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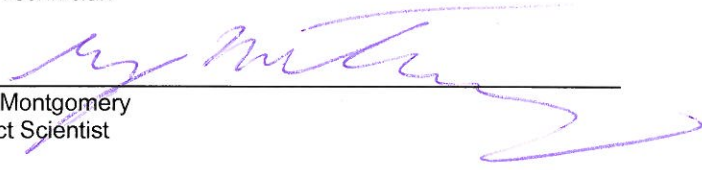
**Second Semi-Annual 2011
Groundwater Monitoring Report**

Former Chevron Facility 306443
Gate 28, West Ramp, Fairbanks International
Airport
Fairbanks, Alaska
ADEC File # 100.26.040

January 6, 2012



Michael MacDaniel
Field Technician



Greg Montgomery
Project Scientist

**Second Semi-Annual 2011
Groundwater Monitoring
Report**

Former Chevron Facility 306443
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International Airport
Fairbanks, Alaska
ADEC File No. 100.26.040

Prepared for:
Chevron Environmental Management
Company

Prepared by:
ARCADIS
2300 Eastlake Avenue East
Suite 200
Seattle
Washington 98102
Tel 206.325.5254
Fax 206.325.8218

Our Ref.:
B0045507

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1. Introduction

On behalf of Chevron Environmental Management Company (Chevron), ARCADIS US, Inc. (ARCADIS), has prepared this report to document the second semi-annual 2011 groundwater sampling event for former Chevron facility 306443 (the site) located at Gate 28, West Ramp at Fairbanks International Airport in Fairbanks, Alaska. The site location and surrounding area are shown on **Figure 1**. The site features are shown on **Figure 2**. This report summarizes the groundwater sampling events conducted by ARCADIS on August 23-25, 2011. 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. Groundwater Monitoring Methods

2.1. Groundwater Gauging Methods

On August 23, 2011, nineteen site monitoring wells, GEI-1 through GEI-9, MW-1 through MW-8, MW-10, and recovery well RW-1, were gauged with an oil/water interface probe to determine depth-to-water, and to ascertain if light non-aqueous phase liquid [LNAPL] was present. LNAPL was detected in monitoring wells GEI-5 and GEI-6 during gauging activities on August 23, 2011. Thicknesses in these wells ranged from 0.28 feet (GEI-5) to 1.09 (GEI-6) feet. Groundwater gauging data are presented in **Table 1**.

In order to prevent the possibility of cross-contamination, wells were gauged in the order of lowest to highest historical petroleum hydrocarbon concentrations in groundwater. Non-disposable groundwater monitoring equipment was decontaminated prior to and after each use, with a detergent solution and rinsed in potable water. Field data sheets are included in **Appendix A**.

2.2. Groundwater Elevation and Flow Direction

Depths to groundwater during the August 2011 event ranged from 6.87 feet below top of casing (btoc) in monitoring well MW-2 to 8.59 feet btoc in monitoring well GEI-6. Groundwater elevations ranged from 424.90 feet above sea level (asl) in monitoring wells GEI-2 and MW-2, to 424.76 feet asl in monitoring well MW-4. Due to the presence of LNAPL, groundwater elevations recorded in monitoring wells GEI-5 and GEI-6 were corrected using the following formula:

Corrected Groundwater Elevation =

(Top of Casing – Depth-to-Water) + (LNAPL Thickness x Specific Gravity of LNAPL (0.82))

Based on the water levels measured during the August 2011 sampling event, the groundwater elevation gradient is relatively flat. The general flow at the site is to the west (summarized in **Table 1** and shown on **Figure 3**).

3. Groundwater Monitoring Results**3.1. Groundwater Sampling Methods**

The second semi-annual 2011 groundwater monitoring event was conducted on August 25, 2011. Groundwater samples were collected using no purge sampling procedures in accordance with the ADEC field sampling procedures. A Teflon[®] bailer was used to collect the samples. Groundwater samples 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 from monitoring wells GEI-2, GEI-8, MW-1 through MW-7, MW-9, and MW-10 were submitted to the analytical laboratory for the following analyses:

- Gasoline range organics (GRO) by Alaska method AK101
- Diesel range organics (DRO) by Alaska method AK102
- Residual range organics (RRO) by Alaska method AK103
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA method 8021B

Duplicate groundwater samples BD-1 (GEI-2) and BD-2 (GEI-8) were collected and submitted blind to the laboratory for GRO and BTEX analysis. Groundwater samples were not collected from monitoring wells GEI-5 and GEI-6 due to the presence of LNAPL. Monitoring wells GEI-1, GEI-3 through GEI-7, GEI-9, MW-8, and RW-1 were not sampled due to the presence of LNAPL globules seen in the bailer.

3.2. Groundwater Analytical Results

A concentration of GRO greater than the ADEC groundwater cleanup level (GCL) (2,200 micrograms per liter [$\mu\text{g/L}$]) was detected in monitoring well MW-1 at a concentration of 2,600 $\mu\text{g/L}$.

Concentrations of DRO greater than the ADEC GCL (1,500 $\mu\text{g/L}$) were detected in monitoring wells GEI-8, MW-1, MW-3, and MW-5 with concentrations ranging between 2,700 $\mu\text{g/L}$ (MW-5) and 99,000 $\mu\text{g/L}$ (GEI-8).

Concentrations of benzene greater than the ADEC GCL (5 $\mu\text{g/L}$) were detected in monitoring wells MW-1 and MW-9 at 32.0 $\mu\text{g/L}$ and 5.9 $\mu\text{g/L}$, respectively.

Analytical results obtained from the second semi-annual 2011 groundwater monitoring event are summarized in **Table 2** and are shown on **Figure 4**.

4. LNAPL Removal

Following the second semi-annual 2011 groundwater monitoring event, LNAPL was removed from monitoring wells GEI-5 and GEI-6. A peristaltic pump placed in secondary containment was used to remove LNAPL from GEI-5 (0.2 gallons) and GEI-6 (1.2 gallons). Purged LNAPL was stored in an over packed drum upon completion. Historical LNAPL thickness is shown in **Figures 5-19**.

5. Laboratory Data Quality Assurance Summary

As required by ADEC (Technical Memorandum 06-002, dated August 20, 2008), ARCADIS completed a laboratory data review checklist for the Lancaster report during the first semi-annual 2011 reporting period. The laboratory report is included as **Appendix B** and the data review checklist is included as **Appendix C**. The following quality assurance (QA) summary describes six parameters, related to the quality and usability of the data presented in this report.

5.1. Precision

The data met precision objectives for laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) relative percent differences (RPDs) with the exception of the RPD for BD-2 (GEI-8) being out of specification for GRO.

5.2. Accuracy

The data met accuracy objectives as indicated by the laboratory quality control samples, which were within method/laboratory limits.

5.3. Representativeness

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

5.4. Comparability

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

5.5. Completeness

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

5.6. Sensitivity

The sensitivity of the analyses was adequate for the samples as the detection limits were less than the ADEC GCLs for compounds analyzed with the exception of:

The RRO PQL for groundwater samples GEI-8 and MW-1

The DRO and RRO surrogate, Orthoterphenyl, was outside specification for the groundwater sample analyzed from GEI-8 and MW-1.

6. Conclusions

The groundwater elevation data collected during August 2011 indicate groundwater flow direction and gradient are generally consistent with historical data. The analytical results of the June and August 2011 groundwater sampling events showed an increase in DRO concentrations in monitoring wells GEI-4, GEI-8, MW-1 and RW-1 from historical concentrations. The cause of the increase is likely that trace LNAPL was inadvertently collected in the groundwater samples during the monitoring events. Typical monitoring wells are not sampled when LNAPL is present. These wells have

had LNAPL present in past monitoring events. The analytical results from the remaining monitoring wells were consistent with previous monitoring events.

ARCADIS will continue to sample the site on a semi-annual basis. The first semi-annual 2012 groundwater sampling event will be conducted in June/July 2012. If you have any questions or would like to discuss this further, please contact Greg Montgomery at 206.726.4742.

7. References

ADEC, May, 2010. *Draft Field Sampling Guidance*. Division of Spill Prevention and Response Contaminated Sites Program.

ADEC Technical Memorandum, March, 2009. *Environmental Laboratory Data and Quality Assurance Requirements*. ADEC, Division of Spill Prevention and Response Contaminated Sites Program.

ARCADIS. *Bailer-Grab Groundwater Sampling*. March 10, 2009.

ARCADIS

Tables

Table 1
Groundwater Elevation Data
Former Chevron Facility 306443
Gate 28, West Ramp, Fairbanks International Airport
Fairbanks, Alaska

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Water (top of casing) (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Groundwater Elevation (feet)	LNAPL Removed (Gallons)
GEI-1	99.87	09/04/03	6.32	--	--	93.55	--
		04/24/04			Well buried under snow/ice		--
		09/16/04	8.56	--	--	91.31	--
		04/21/05			Well buried under snow/ice		--
		09/30/05	8.17	--	--	91.70	--
		04/19/06			Well buried under snow/ice		--
		09/21/06	9.04	--	--	90.83	--
		04/03/07	11.35	11.08	0.27	88.74	--
		09/29/07	8.60	8.54	0.06	91.32	--
		10/15/07	10.35	9.94	0.41	89.86	--
		11/19/07	10.91	10.78	0.13	89.07	--
		03/29/08			Well buried under snow/ice		--
		06/25/08	9.35	--	Trace	90.52	--
		07/14/08	8.22	--	Trace	91.65	--
		08/06/08	5.83	--	Trace	94.04	--
		09/10/08	8.22	8.20	0.02	91.67	--
		11/24/08	9.88	--	Trace	89.99	--
	12/18/08	10.06	--	Trace	89.81	--	
	01/27/09	10.73	10.70	0.03	89.16	--	
	02/20/09	11.18	10.98	0.20	88.85	--	
	04/21/09			Well buried under snow/ice		--	
	10/06/09	10.35	10.33	0.02	89.54	--	
	03/18/10	11.96	11.22	0.74	88.52	--	
	04/20/10			Unable to remove sock- frozen		--	
	05/26/10	11.71	11	0.71	88.74	--	
	06/18/10	9.42	9.41	0.01	90.46	--	
	07/23/10	7.20	--	Trace	92.67	--	
	08/16/10	7.21	--	Trace	92.66	--	
	09/23/10	8.29	8.25	0.04	423.91	--	
	10/25/10	10.67	--	Trace	421.50	--	
	11/16/10	11.46	--	Trace	420.71	--	
	12/14/10			Well not measured		--	
	01/05/11			Well not measured		--	
02/08/11	10.71	--	Trace	421.46	--		
03/23/11	11.39	--	Trace	420.78	--		
04/13/11	11.27	10.84	0.43	421.25	--		
06/09/11	9.40	--	Trace	422.77	--		
08/23/11	7.28	--	Trace	424.89	--		
	¹ 432.17						

Table 1
Groundwater Elevation Data
Former Chevron Facility 306443
Gate 28, West Ramp, Fairbanks International Airport
Fairbanks, Alaska

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Water (top of casing) (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Groundwater Elevation (feet)	LNAPL Removed (Gallons)
GEI-2	99.79	09/04/03	6.19	--	--	93.60	--
		04/24/04			Well buried under snow/ice		--
		09/16/04	8.47	--	--	91.32	--
		04/21/05			Well buried under snow/ice		--
		09/30/05	7.76	--	--	92.03	--
		04/19/06			Well buried under snow/ice		--
		09/21/06	9.01	--	--	90.78	--
		04/03/07			Well Dry		--
		09/29/07	8.57	--	--	91.22	--
		03/29/08	10.22	--	--	89.57	--
		09/10/08	8.18	--	--	91.61	--
		04/21/09			Well under water		--
		10/06/09			Well Dry		--
	06/18/10	9.43	9.42	0.01	90.37	--	
	07/23/10	7.29	--	--	92.50	--	
	08/16/10	7.21	--	--	92.58	--	
	09/23/10	8.25	--	--	423.90	--	
	10/25/10			Well not measured		--	
	11/16/10			Well not measured		--	
	12/14/10			Well not measured		--	
	01/05/11			Well not measured		--	
	02/08/11			Well not measured		--	
	03/23/11			Well not measured		--	
	04/13/11			Well not measured		--	
	06/09/11		9.39	--	--	422.76	--
	08/23/11		7.25	--	--	424.90	--
GEI-3	99.73	09/04/03	6.14	--	--	93.59	--
		04/24/04	9.49	--	--	90.24	--
		09/16/04	8.38	--	--	91.35	--
		04/21/05	9.84	--	--	89.89	--
		09/30/05	7.67	--	--	92.06	--
		04/19/06	11.28	10.75	0.53	88.88	--
		09/21/06	8.91	--	--	90.82	--
		04/03/07	10.80	10.78	0.02	88.95	--
		09/29/07	8.47	--	--	91.26	--
		03/29/08	10.15	--	--	89.58	--
		09/10/08	8.08	--	--	91.65	--
		04/21/09	11.11	10.89	0.22	88.80	--
		10/06/09	10.22	10.20	0.02	89.53	--
	03/18/10	11.41	10.90	0.51	88.74	--	
	04/20/10	10.96	10.90	0.06	88.82	--	
	05/26/10	11.42	10.90	0.52	88.74	--	
	06/18/10	9.37	9.36	0.01	90.37	--	
	07/23/10	7.11	--	--	92.62	--	
	08/16/10	7.10	--	--	92.63	--	
	09/23/10	8.16	--	--	423.91	--	
	10/25/10	10.55	10.51	0.04	421.55	--	
	11/16/10	11.41	11.18	0.23	420.85	--	
	12/14/10			Well not measured		--	
	01/05/11		10.32	--	--	421.75	--
	02/08/11		10.67	--	--	421.40	--
	03/23/11		11.39	--	--	420.68	--
04/13/11		10.90	10.87	0.03	421.19	--	
06/09/11		9.35	--	Trace	422.72	--	
08/23/11		7.25	--	Trace	424.82	--	
	¹ 432.15						
	¹ 432.07						

Table 1
Groundwater Elevation Data
Former Chevron Facility 306443
Gate 28, West Ramp, Fairbanks International Airport
Fairbanks, Alaska

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Water (top of casing) (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Groundwater Elevation (feet)	LNAPL Removed (Gallons)
GEI-4	99.66	09/04/03	6.12	--	--	93.54	--
		04/24/04	9.52	--	--	90.14	--
		09/16/04	8.41	--	--	91.25	--
		04/21/05	9.83	--	--	89.83	--
		09/30/05	7.69	--	--	91.97	--
		04/19/06	10.90	--	--	88.76	--
		09/21/06	8.91	--	--	90.75	--
		04/03/07	10.98	--	--	88.68	--
		09/29/07	8.44	--	--	91.22	--
		03/29/08	10.08	--	--	89.58	--
		09/10/08	8.03	--	--	91.63	--
		04/21/09	10.65	--	--	89.01	--
		10/06/09	10.14	--	--	89.52	--
		06/18/10	9.24	--	--	90.42	--
		07/23/10	6.95	--	--	92.71	--
		08/16/10	7.00	6.97	0.03	92.68	--
		09/23/10	8.10	8.05	0.05	423.91	--
	10/25/10		Well not measured			--	
	11/16/10		Well not measured			--	
	12/14/10		Well not measured			--	
	01/05/11		Well not measured			--	
	02/08/11		Well not measured			--	
	03/23/11		Well not measured			--	
04/13/11		Well not measured			--		
06/09/11		9.19	--	--	422.78	--	
08/23/11		7.09	--	Trace	424.88	--	
GEI-5	99.88	09/04/03	8.28	5.97	2.31	93.49	--
		04/24/04	10.11	9.71	0.40	90.10	--
		09/16/04	10.40	8.21	2.19	91.28	--
		04/21/05	10.49	10.06	0.43	89.74	--
		09/30/05	7.95	--	--	91.93	--
		04/19/06	11.75	11.01	0.74	88.74	--
		09/21/06	10.09	9.01	1.08	90.68	--
		04/03/07	11.70	11.23	0.47	88.57	--
		09/29/07	9.22	8.72	0.50	91.07	--
		03/29/08	10.67	10.45	0.22	89.39	--
		09/10/08	8.71	8.37	0.34	91.45	--
		11/24/08	10.08	--	--	89.80	--
		12/18/08	10.29	--	--	89.59	--
		01/27/09	11.26	10.94	0.32	88.88	--
		02/20/09	11.65	11.21	0.44	88.59	--
		04/21/09	11.44	11.02	0.42	88.78	--
		10/06/09	10.65	10.53	0.12	89.33	--
	03/18/10	11.61	11.6	0.01	88.28	--	
	04/20/10	12.45	11.5	0.95	88.21	--	
	05/26/10	11.69	11.31	0.38	88.50	--	
	06/18/10	9.73	9.72	0.01	90.16	--	
	07/23/10	7.76	--	--	92.12	--	
	08/16/10	7.98	7.34	0.64	92.42	--	
09/23/10	9.51	8.45	1.06	423.79	--		
10/25/10	10.88	--	--	421.55	--		
11/16/10	11.71	11.68	0.03	420.74	--		
12/14/10		Well not measured			--		
01/05/11		10.86	--	--	421.57	--	
02/08/11		10.99	--	--	421.44	--	
03/23/11		11.24	11.23	0.01	421.20	--	
04/13/11		11.51	11.18	0.33	421.19	--	
06/09/11		9.69	--	Trace	422.74	--	
08/23/11		7.84	7.56	0.28	424.82	0.2	
	¹ 431.97						
	¹ 432.43						

Table 1
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Former Chevron Facility 306443
Gate 28, West Ramp, Fairbanks International Airport
Fairbanks, Alaska

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Water (top of casing) (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Groundwater Elevation (feet)	LNAPL Removed (Gallons)	
GEI-6	99.95	09/04/03	6.47	--	--	93.48	--	
		04/24/04	9.95	--	--	90.00	--	
		09/16/04	8.83	--	--	91.12	--	
		04/21/05	10.28	--	--	89.67	--	
		09/30/05	8.24	--	--	91.71	--	
		04/19/06	Well buried under snow/ice					--
		09/21/06	9.30	9.30	<0.1	90.65	--	
		04/03/07	Well Dry					--
		09/29/07	9.10	8.81	0.29	91.09	--	
		10/15/07	10.70	10.26	0.44	89.61	--	
		11/19/07	11.04	10.71	0.33	89.18	--	
		03/29/08	10.61	10.60	0.01	89.35	--	
		06/25/08	9.58	--	--	90.37	--	
		07/14/08	8.51	--	--	91.44	--	
		08/06/08	6.44	6.08	0.36	93.81	--	
		09/10/08	9.25	8.41	0.84	91.39	--	
		11/24/08	10.30	10.22	0.08	89.72	--	
		12/18/08	10.52	10.38	0.14	89.54	--	
		01/27/09	11.10	10.96	0.14	88.96	--	
		02/20/09	11.10	--	--	88.85	--	
		04/21/09	Well blocked at 11.5' below TOC					--
		10/06/09	10.85	10.68	0.17	89.24	--	
		03/18/10	Unable to locate					--
		04/20/10	Well Dry					--
		05/26/10	Well blocked at 11.05' below TOC					--
		06/18/10	9.80	--	Trace	90.15	--	
		07/23/10	7.70	7.61	0.09	92.32	--	
		08/16/10	8.20	7.41	0.79	92.40	--	
		09/23/10	9.31	8.52	0.79	423.83	--	
		10/25/10	Well blocked at 11.1' below TOC					--
		11/16/10	Well blocked at 11.06' below TOC					--
		12/14/10	Well not measured					--
		01/05/11	Well blocked at 11.12' below TOC					--
		02/08/11	Well blocked at 11.10' below TOC					--
03/23/11	Well blocked at 11.06' below TOC					--		
04/13/11	Well blocked at 11.10' below TOC					--		
06/09/11	9.80	--	--	422.69	--			
08/23/11	8.59	7.50	1.09	424.79	1.2			
GEI-7	99.44	09/04/03	5.92	--	--	93.52	--	
		04/24/04	9.49	--	--	89.95	--	
		09/16/04	8.36	--	--	91.08	--	
		04/21/05	9.95	--	--	89.49	--	
		09/30/05	7.74	--	--	91.70	--	
		04/19/06	11.04	--	--	88.40	--	
		09/21/06	9.06	--	--	90.38	--	
		04/03/07	11.21	--	--	88.23	--	
		09/29/07	8.59	--	--	90.85	--	
		03/29/08	10.28	10.26	0.02	89.18	--	
		09/10/08	8.21	--	--	91.23	--	
		04/21/09	10.90	10.86	0.04	88.57	--	
		10/06/09	10.36	10.34	0.02	89.10	--	
		03/18/10	Unable to locate					--
		04/20/10	12.31	11.22	1.09	88.02	--	
		05/26/10	11.41	11.08	0.33	88.30	--	
		06/18/10	9.48	9.47	0.01	89.97	--	
		07/23/10	7.25	--	--	92.19	--	
		08/16/10	7.21	--	--	92.23	--	
		09/23/10	8.30	--	--	423.84	--	
		10/25/10	10.76	--	--	421.38	--	
		11/16/10	11.26	--	--	420.88	--	
		12/14/10	10.38	--	--	421.76	--	
		01/05/11	10.36	--	--	421.78	--	
		02/08/11	11.23	10.69	0.54	421.35	--	
		03/23/11	11.45	10.97	0.48	421.08	--	
		04/13/11	11.43	10.95	0.48	421.10	--	
06/09/11	9.71	9.42	0.29	422.67	0.2			
08/23/11	7.33	--	--	424.81	--			

Table 1
Groundwater Elevation Data
Former Chevron Facility 306443
Gate 28, West Ramp, Fairbanks International Airport
Fairbanks, Alaska

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Water (top of casing) (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Groundwater Elevation (feet)	LNAPL Removed (Gallons)
GEI-8	100.01	09/04/03	6.48	--	--	93.53	--
		04/24/04	9.94	--	--	90.07	--
		09/16/04	8.84	--	--	91.17	--
		04/21/05	10.31	--	--	89.70	--
		09/30/05	8.18	--	--	91.83	--
		04/19/06	11.47	--	--	88.54	--
		09/21/06	9.48	--	--	90.53	--
		04/03/07	11.63	--	--	88.38	--
		09/29/07	9.08	--	--	90.93	--
		03/29/08	10.77	--	--	89.24	--
		09/10/08	8.72	8.70	0.02	91.31	--
		11/24/08	10.36	--	--	89.65	--
		12/18/08	10.55	--	--	89.46	--
		01/27/09	11.24	--	--	88.77	--
		02/20/09	11.55	--	--	88.46	--
		04/21/09	11.50	--	--	88.51	--
		10/06/09	10.82	--	--	89.19	--
		03/18/10	11.79	--	--	88.22	--
		04/20/10	11.87	--	--	88.14	--
		05/26/10	11.63	--	--	88.38	--
	06/18/10	9.96	--	--	90.05	--	
	07/23/10	6.79	--	--	93.22	--	
	08/16/10	7.71	--	--	92.30	--	
	09/23/10	8.80	--	--	423.88	--	
	10/25/10			Well not measured		--	
	11/16/10			Well not measured		--	
	12/14/10			Well not measured		--	
	01/05/11			Well not measured		--	
	02/08/11			Well not measured		--	
	03/23/11			Well not measured		--	
04/13/11			Well not measured		--		
06/09/11		9.97	--	--	422.71	--	
	¹ 432.68	08/23/11	7.86	--	--	424.82	--
GEI-9	100.02	09/04/03	6.42	--	--	93.60	--
		04/24/04	9.82	--	--	90.20	--
		09/16/04	8.21	--	--	91.81	--
		04/21/05			Well buried under snow/ice		--
		09/30/05	8.14	--	--	91.88	--
		04/19/06			Well buried under snow/ice		--
		09/21/06	9.31	--	--	90.71	--
		04/03/07	11.39	--	--	88.63	--
		09/29/07	8.91	--	--	91.11	--
		03/29/08	10.73	10.65	0.08	89.36	--
		09/10/08	8.63	--	--	91.39	--
		04/21/09			Well buried under snow/ice		--
		10/06/09	10.90	10.87	0.03	89.14	--
		03/18/10			Well obstructed by snow/ice		--
		04/20/10	12.11	11.9	0.21	88.08	--
		05/26/10	11.81	11.71	0.1	88.29	--
	07/23/10	7.82	--	--	92.20	--	
	08/16/10	7.84	7.81	0.03	92.20	--	
	09/23/10	9.00	8.87	0.13	423.92	--	
	10/25/10			Well not measured		--	
	11/16/10			Well not measured		--	
	12/14/10			Well not measured		--	
	01/05/11			Well not measured		--	
	02/08/11			Well not measured		--	
	03/23/11			Well not measured		--	
	04/13/11			Well not measured		--	
06/09/11		10.27	10.08	0.19	422.70	--	
	¹ 432.81	08/23/11	7.99	--	Trace	424.82	--

Table 1
Groundwater Elevation Data
Former Chevron Facility 306443
Gate 28, West Ramp, Fairbanks International Airport
Fairbanks, Alaska

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Water (top of casing) (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Groundwater Elevation (feet)	LNAPL Removed (Gallons)
MW-1	432.51 ¹ 432.50	09/10/08	8.65	--	--	423.86	--
		04/21/09	11.26	--	--	421.25	--
		10/06/09	10.75	--	--	421.76	--
		06/18/10	9.85	9.79	0.06	422.71	--
		07/23/10	7.54	--	--	424.97	--
		08/16/10	7.56	--	--	424.95	--
		09/23/10	8.68	--	--	423.82	--
		10/25/10	11.05	--	--	421.45	--
		11/16/10	11.82	--	--	420.68	--
		12/14/10	10.83	--	--	421.67	--
		01/05/11	10.82	--	--	421.68	--
		02/08/11	11.15	--	--	421.35	--
		03/23/11	11.40	10.92	0.48	421.49	--
		04/13/11	11.37	11.36	0.01	421.14	--
		06/09/11	9.84	--	--	422.66	--
		08/23/11	7.69	--	--	424.81	--
		MW-2	431.79 ¹ 431.77	09/10/08	7.75	--	--
04/21/09				Well under water			--
10/06/09	9.89			--	--	421.90	--
06/18/10	9.02			--	--	422.77	--
07/23/10	6.80			--	--	424.99	--
08/16/10	6.71			--	--	425.08	--
09/23/10	7.82			--	--	423.95	--
10/25/10				Well not measured			--
11/16/10				Well not measured			--
12/14/10				Well not measured			--
01/05/11				Well not measured			--
02/08/10				Well not measured			--
03/23/11				Well not measured			--
04/13/11				Well not measured			--
06/09/11	8.98			--	--	422.79	--
08/23/11	6.87			--	--	424.90	--
MW-3	432.89 ¹ 432.90			09/10/08	9.00	--	--
		04/21/09	11.69	--	--	421.20	--
		10/06/09	10.15	--	--	422.74	--
		06/18/10	10.22	--	--	422.67	--
		07/23/10	7.91	--	--	424.98	--
		08/16/10	7.96	--	--	424.93	--
		09/23/10	9.08	--	--	423.82	--
		10/25/10		Well not measured			--
		11/16/10		Well not measured			--
		12/14/10		Well not measured			--
		01/05/11		Well not measured			--
		02/08/11		Well not measured			--
		03/23/11		Well not measured			--
		04/13/11		Well not measured			--
		06/09/11	10.21	--	--	422.69	--
		08/23/11	8.08	--	--	424.82	--
		MW-4	432.29 ¹ 432.31	09/10/08	8.26	--	--
04/21/09				Well buried under snow/ice			--
10/06/09	10.57			--	--	421.72	--
06/18/10	9.49			--	--	422.80	--
07/23/10	7.24			--	--	425.05	--
08/16/10	7.26			--	--	425.03	--
09/23/10	8.33			--	--	423.98	--
10/25/10				Well not measured			--
11/16/10				Well not measured			--
12/14/10				Well not measured			--
01/05/11				Well not measured			--
02/08/11				Well not measured			--
03/23/11				Well not measured			--
04/13/11				Well not measured			--
06/09/11	9.53			--	--	422.78	--
08/23/11	7.42			--	--	424.89	--

Table 1
Groundwater Elevation Data
Former Chevron Facility 306443
Gate 28, West Ramp, Fairbanks International Airport
Fairbanks, Alaska

Monitoring Well	Top of Casing Elevation (feet)	Date	Depth to Water (top of casing) (feet)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Groundwater Elevation (feet)	LNAPL Removed (Gallons)
MW-9	432.39	09/20/10	8.30	--	--	424.09	--
		09/23/10	8.60	--	--	423.79	--
		10/25/10	10.95	--	--	421.44	--
		11/16/10	11.74	--	--	420.65	--
		12/14/10		Well not measured- unable to locate			--
		01/05/11		Well blocked at 0.8' below grade surface			--
		02/08/11		Well blocked at 0.8' below grade surface			--
		03/23/11		Well blocked at 0.8' below grade surface			--
		04/13/11		Well blocked at 0.8' below grade surface			--
		06/09/11		Obstructed @ 4.45'			--
		08/23/11		7.61	--	--	424.78
MW-10	432.75	09/20/10	8.58	--	--	424.17	--
		09/23/10	8.92	--	--	423.83	--
		10/25/10	10.20	--	--	422.55	--
		11/16/10	11.99	--	--	420.76	--
		12/14/10		Well not measured			--
		01/05/11	11.00	--	--	421.75	--
		02/08/11	11.37	--	--	421.38	--
		03/23/11	11.62	--	--	421.13	--
		04/13/11	11.90	--	--	420.85	--
		06/09/11	10.06	--	--	422.69	--
		08/23/11		7.91	--	--	424.84
RW-1	432.30	09/10/08	8.30	--	--	424.00	--
		04/21/09		Well obstructed by snow/ice			--
		10/06/09	10.45	--	--	421.85	--
		06/18/10	9.54	--	--	423.21	--
		08/16/10	7.31	--	--	424.99	--
		09/23/10	8.39	--	--	423.91	--
		10/25/10		Well not measured			--
		11/16/10		Well not measured			--
		12/14/10		Well not measured			--
		1/5/11		Well not measured			--
		2/8/11		Well not measured			--
		3/23/11		Well not measured			--
		4/13/11		Well not measured			--
		06/09/11	9.54	--	--	422.76	--
08/23/11		7.45	--	trace	424.85	--	

Notes:

LNAPL = Light non-aqueous phase liquid

Groundwater elevations were corrected due to the presence of LNAPL in well. Specific gravity of 0.82 was used for the LNAPL (Jet-A Fuel).

Bold text indicates most recent sampling event.

TOC = Top of casing.

"--" = Not applicable.

¹ = Updated survey data

Table 2
Groundwater Analytical Data
 Former Chevron Facility 306443
 Gate 28, West Ramp, Fairbanks International Airport
 Fairbanks, Alaska

Monitoring Well	Date Sampled	Gasoline Range Organic	Diesel Range Organics	Residual Range Organic	Benzene	Toluene	Ethylbenzene	Total Xylenes	Lead	1,2 Dibromoethane
ADEC Groundwater Cleanup Levels ¹		2,200	1,500	1,100	5	1,000	700	10,000	15	0.05
GEI-1	04/24/04	Well buried by snow/ice								
	09/16/04	1,760	151,000	--	7.05	1.83	47.9	251	--	--
	09/16/04 ^D	--	--	--	5.40	2.02	42.2	233	--	--
	04/21/05	Well buried by snow/ice								
	09/30/05	2,270	327,000	<3,970	5.52	0.945	36.6	208	--	--
	04/19/06	Well buried by snow/ice								
	09/21/06	1,300	690,000	<9,800	10.0	0.8	22	140	--	--
	04/03/07	LNAPL Present - Well not sampled								
	09/29/07	LNAPL Present - Well not sampled								
	03/29/08	Well buried by snow/ice								
	09/10/08	LNAPL Present - Well not sampled								
	04/22/09	Well buried under snow/ice								
	10/06/09	LNAPL Present - Well not sampled								
	06/18/10	LNAPL Present - Well not sampled								
09/23/10	LNAPL Present - Well not sampled									
06/10/11	LNAPL Globules Present - Well not sampled									
	08/25/11	LNAPL Globules Present - Well not sampled								
GEI-2	04/24/04	Well buried by snow/ice								
	09/16/04	76.6	1,430	--	2.53	0.547	<0.500	1.81	--	--
	04/21/05	Well buried by snow/ice								
	09/30/05	65.6	885	<391	<0.500	<0.500	<0.500	<1.50	--	--
	04/19/06	Well buried by snow/ice								
	09/21/06	56.0	1,500	430	<0.5	<0.500	<0.500	<1.50	--	--
	04/03/07	Well dry - Not sampled								
	09/29/07	30	--	--	<1.00	<1.00	<1.00	<2.00	--	--
	03/29/08	<50.0	-- ³	-- ³	<0.500	<0.500	<0.500	<1.00	--	--
	09/10/08	52 ⁴	5,300 ⁵	<743	0.225	<0.500	1.16	<1.00	<1.00	--
	04/22/09	Well under water								
	10/06/09	Well dry - Not sampled								
	06/18/10	LNAPL Present - Well not sampled								
	09/23/10	<10	2,500	210	<0.5	<0.5	<0.5	<1.5	<0.052	--
06/10/11	13	6,100	930	<0.5	<0.5	<0.5	<1.00	--	--	
08/25/11	<10	1,100	840	<0.5	<0.5	<0.5	<1.50	--	--	
Duplicate	08/25/11	<10	--	--	<0.5	<0.5	<0.5	<1.50	--	--
GEI-3	04/24/04	1,330	21,000	--	<5.00	<5.00	13.9	59.8	--	--
	09/16/04	310	18,300	--	1.26	<0.500	8.27	14.9	--	--
	04/21/05	464	22,900	--	<0.500	<0.500	6.24	14.6	--	--
	09/30/05	450	33,300	625	<0.500	<0.500	3.45	10.6	--	--
	04/19/06	LNAPL Present - Well not sampled								
	09/21/06	500	29,000	<480	<0.600	<0.500	7.7	25.0	--	--
	04/03/07	LNAPL Present - Well not sampled								
	09/29/07	700	65,000	<2,100	<5.00	<5.00	<5.00	<20	--	--
	03/29/08	492	47,100 ²	863	<0.500	<0.500	5.01	16.0	--	--
	09/10/08	374 ⁴	22,400 ⁵	<3,750	<1.00	<2.50	7.06	13.7	<1.00	--
	04/22/09	LNAPL Present - Well not sampled								
	10/06/09	LNAPL Present - Well not sampled								
	06/18/10	LNAPL Present - Well not sampled								
	09/23/10	450	2,400	<140	<0.5	<0.5	2.2	8.6	<0.052	--
06/10/11	LNAPL Globules Present - Well not sampled									
	08/25/11	LNAPL Globules Present - Well not sampled								
GEI-4	04/24/04	1,270	43,600	--	<5.00	<5.00	14.6	57.2	--	--
	09/16/04	638	36,200	--	15.0	0.675	21.8	35.7	--	--
	04/21/05	570	37,500	--	35.4	1.27	17.7	40.1	--	--
	09/30/05	1,030	122,000	<4,100	7.47	4.88	25.1	58.7	--	--
	04/19/06	879	17,800	<391	7.58	<0.500	21.8	27.9	<1.00	--
	09/21/06	630	12,000	<480	24.0	0.5	25	43	--	--
	04/03/07	300	2,000	<40	5.0	<1.00	9	8.0	--	--
	09/29/07	1,400	43,000	<2,000	20	1.00	20	40	--	--
	03/29/08	255 ¹	11,300 ²	<735	2.17	<0.500	4.16	9.20	--	--
	09/10/08	889 ⁴	32,300 ⁵	<3,750	53.2	2.42	37.9	71.0	<1.00	--
	04/22/09	229 ¹	2,840 ⁵	<721	2.90	<0.500	4.50	7.64	<1.00 ⁷	<0.01
	10/06/09	305	5,820	787	15.7	<1.00	17.3	33.77	<1.00	<0.0100
	06/18/10	Well Not Sampled								
	09/23/10	LNAPL Present - Well not sampled								
06/10/11	3,900	270,000	<14,000	<2.5	<10	<2.5	8.2	--	--	
	08/25/11	LNAPL Globules Present - Well not sampled								
GEI-5	04/24/04	LNAPL Present - Well not sampled								
	09/16/04	LNAPL Present - Well not sampled								
	04/21/05	LNAPL Present - Well not sampled								
	09/30/05	2,530	671,000	<8,700	12.4	<0.500	107	326	--	--
	04/19/06	LNAPL Present - Well not sampled								
	09/21/06	LNAPL Present - Well not sampled								
	04/03/07	LNAPL Present - Well not sampled								
	09/29/07	LNAPL Present - Well not sampled								
	03/29/08	68.1	1,860 ²	<708	<0.500	<0.500	<0.500	1.78	--	--
	09/10/08	LNAPL Present - Well not sampled								
	04/22/09	LNAPL Present - Well not sampled								
	10/06/09	LNAPL Present - Well not sampled								
	06/18/10	LNAPL Present - Well not sampled								
	09/23/10	LNAPL Present - Well not sampled								
06/10/11	LNAPL Globules Present - Well not sampled									
	08/25/11	LNAPL Globules Present - Well not sampled								

Table 2
Groundwater Analytical Data
Former Chevron Facility 306443
Gate 28, West Ramp, Fairbanks International Airport
Fairbanks, Alaska

Monitoring Well	Date Sampled	Gasoline Range Organic	Diesel Range Organics	Residual Range Organic	Benzene	Toluene	Ethylbenzene	Total Xylenes	Lead	1,2 Dibromoethane
ADEC Groundwater Cleanup Levels ¹		2,200	1,500	1,100	5	1,000	700	10,000	15	0.05
GEI-6	04/24/04	2,930	168,000	--	8.17	<5.00	59.6	145	--	--
	09/16/04	1,880	39,600	--	7.80	1.57	23.8	75.0	--	--
	04/21/05	1,290	25,300	--	15.7	<0.500	57.1	134	--	--
	09/30/05	2,220	120,000	<4,770	14.8	<0.500	20.8	107	--	--
	04/19/06	Well buried by snow/ice								
	09/21/06	LNAPL Present - Well not sampled								
	04/03/07	Well Dry - Not sampled								
	09/29/07	LNAPL Present - Well not sampled								
	03/29/08	1,170 ¹	334,000 ²	904	8.41	<2.50	33.8	128	58.8	--
	09/10/08	LNAPL Present - Well not sampled								
	04/22/09	Well blocked at 11.5' below TOC								
	10/06/09	LNAPL Present - Well not sampled								
	06/18/10	LNAPL Present - Well not sampled								
	09/23/10	LNAPL Present - Well not sampled								
	06/10/11	1,300	170,000	<8,400	2.9	<0.5	19	61		
08/25/11	LNAPL Globules Present - Well not sampled									
GEI-7	04/24/04	2,440	43,200	--	6.97	<5.00	7.58	20.0	--	--
	09/16/04	363	5,660	--	<0.500	1.34	8.89	14.2	--	--
	04/21/05	1,080	13,600	--	32.6	2.52	64.6	92.0	--	--
	09/30/05	226	6,700	<397	<0.500	<0.500	3.68	4.72	--	--
	04/19/06	934	25,200	<856	37.9	4.11	77.8	103	<1.00	--
	09/21/06	470	4,100	<98	1.2	<0.5	14	15	--	--
	04/03/07	2,200	12,000	<980	50	4	90	200	--	--
	04/03/07 ^D	2,200	12,000	<980	40	4	90	200	--	--
	09/29/07	1,500	130,000	<2,000	<5	<5	<10	<20	27.9	--
	09/29/07 ^D	900	92,000	<2,000	<5	<5	<10	<20	--	--
	03/29/08	1,630 ¹	44,200	1,320	31.1	<5.00	90.5	147	--	--
	03/29/08 ^D	1,630	51,400	1,470	26.8	<5.00	85.2	131	--	--
	09/10/08	352 ⁴	15,200 ⁵	<833	<1.00	<2.50	10.7	8.02	<1.00	--
	04/22/09	LNAPL Present - Well not sampled								
	10/06/09	LNAPL Present - Well not sampled								
06/18/10	LNAPL Present - Well not sampled									
09/24/10	570	1,900	200	<2.0	<2.0	9.7	11	<0.052	--	
06/10/11	LNAPL Present - Well not sampled									
08/25/11	LNAPL Globules Present - Well not sampled									
GEI-8	04/24/04	<500	7,390	--	<5.00	<5.00	11.7	30.4	--	--
	09/16/04	82	8,690	--	<0.500	<0.500	0.520	1.12	--	--
	04/21/05	54.3	1,460	--	<0.500	<0.500	<0.500	<1.50	--	--
	04/21/05 ^D	<50	--	--	<0.500	<0.500	<0.500	<1.50	--	--
	09/30/05	<50	4,970	<397	<0.500	<0.500	<0.500	<1.50	--	--
	04/19/06	<50	1,480	<400	<0.500	<0.500	<0.500	<1.50	--	--
	04/19/06 ^D	78.0	--	--	<0.500	<0.500	<0.500	<1.50	<1.00	--
	09/21/06	40.0	1,800	<160	<0.5	<0.5	<0.5	<1.5	--	--
	04/03/07	60	910	360	<1.0	<1.0	<1.0	<2.0	--	--
	09/29/07	80	4,400	<200	<1.0	<1.0	<1.0	<2.0	--	--
	03/29/08	62.0 ¹	2,830 ²	<758	<0.500	<0.500	<0.500	1.94	--	--
	09/10/08	LNAPL Present - Well not sampled								
	04/22/09	66.6 ¹	1,810 ³	818 ⁹	<0.200	<0.500	<0.500	<1.00	<1.00 ⁷	<0.01
	10/06/09	50.9	942	<391	<0.200	<1.00	<1.00	<3.00	<1.00	<0.0100
	10/06/09	50.9	942	<391	<0.200	<1.00	<1.00	<3.00	<1.00	<0.0100
06/18/10	Obstruction - Well not sampled									
09/23/10	11	530	220	<0.5	<0.5	<0.5	<1.5	<0.052	--	
06/10/11	1,300	26,000	<3,400	<2.5	<2.5	<2.5	<7.5	--	--	
08/25/11	20	99,000	<3,500	<0.5	<0.5	<0.5	<1.5	--	--	
Duplicate	08/25/11	32	--	--	<0.5	<0.5	<0.5	<1.5	--	--
GEI-9	04/24/04	8,370	33,700	--	9.53	<5.00	113	321	--	--
	09/16/04	1,350	77,400	--	17.3	<0.500	58.3	57.5	--	--
	04/21/05	Well buried by snow/ice								
	09/30/05	838	50,900	<443	16.2	<0.500	55.4	82.3	--	--
	04/19/06	Well buried by snow/ice								
	09/21/06	1,200	95,000	<1,900	23.0	<0.5	52	80	36.5	--
	09/21/06 ^D	1,300	43,000	<980	22.0	<0.5	50	75	--	--
	04/03/07	1,600	9,700	<400	6.0	<1.0	40	80	0.62	--
	09/29/07	1,800	680,000	<20,000	10.0	<5.00	40	70	29.8	--
	03/29/08	1,690 ¹	111,000 ²	839	7.23	<5.00	25.1	85.5	89.4	--
	09/10/08	1,510 ⁴	118,000 ⁶	<8,330	9.04	<5.00	29.3	63.1	<1.00	--
	9/10/08 ^D	1,150 ⁴	191,000 ⁵	<7,500	9.18	<5.00	25.0	56.1	<1.00	--
	04/22/09	Well buried under snow/ice								
	10/06/09	LNAPL Present - Well not sampled								
	06/18/10	Well not sampled								
09/23/10	LNAPL Present - Well not sampled									
06/10/11	LNAPL Present - Well not sampled									
08/25/11	LNAPL Globules Present - Well not sampled									
MW-1	09/10/08	2,000 ⁴	10,900 ⁵	<743	27.4	<0.500	99.8	163	<1.00	--
	04/22/09	2,260 ¹	20,700 ⁵	1,190 ⁸	42.2	0.566	84.3	236	<1.00 ⁷	<0.01
	10/07/09	1,040	8,070	642	25.4	<10.0	81.8	171.9	<1.00	<0.0100
	06/18/10	LNAPL Present - Well not sampled								
	09/24/10	1,800	12,000	<1,500	21	<0.5	55	130	--	--
	09/24/10	1,800	--	--	22	<0.5	56	130	--	--
	06/10/11	1,200	210,000	<8,500	29	<2.5	56	160	--	--
	06/10/11	1,200	--	--	25	<0.5	54	160	--	--
	08/25/11	2,600	82,000	<3,400	32.0	9.1	45	130	--	--

Table 2
Groundwater Analytical Data
Former Chevron Facility 306443
Gate 28, West Ramp, Fairbanks International Airport
Fairbanks, Alaska

Monitoring Well	Date Sampled	Gasoline Range Organic	Diesel Range Organics	Residual Range Organic	Benzene	Toluene	Ethylbenzene	Total Xylenes	Lead	1,2 Dibromethane	
ADEC Groundwater Cleanup Levels ¹		2,200	1,500	1,100	5	1,000	700	10,000	15	0.05	
MW-2	09/10/08	<50.0	208 ⁶	<743	<0.20	<0.500	<0.50	<1.00	<1.00	--	
	04/22/09					Well buried under snow/ice					
	10/06/09	<50.0	<410	<410	<0.200	<1.00	<1.00	<3.00	<1.00	<0.0100	
	06/18/10	11	530	290	<0.5	<0.5	<0.5	<1.5	<0.05	--	
	09/23/10	<10	100	150	<0.5	<0.5	<0.5	<1.5	--	--	
	06/10/11	<10	85	200	<0.5	<0.5	<0.5	<1.5	--	--	
	08/25/11	<10	1,000	790	<0.5	<0.5	<0.5	<1.5	--	--	
MW-3	09/10/08	144 ⁴	2,800 ⁵	<743	0.263	<0.500	0.687	1.56	<1.00	--	
	04/22/09	96.4 ¹	1,600 ⁵	<728	0.210	<0.500	1.09	1.81	<1.00 ⁷	<0.01	
	10/07/09	205	1,350	<391	<0.400	<2.00	10.5	10.02	<1.00	<0.0100	
	06/18/10	220	17,000	<3.4	<0.5	<2	<0.5	<5	<0.05	--	
	06/18/10	64	17,000	<3.5	<0.5	<0.5	<0.5	<1.5	--	--	
	09/24/10	27	510	91	<0.5	<0.5	<0.5	<1.5	--	--	
	06/10/11	<50	21,000	<1,700	<2.5	<2.5	<2.5	<7.5	--	--	
	06/10/11	460	--	--	<0.5	<0.5	0.6	3.3	--	--	
		08/25/11	71	10,000	<690	<0.5	<0.5	<0.5	<1.5	--	--
	MW-4	09/10/08	<50.0	150 ⁹	<743	<0.20	<0.500	<0.50	<1.00	<1.00	--
04/22/09						Well buried under snow/ice					
10/06/09		<50.0	<391	<391	<0.200	<1.00	<1.00	<3.00	<1.00	<0.0100	
10/06/09 ^D		<50.0	<403	<403	<0.200	<1.00	<1.00	<3.00	<1.00	<0.0100	
06/18/10						Well not sampled					
09/24/10		<10	56	75	<0.5	<0.5	<0.5	<1.5	--	--	
06/10/11		<10	<50	<71	<0.5	<0.5	<0.5	<1.5	--	--	
	08/25/11	20	62	77	<0.5	<0.5	<0.5	<1.5	--	--	
MW-5	09/10/08	89.1 ⁴	2,240 ⁵	<743	0.378	<0.500	2.42	3.28	<1.00	--	
	04/22/09	254 ¹	4,230 ⁵	<728	0.590	<0.500	6.95	5.14	<1.00 ⁷	<0.01	
	04/22/09 ^D	248 ¹	4,150 ⁵	<721	0.593	<0.500	6.82	4.90	<1.00 ⁷	<0.01	
	10/07/09	<50.0	1,040	<391	<0.200	<1.00	1.35	<3.00	<1.00	<0.0100	
	06/18/10	540	1,500	<1.7	<0.5	<5	2	<5	--	--	
	09/24/10	230	6,500	<690	<0.5	<0.5	4.3	7.8	--	--	
	09/24/10	240	--	--	<0.5	<0.5	4.6	8.0	--	--	
	06/10/11	3,800	63,000	<6,900	<0.5	<0.5	5.2	23	--	--	
		08/25/11	210	2,700	<140	<0.5	<0.5	<0.5	<1.5	--	--
	MW-6	09/24/10	81	560	86	<0.5	<0.5	2.3	3.9	--	--
06/10/11		86	730	1,600	<0.5	<0.5	0.6	<5	--	--	
08/25/11		58	770	430	<0.5	<0.5	1.1	2	--	--	
MW-7	09/24/10	<10	200	92	<0.5	<0.5	<0.5	<1.5	--	--	
	06/10/11	<10	650	2,000	<0.5	<0.5	<0.5	<1.5	--	--	
	08/25/11	<10	150	190	<0.5	<0.5	<0.5	<1.5	--	--	
MW-8	09/24/10	1,000	4,500	<360	1.3	<0.5	38	69	--	--	
	06/10/11					LNAPL Globules Present - Well not sampled					
	08/25/11					LNAPL Globules Present - Well not sampled					
MW-9	09/24/10	890	6,000	<730	7.3	<0.5	50	55	--	--	
	06/10/11					Obstruction - Well not sampled					
	08/25/11	460	260	350	5.9	<2.5	35	42	--	--	
MW-10	09/24/10	<10	850	520	<0.5	<0.5	<0.5	<1.5	--	--	
	06/10/11	<10	700	480	<0.5	<0.5	<0.5	<1.5	--	--	
	08/25/11	<10	960	530	<0.5	<0.5	<0.5	<1.5	--	--	
RW-1	10/06/09	172	4,260	512	<0.200	<1.00	1.04	2.25	<1.00	<0.0100	
	06/18/10	260	1,500	80	<0.5	<2.00	0.7	8.6	--	--	
	09/24/10	330	4,100	<350	<0.5	<2.0	1.3	8.6	--	--	
	06/10/11	3,500	140,000	<6,800	<2.5	<10	4	39	--	--	
	08/25/11					LNAPL Globules Present - Well not sampled					

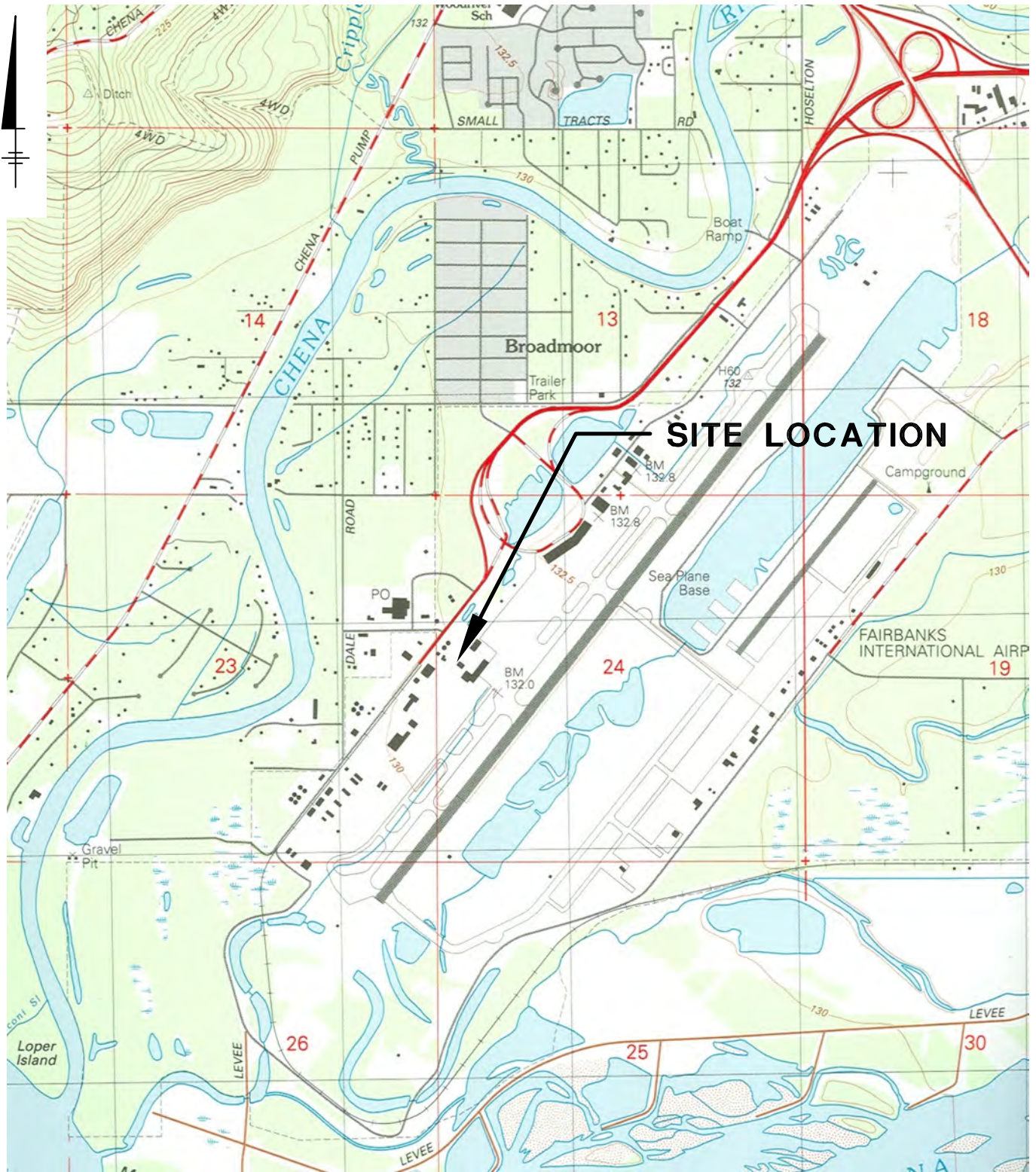
Notes:

- All results are reported in micrograms per liter (ug/l).
- ¹ ADEC Groundwater Cleanup Levels per 18 AAC 75.345, Table C, Register 188, October 9, 2008.
- ^D - duplicate of preceding sample.
- = sample was not analyzed for this compound.
- < = result did not exceed indicated method reporting limit; an elevated reporting limit indicates sample was diluted.
- Highlighted cell= exceeds GCL.
- Bold Type indicates most recent sampling event.
- ¹ Detected hydrocarbons in the gasoline range appear to be due to overlap of diesel range hydrocarbons.
- ² Hydrocarbon pattern most closely resembles kerosene.
- ³ Insufficient water to collect sample.
- ⁴ Does not match typical pattern.
- ⁵ Detected hydrocarbons in the diesel range do not have a distinct diesel pattern and may be due to heavily weathered diesel.
- ⁶ The chromatographic pattern is not consistent with diesel fuel.
- ⁷ Sample filtered in lab.
- ⁸ The heavy oil range organics present are due to hydrocarbons eluting primarily in the diesel range.
- ⁹ Hydrocarbon pattern most closely resembles a blend of Weathered Diesel and Transformer Oil.

ARCADIS

Figures

CITY:TMAPA_FL DIV:GROUP:85 DB:JAR LD:(Opt) PIC:(Opt) PM:(Reg) TM:(Opt) L:YR:(Opt)ON:OFF=REF: G:\ENV\CAD\Tampa-BA\CT\B046587\306443\00000003\2SA.2011 GMR\B046587\N01.dwg LAYOUT: ISAVED: 10/5/2011 11:18 AM ACADVER: 18.0S (LIMS TECH) PAGESETUP: PDF-APPLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 10/5/2011 11:19 AM BY: RICHARDS, JIM



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

SITE LOCATION



APPROXIMATE GRAPHIC SCALE

CHEVRON #306443 (FORMER UNOCAL BULK PLANT)
GATE 28, WEST RAMP, FAIRBANKS AIRPORT, FAIRBANKS, AK.
**SECOND SEMI-ANNUAL 2011 GROUNDWATER
MONITORING REPORT**

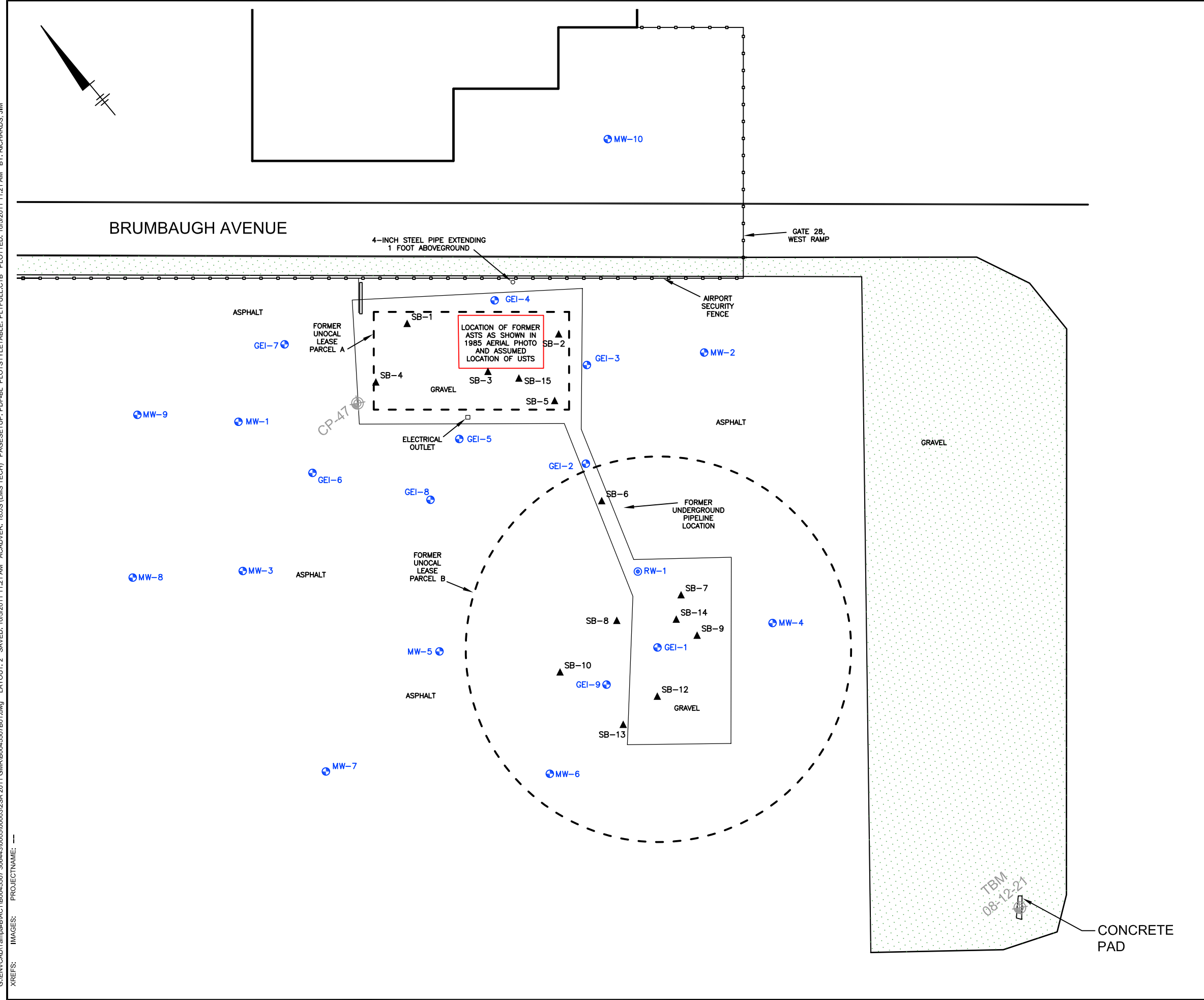
SITE LOCATION MAP



FIGURE

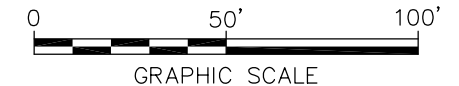
1

CITY: TMA-A, FL DIV/GROUP: 85 DBR/PETRIE LD: J RICHARDS PIC: (Opt) PM: (Read) TM: (Opt) LYR: (Opt) LYS: (Opt) LMS: (Tech) PAGESETUP: PDF-BL PLOTSTY/LETTABLE: PLT-FULL.CTB PLOTTED: 10/5/2011 11:21 AM BY: RICHARDS, JIM
 GAENVCAD1\ampa-b\ACT\B0045507 306443\0005\0003\2SA 2011 GMR\B0045507\B01.dwg LAYOUT: 2 SAVED: 10/5/2011 11:21 AM ACADVER: 18.05 (LMS TECH) PAGESETUP: PDF-BL PLOTSTY/LETTABLE: PLT-FULL.CTB PLOTTED: 10/5/2011 11:21 AM BY: RICHARDS, JIM
 XREFS: IMAGES: PROJECTNAME: --



- LEGEND**
- SURVEY CONTROL POINT
 - MONITORING WELL
 - RECOVERY WELL
 - SOIL BORING

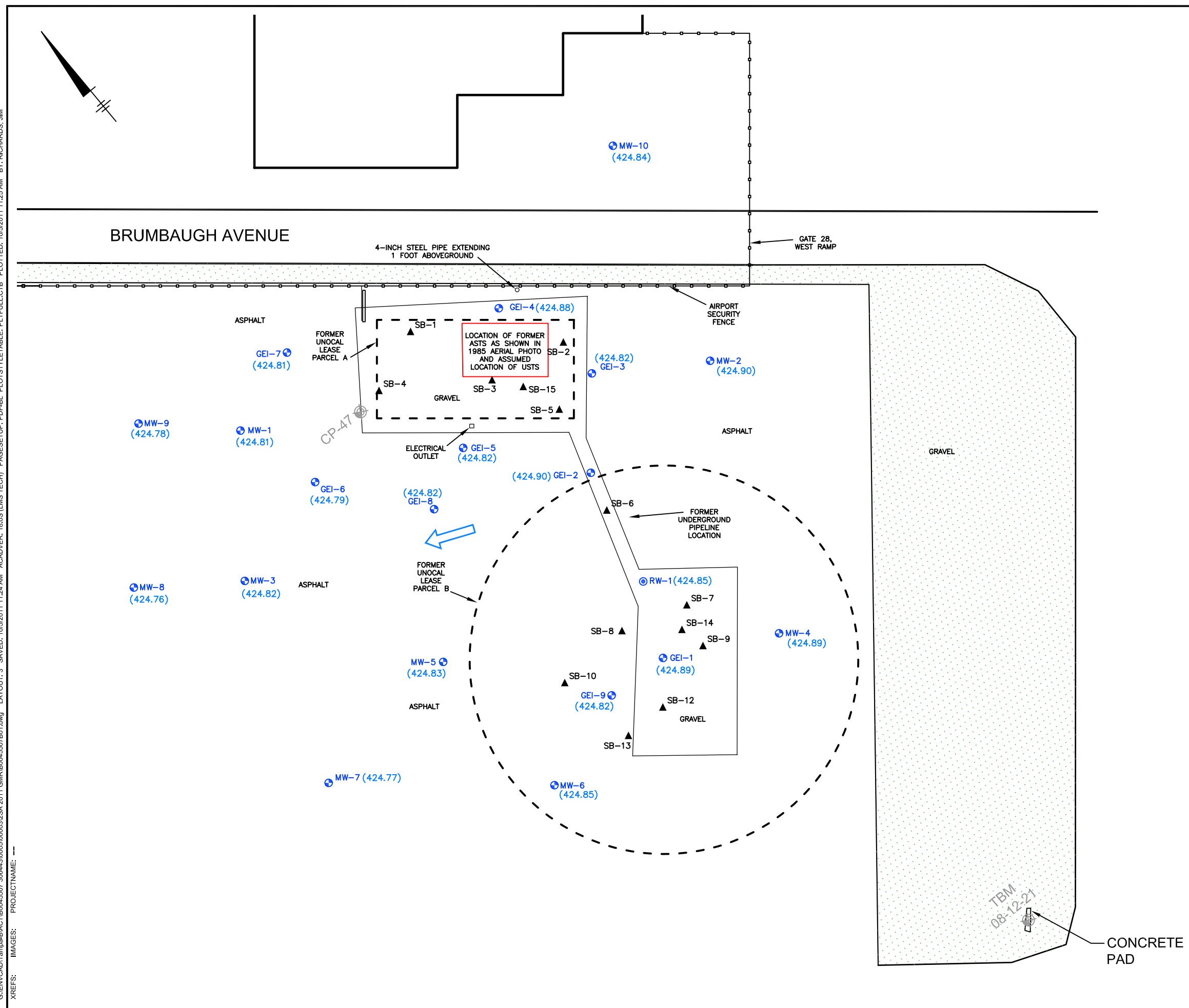
- Notes:**
1. Basis of horizontal control NAD83 position (EPOCH 2003) and vertical control (NAVD88) was an Opus solution from NGS stations "SUAF Surveyorsexch UAF CORS APR", "FAIR GILMORE CREEK OBS CORS ARP", GRNX AKDA AS204 CORS ARP", "CENA CENTRAL ALSAKA CORS ARP", "AB39 FORTYKON AK2008 CORS ARP", "AB37 PAXON2 AS2004 CORS ARP" to establish the position and elevation of CP-47.
 2. The geodetic position of CP-47 was determined to have a Latitude of 64°48'45.32158"N and a Longitude of 147°52'32.92546"W. The Alaska State Plane coordinates (ASP) Zone 3 NAD 83 in feet for CP-47 are:
 N=3955792.291
 E=1348117.704
 Elev.=432.502 (NAVD88)
 3. SB-14 and SB-15 were not surveyed.



SOURCE: Base map provided by GEOENGINEERS. Map date 5/15/05, full scale. Base map updated with survey information by "McLane Consulting, Inc.", Date 8/31/08 and 10/28/10.

CHEVRON #306443 (FORMER UNOCAL BULK PLANT) GATE 28, WEST RAMP, FAIRBANKS AIRPORT, FAIRBANKS, AK. SECOND SEMI-ANNUAL 2011 GROUNDWATER MONITORING REPORT	
SITE MAP	
	FIGURE 2

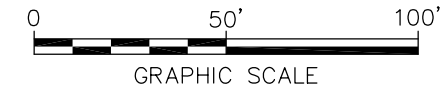
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LEGEND

- SURVEY CONTROL POINT
- MONITORING WELL
- RECOVERY WELL
- SOIL BORING
- (424.84) POTENTIOMETRIC SURFACE ELEVATION (FT)
- APPARENT DIRECTION OF GROUNDWATER FLOW

- Notes:**
1. Basis of horizontal control NAD83 position (EPOCH 2003) and vertical control (NAVD88) was an Opus solution from NGS stations "SUAF Surveyorsexch UAF CORS APR", "FAIR GILMORE CREEK OBS CORS ARP", GRNX AKDA AS204 CORS ARP", "CENA CENTRAL ALSAKA CORS ARP", "AB39 FORTYKON AK2008 CORS ARP", "AB37 PAXON2 AS2004 CORS ARP" to establish the position and elevation of CP-47.
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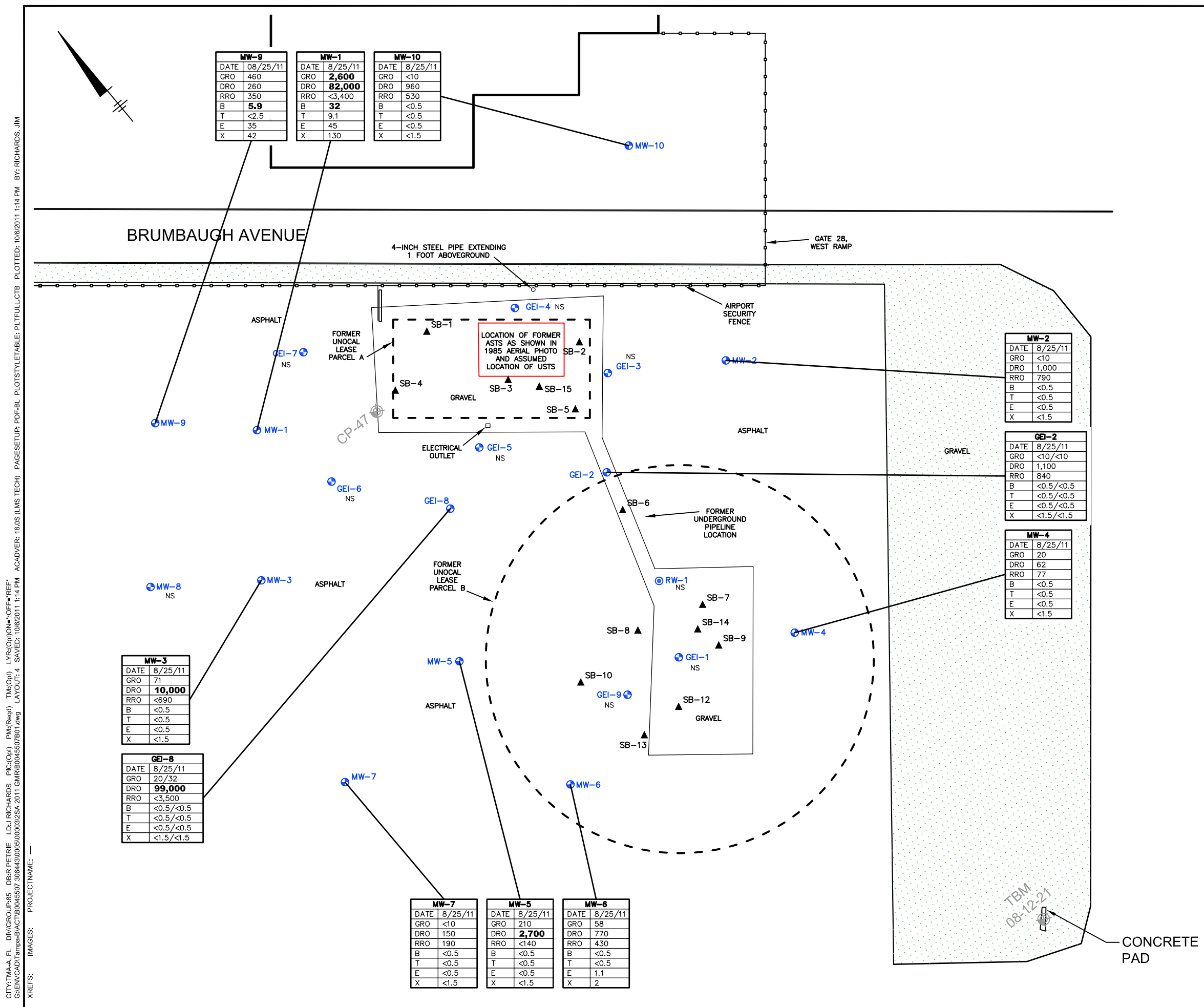


SOURCE: Base map provided by GEOENGINEERS. Map date 5/15/05, full scale. Base map updated with survey information by "McLane Consulting, Inc.", Date 8/31/08 and 10/28/10.

CHEVRON #306443 (FORMER UNOCAL BULK PLANT)
 GATE 28, WEST RAMP, FAIRBANKS AIRPORT, FAIRBANKS, AK.
SECOND SEMI-ANNUAL 2011 GROUNDWATER MONITORING REPORT

GROUNDWATER ELEVATION CONTOUR MAP





LEGEND

- SURVEY CONTROL POINT
- MONITORING WELL
- RECOVERY WELL
- SOIL BORING

Sample Location	
Date	Sample Date
GRO	Gasoline Range Organics
DRO	Diesel Range Organics
RRO	Residual Range Organics
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total Xylenes

RESULTS REPORTED IN MICROGRAMS PER LITER (µg/L)

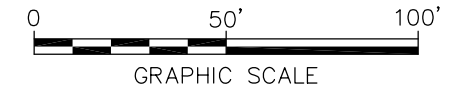
BOLD = EXCEEDS GROUNDWATER CLEANUP LEVEL (GCL)

20/32 = DUPLICATE SAMPLE COLLECTED

<0.5 = RESULT IS BELOW LABORATORY DETECTION LIMIT

NS = NOT SAMPLED

- Notes:
1. Basis of horizontal control NAD83 position (EPOCH 2003) and vertical control (NAVD88) was an Opus solution from NGS stations "SUAF Surveyorsexch UAF CORS APR", "FAIR GILMORE CREEK OBS CORS ARP", GRNX AKDA AS204 CORS ARP", "CENA CENTRAL ALSAKA CORS ARP", "AB39 FORTYKON AK2008 CORS ARP", "AB37 PAXON2 AS2004 CORS ARP" to establish the position and elevation of CP-47.
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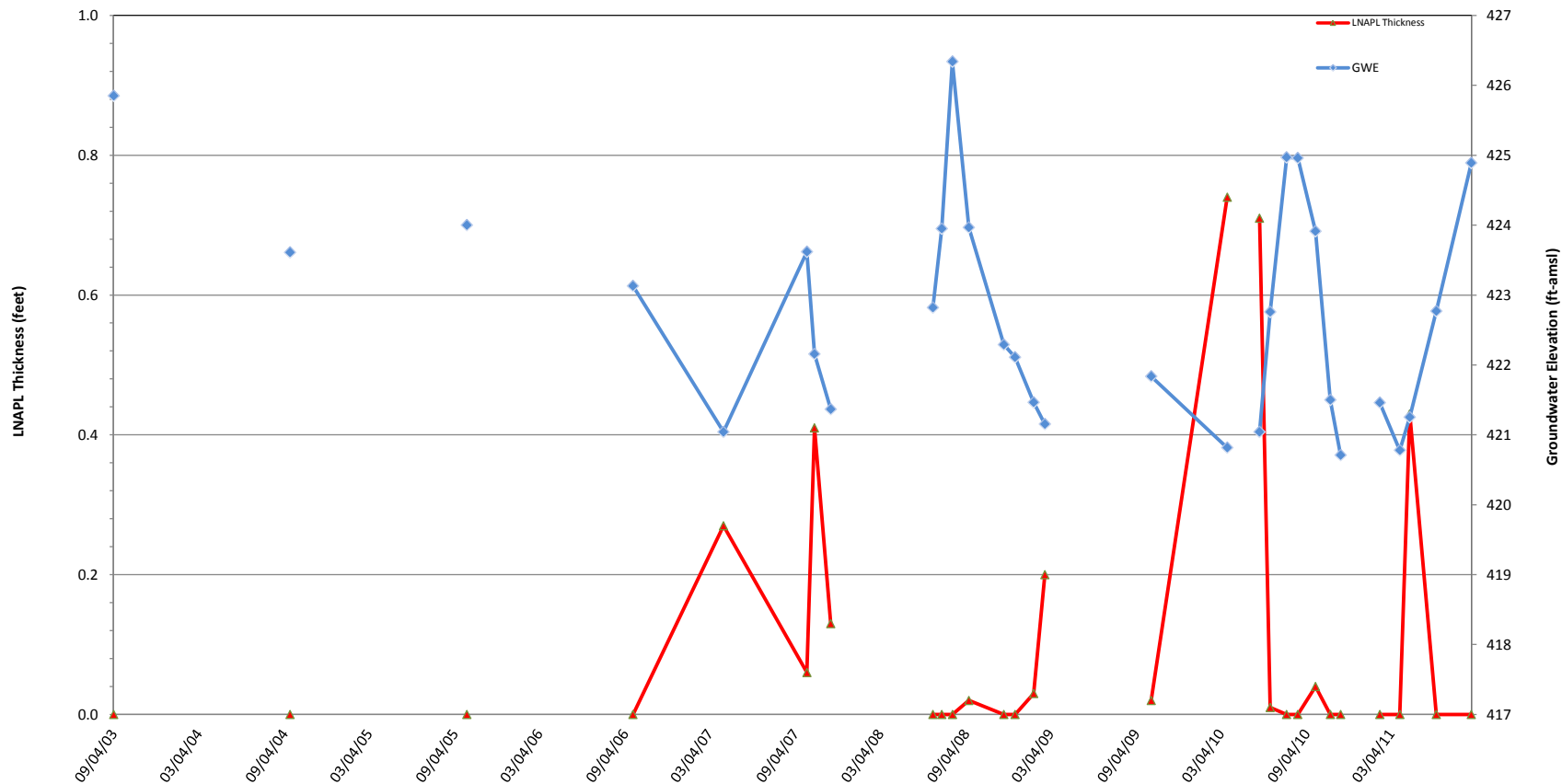
SOURCE: Base map provided by GEOENGINEERS. Map date 5/15/05, full scale. Base map updated with survey information by "McLane Consulting, Inc.", Date 8/31/08 and 10/28/10.

CHEVRON #306443 (FORMER UNOCAL BULK PLANT)
 GATE 28, WEST RAMP, FAIRBANKS AIRPORT, FAIRBANKS, AK.
SECOND SEMI-ANNUAL 2011 GROUNDWATER MONITORING REPORT

GROUNDWATER ANALYTICAL SUMMARY MAP - AUGUST 23, 2011



CITY: TMA-A, FL, DIV: GROUP: 85, DR: R. PETRIE, LD: J. RICHARDS, PIC: (Opt), PM: (Read), TMA: (Opt), LYR: (Opt), OFF: (REF),
 G:\ENVCAD\Tampa-BIACT\B045507_306443\0005\0003\2SA_2011\GMR\B045507\B01.dwg, LAYOUT: 4, SAVED: 10/6/2011 1:14 PM, ACADVER: 18.05 (LMS TECH), PAGES: 10, PLOT: 10/6/2011 1:14 PM, BY: RICHARDS, JIM
 XREFS: IMAGES: PROJECTNAME: --



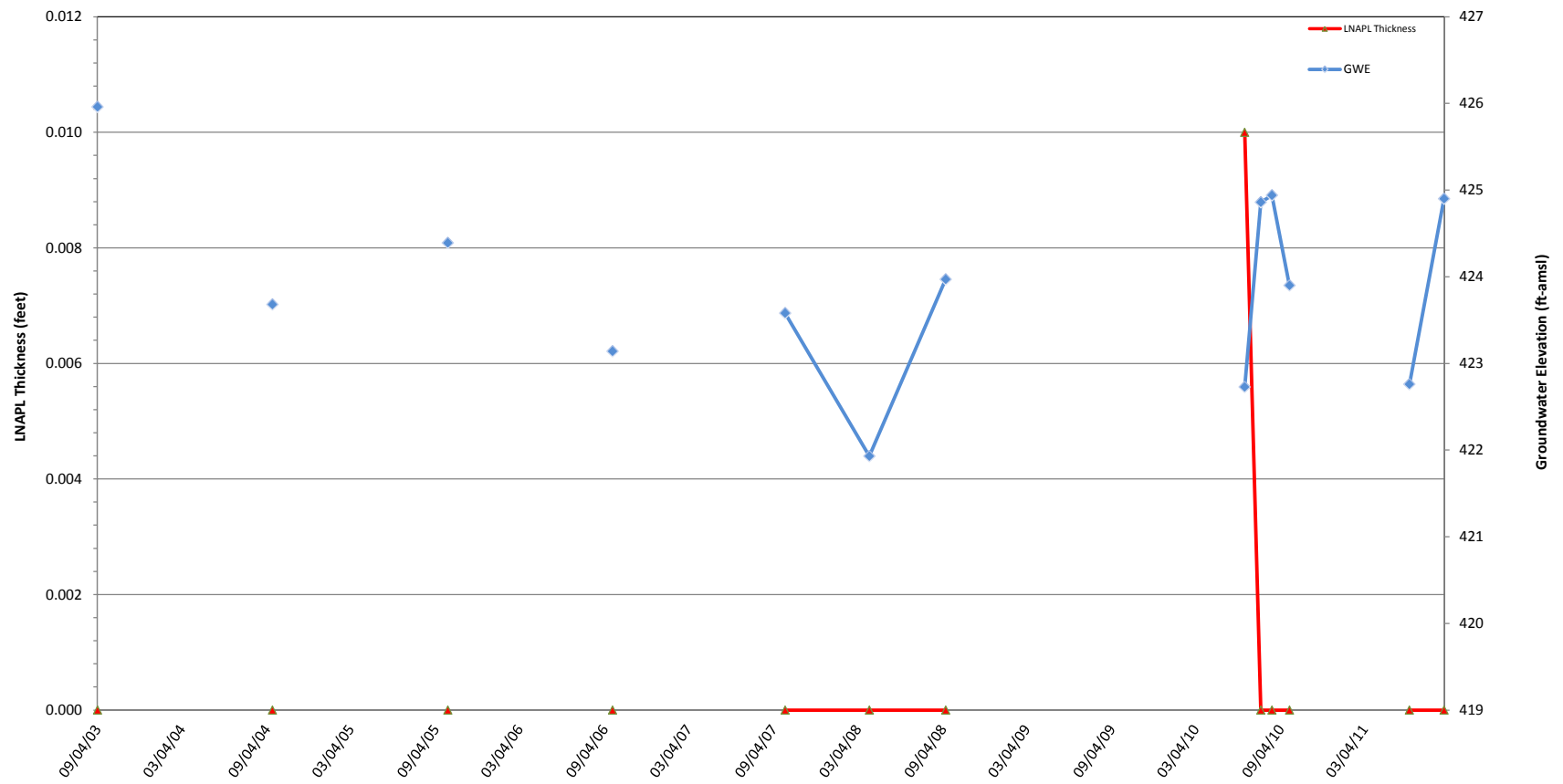
LEGEND:

GWE = Groundwater elevation
 LNAPL = Light non-aqueous phase liquid
 ft-amsl = Feet above mean sea level
 Data gaps = wells were inaccessible and not gauged

CHEVRON #306443 (FORMER UNOCAL BULK PLANT)
 GATE 28, WEST RAMP, FAIRBANKS AIRPORT, FAIRBANKS, AK
**SECOND SEMI-ANNUAL 2011 GROUNDWATER
 MONITORING REPORT**

**Monitoring Well GEI-1 Historical Groundwater
 Elevation and LNAPL Thickness**





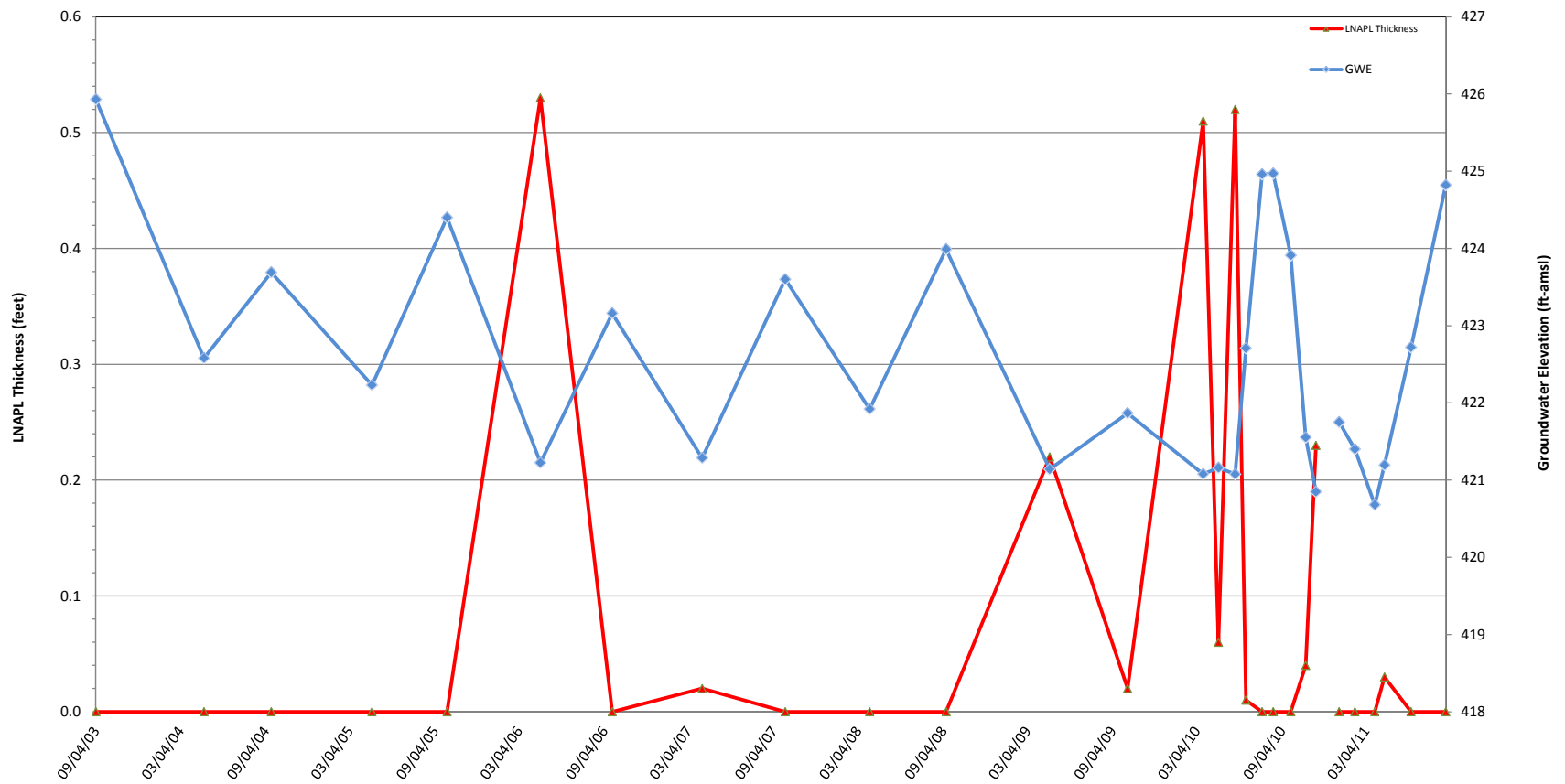
LEGEND:

GWE = Groundwater elevation
 LNAPL = Light non-aqueous phase liquid
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CHEVRON #306443 (FORMER UNOCAL BULK PLANT)
 GATE 28, WEST RAMP, FAIRBANKS AIRPORT, FAIRBANKS, AK
**SECOND SEMI-ANNUAL 2011 GROUNDWATER
 MONITORING REPORT**

**Monitoring Well GEI-2 Historical Groundwater
 Elevation and LNAPL Thickness**





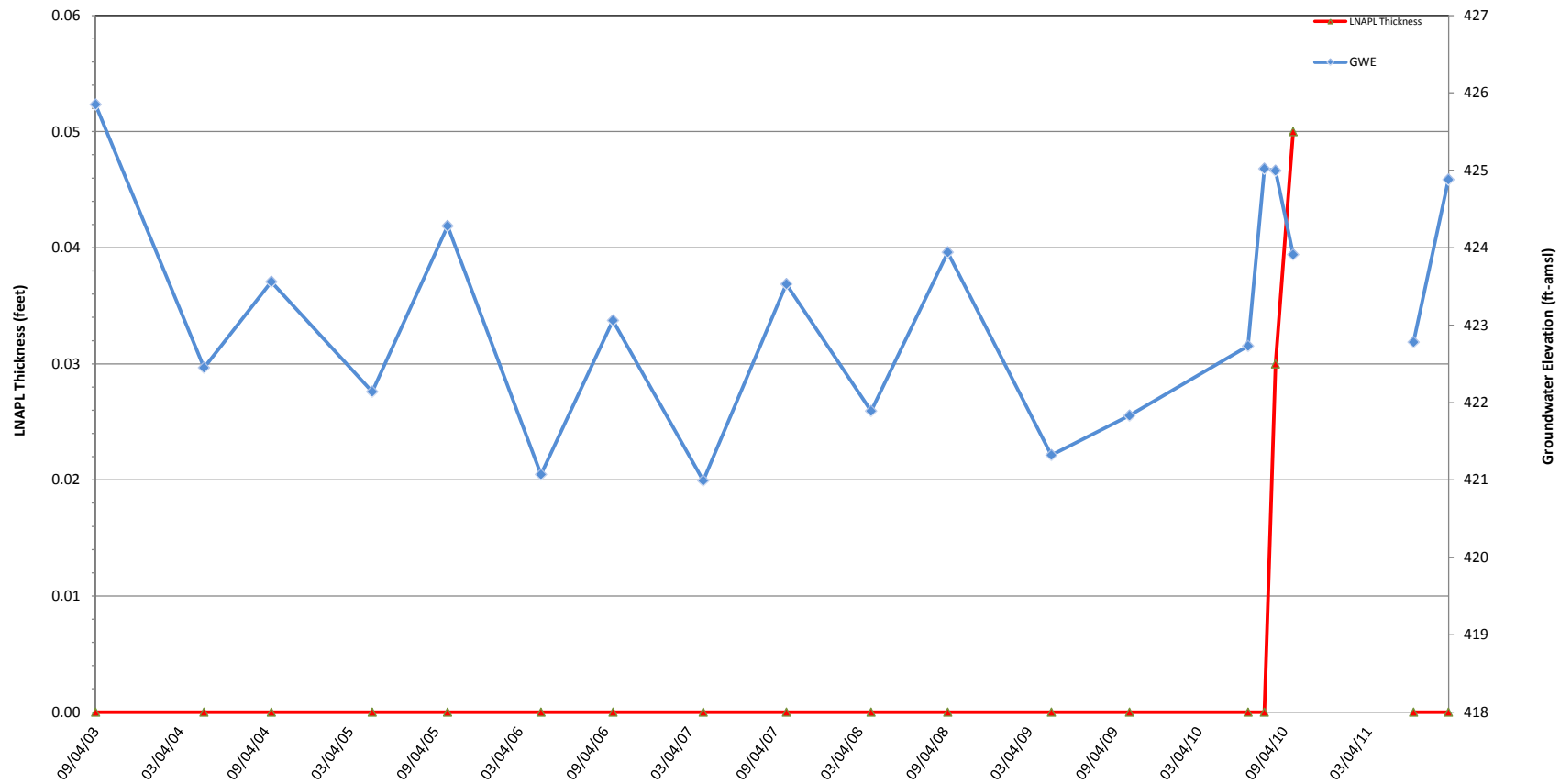
LEGEND:

GWE = Groundwater elevation
 LNAPL = Light non-aqueous phase liquid
 ft-amsl = Feet above mean sea level
 Data gaps = wells were inaccessible and not gauged

CHEVRON #306443 (FORMER UNOCAL BULK PLANT)
 GATE 28, WEST RAMP, FAIRBANKS AIRPORT, FAIRBANKS, AK
 SECOND SEMI-ANNUAL 2011 GROUNDWATER
 MONITORING REPORT

**Monitoring Well GEI-3 Historical Groundwater
 Elevation and LNAPL Thickness**





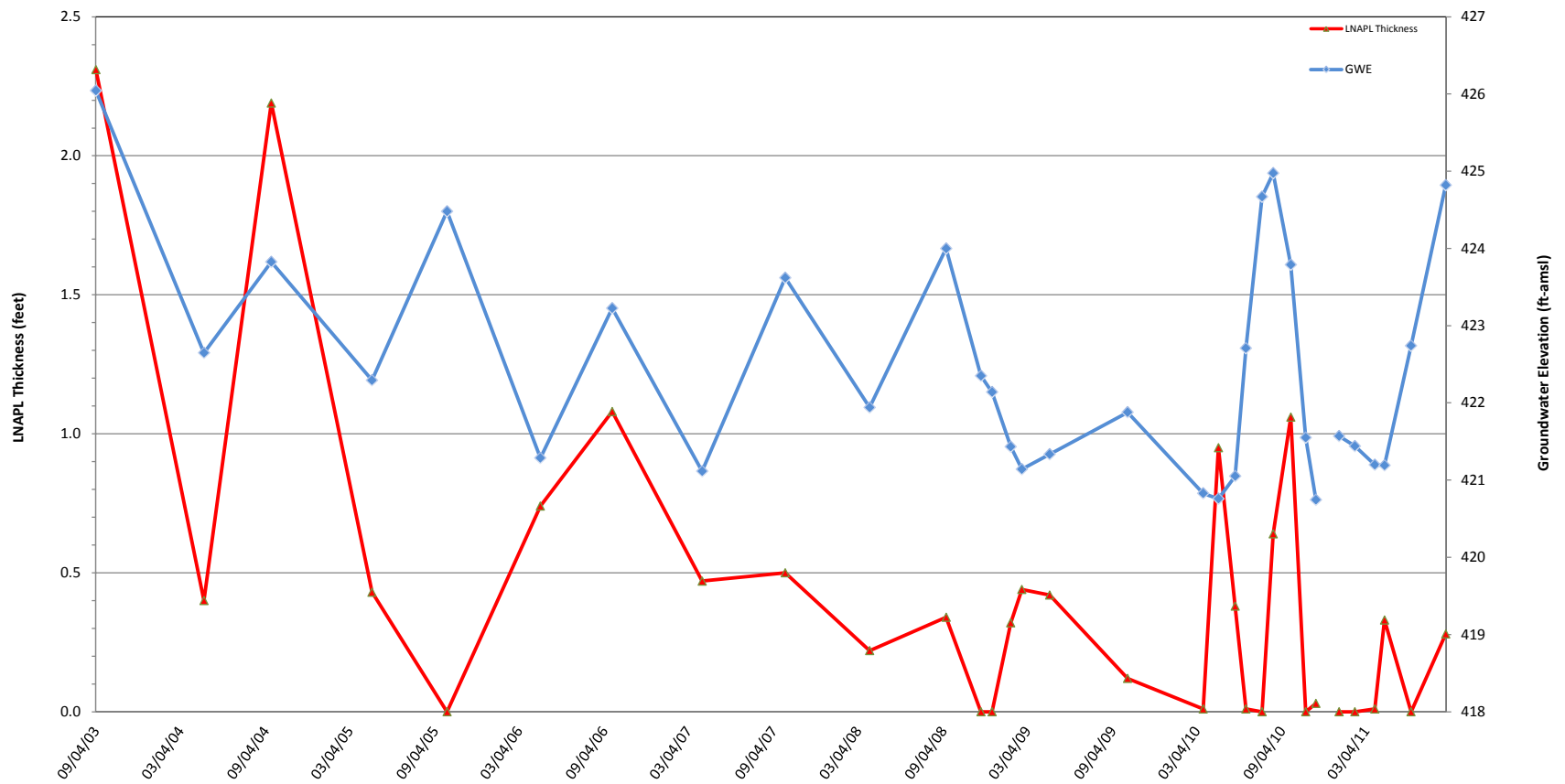
LEGEND:

GWE = Groundwater elevation
 LNAPL = Light non-aqueous phase liquid
 ft-amsl = Feet above mean sea level
 Data gaps = wells were inaccessible and not gauged

CHEVRON #306443 (FORMER UNOCAL BULK PLANT)
 GATE 28, WEST RAMP, FAIRBANKS AIRPORT, FAIRBANKS, AK
**SECOND SEMI-ANNUAL 2011 GROUNDWATER
 MONITORING REPORT**

**Monitoring Well GEI-4 Historical Groundwater
 Elevation and LNAPL Thickness**



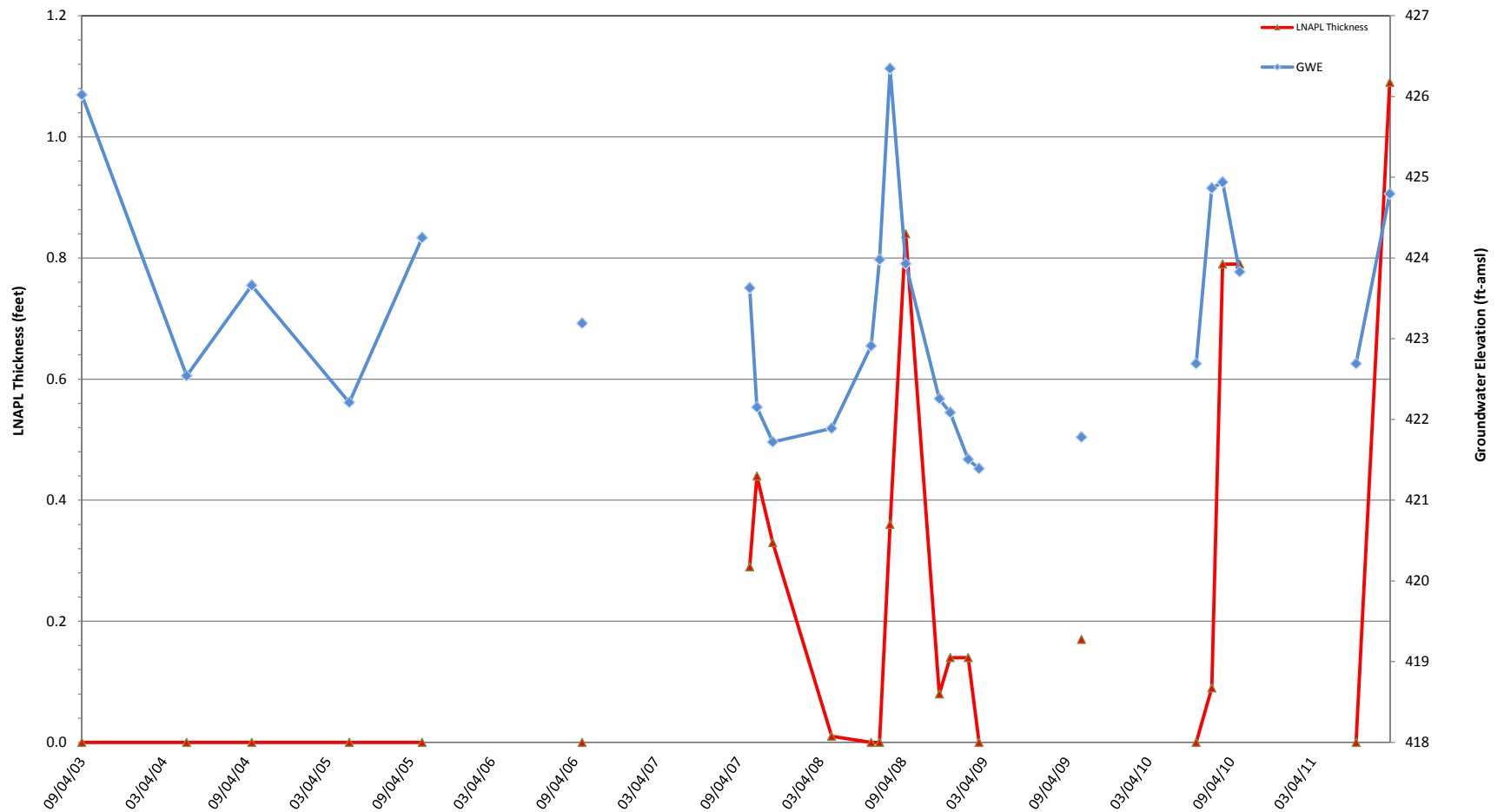


LEGEND:
 GWE = Groundwater elevation
 LNAPL = Light non-aqueous phase liquid
 ft-amsl = Feet above mean sea level
 Data gaps = wells were inaccessible and not gauged

CHEVRON #306443 (FORMER UNOCAL BULK PLANT)
 GATE 28, WEST RAMP, FAIRBANKS AIRPORT, FAIRBANKS, AK
**SECOND SEMI-ANNUAL 2011 GROUNDWATER
 MONITORING REPORT**


**Monitoring Well GEI-5 Historical Groundwater
 Elevation and LNAPL Thickness**

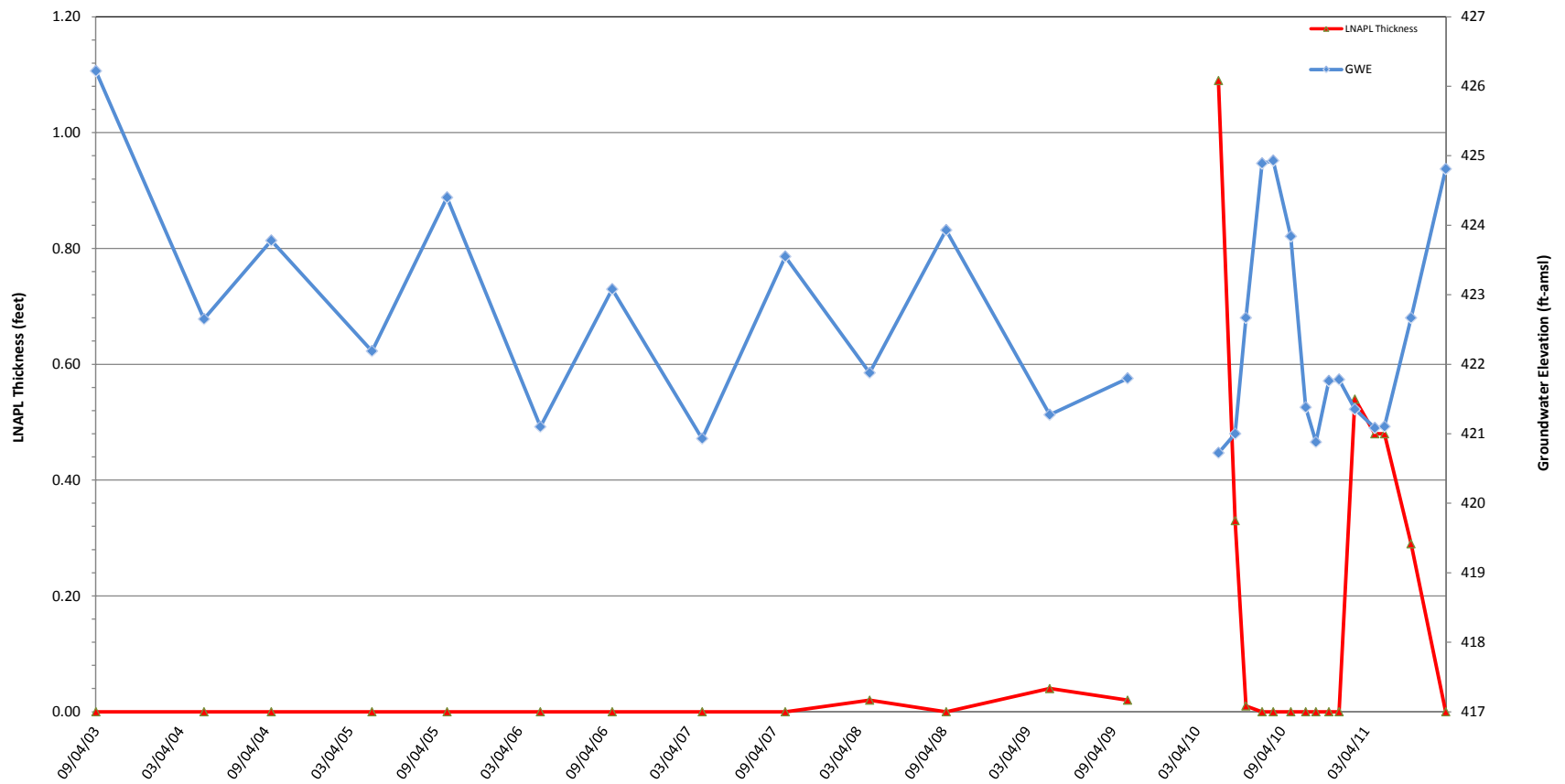




LEGEND:

GWE = Groundwater elevation
 LNAPL = Light non-aqueous phase liquid
 ft-amsl = Feet above mean sea level
 Data gaps = wells were inaccessible and not gauged

CHEVRON #306443 (FORMER UNOCAL BULK PLANT) GATE 28, WEST RAMP, FAIRBANKS AIRPORT, FAIRBANKS, AK SECOND SEMI-ANNUAL 2011 GROUNDWATER MONITORING REPORT	
Monitoring Well GEI-6 Historical Groundwater Elevation and LNAPL Thickness	
	FIGURE 10



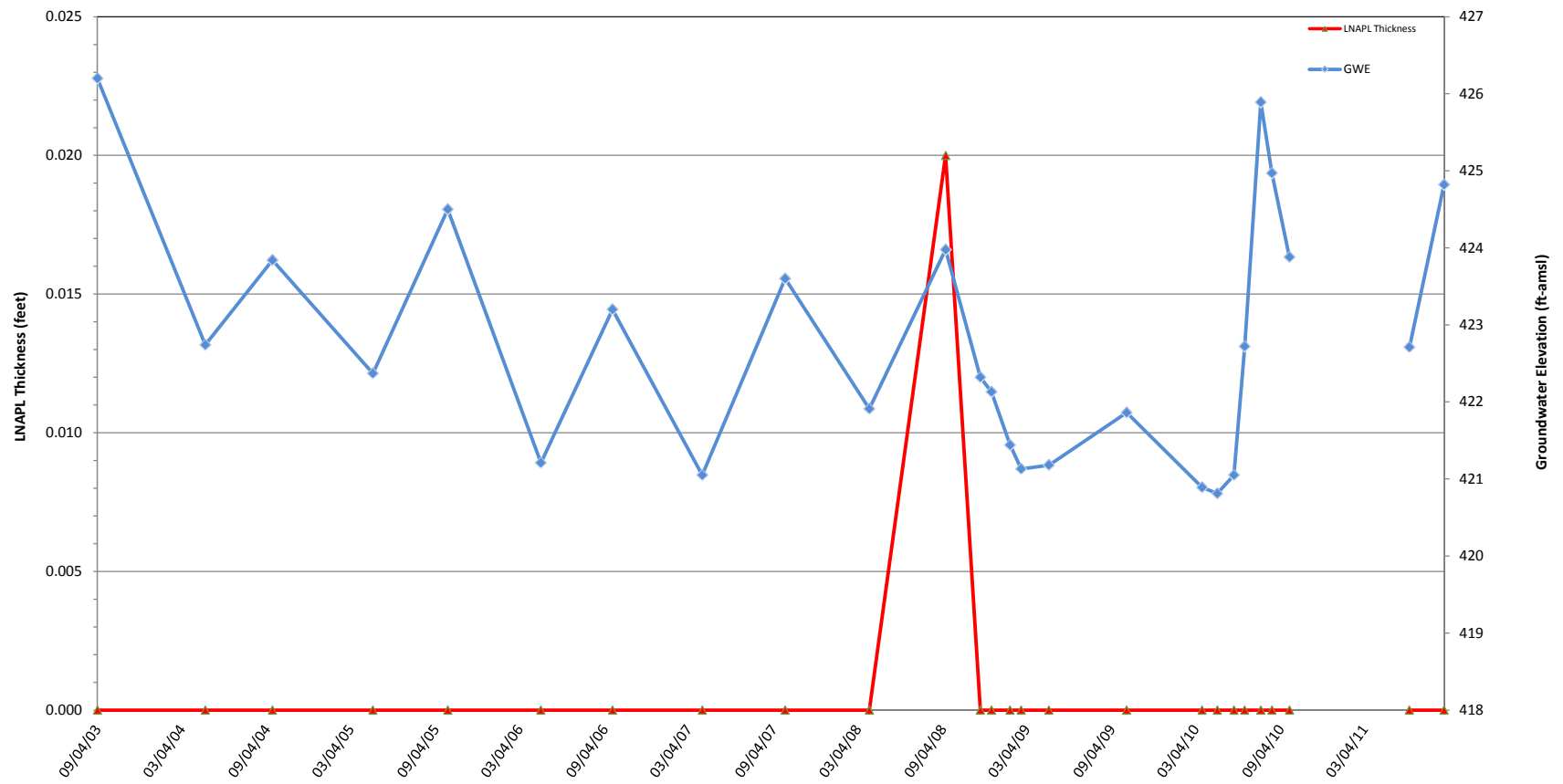
LEGEND:

GWE = Groundwater elevation
 LNAPL = Light non-aqueous phase liquid
 ft-amsl = Feet above mean sea level
 Data gaps = wells were inaccessible and not gauged


CHEVRON #306443 (FORMER UNOCAL BULK PLANT)
 GATE 28, WEST RAMP, FAIRBANKS AIRPORT, FAIRBANKS, AK
**SECOND SEMI-ANNUAL 2011 GROUNDWATER
 MONITORING REPORT**

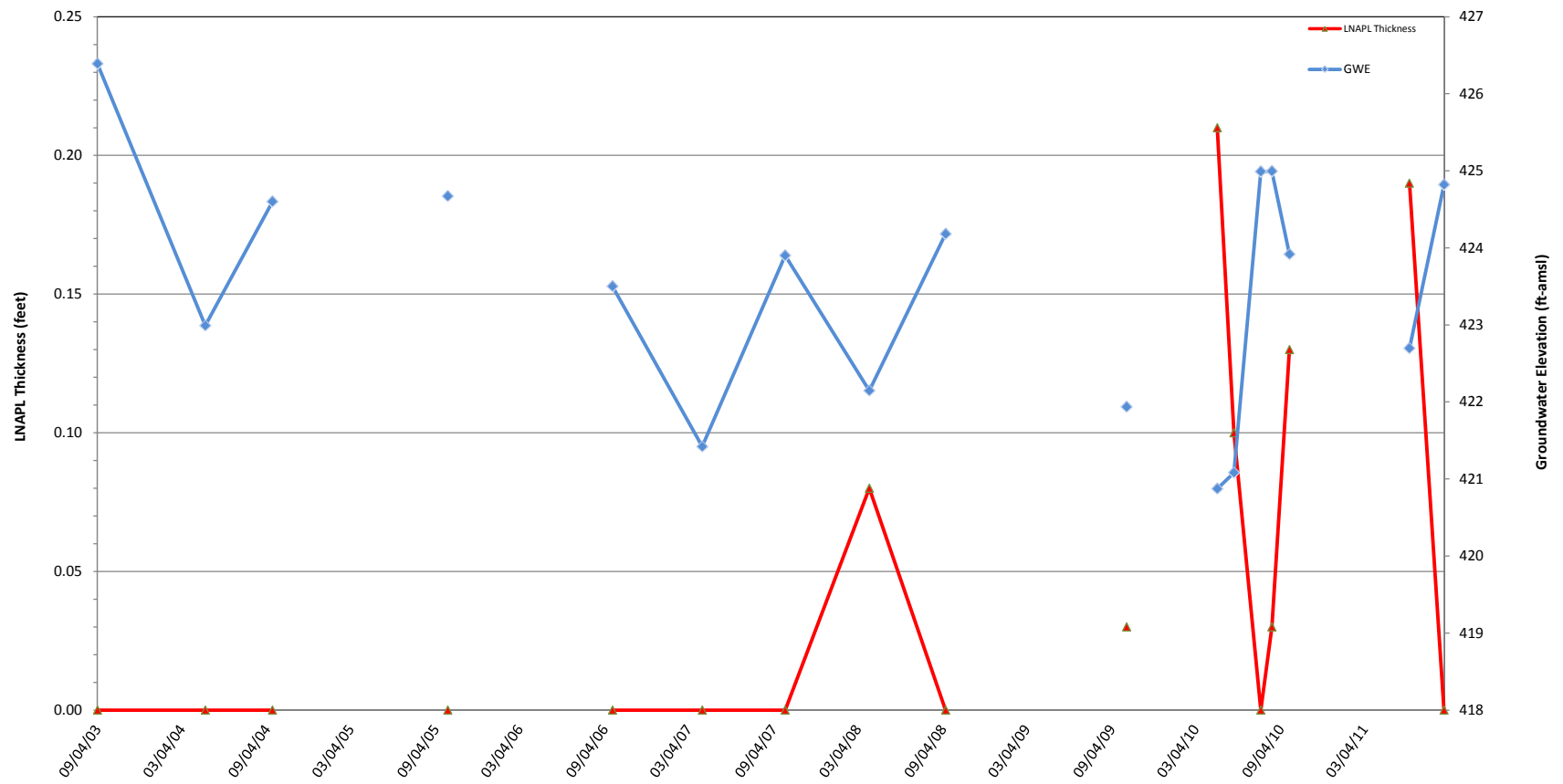
**Monitoring Well GEI-7 Historical Groundwater
 Elevation and LNAPL Thickness**





LEGEND:
 GWE = Groundwater elevation
 LNAPL = Light non-aqueous phase liquid
 ft-amsl = Feet above mean sea level
 Data gaps = wells were inaccessible and not gauged

CHEVRON #306443 (FORMER UNOCAL BULK PLANT) GATE 28, WEST RAMP, FAIRBANKS AIRPORT, FAIRBANKS, AK SECOND SEMI-ANNUAL 2011 GROUNDWATER MONITORING REPORT	
Monitoring Well GEI-8 Historical Groundwater Elevation and LNAPL Thickness	
 Infrastructure, environment, buildings	FIGURE 12



LEGEND:
 GWE = Groundwater elevation
 LNAPL = Light non-aqueous phase liquid
 ft-amsl = Feet above mean sea level
 Data gaps = wells were inaccessible and not gauged

CHEVRON #306443 (FORMER UNOCAL BULK PLANT)
 GATE 28, WEST RAMP, FAIRBANKS AIRPORT, FAIRBANKS, AK
**SECOND SEMI-ANNUAL 2011 GROUNDWATER
 MONITORING REPORT**

**Monitoring Well GEI-9 Historical Groundwater
 Elevation and LNAPL Thickness**


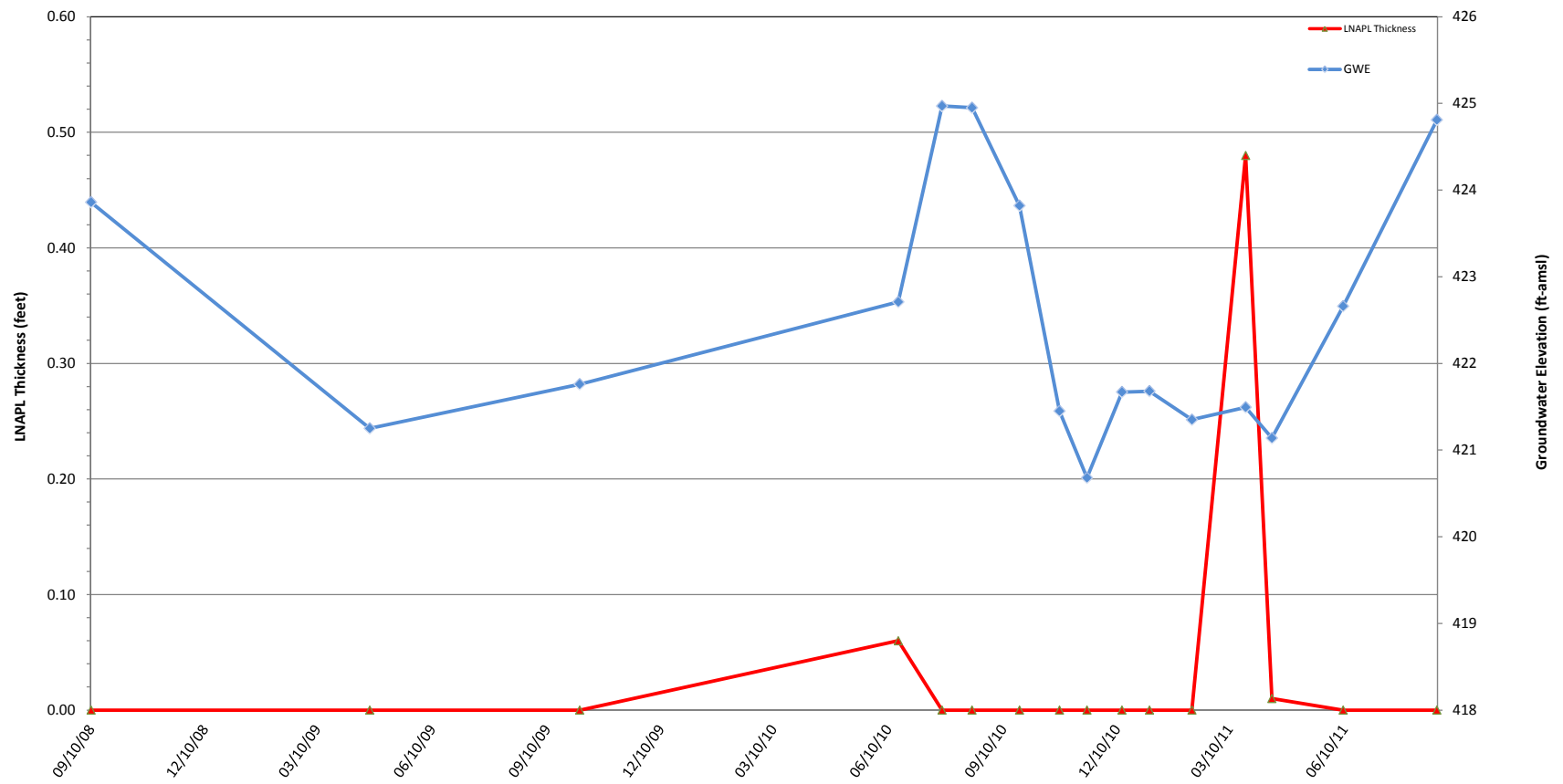

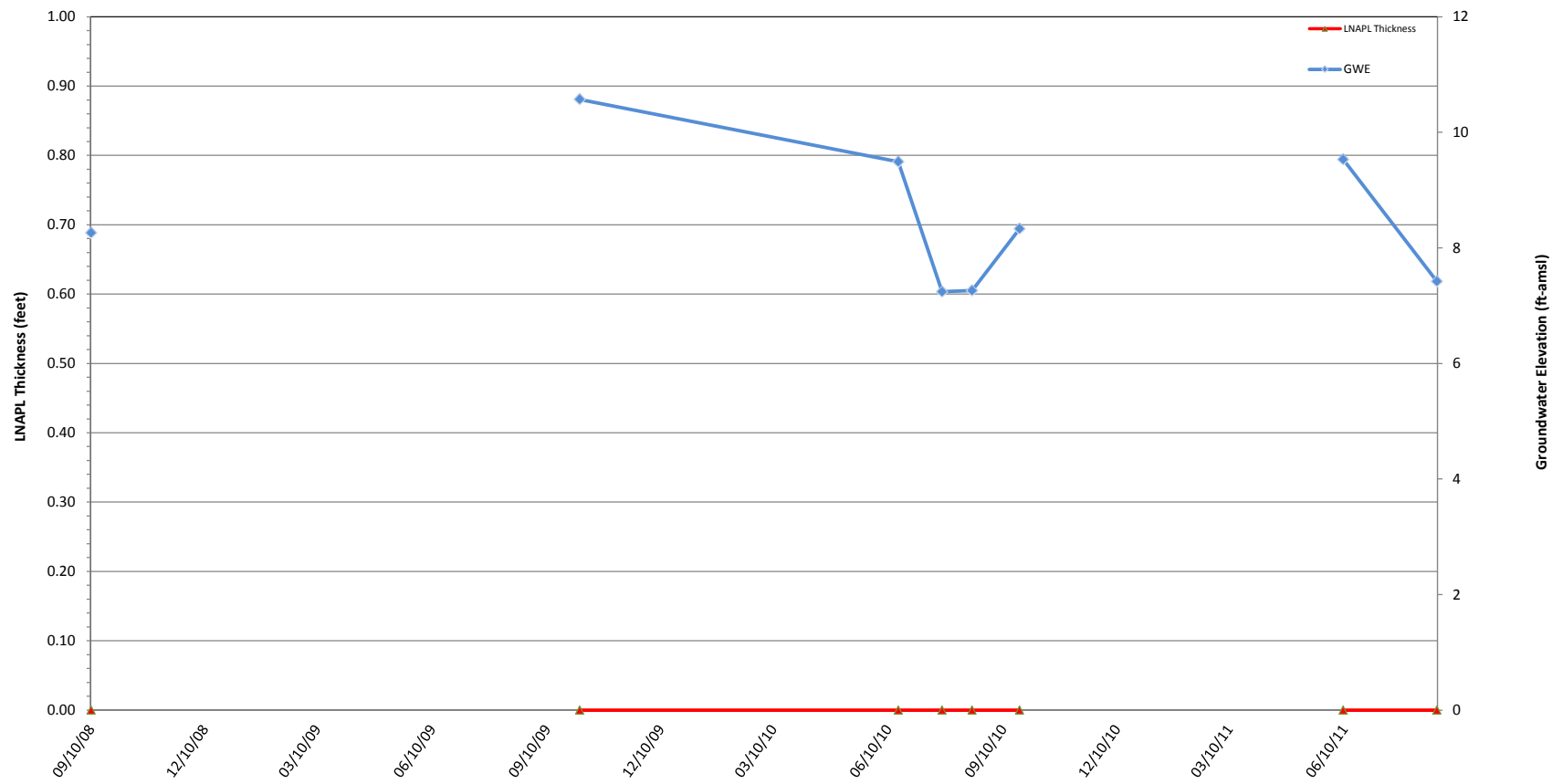


FIGURE
13



LEGEND:
 GWE = Groundwater elevation
 LNAPL = Light non-aqueous phase liquid
 ft-amsl = Feet above mean sea level
 Data gaps = wells were inaccessible and not gauged

CHEVRON #306443 (FORMER UNOCAL BULK PLANT) GATE 28, WEST RAMP, FAIRBANKS AIRPORT, FAIRBANKS, AK SECOND SEMI-ANNUAL 2011 GROUNDWATER MONITORING REPORT	
Monitoring Well MW-1 Historical Groundwater Elevation and LNAPL Thickness	
 Infrastructure, environment, buildings	FIGURE 14

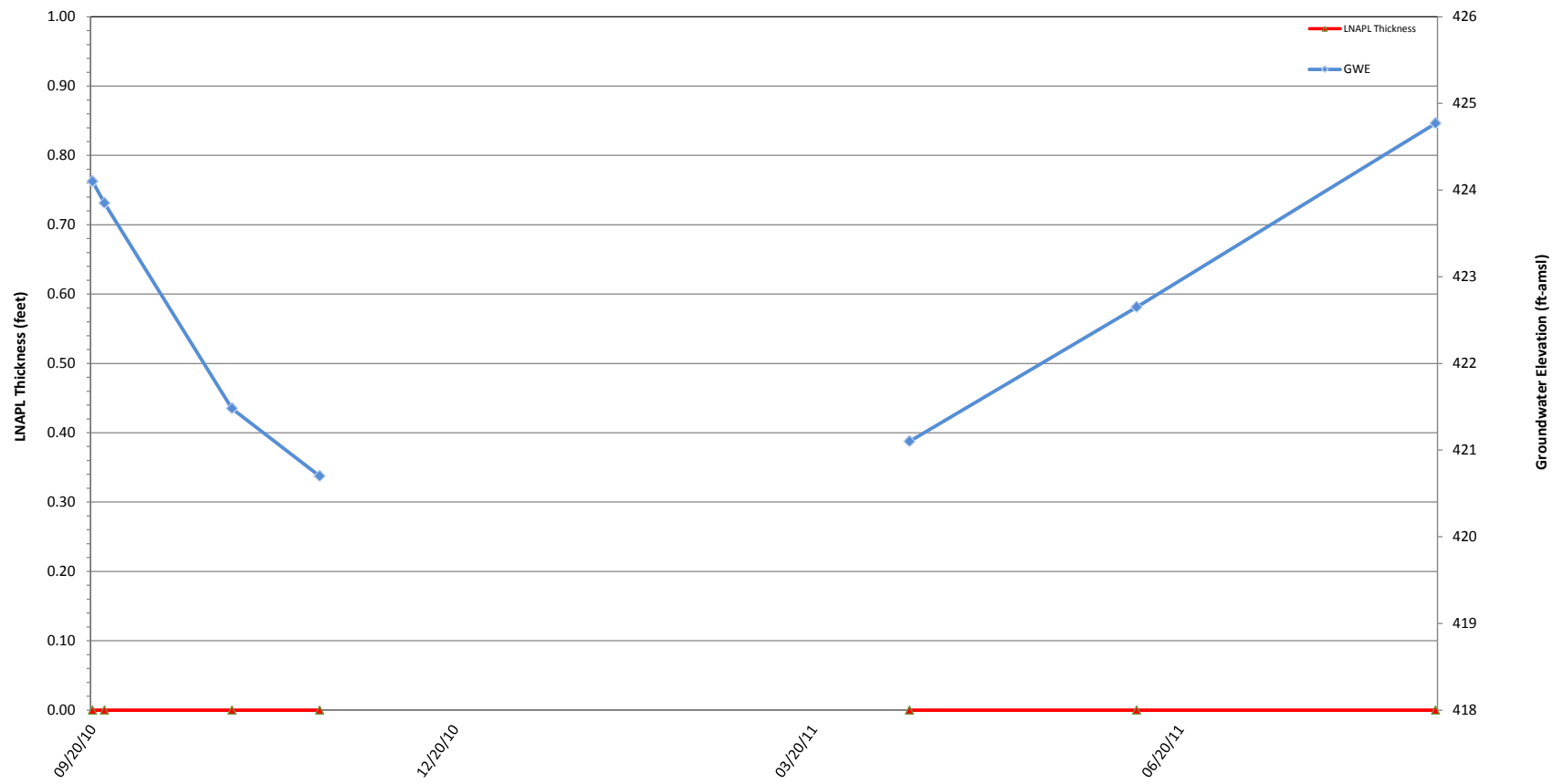


LEGEND:
 GWE = Groundwater elevation
 LNAPL = Light non-aqueous phase liquid
 ft-amsl = Feet above mean sea level
 Data gaps = wells were inaccessible and not gauged

CHEVRON #306443 (FORMER UNOCAL BULK PLANT)
 GATE 28, WEST RAMP, FAIRBANKS AIRPORT, FAIRBANKS, AK
 SECOND SEMI-ANNUAL 2011 GROUNDWATER
 MONITORING REPORT

**Monitoring Well MW-4 Historical Groundwater
 Elevation and LNAPL Thickness**





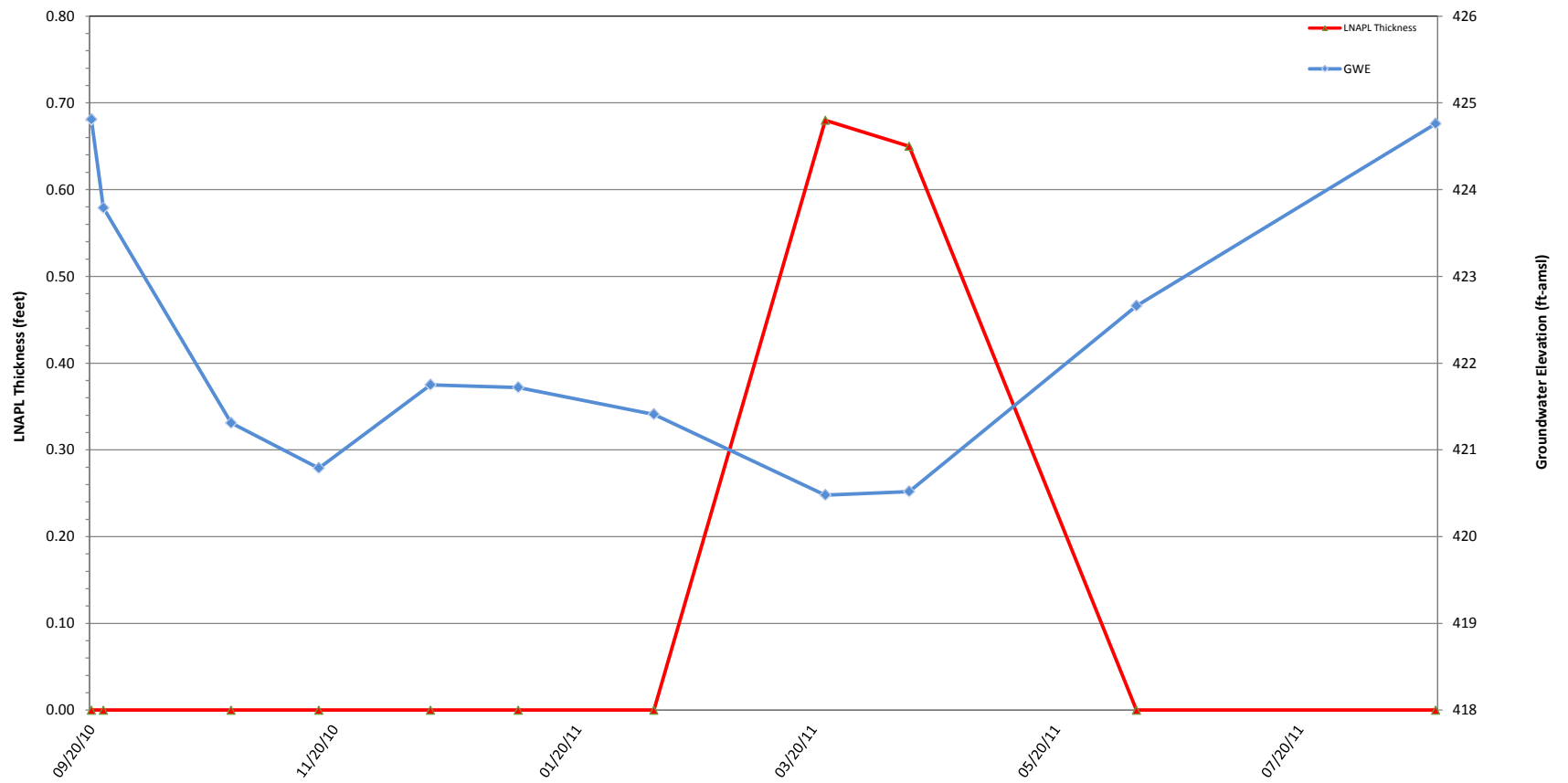
LEGEND:

GWE = Groundwater elevation
 LNAPL = Light non-aqueous phase liquid
 ft-amsl = Feet above mean sea level
 Data gaps = wells were inaccessible and not gauged

CHEVRON #306443 (FORMER UNOCAL BULK PLANT)
 GATE 28, WEST RAMP, FAIRBANKS AIRPORT, FAIRBANKS, AK
**SECOND SEMI-ANNUAL 2011 GROUNDWATER
 MONITORING REPORT**

**Monitoring Well MW-7 Historical Groundwater
 Elevation and LNAPL Thickness**





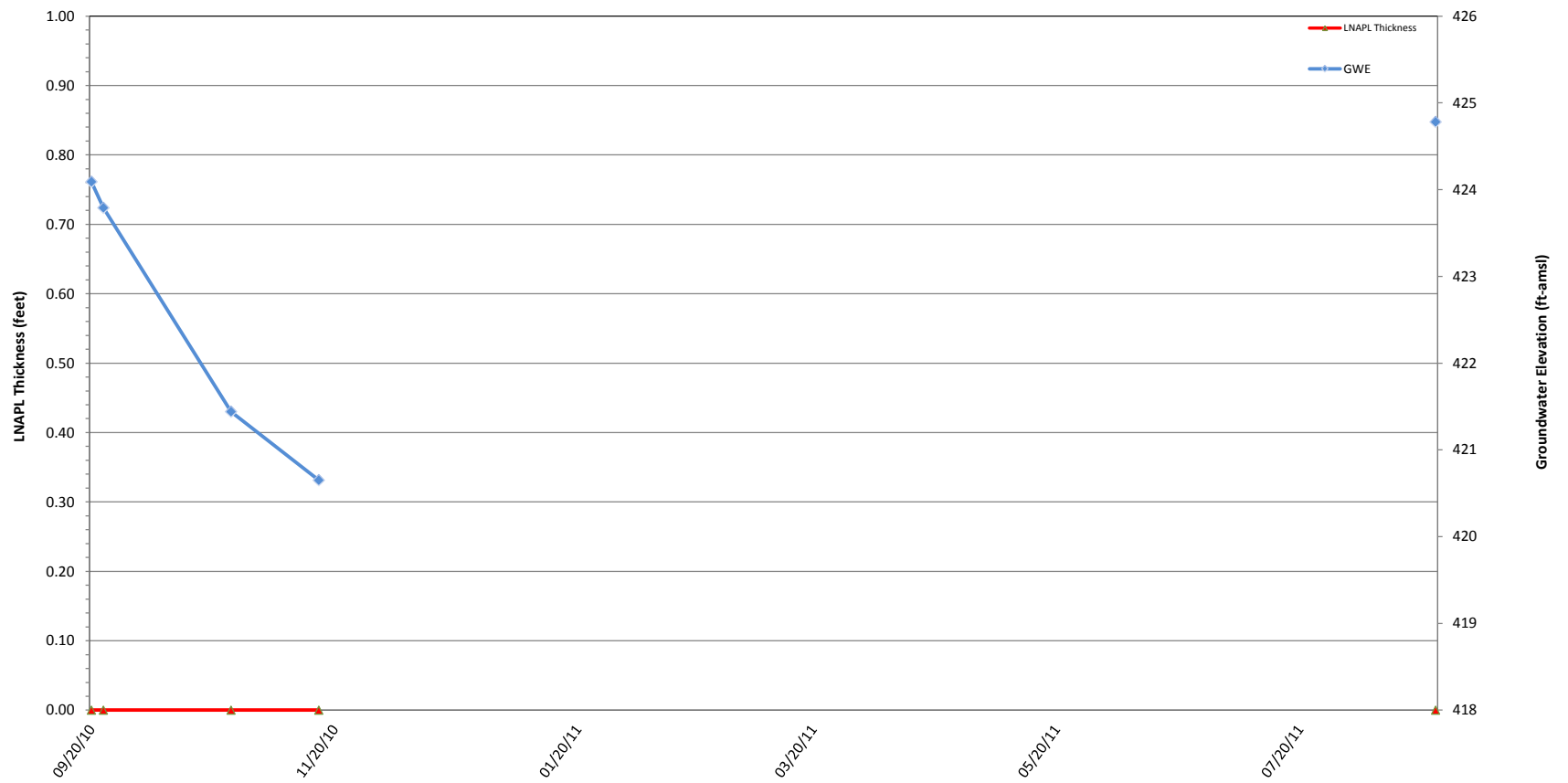
LEGEND:

GWE = Groundwater elevation
 LNAPL = Light non-aqueous phase liquid
 ft-amsl = Feet above mean sea level
 Data gaps = wells were inaccessible and not gauged

CHEVRON #306443 (FORMER UNOCAL BULK PLANT)
 GATE 28, WEST RAMP, FAIRBANKS AIRPORT, FAIRBANKS, AK
**SECOND SEMI-ANNUAL 2011 GROUNDWATER
 MONITORING REPORT**

**Monitoring Well MW-8 Historical Groundwater
 Elevation and LNAPL Thickness**



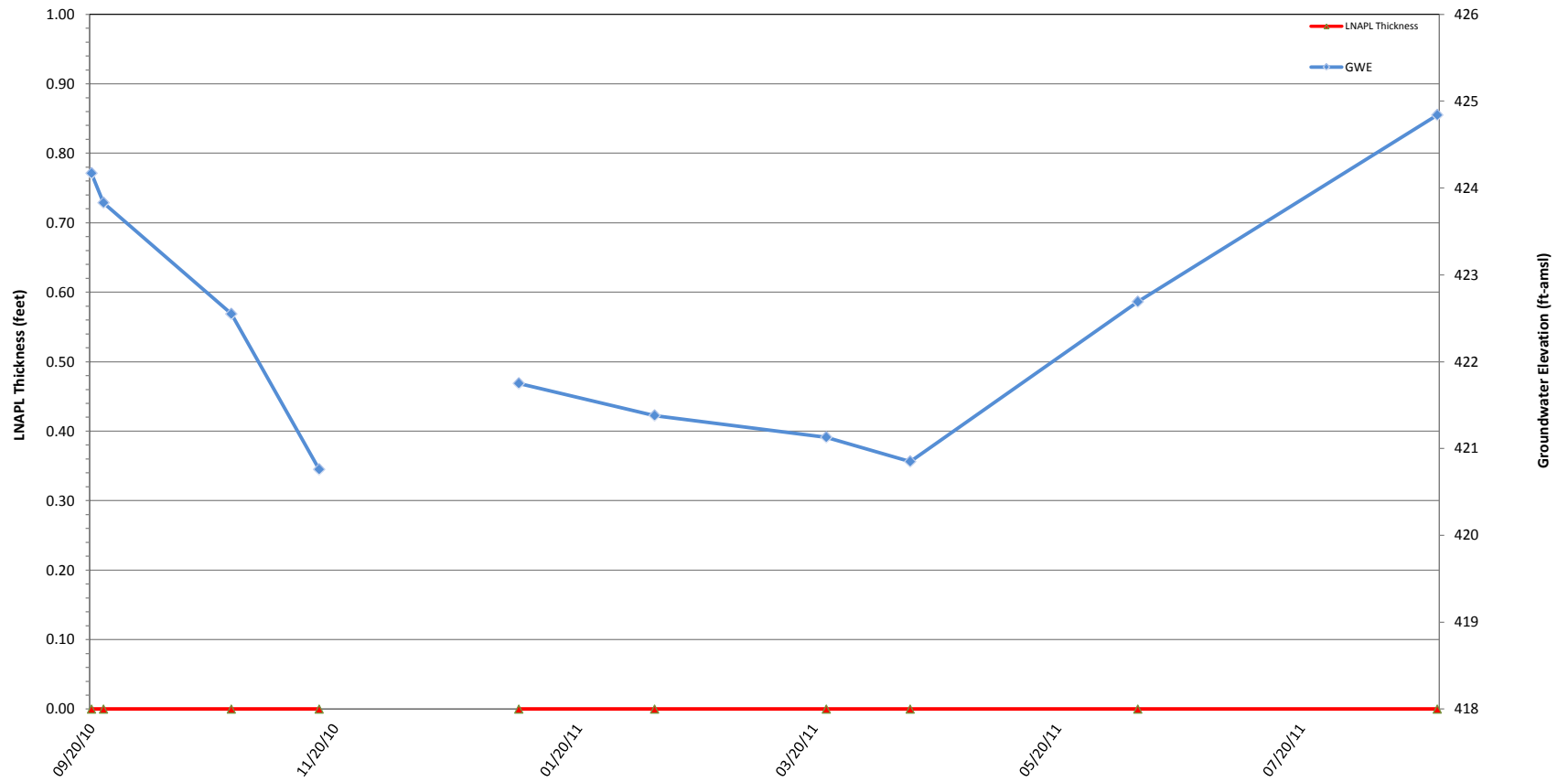


LEGEND:
 GWE = Groundwater elevation
 LNAPL = Light non-aqueous phase liquid
 ft-amsl = Feet above mean sea level
 Data gaps = wells were inaccessible and not gauged

CHEVRON #306443 (FORMER UNOCAL BULK PLANT)
 GATE 28, WEST RAMP, FAIRBANKS AIRPORT, FAIRBANKS, AK
**SECOND SEMI-ANNUAL 2011 GROUNDWATER
 MONITORING REPORT**

**Monitoring Well MW-9 Historical Groundwater
 Elevation and LNAPL Thickness**





LEGEND:

GWE = Groundwater elevation
 LNAPL = Light non-aqueous phase liquid
 ft-amsl = Feet above mean sea level
 Data gaps = wells were inaccessible and not gauged

CHEVRON #306443 (FORMER UNOCAL BULK PLANT)
 GATE 28, WEST RAMP, FAIRBANKS AIRPORT, FAIRBANKS, AK
**SECOND SEMI-ANNUAL 2011 GROUNDWATER
 MONITORING REPORT**

**Monitoring Well MW-10 Historical Groundwater
 Elevation and LNAPL Thickness**



ARCADIS

Appendix A

Field Data Sheets

Location Gate 28 Wat Rwy Fairbanks, AK Date 8-23-2011Project / Client FIA Uncon #306443 / ChevronZSA11 GWM

12:30 Arrive on site

Personnel: Dave BeaudinWeather: 60°F mostly cloudyActivity: MW Gauging

Set up delimiters around Trunk

12:40 Complete PTP, review JLA's, LPSA,

OE Tenets, Subwork, Hazard ID.

12:50 Calibrate TID - Lechner & 100µmIsobathm

13:00 Begin Gauging MWs

Well ID	DTP	DTW	DTB	PTD	Comments
MW-1	—	7.69'	12.09'	44.6	
GET-2	—	7.26'	17.15'	0.0	
GET-3	—	7.25'	11.40'	252	
GET-4	—	7.09'	12.60'	43.0	
GET-5	7.56'	7.84'	11.75'	188	Will do LNAPL Removal
GET-6	7.50'	8.59'	11.00'	191	Will do LNAPL Removal
GET-7	—	7.33'	13.30'	174	
GET-8	—	7.86'	13.28'	265	
GET-9	—	7.99'	12.78'	98.6	
GET-1	—	7.28'	18.95'	220	
MW-2	—	6.87'	18.76'	0.0	
MW-3	—	8.08'	18.16'	81.8	
MW-4	—	7.42'	17.96'	104	

Location Gate 28 Wat Rwy, Fairbanks, AK Date 8-23-11Project / Client FIA Uncon #306443 / ChevronZSA11

Well ID	DTP	DTW	DTB	PTD
MW-5	—	8.02'	19.17'	0.0
MW-6	—	7.73'	19.85'	0.0
MW-7	—	8.01'	18.00'	0.0
MW-8	—	8.35'	19.66'	318
MW-9	—	7.61'	19.31'	0.0
MW-10	—	7.91'	18.16'	0.0
RW-1	—	7.45'	17.20'	752

17:00 Completed Gauging Mobilize off site
to eat dinner.

17:10 Grab a bike to eat

17:30 Arrive @ College to get Effluent
Sample from remediation System.

DGB

Location Gate 28, W. Ramp Fairbanks Date 8-25-11

Project / Client #306443 Chevron

ZSA11 GWM

10:35 Arrive on site / Set up delimitors around Trunk

Complete PTW, review JHA, LPSA, OE Tenets, Stop work Authority, and Hazard Identification.

11:00 Begin pouring sample bottles & labels

▶ Sampling Completed w/ boiler no-purge

Well ID	Time Sampled	Analytes	Comments
MW-1	11:15	BTEX, GRO, DRO, RRO	
MW-2	11:35	"	"
MW-3	11:55	"	"
MW-4	12:20	"	"
MW-5	12:40	"	"
MW-6	13:00	"	"
MW-7	13:20	"	"
MW-8	Not Sampled	NA	LNAPL Globules in boiler
MW-9	13:35	"	"
MW-10	13:55	"	"
GEI-1	Not Sampled	NA	LNAPL Globules present
GEI-2	16:25	"	" BD-1
GEI-3	Not Sampled	NA	LNAPL Globules present
GEI-4	Not Sampled	NA	LNAPL Globules present
GEI-7	Not Sampled	NA	LNAPL Globules present
GEI-8	17:35	"	" BD-2
GEI-9	Not Sampled	NA	LNAPL Globules present

Location Gate 28, W. Ramp Fairbanks Date 8-25-11

Project / Client #306443 / Chevron

ZSA11 GWM

RW-1 Not Sampled LNAPL Globules present

* BD-1 collected from GEI-2

* BD-2 collected from GEI-8

GEI-5 & 6 have LNAPL present in well & were not sampled.

14:20 Mobilize off site to eat & Attend Chevron Call 1500 to 1600

16:10 Deck on site to Complete GWM.

18:10 Mobilize to storage unit - prep samples for shipping.

- complete labels & COC

- Pack Samples on ice

- Clean out Trunk

20:00 Mobilize to Transita stadium to dump garbage

20:30 Mobilize to hotel

Location Gate 28 Walling, Fairbanks Date 8-26-2011
 Project / Client FIA Uncon #306443 / Chevron

7:45 Mobilize to FedEx to ship Samples
to Lancaster

8:20 Mobilize to FIA Uncon to
conduct LNAPL removal via
peristaltic pumping.

8:30 Arrive on site complete PPE,
Review JLA, LPSA, SOP, O & E Tickets,
Stop work Authority, and Hazard
identification.

8:45 Begin set up GEI-6 for LNAPL
Removal. - Purged 1.2 gallons of
LNAPL - No recharge
Initial depth to LNAPL 7.40'
Initial depth to Water 8.64'
Final depth to Water 7.26'

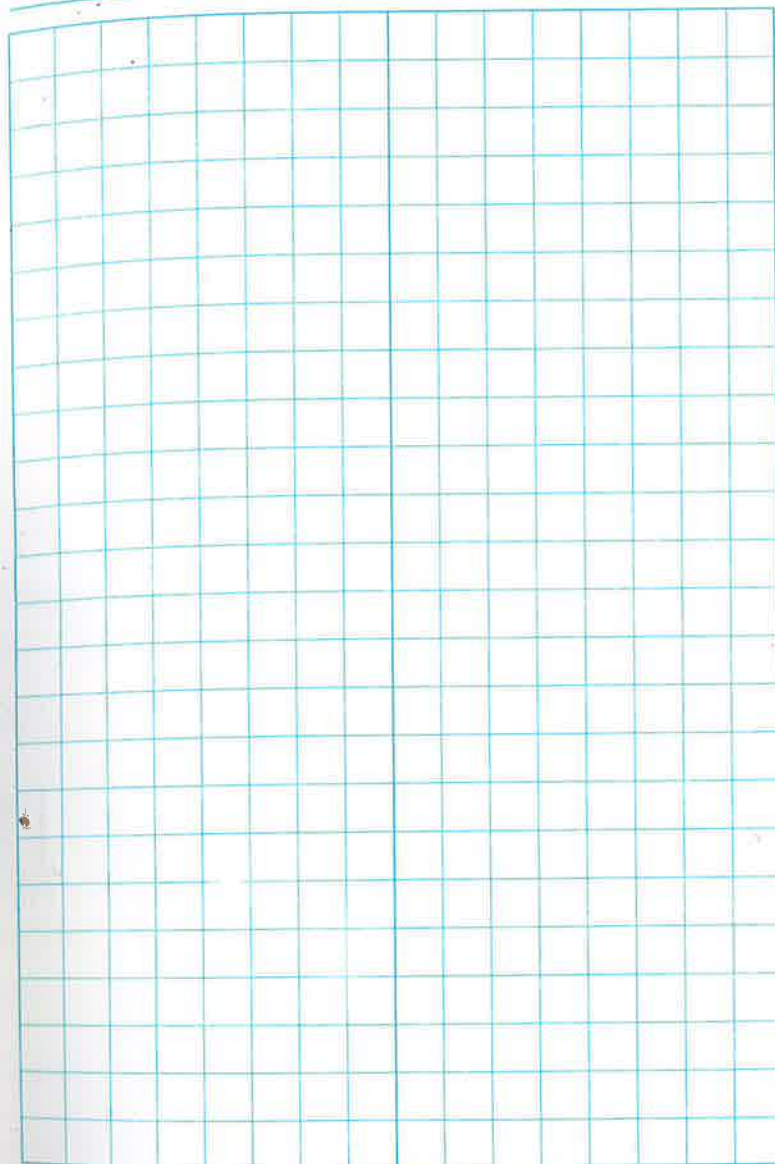
Purged ~ 0.2 gals of LNAPL
from GEI-5.

LNAPL Placed in overpacked
drum on site.

12:45 Mobilize off site to
Storage Unit / FedEx / Airport

Location _____ Date _____

Project / Client _____



ARCADIS

Appendix B

Laboratory Analytical Reports

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

September 13, 2011

Project: 306443

Submittal Date: 08/27/2011
Group Number: 1263894
SDG: LST57
PO Number: 0015074818
Release Number: CARRIER
State of Sample Origin: AK

<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
MW-1 Grab Water Sample	6390141
MW-2 Grab Water Sample	6390142
MW-3 Grab Water Sample	6390143
MW-4 Grab Water Sample	6390144
MW-5 Grab Water Sample	6390145
MW-6 Grab Water Sample	6390146
MW-7 Grab Water Sample	6390147
MW-9 Grab Water Sample	6390148
MW-10 Grab Water Sample	6390149
GEI-2 Grab Water Sample	6390150
GEI-8 Grab Water Sample	6390151
BD-1 Grab Water Sample	6390152
BD-2 Grab Water Sample	6390153
Trip_Blank Water Sample	6390154

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

ELECTRONIC Arcadis
COPY TO
ELECTRONIC Arcadis
COPY TO
ELECTRONIC Arcadis
COPY TO

Attn: David Beaudoin

Attn: Greg Montgomery

Attn: Russ Greisler

1 COPY TO Data Package Group

Questions? Contact your Client Services Representative
Elizabeth A Leonhardt at (510) 232-8894

Respectfully Submitted,



Christine Dulaney
Senior Specialist



Analysis Report

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

Page 1 of 1

Sample Description: MW-1 Grab Water Sample
Facility# 306443
Gate 28, West Ramp - Fairbanks, AK

LLI Sample # WW 6390141
LLI Group # 1263894
Account # 11964

Project Name: 306443

Collected: 08/25/2011 11:15 by DB

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/27/2011 09:15

Reported: 09/13/2011 12:50

28F01 SDG#: LST57-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles AK 101					
01440	TPH-GRO AK water C6-C10	n.a.	2.6	0.050	5
GC Volatiles SW-846 8021B					
02102	Benzene	71-43-2	0.032	0.0025	5
02102	Ethylbenzene	100-41-4	0.045	0.0025	5
02102	Toluene	108-88-3	0.0091	0.0025	5
02102	Total Xylenes	1330-20-7	0.13	0.0075	5
GC Petroleum AK 102/103 4/08/02 modified					
02923	C10-<C25 DRO	n.a.	82	2.4	50
02923	C25-C36 RRO	n.a.	N.D.	3.4	50

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	11248B53A	09/07/2011 03:33	Catherine J Schwarz	5
02102	Method 8021 Water Master	SW-846 8021B	1	11248B53A	09/07/2011 03:33	Catherine J Schwarz	5
01146	GC VOA Water Prep	SW-846 5030B	1	11248B53A	09/07/2011 03:33	Catherine J Schwarz	5
02923	TPH-DRO/RRO (AK) water	AK 102/103 4/08/02 modified	1	112490022A	09/08/2011 11:34	Heather E Williams	50
11185	AK DRO/ORO Waters Extraction	AK 102/AK 103 04/08/02	1	112490022A	09/07/2011 05:15	Roman Kuropatkin	1



Analysis Report

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

Sample Description: MW-2 Grab Water Sample
Facility# 306443
Gate 28, West Ramp - Fairbanks, AK

LLI Sample # WW 6390142
LLI Group # 1263894
Account # 11964

Project Name: 306443

Collected: 08/25/2011 11:35 by DB

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/27/2011 09:15

Reported: 09/13/2011 12:50

28F02 SDG#: LST57-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles AK 101					
01440	TPH-GRO AK water C6-C10	n.a.	mg/l N.D.	mg/l 0.010	1
GC Volatiles SW-846 8021B					
02102	Benzene	71-43-2	mg/l N.D.	mg/l 0.0005	1
02102	Ethylbenzene	100-41-4	N.D.	0.0005	1
02102	Toluene	108-88-3	N.D.	0.0005	1
02102	Total Xylenes	1330-20-7	N.D.	0.0015	1
GC Petroleum AK 102/103 4/08/02 modified					
02923	C10-<C25 DRO	n.a.	mg/l 1.0	mg/l 0.049	1
02923	C25-C36 RRO	n.a.	0.79	0.069	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	11248B53A	09/07/2011 02:40	Laura M Krieger	1
02102	Method 8021 Water Master	SW-846 8021B	1	11248B53A	09/06/2011 21:45	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	11248B53A	09/06/2011 21:45	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	2	11248B53A	09/07/2011 02:40	Laura M Krieger	1
02923	TPH-DRO/RRO (AK) water	AK 102/103 4/08/02 modified	1	112490022A	09/07/2011 22:33	Heather E Williams	1
11185	AK DRO/ORO Waters Extraction	AK 102/AK 103 04/08/02	1	112490022A	09/07/2011 05:15	Roman Kuropatkin	1



Analysis Report

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Page 1 of 1

Sample Description: MW-3 Grab Water Sample
Facility# 306443
Gate 28, West Ramp - Fairbanks, AK

LLI Sample # WW 6390143
LLI Group # 1263894
Account # 11964

Project Name: 306443

Collected: 08/25/2011 11:55 by DB

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/27/2011 09:15

Reported: 09/13/2011 12:50

28F03 SDG#: LST57-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles AK 101					
01440	TPH-GRO AK water C6-C10	n.a.	0.071	0.010	1
GC Volatiles SW-846 8021B					
02102	Benzene	71-43-2	N.D.	0.0005	1
02102	Ethylbenzene	100-41-4	N.D.	0.0005	1
02102	Toluene	108-88-3	N.D.	0.0005	1
02102	Total Xylenes	1330-20-7	N.D.	0.0015	1
GC Petroleum AK 102/103 4/08/02 modified					
02923	C10-<C25 DRO	n.a.	10	0.49	10
02923	C25-C36 RRO	n.a.	N.D.	0.69	10

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	11248B53A	09/07/2011 03:07	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	11248B53A	09/06/2011 22:12	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	11248B53A	09/06/2011 22:12	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	2	11248B53A	09/07/2011 03:07	Catherine J Schwarz	1
02923	TPH-DRO/RRO (AK) water	AK 102/103 4/08/02 modified	1	112490022A	09/08/2011 12:01	Heather E Williams	10
11185	AK DRO/ORO Waters Extraction	AK 102/AK 103 04/08/02	1	112490022A	09/07/2011 05:15	Roman Kuropatkin	1



Analysis Report

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

Sample Description: MW-4 Grab Water Sample
Facility# 306443
Gate 28, West Ramp - Fairbanks, AK

LLI Sample # WW 6390144
LLI Group # 1263894
Account # 11964

Project Name: 306443

Collected: 08/25/2011 12:20 by DB

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/27/2011 09:15

Reported: 09/13/2011 12:50

28F04 SDG#: LST57-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles AK 101					
01440	TPH-GRO AK water C6-C10	n.a.	0.020	0.010	1
GC Volatiles SW-846 8021B					
02102	Benzene	71-43-2	N.D.	0.0005	1
02102	Ethylbenzene	100-41-4	N.D.	0.0005	1
02102	Toluene	108-88-3	N.D.	0.0005	1
02102	Total Xylenes	1330-20-7	N.D.	0.0015	1
GC Petroleum AK 102/103 4/08/02 modified					
02923	C10-<C25 DRO	n.a.	0.062	0.049	1
02923	C25-C36 RRO	n.a.	0.077	0.068	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	11248B53A	09/06/2011 22:39	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	11248B53A	09/06/2011 22:39	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	11248B53A	09/06/2011 22:39	Catherine J Schwarz	1
02923	TPH-DRO/RRO (AK) water	AK 102/103 4/08/02 modified	1	112490022A	09/07/2011 19:02	Heather E Williams	1
11185	AK DRO/ORO Waters Extraction	AK 102/AK 103 04/08/02	1	112490022A	09/07/2011 05:15	Roman Kuropatkin	1



Analysis Report

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Page 1 of 1

Sample Description: MW-5 Grab Water Sample
Facility# 306443
Gate 28, West Ramp - Fairbanks, AK

LLI Sample # WW 6390145
LLI Group # 1263894
Account # 11964

Project Name: 306443

Collected: 08/25/2011 12:40 by DB

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/27/2011 09:15

Reported: 09/13/2011 12:50

28F05 SDG#: LST57-05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles AK 101					
01440	TPH-GRO AK water C6-C10	n.a.	mg/l 0.21	mg/l 0.010	1
GC Volatiles SW-846 8021B					
02102	Benzene	71-43-2	mg/l N.D.	mg/l 0.0005	1
02102	Ethylbenzene	100-41-4	N.D.	0.0005	1
02102	Toluene	108-88-3	N.D.	0.0005	1
02102	Total Xylenes	1330-20-7	N.D.	0.0015	1
GC Petroleum AK 102/103 4/08/02 modified					
02923	C10-<C25 DRO	n.a.	mg/l 2.7	mg/l 0.10	2
02923	C25-C36 RRO	n.a.	N.D.	0.14	2

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	11248B53A	09/06/2011 23:06	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	11248B53A	09/06/2011 23:06	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	11248B53A	09/06/2011 23:06	Catherine J Schwarz	1
02923	TPH-DRO/RRO (AK) water	AK 102/103 4/08/02 modified	1	112490022A	09/08/2011 12:28	Heather E Williams	2
11185	AK DRO/ORO Waters Extraction	AK 102/AK 103 04/08/02	1	112490022A	09/07/2011 05:15	Roman Kuropatkin	1



Analysis Report

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

Sample Description: MW-6 Grab Water Sample
Facility# 306443
Gate 28, West Ramp - Fairbanks, AK

LLI Sample # WW 6390146
LLI Group # 1263894
Account # 11964

Project Name: 306443

Collected: 08/25/2011 13:00 by DB

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/27/2011 09:15

Reported: 09/13/2011 12:50

28F06 SDG#: LST57-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles AK 101					
01440	TPH-GRO AK water C6-C10	n.a.	mg/l 0.058	mg/l 0.010	1
GC Volatiles SW-846 8021B					
02102	Benzene	71-43-2	mg/l N.D.	mg/l 0.0005	1
02102	Ethylbenzene	100-41-4	0.0011	0.0005	1
02102	Toluene	108-88-3	N.D.	0.0005	1
02102	Total Xylenes	1330-20-7	0.0020	0.0015	1
GC Petroleum AK 102/103 4/08/02 modified					
02923	C10-<C25 DRO	n.a.	mg/l 0.77	mg/l 0.049	1
02923	C25-C36 RRO	n.a.	0.43	0.069	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	11248B53A	09/06/2011 23:32	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	11248B53A	09/06/2011 23:32	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	11248B53A	09/06/2011 23:32	Catherine J Schwarz	1
02923	TPH-DRO/RRO (AK) water	AK 102/103 4/08/02 modified	1	112490022A	09/07/2011 20:17	Heather E Williams	1
11185	AK DRO/ORO Waters Extraction	AK 102/AK 103 04/08/02	1	112490022A	09/07/2011 05:15	Roman Kuropatkin	1



Analysis Report

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Sample Description: MW-7 Grab Water Sample
Facility# 306443
Gate 28, West Ramp - Fairbanks, AK

LLI Sample # WW 6390147
LLI Group # 1263894
Account # 11964

Project Name: 306443

Collected: 08/25/2011 13:20 by DB

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/27/2011 09:15

Reported: 09/13/2011 12:50

28F07 SDG#: LST57-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles AK 101					
01440	TPH-GRO AK water C6-C10	n.a.	N.D.	mg/l 0.010	1
GC Volatiles SW-846 8021B					
02102	Benzene	71-43-2	N.D.	mg/l 0.0005	1
02102	Ethylbenzene	100-41-4	N.D.	0.0005	1
02102	Toluene	108-88-3	N.D.	0.0005	1
02102	Total Xylenes	1330-20-7	N.D.	0.0015	1
GC Petroleum AK 102/103 4/08/02					
Hydrocarbons modified					
02923	C10-<C25 DRO	n.a.	0.15	mg/l 0.050	1
02923	C25-C36 RRO	n.a.	0.19	0.070	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	11248B53A	09/06/2011 23:59	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	11248B53A	09/06/2011 23:59	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	11248B53A	09/06/2011 23:59	Catherine J Schwarz	1
02923	TPH-DRO/RRO (AK) water	AK 102/103 4/08/02 modified	1	112490022A	09/07/2011 20:44	Heather E Williams	1
11185	AK DRO/ORO Waters Extraction	AK 102/AK 103 04/08/02	1	112490022A	09/07/2011 05:15	Roman Kuropatkin	1



Analysis Report

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

Sample Description: MW-9 Grab Water Sample
Facility# 306443
Gate 28, West Ramp - Fairbanks, AK

LLI Sample # WW 6390148
LLI Group # 1263894
Account # 11964

Project Name: 306443

Collected: 08/25/2011 13:35 by DB

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/27/2011 09:15

Reported: 09/13/2011 12:50

28F09 SDG#: LST57-08

CAT No.	Analysis Name	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.	0.46	0.050	5
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/l	mg/l	
02102	Benzene	71-43-2	0.0059	0.0025	5
02102	Ethylbenzene	100-41-4	0.035	0.0025	5
02102	Toluene	108-88-3	N.D.	0.0025	5
02102	Total Xylenes	1330-20-7	0.042	0.0075	5
Reporting limits were raised due to sample foaming.					
GC Petroleum AK 102/103 4/08/02 modified			mg/l	mg/l	
02923	C10-<C25 DRO	n.a.	0.26	0.050	1
02923	C25-C36 RRO	n.a.	0.35	0.070	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	11249A53A	09/07/2011 23:28	Catherine J Schwarz	5
02102	Method 8021 Water Master	SW-846 8021B	1	11249A53A	09/07/2011 23:28	Catherine J Schwarz	5
01146	GC VOA Water Prep	SW-846 5030B	1	11249A53A	09/07/2011 23:28	Catherine J Schwarz	5
02923	TPH-DRO/RRO (AK) water	AK 102/103 4/08/02 modified	1	112490022A	09/07/2011 21:12	Heather E Williams	1
11185	AK DRO/ORO Waters Extraction	AK 102/AK 103 04/08/02	1	112490022A	09/07/2011 05:15	Roman Kuropatkin	1



Analysis Report

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

Sample Description: MW-10 Grab Water Sample
Facility# 306443
Gate 28, West Ramp - Fairbanks, AK

LLI Sample # WW 6390149
LLI Group # 1263894
Account # 11964

Project Name: 306443

Collected: 08/25/2011 13:55 by DB

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/27/2011 09:15

Reported: 09/13/2011 12:50

28F10 SDG#: LST57-09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles AK 101					
01440	TPH-GRO AK water C6-C10	n.a.	N.D.	0.010	1
GC Volatiles SW-846 8021B					
02102	Benzene	71-43-2	N.D.	0.0005	1
02102	Ethylbenzene	100-41-4	N.D.	0.0005	1
02102	Toluene	108-88-3	N.D.	0.0005	1
02102	Total Xylenes	1330-20-7	N.D.	0.0015	1
GC Petroleum AK 102/103 4/08/02 modified					
02923	C10-<C25 DRO	n.a.	0.96	0.050	1
02923	C25-C36 RRO	n.a.	0.53	0.069	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	11249A53A	09/07/2011 22:35	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	11249A53A	09/07/2011 22:35	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	11249A53A	09/07/2011 22:35	Catherine J Schwarz	1
02923	TPH-DRO/RRO (AK) water	AK 102/103 4/08/02 modified	1	112490022A	09/07/2011 21:39	Heather E Williams	1
11185	AK DRO/ORO Waters Extraction	AK 102/AK 103 04/08/02	1	112490022A	09/07/2011 05:15	Roman Kuropatkin	1



Analysis Report

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Sample Description: GEI-2 Grab Water Sample
 Facility# 306443
 Gate 28, West Ramp - Fairbanks, AK

LLI Sample # WW 6390150
 LLI Group # 1263894
 Account # 11964

Project Name: 306443

Collected: 08/25/2011 16:25 by DB

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/27/2011 09:15

Reported: 09/13/2011 12:50

28FG2 SDG#: LST57-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles AK 101					
01440	TPH-GRO AK water C6-C10	n.a.	N.D.	0.010	1
GC Volatiles SW-846 8021B					
02102	Benzene	71-43-2	N.D.	0.0005	1
02102	Ethylbenzene	100-41-4	N.D.	0.0005	1
02102	Toluene	108-88-3	N.D.	0.0005	1
02102	Total Xylenes	1330-20-7	N.D.	0.0015	1
GC Petroleum AK 102/103 4/08/02 modified					
02923	C10-<C25 DRO	n.a.	1.1	0.049	1
02923	C25-C36 RRO	n.a.	0.84	0.069	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	11249A53A	09/07/2011 15:01	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	11249A53A	09/07/2011 15:01	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	11249A53A	09/07/2011 15:01	Catherine J Schwarz	1
02923	TPH-DRO/RRO (AK) water	AK 102/103 4/08/02 modified	1	112490022A	09/07/2011 23:00	Heather E Williams	1
11185	AK DRO/ORO Waters Extraction	AK 102/AK 103 04/08/02	1	112490022A	09/07/2011 05:15	Roman Kuropatkin	1



Analysis Report

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

Sample Description: GEI-8 Grab Water Sample
 Facility# 306443
 Gate 28, West Ramp - Fairbanks, AK

LLI Sample # WW 6390151
 LLI Group # 1263894
 Account # 11964

Project Name: 306443

Collected: 08/25/2011 17:35 by DB

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/27/2011 09:15

Reported: 09/13/2011 12:50

28FG8 SDG#: LST57-11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles AK 101					
01440	TPH-GRO AK water C6-C10	n.a.	mg/l 0.020	mg/l 0.010	1
GC Volatiles SW-846 8021B					
02102	Benzene	71-43-2	mg/l N.D.	mg/l 0.0005	1
02102	Ethylbenzene	100-41-4	N.D.	0.0005	1
02102	Toluene	108-88-3	N.D.	0.0005	1
02102	Total Xylenes	1330-20-7	N.D.	0.0015	1
GC Petroleum AK 102/103 4/08/02 modified					
02923	C10-<C25 DRO	n.a.	mg/l 99	mg/l 2.5	50
02923	C25-C36 RRO	n.a.	N.D.	3.5	50

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	11249A53A	09/07/2011 23:02	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	11249A53A	09/07/2011 23:02	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	11249A53A	09/07/2011 23:02	Catherine J Schwarz	1
02923	TPH-DRO/RRO (AK) water	AK 102/103 4/08/02 modified	1	112490022A	09/08/2011 12:56	Heather E Williams	50
11185	AK DRO/ORO Waters Extraction	AK 102/AK 103 04/08/02	1	112490022A	09/07/2011 05:15	Roman Kuropatkin	1



Analysis Report

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

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Sample Description: BD-1 Grab Water Sample
Facility# 306443
Gate 28, West Ramp - Fairbanks, AK

LLI Sample # WW 6390152
LLI Group # 1263894
Account # 11964

Project Name: 306443

Collected: 08/25/2011 by DB

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/27/2011 09:15

Reported: 09/13/2011 12:50

28FD1 SDG#: LST57-12FD

CAT No.	Analysis Name	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	
02102	Benzene	71-43-2	N.D.	0.0005	1
02102	Ethylbenzene	100-41-4	N.D.	0.0005	1
02102	Toluene	108-88-3	N.D.	0.0005	1
02102	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	11249A53A	09/07/2011 15:28	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	11249A53A	09/07/2011 15:28	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	11249A53A	09/07/2011 15:28	Catherine J Schwarz	1



Analysis Report

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

Sample Description: **BD-2 Grab Water Sample**
Facility# **306443**
Gate 28, West Ramp - Fairbanks, AK

LLI Sample # **WW 6390153**
LLI Group # **1263894**
Account # **11964**

Project Name: **306443**

Collected: 08/25/2011 by DB

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/27/2011 09:15

Reported: 09/13/2011 12:50

28FD2 SDG#: LST57-13FD

CAT No.	Analysis Name	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.	0.032	0.010	1
GC Volatiles SW-846 8021B			mg/l	mg/l	
02102	Benzene	71-43-2	N.D.	0.0005	1
02102	Ethylbenzene	100-41-4	N.D.	0.0005	1
02102	Toluene	108-88-3	N.D.	0.0005	1
02102	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	11249A53A	09/07/2011 15:55	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	11249A53A	09/07/2011 15:55	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	11249A53A	09/07/2011 15:55	Catherine J Schwarz	1



Analysis Report

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

Sample Description: Trip_Blank Water Sample
Facility# 306443
Gate 28, West Ramp - Fairbanks, AK

LLI Sample # WW 6390154
LLI Group # 1263894
Account # 11964

Project Name: 306443

Collected: 08/25/2011

Chevron

Submitted: 08/27/2011 09:15

6001 Bollinger Canyon Rd L4310

Reported: 09/13/2011 12:50

San Ramon CA 94583

28FTB SDG#: LST57-14TB*

CAT No.	Analysis Name	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	
02102	Benzene	71-43-2	N.D.	0.0005	1
02102	Ethylbenzene	100-41-4	N.D.	0.0005	1
02102	Toluene	108-88-3	N.D.	0.0005	1
02102	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	11249A53A	09/07/2011 14:22	Catherine J Schwarz	1
02102	Method 8021 Water Master	SW-846 8021B	1	11249A53A	09/07/2011 14:22	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	11249A53A	09/07/2011 14:22	Catherine J Schwarz	1

Quality Control Summary

Client Name: Chevron

Group Number: 1263894

Reported: 09/13/11 at 12:50 PM

Matrix QC may not be reported if insufficient sample or 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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 11248B53A	Sample number(s): 6390141-6390147							
Benzene	N.D.	0.0002	mg/l	115	110	80-120	4	30
Ethylbenzene	N.D.	0.0002	mg/l	105	105	80-120	0	30
Toluene	N.D.	0.0002	mg/l	110	110	80-120	0	30
TPH-GRO AK water C6-C10	N.D.	0.010	mg/l	86	89	60-120	3	20
Total Xylenes	N.D.	0.0006	mg/l	110	110	80-120	0	30
Batch number: 11249A53A	Sample number(s): 6390148-6390154							
Benzene	N.D.	0.0002	mg/l	110	105	80-120	5	30
Ethylbenzene	N.D.	0.0002	mg/l	105	100	80-120	5	30
Toluene	N.D.	0.0002	mg/l	110	105	80-120	5	30
TPH-GRO AK water C6-C10	N.D.	0.010	mg/l	84	84	60-120	0	20
Total Xylenes	N.D.	0.0006	mg/l	110	107	80-120	3	30
Batch number: 112490022A	Sample number(s): 6390141-6390151							
C10-<C25 DRO	N.D.	0.050	mg/l	103	97	75-125	6	20
C25-C36 RRO	N.D.	0.070	mg/l	100	100	60-120	0	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: Method 8021 Water Master

Batch number: 11248B53A

	Trifluorotoluene-F	Trifluorotoluene-P
6390141	63	67
6390142	67	72
6390143	68	69
6390144	68	71
6390145	66	70
6390146	67	71
6390147	66	71
Blank	66	73
LCS	81	73
LCSD	83	72

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.

Quality Control Summary

Client Name: Chevron
Reported: 09/13/11 at 12:50 PM

Group Number: 1263894

Surrogate Quality Control

Analysis Name: Method 8021 Water Master

Batch number: 11249A53A

	Trifluorotoluene-F	Trifluorotoluene-P
6390148	65	73
6390149	67	72
6390150	68	72
6390151	67	72
6390152	67	73
6390153	69	72
6390154	67	72
Blank	67	71
LCS	80	71
LCSD	83	72

Limits: 60-120 58-146

Analysis Name: TPH-DRO/RRO (AK) water

Batch number: 112490022A

	Orthoterphenyl	n-Triacontane-d62
6390141	156*	94
6390142	104	84
6390143	121	89
6390144	98	79
6390145	118	90
6390146	106	85
6390147	96	78
6390148	99	81
6390149	97	86
6390150	102	81
6390151	159*	100
Blank	105	82
LCS	100	75
LCSD	96	73

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



G# 126389-011021
 Acct. #: 11964 For Lancaster Laboratories use only
 Sample #: 6390141-54 SCR#: _____

1 of 2

Facility #: 306443
 Site Address: Gate 28, West Loop, Fairbanks, AK
 Chevron PM: Don Carie Lead Consultant: ARCADIS
 Consultant/Office: 2300 Eastlake Ave E #200, Seattle, WA 98102
 Consultant Prj. Mgr.: Greg Montgomery
 Consultant Phone #: 206 726-4742 Fax #: _____
 Sampler: Dave Beaudin
 Service Order #: NWTRB-00306443-1-62 Non SAR:

Matrix	Analyses Requested													
	Preservation Codes													
Soil <input type="checkbox"/> Potable <input type="checkbox"/> NPDES	Water	Oil	Air	Total Number of Containers	BTEX	8260	TPH	Oxygenates	TPH G R O	TPH D	Lead Total	VPHEPH	NWTPH H CID	quantification
					8021	8260	Naphthalene	TPH R R O	AK 101	AK 102	Method			
				5	X	X	X	X	X	X				
				5	X	X	X	X	X	X				
				5	X	X	X	X	X	X				
				5	X	X	X	X	X	X				
				5	X	X	X	X	X	X				
				5	X	X	X	X	X	X				
				5	X	X	X	X	X	X				
				5	X	X	X	X	X	X				
				3	X	X	X	X	X	X				
				3	X	X	X	X	X	X				

Preservative Codes
 H = HCl T = Thiosulfate
 N = HNO₃ B = NaOH
 S = H₂SO₄ 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

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil	Air	Total Number of Containers	BTEX	8260	TPH	Oxygenates	TPH G R O	TPH D	Lead Total	VPHEPH	NWTPH H CID	quantification
MW-1	8-25-11	11:15	X			X			5	X	X	X	X	X	X				
MW-2	8-25-11	11:35	X			X			5	X	X	X	X	X	X				
MW-3	8-25-11	11:55	X			X			5	X	X	X	X	X	X				
MW-4	8-25-11	12:20	X			X			5	X	X	X	X	X	X				
MW-5	8-25-11	12:40	X			X			5	X	X	X	X	X	X				
MW-6	8-25-11	13:00	X			X			5	X	X	X	X	X	X				
MW-7	8-25-11	13:20	X			X			5	X	X	X	X	X	X				
MW-9	8-25-11	13:35	X			X			5	X	X	X	X	X	X				
MW-10	8-25-11	13:55	X			X			5	X	X	X	X	X	X				
GEI-2	8-25-11	16:25	X			X			5	X	X	X	X	X	X				
GEI-8	8-25-11	17:35	X			X			5	X	X	X	X	X	X				
DD-1	8-25-11	---	X			X			3	X	X	X	X	X	X				
DD-2	8-25-11	---	X			X			3	X	X	X	X	X	X				

Comments / Remarks

Turnaround Time Requested (TAT) (please circle)

STD. TAT 72 hour 48 hour
 24 hour 4 day 5 day

Relinquished by: [Signature] Date: 8-26-11 Time: 8:00

Received by: _____ Date: _____ Time: _____

Data Package Options (please circle if required)

QC Summary Type I - Full
 Type VI (Raw Data) Disk / EDD
 WIP (RWQCB) Standard Format
 Disk Large File Other

Relinquished by: _____ Date: _____ Time: _____

Received by: _____ Date: 8/26/11 Time: 8:05

Relinquished by Commercial Carrier: _____ Received by: _____ Date: _____ Time: _____

UPS FedEx Other _____

Temperature Upon Receipt: 17.5 °C Custody Seals Intact? Yes No

Chevron Generic Analysis Request/Chain of Custody



G# 1263894 017962
 For Lancaster Laboratories use only
 Acct. #: 11964 Sample #: 0390141-54 SCR#: _____

2. A 2

Facility #: <u>306443</u> Site Address: <u>Gate 28, West Camp, Fairbanks, AK</u> Chevron PM: <u>Dan Carrier</u> Lead Consultant: <u>ARCADIS</u> Consultant/Office: <u>2300 Eastlake Ave E #200 Seattle, WA 98102</u> Consultant Prj. Mgr.: <u>Greg Montgomery</u> Consultant Phone #: <u>206-726-4742</u> Fax #: _____ Sampler: <u>Dave Bunting</u> Service Order #: <u>NWTRD-00306443-1-16</u> Non SAR: _____				Matrix Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Air <input type="checkbox"/>		Analyses Requested Preservation Codes Total Number of Containers: _____ BTEX <input checked="" type="checkbox"/> NPDES <input type="checkbox"/> 8021 <input type="checkbox"/> 8022 <input type="checkbox"/> Naphthalene <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxygenates <input type="checkbox"/> TPH G <input checked="" type="checkbox"/> R <input type="checkbox"/> O <input type="checkbox"/> AK <input type="checkbox"/> 601 <input type="checkbox"/> Extended Ring <input type="checkbox"/> Silica Gel Cleanup <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input type="checkbox"/> Method <input type="checkbox"/> VPH/EPH <input type="checkbox"/> NWTPH HCl/D <input type="checkbox"/> quantification <input type="checkbox"/>										Preservative Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy's on highest hit <input type="checkbox"/> Run ___ oxy's on all hits																														
Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil	Air	Total Number of Containers	BTEX	NPDES	8021	8022	Naphthalene	8260 full scan	Oxygenates	TPH G	R	O	AK	601	Extended Ring	Silica Gel Cleanup	Lead Total	Diss.	Method	VPH/EPH	NWTPH HCl/D	quantification	Preservative Codes	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							
<u>Wip Blank</u>	—	—				X			1	X							X																													
Turnaround Time Requested (TAT) (please circle) STD. TAT 72 hour 48 hour 24 hour 4 day 5 day										Relinquished by: <u>[Signature]</u> Date: <u>8-26-11</u> Time: <u>8:00</u> Relinquished by: _____ Date: _____ Time: _____					Received by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____																															
Data Package Options (please circle if required) QC Summary Type I - Full Type VI (Raw Data) Disk / EDD WIP (RWQCB) Standard Format Disk <u>Other</u>										Relinquished by: _____ Date: _____ Time: _____ Relinquished by Commercial Carrier: UPS FedEx Other _____ Received by: _____ Date: <u>8/26/11</u> Time: <u>09:45</u>					Temperature Upon Receipt: <u>17-3.65</u> 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 <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq 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	Inorganic Qualifiers
A TIC is a possible aldol-condensation product	B Value is $<$ CRDL, but \geq IDL
B Analyte was also detected in the blank	E Estimated due to interference
C Pesticide result confirmed by GC/MS	M Duplicate injection precision not met
D Compound quantitated on a diluted sample	N Spike sample not within control limits
E Concentration exceeds the calibration range of the instrument	S Method of standard additions (MSA) used for calculation
N Presumptive evidence of a compound (TICs only)	U Compound was not detected
P Concentration difference between primary and confirmation columns $>$ 25%	W Post digestion spike out of control limits
U Compound was not detected	* Duplicate analysis not within control limits
X,Y,Z Defined in case narrative	+ 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.

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ARCADIS

Appendix C

ADEC Data Review Checklists

Laboratory Data Review Checklist

Completed by:

Title: Date:

CS Report Name: Report Date:

Consultant Firm:

Laboratory Name: Laboratory Report Number:

ADEC File Number: ADEC RecKey Number:

1. Laboratory

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

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

3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ}$ C)?
 Yes No NA (Please explain.) Comments:

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

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes No NA (Please explain.)

Comments:

No

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 NA (Please explain.)

Comments:

No

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

Comments:

Data quality or usability does not appear to be affected.

4. Case Narrative

a. Present and understandable?

Yes No NA (Please explain.)

Comments:

Yes

b. Discrepancies, errors or QC failures identified by the lab?

Yes No NA (Please explain.)

Comments:

Yes

c. Were all corrective actions documented?

Yes No NA (Please explain.)

Comments:

Yes

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

Comments:

Data quality or usability does not appear to be affected.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes No NA (Please explain.)

Comments:

Yes

b. All applicable holding times met?

Yes No NA (Please explain.)

Comments:

Yes

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

Comments:

N/A

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

Comments:

No, The PQL for DRO exceeded the cleanup level in the groundwater samples analyzed from GEI-8 and MW-1.

e. Data quality or usability affected?

Comments:

Data quality of DRO analytical results for samples collected from GEI-8 and MW-1 do not appear to be affected as a detection of DRO exceeded the PQL.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?
 Yes No NA (Please explain.)

Comments:

Yes

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

Comments:

Yes

iii. If above PQL, what samples are affected?

Comments:

N/A

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

Comments:

N/A

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

Comments:

N/A

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)

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)

Yes No NA (Please explain.) Comments:

Yes

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)

Yes No NA (Please explain.) Comments:

Yes

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 No NA (Please explain.) Comments:

NA

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

Comments:

Data quality or usability not expected to be affected

c. Surrogates – Organics Only

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

Yes No NA (Please explain.) Comments:

Yes

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

Yes No NA (Please explain.) Comments:

No. The DRO surrogate orthoterphenyl was outside specification for the groundwater samples GEI-8 and MW-1.

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

Yes No NA (Please explain.)

Comments:

Yes

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

Comments:

Data quality or usability 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.)

Yes No NA (Please explain.)

Comments:

Yes

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 No NA (Please explain.)

Comments:

No, the specific cooler containing trip blanks are not identified on COC.

iii. All results less than PQL?

Yes No NA (Please explain.)

Comments:

Yes

iv. If above PQL, what samples are affected?

Comments:

NA

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?

Yes No NA (Please explain.)

Comments:

Yes

ii. Submitted blind to lab?

Yes No NA (Please explain.)

Comments:

Yes

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

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

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Yes No NA (Please explain.)

Comments:

Yes

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

Comments:

Data not expected to be affected.

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

Yes No NA (Please explain.)

Comments:

N/A. Equipment blank not collected due to the sampling method used in groundwater collection.

i. All results less than PQL?

Yes No NA (Please explain.)

Comments:

N/A

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?

Yes No NA (Please explain.)

Comments:

N/A