120		
1,2,3-Trichlorobenzene	N.D.	0.001	mg/l	73		65-120		
1,2,4-Trichlorobenzene	N.D.	0.001	mg/l	73		67-120		
1,1,1-Trichloroethane	N.D.	0.0008	mg/l	105		75-127		
1,1,2-Trichloroethane	N.D.	0.0008	mg/l	103		80-120		
Trichloroethene	N.D.	0.001	mg/l	100		80-120		
Trichlorofluoromethane	N.D.	0.002	mg/l	91		64-129		
1,2,3-Trichloropropane	N.D.	0.001	mg/l	96		80-120		
1,2,4-Trimethylbenzene	N.D.	0.001	mg/l	96		74-120		
1,3,5-Trimethylbenzene	N.D.	0.001	mg/l	94		75-120		
Vinyl Chloride	N.D.	0.001	mg/l	80		59-120		
m+p-Xylene	N.D.	0.0005	mg/l	98		80-120		
o-Xylene	N.D.	0.0005	mg/l	92		80-120		
Batch number: 10205WAD026	Sample number(s): 6038839-6038840							
Acenaphthene	N.D.	0.00001 0	mg/l	90	89	74-109	2	30
Acenaphthylene	N.D.	0.00001 0	mg/l	100	95	70-110	5	30
Anthracene	N.D.	0.00001 0	mg/l	90	86	66-111	5	30
Benzo(a)anthracene	N.D.	0.00001 0	mg/l	88	88	72-114	0	30
Benzo(a)pyrene	N.D.	0.00001 0	mg/l	88	86	64-115	2	30
Benzo(b)fluoranthene	N.D.	0.00001 0	mg/l	87	90	69-123	4	30
Benzo(g,h,i)perylene	N.D.	0.00001 0	mg/l	91	92	68-125	2	30
Benzo(k)fluoranthene	N.D.	0.00001 0	mg/l	87	84	72-122	3	30
Chrysene	N.D.	0.00001 0	mg/l	90	90	76-116	0	30
Dibenz(a,h)anthracene	N.D.	0.00001 0	mg/l	93	94	71-125	2	30
Fluoranthene	N.D.	0.00001 0	mg/l	89	90	75-116	1	30
Fluorene	N.D.	0.00001 0	mg/l	93	92	75-114	2	30
Indeno(1,2,3-cd)pyrene	N.D.	0.00001 0	mg/l	89	91	69-124	2	30
Naphthalene	N.D.	0.00001	mg/l	81	80	72-109	1	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron Group Number: 1204196
Reported: 08/24/10 at 01:09 PM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Phenanthrene	N.D.	0.00001 0	mg/l	89	88	76-111	0	30
Pyrene	N.D.	0.00001 0	mg/l	95	94	69-118	1	30
Batch number: 10206A53A	Sample number(s): 6038835-6038842							
Benzene	N.D.	0.0005	mg/l	105	115	80-120	9	30
Ethylbenzene	N.D.	0.0005	mg/l	100	115	80-120	14	30
Toluene	N.D.	0.0005	mg/l	105	115	80-120	9	30
TPH-GRO AK water C6-C10	N.D.	0.010	mg/l	100	109	60-120	9	20
Total xylenes	N.D.	0.0015	mg/l	103	115	80-120	11	30
Batch number: 102050032A	Sample number(s): 6038839-6038840							
Ethylene dibromide	N.D.	0.00001 0	mg/l	104	100	60-140	4	20
Batch number: 102040101A	Sample number(s): 6038836-6038842							
C10-<C25 DRO	N.D.	0.050	mg/l	96	96	75-125	0	20
C25-C36 RRO	N.D.	0.070	mg/l	100	108	60-120	8	20
Batch number: 102047050001A	Sample number(s): 6038836-6038840,6038842							
Lead	N.D.	0.00005 0	mg/l	101		85-115		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: W102072AA	Sample number(s): 6038839-6038840,6038842 UNSPK: P038735								
Acetone	88	86	52-139	3	30				
t-Amyl methyl ether	95	98	75-122	3	30				
Benzene	108	108	80-126	1	30				
Bromobenzene	103	101	82-115	2	30				
Bromochloromethane	95	95	83-123	1	30				
Bromodichloromethane	109	111	78-125	2	30				
Bromoform	90	92	60-121	2	30				
Bromomethane	68	69	38-149	2	30				
2-Butanone	89	90	57-138	0	30				
t-Butyl alcohol	102	103	67-119	1	30				
n-Butylbenzene	98	96	73-128	1	30				
sec-Butylbenzene	102	100	79-125	2	30				
tert-Butylbenzene	101	100	81-121	1	30				
Carbon Disulfide	110	110	67-135	0	30				
Carbon Tetrachloride	112	112	81-138	0	30				
Chlorobenzene	103	104	87-124	1	30				
Chloroethane	72	76	51-145	5	30				
2-Chloroethyl Vinyl Ether	0*	0*	10-151	0	30				
Chloroform	111	110	81-134	1	30				

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron Group Number: 1204196
Reported: 08/24/10 at 01:09 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Chloromethane	82	88	67-154	7	30				
2-Chlorotoluene	102	98	82-118	3	30				
4-Chlorotoluene	102	102	84-122	0	30				
1,2-Dibromo-3-chloropropane	99	98	66-121	2	30				
Dibromochloromethane	98	100	74-116	1	30				
1,2-Dibromoethane	100	100	77-116	0	30				
Dibromomethane	103	102	83-119	1	30				
1,2-Dichlorobenzene	101	101	84-119	0	30				
1,3-Dichlorobenzene	102	102	86-121	0	30				
1,4-Dichlorobenzene	102	101	85-121	1	30				
Dichlorodifluoromethane	95	94	64-163	1	30				
1,1-Dichloroethane	106	106	84-129	0	30				
1,2-Dichloroethane	113	114	66-141	1	30				
1,1-Dichloroethene	113	114	85-142	1	30				
cis-1,2-Dichloroethene	104	105	85-125	1	30				
trans-1,2-Dichloroethene	108	108	87-126	1	30				
1,2-Dichloropropane	107	108	83-124	1	30				
1,3-Dichloropropane	102	102	81-120	0	30				
2,2-Dichloropropane	115	116	81-135	0	30				
1,1-Dichloropropene	109	109	86-137	0	30				
cis-1,3-Dichloropropene	104	104	75-125	0	30				
trans-1,3-Dichloropropene	107	106	74-119	1	30				
Ethanol	123	114	37-164	7	30				
Ethyl t-butyl ether	96	99	74-122	3	30				
Ethylbenzene	103	104	71-134	1	30				
Freon 113	113	111	89-148	2	30				
Hexachlorobutadiene	78	82	56-134	5	30				
2-Hexanone	87	87	55-127	0	30				
di-Isopropyl ether	103	104	70-129	1	30				
Isopropylbenzene	103	102	75-128	1	30				
p-Isopropyltoluene	95	94	76-123	1	30				
Methyl Tertiary Butyl Ether	99	100	72-126	1	30				
4-Methyl-2-pentanone	87	87	63-123	1	30				
Methylene Chloride	101	101	79-120	0	30				
Naphthalene	67	68	52-125	1	30				
n-Propylbenzene	109	108	74-134	1	30				
Styrene	105	106	60-140	1	30				
1,1,1,2-Tetrachloroethane	98	101	82-119	3	30				
1,1,2,2-Tetrachloroethane	105	101	73-119	4	30				
Tetrachloroethene	106	107	80-128	1	30				
Toluene	108	109	80-125	1	30				
1,2,3-Trichlorobenzene	86	87	57-122	0	30				
1,2,4-Trichlorobenzene	89	90	60-122	1	30				
1,1,1-Trichloroethane	115	117	80-143	1	30				
1,1,2-Trichloroethane	106	108	77-124	2	30				
Trichloroethene	112	111	88-133	1	30				
Trichlorofluoromethane	104	104	73-152	0	30				
1,2,3-Trichloropropane	99	98	76-118	2	30				
1,2,4-Trimethylbenzene	63*	68*	72-130	2	30				
1,3,5-Trimethylbenzene	71*	70*	72-131	0	30				
Vinyl Chloride	90	92	66-133	2	30				
m+p-Xylene	87	88	79-125	1	30				
o-Xylene	92	92	79-125	1	30				

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron Group Number: 1204196
Reported: 08/24/10 at 01:09 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 10206A53A	Sample number(s): 6038835-6038842 UNSPK: 6038837, 6038838								
Benzene	115		80-152						
Ethylbenzene	120		80-133						
Toluene	120		80-133						
TPH-GRO AK water C6-C10	107		60-120						
Total xylenes	122		80-148						
Batch number: 102050032A	Sample number(s): 6038839-6038840 UNSPK: P039477 BKG: P039482								
Ethylene dibromide	96		65-135			N.D.	N.D.	0 (1)	30
Batch number: 102047050001A	Sample number(s): 6038836-6038840,6038842 UNSPK: P036528 BKG: P036528								
Lead	102		70-130			0.0013	0.0013	4 (1)	20

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs by 8260B(Extended) -Water
Batch number: W102072AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6038839	101	101	98	96
6038840	98	99	103	101
6038842	100	101	98	95
Blank	103	105	98	92
LCS	98	102	104	103
MS	97	100	101	105
MSD	99	99	102	104
Limits:	80-116	77-113	80-113	78-113

Analysis Name: PAHs in waters by SIM
Batch number: 10205WAD026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6038839	93	92	77
6038840	4143*	374*	86
Blank	87	84	88
LCS	89	86	90
LCSD	87	86	90
Limits:	64-147	68-132	53-129

Analysis Name: TPH-GRO AK water C6-C10
Batch number: 10206A53A

	Trifluorotoluene-F	Trifluorotoluene-P
6038835	78	87

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron Group Number: 1204196
Reported: 08/24/10 at 01:09 PM

Surrogate Quality Control

6038836	79	89
6038837	78	88
6038838	78	88
6038839	79	88
6038840	83	65
6038841	83	63
6038842	77	88
Blank	78	88
LCS	90	89
LCSD	92	90
MS	92	87
Limits:	60-120	58-146

Analysis Name: EDB in Wastewater
Batch number: 102050032A

	1,1,2,2-Tetrachloroethane
6038839	83
6038840	71
Blank	103
DUP	71
LCS	109
LCSD	105
MS	91
Limits:	46-136

Analysis Name: TPH-DRO/RRO (AK) water
Batch number: 102040101A

	Orthoterphenyl	n-Triacontane-d62
6038836	85	103
6038837	85	107
6038838	87	105
6038839	87	91
6038840	118	128
6038841	108	120
6038842	87	87
Blank	93	113
LCS	95	106
LCSD	98	109
Limits:	50-150	50-150

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Chevron Generic Analysis Request/Chain of Custody

Lancaster Laboratories
Where quality is a science.

1 of 1

For Lancaster Laboratories use only
Acct. #: 11964 Sample #: 6038835-42 SCR#: 011546
Group# 1204196

Facility #: 301726
Site Address: FIA Texaco
Chevron PM: Amy Gilpin Lead Consultant: ARCADIS
Consultant/Office: Seattle WA
Consultant Prj. Mgr.: Gregory Montgomery
Consultant Phone #: 206 726 4772 Fax #:
Sampler: D Benbow
Service Order #: MWRTB-301726-J ☐ NPW ☐ SAR:

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Matrix: Water	Matrix: Oil ☐ Air ☐	Total Number of Containers	Preservation: H		H	H		N			H	O		Analyses Requested
						Potable ☐ NPDES ☐			BTEX + MTBE 8021 ☒ 8260 ☐ Naphth ☐	8260 full scan	Oxygenates	TPH6	TPH D ☐ Extended Rng. ☐ Silica Gel Cleanup	Lead Total ☒ Diss. ☐ Method 200.8	VPH/EPH	NWTPH H HCID ☐ quantification	AK103 RRO	EDB 8011	PAH 8270	
Trip Blank	7/19/10	—	X			X		2	X		X									
MW-6	7/19/10	9:25	X			X		6	X		X	X		X			X			
MW-4	7/19/10	9:50	X			X		6	X		X	X		X			X			
MW-2	7/19/10	9:40	X			X		6	X		X	X		X			X			
MW-3	7/19/10	11:55	X			X		8	X	X	X	X		X			X	X	X	
MW-1	7/20/10	9:00	X			X		12	X	X	X	X		X			X	X	X	
BD-1	7/20/10	—	X			X		2	X		X	X					X			
MW-5	7/20/10	9:40	X			X		6	X	X	X	X		X			X			

Preservative Codes
H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 O = Other

☐ J value reporting needed
☐ Must meet lowest detection limits possible for 8260 compounds

8021 MTBE Confirmation
☐ Confirm MTBE + Naphthalene
☐ Confirm highest hit by 8260
☐ Confirm all hits by 8260
☐ Run ____ oxy's on highest hit
☐ Run ____ oxy's on all hits

Comments / Remarks
O = Sodium Thiosulfate

Turnaround Time Requested (TAT) (please circle)
STD. TAT 72 hour 48 hour
24 hour 4 day 5 day

Data Package Options (please circle if required)
QC Summary Type I - Full
Type VI (Raw Data) Disk / EDD
WIP (RWQCB) Standard Format
Disk _____ Other.

	Date	Time		Date	Time
Relinquished by:	7/21/10	10:30	Received by:		
Relinquished by:			Received by:		
Relinquished by:			Received by:		
Relinquished by Commercial Carrier: UPS FedEx Other			Received by:	7/22/10	0910
Temperature Upon Receipt 2.7-3.1 C°			Custody Seals Intact? Yes No		

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

August 03, 2010

Project: 301726

Submittal Date: 07/24/2010
Group Number: 1204545
PO Number: 0015060864
Release Number: CARRIER
State of Sample Origin: AK

Client Sample Description	Lancaster Labs (LLI) #
MW-2 Grab Water Sample	6041547
MW-4 Grab Water Sample	6041548
MW-6 Grab Water Sample	6041549
Trip_Blank Water Sample	6041550

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Arcadis	Attn: Greg Montgomery
ELECTRONIC COPY TO	Arcadis	Attn: Russ Greisler
1 COPY TO	Data Package Group	

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: MW-2 Grab Water Sample
Facility# 301726
Block 10, Lot 5A - Fairbanks, AK

LLI Sample # WW 6041547
LLI Group # 1204545
Account # 11964

Project Name: 301726

Collected: 07/22/2010 17:50 by DB

Submitted: 07/24/2010 09:30
Reported: 08/03/2010 14:57
Discard: 09/03/2010

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

5AF02 SDG#: LSK89-01

CAT No.		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	
10905	Acetone	67-64-1	N.D.	0.006	1
10905	t-Amyl methyl ether	994-05-8	N.D.	0.0005	1
10905	Benzene	71-43-2	0.0008	0.0005	1
10905	Bromobenzene	108-86-1	N.D.	0.001	1
10905	Bromochloromethane	74-97-5	N.D.	0.001	1
10905	Bromodichloromethane	75-27-4	N.D.	0.001	1
10905	Bromoform	75-25-2	N.D.	0.001	1
10905	Bromomethane	74-83-9	N.D.	0.001	1
10905	2-Butanone	78-93-3	N.D.	0.003	1
10905	t-Butyl alcohol	75-65-0	N.D.	0.005	1
10905	n-Butylbenzene	104-51-8	N.D.	0.001	1
10905	sec-Butylbenzene	135-98-8	N.D.	0.001	1
10905	tert-Butylbenzene	98-06-6	N.D.	0.001	1
10905	Carbon Disulfide	75-15-0	N.D.	0.001	1
10905	Carbon Tetrachloride	56-23-5	N.D.	0.001	1
10905	Chlorobenzene	108-90-7	N.D.	0.0008	1
10905	Chloroethane	75-00-3	N.D.	0.001	1
10905	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	0.002	1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.				
10905	Chloroform	67-66-3	N.D.	0.0008	1
10905	Chloromethane	74-87-3	N.D.	0.001	1
10905	2-Chlorotoluene	95-49-8	N.D.	0.001	1
10905	4-Chlorotoluene	106-43-4	N.D.	0.001	1
10905	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.002	1
10905	Dibromochloromethane	124-48-1	N.D.	0.001	1
10905	1,2-Dibromoethane	106-93-4	N.D.	0.0005	1
10905	Dibromomethane	74-95-3	N.D.	0.001	1
10905	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	1
10905	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	1
10905	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	1
10905	Dichlorodifluoromethane	75-71-8	N.D.	0.002	1
10905	1,1-Dichloroethane	75-34-3	N.D.	0.001	1
10905	1,2-Dichloroethane	107-06-2	N.D.	0.0005	1
10905	1,1-Dichloroethene	75-35-4	0.002	0.0008	1
10905	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0008	1
10905	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0008	1
10905	1,2-Dichloropropane	78-87-5	N.D.	0.001	1
10905	1,3-Dichloropropane	142-28-9	N.D.	0.001	1
10905	2,2-Dichloropropane	594-20-7	N.D.	0.001	1
10905	1,1-Dichloropropene	563-58-6	N.D.	0.001	1
10905	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.001	1
10905	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.001	1
10905	Ethanol	64-17-5	N.D.	0.050	1
10905	Ethyl t-butyl ether	637-92-3	N.D.	0.0005	1
10905	Ethylbenzene	100-41-4	0.001	0.0005	1
10905	Freon 113	76-13-1	N.D.	0.002	1
10905	Hexachlorobutadiene	87-68-3	N.D.	0.002	1
10905	2-Hexanone	591-78-6	N.D.	0.003	1

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Analysis Report

Sample Description: MW-2 Grab Water Sample
Facility# 301726
Block 10, Lot 5A - Fairbanks, AK

LLI Sample # WW 6041547
LLI Group # 1204545
Account # 11964

Project Name: 301726

Collected: 07/22/2010 17:50 by DB

Submitted: 07/24/2010 09:30
Reported: 08/03/2010 14:57
Discard: 09/03/2010

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

5AF02 SDG#: LSK89-01

CAT No.		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	
10905	di-Isopropyl ether	108-20-3	N.D.	0.0005	1
10905	Isopropylbenzene	98-82-8	0.003	0.001	1
10905	p-Isopropyltoluene	99-87-6	N.D.	0.001	1
10905	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	1
10905	4-Methyl-2-pentanone	108-10-1	N.D.	0.003	1
10905	Methylene Chloride	75-09-2	N.D.	0.002	1
10905	Naphthalene	91-20-3	0.005	0.001	1
10905	n-Propylbenzene	103-65-1	N.D.	0.001	1
10905	Styrene	100-42-5	N.D.	0.001	1
10905	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.001	1
10905	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.001	1
10905	Tetrachloroethene	127-18-4	N.D.	0.0008	1
10905	Toluene	108-88-3	N.D.	0.0005	1
10905	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.001	1
10905	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.001	1
10905	1,1,1-Trichloroethane	71-55-6	N.D.	0.0008	1
10905	1,1,2-Trichloroethane	79-00-5	N.D.	0.0008	1
10905	Trichloroethene	79-01-6	N.D.	0.001	1
10905	Trichlorofluoromethane	75-69-4	0.008	0.002	1
10905	1,2,3-Trichloropropane	96-18-4	N.D.	0.001	1
10905	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	1
10905	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.001	1
10905	Vinyl Chloride	75-01-4	N.D.	0.001	1
10905	m+p-Xylene	n.a.	N.D.	0.0005	1
10905	o-Xylene	95-47-6	N.D.	0.0005	1

General Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10905	8260 Full List w/ Sep. Xylenes	SW-846 8260B	1	W102111AA	07/30/2010 18:21	Emily R Styer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W102111AA	07/30/2010 18:21	Emily R Styer	1

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Analysis Report

Sample Description: MW-4 Grab Water Sample
Facility# 301726
Block 10, Lot 5A - Fairbanks, AK

LLI Sample # WW 6041548
LLI Group # 1204545
Account # 11964

Project Name: 301726

Collected: 07/22/2010 18:00 by DB

Submitted: 07/24/2010 09:30
Reported: 08/03/2010 14:57
Discard: 09/03/2010

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

5AF04 SDG#: LSK89-02

CAT No.		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	
10905	Acetone	67-64-1	N.D.	0.006	1
10905	t-Amyl methyl ether	994-05-8	N.D.	0.0005	1
10905	Benzene	71-43-2	N.D.	0.0005	1
10905	Bromobenzene	108-86-1	N.D.	0.001	1
10905	Bromochloromethane	74-97-5	N.D.	0.001	1
10905	Bromodichloromethane	75-27-4	N.D.	0.001	1
10905	Bromoform	75-25-2	N.D.	0.001	1
10905	Bromomethane	74-83-9	N.D.	0.001	1
10905	2-Butanone	78-93-3	N.D.	0.003	1
10905	t-Butyl alcohol	75-65-0	N.D.	0.005	1
10905	n-Butylbenzene	104-51-8	N.D.	0.001	1
10905	sec-Butylbenzene	135-98-8	N.D.	0.001	1
10905	tert-Butylbenzene	98-06-6	N.D.	0.001	1
10905	Carbon Disulfide	75-15-0	N.D.	0.001	1
10905	Carbon Tetrachloride	56-23-5	N.D.	0.001	1
10905	Chlorobenzene	108-90-7	N.D.	0.0008	1
10905	Chloroethane	75-00-3	N.D.	0.001	1
10905	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	0.002	1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.				
10905	Chloroform	67-66-3	N.D.	0.0008	1
10905	Chloromethane	74-87-3	N.D.	0.001	1
10905	2-Chlorotoluene	95-49-8	N.D.	0.001	1
10905	4-Chlorotoluene	106-43-4	N.D.	0.001	1
10905	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.002	1
10905	Dibromochloromethane	124-48-1	N.D.	0.001	1
10905	1,2-Dibromoethane	106-93-4	N.D.	0.0005	1
10905	Dibromomethane	74-95-3	N.D.	0.001	1
10905	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	1
10905	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	1
10905	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	1
10905	Dichlorodifluoromethane	75-71-8	N.D.	0.002	1
10905	1,1-Dichloroethane	75-34-3	N.D.	0.001	1
10905	1,2-Dichloroethane	107-06-2	N.D.	0.0005	1
10905	1,1-Dichloroethene	75-35-4	0.002	0.0008	1
10905	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0008	1
10905	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0008	1
10905	1,2-Dichloropropane	78-87-5	N.D.	0.001	1
10905	1,3-Dichloropropane	142-28-9	N.D.	0.001	1
10905	2,2-Dichloropropane	594-20-7	N.D.	0.001	1
10905	1,1-Dichloropropene	563-58-6	N.D.	0.001	1
10905	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.001	1
10905	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.001	1
10905	Ethanol	64-17-5	N.D.	0.050	1
10905	Ethyl t-butyl ether	637-92-3	N.D.	0.0005	1
10905	Ethylbenzene	100-41-4	N.D.	0.0005	1
10905	Freon 113	76-13-1	N.D.	0.002	1
10905	Hexachlorobutadiene	87-68-3	N.D.	0.002	1
10905	2-Hexanone	591-78-6	N.D.	0.003	1

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Analysis Report

Sample Description: MW-4 Grab Water Sample
Facility# 301726
Block 10, Lot 5A - Fairbanks, AK

LLI Sample # WW 6041548
LLI Group # 1204545
Account # 11964

Project Name: 301726

Collected: 07/22/2010 18:00 by DB

Submitted: 07/24/2010 09:30
Reported: 08/03/2010 14:57
Discard: 09/03/2010

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

5AF04 SDG#: LSK89-02

CAT No.		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	
10905	di-Isopropyl ether	108-20-3	N.D.	0.0005	1
10905	Isopropylbenzene	98-82-8	N.D.	0.001	1
10905	p-Isopropyltoluene	99-87-6	N.D.	0.001	1
10905	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	1
10905	4-Methyl-2-pentanone	108-10-1	N.D.	0.003	1
10905	Methylene Chloride	75-09-2	N.D.	0.002	1
10905	Naphthalene	91-20-3	N.D.	0.001	1
10905	n-Propylbenzene	103-65-1	N.D.	0.001	1
10905	Styrene	100-42-5	N.D.	0.001	1
10905	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.001	1
10905	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.001	1
10905	Tetrachloroethene	127-18-4	N.D.	0.0008	1
10905	Toluene	108-88-3	N.D.	0.0005	1
10905	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.001	1
10905	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.001	1
10905	1,1,1-Trichloroethane	71-55-6	N.D.	0.0008	1
10905	1,1,2-Trichloroethane	79-00-5	N.D.	0.0008	1
10905	Trichloroethene	79-01-6	N.D.	0.001	1
10905	Trichlorofluoromethane	75-69-4	N.D.	0.002	1
10905	1,2,3-Trichloropropane	96-18-4	N.D.	0.001	1
10905	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	1
10905	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.001	1
10905	Vinyl Chloride	75-01-4	N.D.	0.001	1
10905	m+p-Xylene	n.a.	N.D.	0.0005	1
10905	o-Xylene	95-47-6	N.D.	0.0005	1

General Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10905	8260 Full List w/ Sep. Xylenes	SW-846 8260B	1	W102111AA	07/30/2010 18:44	Emily R Styer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W102111AA	07/30/2010 18:44	Emily R Styer	1

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Analysis Report

Sample Description: MW-6 Grab Water Sample
Facility# 301726
Block 10, Lot 5A - Fairbanks, AK

LLI Sample # WW 6041549
LLI Group # 1204545
Account # 11964

Project Name: 301726

Collected: 07/22/2010 18:09 by DB

Submitted: 07/24/2010 09:30
Reported: 08/03/2010 14:57
Discard: 09/03/2010

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

5AF06 SDG#: LSK89-03

CAT No.		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	
10905	Acetone	67-64-1	N.D.	0.006	1
10905	t-Amyl methyl ether	994-05-8	N.D.	0.0005	1
10905	Benzene	71-43-2	N.D.	0.0005	1
10905	Bromobenzene	108-86-1	N.D.	0.001	1
10905	Bromochloromethane	74-97-5	N.D.	0.001	1
10905	Bromodichloromethane	75-27-4	N.D.	0.001	1
10905	Bromoform	75-25-2	N.D.	0.001	1
10905	Bromomethane	74-83-9	N.D.	0.001	1
10905	2-Butanone	78-93-3	N.D.	0.003	1
10905	t-Butyl alcohol	75-65-0	N.D.	0.005	1
10905	n-Butylbenzene	104-51-8	N.D.	0.001	1
10905	sec-Butylbenzene	135-98-8	N.D.	0.001	1
10905	tert-Butylbenzene	98-06-6	N.D.	0.001	1
10905	Carbon Disulfide	75-15-0	N.D.	0.001	1
10905	Carbon Tetrachloride	56-23-5	N.D.	0.001	1
10905	Chlorobenzene	108-90-7	N.D.	0.0008	1
10905	Chloroethane	75-00-3	N.D.	0.001	1
10905	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	0.002	1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.				
10905	Chloroform	67-66-3	N.D.	0.0008	1
10905	Chloromethane	74-87-3	N.D.	0.001	1
10905	2-Chlorotoluene	95-49-8	N.D.	0.001	1
10905	4-Chlorotoluene	106-43-4	N.D.	0.001	1
10905	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	0.002	1
10905	Dibromochloromethane	124-48-1	N.D.	0.001	1
10905	1,2-Dibromoethane	106-93-4	N.D.	0.0005	1
10905	Dibromomethane	74-95-3	N.D.	0.001	1
10905	1,2-Dichlorobenzene	95-50-1	N.D.	0.001	1
10905	1,3-Dichlorobenzene	541-73-1	N.D.	0.001	1
10905	1,4-Dichlorobenzene	106-46-7	N.D.	0.001	1
10905	Dichlorodifluoromethane	75-71-8	N.D.	0.002	1
10905	1,1-Dichloroethane	75-34-3	N.D.	0.001	1
10905	1,2-Dichloroethane	107-06-2	N.D.	0.0005	1
10905	1,1-Dichloroethene	75-35-4	0.004	0.0008	1
10905	cis-1,2-Dichloroethene	156-59-2	N.D.	0.0008	1
10905	trans-1,2-Dichloroethene	156-60-5	N.D.	0.0008	1
10905	1,2-Dichloropropane	78-87-5	N.D.	0.001	1
10905	1,3-Dichloropropane	142-28-9	N.D.	0.001	1
10905	2,2-Dichloropropane	594-20-7	N.D.	0.001	1
10905	1,1-Dichloropropene	563-58-6	N.D.	0.001	1
10905	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.001	1
10905	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.001	1
10905	Ethanol	64-17-5	N.D.	0.050	1
10905	Ethyl t-butyl ether	637-92-3	N.D.	0.0005	1
10905	Ethylbenzene	100-41-4	N.D.	0.0005	1
10905	Freon 113	76-13-1	N.D.	0.002	1
10905	Hexachlorobutadiene	87-68-3	N.D.	0.002	1
10905	2-Hexanone	591-78-6	N.D.	0.003	1

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Analysis Report

Sample Description: MW-6 Grab Water Sample
Facility# 301726
Block 10, Lot 5A - Fairbanks, AK

LLI Sample # WW 6041549
LLI Group # 1204545
Account # 11964

Project Name: 301726

Collected: 07/22/2010 18:09 by DB

Submitted: 07/24/2010 09:30
Reported: 08/03/2010 14:57
Discard: 09/03/2010

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

5AF06 SDG#: LSK89-03

CAT No.		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/l**	**mg/l**	
10905	di-Isopropyl ether	108-20-3	N.D.	0.0005	1
10905	Isopropylbenzene	98-82-8	N.D.	0.001	1
10905	p-Isopropyltoluene	99-87-6	N.D.	0.001	1
10905	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	1
10905	4-Methyl-2-pentanone	108-10-1	N.D.	0.003	1
10905	Methylene Chloride	75-09-2	N.D.	0.002	1
10905	Naphthalene	91-20-3	N.D.	0.001	1
10905	n-Propylbenzene	103-65-1	N.D.	0.001	1
10905	Styrene	100-42-5	N.D.	0.001	1
10905	1,1,1,2-Tetrachloroethane	630-20-6	N.D.	0.001	1
10905	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.001	1
10905	Tetrachloroethene	127-18-4	N.D.	0.0008	1
10905	Toluene	108-88-3	N.D.	0.0005	1
10905	1,2,3-Trichlorobenzene	87-61-6	N.D.	0.001	1
10905	1,2,4-Trichlorobenzene	120-82-1	N.D.	0.001	1
10905	1,1,1-Trichloroethane	71-55-6	N.D.	0.0008	1
10905	1,1,2-Trichloroethane	79-00-5	N.D.	0.0008	1
10905	Trichloroethene	79-01-6	N.D.	0.001	1
10905	Trichlorofluoromethane	75-69-4	0.003	0.002	1
10905	1,2,3-Trichloropropane	96-18-4	N.D.	0.001	1
10905	1,2,4-Trimethylbenzene	95-63-6	N.D.	0.001	1
10905	1,3,5-Trimethylbenzene	108-67-8	N.D.	0.001	1
10905	Vinyl Chloride	75-01-4	N.D.	0.001	1
10905	m+p-Xylene	n.a.	N.D.	0.0005	1
10905	o-Xylene	95-47-6	N.D.	0.0005	1

General Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10905	8260 Full List w/ Sep. Xylenes	SW-846 8260B	1	W102111AA	07/30/2010 19:08	Emily R Styer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W102111AA	07/30/2010 19:08	Emily R Styer	1

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Jill M Parker at (717) 656-2300 Ext. 1241

Respectfully Submitted,

Martha L. Seidel
Senior Chemist

Lancaster Laboratories

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Analysis Report

Sample Description: Trip_Blank Water Sample
Facility# 301726
Block 10, Lot 5A - Fairbanks, AK

LLI Sample # WW 6041550
LLI Group # 1204545
Account # 11964

Project Name: 301726

Collected: 07/22/2010

Submitted: 07/24/2010 09:30
Reported: 08/03/2010 14:57
Discard: 09/03/2010

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

5AFTB SDG#: LSK89-04TB*

CAT No.			CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles		**AK 101**		mg/l	mg/l	
01440	TPH-GRO AK water C6-C10		n.a.	N.D.	0.010	1
GC Volatiles		**SW-846 8021B**		mg/l	mg/l	
01588	Benzene		71-43-2	N.D.	0.0005	1
01588	Ethylbenzene		100-41-4	N.D.	0.0005	1
01588	Toluene		108-88-3	N.D.	0.0005	1
01588	Total xylenes		1330-20-7	N.D.	0.0015	1

General Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01440	TPH-GRO AK water C6-C10	AK 101	1	10207A53A	07/27/2010 14:26	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	10207A53A	07/27/2010 14:26	Katrina T Longenecker	1
01588	BTEX	SW-846 8021B	1	10207A53A	07/27/2010 14:26	Katrina T Longenecker	1

Quality Control Summary

Client Name: Chevron Group Number: 1204545
Reported: 08/03/10 at 02:57 PM

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W102111AA	Sample number(s): 6041547-6041549							
Acetone	N.D.	0.006	mg/l	96		49-234		
t-Amyl methyl ether	N.D.	0.0005	mg/l	88		77-120		
Benzene	N.D.	0.0005	mg/l	96		79-120		
Bromobenzene	N.D.	0.001	mg/l	96		80-120		
Bromochloromethane	N.D.	0.001	mg/l	96		80-120		
Bromodichloromethane	N.D.	0.001	mg/l	100		80-120		
Bromoform	N.D.	0.001	mg/l	89		61-120		
Bromomethane	N.D.	0.001	mg/l	74		44-120		
2-Butanone	N.D.	0.003	mg/l	83		66-151		
t-Butyl alcohol	N.D.	0.005	mg/l	100		73-120		
n-Butylbenzene	N.D.	0.001	mg/l	89		74-120		
sec-Butylbenzene	N.D.	0.001	mg/l	90		78-120		
tert-Butylbenzene	N.D.	0.001	mg/l	85		80-120		
Carbon Disulfide	N.D.	0.001	mg/l	95		62-120		
Carbon Tetrachloride	N.D.	0.001	mg/l	98		75-123		
Chlorobenzene	N.D.	0.0008	mg/l	95		80-120		
Chloroethane	N.D.	0.001	mg/l	73		49-129		
2-Chloroethyl Vinyl Ether	N.D.	0.002	mg/l	75		56-129		
Chloroform	N.D.	0.0008	mg/l	100		77-122		
Chloromethane	N.D.	0.001	mg/l	80		60-129		
2-Chlorotoluene	N.D.	0.001	mg/l	92		80-120		
4-Chlorotoluene	N.D.	0.001	mg/l	94		80-120		
1,2-Dibromo-3-chloropropane	N.D.	0.002	mg/l	76		66-120		
Dibromochloromethane	N.D.	0.001	mg/l	93		80-120		
1,2-Dibromoethane	N.D.	0.0005	mg/l	94		80-120		
Dibromomethane	N.D.	0.001	mg/l	95		80-120		
1,2-Dichlorobenzene	N.D.	0.001	mg/l	95		80-120		
1,3-Dichlorobenzene	N.D.	0.001	mg/l	96		80-120		
1,4-Dichlorobenzene	N.D.	0.001	mg/l	96		80-120		
Dichlorodifluoromethane	N.D.	0.002	mg/l	86		54-152		
1,1-Dichloroethane	N.D.	0.001	mg/l	96		79-120		
1,2-Dichloroethane	N.D.	0.0005	mg/l	102		70-130		
1,1-Dichloroethene	N.D.	0.0008	mg/l	100		74-123		
cis-1,2-Dichloroethene	N.D.	0.0008	mg/l	95		80-120		
trans-1,2-Dichloroethene	N.D.	0.0008	mg/l	98		80-120		
1,2-Dichloropropane	N.D.	0.001	mg/l	93		78-120		
1,3-Dichloropropane	N.D.	0.001	mg/l	92		80-120		
2,2-Dichloropropane	N.D.	0.001	mg/l	102		77-124		
1,1-Dichloropropene	N.D.	0.001	mg/l	94		80-120		
cis-1,3-Dichloropropene	N.D.	0.001	mg/l	93		80-120		
trans-1,3-Dichloropropene	N.D.	0.001	mg/l	95		79-120		
Ethanol	N.D.	0.050	mg/l	106		40-158		
Ethyl t-butyl ether	N.D.	0.0005	mg/l	90		76-120		
Ethylbenzene	N.D.	0.0005	mg/l	95		79-120		
Freon 113	N.D.	0.002	mg/l	93		69-128		
Hexachlorobutadiene	N.D.	0.002	mg/l	76		58-120		

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron Group Number: 1204545
Reported: 08/03/10 at 02:57 PM

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2-Hexanone	N.D.	0.003	mg/l	76		65-136		
di-Isopropyl ether	N.D.	0.0005	mg/l	88		71-124		
Isopropylbenzene	N.D.	0.001	mg/l	91		77-120		
p-Isopropyltoluene	N.D.	0.001	mg/l	90		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.0005	mg/l	94		76-120		
4-Methyl-2-pentanone	N.D.	0.003	mg/l	74		70-121		
Methylene Chloride	N.D.	0.002	mg/l	98		80-120		
Naphthalene	N.D.	0.001	mg/l	70		62-120		
n-Propylbenzene	N.D.	0.001	mg/l	94		80-120		
Styrene	N.D.	0.001	mg/l	95		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.001	mg/l	93		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.001	mg/l	87		71-120		
Tetrachloroethene	N.D.	0.0008	mg/l	99		80-121		
Toluene	N.D.	0.0005	mg/l	95		79-120		
1,2,3-Trichlorobenzene	N.D.	0.001	mg/l	74		65-120		
1,2,4-Trichlorobenzene	N.D.	0.001	mg/l	76		67-120		
1,1,1-Trichloroethane	N.D.	0.0008	mg/l	104		75-127		
1,1,2-Trichloroethane	N.D.	0.0008	mg/l	96		80-120		
Trichloroethene	N.D.	0.001	mg/l	99		80-120		
Trichlorofluoromethane	N.D.	0.002	mg/l	93		64-129		
1,2,3-Trichloropropane	N.D.	0.001	mg/l	89		80-120		
1,2,4-Trimethylbenzene	N.D.	0.001	mg/l	93		74-120		
1,3,5-Trimethylbenzene	N.D.	0.001	mg/l	92		75-120		
Vinyl Chloride	N.D.	0.001	mg/l	82		59-120		
m+p-Xylene	N.D.	0.0005	mg/l	95		80-120		
o-Xylene	N.D.	0.0005	mg/l	91		80-120		
Batch number: 10207A53A	Sample number(s): 6041550							
Benzene	N.D.	0.0005	mg/l	95	105	80-120	10	30
Ethylbenzene	N.D.	0.0005	mg/l	95	110	80-120	15	30
Toluene	N.D.	0.0005	mg/l	100	110	80-120	10	30
TPH-GRO AK water C6-C10	N.D.	0.010	mg/l	100	83	60-120	19	20
Total xylenes	N.D.	0.0015	mg/l	100	110	80-120	10	30

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: W102111AA	Sample number(s): 6041547-6041549 UNSPK: P045279								
Acetone	73	72	52-139	2	30				
t-Amyl methyl ether	83	82	75-122	1	30				
Benzene	101	102	80-126	1	30				
Bromobenzene	100	103	82-115	3	30				
Bromochloromethane	94	95	83-123	1	30				
Bromodichloromethane	106	105	78-125	1	30				
Bromoform	85	83	60-121	3	30				
Bromomethane	76	74	38-149	2	30				
2-Butanone	75	75	57-138	0	30				
t-Butyl alcohol	104	104	67-119	0	30				

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron Group Number: 1204545
Reported: 08/03/10 at 02:57 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
n-Butylbenzene	94	93	73-128	0	30				
sec-Butylbenzene	96	97	79-125	1	30				
tert-Butylbenzene	95	93	81-121	2	30				
Carbon Disulfide	108	109	67-135	1	30				
Carbon Tetrachloride	111	110	81-138	1	30				
Chlorobenzene	100	100	87-124	1	30				
Chloroethane	87	100	51-145	15	30				
2-Chloroethyl Vinyl Ether	0*	0*	10-151	0	30				
Chloroform	106	106	81-134	0	30				
Chloromethane	81	82	67-154	1	30				
2-Chlorotoluene	96	98	82-118	2	30				
4-Chlorotoluene	98	99	84-122	2	30				
1,2-Dibromo-3-chloropropane	76	79	66-121	4	30				
Dibromochloromethane	95	94	74-116	1	30				
1,2-Dibromoethane	96	96	77-116	0	30				
Dibromomethane	99	99	83-119	1	30				
1,2-Dichlorobenzene	98	100	84-119	1	30				
1,3-Dichlorobenzene	100	100	86-121	0	30				
1,4-Dichlorobenzene	100	99	85-121	0	30				
Dichlorodifluoromethane	94	94	64-163	0	30				
1,1-Dichloroethane	101	103	84-129	1	30				
1,2-Dichloroethane	106	106	66-141	0	30				
1,1-Dichloroethene	109	107	85-142	2	30				
cis-1,2-Dichloroethene	102	103	85-125	1	30				
trans-1,2-Dichloroethene	105	105	87-126	0	30				
1,2-Dichloropropane	97	97	83-124	0	30				
1,3-Dichloropropane	94	95	81-120	1	30				
2,2-Dichloropropane	112	111	81-135	1	30				
1,1-Dichloropropene	103	103	86-137	0	30				
cis-1,3-Dichloropropene	88	89	75-125	1	30				
trans-1,3-Dichloropropene	87	87	74-119	0	30				
Ethanol	101	85	37-164	17	30				
Ethyl t-butyl ether	87	87	74-122	0	30				
Ethylbenzene	100	102	71-134	2	30				
Freon 113	111	110	89-148	1	30				
Hexachlorobutadiene	84	86	56-134	2	30				
2-Hexanone	74	75	55-127	0	30				
di-Isopropyl ether	91	91	70-129	0	30				
Isopropylbenzene	97	98	75-128	1	30				
p-Isopropyltoluene	95	95	76-123	1	30				
Methyl Tertiary Butyl Ether	119	115	72-126	1	30				
4-Methyl-2-pentanone	75	75	63-123	1	30				
Methylene Chloride	96	96	79-120	0	30				
Naphthalene	74	77	52-125	5	30				
n-Propylbenzene	100	102	74-134	2	30				
Styrene	85	83	60-140	2	30				
1,1,1,2-Tetrachloroethane	99	99	82-119	0	30				
1,1,2,2-Tetrachloroethane	89	92	73-119	3	30				
Tetrachloroethene	108	107	80-128	0	30				
Toluene	103	102	80-125	1	30				
1,2,3-Trichlorobenzene	77	79	57-122	2	30				
1,2,4-Trichlorobenzene	80	82	60-122	2	30				
1,1,1-Trichloroethane	112	113	80-143	1	30				

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron Group Number: 1204545
Reported: 08/03/10 at 02:57 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
1,1,2-Trichloroethane	98	101	77-124	3	30				
Trichloroethene	109	109	88-133	1	30				
Trichlorofluoromethane	102	103	73-152	0	30				
1,2,3-Trichloropropane	89	93	76-118	3	30				
1,2,4-Trimethylbenzene	99	100	72-130	1	30				
1,3,5-Trimethylbenzene	97	100	72-131	3	30				
Vinyl Chloride	90	90	66-133	0	30				
m+p-Xylene	100	100	79-125	0	30				
o-Xylene	95	96	79-125	1	30				
Batch number: 10207A53A	Sample number(s): 6041550 UNSPK: P041567, P041568								
Benzene	115		80-152						
Ethylbenzene	122		80-133						
Toluene	115		80-133						
TPH-GRO AK water C6-C10	102		60-120						
Total xylenes	123		80-148						

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs by 8260B(Extended) -Water
Batch number: W102111AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6041547	105	102	98	97
6041548	106	106	96	92
6041549	106	103	97	92
Blank	104	104	97	94
LCS	101	100	101	101
MS	101	100	100	100
MSD	101	103	99	101
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO AK water C6-C10
Batch number: 10207A53A

	Trifluorotoluene-F	Trifluorotoluene-P
6041550	79	88
Blank	78	86
LCS	89	88
LCSD	90	88
MS	90	87
Limits:	60-120	58-146

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Chevron Generic Analysis Request/Chain of Custody

Lancaster Laboratories
Where quality is a science.

Pg 1 of 1

Acct. #: 11964 For Lancaster Laboratories use only Sample #: 6041547-50 SCR#: 011558

Group: 1204545

Facility #: EHA Texaco 601725
Site Address: EHA Texaco
Chevron PM: Amy Gilpin Lead Consultant: Arcadis
Consultant/Office: Seattle WA
Consultant Prj. Mgr.: Greg Montgomery
Consultant Phone #: 206 728 4772 Fax #:
Sampler: D Benua
Service Order #: NWRTB-US0176 Global ID: Non SAR:

Matrix: Soil; Water; Oil; Air; Potable; NPDES; Total Number of Containers

Analyses Requested / Preservation Codes: Grab; Composite; BTEX + MTBE; 8021; 8260; Naphth; 8260 full scan; GRO AK101; TPH G; TPH D; Extended Rng.; Silica Gel Cleanup; Lead Total; Diss.; Method; VPH/EPH; NWTPH H HCID; quantification

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil	Air	Total Number of Containers	BTEX + MTBE	8260 full scan	GRO AK101
MW-2	7/22/10	1750	X			X			3		X	
MW-4	7/22/10	1830	X			X			3		X	
MW-6	7/22/10	1309	X			X			3		X	
Trip Blank	7/22/10		—			X			1	X		X

Preservative Codes
H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 O = Other

- ☐ J value reporting needed
- ☐ Must meet lowest detection limits possible for 8260 compounds

8021 MTBE Confirmation
- ☐ Confirm MTBE + Naphthalene
- ☐ Confirm highest hit by 8260
- ☐ Confirm all hits by 8260
- ☐ Run ____ oxy's on highest hit
- ☐ Run ____ oxy's on all hits

Comments / Remarks

Turnaround Time Requested (TAT) (please circle)
STD. TAT 72 hour 48 hour
24 hour 4 day 5 day

Data Package Options (please circle if required)
QC Summary Type I - Full
Type VI (Raw Data) Disk / EDD
WIP (RWQCB) Standard Format
Disk _____ Other.

	Date	Time		Date	Time
Relinquished by:	7/23/10	1049	Received by:		
Relinquished by:			Received by:		
Relinquished by:			Received by:		
Relinquished by Commercial Carrier: UPS FedEx Other			Received by:	7/24/10	0930
Temperature Upon Receipt 16.2 C°			Custody Seals Intact? Yes No		

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Quality Control Summary

Client Name: Chevron Group Number: 1204545
Reported: 08/03/10 at 02:57 PM

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

July 27, 2010

Russ Greisler
ARCADIS
2300 Eastlake Ave E
Suite 200
Seattle, WA 98102

RE: Project: CHEVRON TEXACO 301726
Pace Project No.: 10134039

Dear Russ Greisler:
Enclosed are the analytical results for sample(s) received by the laboratory on July 22, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Julie Thieschafer

julie.thieschafer@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: CHEVRON TEXACO 301726
Pace Project No.: 10134039

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
Alaska Certification #: UST-078
Alaska Certification #MN00064
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
EPA Region 8 Certification #: Pace
Florida/NELAP Certification #: E87605
Georgia Certification #: 959
Idaho Certification #: MN00064
Illinois Certification #: 200011
Iowa Certification #: 368
Kansas Certification #: E-10167
Louisiana Certification #: 03086
Louisiana Certification #: LA080009
Maine Certification #: 2007029
Maryland Certification #: 322
Michigan DEQ Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT CERT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New Mexico Certification #: Pace
New York Certification #: 11647
North Carolina Certification #: 530
North Dakota Certification #: R-036
North Dakota Certification #: R-036A
Ohio VAP Certification #: CL101
Oklahoma Certification #: D9921
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Tennessee Certification #: 02818
Texas Certification #: T104704192
Washington Certification #: C754
Wisconsin Certification #: 999407970

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1700 Elm Street - Suite 200
Minneapolis, MN 55414
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SAMPLE SUMMARY

Project: CHEVRON TEXACO 301726
Pace Project No.: 10134039

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10134039001	**MW-1**	Water	07/20/10 09:00	07/22/10 09:42

Pace Analytical Services, Inc.
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Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: CHEVRON TEXACO 301726
Pace Project No.: 10134039

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10134039001	**MW-1**	EPA 8270	BJP	2	PASI-M

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: CHEVRON TEXACO 301726
Pace Project No.: 10134039

Method: **EPA 8270**
Description: 8270 MSSV Sulfolane
Client: ARCADIS-WA
Date: July 27, 2010

General Information:
1 sample was analyzed for EPA 8270. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3510 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: OEXT/13388

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10134039001

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MSD (Lab ID: 827003)
  - Sulfolane

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, Inc.
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Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: CHEVRON TEXACO 301726
Pace Project No.: 10134039

Sample: MW-1 **Lab ID: 10134039001** Collected: 07/20/10 09:00 Received: 07/22/10 09:42 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Sulfolane	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
Sulfolane	ND	ug/L	10.0	1	07/22/10 15:58	07/23/10 16:32	126-33-0	M0
Sulfolane-d8 (S)	60	%	45-125	1	07/22/10 15:58	07/23/10 16:32	51219-88-6	

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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: CHEVRON TEXACO 301726
Pace Project No.: 10134039

QC Batch: OEXT/13388 Analysis Method: EPA 8270
QC Batch Method: EPA 3510 Analysis Description: 8270 Water Sulfolane MSSV
Associated Lab Samples: 10134039001

METHOD BLANK: 827000 Matrix: Water
Associated Lab Samples: 10134039001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfolane	ug/L	ND	10.0	07/23/10 15:24	
Sulfolane-d8 (S)	%	58	45-125	07/23/10 15:24	

LABORATORY CONTROL SAMPLE: 827001

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfolane	ug/L	200	213	107	45-125	
Sulfolane-d8 (S)	%			63	45-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 827002 827003

Parameter	Units	10134039001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfolane	ug/L	ND	200	200	224	256	112	128	41-125	13	30	M0
Sulfolane-d8 (S)	%						66	61	45-125			

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: CHEVRON TEXACO 301726
Pace Project No.: 10134039

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CHEVRON TEXACO 301726
Pace Project No.: 10134039

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10134039001	**MW-1**	EPA 3510	OEXT/13388	EPA 8270	MSSV/5713

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

10134039

Section A Required Client Information:

Company: ARCADIS
Address: 2300 Eastlake Ave E Suite 205 Seattle WA
Email To: Gregory.Montgomery@arcadis-us.com
Phone: 2067264792 Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Gregory Montgomery
Copy To: Rebecca Andresen
Purchase Order No.:
Project Name: Chevron Texaco 301726 ~~211515~~ OMB
Project Number: 100046869

Section C Invoice Information:

Attention: Gregory Montgomery
Company Name: ARCADIS
Address: 2300 Eastlake E Ave Suite 205
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

Page: of
1233121

REGULATORY AGENCY
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE:

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE
Drinking Water DW
Water WT
Waste Water WW
Product P
Soil/Solid SL
Oil OL
Wipe WP
Air AR
Tissue TS
Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Analysis Test: Sulfolane 8270 SIM	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-1	WT	G			7/20/10	9:10		3	X								N			001
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	D R / sampler	7/21/10	10:30		7.22.10	0942	0.6	y	y	y

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Dawn Benbe
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY): 7/21/10

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Sample Condition Upon Receipt

Pace Analytical

Client Name: Arcadis Project # 10134039

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 2735-1494-2300

Optional: Proj. Due Date: Proj. Name:

Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____ Temp Blank: Yes ✓ No _____

Thermometer Used 80344042 or 179425 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 0.6 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C Comments:

Date and initials of person examining contents: 7-22-10

Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☑Yes ☐No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: WT		
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ HCl Samp #
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
Exceptions: VOA,Coliform, TOC, Oil and Grease, WI-DRO (water)	☐Yes ☑No	Initial when completed — Lot # of added preservative
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present —	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ **Date:** 7/22/10

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR.

ARCADIS

Appendix C

ADEC Data Review Checklists

Laboratory Data Review Checklist

Completed by: Dana Ramquist

Title: Scientist II Date: 10/5/10

CS Report Name: -Annual Groundwater Monitoring Report Report Date: 8/24/10

Consultant Firm: ARCADIS

Laboratory Name: Lancaster Laboratories Laboratory Report Number: 1204196

ADEC File Number: 100.38.066 ADEC RecKey Number:

1. Laboratory
   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?
      X -Yes No NA (Please explain.) 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 NA (Please explain.) Comments:

2. Chain of Custody (COC)
   a. COC information completed, signed, and dated (including released/received by)?
      X- Yes No NA (Please explain.) Comments:

   b. Correct analyses requested?
      X - Yes No NA (Please explain.) Comments:

3. Laboratory Sample Receipt Documentation
   a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?
      X- Yes No NA (Please explain.) Comments:

   b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?
      X - Yes No NA (Please explain.) Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?
X- Yes No NA (Please explain.) Comments:

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?
Yes X- No NA (Please explain.) Comments:

e. Data quality or usability affected? (Please explain.)
Comments:

NA

4. Case Narrative
   a. Present and understandable?
   X- Yes No NA (Please explain.) Comments:

   b. Discrepancies, errors or QC failures identified by the lab?
   X - Yes No NA (Please explain.) Comments:

   c. Were all corrective actions documented?
   X- Yes No NA (Please explain.) Comments:

   d. What is the effect on data quality/usability according to the case narrative?
   Comments:

   NA

5. Samples Results
   a. Correct analyses performed/reported as requested on COC?
   X- Yes No NA (Please explain.) Comments:

   b. All applicable holding times met?
   X- Yes No NA (Please explain.) Comments:

c. All soils reported on a dry weight basis?
Yes No X -NA (Please explain.) Comments:

Water samples

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?
X- Yes No NA (Please explain.) Comments:

e. Data quality or usability affected?
Comments:

NA

6. QC Samples
a. Method Blank
i. One method blank reported per matrix, analysis and 20 samples?
X- Yes No NA (Please explain.) Comments:

ii. All method blank results less than PQL?
X- Yes No NA (Please explain.) Comments:

NA

iii. If above PQL, what samples are affected?
Comments:

NA

iv. Do the affected sample(s) have data flags and if so, are the data flags clearly defined?
Yes No NA (Please explain.) Comments:

NA

v. Data quality or usability affected? (Please explain.)
Comments:

NA

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)
X- Yes No NA (Please explain.) Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

X- Yes No NA (Please explain.) 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)

X- Yes No NA (Please explain.) Comments:

2-chloroethyl vinyl ether, 124-trimethyl benzene and 135 trimethylbenzene outside specification for MS/MSD recovery

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

x- Yes No NA (Please explain.) Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

MW-1, MW-3, MW-5

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes X- No NA (Please explain.) Comments:

No

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

Not expected to be affected

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

X- Yes No NA (Please explain.) 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 X- No NA (Please explain.) Comments:

Surrogates nitrobenzene and 2-fluorobiphenyl outside the spec. for MW-1

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

Yes No X- NA (Please explain.) Comments:

iv. Data quality or usability affected? (Use the comment box to explain.)

Comments:

Not expected 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 for each cooler containing volatile samples? (If not, enter explanation below.)

X- Yes No NA (Please explain.) Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

Yes X- No NA (Please explain.) Comments:

Cooler not identified

iii. All results less than PQL?

Yes X- No NA (Please explain.) Comments:

RRO above the PQL for MW-1

iv. If above PQL, what samples are affected?

Comments:

MW-1

v. Data quality or usability affected? (Please explain.)

Comments:

Not expected to have an affect. The PQL is higher than the GCL

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

X- Yes No NA (Please explain.) Comments:

ii. Submitted blind to lab?

X- Yes No NA (Please explain.) Comments:

iii. Precision – All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

RPD (%) = 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 X-No NA (Please explain.) Comments:

DRO is 37%

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

Not expected to be affected

f. Decontamination or Equipment Blank (If not used explain why).

Yes No X-NA (Please explain.) Comments:

NA none needed

i. All results less than PQL?

X- Yes No NA (Please explain.) Comments:

ii. If above PQL, what samples are affected?

Comments:

NA

iii. Data quality or usability affected? (Please explain.)

Comments:

NA

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

X- Yes No NA (Please explain.) Comments:

Laboratory Data Review Checklist

Completed by: Dana Ramquist

Title: Scientist II Date: 10/5/10

CS Report Name: Annual Groundwater Monitoring Report Report Date: 7/27/10

Consultant Firm: ARCADIS

Laboratory Name: Pace Analytical Laboratory Report Number: 10134039

ADEC File Number: 100.38.066 ADEC RecKey Number:

1. Laboratory
   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?
      X- Yes No NA (Please explain.) 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 NA (Please explain.) Comments:

      NA

2. Chain of Custody (COC)
   a. COC information completed, signed, and dated (including released/received by)?
      X- Yes No NA (Please explain.) Comments:

   b. Correct analyses requested?
      X- Yes No NA (Please explain.) Comments:

3. Laboratory Sample Receipt Documentation
   a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?
      X- Yes No NA (Please explain.) Comments:

   b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?
      X- Yes No NA (Please explain.) Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?
X- Yes No NA (Please explain.) Comments:

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?
Yes No X- NA (Please explain.) Comments:

e. Data quality or usability affected? (Please explain.)
Comments:

NA

4. Case Narrative
   a. Present and understandable?
   X- Yes No NA (Please explain.) Comments:

   b. Discrepancies, errors or QC failures identified by the lab?
   X- Yes No NA (Please explain.) Comments:

   c. Were all corrective actions documented?
   X- Yes No NA (Please explain.) Comments:

   d. What is the effect on data quality/usability according to the case narrative?
   Comments:

   NA

5. Samples Results
   a. Correct analyses performed/reported as requested on COC?
   X- Yes No NA (Please explain.) Comments:

   b. All applicable holding times met?
   X- Yes No NA (Please explain.) Comments:

c. All soils reported on a dry weight basis?
Yes No X- NA (Please explain.) Comments:

water

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?
X- Yes No NA (Please explain.) Comments:

e. Data quality or usability affected?
Comments:

NA

6. QC Samples
a. Method Blank
i. One method blank reported per matrix, analysis and 20 samples?
X- Yes No NA (Please explain.) Comments:

ii. All method blank results less than PQL?
X- Yes No NA (Please explain.) Comments:

iii. If above PQL, what samples are affected?
Comments:

iv. Do the affected sample(s) have data flags and if so, are the data flags clearly defined?
Yes No NA (Please explain.) Comments:

NA

v. Data quality or usability affected? (Please explain.)
Comments:

NA

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)
X- Yes No NA (Please explain.) Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes No NA (Please explain.) Comments:

NA

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)

X- Yes No NA (Please explain.) Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

X- Yes No NA (Please explain.) Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

NA

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes X- No NA (Please explain.) Comments:

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

NA

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

X- Yes No NA (Please explain.) 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)

X- Yes No NA (Please explain.) Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

Yes X- No NA (Please explain.) Comments:

iv. Data quality or usability affected? (Use the comment box to explain.)

Comments:

NA

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

Yes X- No NA (Please explain.) Comments:

NA

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

X- Yes No NA (Please explain.) Comments:

iii. All results less than PQL?

X- Yes No NA (Please explain.) Comments:

iv. If above PQL, what samples are affected?

Comments:

v. Data quality or usability affected? (Please explain.)

Comments:

NA

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

X- Yes No NA (Please explain.) Comments:

ii. Submitted blind to lab?

X- Yes No NA (Please explain.) Comments:

iii. Precision – All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

$$RPD\ (\%) = \text{Absolute value of: } \frac{(R_1-R_2)}{((R_1+R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

X- Yes No NA (Please explain.) Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

f. Decontamination or Equipment Blank (If not used explain why).

Yes No X- NA (Please explain.) Comments:

Not needed

i. All results less than PQL?

Yes No NA (Please explain.) Comments:

NA

ii. If above PQL, what samples are affected?

Comments:

NA

iii. Data quality or usability affected? (Please explain.)

Comments:

NA

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

X- Yes No NA (Please explain.) Comments: