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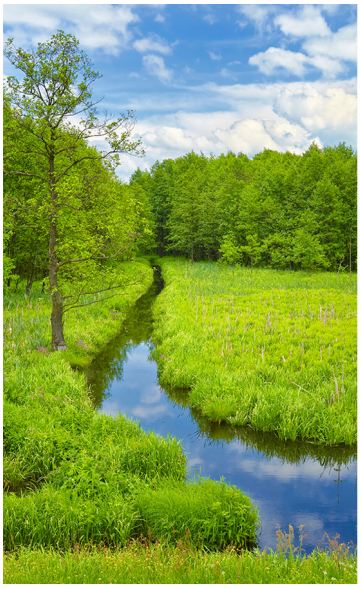

Report

Revised Annual 2013 Groundwater Monitoring Report

Chevron Site 211079
1501 South Cushman Street
Fairbanks, Alaska
ADEC File ID 102.26.015

Prepared for: Alaska Department of Environmental Conservation

Conestoga-Rovers & Associates
14998 West 6th Avenue, Suite 800
Golden, Colorado 80401

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Partners in Sustainability

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Prepared For:
Mr. Robert Burgess
Alaska Department of Environmental Conservation

Tom Echtermeyer
Staff Geologist

Siobhan Pritchard, P.G.
Senior Project Geologist

Prepared by:
Conestoga-Rovers & Associates

14998 West 6th Avenue
Suite 800
Golden, Colorado 80401

Office: (720) 974-0935
Fax: (720) 974-0936

web: http://www.CRAworld.com

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List of Acronyms and Abbreviations

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AS	air sparge
BTEX	benzene, toluene, ethylbenzene, and xylenes
COPCs	contaminants of potential concern
CRA	Conestoga-Rovers & Associates
CSM	conceptual site model
DRO	diesel range organics
EPA	Environmental Protection Agency
fbg	feet below grade
GRO	gasoline range organics
P.G.	Professional Geologist
ppmv	parts per million by volume
Ref. No.	Reference Number
SVE	soil vapor extraction
VOC	volatile organic compound
UST	underground storage tank

Section 1.0 Introduction

Conestoga-Rovers & Associates (CRA) is submitting this *Annual 2013 Groundwater Monitoring and Sampling Report* to the Alaska Department of Environmental Conservation (ADEC) on behalf of Chevron Environmental Management Company (Chevron) for Chevron Site 211079. Groundwater monitoring and sampling was performed by CRA in accordance with the ADEC's May 2010 *Draft Field Guidance*. Reporting was performed by CRA in accordance with ADEC's September 2009 *Site Characterization Work Plan and Reporting Guidance for Investigation of Contaminated Sites.*

Project objectives are to monitor current groundwater conditions to determine if attenuation is occurring.

1.1 Site Description and Background

The site is located at 1501 South Cushman Street in Fairbanks, Alaska (Figure 1). The property's legal description is UMB01 BLK3 Gateway. The latitude and longitude are 64.833988° North and 147.716887° West. The site is a former Texaco service station currently occupied by the Friendship Korean Baptist Church. The station operated from 1963 to 1986. Station facilities included six underground storage tanks (USTs), dispenser islands, associated product piping, a station building and a car wash. The USTs were removed in 1988 in 1993. An air sparge/soil vapor extraction (AS/SVE) system operated onsite from 1993 until 2000. A single vapor probe was installed in 2007; sample results indicated benzene concentrations in soil vapor were above the EPA screening level. CRA decommissioned the AS/SVE remediation system on July 29, 2013.

Land use surrounding the site is primarily commercial and residential. Currently, the site is occupied by a Korean Baptist Church. Businesses are located south of the site and west across South Cushman Street. Residences border the site on the north and east. The former Texaco service station is listed in the ADEC contaminated site database.

Six groundwater monitoring wells are present onsite. One groundwater monitoring well and two soil vapor probes are located offsite. Both onsite and offsite groundwater monitoring wells are monitored and sampled semiannually (Figure 2). Site photos are included Appendix A.

1.2 Hydrogeology

The site is located in central Alaska approximately 0. 5 miles southwest of the Chena River in the Tanana River Valley. Historical static groundwater depths have ranged between 9.8 to 17.12 feet below grade (fbg) according to groundwater data from 1995 to present. Static groundwater depths ranged from 12.91 (MW-9) to 14.91 fbg (MW-1) on July 26, 2013. Groundwater flow was to the northwest with a gradient of 0.002, which is consistent with historical data (Figure 2).

1.3 Conceptual Site Model

CRA submitted a conceptual site model (CSM) to the ADEC on June 21, 2011. The CSM includes information on sources, affected media and exposure pathways. CRA prepared this CSM in accordance with ADEC's *Draft Guidance on Developing Conceptual Site Models*. Potentially complete pathways include incidental soil ingestion, ingestion of groundwater, and inhalation of outdoor air. Current groundwater conditions are consistent with historical data.

1.4 Contaminants of Potential Concern - Cleanup Levels

Site contaminants of potential concern (COPCs) are diesel range organics (DRO), gasoline range organics (GRO), and benzene. ADEC Table C Groundwater Cleanup Levels (Title 18 Alaska Administrative Code (ACC) 75.345) and ADEC Method Two Soil Cleanup Levels, Tables B1 and B2, under 40-inch zone, migration to groundwater (Title 18 AAC 75.341) are the default site cleanup levels for groundwater and soil.

Section 2.0 Groundwater Monitoring and Sampling

CRA gauged groundwater and sampled monitoring wells MW-1 through MW-5 and MW-9 through MW-11 on July 26 and 27, 2013. Each well cap was removed to allow groundwater levels to stabilize and equilibrate prior to gauging. Sampled monitoring wells were purged using a low-flow bladder pump at an average flow rate of approximately 0.5 liters per minute until a minimum of three parameters (temperature, pH, specific conductivity, turbidity, dissolved oxygen, and oxidation reduction potential) were stable for three consecutive readings. Groundwater samples, including one duplicate sample were collected using clean disposable tubing and decanted into clean containers supplied by the analytical laboratory. Groundwater samples were submitted under chain-of-custody to Pace Analytical Laboratories of Minnesota. CRA monitoring data package is presented as Appendix B. CRA's standard operating procedures for low flow sampling are presented as Appendix C.

2.1 Purged Groundwater Disposal

Groundwater not used for sampling was filtered through granular activated carbon and purged to the ground surface behind the church building to ensure no offsite runoff.

Section 3.0 Results and Findings

3.1 Groundwater Analytical Methods

Collected groundwater samples were analyzed for one or more of the following:

- DRO by Alaska Method AK102

- GRO by Alaska Method AK101
- Benzene, toluene, ethylbenzene, and totoal xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260
- Methane by EPA Method 8015
- Alkalinity by EPA Method 2320B
- Sulfate by EPA Method 300
- Nitrate as Nitrogen by EPA Method 300
- Ferrous Iron by field test kit HOCH DR 890 color meter

3.2 Groundwater Sampling Results

No DRO, GRO or benzene was detected above ADEC Table C Groundwater Cleanup Levels in samples MW-1, MW-2, MW-4, MW-10 or MW-11. The highest DRO and GRO detected were 1.6 milligrams per liter (mg/l) and 4.2 mg/l, respectively, in sample MW-9. Sample MW-2 contained the highest benzene (0.0015 mg/l). Hydrocarbon concentrations have decreased since initial monitoring in 1994. Current groundwater analytical data is presented in Table 1. Historical groundwater analytical data is presented in Table 2.

Monitored natural attenuation (MNA) parameters in source area wells (MW-2 and MW-5) indicate that natural attenuation is continuing to enhance remediation. Data for the site has only been collected for three years and therefore is difficult to evaluate based on limited data. Field Sulfate levels in source area wells are lower than those outside of the source area, indicating that sulfate is utilized for MNA. Methane levels in MW-5 are slightly lower than wells outside of the source area; however the levels are increasing and indicate methanogenic chemistry. Alkalinity is trending downward; however levels in the source area equivalent to background, indicating potential stabilization. Ferrous iron in the source area is above levels compared to wells outside the source area, indicating anerobic conditions. MNA parameters from samples outside the source area indicate attenuation has stabilized. Nitrate was not analyzed in the field due to the equipment supplier not including reagents with the test equipment. MNA parameters are presented in Table 2. The laboratory analytical report is presented as Appendix D. Petroleum hydrocarbon concentration graphs are presented in Appendix E.

3.3 Data Quality

Based on the QA/QC review, the data submitted were judged to be acceptable for use with the qualifications noted. The ADEC Laboratory Data Review Checklist and Memorandum are presented as Appendix F.

Section 4.0 Conclusions

Groundwater samples contained DRO and GRO above ADEC Table C Groundwater Cleanup Levels in monitoring well MW-9 during the annual 2013 sampling event. CRA will continue to conduct semiannual groundwater monitoring and sampling in 2014.

Figures

F1: Vicinity Map
F2: Groundwater Elevation Contour and Concentration Map

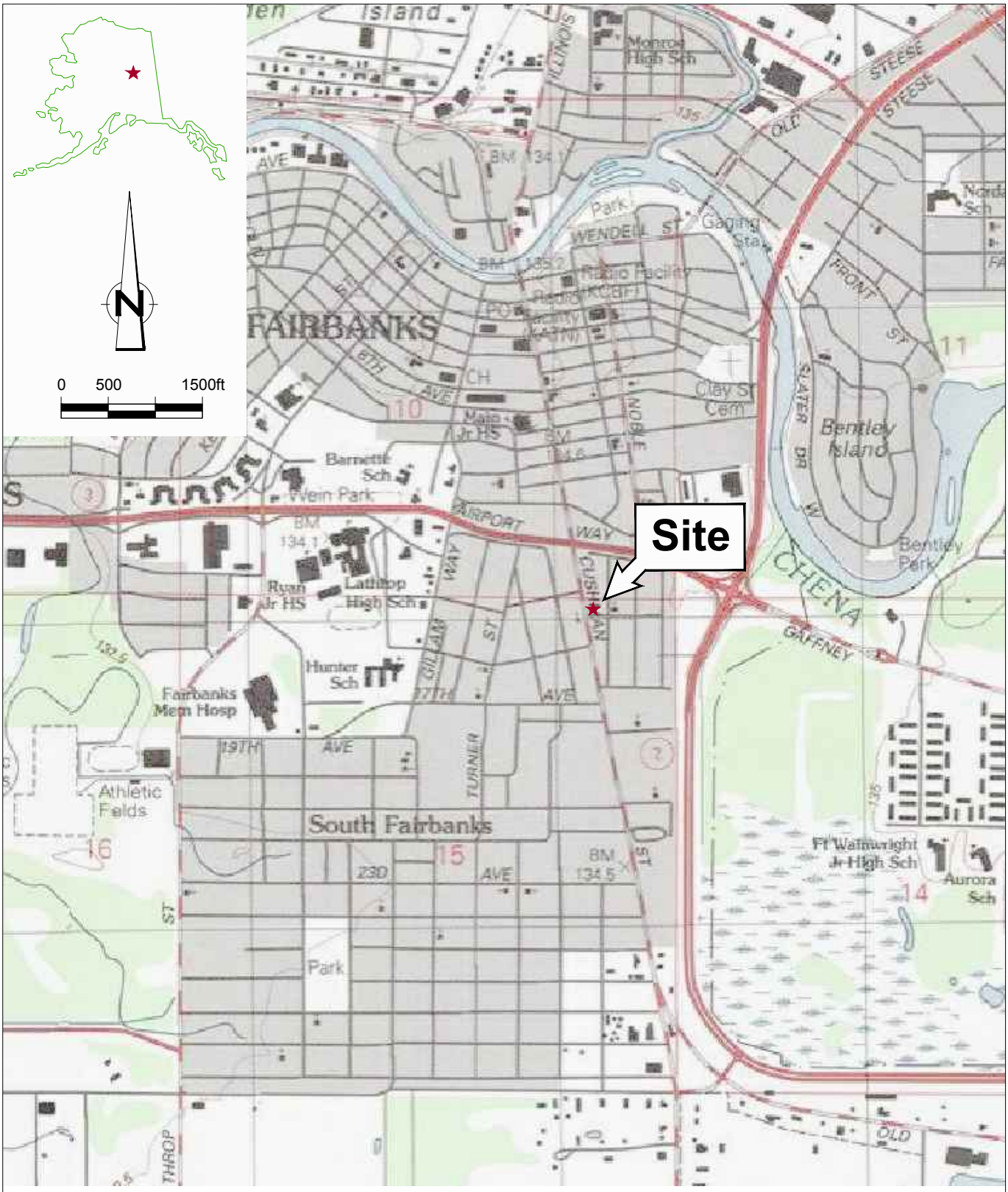
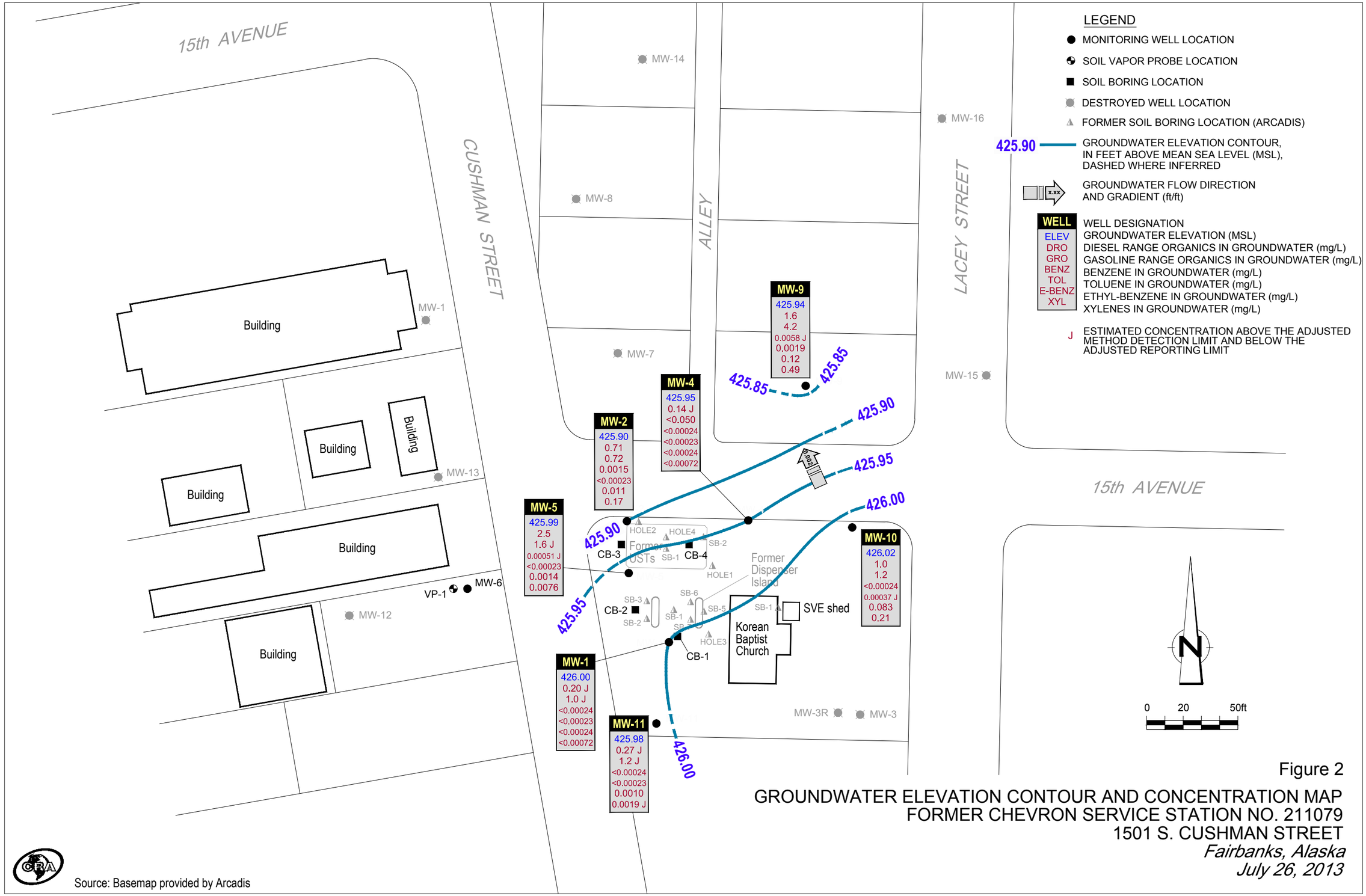


Figure 1

VICINITY MAP
FORMER CHEVRON STATION 211079
1501 CUSHMAN STREET
Fairbanks, Alaska

CRA

065003-95(011)GN-EM001 OCT 22/2013



Source: Basemap provided by Arcadis

Figure 2

GROUNDWATER ELEVATION CONTOUR AND CONCENTRATION MAP
FORMER CHEVRON SERVICE STATION NO. 211079
1501 S. CUSHMAN STREET
Fairbanks, Alaska
July 26, 2013

065003-95(011)GN-EM002 FEB 19/2014

Tables

TABLE 1

GROUNDWATER ANALYTICAL RESULTS
FORMER TEXACO SERVICE STATION 21-1079
1501 SOUTH CUSHMAN STREET
FAIRBANKS, ALASKA

					HYDROCARBONS			*PRIMARY VOCS*						
Location	*Date*	*TOC*	*DTW*	*GWE*	*DRO*	*GRO*	*RRO*	*Benzene*	*Toluene*	*Ethylbenzene*	*Total Xylenes*	*EDB*	*1,2-DCA*	*Sulfolane*
	Units	*ft msl*	*fbg*	*ft msl*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
ADEC Groundwater Cleanup Levels [a]					***1.5***	***2.2***	***1.1***	***0.005***	***1.0***	***0.7***	***10.0***			
MW-1	07/26/2013	440.91	14.91	426.00	-	-		-	-	-	-			
MW-1	07/27/2013	-	-	-	0.20 J	1.0 J		<0.00024	<0.00023	<0.00024	<0.00072			
MW-2	07/26/2013	439.39	13.49	425.90	-	-	-	-	-	-	-	-	-	-
MW-2	07/27/2013	-	-	-	0.71	0.72	-	0.0015	<0.00023	0.011	0.17	-	-	-
MW-4	07/26/2013	438.98	13.03	425.95	-	-	-	-	-	-	-	-	-	-
MW-4	07/27/2013	-	-	-	0.14 J	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-
MW-5	07/26/2013	439.82	13.83	425.99	-	-	-	-	-	-	-	-	-	-
MW-5	07/27/2013	-	-	-	**2.5 / 2.2**	1.6 / 1.6 J	-	0.00049 J / 0.00051 J	<0.00023 / <0.00023	0.0014 / 0.0013	0.0076 / 0.0071	-	-	-
MW-6	07/26/2013	439.47							No Access					
MW-9	07/26/2013	438.75	12.91	425.84	-	-	-	-	-	-	-	-	-	-
MW-9	07/27/2013	-	-	-	**1.6**	**4.2**	-	0.00058 J	0.0019	0.12	0.49	-	-	-
MW-10	07/26/2013	439.19	13.17	426.02	-	-	-	-	-	-	-	-	-	-
MW-10	07/27/2013	-	-	-	1.0	1.2	-	<0.00024	0.00037 J	0.083	0.21	-	-	-
MW-11	07/26/2013	440.38	14.40	425.98	-	-	-	-	-	-	-	-	-	-
MW-11	07/27/2013	-	-	-	0.27 J	1.2 J	-	<0.00024	<0.00023	0.0010	0.0019 J	-	-	-
Trip Blank	07/27/2013	-	-	-	-	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-

Notes and Abbreviations

TOC = Top of Casing
DTW = Depth to Water
GWE = Groundwater Elevation
DRO = Diesel Range Organics by Alaska Series Method AK102
GRO = Gasoline Range Organics by Alaska Series Method AK101
Benzene, Toluene, Ethylbenzene, and Total Xylenes by Environmental Protection Agency (EPA) Method 8021B or 8260B
Total Xylenes = Sum of m-, o-, and p-xylenes
ADEC = Alaska Department of Environmental Conservation
[a] = Levels established in ADEC Table C Groundwater Cleanup Levels (18 AAC 75.345), there is no established criteria for Sulfolane
BOLD = Indicates concentration above the ADEC Table C Groundwater Cleanup Level
NA = Not Applicable
ft msl = Feet Above Mean Sea Level
fbg = Feet Below Grade
mg/L = Milligrams per Liter
ND = Not detected above laboratory method detection limits
J = Estimated Value
- = Not Measured/Not Analyzed
* = Sample date defaulted to first date listed in historical data table
<x = Constituent not detected above x milligrams per liter
x / y = Sample Results / Blind Duplicate Results
** = Sample date accurate to month and year only
Groundwater data from 1992 through 2007 provided by Gettler-Ryan, Inc.

TABLE 2

MONITORED NATURAL ATTENUATION PARAMETERS
FORMER TEXACO SERVICE STATION 211079
1501 SOUTH CUSHMAN STREET
FAIRBANKS, ALASKA

Location	Date Units	MNA PARAMETERS Total Alkalinity mg/L	Alkalinity, phenolphthalein mg/L	Sulfate mg/L	Nitrate as Nitrogen mg/L	Methane mg/L	Nitrite (as N) mg/L	Ferrous Iron by Field Measurement mg/L	Ferrous Iron mg/L
ADEC Groundwater Cleanup Levels[a]									
MW-1	07/27/2013	215	-	21.1	-	0.036	<0.050 J	0.66	<0.015 J
MW-2	07/27/2013	251	-	23.6	-	0.055	<0.050 J	3.30	<0.015 J
MW-4	07/27/2013	202	-	18.8	-	0.0085	<0.050 J	0.00	<0.015 J
MW-5	07/27/2013	227 / 235	-	13.7 / 13.4	-	0.047 / 0.045	<0.050 J / <0.050 J	2.40 / -	<0.015 J / <0.015 J
MW-9	07/27/2013	240	-	7.5	-	0.076	<0.050 J	0.57	<0.015 J
MW-10	07/27/2013	246	-	33.2	-	0.11	<0.050 J	0.58	<0.015 J
MW-11	07/27/2013	228	-	16.6	-	0.029	<0.050 J	0.44	<0.015 J

Notes and Abbreviations

DO = Dissolved Oxygen
ORP = Oxidation Reduction Potential
mg/L = Milligrams per Liter
ND = Not detected above laboratory method detection limits
- = Not Measured/Not Analyzed
<x = Constituent not detected above x milligrams per liter
x / y = Sample Results / Blind Duplicate Results

TABLE 3

HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER TEXACO SERVICE STATION 21-1079
1501 SOUTH CUSHMAN STREET
FAIRBANKS, ALASKA

					HYDROCARBONS			*PRIMARY VOCS*						
Locat	*Date*	*TOC*	*DTW*	*GWE*	*DRO*	*GRO*	*RRO*	*Benzene*	*Toluene*	*Ethylbenzene*	*Total Xylenes*	*EDB*	*1,2-DCA*	*Sulfolane*
	Units	*ft msl*	*fbg*	*ft msl*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
ADEC Groundwater Cleanup Levels [a]					*1.5*	*2.2*	*1.1*	*0.005*	*1.0*	*0.7*	*10.0*			
MW-1	06/20/1994	440.92	15.25	425.67	-	**49**	-	**0.75**	**11**	**1.8**	10	-	-	-
MW-1	09/27/1994	440.92	14.83	426.09	-	**52**	-	**0.81**	**11.7**	**2.7**	**13.4**	-	-	-
MW-1	11/21/1994	440.92	15.48	425.44	-	**51**	-	**1.1**	**13**	**3.1**	**14**	-	-	-
MW-1	03/29/1995	440.92	16.13	424.79	-	**49**	-	**0.54**	**14**	**2.4**	10	-	-	-
MW-1	06/29/1995	440.94	14.45	426.49	**1.8**	**58**	-	**0.38**	**14**	**2.6**	**13**	-	-	-
MW-1	09/18/1995	440.94	13.12	427.82	-	**24**	-	**0.055**	**3.7**	**1.3**	6.9	-	-	-
MW-1	12/13/1995	440.94	15.00	425.94	0.39	**42**	-	**0.29**	**4**	**16**	7.7	-	-	-
MW-1	03/08/1996	440.94	16.10	424.84	1.1	**110**	-	**0.62**	**26**	**3.2**	**16**	-	-	-
MW-1	05/31/1996	440.94	15.13	425.81	-	**91.5**	-	**0.394**	**20.1**	**2.37**	**13.9**	-	-	-
MW-1	09/19/1996	440.94	15.18	425.76	-	**59.4**	-	**0.135**	**9.7**	**1.7**	**10.3**	-	-	-
MW-1	12/11/1996	440.96	15.73	425.23	-	**43.6**	-	**0.15**	**8.16**	**1.56**	7.93	-	-	-
MW-1	03/13/1997	440.96	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	06/18/1997	440.96	15.40	425.56	-	**37.3**	-	<0.025	**3.53**	**1.49**	6.91	-	-	-
MW-1	09/19/1997	440.96	14.97	425.99	-	**17.2**	-	<0.025	**1.7**	**0.919**	5.3	-	-	-
MW-1	12/10/1997	440.96	15.80	425.16	-	**32.1**	-	<0.05	**2.77**	**1.86**	9.46	-	-	-
MW-1	03/30/1998	440.96	16.54	424.42	-	**16.8** / **9.34**	-	**0.0142** / <0.025	0.925 / 0.531	**0.98** / 0.569	4.53 / 2.66	-	-	-
MW-1	06/08/1998	440.96	15.94	425.02	-	**7.79**	-	<0.01	0.408	0.476	2.39	-	-	-
MW-1	09/16/1998	440.96	14.32	426.64	-	**12.2** / **13.8**	-	**0.0153** / **0.0197**	0.356 / 0.469	0.593 / **0.719**	3.2 / 3.68	-	-	-
MW-1	12/28/1998	440.96	15.61	425.35	-	**14.3** / **16.3**	-	<0.05 / **0.0252**	0.865 / 0.987	**0.855** / **0.979**	3.8 / 4.29	-	-	-
MW-1	03/13/1999	440.96	16.54	424.42	-	**9.1**	-	<0.025	0.351	**0.751**	3.26	-	-	-
MW-1	06/22/1999	440.96	-	-	-	-	-	-	-	-	-	-	-	-
MW-1	09/28/1999	440.96	14.92	426.04	-	**8.9**	-	<0.02	0.079	0.59	2.31	-	-	-
MW-1	12/15/1999	440.96	15.84	425.12	-	**8.83**	-	**0.00888**	0.139	0.505	2.11	-	-	-
MW-1	03/21/2000	440.96	16.30	424.66	-	**8.95** / **11.5**	-	<0.01 / <0.005	0.107 / 0.0917	0.346 / 0.34	1.47 / 1.44	-	-	-
MW-1	06/20/2000	440.96	13.97	426.99	-	**4.69**	-	**0.00885**	0.019	0.15	0.565	-	-	-
MW-1	09/13/2000	440.96	12.99	427.97	-	**3.84** / **5.96**	-	<0.005 / <0.005	0.0135 / 0.023	0.147 / 0.216	0.535 / 0.848	-	-	-
MW-1	12/13/2000	440.96	14.79	426.17	-	**6.29** / **5.14**	-	<0.004 / <0.004	0.0249 / 0.0142	0.178 / 0.125	0.631 / 0.452	-	-	-
MW-1	03/20/2001	440.96	15.64	425.32	-	**6.39** / **6.69**	-	<0.0132 / <0.014	0.0133 / 0.0172	0.218 / 0.21	0.793 / 0.754	-	-	-
MW-1	06/20/2001	440.96	14.76	426.20	-	**4.16** / **6.18**	-	**0.00516** / 0.00295	0.00613 / 0.0107	0.194 / 0.197	0.756 / 0.785	-	-	-
MW-1	09/18/2001	440.96	14.03	426.93	-	**4.88** / **5.73**	-	**0.00726** / **0.0078**	0.00718 / <0.005	0.189 / 0.186	0.706 / 0.627	-	-	-
MW-1	03/25/2002	440.96	16.12	424.84	-	**5.07** / **5.31**	-	**0.00747** / **0.00528**	<0.005 / <0.005	0.151 / 0.17	0.692 / 0.812	-	-	-
MW-1	09/15/2002	440.96	13.02	427.94	-	**4.53** / **4.03**	-	0.00369 / 0.00419	0.000738 / <0.005	0.0813 / 0.107	0.424 / 0.394	-	-	-
MW-1	04/10/2003	440.96	15.55	425.41	-	**4.8** / **4.9**	-	<0.01 / <0.02	<0.002 / <0.002	0.072 / 0.073	0.33 / 0.33	-	-	-
MW-1	09/05/2003	440.96	12.56	428.40	-	**2.6** / **2.9**	-	<0.005 / <0.01	0.0006 / 0.0006	0.037 / 0.042	0.16 / 0.18	-	-	-
MW-1	03/03/2004	440.96	15.85	425.11	-	**3.6** / **3.3**	-	<0.01 / <0.02	<0.002 / <0.002	0.046 / 0.043	0.22 / 0.2	-	-	-
MW-1	09/20/2004	440.96	15.32	425.64	-	**3.5** / **2.6**	-	<0.01 / <0.01	<0.0005 / <0.002	0.033 / 0.037	0.17 / 0.19	-	-	-
MW-1	04/04/2005	440.96	16.20	424.76	-	**2.8** / **2.5**	-	0.0023 / 0.0021	<0.0005 / <0.0005	0.022 / 0.024	0.11 / 0.13	-	-	-
MW-1	09/29/2005	440.91	14.16	426.75	-	**2.5** / 1.8	-	<0.005 / <0.005	<0.0005 / <0.0005	0.02 / 0.017	0.099 / 0.066	-	-	-
MW-1	03/24/2006	440.91	16.25	424.66	-	1.8 / 2	-	<0.01 / <0.01	<0.0005 / <0.0005	0.0088 / 0.011	0.049 / 0.06	-	-	-
MW-1	04/02/2008	440.91	16.48	424.43	0.325 / 0.466	**3.25** / **2.83**	<0.758 / <0.75	**0.00676** / **0.00564**	0.000652 / <0.0005	0.0023 / 0.00187	0.0123 / 0.0101	-	-	-
MW-1	07/20/2009	-	-	-	<0.056	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-1	07/26/2010	440.91	15.30	425.61	0.11 J / 0.097 J	1.0 / 1.1	-	0.0032 / 0.0032	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0015 / <0.0015	-	-	-
MW-1	06/14/2011	440.91	15.26	425.65	-	-	-	-	-	-	-	-	-	-
MW-1	06/16/2011	-	-	-	<0.048	0.23	-	<0.0020	<0.0005	<0.0005	<0.0015	-	-	-
MW-1	08/20/2012	440.91	14.75	426.16	0.085 J	0.99	-	**0.0074**	0.0016 J	<0.0005	<0.0015	-	-	-
MW-1	07/26/2013	440.91	14.91	426.00	-	-		-	-	-	-			
MW-1	07/27/2013	-	-	-	0.20 J	1.0 J		<0.00024	<0.00023	<0.00024	<0.00072			

TABLE 3

HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER TEXACO SERVICE STATION 21-1079
1501 SOUTH CUSHMAN STREET
FAIRBANKS, ALASKA

					HYDROCARBONS			*PRIMARY VOCS*						
Locat	*Date*	*TOC*	*DTW*	*GWE*	*DRO*	*GRO*	*RRO*	*Benzene*	*Toluene*	*Ethylbenzene*	*Total Xylenes*	*EDB*	*1,2-DCA*	*Sulfolane*
	Units	*ft msl*	*fbg*	*ft msl*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
ADEC Groundwater Cleanup Levels [a]					*1.5*	*2.2*	*1.1*	*0.005*	*1.0*	*0.7*	*10.0*			
MW-2	06/22/1994	439.45	13.61	425.84	-	**37**	-	**11**	**9.3**	**1.2**	4.9	-	-	-
MW-2	09/28/1994	439.45	13.50	425.95	-	**67**	-	**18.8**	**13.8**	**1.4**	6.7	-	-	-
MW-2	11/21/1994	439.45	14.07	425.38	-	**140**	-	**38**	**33**	**4**	**14**	-	-	-
MW-2	03/29/1995	439.45	14.73	424.72	-	**110**	-	**29**	**26**	**2.1**	10	-	-	-
MW-2	06/29/1995	439.42	13.08	426.34	-	**42**	-	**8.3**	**8.1**	**1.1**	4.7	-	-	-
MW-2	09/19/1995	439.42	11.75	427.67	-	**26**	-	**5.4**	**6.1**	0.65	2.3	-	-	-
MW-2	12/13/1995	439.42	13.60	425.82	-	**170 / 150**	-	**24 / 24**	**29 / 28**	**1.3 / 1.3**	7.5 / 7.7	-	-	-
MW-2	03/08/1996	439.42	14.70	424.72	-	**91 / 100**	-	**18 / 22**	**14 / 22**	**1 / 1.7**	5.5 / 9.8	-	-	-
MW-2	06/01/1996	439.42	13.72	425.70	-	**83.9 / 80.1**	-	**17.1 / 16.6**	**14.4 / 13.8**	**1.03 / 1.01**	4.97 / 4.85	-	-	-
MW-2	09/18/1996	439.42	13.79	425.63	-	**12.4**	-	**1.26**	**1.25**	0.132	0.925	-	-	-
MW-2	12/11/1996	439.42	14.20	425.22	-	**26 / 24.8**	-	**1.86 / 1.9**	**5.52 / 5.36**	0.473 / 0.459	3.47 / 3.24	-	-	-
MW-2	03/13/1997	439.42	14.59	424.83	-	0.741	-	**0.0788**	0.159	0.00954	0.134	-	-	-
MW-2	06/18/1997	439.42	15.15	424.27	-	0.067 / 0.0652	-	0.00221 / 0.00266	0.00631 / 0.00751	0.00293 / 0.00245	0.0182 / 0.0162	-	-	-
MW-2	09/19/1997	439.42	14.28	425.14	-	<0.5	-	<0.0005	0.000797	<0.0005	0.00145	-	-	-
MW-2	12/10/1997	439.42	13.84	425.58	-	<0.5	-	0.000529	0.000801	0.00102	0.00472	-	-	-
MW-2	03/30/1998	439.42	14.65	424.77	-	0.15	-	<0.0005	0.00684	0.00728	0.0536	-	-	-
MW-2	06/09/1998	439.42	17.12	422.30	-	<0.5	-	<0.0005	0.00149	0.000726	0.00356	-	-	-
MW-2	09/16/1998	439.42	14.81	424.61	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-2	12/28/1998	439.42	13.19	426.23	-	<0.5	-	<0.001	<0.001	<0.001	<0.002	-	-	-
MW-2	03/13/1999	439.42	14.75	424.67	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-2	06/22/1999	439.42	15.36	424.06	-	<0.5	-	0.00203	<0.0005	0.0012	0.00723	-	-	-
MW-2	09/28/1999	439.42	14.29	425.13	-	0.063 / 0.077	-	0.00314 / 0.00333	0.000887 / <0.0005	0.00483 / 0.00544	0.0049 / 0.00485	-	-	-
MW-2	12/15/1999	439.42	14.59	424.83	-	0.0802	-	**0.00736**	<0.0005	0.00286	0.00451	-	-	-
MW-2	03/21/2000	439.42	15.04	424.38	-	0.0516	-	**0.00648**	<0.0005	0.00148	0.00213	-	-	-
MW-2	06/20/2000	439.42	12.77	426.65	-	<0.8	-	0.00189	<0.0005	<0.0005	0.00302	-	-	-
MW-2	09/13/2000	439.42	11.74	427.68	-	<0.5	-	0.00169	<0.0005	0.000807	0.00345	-	-	-
MW-2	12/13/2000	439.42	13.59	425.83	-	1.08	-	**0.00594**	<0.00103	0.0564	0.195	-	-	-
MW-2	03/20/2001	439.42	14.39	425.03	-	0.427	-	**0.00507**	<0.0005	0.0272	0.0686	-	-	-
MW-2	06/20/2001	439.42	13.58	425.84	-	0.147	-	0.00203	<0.0005	0.00999	0.0209	-	-	-
MW-2	09/18/2001	439.42	12.83	426.59	-	0.431	-	0.00251	0.0005	0.0264	0.102	-	-	-
MW-2	03/25/2002	439.42	14.97	424.45	-	1.16	-	0.00373	0.00487	0.0986	0.315	-	-	-
MW-2	09/15/2002	439.42	11.76	427.66	-	1.34	-	**0.00747**	<0.005	0.0759	0.319	-	-	-
MW-2	04/10/2003	439.42	13.91	425.51	-	**2.7**	-	**0.0064**	<0.0005	0.2	0.62	-	-	-
MW-2	09/05/2003	439.42	11.28	428.14	-	1.6	-	0.0043	<0.0005	0.11	0.43	-	-	-
MW-2	03/01/2004	439.42						Well Beneath snowbank, no access						
MW-2	09/20/2004	439.42	14.03	425.39	-	**2.3**	-	**0.0051**	<0.0005	0.15	0.41	-	-	-
MW-2	04/04/2005	439.42	14.75	424.67	-	1.9	-	0.0026	<0.0005	0.072	0.55	-	-	-
MW-2	09/29/2005	439.39	12.76	426.66	-	**2.6**	-	**0.0058**	0.0007	0.14	0.6	-	-	-
MW-2	03/26/2006	439.39	14.79	424.60	-	**2.7**	-	0.0038	<0.0005	0.096	0.68	-	-	-
MW-2	04/02/2008	439.39	14.90	424.49	-	-	-	-	-	-	-	-	-	-
MW-2	04/05/2008	-	-	-	0.674	1.81	<0.714	0.00317	<0.0005	0.0471	0.456	-	-	-
MW-2	07/21/2009	-	-	-	0.68	0.54	-	<0.0005	<0.0005	0.0077	0.12	-	-	-
MW-2	07/25/2010	439.39	13.70	425.69	0.64	1.7	-	0.0031	0.0006 J	0.027	0.28	-	-	-
MW-2	06/14/2011	439.39	13.61	425.78	-	-	-	-	-	-	-	-	-	-
MW-2	08/02/2011	439.39	12.51	426.88	0.19 J / 0.22 J	0.55 / 0.53	-	0.0032 / 0.0031	<0.0005 / <0.0005	0.010 / 0.0098	0.086 / 0.079	-	-	-
MW-2	08/20/2012	439.39	13.40	425.99	0.85	1.4	-	0.0032	0.0005 J	0.014	0.16	-	-	-
MW-2	07/26/2013	439.39	13.49	425.90	-	-	-	-	-	-	-	-	-	-
MW-2	07/27/2013	-	-	-	0.71	0.72	-	0.0015	<0.00023	0.011	0.17	-	-	-

TABLE 3

HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER TEXACO SERVICE STATION 21-1079
1501 SOUTH CUSHMAN STREET
FAIRBANKS, ALASKA

					HYDROCARBONS			PRIMARY VOCS						
Locat	Date	TOC	DTW	GWE	DRO	GRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	EDB	1,2-DCA	Sulfolane
	Units	ft msl	fbg	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels[a]					1.5	2.2	1.1	0.005	1.0	0.7	10.0			
MW-3	06/22/1994	439.84	14.25	425.59	-	ND	-	ND	ND	ND	ND	-	-	-
MW-3	09/27/1994	439.84	13.75	426.09	-	ND	-	0.0016	0.002	ND	0.001	-	-	-
MW-3	11/22/1994	439.84	14.38	425.46	-	ND	-	0.0013	ND	ND	ND	-	-	-
MW-3	03/29/1995	439.84	15.07	424.77	-	ND	-	0.0021	0.002	ND	0.006	-	-	-
MW-3	06/29/1995	439.93	13.40	426.53	-	ND	-	0.0006	ND	ND	ND	-	-	-
MW-3	09/18/1995	439.93	12.08	427.85	-	ND	-	0.0006	ND	ND	ND	-	-	-
MW-3	12/12/1995	439.93	14.10	425.83	-	ND	-	ND	ND	ND	ND	-	-	-
MW-3	03/08/1996	439.93	15.12	424.81	ND	ND	-	ND	ND	ND	ND	-	-	-
MW-3	05/30/1996	439.93	14.16	425.77	-	ND	-	ND	ND	ND	ND	-	-	-
MW-3	09/18/1996	439.93	14.20	425.73	-	ND	-	ND	ND	ND	ND	-	-	-
MW-3	12/11/1996	439.93	15.10	424.83	-	ND	-	ND	ND	ND	ND	-	-	-
MW-3	03/13/1997	439.93	15.61	424.32	-	ND	-	ND	ND	ND	ND	-	-	-
MW-3	06/18/1997	439.93	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	09/19/1997	439.93	14.32	425.61	-	<0.5	-	<0.0005	<0.0005	<0.0005	0.0011	-	-	-
MW-3	12/10/1997	439.93	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	06/09/1998	439.93	15.30	424.63	-	<0.5 / <0.5	-	<0.0005 / <0.0005	<0.0005 / <0.0005	0.000592 / <0.0005	0.0022 / 0.00176	-	-	-
MW-3	09/16/1998	439.93	13.69	426.24	-	0.178	-	<0.0005	0.00504	0.00805	0.0687	-	-	-
MW-3	12/28/1998	439.93	15.26	424.67	-	<0.5	-	<0.001	<0.001	<0.001	<0.002	-	-	-
MW-3	03/13/1999	439.93	15.89	424.04	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-3	06/22/1999	439.93	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	09/28/1999	439.93	14.32	425.61	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-3	12/15/1999	439.93	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	03/21/2000	439.93	15.04	424.89	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.0001	-	-	-
MW-3	06/20/2000	439.93	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	09/13/2000	439.93	12.42	427.51	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.0001	-	-	-
MW-3	12/13/2000	439.93	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	03/20/2001	439.93	15.10	424.83	-	<0.5	-	<0.0002	<0.0005	<0.0005	<0.0001	-	-	-
MW-3	06/20/2001	439.93	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	09/18/2001	439.93	-	-	-	-	-	-	-	-	-	-	-	-
MW-3	03/25/2002	439.93	15.74	424.19	-	<0.5	-	<0.0002	<0.0005	<0.0005	<0.001	-	-	-
MW-3	04/09/2003	439.93	15.13	424.80	-	0.012	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-3	09/01/2004	439.93						Well Beneath snowbank - no access. Well Decommissioned due to damage on 8/19/2004.						
MW-3	09/26/2005	439.93						Well removed and replaced with MW-3R						
MW-3R	09/29/2005	440.14	13.38	426.76	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-3R	03/24/2006	440.14	15.31	424.83	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-3R	04/02/2008	440.14	15.45	424.69	-	-	-	-	-	-	-	-	-	-
MW-3R	04/05/2008	-	-	-	0.506	<0.05	<0.735	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-3R	07/21/2009	-	-	-	0.12	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-3R	07/26/2010	440.14	14.19	425.95	0.12 J	0.012 J	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-3R	06/14/2011	440.14	14.14	426.00	-	-	-	-	-	-	-	-	-	-
MW-3R	06/15/2011	-	-	-	0.24 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-3R	08/20/2012	440.14	13.95	426.19	<0.049	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-

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FORMER TEXACO SERVICE STATION 21-1079
1501 SOUTH CUSHMAN STREET
FAIRBANKS, ALASKA

					HYDROCARBONS			PRIMARY VOCS						
Locat	Date	TOC	DTW	GWE	DRO	GRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	EDB	1,2-DCA	Sulfolane
	Units	ft msl	fbg	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels[a]					1.5	2.2	1.1	0.005	1.0	0.7	10.0			
MW-4	06/20/1994	439.23	13.51	425.72	-	140	-	7.7	56	4.6	20	-	-	-
MW-4	09/27/1994	439.23	13.15	426.08	-	98	-	5.51	35	3.8	17.8	-	-	-
MW-4	11/21/1994	439.23	13.74	425.49	-	120	-	5.2	42	5	28	-	-	-
MW-4	03/29/1995	439.23	14.44	424.79	-	60	-	1	17	2.6	15	-	-	-
MW-4	06/29/1995	439.16	12.76	426.40	1.9	79	-	0.79	20	3.3	16	-	-	-
MW-4	09/18/1995	439.16	11.35	427.81	-	47	-	0.4	11	1.8	12	-	-	-
MW-4	12/13/1995	439.16	13.30	425.86	-	87	-	0.45	12	2.3	14	-	-	-
MW-4	03/08/1996	439.16	14.39	424.77	-	130	-	0.66	33	5.3	30	-	-	-
MW-4	05/31/1996	439.16	13.38	425.78	-	102	-	0.407	15.9	3.45	22.3	-	-	-
MW-4	09/19/1996	439.16	13.45	425.71	-	92.1	-	0.332	11	3.37	22.2	-	-	-
MW-4	12/12/1996	439.16	14.22	424.94	-	39.8	-	0.164	3.81	1.33	10.3	-	-	-
MW-4	03/13/1997	439.16	14.81	424.35	-	37.2	-	0.141	3.15	1.21	10.1	-	-	-
MW-4	06/18/1997	439.16	13.81	425.35	-	33.8	-	<0.1	2.76	1.27	9.77	-	-	-
MW-4	09/19/1997	439.16	13.42	425.74	-	34	-	<0.1	3.5	1.62	12.3	-	-	-
MW-4	12/10/1997	439.16	14.33	424.83	-	38.7	-	0.0506	1.82	1.33	11.3	-	-	-
MW-4	03/30/1998	439.16	15.03	424.13	-	20.5	-	<0.05	1.27	0.849	6.66	-	-	-
MW-4	06/09/1998	439.16	14.34	424.82	-	18.7	-	<0.05	0.771	0.673	6.53	-	-	-
MW-4	09/16/1998	439.16	12.74	426.42	-	29.1	-	0.0338	0.818	1.15	9.45	-	-	-
MW-4	12/28/1998	439.16	14.43	424.73	-	25.9	-	0.00803	0.275	0.939	7.03	-	-	-
MW-4	03/13/1999	439.16	15.02	424.14	-	13.6	-	<0.05	0.122	0.644	4.82	-	-	-
MW-4	06/22/1999	439.16	-	-	-	-	-	-	-	-	-	-	-	-
MW-4	09/28/1999	439.16	13.49	425.67	-	22.7	-	<0.04	0.095	0.766	4.89	-	-	-
MW-4	12/15/1999	439.16	14.29	424.87	-	17.5	-	0.0225	0.0454	0.71	3.7	-	-	-
MW-4	03/21/2000	439.16	14.75	424.41	-	12.5	-	<0.025	0.0276	0.366	1.99	-	-	-
MW-4	06/20/2000	439.16	12.47	426.69	-	14.9	-	0.0235	0.0475	0.395	1.79	-	-	-
MW-4	09/13/2000	439.16	11.45	427.71	-	12.4	-	<0.01	0.0278	0.386	2.01	-	-	-
MW-4	12/13/2000	439.16	13.24	425.92	-	11.5	-	<0.01	<0.025	0.442	1.91	-	-	-
MW-4	03/20/2001	439.16	14.10	425.06	-	9.26	-	<0.0042	<0.01	0.326	1.34	-	-	-
MW-4	06/20/2001	439.16	13.27	425.89	-	7.96	-	0.0125	0.0114	0.36	13.91	-	-	-
MW-4	09/18/2001	439.16	12.51	426.65	-	9.65	-	0.0129	<0.01	0.373	1.53	-	-	-
MW-4	03/25/2002	439.16	14.65	424.51	-	8.38 / 4.2	-	0.00919 / 0.00646	0.00536 / <0.005	0.259 / 0.115	0.94 / 0.342	-	-	-
MW-4	09/15/2002	439.16	11.46	427.70	-	8.69	-	0.00693	<0.005	0.315	1.17	-	-	-
MW-4	04/10/2003	439.16	13.96	425.20	-	5.6	-	<0.01	0.0013	0.15	0.52	-	-	-
MW-4	09/05/2003	439.16	10.88	428.28	-	6.3	-	<0.02	0.0015	0.17	0.43	-	-	-
MW-4	03/03/2004	439.16	14.09	425.07	-	3.8	-	<0.02	0.001	0.11	0.3	-	-	-
MW-4	09/20/2004	439.16	13.72	425.44	-	6.1	-	<0.02	<0.0025	0.12	0.28	-	-	-
MW-4	04/04/2005	439.16	14.48	424.68	-	4	-	0.0032	0.0007	0.056	0.13	-	-	-
MW-4	09/29/2005	438.98	12.50	426.66	-	3.2	-	<0.01	<0.005	0.029	0.083	-	-	-
MW-4	03/24/2006	438.98	14.30	424.68	-	2.1	-	0.0041	<0.0005	0.023	0.045	-	-	-
MW-4	04/02/2008	438.98	14.47	424.51	-	-	-	-	-	-	-	-	-	-
MW-4	04/05/2008	-	-	-	0.511	2.5	<0.773	0.00581	0.000569	0.0113	0.0219	-	-	-
MW-4	07/21/2009	-	-	-	0.13	0.18	-	0.0005	<0.0005	0.0021	0.0033	-	-	-
MW-4	07/25/2010	438.98	13.20	425.78	0.092 J	0.049 J	-	<0.0005	<0.0005	0.0005 J	0.0021 J	-	-	-
MW-4	06/14/2011	438.98	13.11	425.87	-	-	-	-	-	-	-	-	-	-
MW-4	08/02/2011	438.98	12.04	426.94	0.087 J	0.031 J	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-4	08/20/2012	438.98	12.93	426.05	<0.049	0.049 J	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-4	07/26/2013	438.98	13.03	425.95	-	-	-	-	-	-	-	-	-	-
MW-4	07/27/2013	-	-	-	0.14 J	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-

TABLE 3

HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER TEXACO SERVICE STATION 21-1079
1501 SOUTH CUSHMAN STREET
FAIRBANKS, ALASKA

					HYDROCARBONS			*PRIMARY VOCS*						
Locat	*Date*	*TOC*	*DTW*	*GWE*	*DRO*	*GRO*	*RRO*	*Benzene*	*Toluene*	*Ethylbenzene*	*Total Xylenes*	*EDB*	*1,2-DCA*	*Sulfolane*
	Units	*ft msl*	*fbg*	*ft msl*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
ADEC Groundwater Cleanup Levels[a]					*1.5*	*2.2*	*1.1*	*0.005*	*1.0*	*0.7*	*10.0*			
MW-5	06/22/1994	439.90	13.95	426.99	-	**150**	-	**33**	**45**	**3.8**	**16**	-	-	-
MW-5	09/27/1994	439.90	13.82	427.12	-	**103**	-	**22.8**	**24.1**	**2.9**	**13.9**	-	-	-
MW-5	11/21/1994	439.90	14.44	426.50	-	**150**	-	**29**	**39**	**5**	**30**	-	-	-
MW-5	03/29/1995	439.90	15.10	425.84	-	**160**	-	**12**	**25**	**5**	**50**	-	-	-
MW-5	06/29/1995	439.82	13.45	426.37	-	**19**	-	**17**	**37**	**5.2**	**33**	-	-	-
MW-5	09/19/1995	439.82	12.10	427.72	-	**170**	-	**26**	**48**	**4**	**26**	-	-	-
MW-5	12/13/1995	439.82	13.85	425.97	-	**420**	-	**43**	**60**	**56**	**35**	-	-	-
MW-5	03/08/1996	439.82	14.90	424.92	**2**	**240**	-	**37**	**46**	**3.2**	**15**	-	-	-
MW-5	06/01/1996	439.82	14.07	425.75	-	**124**	-	**15.4**	**25.4**	**2.11**	9.89	-	-	-
MW-5	09/17/1996	439.82	14.11	425.71	-	**176**	-	**22.4**	**36.2**	**2.83**	**14.4**	-	-	-
MW-5	12/11/1996	439.82	14.81	425.01	-	**175**	-	**17.2**	**34.5**	**3.21**	**18.2**	-	-	-
MW-5	03/13/1997	439.82	15.46	424.36	-	**54**	-	**3.12**	**12.9**	**0.986**	8.43	-	-	-
MW-5	06/18/1997	439.82	14.61	425.21	-	**7.15**	-	**0.23**	0.953	0.259	1.21	-	-	-
MW-5	09/19/1997	439.82	14.20	425.62	-	2.15 / **3.05**	-	**0.0261** / <0.0125	0.402 / 0.613	0.108 / 0.158	0.551 / 0.769	-	-	-
MW-5	12/10/1997	439.82	15.00	424.82	-	**7.7** / **6.39**	-	**0.16** / **0.138**	0.427 / 0.418	0.336 / 0.34	1.94 / 1.72	-	-	-
MW-5	03/30/1998	439.82	16.72	423.10	-	1.69	-	**0.00589**	0.389	0.062	0.322	-	-	-
MW-5	06/09/1998	439.82	15.14	424.68	-	1.28	-	<0.005	0.281	0.0452	0.213	-	-	-
MW-5	09/16/1998	439.82	13.53	426.29	-	**2.82** / **2.45**	-	<0.0125 / <0.01	0.13 / 0.132	0.141 / 0.145	0.796 / 0.814	-	-	-
MW-5	12/28/1998	439.82	15.09	424.73	-	**3.33**	-	0.0021	0.06	0.218	0.881	-	-	-
MW-5	03/13/1999	439.82	15.67	424.15	-	**4.49** / **5.37**	-	**0.0267** / **0.03**	0.065 / 0.079	0.391 / 0.45	1.22 / 1.41	-	-	-
MW-5	06/22/1999	439.82	14.72	425.10	-	**5.66**	-	**0.0307**	0.539	0.207	0.991	-	-	-
MW-5	09/28/1999	439.82	14.18	425.64	-	**8.47**	-	<0.025	0.052	0.282	1.46	-	-	-
MW-5	12/15/1999	439.82	14.95	424.87	-	**7.58** / **5.9**	-	**0.0305** / **0.0238**	0.0454 / 0.0318	0.411 / 0.307	1.92 / 1.38	-	-	-
MW-5	03/21/2000	439.82	15.40	424.42	-	**5.38**	-	**0.013**	0.0707	0.179	0.708	-	-	-
MW-5	06/20/2000	439.82	13.13	426.69	-	**5.47** / **4.79**	-	**0.0143** / **0.0142**	0.153 / 0.14	0.184 / 0.171	0.875 / 0.74	-	-	-
MW-5	09/13/2000	439.82	12.16	427.66	-	**9.57**	-	**0.0117**	0.134	0.38	2.19	-	-	-
MW-5	12/13/2000	439.82	13.89	425.93	-	**13**	-	<0.01	0.251	0.576	3.73	-	-	-
MW-5	03/20/2001	439.82	14.74	425.08	-	**15.1**	-	<0.021	0.338	0.637	3.71	-	-	-
MW-5	06/20/2001	439.82	13.98	425.84	-	**11.8**	-	**0.00715**	0.325	0.455	2.9	-	-	-
MW-5	09/18/2001	439.82	13.13	426.69	-	**11.5**	-	**0.013**	0.223	0.485	3.26	-	-	-
MW-5	03/25/2002	439.82	15.30	424.52	-	**9.63**	-	**0.00552**	0.0291	0.448	3.24	-	-	-
MW-5	09/15/2002	439.82	12.13	427.69	-	**15.3**	-	**0.00898**	0.0296	0.577	4.59	-	-	-
MW-5	04/10/2003	439.82	14.49	425.33	-	**23**	-	<0.01	0.021	**0.85**	6.8	-	-	-
MW-5	09/05/2003	439.82	11.64	428.18	-	**18**	-	**0.03**	0.037	0.57	4.6	-	-	-
MW-5	03/03/2004	439.82	14.83	424.99	-	**24**	-	<0.02	0.0058	0.68	5.6	-	-	-
MW-5	09/20/2004	439.82	14.37	425.45	-	**20**	-	<0.02	0.0042	0.5	4.5	-	-	-
MW-5	04/04/2005	439.82	15.13	424.69	-	**11**	-	0.0044	0.0022	0.24	2.4	-	-	-
MW-5	09/29/2005	439.82	13.15	426.67	1.4	**13**	<0.1	<0.01	<0.0025	0.27	2.3	-	-	-
MW-5	03/26/2006	439.82	15.15	424.67	**2.8**	**11**	<0.42	**0.0095**	0.0019	0.21	1.9	-	-	-
MW-5	04/02/2008	439.82	15.58	424.24	0.359	<0.05	<0.765	<0.0005	0.000647	<0.0005	<0.001	-	-	-
MW-5	07/20/2009	-	-	-	**3.9**	**12**	-	**0.0096**	0.0014	0.067	0.48	-	-	-
MW-5	07/25/2010	439.82	14.09	425.73	1.1 J	**5.1**	-	**0.0067**	0.0006 J	0.0090	0.059	-	-	-
MW-5	09/09/2010	439.82	13.91	425.91	-	-	-	-	-	-	-	-	-	<0.010 / <0.010
MW-5	06/14/2011	439.82	13.97	425.85	-	-	-	-	-	-	-	-	-	-
MW-5	06/16/2011	-	-	-	**3.7**	**5.9**	-	**0.0078 J**	<0.0025	0.0089 J	0.058	-	-	-
MW-5	08/20/2012	439.82	13.76	426.06	**4.3** / **4.3**	**8.0** / **7.2**	-	**0.013** / **0.0094 J**	0.0036 J / 0.0028 J	0.0046 J / 0.0038 J	0.020 J / 0.019 J	<0.0000097 / <0.0000097	<0.001 / <0.003	-
MW-5	07/26/2013	439.82	13.83	425.99	-	-	-	-	-	-	-	-	-	-
MW-5	07/27/2013	-	-	-	**2.5** / **2.2**	1.6 / 1.6 J	-	0.00049 J / 0.00051 J	<0.00023 / <0.00023	0.0014 / 0.0013	0.0076 / 0.0071	-	-	-

TABLE 3

HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER TEXACO SERVICE STATION 21-1079
1501 SOUTH CUSHMAN STREET
FAIRBANKS, ALASKA

					HYDROCARBONS			*PRIMARY VOCS*						
Locat	*Date*	*TOC*	*DTW*	*GWE*	*DRO*	*GRO*	*RRO*	*Benzene*	*Toluene*	*Ethylbenzene*	*Total Xylenes*	*EDB*	*1,2-DCA*	*Sulfolane*
	Units	*ft msl*	*fbg*	*ft msl*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
ADEC Groundwater Cleanup Levels [a]					*1.5*	*2.2*	*1.1*	*0.005*	*1.0*	*0.7*	*10.0*			
MW-6	06/20/1994	439.39	13.88	425.51	-	**13**	-	**2.3**	0.65	**0.85**	2.6	-	-	-
MW-6	09/28/1994	439.39	13.44	425.95	-	**9**	-	**2.43**	0.9	0.7	1.8	-	-	-
MW-6	11/21/1994	439.39	14.03	425.36	-	**28**	-	**5.8**	**7.8**	**1.6**	5.2	-	-	-
MW-6	03/29/1995	439.39	14.69	424.70	-	**32**	-	**3.4**	**7**	**1.7**	6.5	-	-	-
MW-6	06/29/1995	439.37	13.06	426.31	-	**4.2**	-	**0.23**	0.008	0.51	0.96	-	-	-
MW-6	09/18/1995	439.37	11.69	427.68	-	**2.4**	-	**0.19**	0.017	0.3	0.39	-	-	-
MW-6	12/13/1995	439.37	13.65	425.72	-	**39**	-	**3.6**	**7.3**	**1.2**	4	-	-	-
MW-6	03/08/1996	439.37	14.67	424.70	-	**58**	-	**3.6**	**17**	**2.1**	7.9	-	-	-
MW-6	05/31/1996	439.37	13.66	425.71	-	**15.3**	-	**0.377**	**1.02**	**0.972**	3.38	-	-	-
MW-6	09/17/1996	439.37	13.74	425.63	-	**15.4**	-	**0.848**	**2.08**	**0.84**	2.5	-	-	-
MW-6	12/12/1996	439.37	14.55	424.82	-	**31.7**	-	**2.08**	**7.24**	**1.16**	3.39	-	-	-
MW-6	03/13/1997	439.37	15.10	424.27	-	**22.4**	-	**0.773**	**4.51**	**1.17**	3.95	-	-	-
MW-6	06/18/1997	439.37	14.23	425.14	-	**8.06**	-	**0.124**	0.05	**0.846**	1.68	-	-	-
MW-6	09/20/1997	439.37	13.85	425.52	-	**2.46**	-	**0.0724**	0.0331	0.387	0.39	-	-	-
MW-6	12/10/1997	439.37	14.63	424.74	-	**5.13**	-	**0.728**	**5.13**	**1.13**	2.64	-	-	-
MW-6	03/31/1998	439.37	15.37	424.00	-	**12.2**	-	**0.174**	0.638	**1.31**	3.47	-	-	-
MW-6	06/08/1998	439.37	14.77	424.60	-	**4.55**	-	**0.0649**	0.21	0.665	1.23	-	-	-
MW-6	09/16/1998	439.37	13.16	426.21	-	0.87	-	**0.0144**	<0.0025	0.173	0.159	-	-	-
MW-6	12/29/1998	439.37	14.70	424.67	-	**16.9**	-	**0.249**	**4.21**	**1.11**	2.71	-	-	-
MW-6	03/14/1999	439.37	15.35	424.02	-	**23**	-	**0.176**	**4.55**	**1.82**	5.84	-	-	-
MW-6	06/22/1999	439.37	14.36	425.01	-	**5.91**	-	**0.0271**	<0.01	**0.769**	1.78	-	-	-
MW-6	09/28/1999	439.37	13.78	425.59	-	0.698	-	**0.0095**	<0.0025	0.117	0.142	-	-	-
MW-6	12/16/1999	439.37	14.59	424.78	-	**4.24 / 4.55**	-	**0.102 / 0.0971**	0.24 / 0.226	0.562 / 0.522	0.964 / 0.903	-	-	-
MW-6	03/21/2000	439.37	15.04	424.33	-	**10.4**	-	**0.0599**	**1.41**	**0.907**	1.91	-	-	-
MW-6	06/20/2000	439.37	12.77	426.60	-	**2.99**	-	**0.0135**	0.00408	0.407	0.585	-	-	-
MW-6	09/13/2000	439.37	11.80	427.57	-	0.439	-	0.0042	<0.0005	0.0457	0.0888	-	-	-
MW-6	12/13/2000	439.37	13.45	425.92	-	0.655	-	**0.00841**	0.00103	0.049	0.0695	-	-	-
MW-6	03/20/2001	439.37	14.42	424.95	-	**24.9**	-	**0.238**	**2.52**	**1.77**	6.26	-	-	-
MW-6	06/20/2001	439.37	13.56	425.81	-	**7.54**	-	**0.0543**	0.0153	**0.967**	2.22	-	-	-
MW-6	09/18/2001	439.37	12.84	426.53	-	0.976	-	**0.0134**	<0.25	0.171	0.233	-	-	-
MW-6	03/25/2002	439.37	14.98	424.39	-	**13.8**	-	**0.42**	0.0788	**1.41**	3.3	-	-	-
MW-6	04/16/2002	439.37	-	-	-	**24.6**	-	**0.198**	**1.41**	**1.68**	6.16	-	-	-
MW-6	09/15/2002	439.37	11.79	427.58	-	0.34	-	0.00415	<0.0005	0.0116	0.0755	-	-	-
MW-6	04/09/2003	439.37	14.25	425.12	-	**23 / 24**	-	**0.25 / 0.27**	0.83 / 0.95	**1.5 / 1.6**	5.5 / 5.8	-	-	-
MW-6	09/05/2003	439.37	11.34	428.03	-	1.8	-	**0.023**	<0.0005	0.15	0.38	-	-	-
MW-6	03/03/2004	439.37	14.55	424.82	-	**25**	-	**0.34**	0.18	**1.4**	6.2	-	-	-
MW-6	09/20/2004	439.37	14.06	425.31	-	**3.8**	-	**0.094**	0.012	0.23	0.7	-	-	-
MW-6	04/04/2005	439.37	14.82	424.55	-	**5.9 / 6.1**	-	**0.078 / 0.078**	0.0006 / 0.0006	0.46 / 0.47	1.5 / 1.6	-	-	-
MW-6	09/29/2005	439.47							Well Inaccessible					
MW-6	03/24/2006	439.47	14.85	424.62	-	**16 / 17**	-	**0.25 / 0.25**	0.0087 / 0.0097	**1.3 / 1.3**	4 / 4.2	-	-	-
MW-6	04/02/2008	439.47	15.01	424.46	1.04 / 1.15	**7.56 / 7.28**	<0.773 / <0.781	**0.0438 / 0.0432**	0.00106 / 0.00108	0.56 / 0.534	1.8 / 1.75	-	-	-
MW-6	07/21/2009	-	-	-	0.16	0.73	-	**0.0063**	<0.0005	0.023	0.18	-	-	-
MW-6	07/26/2010	439.47	13.81	425.66	0.13 J / 0.15 J	0.33 / 0.31	-	0.0028 / 0.0028	<0.0005 / <0.0005	<0.0005 / <0.0005	0.0037 J / 0.0034 J	-	-	-
MW-6	07/26/2013	439.47							No Access					

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1501 SOUTH CUSHMAN STREET
FAIRBANKS, ALASKA

					HYDROCARBONS			*PRIMARY VOCS*						
Locat	*Date*	*TOC*	*DTW*	*GWE*	*DRO*	*GRO*	*RRO*	*Benzene*	*Toluene*	*Ethylbenzene*	*Total Xylenes*	*EDB*	*1,2-DCA*	*Sulfolane*
	Units	*ft msl*	*fbg*	*ft msl*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
ADEC Groundwater Cleanup Levels [a]					*1.5*	*2.2*	*1.1*	*0.005*	*1.0*	*0.7*	*10.0*			
MW-7	06/22/1994	439.72	13.97	425.75	-	**44**	-	**11**	**6.2**	**1.6**	5.5	-	-	-
MW-7	09/28/1994	439.72	13.90	425.82	-	**38**	-	**11.4**	**5.9**	**1.8**	5.8	-	-	-
MW-7	11/22/1994	439.72	14.46	425.26	-	**41**	-	**12**	**8.6**	**1.9**	6.9	-	-	-
MW-7	03/29/1995	439.72	15.12	424.60	-	**39**	-	**8.6**	**6.8**	**1.6**	6.1	-	-	-
MW-7	06/29/1995	439.70	13.45	426.25	-	**18**	-	**5.1**	**2.5**	**0.9**	2.6	-	-	-
MW-7	09/18/1995	439.70	12.08	427.62	-	**2.7**	-	**0.75**	0.005	0.25	0.286	-	-	-
MW-7	12/13/1995	439.70	14.00	425.70	-	**26**	-	**4.8**	0.53	**1**	3.8	-	-	-
MW-7	03/08/1996	439.70	15.10	424.60	-	**25**	-	**5.1**	0.25	**0.96**	2.4	-	-	-
MW-7	06/01/1996	439.70	14.11	425.59	-	**13.2**	-	**3.36**	0.0381	0.649	1.03	-	-	-
MW-7	09/18/1996	439.70	14.19	425.51	-	**15.8**	-	**4.06**	0.0526	**0.807**	1.12	-	-	-
MW-7	12/11/1996	439.70	14.98	424.72	-	**12.3**	-	**3.34**	0.0529	**0.715**	0.884	-	-	-
MW-7	03/13/1997	439.70	15.52	424.18	-	**13.6**	-	**3.37**	0.162	**0.785**	1.17	-	-	-
MW-7	06/18/1997	439.70	14.66	425.04	-	**4.63**	-	**1.43**	<0.0125	0.371	0.257	-	-	-
MW-7	09/20/1997	439.70	14.27	425.43	-	**3.23**	-	**1.25**	<0.01	0.305	0.181	-	-	-
MW-7	12/10/1997	439.70	14.95	424.75	-	**2.31**	-	**0.818**	<0.01	0.253	0.112	-	-	-
MW-7	03/31/1998	439.70	15.79	423.91	-	0.798	-	**0.28**	<0.0025	0.145	0.0127	-	-	-
MW-7	06/09/1998	439.70	15.19	424.51	-	0.473	-	**0.157**	0.00101	0.117	0.00789	-	-	-
MW-7	09/16/1998	439.70	13.57	426.13	-	0.264	-	**0.0553**	0.00217	0.0422	0.0323	-	-	-
MW-7	12/28/1998	439.70	15.15	424.55	-	0.186	-	**0.045**	0.00122	0.0343	0.02006	-	-	-
MW-7	03/13/1999	439.70	15.75	423.95	-	0.203 / 0.181	-	**0.061** / **0.0607**	<0.0005 / <0.0005	0.043 / 0.0426	<0.001 / <0.001	-	-	-
MW-7	06/22/1999	439.70	14.77	424.93	-	0.0859	-	**0.0243**	<0.0005	0.0075	<0.001	-	-	-
MW-7	09/28/1999	439.70	14.19	425.51	-	0.119 / 0.149	-	**0.0186** / **0.0218**	<0.0005 / 0.00082	0.0062 / 0.0073	0.0175 / 0.0217	-	-	-
MW-7	12/16/1999	439.70	14.97	424.73	-	0.0503	-	**0.0162**	<0.0005	0.00117	<0.001	-	-	-
MW-7	03/21/2000	439.70	15.42	424.28	-	0.0516	-	**0.0163**	<0.0005	<0.0005	<0.001	-	-	-
MW-7	06/20/2000	439.70	13.14	426.56	-	0.0516	-	**0.0156**	<0.0005	<0.0005	<0.001	-	-	-
MW-7	09/13/2000	439.70	12.17	427.53	-	<0.8	-	0.00499	<0.0005	<0.0005	<0.001	-	-	-
MW-7	12/13/2000	439.70	13.92	425.78	-	<0.8	-	0.00483	<0.0005	<0.0005	<0.001	-	-	-
MW-7	03/21/2001	439.70	14.79	424.91	-	<0.5 / <0.5	-	0.00309 / **0.0135**	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	-	-	-
MW-7	06/20/2001	439.70	13.96	425.74	-	<0.5 / <0.5	-	**0.00702** / 0.00474	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001	-	-	-
MW-7	09/18/2001	439.70	-	-	-	-	-	-	-	-	-	-	-	-
MW-7	03/25/2002	439.70	15.31	424.39	-	1.16	-	0.00153	<0.0005	<0.0005	<0.001	-	-	-
MW-7	04/10/2003	439.70	14.66	425.04	-	0.015	-	0.0008	<0.0005	<0.0005	<0.0005	-	-	-
MW-7	03/03/2004	439.70	14.89	424.81	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-7	04/04/2005	439.70	14.90	424.50	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-7	03/24/2006	439.70	15.21	424.49	-	0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-7	04/02/2008	439.70	15.33	424.37	0.208	<0.05	<0.773	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-7	07/20/2009	-	-	-	0.072	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-7	07/25/2010	439.70	14.12	425.58	0.056 J	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-7	06/14/2011	439.70	14.05	425.65	-	-	-	-	-	-	-	-	-	-
MW-7	08/02/2011	439.70	12.95	426.75	<0.049	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-7	08/20/2012	439.70	13.85	425.85	<0.050	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-

TABLE 3

HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER TEXACO SERVICE STATION 21-1079
1501 SOUTH CUSHMAN STREET
FAIRBANKS, ALASKA

					HYDROCARBONS			*PRIMARY VOCS*						
Locat	*Date*	*TOC*	*DTW*	*GWE*	*DRO*	*GRO*	*RRO*	*Benzene*	*Toluene*	*Ethylbenzene*	*Total Xylenes*	*EDB*	*1,2-DCA*	*Sulfolane*
	Units	*ft msl*	*fbg*	*ft msl*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
ADEC Groundwater Cleanup Levels [a]					*1.5*	*2.2*	*1.1*	*0.005*	*1.0*	*0.7*	*10.0*			
MW-8	06/27/1995	439.58	13.39	426.19	0.1	1.65	-	**0.711**	0.001	0.03	0.019	-	-	-
MW-8	09/19/1995	439.58	12.03	427.55	-	**4.4**	-	**2.2**	0.015	0.102	0.154	-	-	-
MW-8	12/13/1995	439.58	13.96	425.62	**2.4**	**7.2**	-	**0.24**	ND	0.0028	0.0017	-	-	-
MW-8	03/08/1996	439.58	15.03	424.55	-	**2.6**	-	ND	ND	0.013	0.0035	-	-	-
MW-8	05/31/1996	439.58	14.03	425.55	0.478	1.94	-	**0.726**	ND	0.00442	0.0101	-	-	-
MW-8	09/16/1996	439.58	14.11	425.47	-	1.36	-	**0.593**	ND	0.00107	ND	-	-	-
MW-8	12/11/1996	439.58	14.93	424.65	-	1.31	-	**0.592**	0.000518	0.00309	0.00105	-	-	-
MW-8	03/13/1997	439.58	15.41	424.17	-	0.362	-	**0.126**	ND	0.00167	ND	-	-	-
MW-8	06/18/1997	439.58	14.58	425.00	-	1.71	-	**0.673**	<0.005	<0.005	<0.01	-	-	-
MW-8	09/20/1997	439.58	14.19	425.39	-	0.114	-	**0.0529**	<0.0005	<0.0005	<0.001	-	-	-
MW-8	12/10/1997	439.58	14.95	424.63	-	0.0787	-	**0.0334**	<0.0005	<0.0005	<0.001	-	-	-
MW-8	03/20/1998	439.58	15.72	423.86	-	-	-	-	-	-	-	-	-	-
MW-8	06/09/1998	439.58	15.11	424.47	-	0.427	-	**0.299**	<0.0025	0.00302	0.00814	-	-	-
MW-8	09/16/1998	439.58	13.49	426.09	-	1.87	-	**1.53**	<0.01	0.0367	0.0517	-	-	-
MW-8	12/29/1998	439.58	15.10	424.48	-	0.485	-	**0.257**	<0.0025	<0.0025	<0.005	-	-	-
MW-8	03/14/1999	439.58	15.68	423.90	-	<0.5	-	**0.019**	<0.0005	<0.0005	<0.001	-	-	-
MW-8	06/22/1999	439.58	14.70	424.88	-	1.13	-	**0.534**	<0.01	<0.01	<0.02	-	-	-
MW-8	09/28/1999	439.58	14.12	425.46	-	1.4	-	**0.637**	<0.01	<0.01	<0.02	-	-	-
MW-8	12/16/1999	439.58	14.89	424.69	-	0.0775	-	**0.04**	<0.0005	<0.0005	<0.001	-	-	-
MW-8	03/21/2000	439.58	15.35	424.23	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-8	06/20/2000	439.58	13.06	426.52	-	1.13	-	**0.436**	<0.005	0.00504	<0.01	-	-	-
MW-8	09/14/2000	439.58	12.06	427.52	-	0.242	-	**0.106**	<0.0005	<0.0005	<0.001	-	-	-
MW-8	12/14/2000	439.58	13.84	425.74	-	<0.5	-	<0.0002	<0.0005	<0.0005	<0.001	-	-	-
MW-8	03/21/2001	439.58	14.71	424.87	-	<0.5	-	<0.0002	<0.0005	<0.0005	<0.001	-	-	-
MW-8	06/20/2001	439.58	13.89	425.69	-	0.296	-	**0.141**	<0.0005	<0.0005	<0.001	-	-	-
MW-8	09/18/2001	439.58	-	-	-	-	-	-	-	-	-	-	-	-
MW-8	03/25/2002	439.58	15.30	424.28	-	<0.05	-	<0.0002	<0.0005	<0.0005	<0.001	-	-	-
MW-8	04/10/2003	439.58	14.58	425.00	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-8	03/03/2004	439.58	14.80	424.78	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-8	04/04/2005	439.58	15.11	424.47	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-8	03/24/2006	439.58	15.13	424.45	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-8	04/02/2008	439.58	15.44	424.14					Ice in well casing prevented access					
MW-8	07/20/2009	-	-	-	<0.052	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-8	07/25/2010	439.58	14.09	425.49	<0.049	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
MW-8	06/14/2011	439.58	13.90	425.68	-	-	-	-	-	-	-	-	-	-
MW-8	06/15/2011	-	-	-	<0.052	<0.010	-	0.0014 J	<0.0005	<0.0005	<0.0015	-	-	-
MW-8	08/20/2012	439.58	13.79	425.79	<0.049	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-

TABLE 3

HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER TEXACO SERVICE STATION 21-1079
1501 SOUTH CUSHMAN STREET
FAIRBANKS, ALASKA

					HYDROCARBONS			PRIMARY VOCS						
Locat	Date	TOC	DTW	GWE	DRO	GRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	EDB	1,2-DCA	Sulfolane
	Units	ft msl	fbg	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels[a]					1.5	2.2	1.1	0.005	1.0	0.7	10.0			
MW-9	06/30/1995	438.76	12.51	426.25	-	87	-	3.7	2.1	3.8	16	-	-	-
MW-9	09/19/1995	438.76	11.10	427.66	-	78	-	3.2	37	3.1	14	-	-	-
MW-9	12/13/1995	438.76	13.00	425.76	-	91	-	2.9	18	2.3	11	-	-	-
MW-9	03/08/1996	438.76	14.10	424.66	-	110 / 110	-	3.7 / 3.8	34 / 35	3.6 / 3.7	17 / 17	-	-	-
MW-9	05/30/1996	438.76	13.10	425.66	-	104	-	2.53	22.8	3.52	15.9	-	-	-
MW-9	09/16/1996	438.76	13.19	425.57	-	72.4	-	1.67	16	2.4	10.9	-	-	-
MW-9	12/12/1996	438.76	13.96	424.80	-	111	-	2.29	24.9	4.44	18.3	-	-	-
MW-9	03/13/1997	438.76	14.52	424.24	-	84.7 / 79.3	-	1.62 / 1.58	19.3 / 19.1	2.94 / 2.84	13.8 / 13.5	-	-	-
MW-9	06/18/1997	438.76	13.66	425.10	-	74.4 / 74.6	-	1.12 / 1.13	14.7 / 14.8	3.34 / 3.24	14.3 / 13.9	-	-	-
MW-9	09/20/1997	438.76	13.27	425.49	-	59.2	-	0.84	15.9	2.87	12.6	-	-	-
MW-9	12/10/1997	438.76	14.00	424.76	-	66.8 / 69.8	-	0.76 / 0.804	16.7 / 17	2.99 / 3.57	16 / 16.6	-	-	-
MW-9	03/30/1998	438.76	14.80	423.96	-	57.9	-	0.508	13.9	2.71	12.5	-	-	-
MW-9	06/09/1998	438.76	14.21	424.55	-	52.9	-	0.513	12	2.61	12.1	-	-	-
MW-9	09/17/1998	438.76	12.59	426.17	-	29.7	-	0.332	5.52	1.3	7.06	-	-	-
MW-9	12/29/1998	438.76	14.15	424.61	-	52.9	-	0.238	9.92	2.32	12.83	-	-	-
MW-9	03/13/1999	438.76	14.78	423.98	-	56.4	-	0.272	11.2	3.24	16.7	-	-	-
MW-9	08/09/1999	438.76	-	-	-	56.2	-	0.11	6.64	2.61	11.8	-	-	-
MW-9	09/28/1999	438.76	13.22	425.54	-	36.3	-	<0.2	4.61	1.92	9.24	-	-	-
MW-9	12/15/1999	438.76	13.98	424.78	-	45.8	-	<0.125	6.67	2.53	13.9	-	-	-
MW-9	03/22/2000	438.76	14.43	424.33	-	54.1	-	0.0598	4.77	2.05	10.9	-	-	-
MW-9	06/20/2000	438.76	12.16	426.60	-	44.2	-	0.062	3.54	2.02	10.4	-	-	-
MW-9	09/14/2000	438.76	11.20	427.56	-	41.9	-	0.0346	3.45	1.97	10.6	-	-	-
MW-9	12/14/2000	438.76	12.94	425.82	-	26.2	-	<0.02	1.92	1.3	7.29	-	-	-
MW-9	03/21/2001	438.76	13.81	424.95	-	37.7	-	<0.046	2.52	1.98	11	-	-	-
MW-9	06/20/2001	438.76	12.98	425.78	-	35.6	-	0.0408	2.3	1.83	11.4	-	-	-
MW-9	09/18/2001	438.76	12.24	426.52	-	19.4	-	<0.02	0.567	1.1	6.01	-	-	-
MW-9	03/25/2002	438.76	14.37	424.39	-	42.4	-	0.0189	1.47	2.01	12.5	-	-	-
MW-9	09/15/2002	438.76	11.17	427.59	-	24.5	-	0.0125	0.175	1.28	5.81	-	-	-
MW-9	04/10/2003	438.76	13.64	425.12	-	41	-	<0.05	0.43	1.7	11	-	-	-
MW-9	09/05/2003	438.76	10.71	428.05	-	35	-	<0.05	0.22	1.5	9.3	-	-	-
MW-9	03/03/2004	438.76	13.87	424.89	-	34	-	<0.05	0.13	1.3	7.3	-	-	-
MW-9	09/20/2004	438.76	13.45	425.31	-	27	-	<0.05	0.053	1.1	5.9	-	-	-
MW-9	04/04/2005	438.76	14.18	424.58	-	26	-	<0.01	0.11	1.2	6.6	-	-	-
MW-9	09/29/2005	438.75	12.25	426.51	1.4	20	<0.19	<0.01	0.041	0.86	4.6	-	-	-
MW-9	03/26/2006	438.75	14.21	424.54	2.4	24	<0.39	<0.1	0.075	0.96	5.8	-	-	-
MW-9	04/02/2008	438.75	14.33	424.42	4.06	19.6	<0.773	0.01	0.0232	0.72	3.85	-	-	-
MW-9	07/22/2009	-	-	-	1.9	8.8	-	<0.015	0.0057	0.33	1.4	-	-	-
MW-9	07/25/2010	438.75	13.16	425.59	1.3 J	9.2	-	<0.050	0.0061 J	0.30	1.4	-	-	-
MW-9	09/09/2010	438.75	12.96	425.79	-	-	-	-	-	-	-	-	-	<10.0
MW-9	06/14/2011	438.75	13.04	425.71	-	-	-	-	-	-	-	-	-	-
MW-9	06/15/2011	-	-	-	1.7 / 1.6	4.8 / 4.9	-	<0.030 / <0.030	0.0043 J / 0.0046 J	0.14 / 0.15	0.64 / 0.66	-	-	-
MW-9	08/20/2012	438.75	12.85	425.90	1.5 / 1.5	5.7 / 5.6	-	<0.033 / <0.034	0.0045 J / 0.0040 J	0.14 / 0.14	0.52 / 0.51	-	-	-
MW-9	07/26/2013	438.75	12.91	425.84	-	-	-	-	-	-	-	-	-	-
MW-9	07/27/2013	-	-	-	1.6	4.2	-	0.00058 J	0.0019	0.12	0.49	-	-	-

TABLE 3

HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER TEXACO SERVICE STATION 21-1079
1501 SOUTH CUSHMAN STREET
FAIRBANKS, ALASKA

					HYDROCARBONS			*PRIMARY VOCS*						
Locat	*Date*	*TOC*	*DTW*	*GWE*	*DRO*	*GRO*	*RRO*	*Benzene*	*Toluene*	*Ethylbenzene*	*Total Xylenes*	*EDB*	*1,2-DCA*	*Sulfolane*
	Units	*ft msl*	*fbg*	*ft msl*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
ADEC Groundwater Cleanup Levels [a]					*1.5*	*2.2*	*1.1*	*0.005*	*1.0*	*0.7*	*10.0*			
MW-10	06/30/1995	439.22	12.78	426.44	-	**23**	-	**0.0212**	**2.5**	**1.5**	7	-	-	-
MW-10	09/19/1995	439.22	11.45	427.77	-	**13**	-	**0.021**	0.89	**0.98**	3.8	-	-	-
MW-10	12/12/1995	439.22	13.30	425.92	-	**19**	-	**0.088**	0.13	**1.4**	3.4	-	-	-
MW-10	03/08/1996	439.22	14.38	424.84	-	**13**	-	**0.099**	0.015	**1**	1.8	-	-	-
MW-10	06/01/1996	439.22	13.42	425.80	-	**17.4**	-	**0.108**	0.0493	**1.23**	2.34	-	-	-
MW-10	09/19/1996	439.22	13.48	425.74	-	**20.4**	-	**0.224**	0.292	**1.52**	3.61	-	-	-
MW-10	12/11/1996	439.22	14.25	424.97	-	**14.3**	-	**0.107**	0.0538	**1.15**	1.89	-	-	-
MW-10	03/13/1997	439.22	14.80	424.42	-	**3.38**	-	**0.0237**	ND	0.462	0.491	-	-	-
MW-10	06/10/1997	439.22	-	-	-	-	-	-	-	-	-	-	-	-
MW-10	09/19/1997	439.22	13.54	425.68	-	**21.3**	-	**0.302**	**1.06**	**1.86**	6.63	-	-	-
MW-10	12/10/1997	439.22	14.33	424.89	-	**8.57**	-	**0.0548**	0.025	**0.953**	1.3	-	-	-
MW-10	03/30/1998	439.22	15.06	424.16	-	1.68	-	**0.0109**	ND	0.281	0.255	-	-	-
MW-10	06/09/1998	439.22	14.49	424.73	-	2.2	-	<0.02	<0.0025	0.313	0.23	-	-	-
MW-10	09/17/1998	439.22	12.88	426.34	-	2.2	-	**0.0167**	<0.005	0.373	0.347	-	-	-
MW-10	12/28/1998	439.22	14.42	424.80	-	**2.95**	-	**0.00829**	<0.001	0.503	0.481	-	-	-
MW-10	03/13/1999	439.22	15.03	424.19	-	2	-	**0.0133**	<0.005	0.424	0.443	-	-	-
MW-10	08/09/1999	439.22	-	-	-	**13.2**	-	**0.061**	0.549	**0.991**	3.47	-	-	-
MW-10	09/28/1999	439.22	13.48	425.74	-	**8.17**	-	**0.04**	0.0984	**0.836**	2.5	-	-	-
MW-10	12/15/1999	439.22	14.27	424.95	-	**5.14**	-	**0.0206**	0.00248	**0.947**	0.988	-	-	-
MW-10	03/21/2000	439.22	14.72	424.50	-	**2.43**	-	**0.00778**	<0.005	0.403	0.378	-	-	-
MW-10	06/20/2000	439.22	12.47	426.75	-	0.413	-	0.00195	0.000632	0.0475	0.0337	-	-	-
MW-10	09/14/2000	439.22	11.51	427.71	-	0.838 / 0.666	-	<0.0033 / <0.00275	<0.0025 / <0.0025	0.135 / 0.12	0.0923 / 0.0804	-	-	-
MW-10	12/14/2000	439.22	13.23	425.99	-	**3.26 / 3.03**	-	<0.005 / <0.001	<0.0025 / <0.0025	0.405 / 0.425	0.285 / 0.316	-	-	-
MW-10	03/21/2001	439.22	-	-	-	**7.15**	-	<0.022	<0.0025	**0.821**	1.13	-	-	-
MW-10	06/21/2001	439.22	13.27	425.95	-	**6.04**	-	**0.0101**	0.122	0.637	1.15	-	-	-
MW-10	09/18/2001	439.22	12.53	426.69	-	**6.41**	-	**0.0131**	0.063	0.7	1.07	-	-	-
MW-10	03/25/2002	439.22	14.55	424.67	-	**4.14**	-	**0.00788**	0.0499	0.524	0.681	-	-	-
MW-10	09/15/2002	439.22	12.46	426.76	-	1.75	-	0.00248	0.00216	0.16	0.172	-	-	-
MW-10	04/10/2003	439.22	13.92	425.30	-	**10**	-	<0.02	0.13	0.7	1.6	-	-	-
MW-10	09/05/2003	439.22	10.97	428.25	-	**3.1**	-	<0.005	0.014	0.19	0.37	-	-	-
MW-10	03/03/2004	439.22	14.16	425.06	-	**4.1**	-	<0.01	0.0089	0.3	0.52	-	-	-
MW-10	09/20/2004	439.22	13.71	425.51	-	**13**	-	<0.02	0.12	0.64	2	-	-	-
MW-10	04/04/2005	439.22	14.45	424.77	-	**3.8**	-	<0.005	0.011	0.19	0.45	-	-	-
MW-10	09/29/2005	439.19	12.53	426.69	-	**6.5**	-	<0.005	0.099	0.37	1.3	-	-	-
MW-10	03/24/2006	439.19	14.45	424.74	-	**4.7**	-	<0.025	0.0027	0.22	0.53	-	-	-
MW-10	04/02/2008	439.19	14.66	424.53	-	-	-	-	-	-	-	-	-	-
MW-10	04/05/2008	-	-	-	0.803	**4.14**	<0.735	**0.00583**	<0.0005	0.161	0.308	-	-	-
MW-10	07/21/2009	-	-	-	0.77	**3.1**	-	**0.0052**	<0.0005	0.17	0.42	-	-	-
MW-10	07/25/2010	-	-	-	0.33	**2.9**	-	<0.020	<0.0005	0.12	0.32	-	-	-
MW-10	06/14/2011	439.19	13.30	425.89	-	-	-	-	-	-	-	-	-	-
MW-10	06/16/2011	-	-	-	0.42	1.2	-	0.0034	0.001 J	0.069	0.16	-	-	-
MW-10	08/20/2012	439.19	13.04	426.15	0.56	2.1	-	**0.0062**	0.0013 J	0.12	0.24	-	-	-
MW-10	07/26/2013	439.19	13.17	426.02	-	-	-	-	-	-	-	-	-	-
MW-10	07/27/2013	-	-	-	1.0	1.2	-	<0.00024	0.00037 J	0.083	0.21	-	-	-

TABLE 3

HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER TEXACO SERVICE STATION 21-1079
1501 SOUTH CUSHMAN STREET
FAIRBANKS, ALASKA

					HYDROCARBONS			*PRIMARY VOCS*						
Locat	*Date*	*TOC*	*DTW*	*GWE*	*DRO*	*GRO*	*RRO*	*Benzene*	*Toluene*	*Ethylbenzene*	*Total Xylenes*	*EDB*	*1,2-DCA*	*Sulfolane*
	Units	*ft msl*	*fbg*	*ft msl*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
ADEC Groundwater Cleanup Levels [a]					*1.5*	*2.2*	*1.1*	*0.005*	*1.0*	*0.7*	*10.0*			
MW-11	06/30/1995	440.42	13.96	426.46	**14.9**	**34**	-	**0.01**	0.102	**8**	**28**	-	-	-
MW-11	09/18/1995	440.42	12.60	427.82	-	-	-	-	-	-	-	-	-	-
MW-11	12/12/1995	440.42	-	-	-	-	-	-	-	-	-	-	-	-
MW-11	03/08/1996	440.42	15.55	424.87	ND	**35**	-	**0.23**	0.012	**1.4**	2.6	-	-	-
MW-11	05/30/1996	440.42	14.55	425.87	**3.4**	**17.6**	-	**0.111**	ND	**0.883**	2.07	-	-	-
MW-11	09/17/1996	440.42	14.64	425.78	-	**37.9**	-	**0.224**	0.0104	**1.13**	2.45	-	-	-
MW-11	12/11/1996	440.42	15.42	425.00	-	**28.8**	-	**0.222**	ND	**0.892**	1.88	-	-	-
MW-11	03/13/1997	440.42	16.05	424.37	-	**29.5**	-	**0.165**	ND	**0.923**	2.31	-	-	-
MW-11	06/18/1997	440.42	15.16	425.26	-	-	-	-	-	-	-	-	-	-
MW-11	09/19/1997	440.42	14.72	425.70	-	**23.4**	-	<0.1	<0.1	**0.742**	2.06	-	-	-
MW-11	12/10/1997	440.42	15.60	424.82	-	**19.6**	-	**0.0342**	0.0132	0.667	1.49	-	-	-
MW-11	03/30/1998	440.42	16.34	424.08	-	**14.5**	-	**0.0234**	ND	0.301	0.795	-	-	-
MW-11	06/09/1998	440.42	15.74	424.68	-	**14.4**	-	<0.025	<0.01	0.352	0.741	-	-	-
MW-11	09/15/1998	440.42	14.12	426.30	-	**12.7**	-	<0.034	<0.01	0.319	0.603	-	-	-
MW-11	12/28/1998	440.42	15.75	424.67	-	**9.97**	-	<0.001	<0.001	0.202	0.35715	-	-	-
MW-11	03/13/1999	440.42	16.34	424.08	-	**9.11**	-	**0.0539**	0.022	0.29	0.523	-	-	-
MW-11	06/22/1999	440.42	15.37	425.05	-	**5.6 / 5.14**	-	<0.03 / <0.0255	<0.0071 / <0.0075	0.173 / 0.197	0.342 / 0.303	-	-	-
MW-11	09/28/1999	440.42	14.75	425.67	-	**3.15**	-	<0.01	<0.005	0.082	0.143	-	-	-
MW-11	12/15/1999	440.42	15.63	424.79	-	**8.09**	-	<0.02	<0.0075	0.162	0.276	-	-	-
MW-11	03/21/2000	440.42	16.09	424.33	-	**9.01**	-	<0.005	<0.0085	0.128	0.252	-	-	-
MW-11	06/21/2000	440.42	13.84	426.58	-	**8.7**	-	**0.0192**	<0.0025	0.126	0.253	-	-	-
MW-11	09/14/2000	440.42	13.08	427.34	-	**5.44**	-	<0.00297	<0.00298	0.094	0.175	-	-	-
MW-11	12/14/2000	440.42	14.63	425.79	-	**10.6**	-	<0.004	<0.01	0.0911	0.184	-	-	-
MW-11	03/21/2001	440.42	15.49	424.93	-	**12.2**	-	<0.002	0.013	0.157	0.328	-	-	-
MW-11	06/20/2001	440.42	-	-	-	-	-	-	-	-	-	-	-	-
MW-11	09/18/2001	440.42	-	-	-	-	-	-	-	-	-	-	-	-
MW-11	03/25/2002	440.42	15.85	424.57	-	**7.83**	-	**0.0182**	0.00154	0.0921	0.176	-	-	-
MW-11	04/09/2003	440.42	15.17	425.25	-	**8.5**	-	<0.02	<0.005	0.052	0.1	-	-	-
MW-11	03/02/2004	440.42	15.50	424.92	-	**4.9**	-	<0.05	<0.0025	0.04	0.076	-	-	-
MW-11	04/04/2005	440.42	15.82	424.60	-	**7.5**	-	**0.0077**	<0.0025	0.046	0.085	-	-	-
MW-11	03/24/2006	440.38	15.63	424.75	-	**4.6**	-	<0.025	<0.01	0.02	0.04	-	-	-
MW-11	04/02/2008	440.38	15.85	424.53	0.438	**3.55**	<0.714	**0.00737**	<0.0005	0.00901	0.016	-	-	-
MW-11	07/21/2009	-	-	-	0.2	2.1	-	**0.0056**	<0.0005	0.0038	0.0074	-	-	-
MW-11	07/26/2010	440.38	14.67	425.71	0.16 J	**3.1**	-	**0.0077**	0.0005 J	0.0044	0.0084	-	-	-
MW-11	06/14/2011	440.38	14.66	425.72	-	-	-	-	-	-	-	-	-	-
MW-11	06/16/2011	-	-	-	0.17 J	1.8	-	<0.010	0.0019 J	0.0022	0.0041 J	-	-	-
MW-11	08/20/2012	440.38	14.46	425.92	0.11 J	1.8	-	**0.0086**	0.0027	0.0017 J	0.0026 J	-	-	-
MW-11	07/26/2013	440.38	14.40	425.98	-	-	-	-	-	-	-	-	-	-
MW-11	07/27/2013	-	-	-	0.27 J	1.2 J	-	<0.00024	<0.00023	0.0010	0.0019 J	-	-	-

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HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER TEXACO SERVICE STATION 21-1079
1501 SOUTH CUSHMAN STREET
FAIRBANKS, ALASKA

					HYDROCARBONS			*PRIMARY VOCS*						
Locat	*Date*	*TOC*	*DTW*	*GWE*	*DRO*	*GRO*	*RRO*	*Benzene*	*Toluene*	*Ethylbenzene*	*Total Xylenes*	*EDB*	*1,2-DCA*	*Sulfolane*
	Units	*ft msl*	*fbg*	*ft msl*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
ADEC Groundwater Cleanup Levels[a]					*1.5*	*2.2*	*1.1*	*0.005*	*1.0*	*0.7*	*10.0*			
MW-12	06/30/1995	439.59	13.29	426.30	-	0.067	-	ND	0.002	0.002	0.008	-	-	-
MW-12	09/20/1995	439.59	11.95	427.64	-	ND	-	ND	ND	ND	ND	-	-	-
MW-12	12/13/1995	439.59	13.83	425.76	-	ND	-	ND	ND	ND	ND	-	-	-
MW-12	03/07/1996	439.59	14.90	424.69	-	ND	-	ND	ND	ND	ND	-	-	-
MW-12	05/31/1996	439.59	13.90	425.69	-	ND	-	ND	ND	ND	ND	-	-	-
MW-12	09/16/1996	439.59	13.96	425.63	-	ND	-	ND	ND	ND	ND	-	-	-
MW-12	12/11/1996	439.59	14.75	424.84	-	ND	-	ND	ND	ND	ND	-	-	-
MW-12	03/13/1997	439.59	15.31	424.28	-	ND	-	ND	ND	ND	ND	-	-	-
MW-12	06/18/1997	439.59	14.43	425.16	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-12	09/20/1997	439.59	14.05	425.54	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-12	12/10/1997	439.59	-	-	-	-	-	-	-	-	-	-	-	-
MW-12	03/31/1998	439.59	15.58	424.01	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-12	09/16/1998	439.59	13.37	426.22	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-12	03/14/1999	439.59	15.54	424.05	-	<0.5	-	<0.0005	<0.0005	<0.0005	0.00059	-	-	-
MW-12	09/28/1999	439.59	13.98	425.61	-	<0.5	-	<0.0005	<0.0005	<0.0005	0.00121	-	-	-
MW-12	12/15/1999	439.59	-	-	-	-	-	-	-	-	-	-	-	-
MW-12	03/21/2000	439.59	15.22	424.37	<0.0005	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-12	06/20/2000	439.59	-	-	-	-	-	-	-	-	-	-	-	-
MW-12	09/13/2000	439.59	12.00	427.59	<0.0005	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-12	12/14/2000	439.59	-	-	-	-	-	-	-	-	-	-	-	-
MW-12	03/21/2001	439.59	14.59	425.00	<0.0002	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-12	06/20/2001	439.59	-	-	-	-	-	-	-	-	-	-	-	-
MW-12	08/19/2004							Well Decommissioned on 8/19/2004				-	-	-
MW-13	06/30/1995	439.17	12.92	426.25	-	**6.7**	-	**1.7**	0.79	0.46	6.9	-	-	-
MW-13	09/18/1995	439.17	11.55	427.62	-	**3.2**	-	**0.8**	0.003	0.32	0.22	-	-	-
MW-13	12/13/1995	439.17	13.45	425.72	-	**7 / 7.1**	-	**1.4 / 1.4**	0.00098 / ND	0.39 / 0.37	0.26 / 0.28	-	-	-
MW-13	03/07/1996	439.17	14.50	424.67	-	**3.7**	-	**1.2**	0.0009	0.19	0.075	-	-	-
MW-13	05/31/1996	439.17	13.56	425.61	-	**10.5**	-	**2.09**	0.781	0.578	0.829	-	-	-
MW-13	09/16/1996	439.17	13.62	425.55	-	**17 / 18.6**	-	**1.9 / 2.06**	**1.44 / 1.42**	**1.05 / 1.11**	2.9 / 2.7	-	-	-
MW-13	12/11/1996	439.17	14.40	424.77	-	**2.69 / 2.83**	-	**0.356 / 0.374**	ND / ND	0.33 / 0.351	0.217 / 0.216	-	-	-
MW-13	03/13/1997	439.17	14.96	424.21	-	1.36 / 1.96	-	**0.371 / 0.308**	ND / ND	0.178 / 0.23	ND / ND	-	-	-
MW-13	06/18/1997	439.17	14.10	425.07	-	**5.44**	-	**1.43**	0.0177	0.578	0.231	-	-	-
MW-13	09/19/1997	439.17	13.70	425.47	-	**4.83 / 4.8**	-	**0.751 / 0.691**	<0.005 / <0.0125	**0.801 / 0.717**	0.524 / 0.463	-	-	-
MW-13	12/10/1997	439.17	14.47	424.70	-	2.05	-	**0.231**	0.0035	0.417	0.206	-	-	-
MW-13	03/30/1998	439.17	15.24	423.93	-	**2.23**	-	**0.284**	0.18	0.31	0.174	-	-	-
MW-13	06/08/1998	439.17	14.66	424.51	-	**4.89 / 5.02**	-	**0.576 / 0.619**	0.107 / 0.0919	0.697 / 0.653	0.597 / 0.624	-	-	-
MW-13	09/15/1998	439.17	13.02	426.15	-	1.73	-	**0.0991**	0.000636	0.281	0.118	-	-	-
MW-13	12/29/1998	439.17	14.61	424.56	-	0.134	-	**0.00988**	<0.001	0.0148	0.0259	-	-	-
MW-13	03/14/1999	439.17	15.20	423.97	-	<0.5	-	**0.00785**	<0.0005	<0.0005	0.00234	-	-	-
MW-13	06/22/1999	439.17	-	-	-	-	-	-	-	-	-	-	-	-
MW-13	09/28/1999	439.17	13.64	425.53	-	1.58	-	**0.0855**	<0.0025	0.306	0.224	-	-	-
MW-13	12/16/1999	439.17	14.42	424.75	-	<0.05	-	**0.00739**	<0.0005	0.00138	0.0041	-	-	-
MW-13	03/22/2000	439.17	14.89	424.28	-	<0.5	-	0.0049	<0.0005	<0.0005	<0.001	-	-	-
MW-13	06/20/2000	439.17	12.63	426.54	-	0.335	-	**0.0542**	<0.0005	0.0233	0.0178	-	-	-
MW-13	09/14/2000	439.17	11.36	427.81	-	0.186	-	**0.0128**	<0.0005	0.0148	0.0243	-	-	-
MW-13	12/13/2000	439.17	13.40	425.77	-	0.074	-	**0.0116**	<0.0005	0.00235	0.00702	-	-	-
MW-13	03/21/2001	439.17	14.27	424.90	-	<0.5	-	0.00491	<0.0005	<0.0005	<0.001	-	-	-
MW-13	06/20/2001	439.17	13.44	425.73	-	0.41	-	**0.0406**	0.00417	0.051	0.0531	-	-	-
MW-13	09/18/2001	439.17	12.71	426.46	-	0.212	-	**0.0361**	<0.0005	0.0257	0.0235	-	-	-
MW-13	03/25/2002	439.17	14.84	424.33	-	<0.05	-	**0.0181**	<0.0005	<0.0005	<0.001	-	-	-
MW-13	09/15/2002	439.17	11.64	427.53	-	0.0799	-	**0.02**	<0.0005	0.00282	0.00135	-	-	-
MW-13	04/10/2003	439.17	14.18	424.99	-	0.026	-	**0.009**	<0.0005	<0.0005	<0.0015	-	-	-
MW-13	09/05/2003	439.17	11.18	427.99	-	0.18	-	**0.05**	<0.0005	<0.0005	0.007	-	-	-
MW-13	03/03/2004	439.17	14.40	424.77	-	<0.01	-	0.0006	<0.0005	<0.0005	<0.0015	-	-	-
MW-13	09/20/2004	439.17	13.95	425.22	-	0.39	-	**0.12**	<0.0005	0.001	0.0082	-	-	-
MW-13	04/04/2005	439.17	14.71	424.46	-	0.032	-	**0.011**	<0.0005	<0.0005	<0.0015	-	-	-
MW-13	09/29/2005	439.26	12.82	426.35	-	0.052	-	**0.013**	<0.0005	<0.0005	<0.0015	-	-	-
MW-13	03/23/2006	439.26	14.73	424.53	-	0.012	-	0.0023	<0.0005	<0.0005	<0.0015	-	-	-
MW-13	04/02/2008	439.26					Ice in well prevented access					-	-	
MW-13	07/25/2010	439.26	13.74	425.52	0.056 J	<0.010	-	0.0006 J	<0.0005	<0.0005	<0.0015	-	-	-
MW-13	06/14/2011	439.26	13.58	425.68	-	-	-	-	-	-	-	-	-	-
MW-13	06/15/2011	-	-	-	0.075 J	<0.010	-	0.0030	<0.0005	<0.0005	<0.0015	-	-	-
MW-13	08/20/2012	439.26	13.45	425.81	<0.052	0.16	-	**0.016**	<0.0005	0.0006 J	0.038	-	-	-

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FORMER TEXACO SERVICE STATION 21-1079
1501 SOUTH CUSHMAN STREET
FAIRBANKS, ALASKA

					HYDROCARBONS			*PRIMARY VOCS*						
Locat	*Date*	*TOC*	*DTW*	*GWE*	*DRO*	*GRO*	*RRO*	*Benzene*	*Toluene*	*Ethylbenzene*	*Total Xylenes*	*EDB*	*1,2-DCA*	*Sulfolane*
	Units	*ft msl*	*fbg*	*ft msl*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
ADEC Groundwater Cleanup Levels [a]					***1.5***	***2.2***	***1.1***	***0.005***	***1.0***	***0.7***	***10.0***			
MW-14	06/30/1995	439.26	13.10	426.16	0.0005	0.057	-	0.0007	0.004	0.002	0.008			-
MW-14	09/20/1995	439.26	11.70	427.56	-	ND	-	0.0006	ND	ND	ND			-
MW-14	12/13/1995	439.26	13.65	425.61	-	ND	-	ND	ND	ND	ND			-
MW-14	03/07/1996	439.26	14.70	424.56	-	ND	-	ND	ND	ND	ND			-
MW-14	05/31/1996	439.26	13.71	425.55	-	ND	-	ND	ND	ND	ND			-
MW-14	09/16/1996	439.26	13.81	425.45	-	ND	-	ND	0.000626	ND	0.00256			-
MW-14	12/11/1996	439.26	14.59	424.67	-	ND	-	ND	ND	ND	ND			-
MW-14	03/13/1997	439.26	15.13	424.13	-	ND	-	ND	ND	ND	ND			-
MW-14	06/18/1997	439.26	14.28	424.98	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001			-
MW-14	09/20/1997	439.26	13.91	425.35	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001			-
MW-14	12/10/1997	439.26	-	-	-	-	-	-	-	-	-			-
MW-14	03/30/1998	439.26	15.41	423.85	-	<0.5 / <0.5	-	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001			-
MW-14	06/08/1998	439.26	-	-	-	-	-	-	-	-	-			-
MW-14	09/17/1998	439.26	13.20	426.06	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001			-
MW-14	12/29/1998	439.26	-	-	-	-	-	-	-	-	-			-
MW-14	03/14/1999	439.26	15.37	423.89	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001			-
MW-14	06/22/1999	439.26	-	-	-	-	-	-	-	-	-			-
MW-14	09/28/1999	439.26	13.81	425.45	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001			-
MW-14	12/15/1999	439.26	-	-	-	-	-	-	-	-	-			-
MW-14	03/21/2000	439.26	15.04	424.22	<0.0005	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001			-
MW-14	06/20/2000	439.26	-	-	-	-	-	-	-	-	-			-
MW-14	09/14/2000	439.26	11.80	427.46	<0.0005	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001			-
MW-14	12/14/2000	439.26	-	-	-	-	-	-	-	-	-			-
MW-14	03/21/2001	439.26	14.42	424.84	<0.0002 / <0.0002	<0.5 / <0.5	-	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.001 / <0.001			-
MW-14	06/20/2001	439.26	-	-	-	-	-	-	-	-	-			-
MW-14	08/19/2004							Well decommissioned on 8/19/2004						
MW-15	09/21/1995	437.55	9.80	427.75	-	ND	-	ND	ND	ND	ND	-	-	-
MW-15	12/12/1995	437.55	11.70	425.85	-	ND	-	ND	ND	ND	ND	-	-	-
MW-15	03/07/1996	437.55	12.78	424.77	-	ND	-	ND	ND	ND	ND	-	-	-
MW-15	05/31/1996	437.55	11.80	425.75	-	ND	-	ND	ND	ND	ND	-	-	-
MW-15	09/16/1996	437.55	11.88	425.67	-	ND	-	ND	ND	ND	ND	-	-	-
MW-15	12/11/1996	437.55	12.66	424.89	-	ND	-	ND	ND	ND	ND	-	-	-
MW-15	03/13/1997	437.55	13.20	424.35	-	ND	-	ND	ND	ND	ND	-	-	-
MW-15	06/18/1997	437.55	12.36	425.19	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-15	09/19/1997	437.55	11.65	425.90	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-15	12/10/1997	437.55	12.74	424.81	-	-	-	-	-	-	-	-	-	-
MW-15	03/30/1998	437.55	13.46	424.09	-	-	-	-	-	-	-	-	-	-
MW-15	06/09/1998	437.55	12.90	424.65	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-15	09/17/1998	437.55	11.28	426.27	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-15	12/29/1998	437.55	-	-	-	-	-	-	-	-	-	-	-	-
MW-15	03/13/1999	437.55	13.46	424.09	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-15	06/22/1999	437.55	-	-	-	-	-	-	-	-	-	-	-	-
MW-15	09/28/1999	437.55	11.90	425.65	-	<0.5	-	<0.0005	<0.0005	0.000511	0.00292	-	-	-
MW-15	12/15/1999	437.55	-	-	-	-	-	-	-	-	-	-	-	-
MW-15	03/21/2000	437.55	13.13	424.42	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-15	06/20/2000	437.55	-	-	-	-	-	-	-	-	-	-	-	-
MW-15	09/14/2000	437.55	9.91	427.64	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-15	12/14/2000	437.55	-	-	-	-	-	-	-	-	-	-	-	-
MW-15	03/21/2001	437.55	-	-	-	-	-	-	-	-	-	-	-	-
MW-15	06/20/2001	437.55	-	-	-	-	-	-	-	-	-	-	-	-
MW-15	08/19/2004							Well decommissioned on 8/19/2004						

TABLE 3

HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER TEXACO SERVICE STATION 21-1079
1501 SOUTH CUSHMAN STREET
FAIRBANKS, ALASKA

					HYDROCARBONS			PRIMARY VOCS						
Locat	Date	TOC	DTW	GWE	DRO	GRO	RRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	EDB	1,2-DCA	Sulfolane
	Units	ft msl	fbg	ft msl	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Groundwater Cleanup Levels[a]					1.5	2.2	1.1	0.005	1.0	0.7	10.0			
MW-16	09/21/1995	437.96	10.33	427.63	-	ND	-	ND	ND	ND	ND	-	-	-
MW-16	12/12/1995	437.96	12.25	425.71	-	ND	-	ND	ND	ND	ND	-	-	-
MW-16	05/30/1996	437.96	12.30	425.66	-	ND	-	ND	ND	ND	ND	-	-	-
MW-16	09/16/1996	437.96	12.44	425.52	-	ND	-	ND	ND	ND	ND	-	-	-
MW-16	12/12/1996	437.96	13.17	424.79	-	ND	-	ND	ND	ND	ND	-	-	-
MW-16	03/13/1997	437.96	13.72	424.24	-	ND	-	ND	ND	ND	ND	-	-	-
MW-16	06/18/1997	437.96	12.89	425.07	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-16	09/19/1997	437.96	12.53	425.43	-	<0.5	-	<0.0005	<0.0005	<0.0005	0.00188	-	-	-
MW-16	12/10/1997	437.96	-	-	-	-	-	-	-	-	-	-	-	-
MW-16	03/31/1998	437.96	14.05	423.91	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-16	06/09/1998	437.96	-	-	-	-	-	-	-	-	-	-	-	-
MW-16	09/17/1998	437.96	11.83	426.13	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-16	12/29/1998	437.96	-	-	-	-	-	-	-	-	-	-	-	-
MW-16	03/13/1999	437.96	14.16	423.80	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-16	06/22/1999	437.96	-	-	-	-	-	-	-	-	-	-	-	-
MW-16	09/28/1999	437.96	12.46	425.50	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-16	12/15/1999	437.96	-	-	-	-	-	-	-	-	-	-	-	-
MW-16	03/21/2000	437.96	13.38	424.58	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-16	06/20/2000	437.96	-	-	-	-	-	-	-	-	-	-	-	-
MW-16	09/14/2000	437.96	10.42	427.54	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
MW-16	12/14/2000	437.96	-	-	-	-	-	-	-	-	-	-	-	-
MW-16	03/21/2001	437.96	13.20	424.76	-	<0.5	-	<0.0002	<0.0005	<0.0005	<0.001	-	-	-
MW-16	08/19/2004							Well decommissioned on 8/19/2004						
SWMW-1	06/26/1995	440.34	14.72	425.62	-	0.225	-	**0.114**	ND	ND	ND	-	-	-
SWMW-1	09/19/1995	440.34	12.79	427.55	-	0.36	-	**0.15**	ND	ND	ND	-	-	-
SWMW-1	12/13/1995	440.34	14.68	425.66	-	ND	-	ND	ND	ND	ND	-	-	-
SWMW-1	03/07/1996	440.34	15.71	424.63	-	ND	-	ND	ND	ND	ND	-	-	-
SWMW-1	06/01/1996	440.34	14.79	425.55	-	ND / ND	-	ND / ND	ND / ND	ND / ND	ND / ND	-	-	-
SWMW-1	09/16/1996	440.34	14.84	425.50	-	ND	-	ND	ND	ND	ND	-	-	-
SWMW-1	12/12/1996	440.34	15.59	424.75	-	ND	-	ND	ND	ND	ND	-	-	-
SWMW-1	03/13/1997	440.34	-	-	-	-	-	-	-	-	-	-	-	-
SWMW-1	06/18/1997	440.34	15.31	425.03	-	<0.5	-	0.000534	<0.0005	<0.0005	<0.001	-	-	-
SWMW-1	09/20/1997	440.34	14.80	425.54	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
SWMW-1	12/10/1997	440.34	15.71	424.63	-	-	-	-	-	-	-	-	-	-
SWMW-1	03/30/1998	440.34	16.46	423.88	-	<0.5	-	<0.0005	0.0038	<0.0005	<0.001	-	-	-
SWMW-1	06/09/1998	440.34	-	-	-	-	-	-	-	-	-	-	-	-
SWMW-1	09/16/1998	440.34	14.24	426.10	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
SWMW-1	12/29/1998	440.34	-	-	-	-	-	-	-	-	-	-	-	-
SWMW-1	03/14/1999	440.34	16.44	423.90	-	<0.5	-	<0.0005	<0.0005	0.00101	0.00346	-	-	-
SWMW-1	06/22/1999	440.34	-	-	-	-	-	-	-	-	-	-	-	-
SWMW-1	09/28/1999	440.34	14.86	425.48	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
SWMW-1	12/15/1999	440.34	-	-	-	-	-	-	-	-	-	-	-	-
SWMW-1	03/21/2000	440.34	16.11	424.23	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
SWMW-1	06/20/2000	440.34	-	-	-	-	-	-	-	-	-	-	-	-
SWMW-1	09/14/2000	440.34	12.85	427.49	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
SWMW-1	12/14/2000	440.34	-	-	-	-	-	-	-	-	-	-	-	-
SWMW-1	03/21/2001	440.34	15.48	424.86	-	<0.5	-	<0.0002	<0.0005	<0.0005	<0.001	-	-	-
SWMW-1	06/20/2001							Well destroyed						

TABLE 3

HISTORICAL GROUNDWATER ANALYTICAL RESULTS
FORMER TEXACO SERVICE STATION 21-1079
1501 SOUTH CUSHMAN STREET
FAIRBANKS, ALASKA

					HYDROCARBONS			*PRIMARY VOCS*						
Locat	*Date*	*TOC*	*DTW*	*GWE*	*DRO*	*GRO*	*RRO*	*Benzene*	*Toluene*	*Ethylbenzene*	*Total Xylenes*	*EDB*	*1,2-DCA*	*Sulfolane*
	Units	*ft msl*	*fbg*	*ft msl*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
ADEC Groundwater Cleanup Levels [a]					***1.5***	***2.2***	***1.1***	***0.005***	***1.0***	***0.7***	***10.0***			
Trip Blank	09/16/1996	-	-	-	-	ND	-	ND	ND	ND	ND	-	-	-
Trip Blank	12/11/1996	-	-	-	-	ND	-	ND	ND	ND	ND	-	-	-
Trip Blank	03/13/1997	-	-	-	-	ND	-	ND	ND	ND	ND	-	-	-
Trip Blank	06/18/1997	-	-	-	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
Trip Blank	09/18/1997	-	-	-	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
Trip Blank	12/10/1997	-	-	-	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
Trip Blank	03/31/1998	-	-	-	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
Trip Blank	09/28/1999	-	-	-	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
Trip Blank	12/15/1999	-	-	-	-	<0.5	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
Trip Blank	03/25/2002	-	-	-	-	<0.05	-	<0.0002	<0.0005	<0.0005	<0.001	-	-	-
Trip Blank	04/10/2003	-	-	-	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
Trip Blank	05/09/2003	-	-	-	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
Trip Blank	03/03/2004	-	-	-	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
Trip Blank	09/20/2004	-	-	-	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
Trip Blank	04/04/2005	-	-	-	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
Trip Blank	09/29/2005	-	-	-	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
Trip Blank	03/24/2006	-	-	-	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
Trip Blank	04/02/2008	-	-	-	-	<0.05	-	<0.0005	<0.0005	<0.0005	<0.001	-	-	-
Trip Blank	07/20/2009	-	-	-	-	<0.01	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
Trip Blank	07/21/2009	-	-	-	-	<0.01 / <0.01	-	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0005 / <0.0005	<0.0015 / <0.0015	-	-	-
Trip Blank	07/26/2010	-	-	-	-	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
Trip Blank	06/15/2011	-	-	-	-	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
Trip Blank	08/02/2011	-	-	-	-	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	-	-	-
Trip Blank	08/20/2012	-	-	-	-	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015	<0.0000097	<0.0005	-
Trip Blank	07/27/2013	-	-	-	-	<0.050	-	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-

Notes and Abbreviations

TOC = Top of Casing
DTW = Depth to Water
GWE = Groundwater Elevation
DRO = Diesel Range Organics by Alaska Series Method AK102
GRO = Gasoline Range Organics by Alaska Series Method AK101
Benzene, Toluene, Ethylbenzene, and Total Xylenes by Environmental Protection Agency (EPA) Method 8021B or 8260B
Total Xylenes = Sum of m-, o-, and p-xylenes
ADEC = Alaska Department of Environmental Conservation
[a] = Levels established in ADEC Table C Groundwater Cleanup Levels (18 AAC 75.345), there is no established criteria for Sulfolane
BOLD = Indicates concentration above the ADEC Table C Groundwater Cleanup Level
NA = Not Applicable
ft msl = Feet Above Mean Sea Level
fbg = Feet Below Grade
mg/L = Milligrams per Liter
ND = Not detected above laboratory method detection limits
J = Estimated Value
- = Not Measured/Not Analyzed
* = Sample date defaulted to first date listed in historical data table
<x = Constituent not detected above x milligrams per liter
x / y = Sample Results / Blind Duplicate Results
** = Sample date accurate to month and year only
Groundwater data from 1992 through 2007 provided by Gettler-Ryan, Inc.

TABLE 4

HISTORICAL MONITORED NATURAL ATTENUATION PARAMETERS
FORMER TEXACO SERVICE STATION 211079
1501 SOUTH CUSHMAN STREET
FAIRBANKS, ALASKA

		MNA PARAMETERS							
Location	Date Units	Total Alkalinity mg/L	Alkalinity, phenolphthalein mg/L	Sulfate mg/L	Nitrate as Nitrogen mg/L	Methane mg/L	Nitrite (as N) mg/L	Ferrous Iron by Field Measurement mg/L	Ferrous Iron mg/L
ADEC Groundwater Cleanup Levels[a]									
MW-1	07/20/2009	184	-	30	<0.25	0.068	-	-	-
MW-1	08/20/2012	232 J	<0.70	14.3	0.44 J	0.024	-	-	-
MW-1	07/27/2013	215	-	21.1	-	0.036	<0.050 J	0.66	<0.015 J
MW-2	07/21/2009	319	-	22.7	<0.25	0.037	-	-	-
MW-2	08/20/2012	400 J	<0.70	56.8	0.46 J	0.026	-	-	-
MW-2	07/27/2013	251	-	23.6	-	0.055	<0.050 J	3.30	<0.015 J
MW-3R	07/21/2009	208	-	34.3	1	0.031	-	-	-
MW-3R	08/20/2012	196 J	<0.70	39.3	0.42 J	0.050	-	-	-
MW-4	07/21/2009	223	-	9.4	0.33	0.014	-	-	-
MW-4	08/20/2012	231 J	<0.70	35.9	4.4	0.011 J	-	-	-
MW-4	07/27/2013	202	-	18.8	-	0.0085	<0.050 J	0.00	<0.015 J
MW-5	07/20/2009	269	-	8.6	<0.25	0.031	-	-	-
MW-5	08/20/2012	277 J / 279 J	<0.70 / <0.70	8.9 / 8.2	<0.25 / <0.25	0.022 / 0.018	-	-	-
MW-5	07/27/2013	227 / 235	-	13.7 / 13.4	-	0.047 / 0.045	<0.050 J / <0.050 J	2.40 / -	<0.015 J / <0.015 J
MW-6	07/21/2009	256	-	17.7	<0.25	0.044	-	-	-
MW-7	07/20/2009	392	-	70	<0.25	0.027	-	-	-
MW-7	08/20/2012	329 J	<0.70	51.3	<0.25 UJ	0.041	-	-	-
MW-8	07/20/2009	450	-	86.7	<0.25	0.15	-	-	-
MW-8	08/20/2012	379 J	<0.70	46.3	<0.25 UJ	0.16	-	-	-
MW-9	07/22/2009	269	-	6.4	<0.25	0.063	-	-	-
MW-9	08/20/2012	281 J / 281 J	<0.70 / <0.70	5.0 / 5.5	<0.25 / 0.38 J	0.033 / 0.033	-	-	-
MW-9	07/27/2013	240	-	7.5	-	0.076	<0.050 J	0.57	<0.015 J
MW-10	07/21/2009	255	-	16.5	0.54	0.083	-	-	-
MW-10	08/20/2012	274 J	<0.70	47.6	2.1	0.062	-	-	-
MW-10	07/27/2013	246	-	33.2	-	0.11	<0.050 J	0.58	<0.015 J
MW-11	07/21/2009	229	-	13.3	<0.25	0.05	-	-	-
MW-11	08/20/2012	230 J	<0.70	12.6	<0.25	0.033	-	-	-
MW-11	07/27/2013	228	-	16.6	-	0.029	<0.050 J	0.44	<0.015 J
MW-13	08/20/2012	375 J	<0.70	18.6	3.8 J	0.034	-	-	-

Notes and Abbreviations
DO = Dissolved Oxygen
ORP = Oxidation Reduction Potential
mg/L = Milligrams per Liter
ND = Not detected above laboratory method detection limits
- = Not Measured/Not Analyzed
<x = Constituent not detected above x milligrams per liter
x / y = Sample Results / Blind Duplicate Results

Appendix A

Site Photos

1. Site

2. MW-1

3. MW-5

4. MW-6

SITE PHOTOS
FORMER TEXACO SERVICE STATION / CHEVRON 211079
1501 SOUTH CUSHMAN STREET
Fairbanks, Alaska

(EM)I:\Chevron\0650--\065003 21-1079 Fairbanks\065003 FIGURES\065003 PHOTOS\065003-EM002-PHOTOS.DWG

Appendix B

Monitoring Data Package

CRA

Groundwater Monitoring Field Sheet

Well ID	Time	DTP	DTW	Depth to Bottom	Product Thickness	Amount of Product Removed	Casing Diam.	PID (ppm)	Comments
③ MW-1	1148	—	14.91	19.31	—	—	4"	0.7	casing cracked
② MW-2	1145	—	13.49	22.93	—	—	4"	0.3	
① MW-4	1140	—	13.03	21.81	—	—	4"	1.5	
⑦ MW-5	1156	—	13.83	20.37	—	—	4"	0.2	
⑧ MW-6	—	—	—	—	—	—	—	—	No site/property access
⑥ MW-9	1154	—	12.91	18.21	—	—	2"	0.3	
⑤ MW-10	1152	—	13.17	16.76	—	—	2"	0.6	
④ MW-11	1149	—	14.40	17.01	—	—	2"	0.1	Casing heaved up 2" cut off through vault lid; casing TOC

GAC Filtered Water Volume: 28 **gallons** **Volume logged on *Portable GAC Volume Tracking Log*?** ☒

Project Name: 211079

Project Number: 065003

Field Staff: Nick Greco & Tom Echtermeyer

Date: 07/26/13

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CONESTOGA-ROVERS & ASSOCIATES

LOW-FLOW WELL SAMPLING FORM

Site ID: 211074	CRA Mgr: Siobhan Pritchard	Well ID: MW-4
CRA Project No: 065003	Date: ~~07/26/13~~ 07/27/13	Field Staff: N.Greco/T.Echtermeyer
Site Address: 1501 S. Cushman Street	City, State: Fairbanks Alaska	Low-Flow Sampling Device: ○ Peristaltic Pump ◉ Bladder Pump ○ Centrifugal Pump
Initial Depth to Water: 13.03	Depth to Bottom: 21.81	Water Column Height: 8.78
Pump Rate: 500 mL/Min.	Well Diameter: 4"	Did Well Dewater?: NO
Start Purge Time: 1005	Stop Purge Time: 1039	Total Gallons Purged: ~~3~~ 7.0

Time	Volume Purged (gallons)	DTW	Turb. (NTU)	Temp. (°C) ± 10%	DO ± 10% (mg/L)	pH ± 0.1 ✓	Cond. (mS) ± 3% ✓	ORP (mv) ± 10	Comments
1008	<0.5	13.11	4	3.71	2.57	6.45	0.457	170.9	
1013	0.5	13.12	3	3.62	2.24	6.58	0.453	160.5	
1018	2.25	13.12	3	3.55	1.99	6.65	0.453	149.5	
1023	3.0	13.12	3	3.52	1.87	6.66	0.453	145.0	
1028	3.75	13.12	2	3.54	1.68	6.69	0.451	132.7	
1033	4.00	13.13	3	3.50	1.52	6.71	0.450	123.3	
1038	4.5	13.11	2	3.50	1.36	6.73	0.448	114.7	

A minimum of three parameters must be monitored and recorded, four if temperature is used, to be considered stabilized.
Parameters to be collected every 3-5 minutes.
NOTE: If well is purged dry, DO NOT collect sample until it has recharged to approximately 80% of its pre-purge volume.

FIELD KIT RESULTS: Ferrous Iron 0.60 mg/L Nitrate — mg/L

Sample ID	Date	Time	Analytes / Analytical Method
MW-4-072713	07/27/13	1045	◉ DRO by AK102 ○ SVOCs by TCL8270 ○ PAHs by 8270 ○ RRO by AK103 ○ Lead by 6010 ○ PAHs by 8270SIM ◉ Alkalinity by 2320B ◉ Methane by RSK175 ◉ Nitrate/Nitrite by EPA 300 ◉ Sulfate by EPA 300 ◉ Ferrous Iron ◉ GRO by AK101 ◉ BTEX by 8260B ○ EDB by 8011 ○ HVOCs by 8260B ○ MtBE by 8260B ○ 1,2-DCA by 8260B

Additional Comments: Could not field screen for nitrate

CONESTOGA-ROVERS & ASSOCIATES

LOW-FLOW WELL SAMPLING FORM

Site ID: 211079	CRA Mgr: Siobhan Pritchard	Well ID: MW-2
CRA Project No: 065003	Date: 07/27/13	Field Staff: N.Greco/T.Echtermeyer
Site Address: 1501 S. Cushman Street	City, State: Fairbanks Alaska	Low-Flow Sampling Device: ○ Peristaltic Pump ◉ Bladder Pump ○ Centrifugal Pump
Initial Depth to Water: 13.49	Depth to Bottom: 22.93	Water Column Height: 9.44
Pump Rate: 500 mL/Min.	Well Diameter: 4"	Did Well Dewater?: No
Start Purge Time: 1134	Stop Purge Time: 1220	Total Gallons Purged: 5 gal

Time	Volume Purged (gallons)	DTW	Turb. (NTU)	Temp. (°C) ± 10%	DO ± 10% ✓	pH ± 0.1 ✓	Cond. (mS) ± 3% ✓	ORP (mv) ± 10 ✓	Comments
1139	<0.5	13.54	6	3.79	0.49	6.79	0.643	-31.6	
1153	2.0	13.53	5	3.52	0.06	6.93	0.629	-58.9	
1157	2.5	13.53	3	3.47	0.06	6.97	0.624	-62.8	
1202	3.0	13.53	3	3.49	0.04	7.01	0.617	-68.4	

A minimum of three parameters must be monitored and recorded, four if temperature is used, to be considered stabilized.
Parameters to be collected every 3-5 minutes.
NOTE: If well is purged dry, DO NOT collect sample until it has recharged to approximately 80% of its pre-purge volume.

FIELD KIT RESULTS: Ferrous Iron 3.30 mg/L Nitrate — mg/L

Sample ID	Date	Time	Analytes / Analytical Method
MW-2-072713	07/27/13	1205	◉ DRO by AK102 ○ SVOCs by TCL8270 ○ PAHs by 8270 ○ RRO by AK103 ○ Lead by 6010 ○ PAHs by 8270SIM ◉ Alkalinity by 2320B ◉ Methane by RSK175 ◉ Nitrate/Nitrite by EPA 300 ◉ Sulfate by EPA 300 ◉ Ferrous Iron ◉ GRO by AK101 ◉ BTEX by 8260B ○ EDB by 8011 ○ HVOCs by 8260B ○ MtBE by 8260B ○ 1,2-DCA by 8260B

Additional Comments: Could not field screen nitrate

CONESTOGA-ROVERS & ASSOCIATES

LOW-FLOW WELL SAMPLING FORM

Site ID: 211074	CRA Mgr: Siobhan Pritchard	Well ID: MW-1
CRA Project No: 065003	Date: 07/26/13	Field Staff: N.Greco/T.Echtermeyer
Site Address: 1501 S. Cushman Street	City, State: Fairbanks Alaska	Low-Flow Sampling Device: ○ Peristaltic Pump ◉ Bladder Pump ○ Centrifugal Pump
Initial Depth to Water: 14.91	Depth to Bottom: 19.31	Water Column Height: 4.4
Pump Rate: 0.5 L/Min.	Well Diameter: 4"	Did Well Dewater?: No
Start Purge Time: 1243	Stop Purge Time: 1317	Total Gallons Purged: 3.5

Time	Volume Purged (gallons)	DTW	Turb. (NTU)	Temp. (°C) ± 10%	DO ± 10% mg/L	pH ± 0.1 ✓	Cond. (mS) ± 3% ✓	ORP (mv) ± 10 ✓	Comments
1258	1.5	14.96	10	2.91	3.76	6.75	0.496	-14.3	
1304	2.0	14.96	7	3.01	3.35	6.88	0.498	-28.5	
1309	2.5	14.96	6	2.81	2.95	6.91	0.500	-35.5	
1312	2.75	14.96	5	2.74	2.69	6.96	0.499	-40.7	
1315	3.0	14.96	4	2.82	2.42	7.00	0.500	-45.4	

A minimum of three parameters must be monitored and recorded, four if temperature is used, to be considered stabilized.
Parameters to be collected every 3-5 minutes.
NOTE: If well is purged dry, DO NOT collect sample until it has recharged to approximately 80% of its pre-purge volume.

FIELD KIT RESULTS: Ferrous Iron 0.66 mg/L Nitrate — mg/L

Sample ID	Date	Time	Analytes / Analytical Method
MW-1-072713	07/27/13	1315	◉ DRO by AK102 ○ SVOCs by TCL8270 ○ PAHs by 8270 ○ RRO by AK103 ○ Lead by 6010 ○ PAHs by 8270SIM ◉ Alkalinity by 2320B ◉ Methane by RSK175 ◉ Nitrate/Nitrite by EPA 300 ◉ Sulfate by EPA 300 ◉ Ferrous Iron ◉ GRO by AK101 ◉ BTEX by 8260B ○ EDB by 8011 ○ HVOCs by 8260B ○ MtBE by 8260B ○ 1,2-DCA by 8260B

Additional Comments: Could not collect Nitrate Field screen

CONESTOGA-ROVERS & ASSOCIATES

LOW-FLOW WELL SAMPLING FORM

Site ID: 211079	CRA Mgr: Siobhan Pritchard	Well ID: MW-11
CRA Project No: 065003	Date:	Field Staff: N.Greco/T.Echtermeyer
Site Address: 1501 S. Cushman Street	City, State: Fairbanks Alaska	Low-Flow Sampling Device: ○ Peristaltic Pump ◉ Bladder Pump ○ Centrifugal Pump
Initial Depth to Water: 14.40	Depth to Bottom: 17.01	Water Column Height: 2.61
Pump Rate: 0.5 L/Min.	Well Diameter: 2"	Did Well Dewater?: No
Start Purge Time: 1355	Stop Purge Time: 1430	Total Gallons Purged: ~~3~~ 3 gal

Time	Volume Purged (gallons)	DTW	Turb. (NTU)	Temp. (°C) ± 10%	DO ± 10%	pH ± 0.1 ✓	Cond. (mS) ± 3% ✓	ORP (mv) ± 10 ✓	Comments
1402	1.0	14.41	25	4.64	13.26	6.94	0.507	-46.4	
1406	1.5	14.41	20	4.59	13.19	6.94	0.507	-46.7	
1410	1.75	14.41	13	4.42	13.27	6.97	0.508	-47.0	

A minimum of three parameters must be monitored and recorded, four if temperature is used, to be considered stabilized.
Parameters to be collected every 3-5 minutes.
NOTE: If well is purged dry, DO NOT collect sample until it has recharged to approximately 80% of its pre-purge volume.

FIELD KIT RESULTS: Ferrous Iron 0.44 mg/L Nitrate — mg/L

Sample ID	Date	Time	Analytes / Analytical Method
MW-11-072713	07/27/13	1410	◉ DRO by AK102 ○ SVOCs by TCL8270 ○ PAHs by 8270 ○ RRO by AK103 ○ Lead by 6010 ○ PAHs by 8270SIM ◉ Alkalinity by 2320B ◉ Methane by RSK175 ◉ Nitrate/Nitrite by EPA 300 ◉ Sulfate by EPA 300 ◉ Ferrous Iron ◉ GRO by AK101 ◉ BTEX by 8260B ○ EDB by 8011 ○ HVOCs by 8260B ○ MtBE by 8260B ○ 1,2-DCA by 8260B

Additional Comments: Could not collect Nitrate Field ~~test~~ screen

CONESTOGA-ROVERS & ASSOCIATES

LOW-FLOW WELL SAMPLING FORM

Site ID: 211079	CRA Mgr: Siobhan Pritchard	Well ID: MW-10
CRA Project No: 065003	Date: 07/27/13	Field Staff: N.Greco/T.Echtermeyer
Site Address: 1501 S. Cushman Street	City, State: Fairbanks Alaska	Low-Flow Sampling Device: ○ Peristaltic Pump ◉ Bladder Pump ○ Centrifugal Pump
Initial Depth to Water: 13.17	Depth to Bottom: 16.76	Water Column Height: 3.59
Pump Rate: 0.5 L/Min.	Well Diameter: 2"	Did Well Dewater?: No
Start Purge Time: 1545	Stop Purge Time: 1620	Total Gallons Purged: 3.5

Time	Volume Purged (gallons)	DTW	Turb. (NTU)	Temp. (°C) ± 10%	DO ± 10% ✓ mg/L	pH ± 0.1	Cond. (mS) ± 3% ✓	ORP (mv) ± 10 ✓	Comments
1551	0.75	13.21	23	5.37	13.38	7.33	0.606	-42.5	
1556	1.0	13.20	10	5.20	13.00	7.15	0.594	-47.5	
1603	2.0	13.20	7	5.16	11.83	6.78	0.576	-48.3	
1606	2.5	13.20	5	4.97	11.03	7.11	0.572	-55.8	
1612	3.0	13.20	4	4.90	11.79	7.17	0.570	-58.6	

A minimum of three parameters must be monitored and recorded, four if temperature is used, to be considered stabilized.
Parameters to be collected every 3-5 minutes.
NOTE: If well is purged dry, DO NOT collect sample until it has recharged to approximately 80% of its pre-purge volume.

FIELD KIT RESULTS: Ferrous Iron 0.58 mg/L Nitrate — mg/L

Sample ID	Date	Time	Analytes / Analytical Method
MW-10-072713	07/27/13	1615	◉ DRO by AK102 ○ SVOCs by TCL8270 ○ PAHs by 8270 ○ RRO by AK103 ○ Lead by 6010 ○ PAHs by 8270SIM ◉ Alkalinity by 2320B ◉ Methane by RSK175 ◉ Nitrate/Nitrite by EPA 300 ◉ Sulfate by EPA 300 ◉ Ferrous Iron ◉ GRO by AK101 ◉ BTEX by 8260B ○ EDB by 8011 ○ HVOCs by 8260B ○ MtBE by 8260B ○ 1,2-DCA by 8260B

Additional Comments: Could not collect Nitrate Field readings

CONESTOGA-ROVERS & ASSOCIATES

LOW-FLOW WELL SAMPLING FORM

Site ID: 21107q	CRA Mgr: Siobhan Pritchard	Well ID: MW-9
CRA Project No: 065003	Date: 07/27/13	Field Staff: N.Greco/T.Echtermeyer
Site Address: 1501 S. Cushman Street	City, State: Fairbanks Alaska	Low-Flow Sampling Device: ○ Peristaltic Pump ◉ Bladder Pump ○ Centrifugal Pump
Initial Depth to Water: 12.91	Depth to Bottom: 18.21	Water Column Height: 5.30
Pump Rate: 0.5 L/Min.	Well Diameter: 2"	Did Well Dewater?: No
Start Purge Time: 1648	Stop Purge Time: 1730	Total Gallons Purged: 3.0

Time	Volume Purged (gallons)	DTW	Turb. (NTU)	Temp. (°C) ± 10%	DO ± 10%	pH ± 0.1 ✓	Cond. (mS) ± 3% ✓	ORP (mv) ± 10 ✓	Comments
1700	0.5	12.97	90	9.66	0.70	6.63	0.559	-65.7	
1705	1.0	12.96	36	8.92	0.78	6.70	0.550	-70.6	
1708	1.5	12.96	25	8.93	0.90	6.70	0.548	-72.9	
1712	2.0	12.96	19	8.98	0.99	6.86	0.545	-75.8	

A minimum of three parameters must be monitored and recorded, four if temperature is used, to be considered stabilized.
Parameters to be collected every 3-5 minutes.
NOTE: If well is purged dry, DO NOT collect sample until it has recharged to approximately 80% of its pre-purge volume.

FIELD KIT RESULTS: Ferrous Iron 0.57 mg/L Nitrate — mg/L

Sample ID	Date	Time	Analytes / Analytical Method
MW-9-072713	07/27/13	1715	◉ DRO by AK102 ○ SVOCs by TCL8270 ○ PAHs by 8270 ○ RRO by AK103 ○ Lead by 6010 ○ PAHs by 8270SIM ◉ Alkalinity by 2320B ◉ Methane by RSK175 ◉ Nitrate/Nitrite by EPA 300 ◉ Sulfate by EPA 300 ◉ Ferrous Iron ◉ GRO by AK101 ◉ BTEX by 8260B ○ EDB by 8011 ○ HVOCs by 8260B ○ MtBE by 8260B ○ 1,2-DCA by 8260B

Additional Comments: Could not collect Nitrate Field screens

CONESTOGA-ROVERS & ASSOCIATES

LOW-FLOW WELL SAMPLING FORM

Site ID: 211074	CRA Mgr: Siobhan Pritchard	Well ID: MW-5
CRA Project No: 065003	Date: 07/27/13	Field Staff: N.Greco/T.Echtermeyer
Site Address: 1501 S. Cushman Street	City, State: Fairbanks Alaska	Low-Flow Sampling Device: ○ Peristaltic Pump ◉ Bladder Pump ○ Centrifugal Pump
Initial Depth to Water: 13.83	Depth to Bottom: 20.37	Water Column Height: 6.54
Pump Rate: 0.5 L/Min.	Well Diameter: 4"	Did Well Dewater?: No
Start Purge Time: 1750	Stop Purge Time: 1811	Total Gallons Purged: 3

Time	Volume Purged (gallons)	DTW	Turb. (NTU)	Temp. (°C) ± 10%	DO ± 10%	pH ± 0.1 ✓	Cond. (mS) ± 3% ✓	ORP (mv) ± 10 ✓	Comments
1757	0.75	13.90	14	4.31	0.31	6.70	0.554	-56.6	
1803	1.5	13.90	10	4.11	0.15	6.93	0.555	-65.1	
1806	2.25	13.90	7	4.02	0.10	7.06	0.555	-72.1	
1809	2.5	13.90	6	3.99	0.15	7.07	0.555	-74.2	

A minimum of three parameters must be monitored and recorded, four if temperature is used, to be considered stabilized.
Parameters to be collected every 3-5 minutes.
NOTE: If well is purged dry, DO NOT collect sample until it has recharged to approximately 80% of its pre-purge volume.

FIELD KIT RESULTS: Ferrous Iron 2.40 mg/L Nitrate — mg/L

Sample ID	Date	Time	Analytes / Analytical Method
MW-5-072713	07/27/13	1815	◉ DRO by AK102 ○ SVOCs by TCL8270 ○ PAHs by 8270 ○ RRO by AK103 ○ Lead by 6010 ○ PAHs by 8270SIM ◉ Alkalinity by 2320B ◉ Methane by RSK175 ◉ Nitrate/Nitrite by EPA 300 ◉ Sulfate by EPA 300 ◉ Ferrous Iron ◉ GRO by AK101 ◉ BTEX by 8260B ○ EDB by 8011 ○ HVOCs by 8260B ○ MtBE by 8260B ○ 1,2-DCA by 8260B
DUP-1-072713	07/27/13	—	

Additional Comments: Could not collect Nitrate field readings

Appendix C

Standard Operating Procedures for Groundwater Monitoring and Sampling

CONESTOGA-ROVERS
& ASSOCIATES

STANDARD FIELD PROCEDURES FOR GROUNDWATER MONITORING AND SAMPLING

This document presents standard field methods for groundwater monitoring, purging and sampling, and well development. These procedures are designed to comply with Federal, State and local regulatory guidelines. Conestoga-Rovers & Associates' specific field procedures are summarized below.

Groundwater Monitoring

Prior to performing monitoring activities, the historical monitoring and analytical data of each monitoring well shall be reviewed to determine if any of the wells are likely to contain separate phase hydrocarbons (SPH) and to determine the order in which the wells will be monitored (i.e. cleanest to dirtiest). Groundwater monitoring should not be performed when the potential exists for surface water to enter the well (i.e. flooding during a rainstorm).

Prior to monitoring, each well shall be opened and the well cap removed to allow water levels to stabilize and equilibrate. The condition of the well box and well cap shall be observed and recommended repairs noted. Any surface water that may have entered and flooded the well box should be evacuated prior to removing the well cap. In wells with no history of SPH, the static water level and total well depth shall be measured to the nearest 0.01 foot with an electronic water level meter. Wells with the highest contaminant concentrations shall be monitored last. In wells with a history of SPH, the SPH level/thickness and static water level shall be measured to the nearest 0.01 foot using an electronic interface probe. The water level meter and/or interface probe shall be thoroughly cleaned and decontaminated at the beginning of the monitoring event and between each well. Monitoring equipment shall be washed using soapy water consisting of Liqui-nox™ or Alconox™ followed by one rinse of clean tap water and then two rinses of distilled water.

Groundwater Sampling

Purge Sampling

Prior to groundwater purging and sampling, the historical analytical data of each monitoring well shall be reviewed to determine the order in which the wells should be purged and sampled (i.e. cleanest to dirtiest). No purging or groundwater sampling shall be performed on wells with a measurable thickness of SPH or floating SPH globules. If a sheen is observed, the well should be purged and a groundwater sample collected only if no SPH is present. Wells shall be purged either by hand using a disposal or PVC bailer or by using an aboveground pump (e.g. peristaltic or Wattera™) or down-hole pump (e.g. Grundfos™ or DC Purger pump).

Groundwater wells shall be purged approximately three to ten well-casing volumes (depending on the regulatory agency requirements) or until a minimum of three groundwater parameters have stabilized for three consecutive readings. Temperature, dissolved oxygen (DO), pH, conductivity, and oxidation-reduction potential (ORP) shall be measured and recorded. The total volume of groundwater removed shall be recorded along with any other notable physical characteristic such as color and odor. If required, turbidity shall also be measured prior to collection of each groundwater sample.

Groundwater samples shall be collected after the well has been purged and allowed to recharge to 80% of the pre-purging static water level, or if the well is slow to recharge, after waiting a minimum of 2 hours. Groundwater samples shall be collected using clean disposable bailers or

pumps (if an operating remediation system exists on site and the project manager approves of its use for sampling) and shall be decanted into clean containers supplied by the analytical laboratory. New nitrile gloves and disposable tubing or bailers shall be used for sampling each well. If a PVC bailer or down-hole pump is used for groundwater purging, it shall be decontaminated before purging each well by using soapy water consisting of Liqui-nox™ or Alconox™ followed by one rinse of clean tap water and then two rinses of distilled water. If a submersible pump with non-dedicated discharge tubing is used for groundwater purging, both the inside and outside of pump and discharge tubing shall be decontaminated as described above.

No Purge Sampling
Groundwater samples shall be collected using clean disposable bailers (PVC or Teflon) and decanted into clean containers supplied by the analytical laboratory. New nitrile gloves shall be used for sampling each well.

HydraSleeve Sampling
HydraSleeve sampling devices shall be deployed a minimum of 24 hours prior to sampling to allow for equilibration and stabilization.

For wells without a previously deployed HydraSleeve sampling device, the groundwater monitoring SOP shall be followed to determine water column length. For wells with a previously deployed HydraSleeve sampling device, the depth to groundwater shall be measured prior to HydraSleeve removal. The depth to well bottom shall be measured prior to new HydraSleeve deployment.

The top of the HydraSleeve sampling device shall be set no more than 3 feet below static groundwater level. If the length of the water column does not allow for this, a top weight bottom set will be employed. Groundwater samples collected using clean disposable HydraSleeve sampling devices will be decanted into clean containers supplied by the analytical laboratory. New nitrile gloves and HydraSleeve sampling devices will be used for sampling each well.

Following sampling, a new HydraSleeve sampling device shall be deployed for the next sampling event if applicable.

Sample Handling

Except for samples that will be tested in the field, or that require special handling or preservation, samples shall be stored in coolers chilled to 4° C for shipment to the analytical laboratory. Samples shall be labeled, placed in protective foam sleeves or bubble wrap as needed, stored on crushed ice at or below 4° C, and submitted under chain-of-custody (COC) to the laboratory. The laboratory shall be notified of the sample shipment schedule and arrival time. Samples shall be shipped to the laboratory within a time frame to allow for extraction and analysis to be performed within the standard sample holding times.

Sample labels shall be filled out using indelible ink and must contain the site name; field identification number; the date, time, and location of sample collection; notation of the type of sample; identification of preservatives used; remarks; and the signature of the sampler. Field identification must be sufficient to allow easy cross-reference with the field datasheet.

All samples submitted to the laboratory shall be accompanied by a COC record to ensure adequate documentation. One copy of the COC shall be kept in the QA/QC file and another copy shall be retained in the project file. Information on the COC shall consist of the project name and

number; project location; sample numbers; sampler/recorder's signature; date and time of collection of each sample; sample type; analyses requested; name of person receiving the sample; and date of receipt of sample.

Laboratory-supplied trip blanks shall accompany the samples and be analyzed to check for cross-contamination, if requested by the project manager.

Well Development

Wells shall be developed using a combination of groundwater surging and extraction. A surge block shall be used to swab the well and agitate the groundwater in order to dislodge any fine sediment from the sand pack. After approximately ten minutes of swabbing the well, groundwater shall be extracted from the well using a bailer, pump and/or reverse air-lifting through a pipe to remove the sediments from the well. Alternating surging and extraction shall continue until the sediment volume in the groundwater (i.e. turbidity) is negligible, which typically requires extraction of approximately ten well-casing volumes of groundwater. Preliminary well development usually is performed during well installation prior to placing the sanitary surface seal to ensure sand pack stabilization. Well development that is performed after surface seal installation, should occur 72 hours after seal installation to ensure that the cement has had adequate time to set.

Waste Handling and Disposal

Groundwater extracted during development and sampling shall be stored onsite in sealed U.S. DOT H17 55-gallon drums. Each drum shall be labeled with the contents, date of generation, generator identification and consultant contact. If hydrocarbon concentrations in the purged groundwater are below ADEC cleanup levels or the site is in a remote area (pending ADEC approval) groundwater will be discharged to the ground surface, at least 100 feet from the nearest surface water body.

Appendix D

Laboratory Analytical Report

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

August 13, 2013

Conestoga-Rovers Association

14998 W. 6th Ave
Golden, CO 80401

RE: Project: 065003 Chevron 211079
Pace Project No.: 10236896

Dear Conestoga-Rovers Association:
Enclosed are the analytical results for sample(s) received by the laboratory on July 30, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Michelle Kruse for
Jennifer Gross
jennifer.gross@pacelabs.com
Project Manager

Enclosures

cc: Chevron-EDDs, Conestoga-Rovers Association
ChevronGWRT, Conestoga-Rovers Association
Jeffrey Cloud, Conestoga-Rovers Association
Doug Gatrell, CRA
Sarah Gillette, Conestoga-Rovers Association
Nick Greco, Conestoga-Rovers Association
Siobhan Pritchard, Conestoga-Rovers Association

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

CERTIFICATIONS

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Minnesota Certification IDs
1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: Pace
Florida/NELAP Certification #: E87605
Georgia Certification #: 959
Hawaii Certification #Pace
Idaho Certification #: MN00064
Illinois Certification #: 200011
Kansas Certification #: E-10167
Louisiana Certification #: 03086
Louisiana Certification #: LA080009
Maine Certification #: 2007029
Maryland Certification #: 322
Michigan DEQ Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT CERT0092
Nebraska Certification #: Pace
Nevada Certification #: MN_00064
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Dakota Certification #: R-036
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Tennessee Certification #: 02818
Texas Certification #: T104704192
Utah Certification #: MN00064
Virginia/DCLS Certification #: 002521
Virginia/VELAP Certification #: 460163
Washington Certification #: C754
West Virginia Certification #: 382
Wisconsin Certification #: 999407970

Kansas Certification IDs
9608 Loiret Boulevard, Lenexa, KS 66219
WY STR Certification #: 2456.01
Arkansas Certification #: 13-012-0
Illinois Certification #: 003097
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212008A
Oklahoma Certification #: 9205/9935
Texas Certification #: T104704407-13-4
Utah Certification #: KS000212013-3
Illinois Certification #: 003097

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SAMPLE SUMMARY

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10236896001	**MW-4-072713**	Water	07/27/13 10:45	07/30/13 09:00
10236896002	**MW-2-072713**	Water	07/27/13 12:05	07/30/13 09:00
10236896003	**MW-1-072713**	Water	07/27/13 13:15	07/30/13 09:00
10236896004	**MW-11-072713**	Water	07/27/13 14:10	07/30/13 09:00
10236896005	**Trip Blank-1-072713**	Water	07/27/13 00:00	07/30/13 09:00
10236896006	**MW-10-072713**	Water	07/27/13 16:15	07/30/13 09:00
10236896007	**MW-9-072713**	Water	07/27/13 17:15	07/30/13 09:00
10236896008	**MW-5-072713**	Water	07/27/13 18:15	07/30/13 09:00
10236896009	**DUP-1-072713**	Water	07/27/13 00:00	07/30/13 09:00

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SAMPLE ANALYTE COUNT

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10236896001	**MW-4-072713**	RSK 175	DL1	1	PASI-M
		Alaska 102	JRH	2	PASI-M
		Alaska 101	KT1	2	PASI-M
		EPA 8260	LPM	7	PASI-M
		SM 2320B	PH1	1	PASI-M
		SM 3500-Fe B#4	JML	1	PASI-K
		ASTM D516	KEO	1	PASI-M
		SM 4500-NO2 B	KEO	1	PASI-M
10236896002	**MW-2-072713**	RSK 175	DL1	1	PASI-M
		Alaska 102	JRH	2	PASI-M
		Alaska 101	KT1	2	PASI-M
		EPA 8260	LPM	7	PASI-M
		SM 2320B	PH1	1	PASI-M
		SM 3500-Fe B#4	JML	1	PASI-K
		ASTM D516	KEO	1	PASI-M
		SM 4500-NO2 B	KEO	1	PASI-M
10236896003	**MW-1-072713**	RSK 175	DL1	1	PASI-M
		Alaska 102	JRH	2	PASI-M
		Alaska 101	KT1	2	PASI-M
		EPA 8260	EB2	7	PASI-M
		SM 2320B	PH1	1	PASI-M
		SM 3500-Fe B#4	JML	1	PASI-K
		ASTM D516	KEO	1	PASI-M
		SM 4500-NO2 B	KEO	1	PASI-M
10236896004	**MW-11-072713**	RSK 175	DL1	1	PASI-M
		Alaska 102	JRH	2	PASI-M
		Alaska 101	KT1	2	PASI-M
		EPA 8260	EB2	7	PASI-M
		SM 2320B	PH1	1	PASI-M
		SM 3500-Fe B#4	JML	1	PASI-K
		ASTM D516	KEO	1	PASI-M
		SM 4500-NO2 B	KEO	1	PASI-M
10236896005	**Trip Blank-1-072713**	Alaska 101	KT1	2	PASI-M
		EPA 8260	EB2	7	PASI-M
10236896006	**MW-10-072713**	RSK 175	DL1	1	PASI-M
		Alaska 102	JRH	2	PASI-M
		Alaska 101	KT1	2	PASI-M

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SAMPLE ANALYTE COUNT

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260	LPM	7	PASI-M
		SM 2320B	PH1	1	PASI-M
		SM 3500-Fe B#4	JML	1	PASI-K
		ASTM D516	KEO	1	PASI-M
		SM 4500-NO2 B	KEO	1	PASI-M
10236896007	**MW-9-072713**	RSK 175	DL1	1	PASI-M
		Alaska 102	JRH	2	PASI-M
		Alaska 101	KT1	2	PASI-M
		EPA 8260	LPM	7	PASI-M
		SM 2320B	PH1	1	PASI-M
		SM 3500-Fe B#4	JML	1	PASI-K
		ASTM D516	KEO	1	PASI-M
		SM 4500-NO2 B	KEO	1	PASI-M
10236896008	**MW-5-072713**	RSK 175	DL1	1	PASI-M
		Alaska 102	JRH	2	PASI-M
		Alaska 101	KT1	2	PASI-M
		EPA 8260	LPM	7	PASI-M
		SM 2320B	PH1	1	PASI-M
		SM 3500-Fe B#4	JML	1	PASI-K
		ASTM D516	KEO	1	PASI-M
		SM 4500-NO2 B	KEO	1	PASI-M
10236896009	**DUP-1-072713**	RSK 175	DL1	1	PASI-M
		Alaska 102	JRH	2	PASI-M
		Alaska 101	KT1	2	PASI-M
		EPA 8260	LPM	7	PASI-M
		SM 2320B	PH1	1	PASI-M
		SM 3500-Fe B#4	JML	1	PASI-K
		ASTM D516	KEO	1	PASI-M
		SM 4500-NO2 B	KEO	1	PASI-M

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PROJECT NARRATIVE

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Method: **RSK 175**
Description: RSK 175 AIR Headspace
Client: CRA_Chevron
Date: August 13, 2013

General Information:
8 samples were analyzed for RSK 175. All samples were received in acceptable condition with any exceptions noted below.

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

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

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

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

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

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

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

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

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

QC Batch: AIR/17906

R1: RPD value was outside control limits.

- DUP (Lab ID: 1491276)
  - Methane

Additional Comments:

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PROJECT NARRATIVE

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Method: **Alaska 102**
Description: AK102 GCS
Client: CRA_Chevron
Date: August 13, 2013

General Information:
8 samples were analyzed for Alaska 102. All samples were received in acceptable condition with any exceptions noted below.

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

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

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

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

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

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

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

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

Additional Comments:

Analyte Comments:

QC Batch: OEXT/22484

N2: The lab does not hold TNI accreditation for this parameter.

- BLANK (Lab ID: 1490734)
  - DRO by AK 102
- DUP-1-072713 (Lab ID: 10236896009)
  - DRO by AK 102
- LCS (Lab ID: 1490735)
  - DRO by AK 102
- LCSD (Lab ID: 1490736)
  - DRO by AK 102
- MW-1-072713 (Lab ID: 10236896003)
  - DRO by AK 102

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PROJECT NARRATIVE

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Method: **Alaska 102**
Description: AK102 GCS
Client: CRA_Chevron
Date: August 13, 2013

Analyte Comments:

QC Batch: OEXT/22484

N2: The lab does not hold TNI accreditation for this parameter.

- MW-10-072713 (Lab ID: 10236896006)
  - DRO by AK 102
- MW-11-072713 (Lab ID: 10236896004)
  - DRO by AK 102
- MW-2-072713 (Lab ID: 10236896002)
  - DRO by AK 102
- MW-4-072713 (Lab ID: 10236896001)
  - DRO by AK 102
- MW-5-072713 (Lab ID: 10236896008)
  - DRO by AK 102
- MW-9-072713 (Lab ID: 10236896007)
  - DRO by AK 102

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PROJECT NARRATIVE

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Method: **Alaska 101**
Description: AK101 GCV
Client: CRA_Chevron
Date: August 13, 2013

General Information:
9 samples were analyzed for Alaska 101. All samples were received in acceptable condition with any exceptions noted below.

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

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

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

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

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

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

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

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

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

Additional Comments:

Analyte Comments:

QC Batch: GCV/11133

1M: Surrogate recovery outside laboratory control limits due to matrix interferences.
- MW-1-072713 (Lab ID: 10236896003)
  - a,a,a-Trifluorotoluene (S)
- MW-11-072713 (Lab ID: 10236896004)
  - a,a,a-Trifluorotoluene (S)

N2: The lab does not hold TNI accreditation for this parameter.
- BLANK (Lab ID: 1490809)
  - AK101 Gasoline Range Organics

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PROJECT NARRATIVE

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Method: **Alaska 101**
Description: AK101 GCV
Client: CRA_Chevron
Date: August 13, 2013

Analyte Comments:

QC Batch: GCV/11133

N2: The lab does not hold TNI accreditation for this parameter.

- DUP (Lab ID: 1494798)
  - AK101 Gasoline Range Organics
- LCS (Lab ID: 1490810)
  - AK101 Gasoline Range Organics
- LCSD (Lab ID: 1490811)
  - AK101 Gasoline Range Organics
- MS (Lab ID: 1494797)
  - AK101 Gasoline Range Organics
- MW-1-072713 (Lab ID: 10236896003)
  - AK101 Gasoline Range Organics
- MW-10-072713 (Lab ID: 10236896006)
  - AK101 Gasoline Range Organics
- MW-11-072713 (Lab ID: 10236896004)
  - AK101 Gasoline Range Organics
- MW-2-072713 (Lab ID: 10236896002)
  - AK101 Gasoline Range Organics
- MW-4-072713 (Lab ID: 10236896001)
  - AK101 Gasoline Range Organics
- Trip Blank-1-072713 (Lab ID: 10236896005)
  - AK101 Gasoline Range Organics

QC Batch: GCV/11144

1M: Surrogate recovery outside laboratory control limits due to matrix interferences.

- DUP-1-072713 (Lab ID: 10236896009)
  - a,a,a-Trifluorotoluene (S)

N2: The lab does not hold TNI accreditation for this parameter.

- BLANK (Lab ID: 1492458)
  - AK101 Gasoline Range Organics
- DUP-1-072713 (Lab ID: 10236896009)
  - AK101 Gasoline Range Organics
- LCS (Lab ID: 1492459)
  - AK101 Gasoline Range Organics
- LCSD (Lab ID: 1492460)
  - AK101 Gasoline Range Organics
- MS (Lab ID: 1493186)
  - AK101 Gasoline Range Organics
- MSD (Lab ID: 1493187)
  - AK101 Gasoline Range Organics
- MW-5-072713 (Lab ID: 10236896008)
  - AK101 Gasoline Range Organics
- MW-9-072713 (Lab ID: 10236896007)
  - AK101 Gasoline Range Organics

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PROJECT NARRATIVE

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Method: **EPA 8260**
Description: 8260 MSV UST
Client: CRA_Chevron
Date: August 13, 2013

General Information:
9 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

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

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

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

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

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

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

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

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

QC Batch: MSV/24473

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10237035004

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1491183)
  - Toluene
- MSD (Lab ID: 1491184)
  - Benzene
  - Ethylbenzene
  - Toluene

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

Additional Comments:

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PROJECT NARRATIVE

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Method: **SM 2320B**
Description: 2320B Alkalinity
Client: CRA_Chevron
Date: August 13, 2013

General Information:
8 samples were analyzed for SM 2320B. All samples were received in acceptable condition with any exceptions noted below.

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Method: **SM 3500-Fe B#4**
Description: Iron, Ferrous
Client: CRA_Chevron
Date: August 13, 2013

General Information:
8 samples were analyzed for SM 3500-Fe B#4. All samples were received in acceptable condition with any exceptions noted below.

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

H6: Analysis initiated outside of the 15 minute EPA recommended holding time.
- DUP-1-072713 (Lab ID: 10236896009)
- MW-1-072713 (Lab ID: 10236896003)
- MW-10-072713 (Lab ID: 10236896006)
- MW-11-072713 (Lab ID: 10236896004)
- MW-2-072713 (Lab ID: 10236896002)
- MW-4-072713 (Lab ID: 10236896001)
- MW-5-072713 (Lab ID: 10236896008)
- MW-9-072713 (Lab ID: 10236896007)

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Method: **ASTM D516**
Description: ASTM D516 Sulfate Water
Client: CRA_Chevron
Date: August 13, 2013

General Information:
8 samples were analyzed for ASTM D516. All samples were received in acceptable condition with any exceptions noted below.

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

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

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

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

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

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

Additional Comments:

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PROJECT NARRATIVE

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Method: **SM 4500-NO2 B**
Description: SM4500NO2-B, Nitrite, unpres
Client: CRA_Chevron
Date: August 13, 2013

General Information:
8 samples were analyzed for SM 4500-NO2 B. All samples were received in acceptable condition with any exceptions noted below.

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

H3: Sample was received or analysis requested beyond the recognized method holding time.
- DUP-1-072713 (Lab ID: 10236896009)
- MW-1-072713 (Lab ID: 10236896003)
- MW-10-072713 (Lab ID: 10236896006)
- MW-11-072713 (Lab ID: 10236896004)
- MW-2-072713 (Lab ID: 10236896002)
- MW-4-072713 (Lab ID: 10236896001)
- MW-5-072713 (Lab ID: 10236896008)
- MW-9-072713 (Lab ID: 10236896007)

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

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

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

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

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

QC Batch: WETA/15630

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10236809006

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 1490026)
  - Nitrite as N
- MSD (Lab ID: 1490027)
  - Nitrite as N

Additional Comments:

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

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ANALYTICAL RESULTS

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Sample: MW-4-072713 **Lab ID: 10236896001** Collected: 07/27/13 10:45 Received: 07/30/13 09:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Methane	**0.0085**	mg/L	0.0066	0.0033	1		07/31/13 09:43	74-82-8	
AK102 GCS	Analytical Method: Alaska 102 Preparation Method: EPA 3510								
DRO by AK 102	**0.14J**	mg/L	0.49	0.043	1	07/31/13 09:07	08/03/13 19:29		N2
Surrogates									
o-Terphenyl (S)	86	%	50-150		1	07/31/13 09:07	08/03/13 19:29	84-15-1	
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**<0.050**	mg/L	0.10	0.050	1		07/31/13 16:02		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%	60-120		1		07/31/13 16:02	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**<0.00024**	mg/L	0.0010	0.00024	1		08/01/13 22:38	71-43-2	
Ethylbenzene	**<0.00024**	mg/L	0.0010	0.00024	1		08/01/13 22:38	100-41-4	
Toluene	**<0.00023**	mg/L	0.0010	0.00023	1		08/01/13 22:38	108-88-3	
Xylene (Total)	**<0.00072**	mg/L	0.0030	0.00072	1		08/01/13 22:38	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%	75-125		1		08/01/13 22:38	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1		08/01/13 22:38	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1		08/01/13 22:38	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**202**	mg/L	5.0	2.5	1		08/06/13 15:46		
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4								
Iron, Ferrous	**<0.015**	mg/L	0.20	0.015	1		08/07/13 17:39		H6
ASTM D516 Sulfate Water	Analytical Method: ASTM D516								
Sulfate	**18.8**	mg/L	2.5	1.2	1		08/06/13 11:24	14808-79-8	
SM4500NO2-B, Nitrite, unpres	Analytical Method: SM 4500-NO2 B								
Nitrite as N	**<0.050**	mg/L	0.10	0.050	1		07/30/13 15:36	14797-65-0	H3

Sample: MW-2-072713 **Lab ID: 10236896002** Collected: 07/27/13 12:05 Received: 07/30/13 09:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Methane	**0.055**	mg/L	0.0066	0.0033	1		07/31/13 09:54	74-82-8	
AK102 GCS	Analytical Method: Alaska 102 Preparation Method: EPA 3510								
DRO by AK 102	**0.71**	mg/L	0.52	0.046	1	07/31/13 09:07	08/03/13 19:52		N2

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ANALYTICAL RESULTS

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Sample: MW-2-072713 **Lab ID: 10236896002** Collected: 07/27/13 12:05 Received: 07/30/13 09:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
AK102 GCS	Analytical Method: Alaska 102 Preparation Method: EPA 3510								
Surrogates									
o-Terphenyl (S)	86	%	50-150		1	07/31/13 09:07	08/03/13 19:52	84-15-1	
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**0.72**	mg/L	0.10	0.050	1		07/31/13 15:21		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	110	%	60-120		1		07/31/13 15:21	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**0.0015**	mg/L	0.0010	0.00024	1		08/01/13 23:02	71-43-2	
Ethylbenzene	**0.011**	mg/L	0.0010	0.00024	1		08/01/13 23:02	100-41-4	
Toluene	**<0.00023**	mg/L	0.0010	0.00023	1		08/01/13 23:02	108-88-3	
Xylene (Total)	**0.17**	mg/L	0.0030	0.00072	1		08/01/13 23:02	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%	75-125		1		08/01/13 23:02	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1		08/01/13 23:02	2037-26-5	
4-Bromofluorobenzene (S)	96	%	75-125		1		08/01/13 23:02	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**251**	mg/L	5.0	2.5	1		08/06/13 15:50		
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4								
Iron, Ferrous	**<0.015**	mg/L	0.20	0.015	1		08/07/13 17:40		H6
ASTM D516 Sulfate Water	Analytical Method: ASTM D516								
Sulfate	**23.6**	mg/L	2.5	1.2	1		08/06/13 11:24	14808-79-8	
SM4500NO2-B, Nitrite, unpres	Analytical Method: SM 4500-NO2 B								
Nitrite as N	**<0.050**	mg/L	0.10	0.050	1		07/30/13 15:36	14797-65-0	H3

Sample: MW-1-072713 **Lab ID: 10236896003** Collected: 07/27/13 13:15 Received: 07/30/13 09:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Methane	**0.036**	mg/L	0.0066	0.0033	1		07/31/13 10:05	74-82-8	
AK102 GCS	Analytical Method: Alaska 102 Preparation Method: EPA 3510								
DRO by AK 102	**0.20J**	mg/L	0.52	0.046	1	07/31/13 09:07	08/03/13 20:14		N2
Surrogates									
o-Terphenyl (S)	81	%	50-150		1	07/31/13 09:07	08/03/13 20:14	84-15-1	

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ANALYTICAL RESULTS

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Sample: MW-1-072713 **Lab ID: 10236896003** Collected: 07/27/13 13:15 Received: 07/30/13 09:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**1.0**	mg/L	0.10	0.050	1		07/31/13 15:01		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	141	%	60-120		1		07/31/13 15:01	98-08-8	1M
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**<0.00024**	mg/L	0.0010	0.00024	1		08/02/13 12:21	71-43-2	
Ethylbenzene	**<0.00024**	mg/L	0.0010	0.00024	1		08/02/13 12:21	100-41-4	
Toluene	**<0.00023**	mg/L	0.0010	0.00023	1		08/02/13 12:21	108-88-3	
Xylene (Total)	**<0.00072**	mg/L	0.0030	0.00072	1		08/02/13 12:21	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	113	%	75-125		1		08/02/13 12:21	17060-07-0	
Toluene-d8 (S)	104	%	75-125		1		08/02/13 12:21	2037-26-5	
4-Bromofluorobenzene (S)	105	%	75-125		1		08/02/13 12:21	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**215**	mg/L	5.0	2.5	1		08/06/13 15:54		
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4								
Iron, Ferrous	**<0.015**	mg/L	0.20	0.015	1		08/07/13 17:40		H6
ASTM D516 Sulfate Water	Analytical Method: ASTM D516								
Sulfate	**21.1**	mg/L	2.5	1.2	1		08/06/13 11:26	14808-79-8	
SM4500NO2-B, Nitrite, unpres	Analytical Method: SM 4500-NO2 B								
Nitrite as N	**<0.050**	mg/L	0.10	0.050	1		07/30/13 15:36	14797-65-0	H3

Sample: MW-11-072713 **Lab ID: 10236896004** Collected: 07/27/13 14:10 Received: 07/30/13 09:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Methane	**0.029**	mg/L	0.0066	0.0033	1		07/31/13 10:15	74-82-8	
AK102 GCS	Analytical Method: Alaska 102 Preparation Method: EPA 3510								
DRO by AK 102	**0.27J**	mg/L	0.57	0.050	1	07/31/13 09:07	08/03/13 20:36		N2
Surrogates									
o-Terphenyl (S)	76	%	50-150		1	07/31/13 09:07	08/03/13 20:36	84-15-1	
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**1.2**	mg/L	0.10	0.050	1		07/31/13 14:41		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	134	%	60-120		1		07/31/13 14:41	98-08-8	1M

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ANALYTICAL RESULTS

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Sample: MW-11-072713 **Lab ID: 10236896004** Collected: 07/27/13 14:10 Received: 07/30/13 09:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**<0.00024**	mg/L	0.0010	0.00024	1		07/31/13 17:03	71-43-2	
Ethylbenzene	**0.0010**	mg/L	0.0010	0.00024	1		07/31/13 17:03	100-41-4	
Toluene	**<0.00023**	mg/L	0.0010	0.00023	1		07/31/13 17:03	108-88-3	
Xylene (Total)	**0.0019J**	mg/L	0.0030	0.00072	1		07/31/13 17:03	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	109	%	75-125		1		07/31/13 17:03	17060-07-0	
Toluene-d8 (S)	104	%	75-125		1		07/31/13 17:03	2037-26-5	
4-Bromofluorobenzene (S)	104	%	75-125		1		07/31/13 17:03	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**228**	mg/L	5.0	2.5	1		08/06/13 15:58		
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4								
Iron, Ferrous	**<0.015**	mg/L	0.20	0.015	1		08/07/13 17:41		H6
ASTM D516 Sulfate Water	Analytical Method: ASTM D516								
Sulfate	**16.6**	mg/L	2.5	1.2	1		08/06/13 11:26	14808-79-8	
SM4500NO2-B, Nitrite, unpres	Analytical Method: SM 4500-NO2 B								
Nitrite as N	**<0.050**	mg/L	0.10	0.050	1		07/30/13 15:36	14797-65-0	H3

Sample: Trip Blank-1-072713 **Lab ID: 10236896005** Collected: 07/27/13 00:00 Received: 07/30/13 09:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**<0.050**	mg/L	0.10	0.050	1		07/31/13 14:21		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	98	%	60-120		1		07/31/13 14:21	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**<0.00024**	mg/L	0.0010	0.00024	1		07/31/13 11:14	71-43-2	
Ethylbenzene	**<0.00024**	mg/L	0.0010	0.00024	1		07/31/13 11:14	100-41-4	
Toluene	**<0.00023**	mg/L	0.0010	0.00023	1		07/31/13 11:14	108-88-3	
Xylene (Total)	**<0.00072**	mg/L	0.0030	0.00072	1		07/31/13 11:14	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%	75-125		1		07/31/13 11:14	17060-07-0	
Toluene-d8 (S)	102	%	75-125		1		07/31/13 11:14	2037-26-5	
4-Bromofluorobenzene (S)	104	%	75-125		1		07/31/13 11:14	460-00-4	

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ANALYTICAL RESULTS

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Sample: MW-10-072713 **Lab ID: 10236896006** Collected: 07/27/13 16:15 Received: 07/30/13 09:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Methane	**0.11**	mg/L	0.0066	0.0033	1		07/31/13 10:26	74-82-8	
AK102 GCS	Analytical Method: Alaska 102 Preparation Method: EPA 3510								
DRO by AK 102	**1.0**	mg/L	0.50	0.044	1	07/31/13 09:07	08/03/13 20:59		N2
Surrogates									
o-Terphenyl (S)	74	%	50-150		1	07/31/13 09:07	08/03/13 20:59	84-15-1	
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**1.2**	mg/L	0.10	0.050	1		07/31/13 17:22		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	112	%	60-120		1		07/31/13 17:22	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**<0.00024**	mg/L	0.0010	0.00024	1		08/02/13 00:15	71-43-2	
Ethylbenzene	**0.083**	mg/L	0.0010	0.00024	1		08/02/13 00:15	100-41-4	
Toluene	**0.00037J**	mg/L	0.0010	0.00023	1		08/02/13 00:15	108-88-3	
Xylene (Total)	**0.21**	mg/L	0.0030	0.00072	1		08/02/13 00:15	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	95	%	75-125		1		08/02/13 00:15	17060-07-0	
Toluene-d8 (S)	102	%	75-125		1		08/02/13 00:15	2037-26-5	
4-Bromofluorobenzene (S)	96	%	75-125		1		08/02/13 00:15	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**246**	mg/L	5.0	2.5	1		08/06/13 16:02		
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4								
Iron, Ferrous	**<0.015**	mg/L	0.20	0.015	1		08/07/13 17:41		H6
ASTM D516 Sulfate Water	Analytical Method: ASTM D516								
Sulfate	**33.2**	mg/L	5.0	2.5	2		08/06/13 11:38	14808-79-8	
SM4500NO2-B, Nitrite, unpres	Analytical Method: SM 4500-NO2 B								
Nitrite as N	**<0.050**	mg/L	0.10	0.050	1		07/30/13 15:36	14797-65-0	H3

Sample: MW-9-072713 **Lab ID: 10236896007** Collected: 07/27/13 17:15 Received: 07/30/13 09:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Methane	**0.076**	mg/L	0.0066	0.0033	1		07/31/13 10:37	74-82-8	
AK102 GCS	Analytical Method: Alaska 102 Preparation Method: EPA 3510								
DRO by AK 102	**1.6**	mg/L	0.52	0.046	1	07/31/13 09:07	08/03/13 21:21		N2

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ANALYTICAL RESULTS

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Sample: MW-9-072713 **Lab ID: 10236896007** Collected: 07/27/13 17:15 Received: 07/30/13 09:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
AK102 GCS	Analytical Method: Alaska 102 Preparation Method: EPA 3510								
Surrogates									
o-Terphenyl (S)	79	%	50-150		1	07/31/13 09:07	08/03/13 21:21	84-15-1	
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**4.2**	mg/L	0.50	0.25	5		08/02/13 14:51		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	109	%	60-120		5		08/02/13 14:51	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**0.00058J**	mg/L	0.0010	0.00024	1		08/02/13 00:39	71-43-2	
Ethylbenzene	**0.12**	mg/L	0.0010	0.00024	1		08/02/13 00:39	100-41-4	
Toluene	**0.0019**	mg/L	0.0010	0.00023	1		08/02/13 00:39	108-88-3	
Xylene (Total)	**0.49**	mg/L	0.0030	0.00072	1		08/02/13 00:39	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	94	%	75-125		1		08/02/13 00:39	17060-07-0	
Toluene-d8 (S)	102	%	75-125		1		08/02/13 00:39	2037-26-5	
4-Bromofluorobenzene (S)	96	%	75-125		1		08/02/13 00:39	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**240**	mg/L	5.0	2.5	1		08/06/13 16:06		
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4								
Iron, Ferrous	**<0.015**	mg/L	0.20	0.015	1		08/07/13 17:42		H6
ASTM D516 Sulfate Water	Analytical Method: ASTM D516								
Sulfate	**7.5**	mg/L	2.5	1.2	1		08/06/13 11:29	14808-79-8	
SM4500NO2-B, Nitrite, unpres	Analytical Method: SM 4500-NO2 B								
Nitrite as N	**<0.050**	mg/L	0.10	0.050	1		07/30/13 15:38	14797-65-0	H3

Sample: MW-5-072713 **Lab ID: 10236896008** Collected: 07/27/13 18:15 Received: 07/30/13 09:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Methane	**0.047**	mg/L	0.0066	0.0033	1		07/31/13 10:47	74-82-8	
AK102 GCS	Analytical Method: Alaska 102 Preparation Method: EPA 3510								
DRO by AK 102	**2.5**	mg/L	0.48	0.042	1	07/31/13 09:07	08/03/13 21:43		N2
Surrogates									
o-Terphenyl (S)	75	%	50-150		1	07/31/13 09:07	08/03/13 21:43	84-15-1	

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ANALYTICAL RESULTS

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Sample: MW-5-072713 **Lab ID: 10236896008** Collected: 07/27/13 18:15 Received: 07/30/13 09:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**1.6**	mg/L	0.20	0.10	2		08/02/13 14:10		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	120	%	60-120		2		08/02/13 14:10	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**0.00049J**	mg/L	0.0010	0.00024	1		08/02/13 01:03	71-43-2	
Ethylbenzene	**0.0014**	mg/L	0.0010	0.00024	1		08/02/13 01:03	100-41-4	
Toluene	**<0.00023**	mg/L	0.0010	0.00023	1		08/02/13 01:03	108-88-3	
Xylene (Total)	**0.0076**	mg/L	0.0030	0.00072	1		08/02/13 01:03	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	94	%	75-125		1		08/02/13 01:03	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1		08/02/13 01:03	2037-26-5	
4-Bromofluorobenzene (S)	94	%	75-125		1		08/02/13 01:03	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**227**	mg/L	5.0	2.5	1		08/06/13 16:28		
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4								
Iron, Ferrous	**<0.015**	mg/L	0.20	0.015	1		08/07/13 17:43		H6
ASTM D516 Sulfate Water	Analytical Method: ASTM D516								
Sulfate	**13.7**	mg/L	2.5	1.2	1		08/06/13 11:29	14808-79-8	
SM4500NO2-B, Nitrite, unpres	Analytical Method: SM 4500-NO2 B								
Nitrite as N	**<0.050**	mg/L	0.10	0.050	1		07/30/13 15:39	14797-65-0	H3

Sample: DUP-1-072713 **Lab ID: 10236896009** Collected: 07/27/13 00:00 Received: 07/30/13 09:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
RSK 175 AIR Headspace	Analytical Method: RSK 175								
Methane	**0.045**	mg/L	0.0066	0.0033	1		07/31/13 10:58	74-82-8	
AK102 GCS	Analytical Method: Alaska 102 Preparation Method: EPA 3510								
DRO by AK 102	**2.2**	mg/L	0.50	0.044	1	07/31/13 09:07	08/03/13 22:06		N2
Surrogates									
o-Terphenyl (S)	74	%	50-150		1	07/31/13 09:07	08/03/13 22:06	84-15-1	
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**1.6**	mg/L	0.20	0.10	2		08/02/13 14:31		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	122	%	60-120		2		08/02/13 14:31	98-08-8	1M

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ANALYTICAL RESULTS

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Sample: DUP-1-072713 **Lab ID: 10236896009** Collected: 07/27/13 00:00 Received: 07/30/13 09:00 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**0.00051J**	mg/L	0.0010	0.00024	1		08/02/13 01:28	71-43-2	
Ethylbenzene	**0.0013**	mg/L	0.0010	0.00024	1		08/02/13 01:28	100-41-4	
Toluene	**<0.00023**	mg/L	0.0010	0.00023	1		08/02/13 01:28	108-88-3	
Xylene (Total)	**0.0071**	mg/L	0.0030	0.00072	1		08/02/13 01:28	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	93	%	75-125		1		08/02/13 01:28	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1		08/02/13 01:28	2037-26-5	
4-Bromofluorobenzene (S)	96	%	75-125		1		08/02/13 01:28	460-00-4	
2320B Alkalinity	Analytical Method: SM 2320B								
Alkalinity, Total as CaCO3	**235**	mg/L	5.0	2.5	1		08/06/13 16:32		
Iron, Ferrous	Analytical Method: SM 3500-Fe B#4								
Iron, Ferrous	**<0.015**	mg/L	0.20	0.015	1		08/07/13 17:39		H6
ASTM D516 Sulfate Water	Analytical Method: ASTM D516								
Sulfate	**13.4**	mg/L	2.5	1.2	1		08/06/13 11:29	14808-79-8	
SM4500NO2-B, Nitrite, unpres	Analytical Method: SM 4500-NO2 B								
Nitrite as N	**<0.050**	mg/L	0.10	0.050	1		07/30/13 15:39	14797-65-0	H3

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QUALITY CONTROL DATA

Project: 065003 Chevron 211079
Pace Project No.: 10236896

QC Batch: AIR/17906 Analysis Method: RSK 175
QC Batch Method: RSK 175 Analysis Description: RSK 175 AIR HEADSPACE
Associated Lab Samples: 10236896001, 10236896002, 10236896003, 10236896004, 10236896006, 10236896007, 10236896008, 10236896009

METHOD BLANK: 1491273 Matrix: Water
Associated Lab Samples: 10236896001, 10236896002, 10236896003, 10236896004, 10236896006, 10236896007, 10236896008, 10236896009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Methane	mg/L	<0.0033	0.0066	07/31/13 09:10	

LABORATORY CONTROL SAMPLE & LCSD: 1491274 1491275

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Methane	mg/L	.061	0.057	0.057	94	94	85-115	.03	20	

SAMPLE DUPLICATE: 1491276

Parameter	Units	60149754001 Result	Dup Result	RPD	Max RPD	Qualifiers
Methane	mg/L	17.9 ug/L	0.013	29	20	R1

SAMPLE DUPLICATE: 1491277

Parameter	Units	10236983003 Result	Dup Result	RPD	Max RPD	Qualifiers
Methane	mg/L	450 ug/L	0.43	6	20	

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QUALITY CONTROL DATA

Project: 065003 Chevron 211079
Pace Project No.: 10236896

QC Batch: GCV/11133 — Analysis Method: Alaska 101
QC Batch Method: Alaska 101 — Analysis Description: AK101W GCV Water
Associated Lab Samples: 10236896001, 10236896002, 10236896003, 10236896004, 10236896005, 10236896006

METHOD BLANK: 1490809 — Matrix: Water
Associated Lab Samples: 10236896001, 10236896002, 10236896003, 10236896004, 10236896005, 10236896006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
AK101 Gasoline Range Organics	mg/L	<0.050	0.10	07/31/13 12:27	N2
a,a,a-Trifluorotoluene (S)	%	99	60-120	07/31/13 12:27	

LABORATORY CONTROL SAMPLE & LCSD: 1490810 1490811

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
AK101 Gasoline Range Organics	mg/L	1	1.0	0.95	105	95	60-120	9	20	N2
a,a,a-Trifluorotoluene (S)	%				105	104	60-120			

MATRIX SPIKE SAMPLE: 1494797

Parameter	Units	10236896001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
AK101 Gasoline Range Organics	mg/L	<0.050	1	1.2	115	70-142	N2
a,a,a-Trifluorotoluene (S)	%				109	60-120	

SAMPLE DUPLICATE: 1494798

Parameter	Units	10236896002 Result	Dup Result	RPD	Max RPD	Qualifiers
AK101 Gasoline Range Organics	mg/L	0.72	0.70	3	30	N2
a,a,a-Trifluorotoluene (S)	%	110	108	2		

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QUALITY CONTROL DATA

Project: 065003 Chevron 211079
Pace Project No.: 10236896

QC Batch: GCV/11144 — Analysis Method: Alaska 101
QC Batch Method: Alaska 101 — Analysis Description: AK101W GCV Water
Associated Lab Samples: 10236896007, 10236896008, 10236896009

METHOD BLANK: 1492458 — Matrix: Water
Associated Lab Samples: 10236896007, 10236896008, 10236896009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
AK101 Gasoline Range Organics	mg/L	<0.050	0.10	08/02/13 12:42	N2
a,a,a-Trifluorotoluene (S)	%	98	60-120	08/02/13 12:42	

LABORATORY CONTROL SAMPLE & LCSD: 1492459 1492460

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
AK101 Gasoline Range Organics	mg/L	1	1.0	0.99	101	99	60-120	2	20	N2
a,a,a-Trifluorotoluene (S)	%				104	90	60-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1493186 1493187

Parameter	Units	10237254006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
AK101 Gasoline Range Organics	mg/L	ND	1	1	1.2	1.2	120	119	70-142	.6	30	N2
a,a,a-Trifluorotoluene (S)	%						106	107	60-120			

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QUALITY CONTROL DATA

Project: 065003 Chevron 211079
Pace Project No.: 10236896

QC Batch: MSV/24473 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 10236896004, 10236896005

METHOD BLANK: 1490877 | Matrix: Water
Associated Lab Samples: 10236896004, 10236896005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	mg/L	<0.00024	0.0010	07/31/13 10:58	
Ethylbenzene	mg/L	<0.00024	0.0010	07/31/13 10:58	
Toluene	mg/L	<0.00023	0.0010	07/31/13 10:58	
Xylene (Total)	mg/L	<0.00072	0.0030	07/31/13 10:58	
1,2-Dichloroethane-d4 (S)	%	107	75-125	07/31/13 10:58	
4-Bromofluorobenzene (S)	%	103	75-125	07/31/13 10:58	
Toluene-d8 (S)	%	102	75-125	07/31/13 10:58	

LABORATORY CONTROL SAMPLE: 1490878

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	mg/L	.02	0.019	96	75-125	
Ethylbenzene	mg/L	.02	0.018	90	75-125	
Toluene	mg/L	.02	0.019	94	75-125	
Xylene (Total)	mg/L	.06	0.057	95	75-125	
1,2-Dichloroethane-d4 (S)	%			107	75-125	
4-Bromofluorobenzene (S)	%			102	75-125	
Toluene-d8 (S)	%			101	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1491183 1491184

Parameter	Units	10237035004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	mg/L	ND	.1	.1	0.071	0.069	71	68	70-135	3	30	M1
Ethylbenzene	mg/L	ND	.1	.1	0.078	0.073	78	73	75-125	7	30	M1
Toluene	mg/L	ND	.1	.1	0.074	0.072	74	71	75-125	4	30	M1
Xylene (Total)	mg/L	ND	.3	.3	0.24	0.23	79	75	75-125	4	30	ES
1,2-Dichloroethane-d4 (S)	%						108	109	75-125			
4-Bromofluorobenzene (S)	%						102	103	75-125			
Toluene-d8 (S)	%						102	102	75-125			

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QUALITY CONTROL DATA

Project: 065003 Chevron 211079
Pace Project No.: 10236896

QC Batch: MSV/24478 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 10236896001, 10236896002, 10236896006, 10236896007, 10236896008, 10236896009

METHOD BLANK: 1491309 Matrix: Water
Associated Lab Samples: 10236896001, 10236896002, 10236896006, 10236896007, 10236896008, 10236896009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	mg/L	<0.00024	0.0010	08/01/13 20:37	
Ethylbenzene	mg/L	<0.00024	0.0010	08/01/13 20:37	
Toluene	mg/L	<0.00023	0.0010	08/01/13 20:37	
Xylene (Total)	mg/L	<0.00072	0.0030	08/01/13 20:37	
1,2-Dichloroethane-d4 (S)	%	98	75-125	08/01/13 20:37	
4-Bromofluorobenzene (S)	%	98	75-125	08/01/13 20:37	
Toluene-d8 (S)	%	103	75-125	08/01/13 20:37	

LABORATORY CONTROL SAMPLE: 1491310

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	mg/L	.02	0.020	102	75-125	
Ethylbenzene	mg/L	.02	0.021	104	75-125	
Toluene	mg/L	.02	0.021	105	75-125	
Xylene (Total)	mg/L	.06	0.064	106	75-125	
1,2-Dichloroethane-d4 (S)	%			92	75-125	
4-Bromofluorobenzene (S)	%			96	75-125	
Toluene-d8 (S)	%			103	75-125	

MATRIX SPIKE SAMPLE: 1491311

Parameter	Units	10236896001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	mg/L	<0.00024	.02	0.020	98	70-135	
Ethylbenzene	mg/L	<0.00024	.02	0.020	99	75-125	
Toluene	mg/L	<0.00023	.02	0.020	100	75-125	
Xylene (Total)	mg/L	<0.00072	.06	0.061	101	75-125	
1,2-Dichloroethane-d4 (S)	%				95	75-125	
4-Bromofluorobenzene (S)	%				97	75-125	
Toluene-d8 (S)	%				103	75-125	

SAMPLE DUPLICATE: 1491312

Parameter	Units	10236896002 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	mg/L	0.0015	0.0015	.7	30	
Ethylbenzene	mg/L	0.011	0.011	3	30	
Toluene	mg/L	<0.00023	<0.00023		30	
Xylene (Total)	mg/L	0.17	0.17	.4	30	
1,2-Dichloroethane-d4 (S)	%	97	96	.7		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 065003 Chevron 211079
Pace Project No.: 10236896

SAMPLE DUPLICATE: 1491312

Parameter	Units	10236896002 Result	Dup Result	RPD	Max RPD	Qualifiers
4-Bromofluorobenzene (S)	%	96	95	.8		
Toluene-d8 (S)	%	101	101	.7		

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QUALITY CONTROL DATA

Project: 065003 Chevron 211079
Pace Project No.: 10236896

QC Batch: MSV/24492
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 10236896003

METHOD BLANK: 1493012
Matrix: Water
Associated Lab Samples: 10236896003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	mg/L	<0.00024	0.0010	08/02/13 11:34	
Ethylbenzene	mg/L	<0.00024	0.0010	08/02/13 11:34	
Toluene	mg/L	<0.00023	0.0010	08/02/13 11:34	
Xylene (Total)	mg/L	<0.00072	0.0030	08/02/13 11:34	
1,2-Dichloroethane-d4 (S)	%	115	75-125	08/02/13 11:34	
4-Bromofluorobenzene (S)	%	105	75-125	08/02/13 11:34	
Toluene-d8 (S)	%	103	75-125	08/02/13 11:34	

LABORATORY CONTROL SAMPLE: 1493013

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	mg/L	.02	0.022	109	75-125	
Ethylbenzene	mg/L	.02	0.020	101	75-125	
Toluene	mg/L	.02	0.021	105	75-125	
Xylene (Total)	mg/L	.06	0.062	103	75-125	
1,2-Dichloroethane-d4 (S)	%			116	75-125	
4-Bromofluorobenzene (S)	%			106	75-125	
Toluene-d8 (S)	%			104	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1493014 1493015

Parameter	Units	10237254006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	mg/L	ND	.02	.02	0.023	0.022	114	111	70-135	3	30	
Ethylbenzene	mg/L	ND	.02	.02	0.022	0.021	108	105	75-125	4	30	
Toluene	mg/L	ND	.02	.02	0.022	0.022	112	108	75-125	4	30	
Xylene (Total)	mg/L	ND	.06	.06	0.065	0.063	108	105	75-125	3	30	
1,2-Dichloroethane-d4 (S)	%						116	114	75-125			
4-Bromofluorobenzene (S)	%						105	105	75-125			
Toluene-d8 (S)	%						104	102	75-125			

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QUALITY CONTROL DATA

Project: 065003 Chevron 211079
Pace Project No.: 10236896

QC Batch: OEXT/22484 Analysis Method: Alaska 102
QC Batch Method: EPA 3510 Analysis Description: AK102 GCS
Associated Lab Samples: 10236896001, 10236896002, 10236896003, 10236896004, 10236896006, 10236896007, 10236896008, 10236896009

METHOD BLANK: 1490734 Matrix: Water
Associated Lab Samples: 10236896001, 10236896002, 10236896003, 10236896004, 10236896006, 10236896007, 10236896008, 10236896009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
DRO by AK 102	mg/L	0.022J	0.25	08/03/13 17:59	N2
o-Terphenyl (S)	%	85	60-120	08/03/13 17:59	

LABORATORY CONTROL SAMPLE & LCSD: 1490735 1490736

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
DRO by AK 102	mg/L	1	0.76	0.91	76	91	75-125	18	20	N2
o-Terphenyl (S)	%				86	64	60-120			

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QUALITY CONTROL DATA

Project: 065003 Chevron 211079
Pace Project No.: 10236896

QC Batch: WET/31638 — Analysis Method: SM 2320B
QC Batch Method: SM 2320B — Analysis Description: 2320B Alkalinity
Associated Lab Samples: 10236896001, 10236896002, 10236896003, 10236896004, 10236896006, 10236896007, 10236896008, 10236896009

METHOD BLANK: 1494780 — Matrix: Water
Associated Lab Samples: 10236896001, 10236896002, 10236896003, 10236896004, 10236896006, 10236896007, 10236896008, 10236896009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<2.5	5.0	08/06/13 14:15	

LABORATORY CONTROL SAMPLE & LCSD: 1494781 1494782

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	41.7	41.8	104	104	90-110	.1	30	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1494783 1494784

Parameter	Units	10237391001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	108	40	40	149	147	103	99	80-120	1	30	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1494785 1494786

Parameter	Units	10236896007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	240	40	40	277	284	92	110	80-120	3	30	

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QUALITY CONTROL DATA

Project: 065003 Chevron 211079
Pace Project No.: 10236896

QC Batch: WET/42722 — Analysis Method: SM 3500-Fe B#4
QC Batch Method: SM 3500-Fe B#4 — Analysis Description: Iron, Ferrous
Associated Lab Samples: 10236896001, 10236896002, 10236896003, 10236896004, 10236896006, 10236896007, 10236896008, 10236896009

METHOD BLANK: 1231243 — Matrix: Water
Associated Lab Samples: 10236896001, 10236896002, 10236896003, 10236896004, 10236896006, 10236896007, 10236896008, 10236896009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Ferrous	mg/L	<0.015	0.20	08/07/13 17:38	H6

LABORATORY CONTROL SAMPLE: 1231244

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	2	2.0	100	90-118	H6

MATRIX SPIKE SAMPLE: 1231245

Parameter	Units	10236896009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	<0.015	2	2.3	114	59-145	H6

SAMPLE DUPLICATE: 1231246

Parameter	Units	10236896001 Result	Dup Result	RPD	Max RPD	Qualifiers
Iron, Ferrous	mg/L	<0.015	<0.015		23	H6

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QUALITY CONTROL DATA

Project: 065003 Chevron 211079
Pace Project No.: 10236896

QC Batch: WETA/15688 — Analysis Method: ASTM D516
QC Batch Method: ASTM D516 — Analysis Description: ASTM D516 Sulfate Water
Associated Lab Samples: 10236896001, 10236896002, 10236896003, 10236896004, 10236896006, 10236896007, 10236896008, 10236896009

METHOD BLANK: 1495003 — Matrix: Water
Associated Lab Samples: 10236896001, 10236896002, 10236896003, 10236896004, 10236896006, 10236896007, 10236896008, 10236896009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	<1.2	2.5	08/06/13 11:18	

LABORATORY CONTROL SAMPLE: 1495004

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	7.5	7.5	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1495005 — 1495006

Parameter	Units	10236709001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	ND	20	20	20.3	20.7	101	103	80-120	2	30	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1495007 — 1495008

Parameter	Units	10236896004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	16.6	20	20	35.1	35.0	92	92	80-120	.3	30	

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QUALITY CONTROL DATA

Project: 065003 Chevron 211079
Pace Project No.: 10236896

QC Batch: WETA/15630 Analysis Method: SM 4500-NO2 B
QC Batch Method: SM 4500-NO2 B Analysis Description: SM4500NO2-B, Nitrite, unpres
Associated Lab Samples: 10236896001, 10236896002, 10236896003, 10236896004, 10236896006, 10236896007, 10236896008, 10236896009

METHOD BLANK: 1490024 Matrix: Water
Associated Lab Samples: 10236896001, 10236896002, 10236896003, 10236896004, 10236896006, 10236896007, 10236896008, 10236896009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrite as N	mg/L	<0.050	0.10	07/30/13 15:36	

LABORATORY CONTROL SAMPLE: 1490025

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	.3	0.31	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1490026 1490027

Parameter	Units	10236809006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrite as N	mg/L	ND	.3	.3	0.22	0.22	71	70	80-120	.9	30	M1

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QUALIFIERS

Project: 065003 Chevron 211079
Pace Project No.: 10236896

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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TNI - The NELAC Institute.

LABORATORIES

PASI-K	Pace Analytical Services - Kansas City
PASI-M	Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

1M	Surrogate recovery outside laboratory control limits due to matrix interferences.
ES	The reported result is estimated because one or more of the constituent results are qualified as such.
H3	Sample was received or analysis requested beyond the recognized method holding time.
H6	Analysis initiated outside of the 15 minute EPA recommended holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N2	The lab does not hold TNI accreditation for this parameter.
R1	RPD value was outside control limits.

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

METHOD CROSS REFERENCE TABLE

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Parameter	Matrix	Analytical Method	Preparation Method
8260 MSV UST	Water	SW-846 8260B/5030B	N/A

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10236896001	**MW-4-072713**	RSK 175	AIR/17906		
10236896002	**MW-2-072713**	RSK 175	AIR/17906		
10236896003	**MW-1-072713**	RSK 175	AIR/17906		
10236896004	**MW-11-072713**	RSK 175	AIR/17906		
10236896006	**MW-10-072713**	RSK 175	AIR/17906		
10236896007	**MW-9-072713**	RSK 175	AIR/17906		
10236896008	**MW-5-072713**	RSK 175	AIR/17906		
10236896009	**DUP-1-072713**	RSK 175	AIR/17906		
10236896001	**MW-4-072713**	EPA 3510	OEXT/22484	Alaska 102	GCSV/11779
10236896002	**MW-2-072713**	EPA 3510	OEXT/22484	Alaska 102	GCSV/11779
10236896003	**MW-1-072713**	EPA 3510	OEXT/22484	Alaska 102	GCSV/11779
10236896004	**MW-11-072713**	EPA 3510	OEXT/22484	Alaska 102	GCSV/11779
10236896006	**MW-10-072713**	EPA 3510	OEXT/22484	Alaska 102	GCSV/11779
10236896007	**MW-9-072713**	EPA 3510	OEXT/22484	Alaska 102	GCSV/11779
10236896008	**MW-5-072713**	EPA 3510	OEXT/22484	Alaska 102	GCSV/11779
10236896009	**DUP-1-072713**	EPA 3510	OEXT/22484	Alaska 102	GCSV/11779
10236896001	**MW-4-072713**	Alaska 101	GCV/11133		
10236896002	**MW-2-072713**	Alaska 101	GCV/11133		
10236896003	**MW-1-072713**	Alaska 101	GCV/11133		
10236896004	**MW-11-072713**	Alaska 101	GCV/11133		
10236896005	**Trip Blank-1-072713**	Alaska 101	GCV/11133		
10236896006	**MW-10-072713**	Alaska 101	GCV/11133		
10236896007	**MW-9-072713**	Alaska 101	GCV/11144		
10236896008	**MW-5-072713**	Alaska 101	GCV/11144		
10236896009	**DUP-1-072713**	Alaska 101	GCV/11144		
10236896001	**MW-4-072713**	EPA 8260	MSV/24478		
10236896002	**MW-2-072713**	EPA 8260	MSV/24478		
10236896003	**MW-1-072713**	EPA 8260	MSV/24492		
10236896004	**MW-11-072713**	EPA 8260	MSV/24473		
10236896005	**Trip Blank-1-072713**	EPA 8260	MSV/24473		
10236896006	**MW-10-072713**	EPA 8260	MSV/24478		
10236896007	**MW-9-072713**	EPA 8260	MSV/24478		
10236896008	**MW-5-072713**	EPA 8260	MSV/24478		
10236896009	**DUP-1-072713**	EPA 8260	MSV/24478		
10236896001	**MW-4-072713**	SM 2320B	WET/31638		
10236896002	**MW-2-072713**	SM 2320B	WET/31638		
10236896003	**MW-1-072713**	SM 2320B	WET/31638		
10236896004	**MW-11-072713**	SM 2320B	WET/31638		
10236896006	**MW-10-072713**	SM 2320B	WET/31638		
10236896007	**MW-9-072713**	SM 2320B	WET/31638		
10236896008	**MW-5-072713**	SM 2320B	WET/31638		
10236896009	**DUP-1-072713**	SM 2320B	WET/31638		
10236896001	**MW-4-072713**	SM 3500-Fe B#4	WET/42722		
10236896002	**MW-2-072713**	SM 3500-Fe B#4	WET/42722		

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1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 065003 Chevron 211079
Pace Project No.: 10236896

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10236896003	**MW-1-072713**	SM 3500-Fe B#4	WET/42722		
10236896004	**MW-11-072713**	SM 3500-Fe B#4	WET/42722		
10236896006	**MW-10-072713**	SM 3500-Fe B#4	WET/42722		
10236896007	**MW-9-072713**	SM 3500-Fe B#4	WET/42722		
10236896008	**MW-5-072713**	SM 3500-Fe B#4	WET/42722		
10236896009	**DUP-1-072713**	SM 3500-Fe B#4	WET/42722		
10236896001	**MW-4-072713**	ASTM D516	WETA/15688		
10236896002	**MW-2-072713**	ASTM D516	WETA/15688		
10236896003	**MW-1-072713**	ASTM D516	WETA/15688		
10236896004	**MW-11-072713**	ASTM D516	WETA/15688		
10236896006	**MW-10-072713**	ASTM D516	WETA/15688		
10236896007	**MW-9-072713**	ASTM D516	WETA/15688		
10236896008	**MW-5-072713**	ASTM D516	WETA/15688		
10236896009	**DUP-1-072713**	ASTM D516	WETA/15688		
10236896001	**MW-4-072713**	SM 4500-NO2 B	WETA/15630		
10236896002	**MW-2-072713**	SM 4500-NO2 B	WETA/15630		
10236896003	**MW-1-072713**	SM 4500-NO2 B	WETA/15630		
10236896004	**MW-11-072713**	SM 4500-NO2 B	WETA/15630		
10236896006	**MW-10-072713**	SM 4500-NO2 B	WETA/15630		
10236896007	**MW-9-072713**	SM 4500-NO2 B	WETA/15630		
10236896008	**MW-5-072713**	SM 4500-NO2 B	WETA/15630		
10236896009	**DUP-1-072713**	SM 4500-NO2 B	WETA/15630		

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CHAIN-OF-CUSTODY / Analytical Request Document

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

1124

10236896

Page: 1 of 1

1630667

Section A Required Client Information:

Company: CRA
Address: 14998 W. 6th Ave #800, Golden, CO 80401
Email To: spritchard@crworld.com
Phone: 720.974.0563 Fax: —
Requested Due Date/TAT: 2 wks

Section B Required Project Information:

Report To: Siobhan Pritchard
Copy To: Nick Greco
Purchase Order No.: 065003
Project Name: Chevron 211079
Project Number: 065003

Section C Invoice Information:

Attention: Siobhan Pritchard
Company Name: CRA
Address:
Pace Quote Reference:
Pace Project Manager: Jenni Gross
Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☒ OTHER ADEC

Site Location STATE: AK

Section D Required Client Information

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	GRO (AK101)	BTEX (8260)	Methane (RSK175)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-4-072713	WT	G	—	—	7/27/13	1045		9	X			X					X	X	X		10236896001
2	MW-2-072713	WT	G	—	—	7/27/13	1205		9	X			X					X	X	X		002
3	MW-1-072715	WT	G	—	—	7/27/13	1315		9	X			X					X	X	X		003
4	MW-11-072713	WT	G	—	—	7/27/13	1410		9	X			X					X	X	X		004
5	TripBlank-1-072713	WT		—	—	7/27/13	—		4				X					X	X			005
6	MW-10-072713	WT	G	—	—	7/27/13	1815		9	X			X					X	X	X		006
7	MW-9-072713	WT	G	—	—	7/27/13	1715		9	X			X					X	X	X		007
8	MW-5-072713	WT	G	—	—	7/27/13	1815		9	X			X					X	X	X		008
9	DUP-1-072713	WT	G	—	—	7/27/13	—		9	X			X					X	X	X		009
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
• Report in mg/L	/CRA	7/29/13	0800		7-30-13	09:00
• Report w/ case narrative + Chrons						

SAMPLE CONDITIONS: Temp in °C 4.2; Received on Ice (Y/N) Y; Custody Sealed Cooler (Y/N) Y; Samples Intact (Y/N) Y

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Nick Greco
SIGNATURE of SAMPLER:
DATE Signed (MM/DD/YY): 07/29/13

ORIGINAL

F-ALL-Q-020rev.07, 15-May-2007

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CHAIN-OF-CUSTODY / Analytical Request Document

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

10236896

1150

Page: 1 of 1

1630667

Section A Required Client Information:

Company: CRA
Address: 14998 W. 6th Ave, #800
Golden, CO 80401
Email To: spritchard@crawarh.com
Phone: 720.974.0963 Fax: —
Requested Due Date/TAT: 2 wks

Section B Required Project Information:

Report To: Siobhan Pritchard
Copy To: Nick Greco
Purchase Order No.: 065003
Project Name: Chevron 211079
Project Number: 065003

Section C Invoice Information:

Attention: Siobhan Pritchard
Company Name: CRA
Address:
Pace Quote Reference:
Pace Project Manager: Jenni Gross
Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☒ OTHER ADEC

Site Location STATE: AK

Section D Required Client Information

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

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

Requested Analysis Filtered (Y/N): Y

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	COLLECTED Composite Start TIME	COLLECTED Composite End/Grab DATE	COLLECTED Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	DRO (AK102)	Nitrate (300)	Sulfate (300)	Ferrous Iron	Alkalinity (2320)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-4-072713	WT	G	—	—	7/27/13	1045		3	X			X					X	X	X	X	X		001
2	MW-2-072713	WT	G	—	—	7/27/13	1205		3	X			X					X	X	X	X	X		002
3	MW-1-072713	WT	G	—	—	7/27/13	1315		3	X			X					X	X	X	X	X		003
4	MW-11-072713	WT	G	—	—	7/27/13	1410		3	X			X					X	X	X	X	X		004
5	~~Fi~~																							
6	MW-10-072713	WT	G	—	—	7/27/13	1615		3	X			X					X	X	X	X	X		006
7																								
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
• Report in mg/L	CRA	7/29/13	0800	Pace	7/30/13	900	4.7	Y	N	Y
• Report w/ case narrative + Chrom							39			

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Nick Greco
SIGNATURE of SAMPLER:
DATE Signed (MM/DD/YY): 07/29/13

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

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

F-ALL-Q-020rev.07, 15-May-2007

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CHAIN-OF-CUSTODY / Analytical Request Document

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

SHORT HOLD, 7/29/13

10236896

Page: 1 of 1

1630668

Section A Required Client Information:

Company: CRA
Address: 14998 W. 6th Ave #800, Golden, CO 80401
Email To: spritchard@CRAworld.com
Phone: 720.574.0963 Fax: —
Requested Due Date/TAT: 2 wks

Section B Required Project Information:

Report To: Siobhan Pritchard
Copy To: Nick Greco
Purchase Order No.: 065003
Project Name: Chevron 211079
Project Number: 065003

Section C Invoice Information:

Attention: Siobhan Pritchard
Company Name: CRA
Address:
Pace Quote Reference:
Pace Project Manager: Jenni Gross
Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☒ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☒ OTHER ADEC

Site Location STATE: AK

Requested Analysis Filtered (Y/N)

Section D Required Client Information

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

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

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	DRO (AK102)	Nitrate (300)	Sulfate (300)	Ferrous Iron	Alkalinity (2320)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
																		Y							
1	MW-9-072713	WT	G	—	—	7/27/13	1715	[illegible]	3	X			X						X	X	X	X	X		007
2	MW-5-072713	WT	G	—	—	7/27/13	1815	[illegible]	3	X			X						X	X	X	X	X		008
3	DUP-1-072713	WT	G	—	—	7/27/13	—	[illegible]	3	X			X						X	X	X	X	X		009
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
• Report in mg/L	[signature] / CRA	07/29/13	0800	[signature] / PAC	7/29-13	0900	2.0	Y	Y	Y
• Report w/ case narrative + chrons					7/30-13					

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Nick Greco

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM/DD/YY): 07/29/13

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

ORIGINAL

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical

CUSTODY SEAL

SIGNATURE

DATE 07/29/13

Pace Analytical®

CUSTODY SEAL

SIGNATURE

DATE 07/29/15

Pace Analytical®

CUSTODY SEAL

SIGNATURE

DATE 07/29/13

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 28Jan2013 Page 1 of 1
	Document No.: F-MN-L-213-rev.06	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: CRA

Project #: WO# : 10236896

10236896

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

Tracking Number: 8020 4473 0006

Optional: Proj. Due Date: Proj. Name:

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No Seals Intact? ☑ Yes ☐ No

Temp Blank? ☑ Yes ☐ No

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other:

Thermom. Used: ☑ 88A912167504 ☐ 80512447 ☐ 72337080 Type of Ice: ☑ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temp Read (°C): 1-8 Cooler Temp Corrected (°C): 2.0 Biological Tissue Frozen? ☐ Yes ☐ No

Temp should be above freezing to 6°C Correction Factor: +0.2 Date and Initials of Person Examining Contents: CJ 7.30.13 ~~7.29.13~~ 7.30.13

Comments:

Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	☐ N/A	3.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☑ Yes	☐ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	11.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	☑ Yes	☐ No	☐ N/A	12.
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	☐ Yes	☐ No	☑ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH>12)	☐ Yes	☐ No	☑ N/A	
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	☐ Yes	☑ No		Initial when completed: Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☑ N/A	14.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	15.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	
Pace Trip Blank Lot # (if purchased):				

Field Data Required? ☐ Yes ☐ No

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: Siohban @ CRA Date/Time: 7/30/13 14:12 Phone

Comments/Resolution:

OK to report Nitrite by SM4500 and Sulfate by ASTM D516. 07/30/13

Project Manager Review: [illegible] Date: 7/30/13

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 28Jan2013 Page 1 of 1
	Document No.: F-MN-L-213-rev.06	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: CRA

Project #: 10236896

Courier: [X] Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace [ ] Other:

Tracking Number: 7958 0263 5932, 5921

Optional: Proj. Due Date: Proj. Name:

Custody Seal on Cooler/Box Present? [X] Yes [ ] No **Seals Intact?** [X] Yes [ ] No

Packing Material: [X] Bubble Wrap [X] Bubble Bags [ ] None [ ] Other:

Temp Blank? [X] Yes [ ] No

Thermom. Used: [X] B88A912167504 [ ] 80512447 [ ] 72337080 **Type of Ice:** [X] Wet [ ] Blue [ ] None [ ] Samples on ice, cooling process has begun

Cooler Temp Read (°C): 4.0, 3.7 **Cooler Temp Corrected (°C):** 4.2, 3.9 **Biological Tissue Frozen?** [ ] Yes [ ] No

Temp should be above freezing to 6°C **Correction Factor:** Add 0.2 **Date and Initials of Person Examining Contents:** 7-30-13 JF

				Comments:
Chain of Custody Present?	[X] Yes	[ ] No	[ ] N/A	1.
Chain of Custody Filled Out?	[X] Yes	[ ] No	[ ] N/A	2.
Chain of Custody Relinquished?	[X] Yes	[ ] No	[ ] N/A	3.
Sampler Name and/or Signature on COC?	[X] Yes	[ ] No	[ ] N/A	4.
Samples Arrived within Hold Time?	[X] Yes	[ ] No	[ ] N/A	5.
Short Hold Time Analysis (<72 hr)?	[ ] Yes	[X] No	[ ] N/A	6.
Rush Turn Around Time Requested?	[ ] Yes	[X] No	[ ] N/A	7.
Sufficient Volume?	[X] Yes	[ ] No	[ ] N/A	8.
Correct Containers Used?	[X] Yes	[ ] No	[ ] N/A	9.
-Pace Containers Used?	[X] Yes	[ ] No	[ ] N/A	
Containers Intact?	[X] Yes	[ ] No	[ ] N/A	10.
Filtered Volume Received for Dissolved Tests?	[ ] Yes	[ ] No	[X] N/A	11.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	[ ] Yes	[X] No	[ ] N/A	12. NO IDS ON SAMPLES - LABEL ON OUTER BAG.
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	[ ] Yes	[ ] No	[X] N/A	13. [ ] HNO_3 [ ] H_2SO_4 [ ] NaOH [ ] HCl Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH>12)	[ ] Yes	[ ] No	[X] N/A	
(Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water))	[X] Yes	[ ] No		Initial when completed: JA Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	[ ] Yes	[X] No	[ ] N/A	14.
Trip Blank Present?	[X] Yes	[ ] No	[ ] N/A	15.
Trip Blank Custody Seals Present?	[ ] Yes	[X] No	[ ] N/A	
Pace Trip Blank Lot # (if purchased):				

Field Data Required? [ ] Yes [ ] No

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: ~~Sarah~~ Siobhan@CRA **Date/Time:** 7/30/13 14:12 Phone

Comments/Resolution: OK TO report nitrate by 4500 and sulfate by ASTM D516. QC 7/30/13

Project Manager Review: JENNI GOSS **Date:** 7/30/13

Note: Whenever there's a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Data File: \\192.168.10.12\chem\10gcv6.i\073113a-2.b/073113012.d

Report Date: 08/05/2013

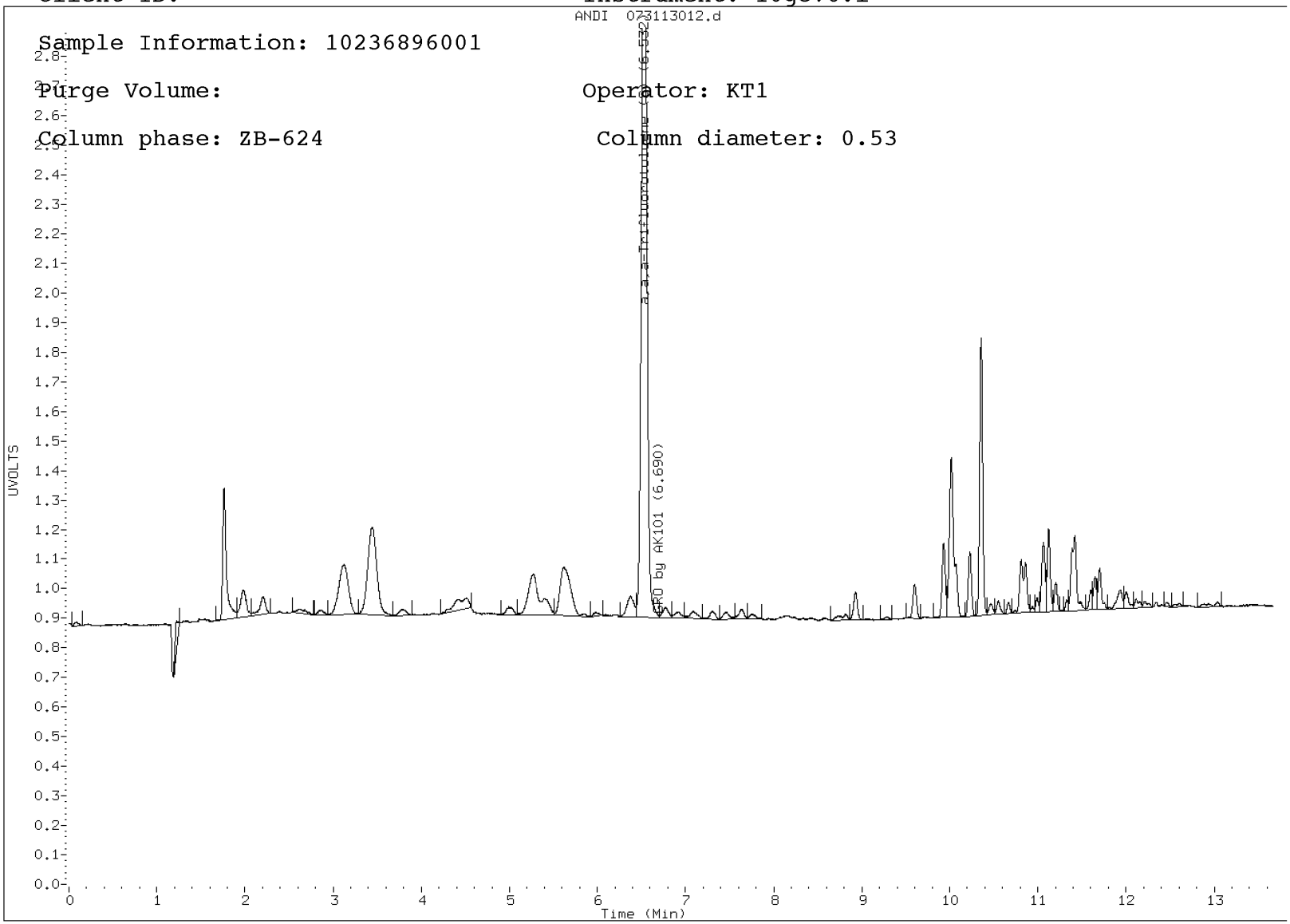
Sample ID: 10236896001

Client ID: Instrument: 10gcv6.i

Sample Information: 10236896001

Purge Volume: Operator: KT1

Column phase: ZB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv6.i\073113a-2.b/073113010.d

Report Date: 08/05/2013

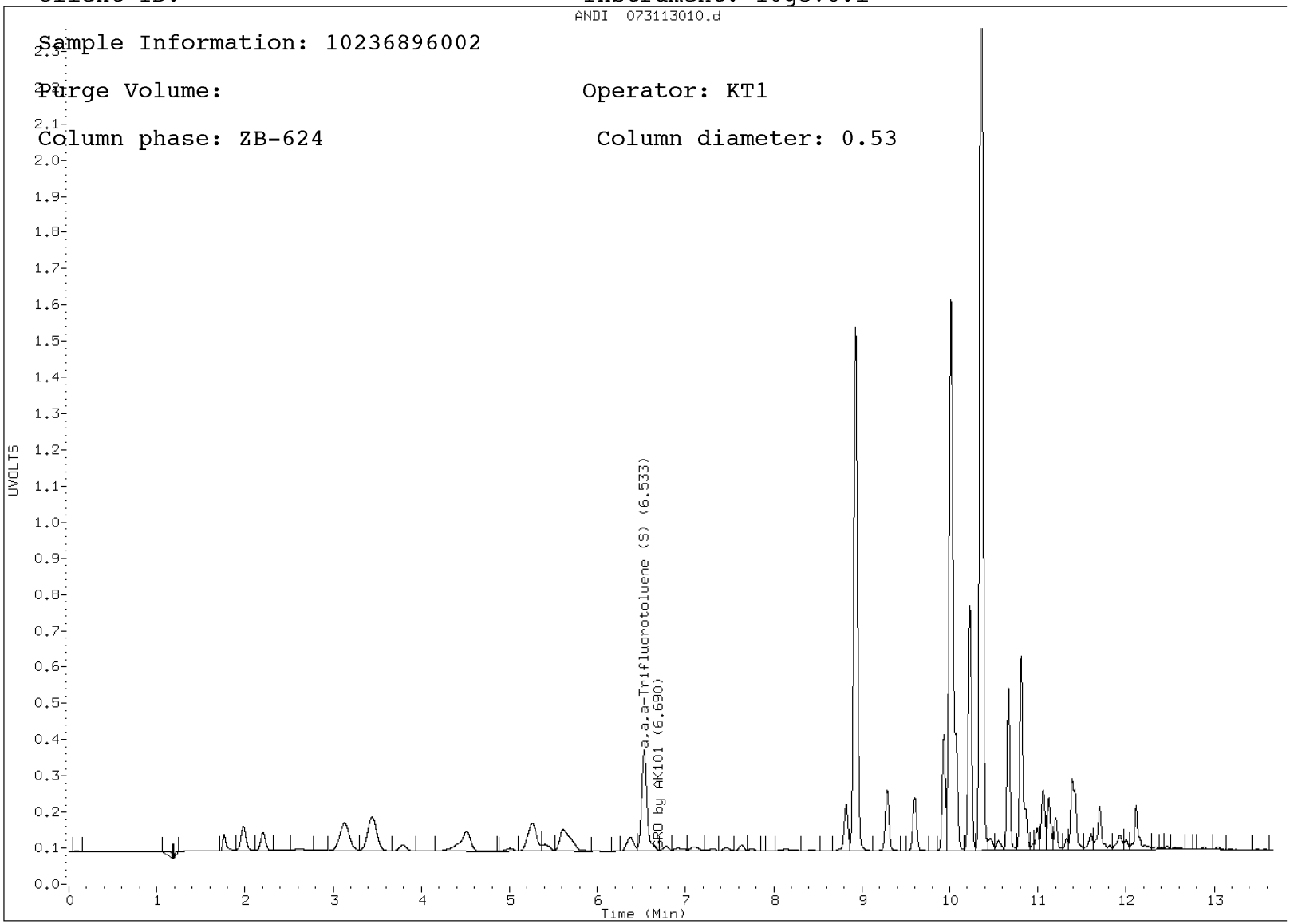
Sample ID: 10236896002

Client ID: Instrument: 10gcv6.i

Sample Information: 10236896002

Purge Volume: Operator: KT1

Column phase: ZB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv6.i\073113a-2.b/073113009.d

Report Date: 08/05/2013

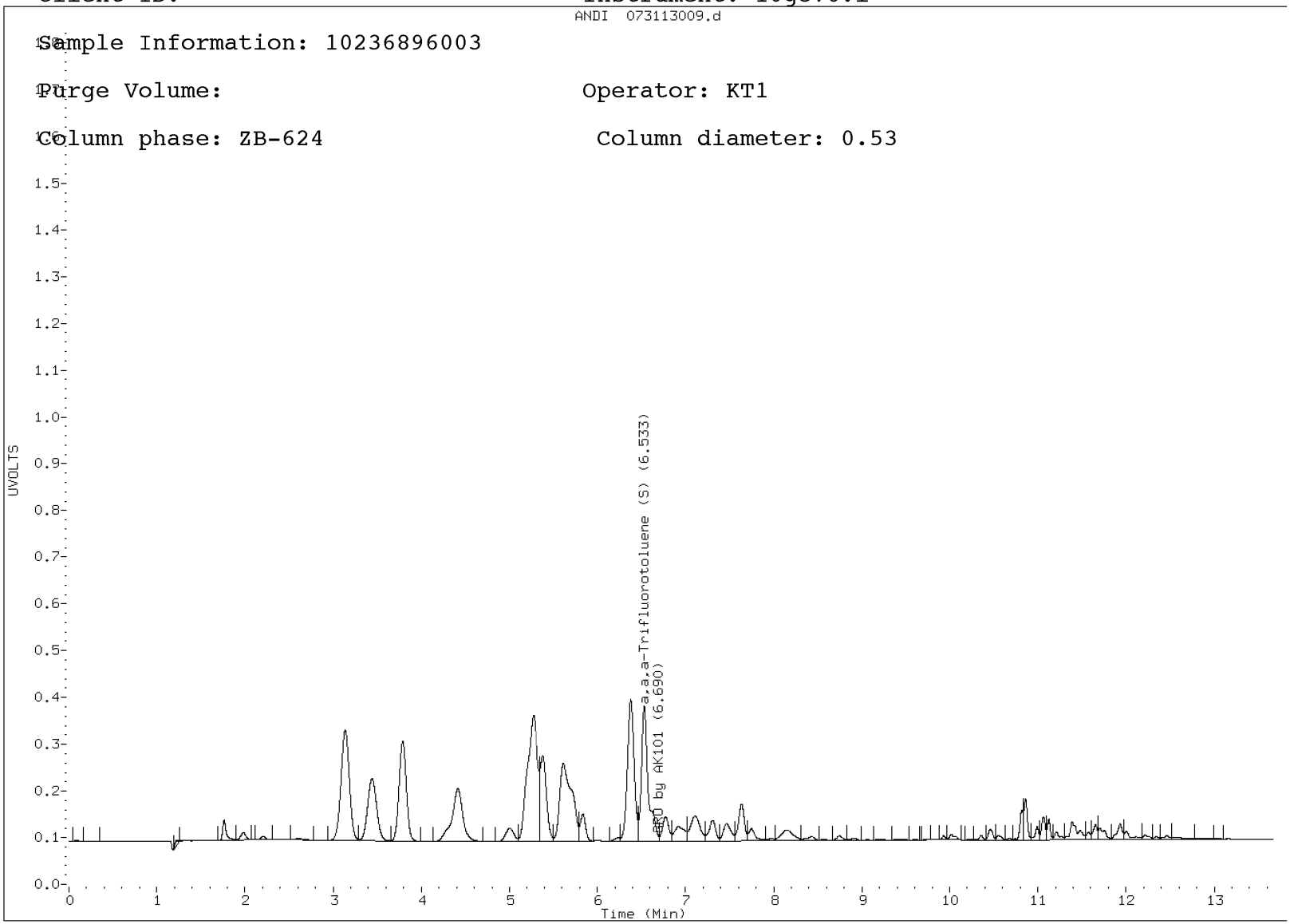
Sample ID: 10236896003

Client ID: Instrument: 10gcv6.i

Sample Information: 10236896003

Purge Volume: Operator: KT1

Column phase: ZB-624 Column diameter: 0.53



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Report Date: 08/05/2013

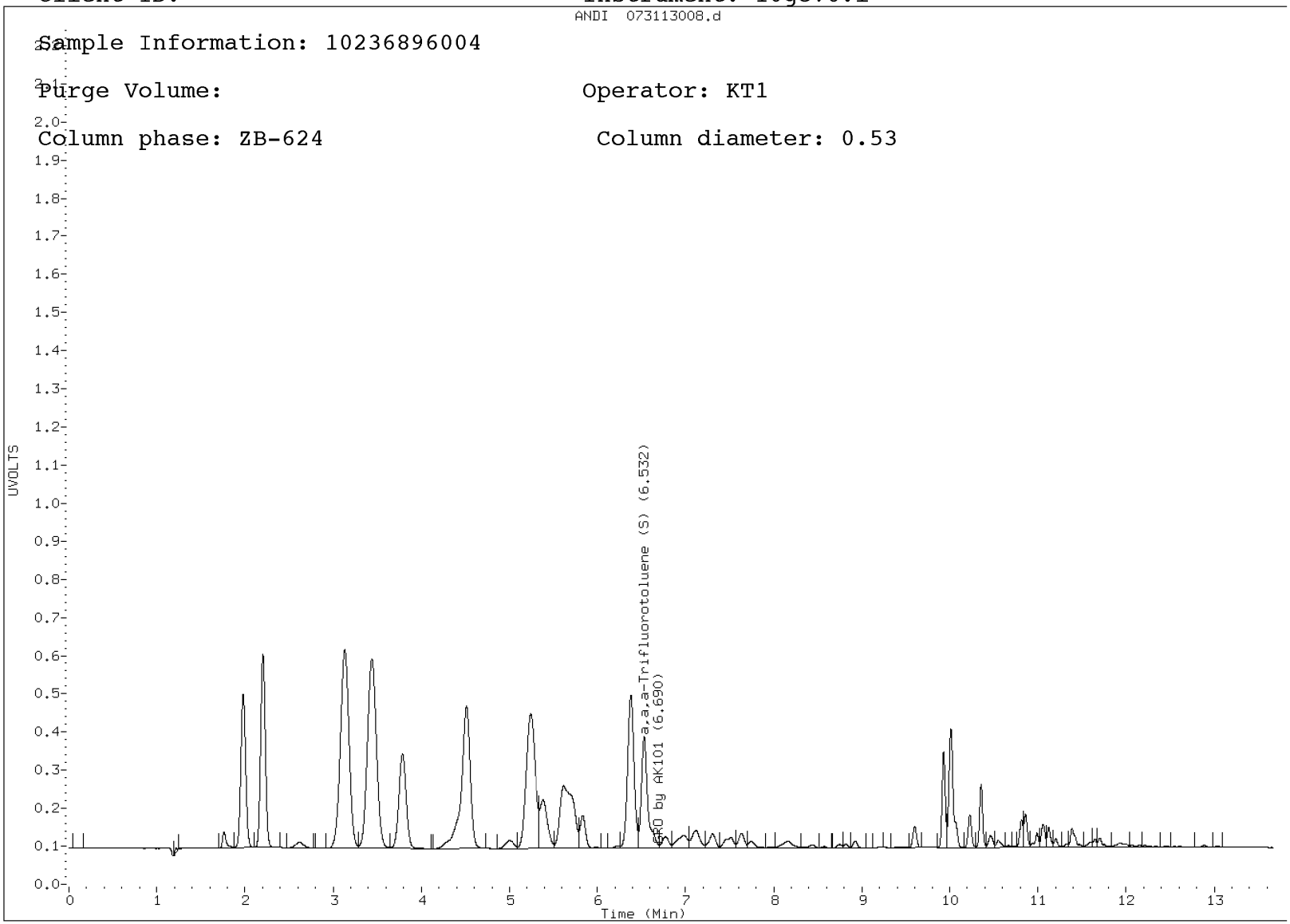
Sample ID: 10236896004

Client ID: Instrument: 10gcv6.i

Sample Information: 10236896004

Purge Volume: Operator: KT1

Column phase: ZB-624 Column diameter: 0.53



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Report Date: 08/05/2013

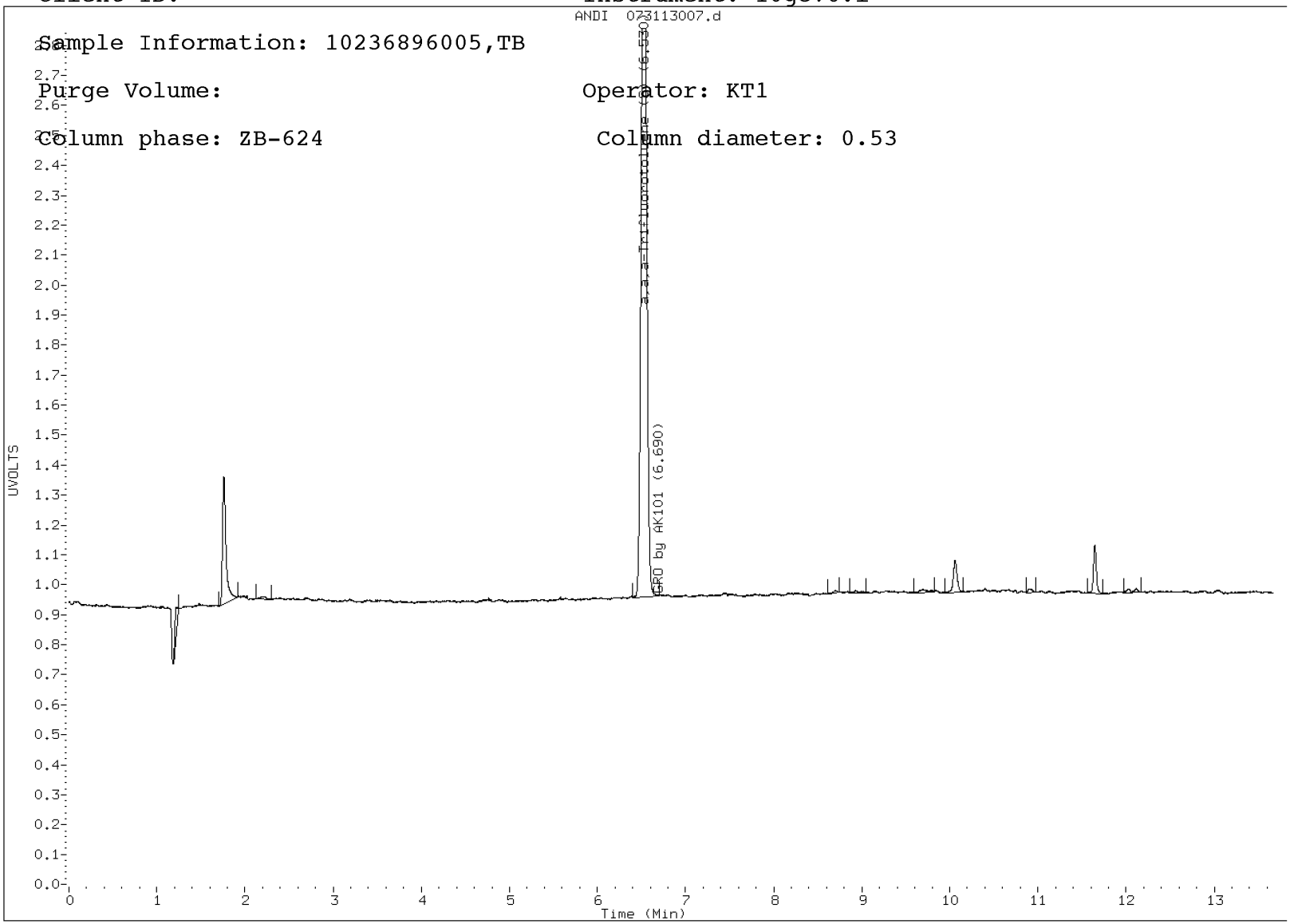
Sample ID: 10236896005

Client ID: Instrument: 10gcv6.i

Sample Information: 10236896005,TB

Purge Volume: Operator: KT1

Column phase: ZB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv6.i\073113a-2.b/073113016.d

Report Date: 08/05/2013

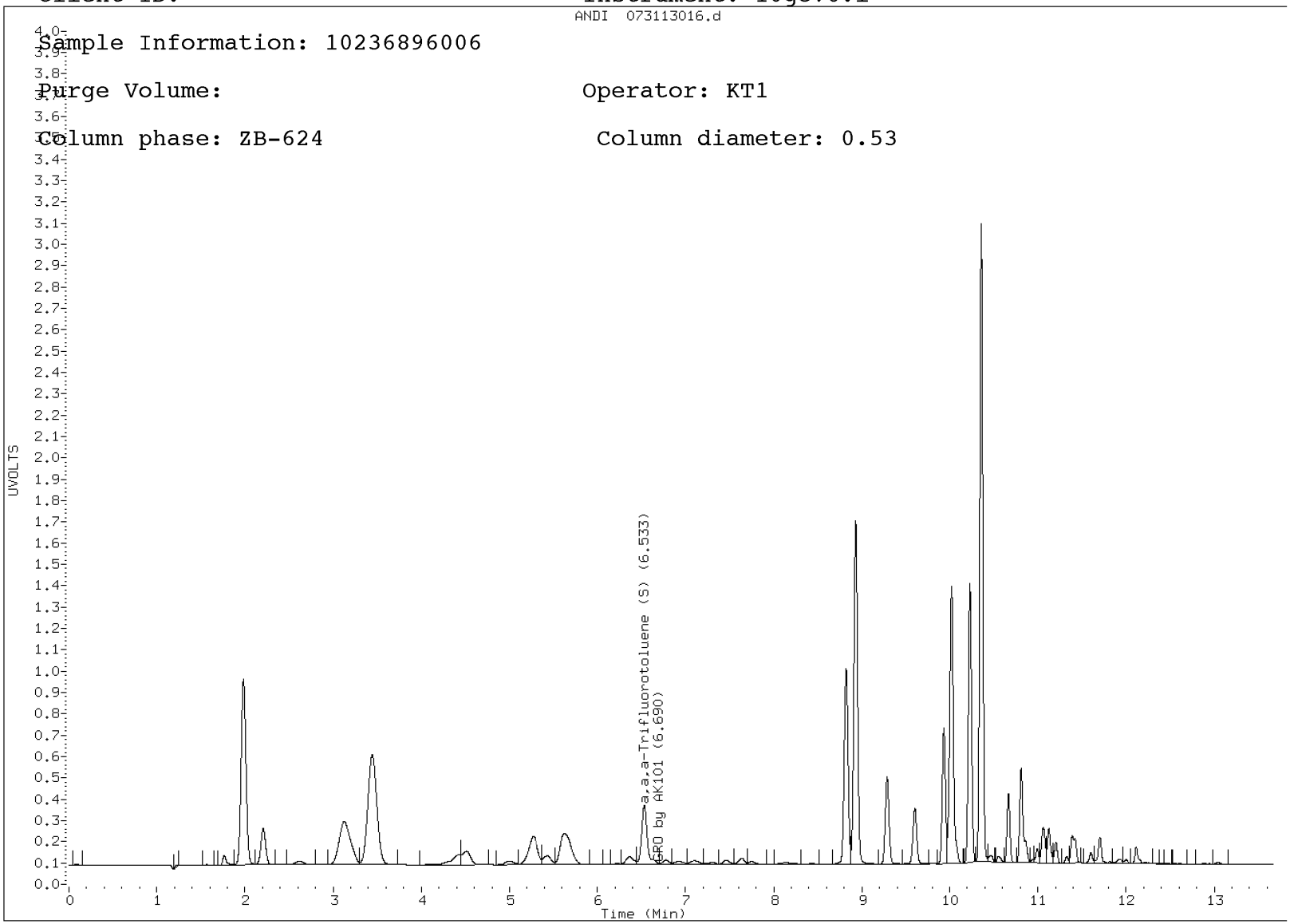
Sample ID: 10236896006

Client ID: Instrument: 10gcv6.i

Sample Information: 10236896006

Purge Volume: Operator: KT1

Column phase: ZB-624 Column diameter: 0.53



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Report Date: 08/05/2013

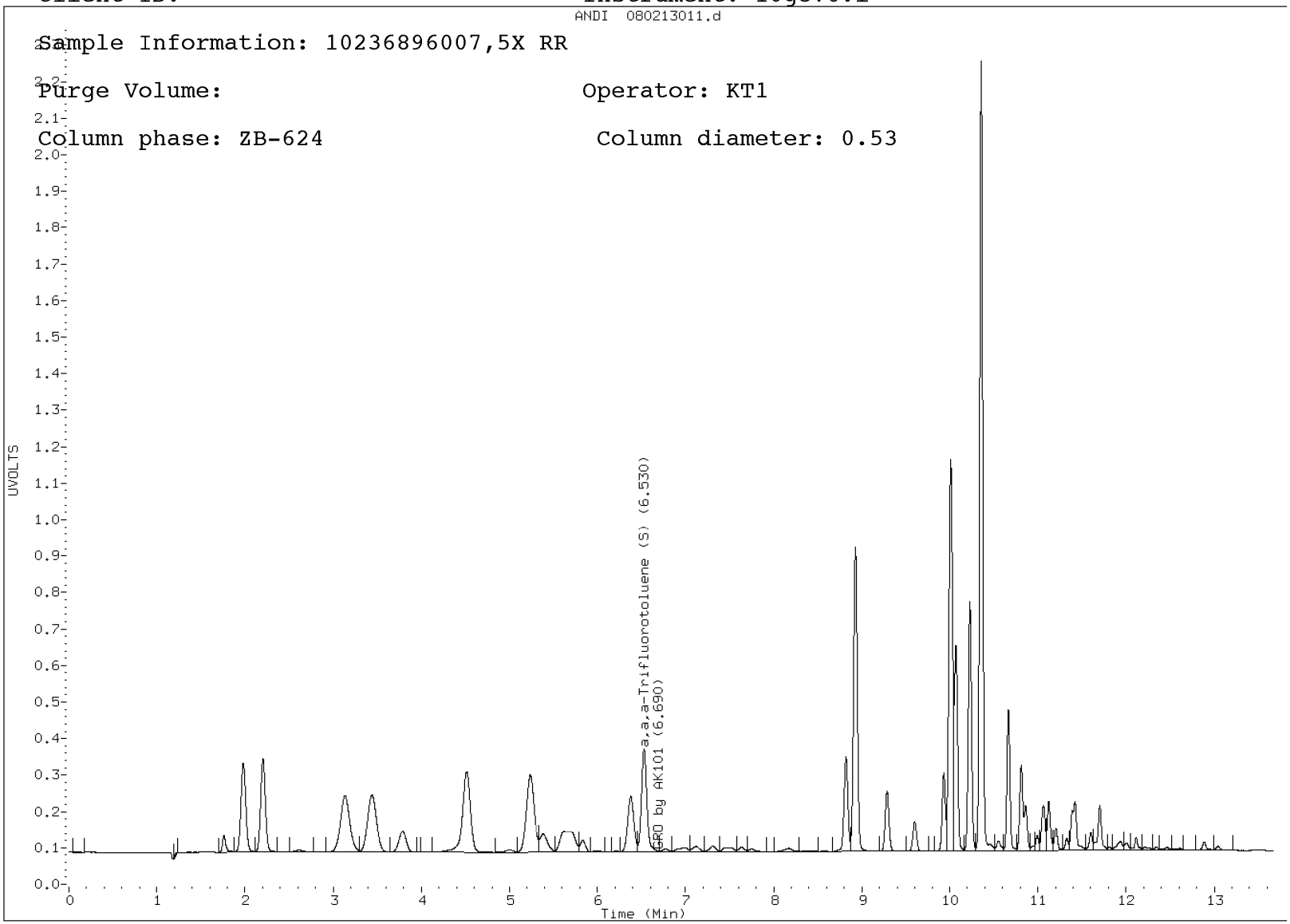
Sample ID: 10236896007

Client ID: Instrument: 10gcv6.i

Sample Information: 10236896007,5X RR

Purge Volume: Operator: KT1

Column phase: ZB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv6.i\080213a-2.b/080213009.d

Report Date: 08/05/2013

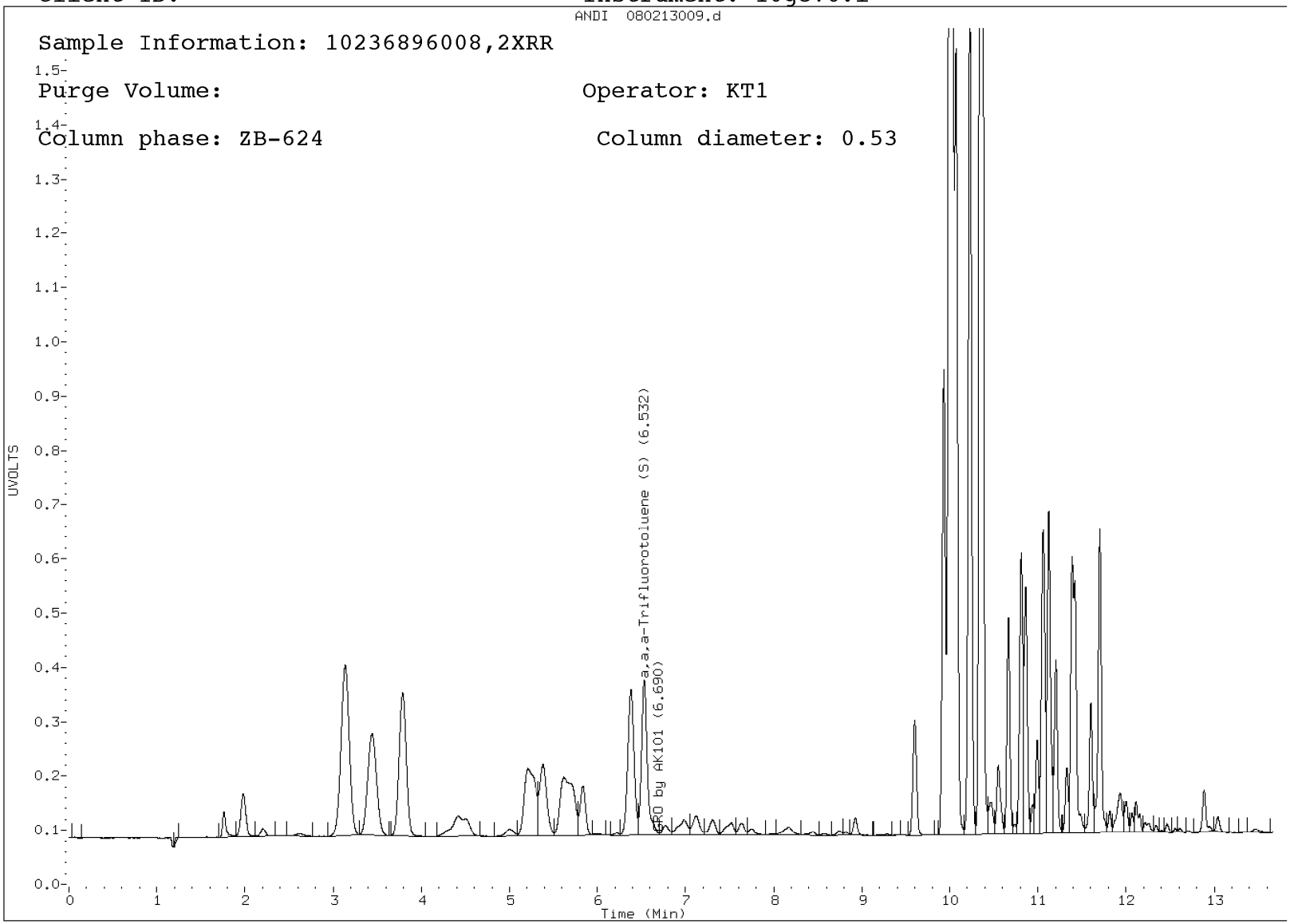
Sample ID: 10236896008

Client ID: Instrument: 10gcv6.i

Sample Information: 10236896008,2XRR

Purge Volume: Operator: KT1

Column phase: ZB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv6.i\080213a-2.b/080213010.d

Report Date: 08/05/2013

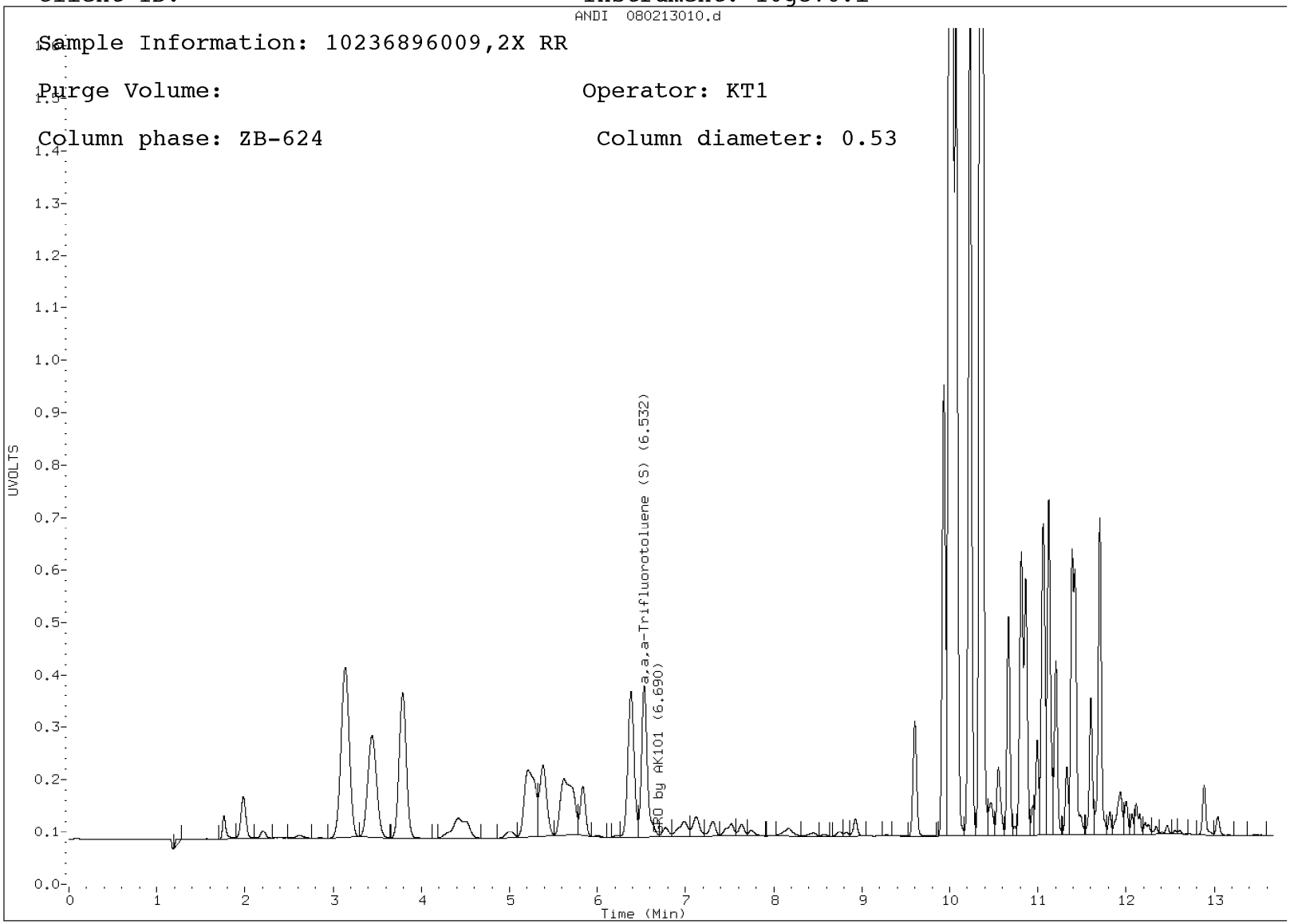
Sample ID: 10236896009

Client ID: Instrument: 10gcv6.i

Sample Information: 10236896009,2X RR

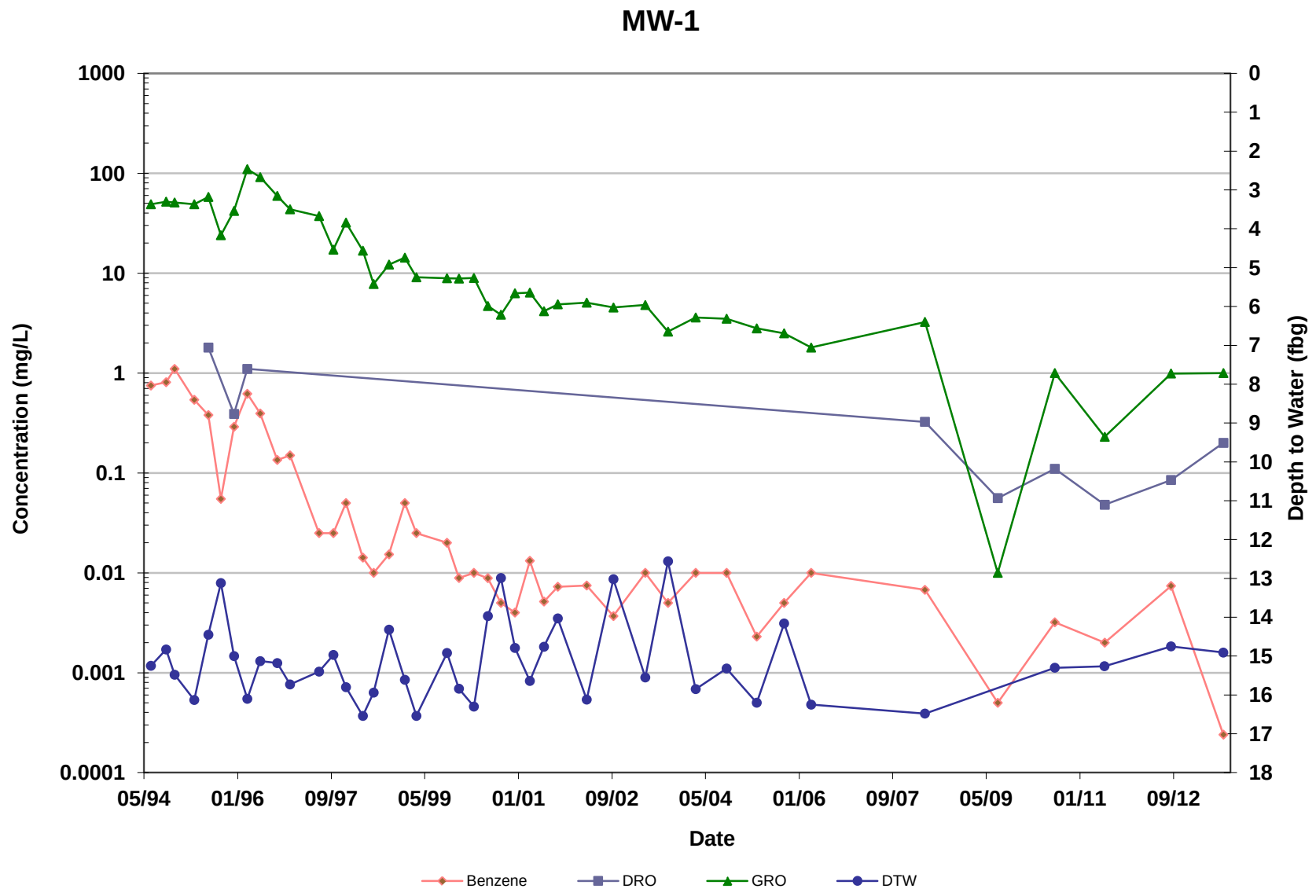
Purge Volume: Operator: KT1

Column phase: ZB-624 Column diameter: 0.53



Appendix E

Petroleum Hydrocarbon Concentration Graphs



Former Texaco Service Station 21-1079
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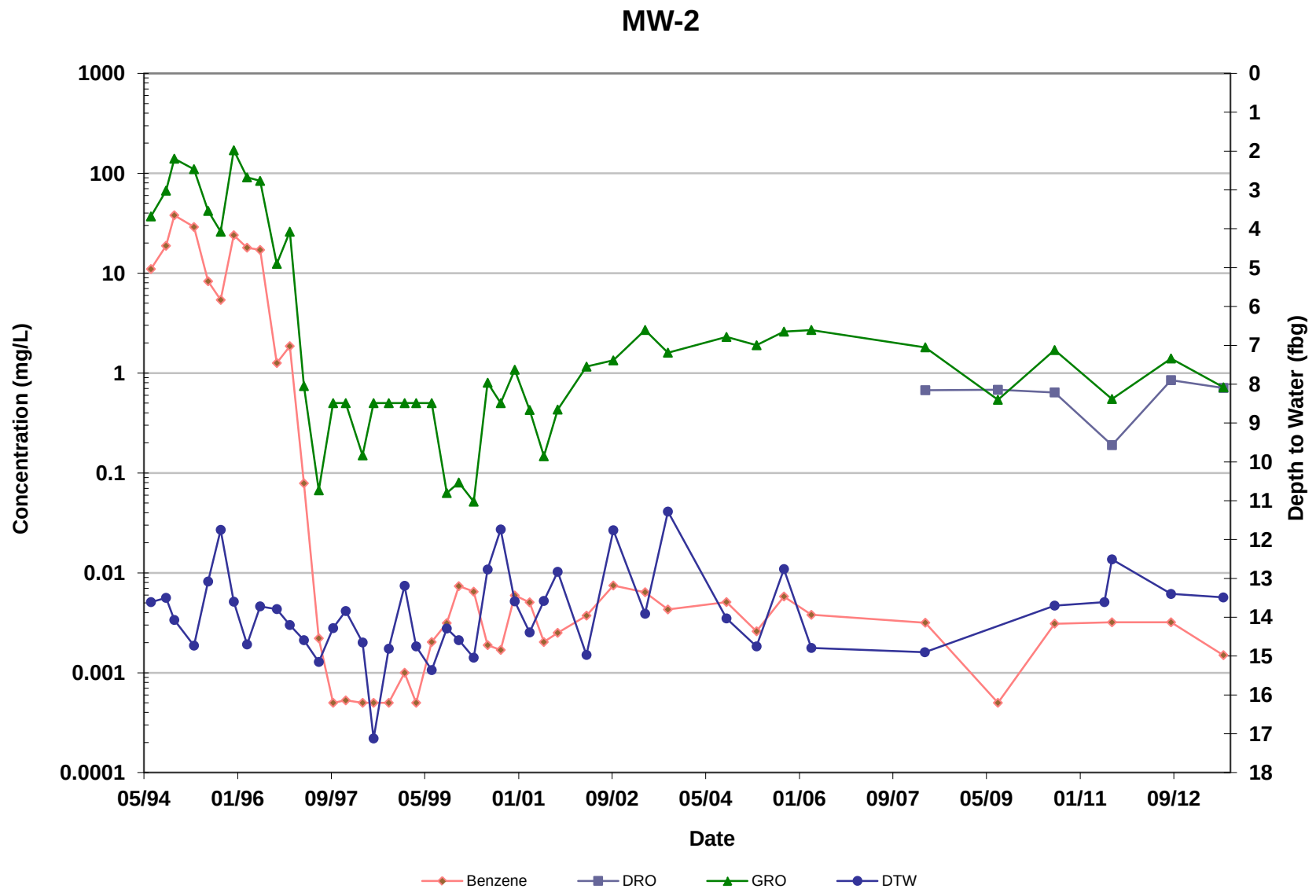
Fairbanks, Alaska



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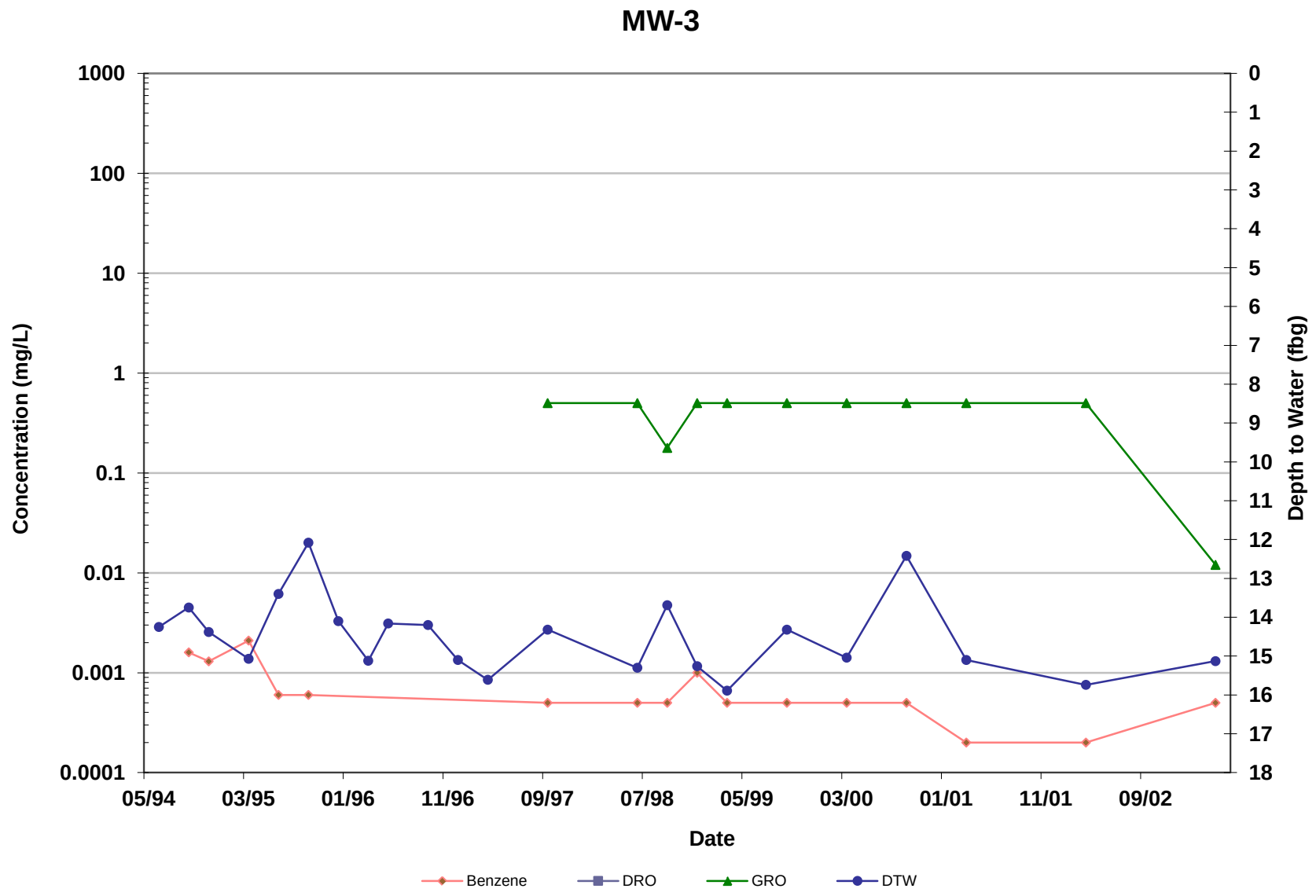

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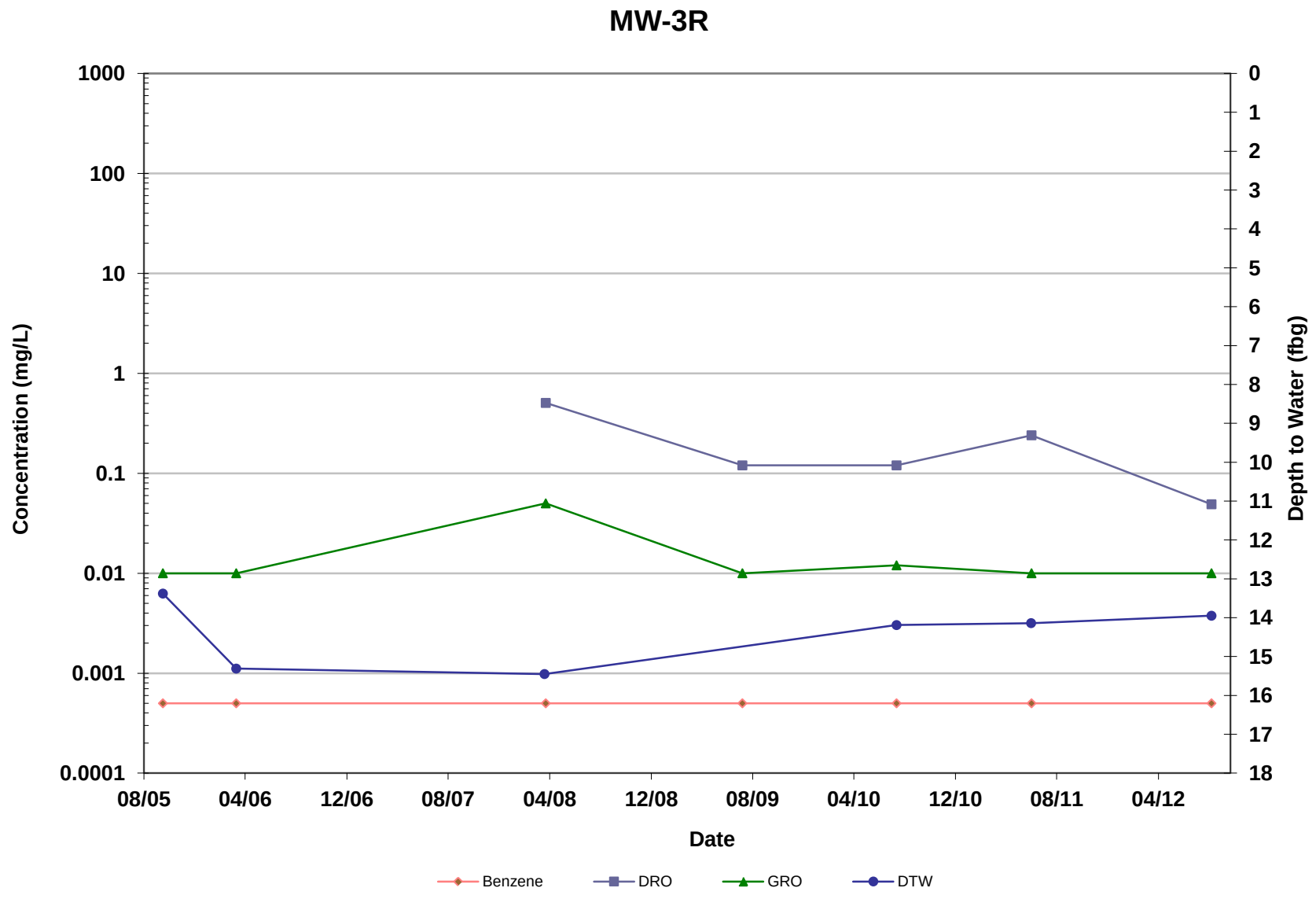

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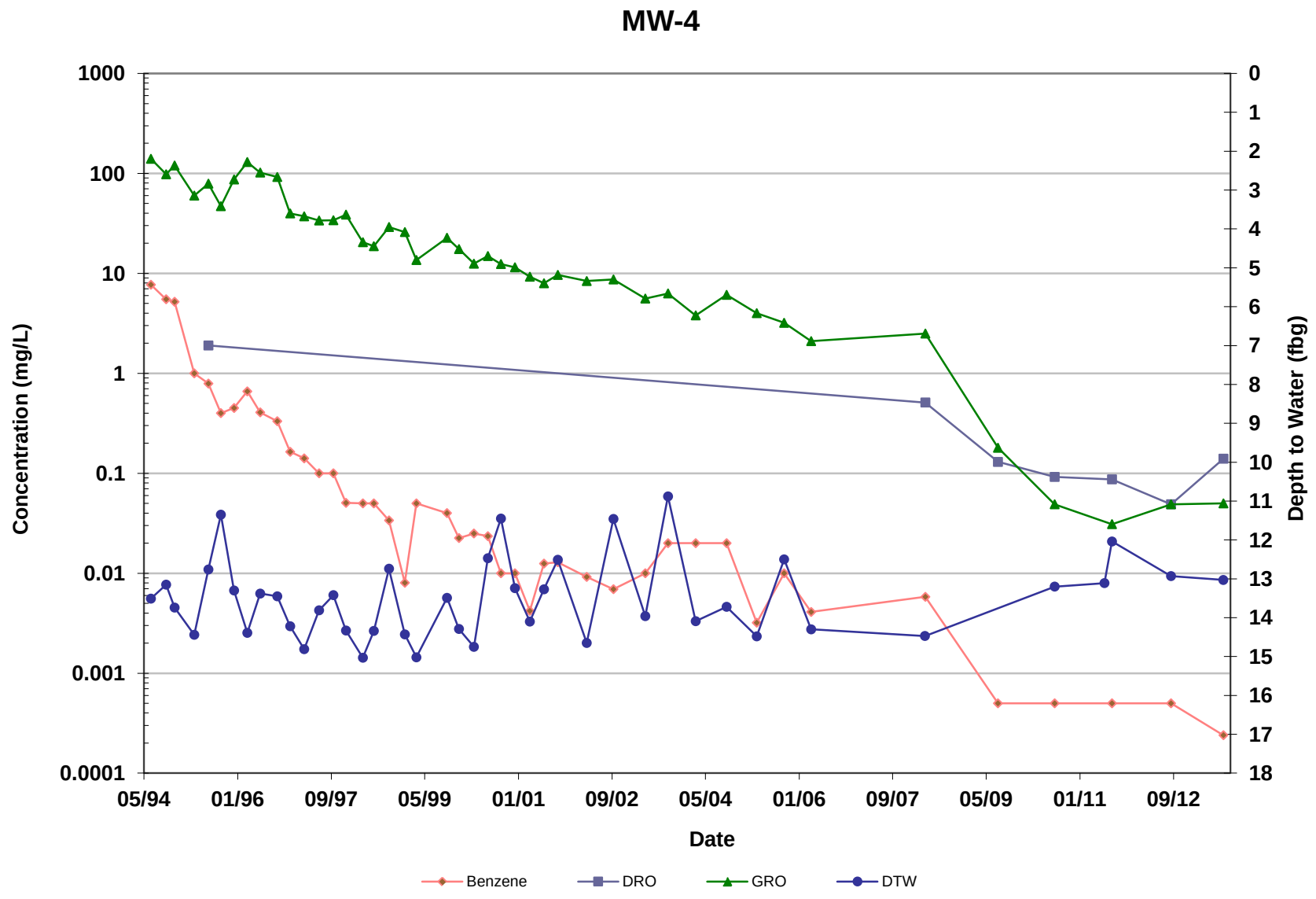

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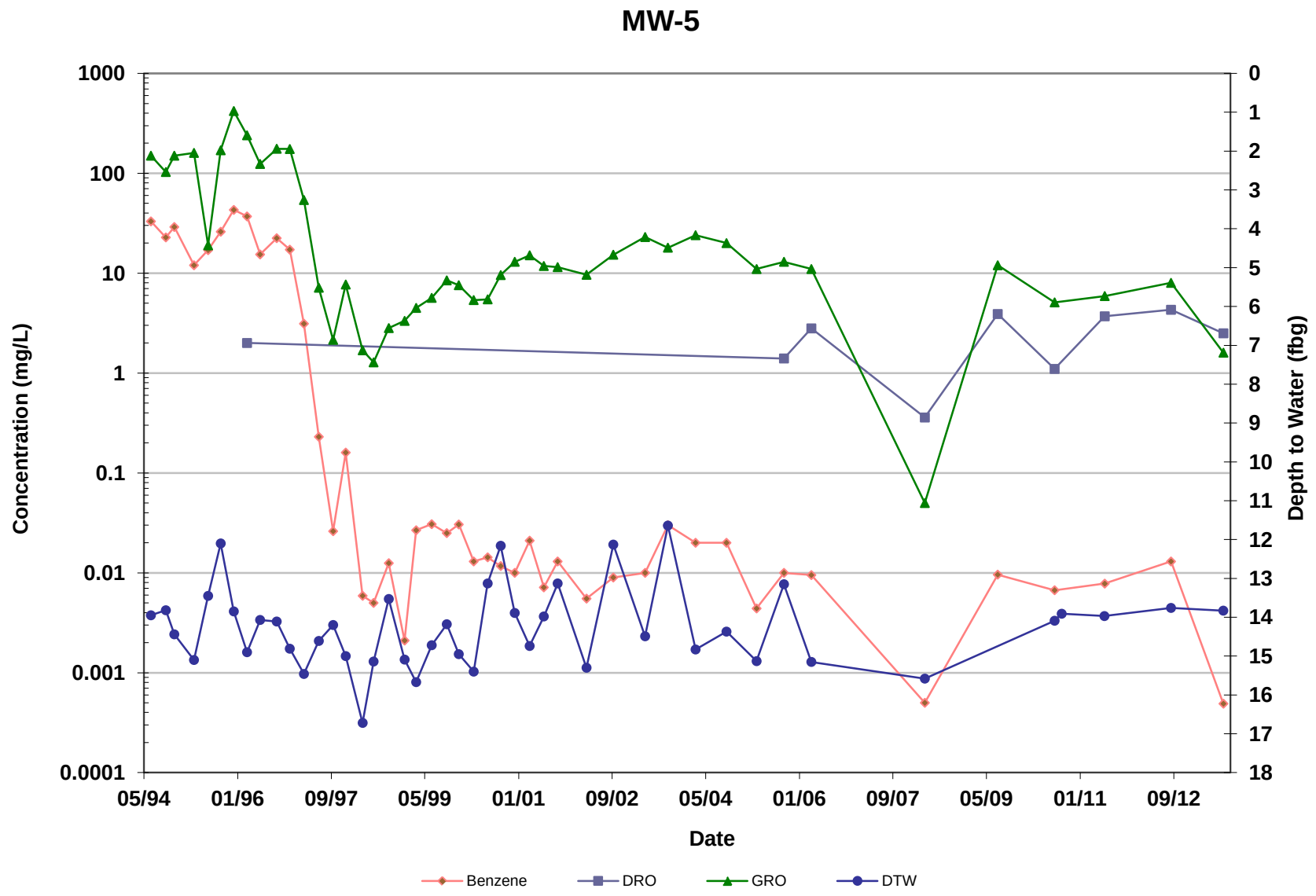

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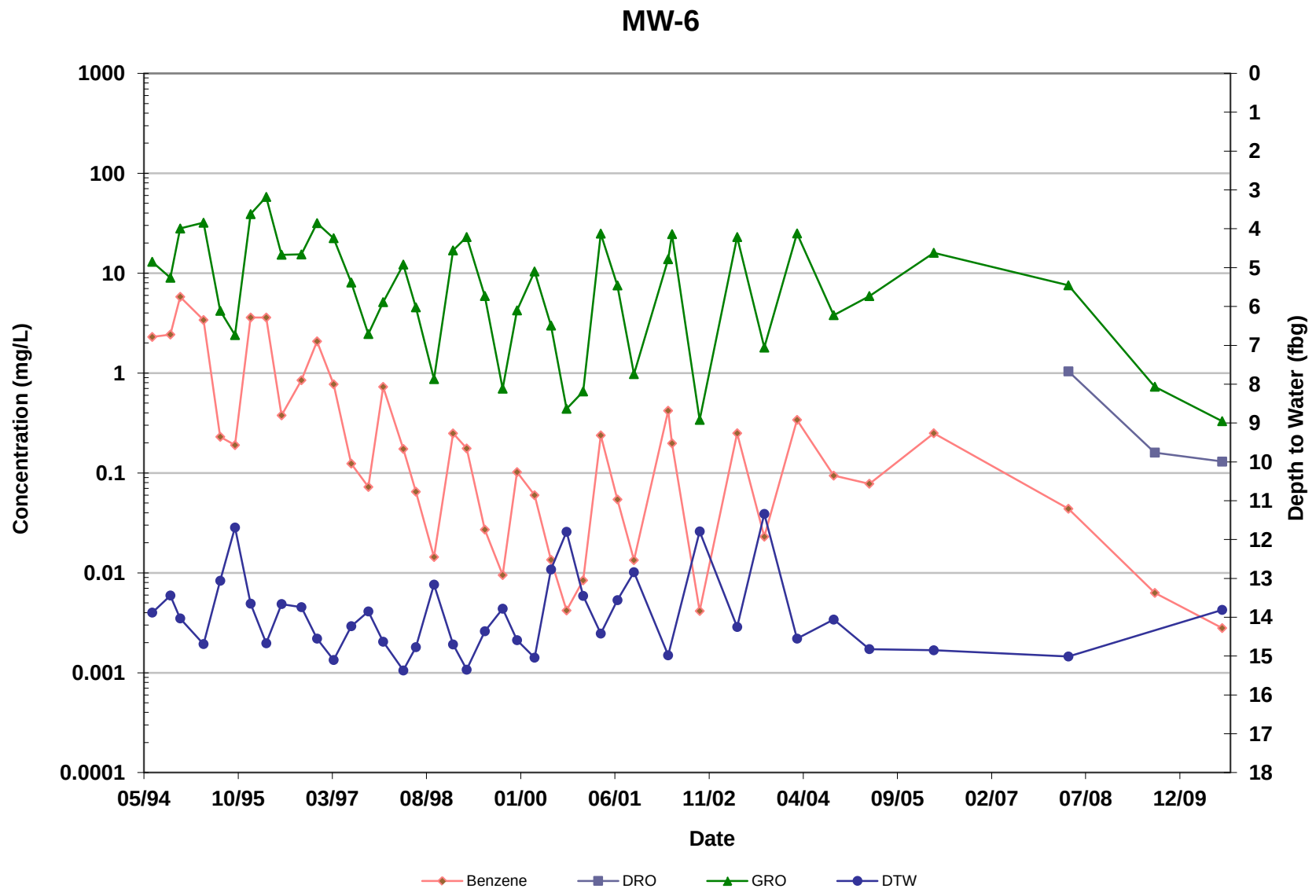

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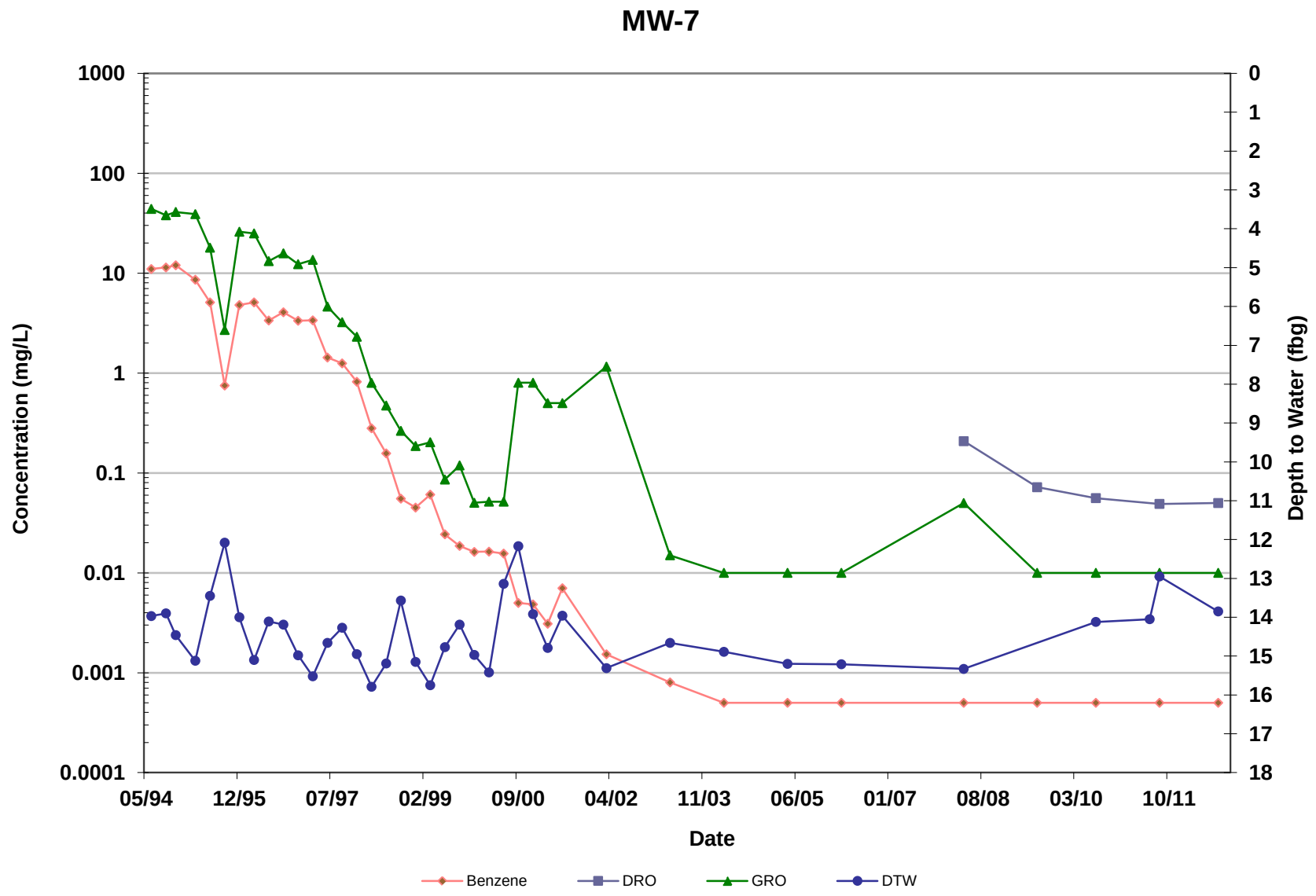

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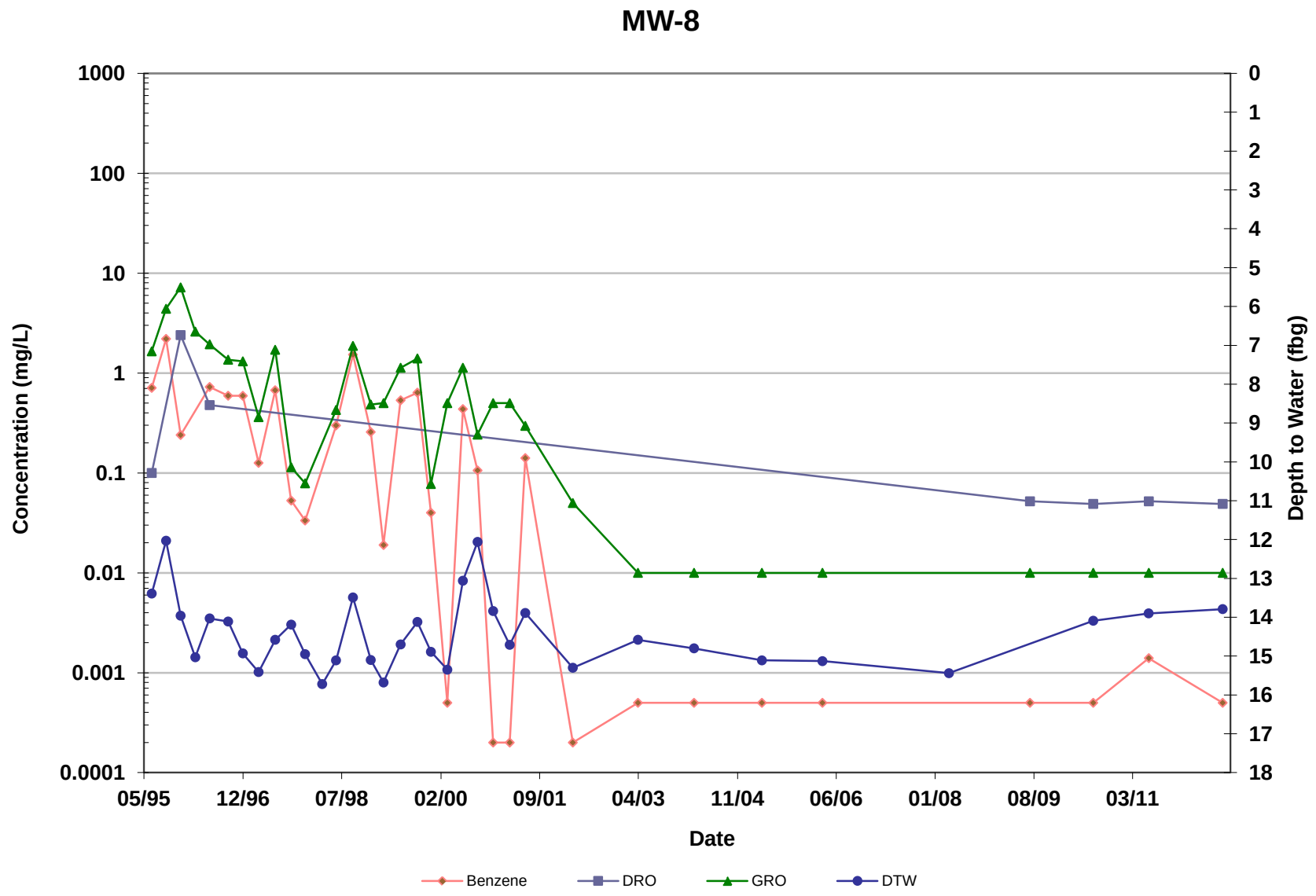

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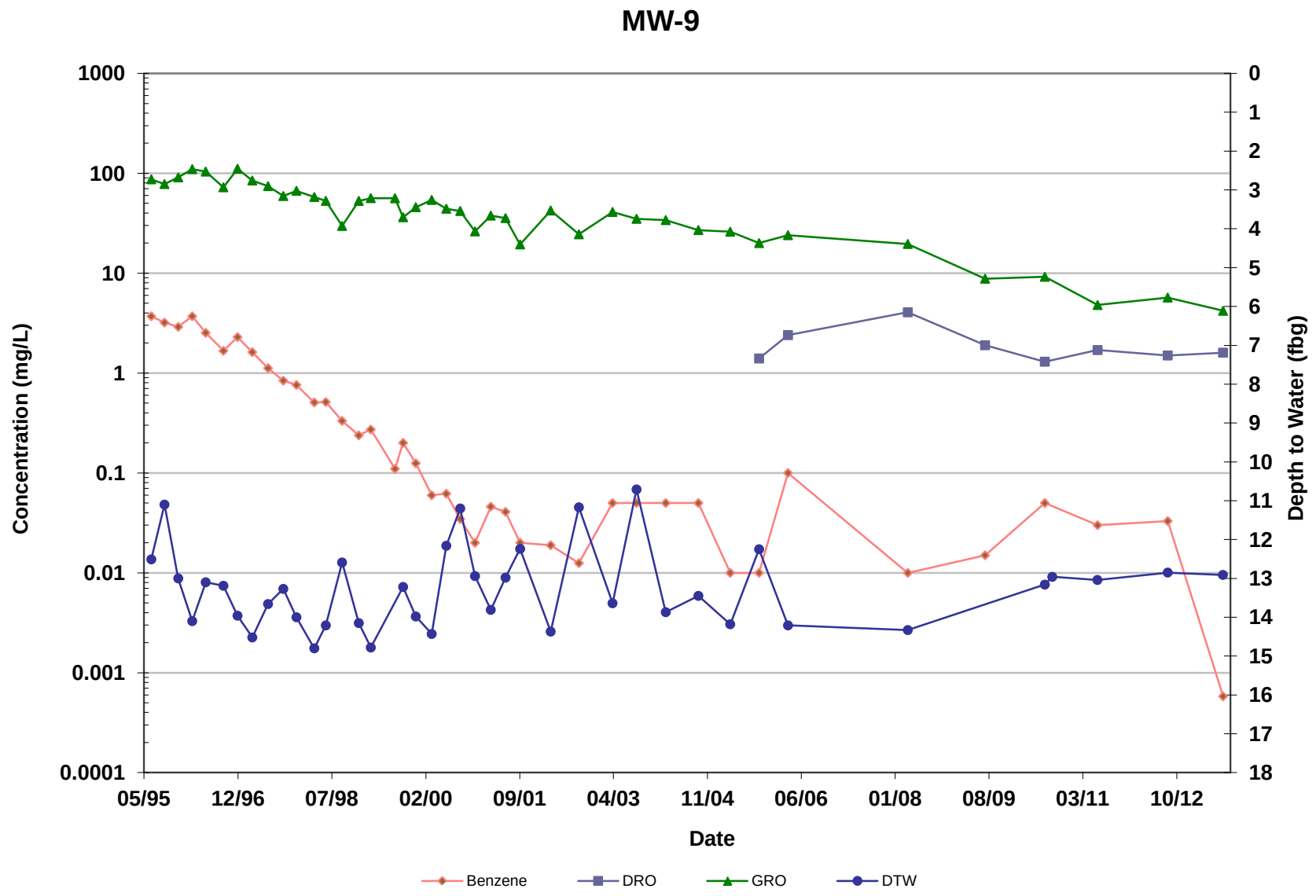

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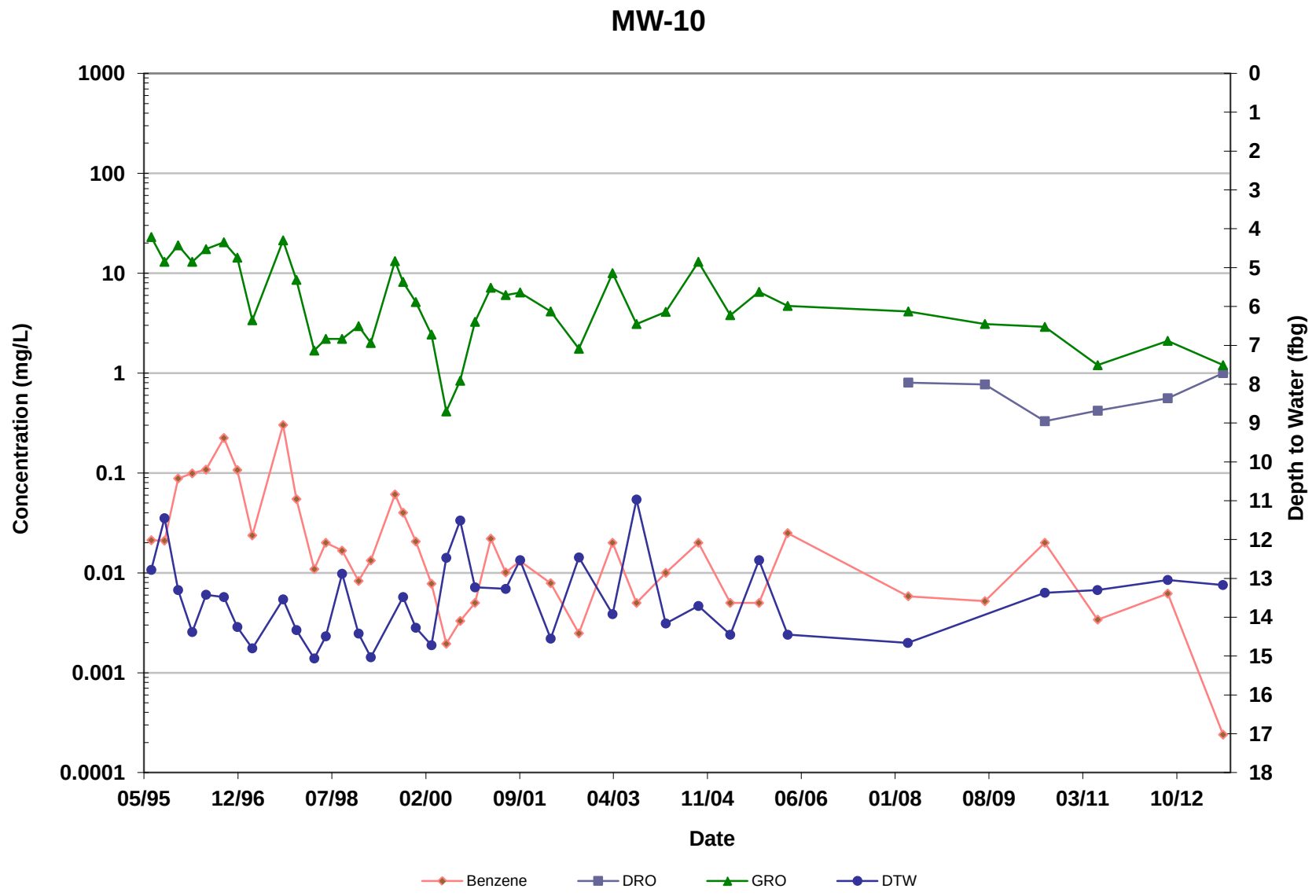

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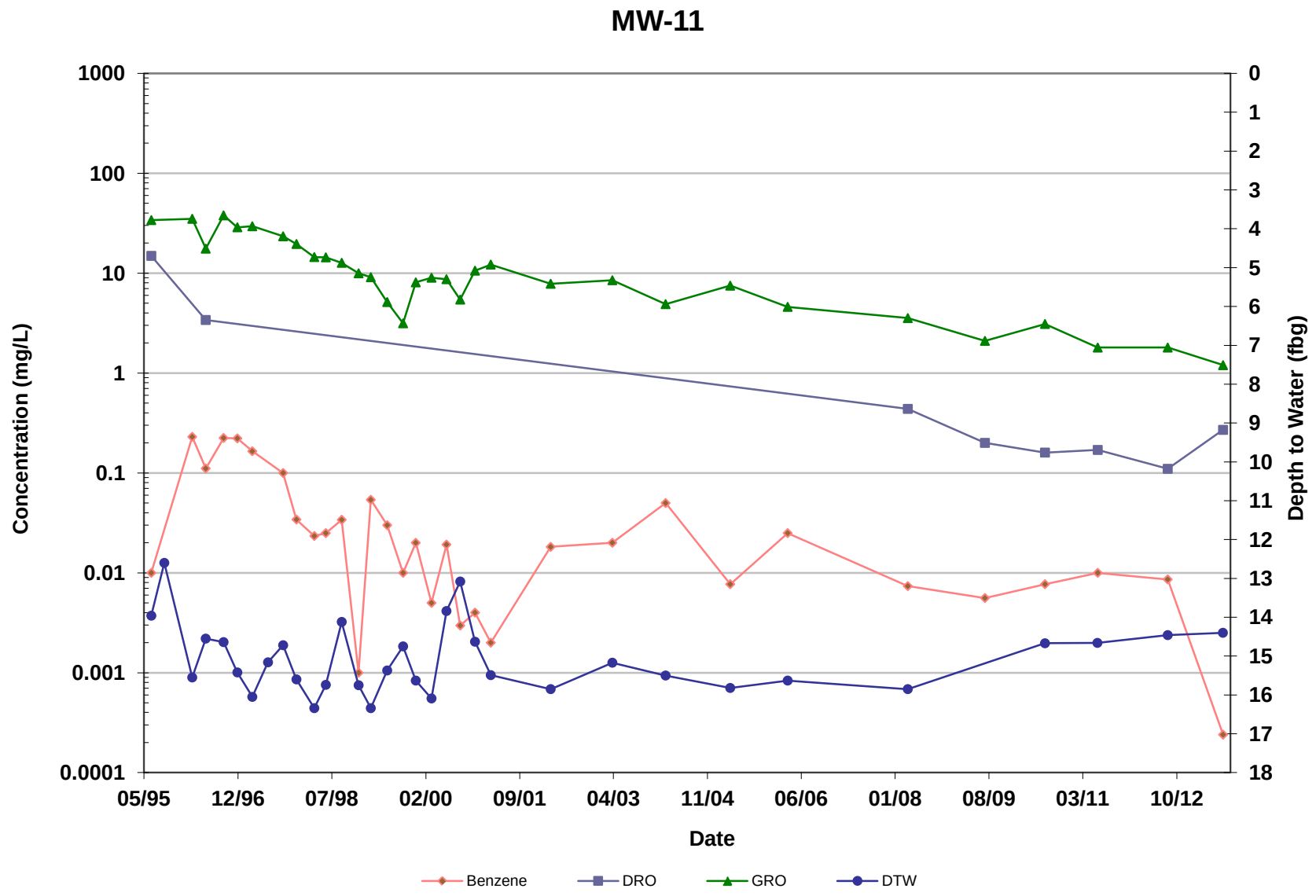

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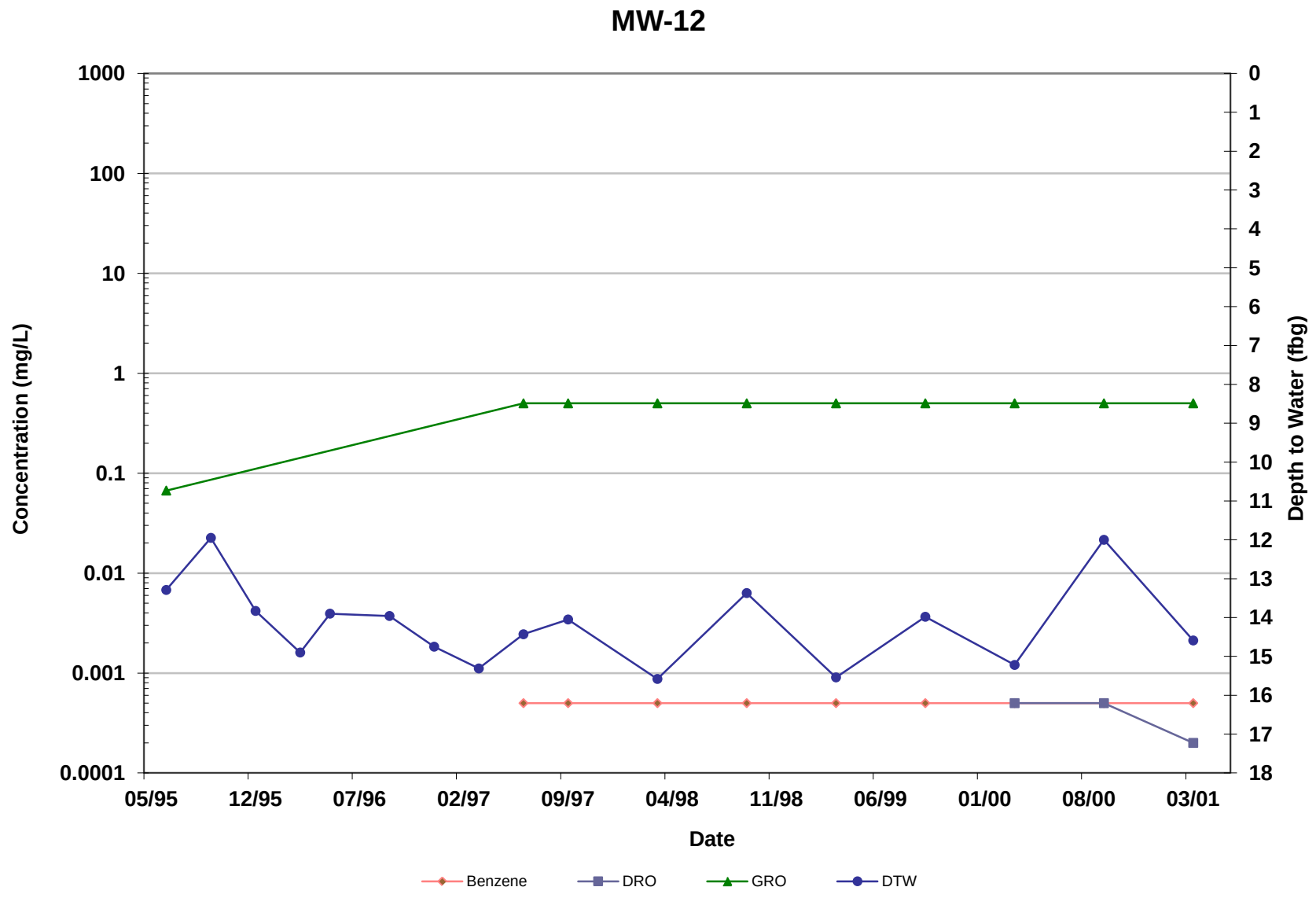

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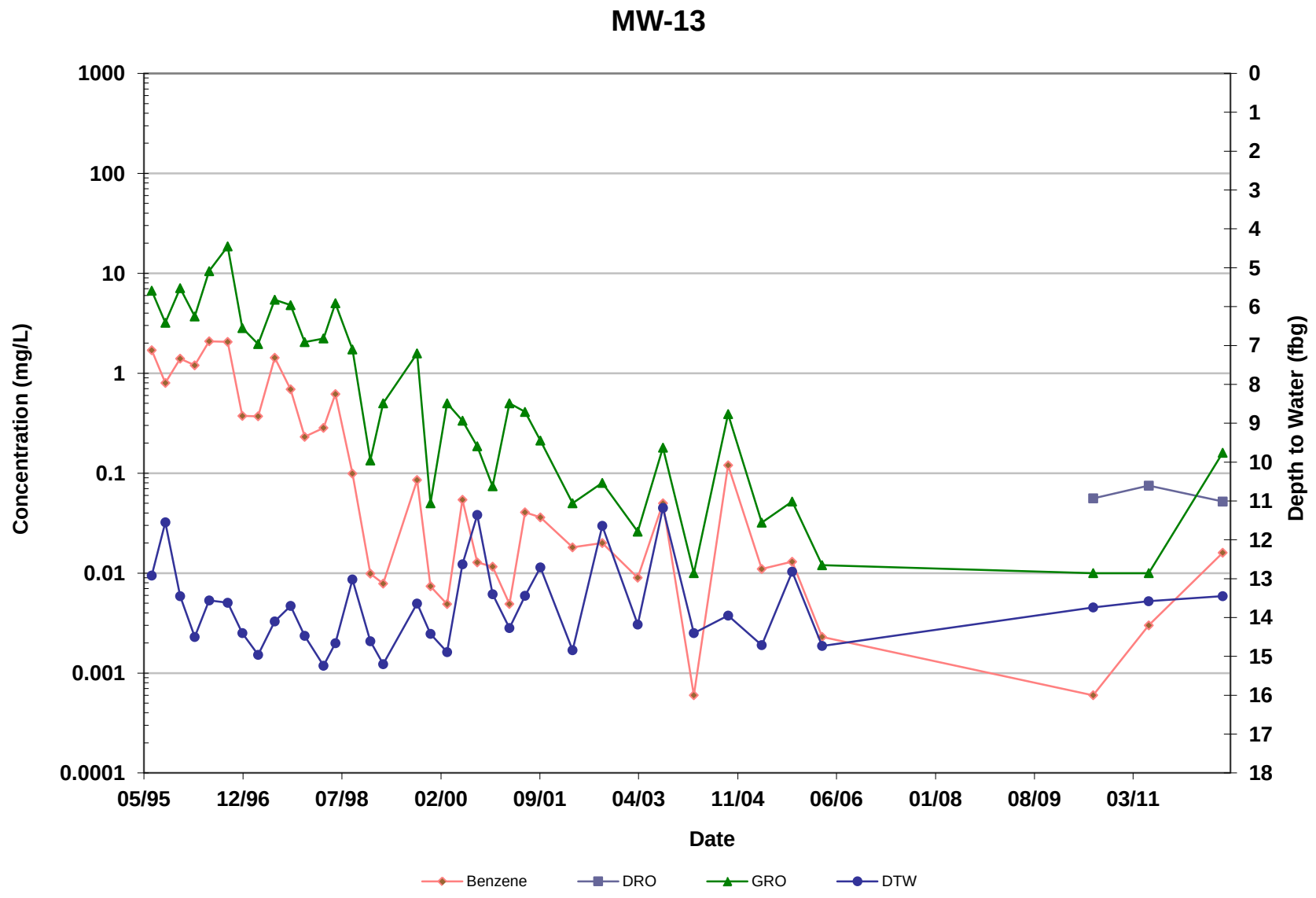

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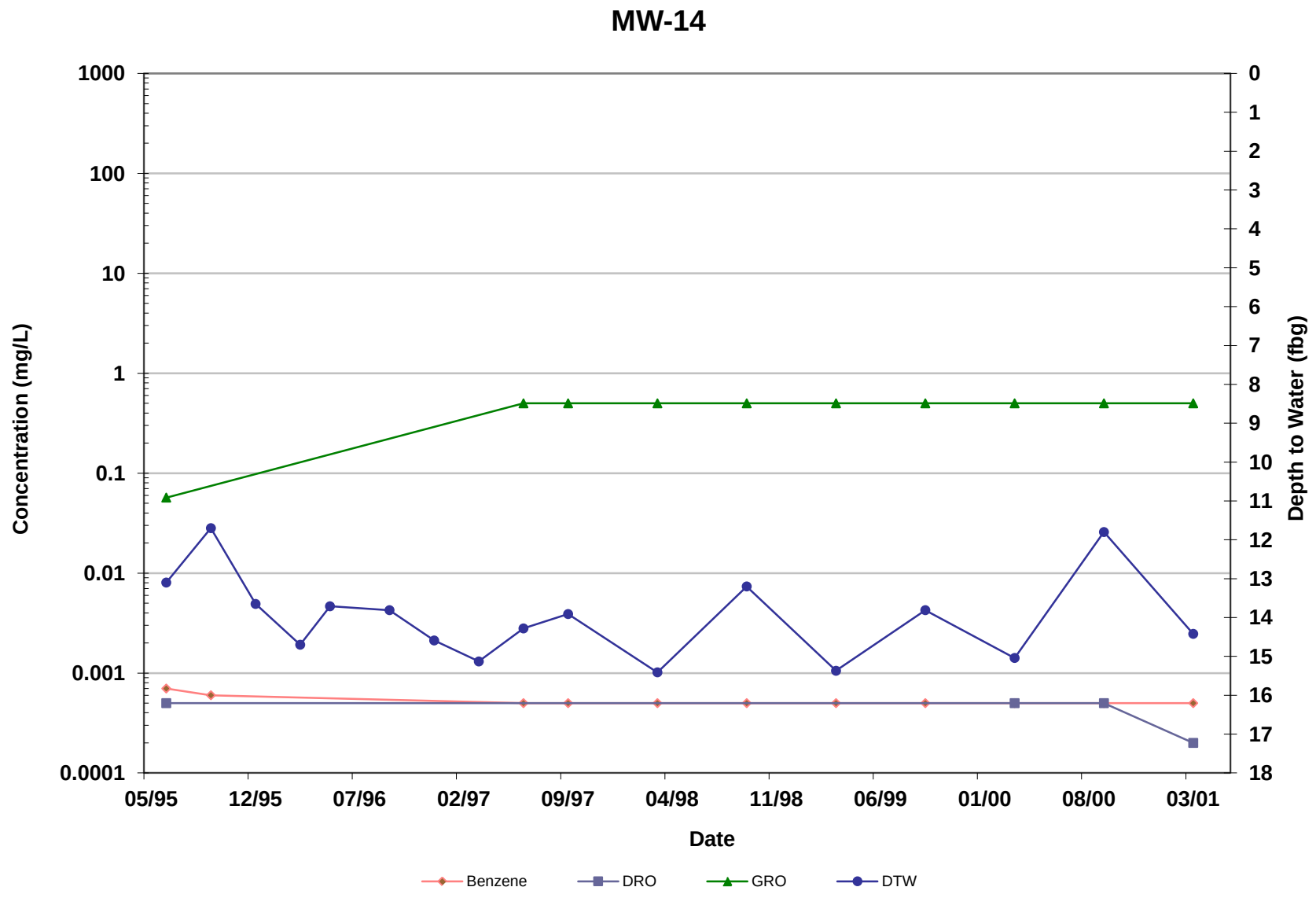

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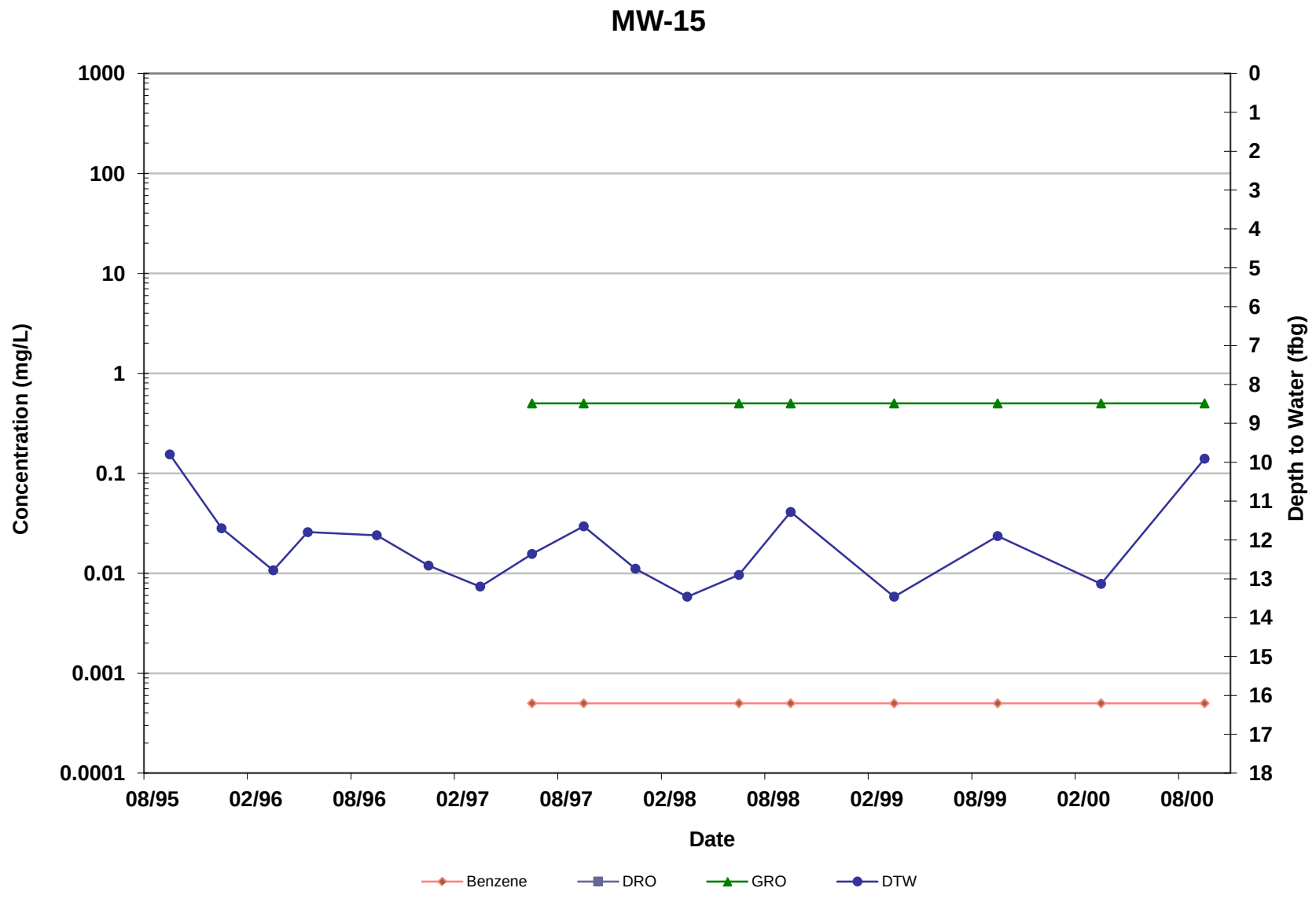

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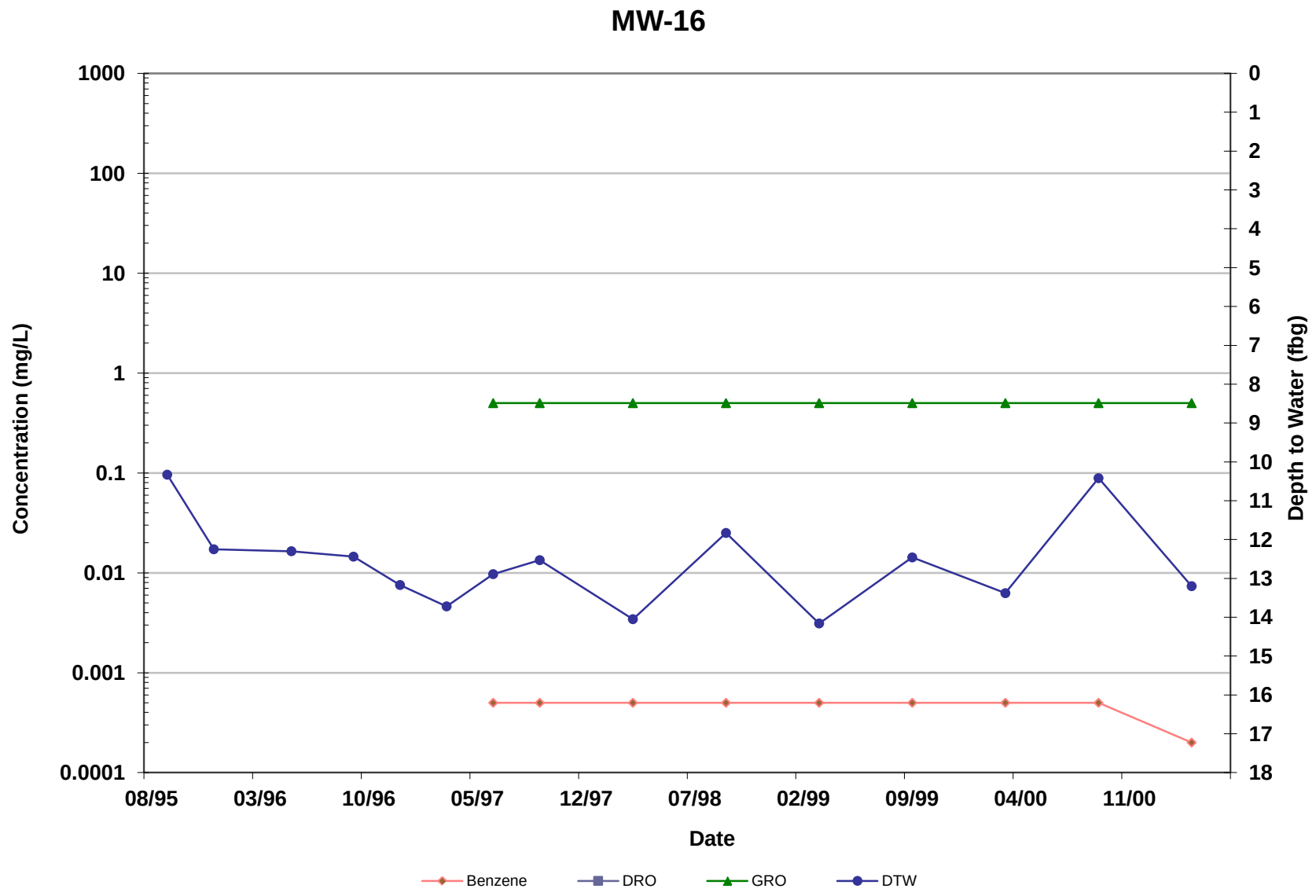

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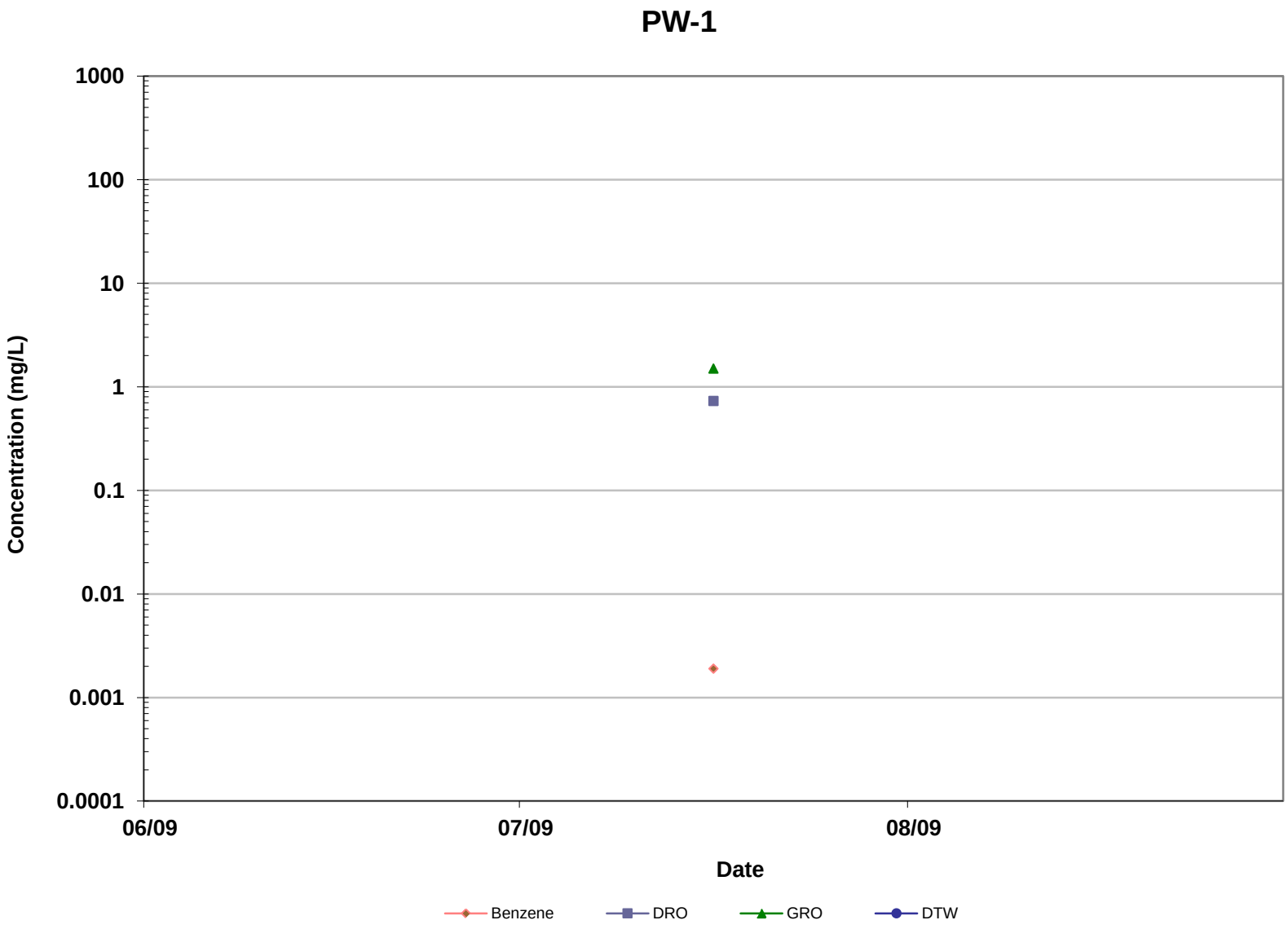

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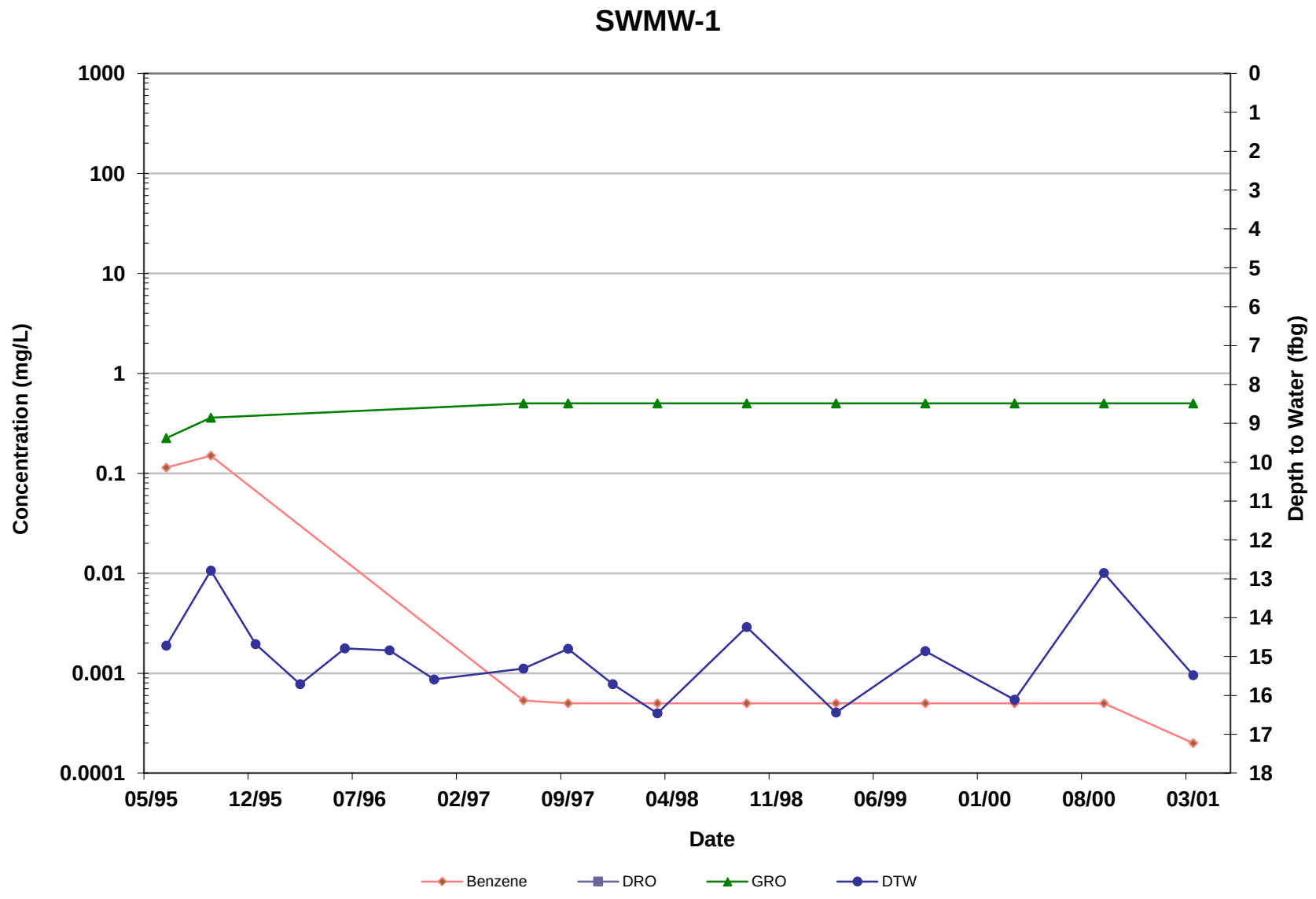

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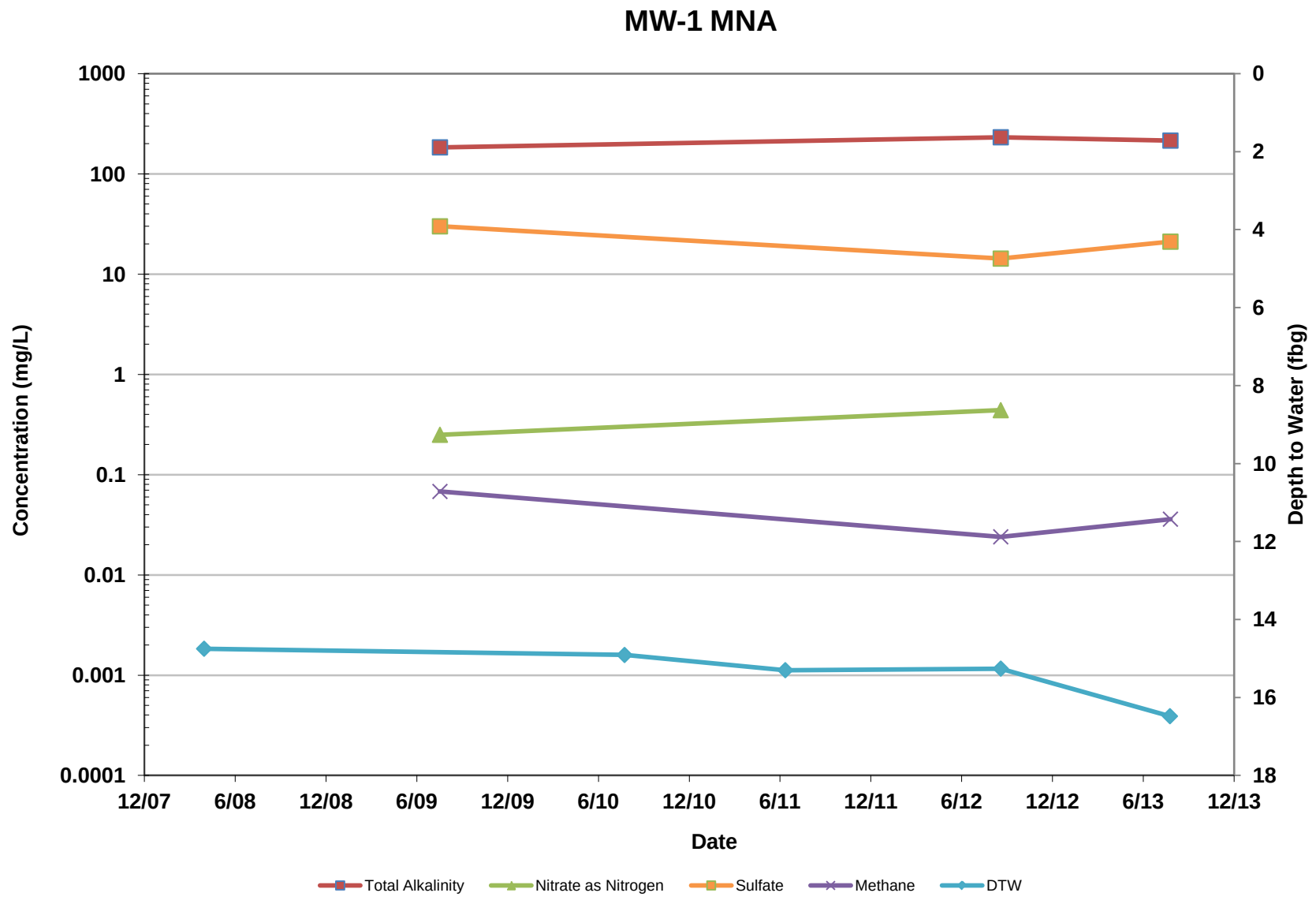

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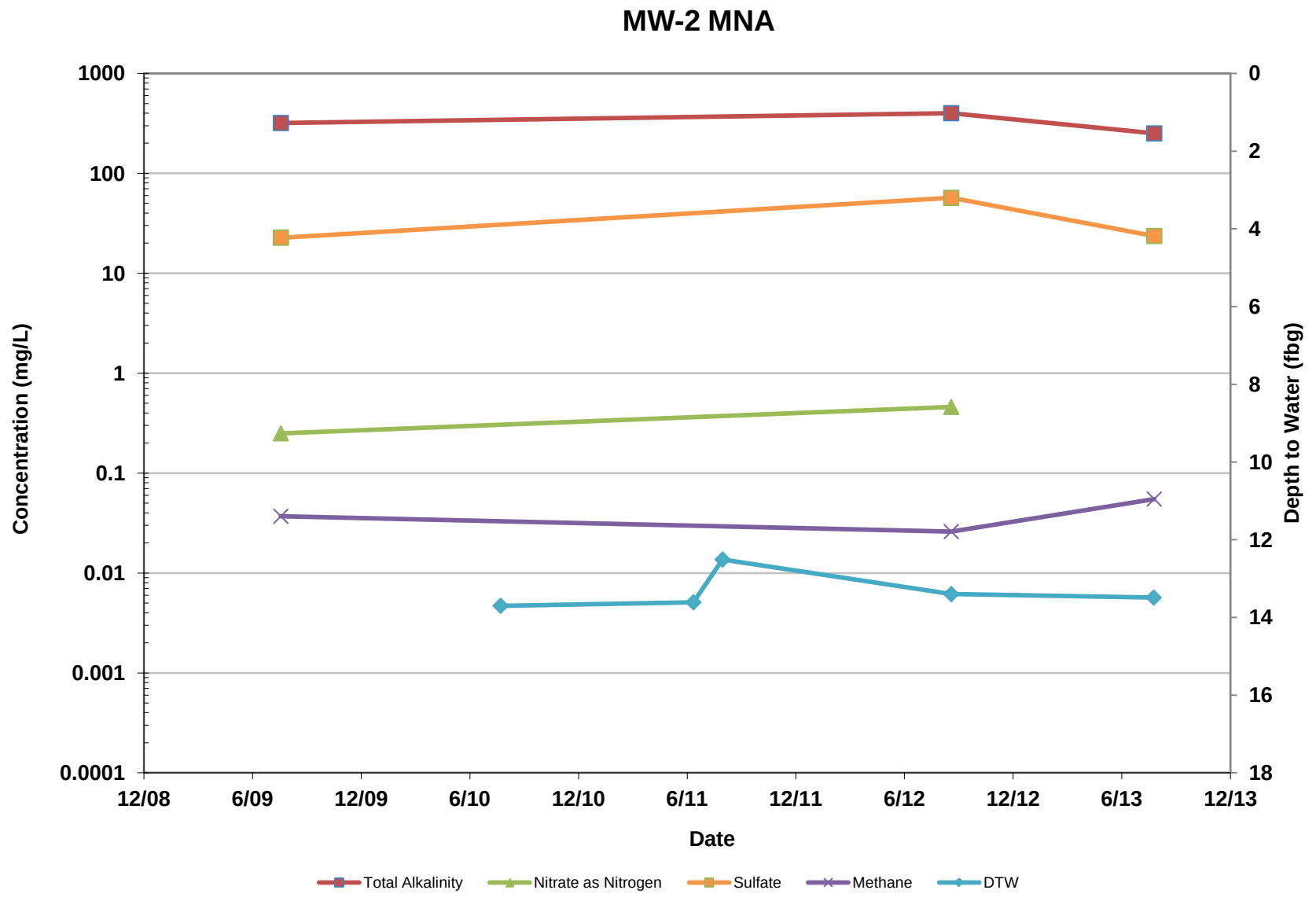

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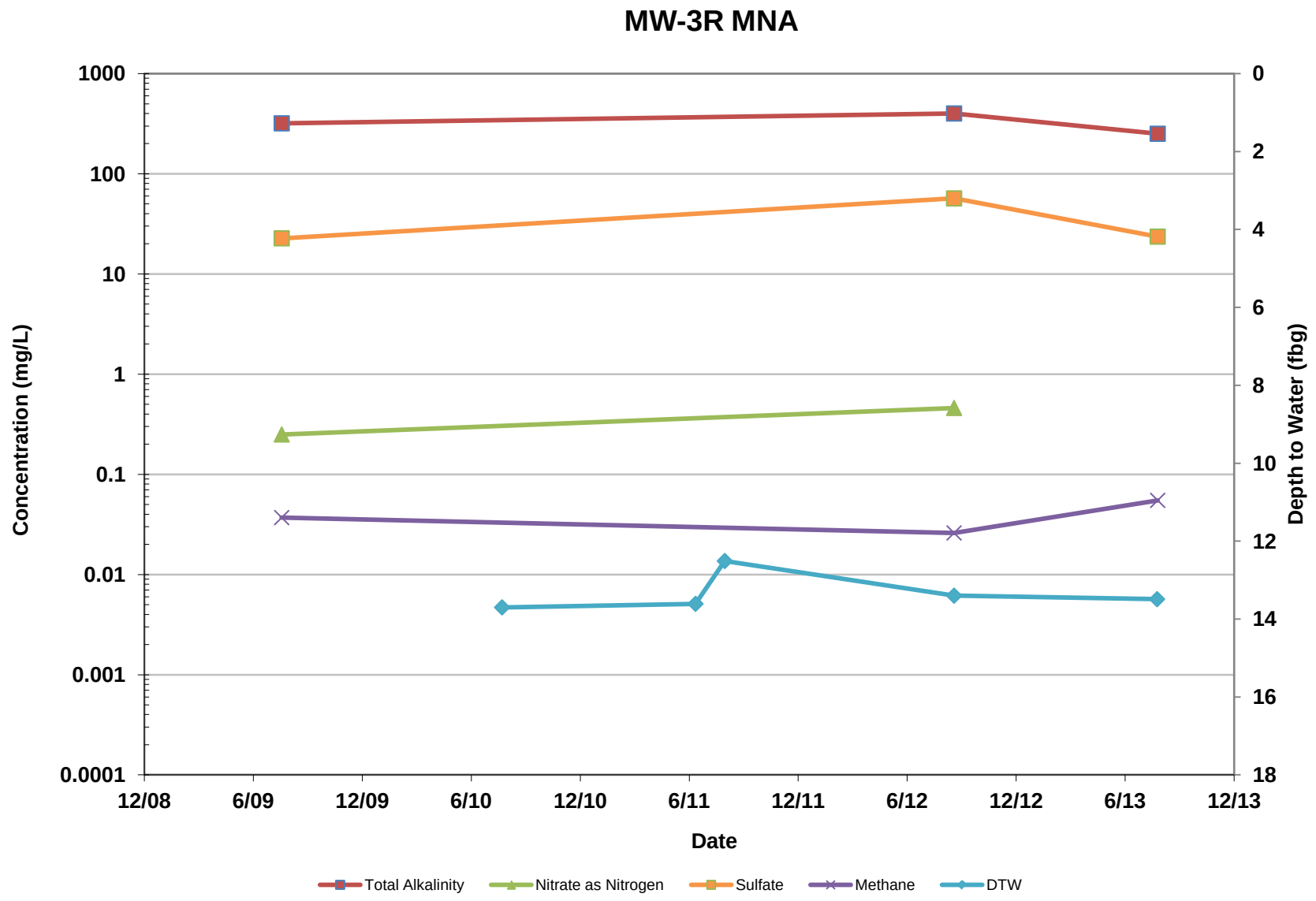

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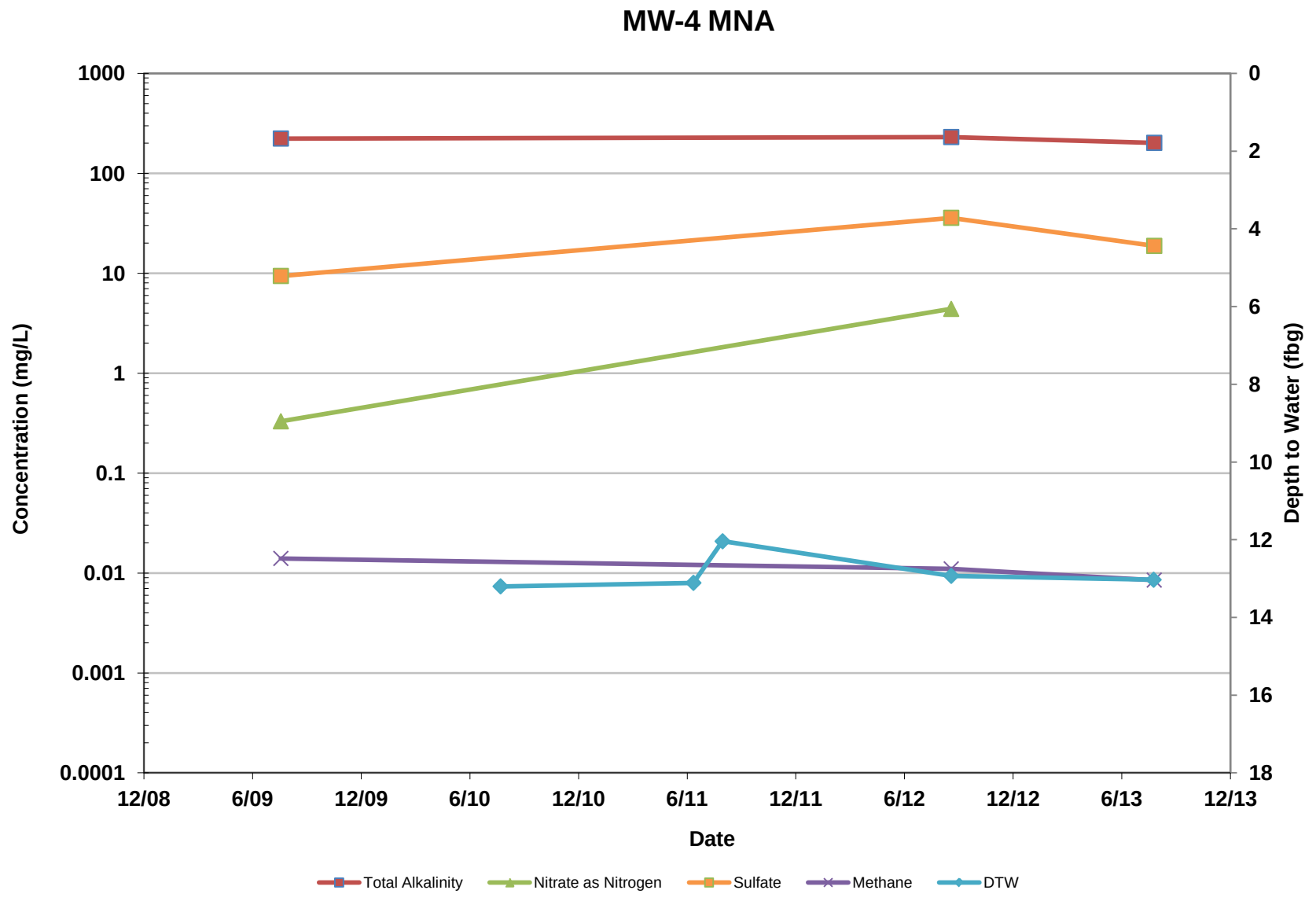

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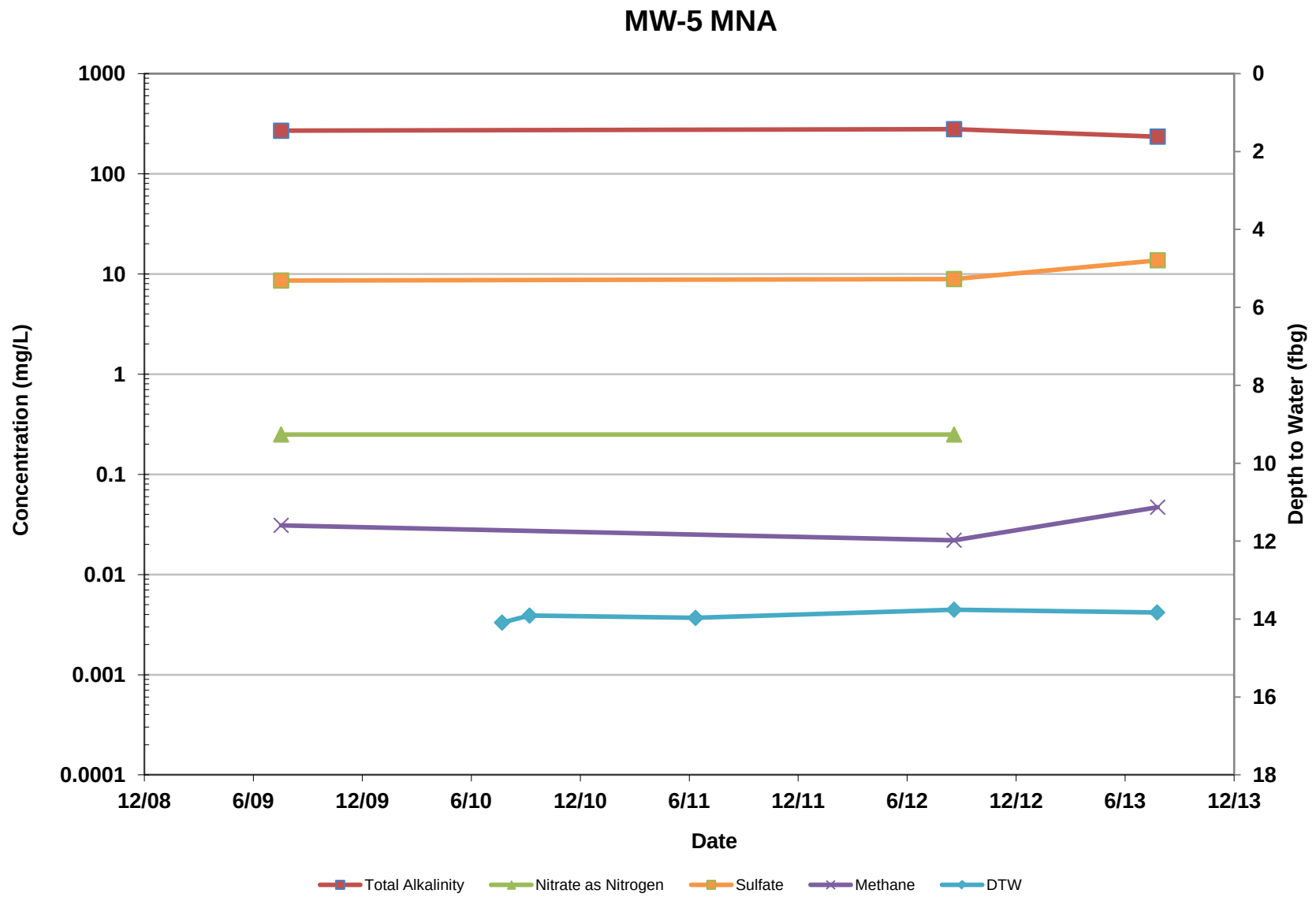

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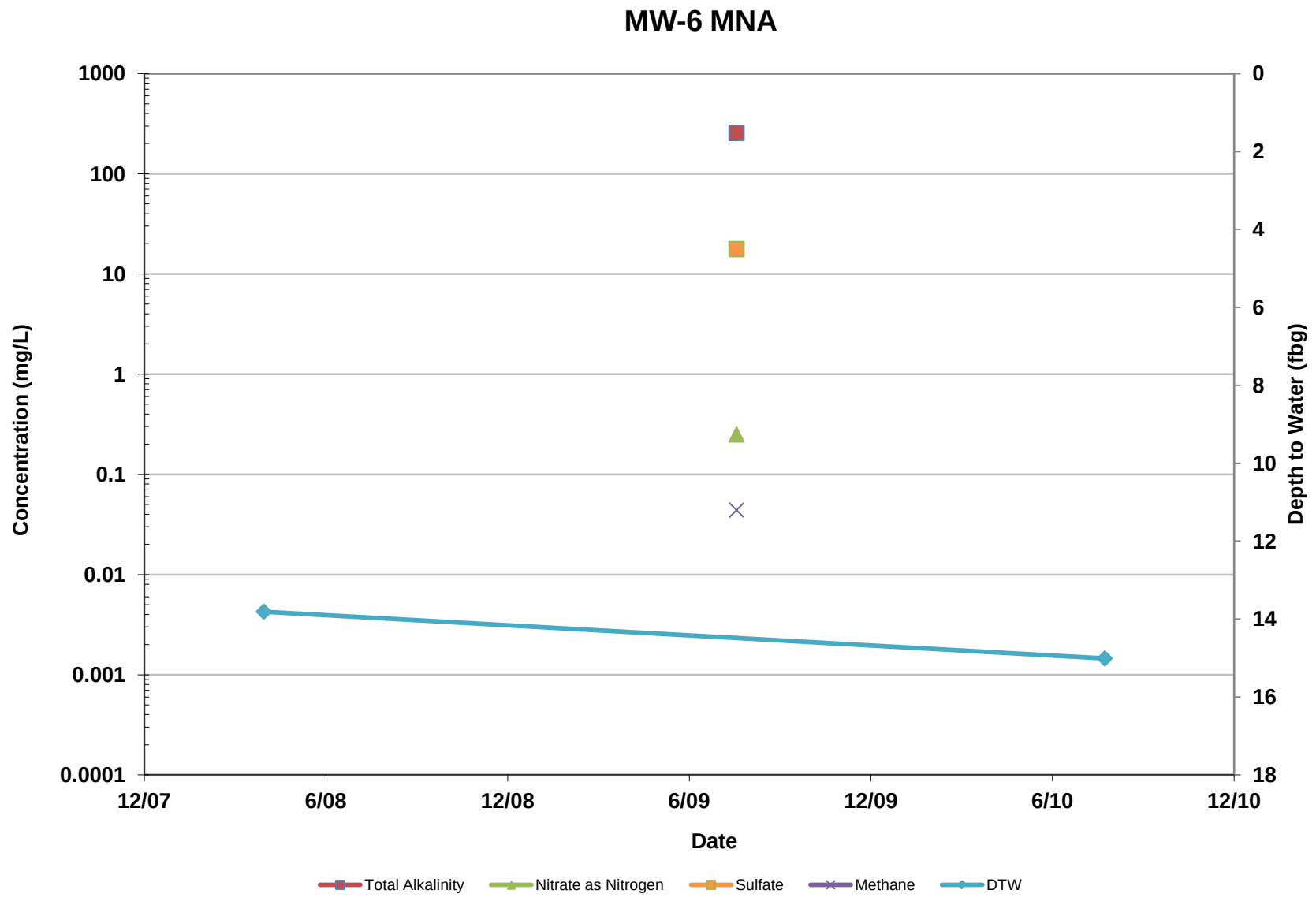

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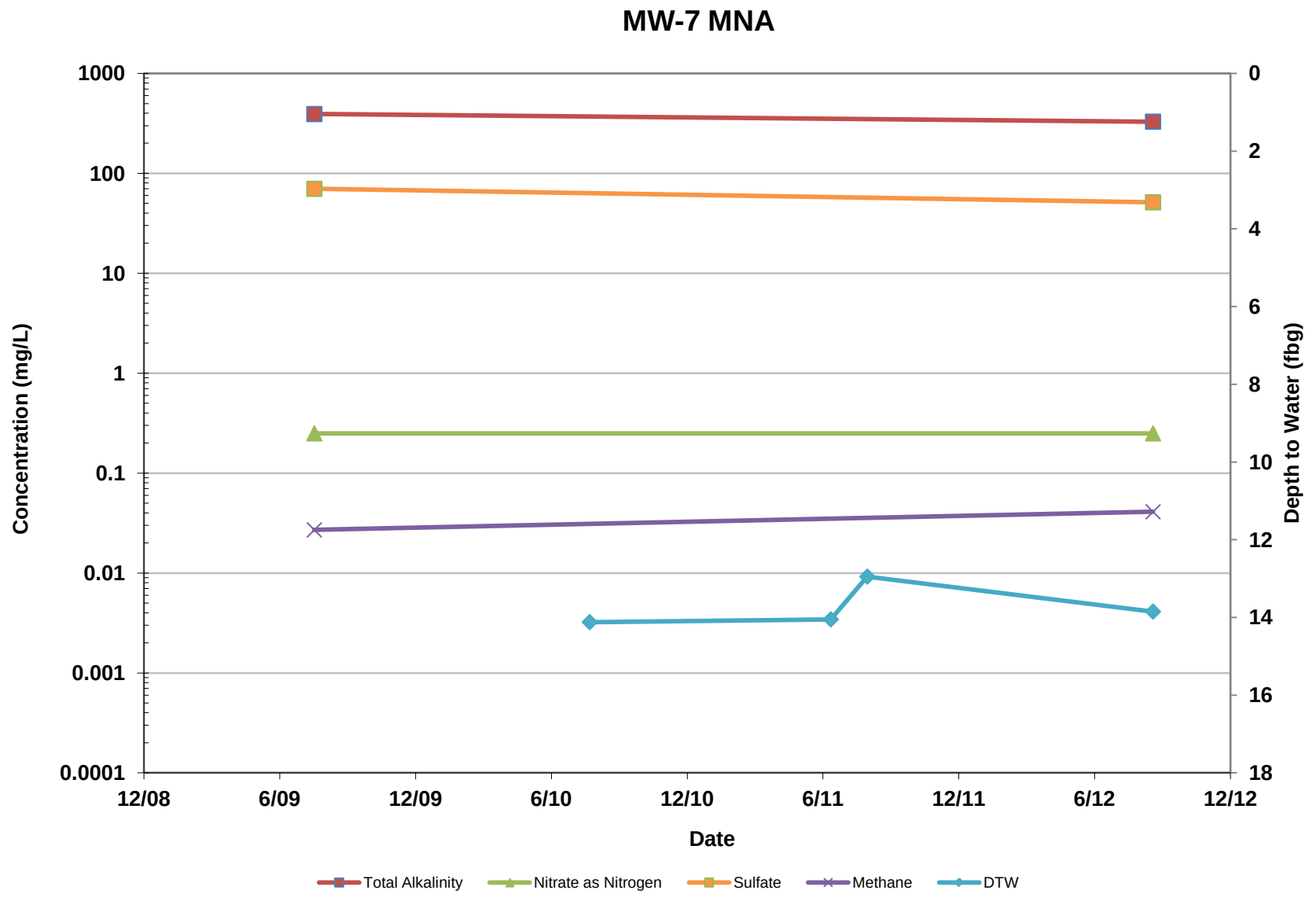

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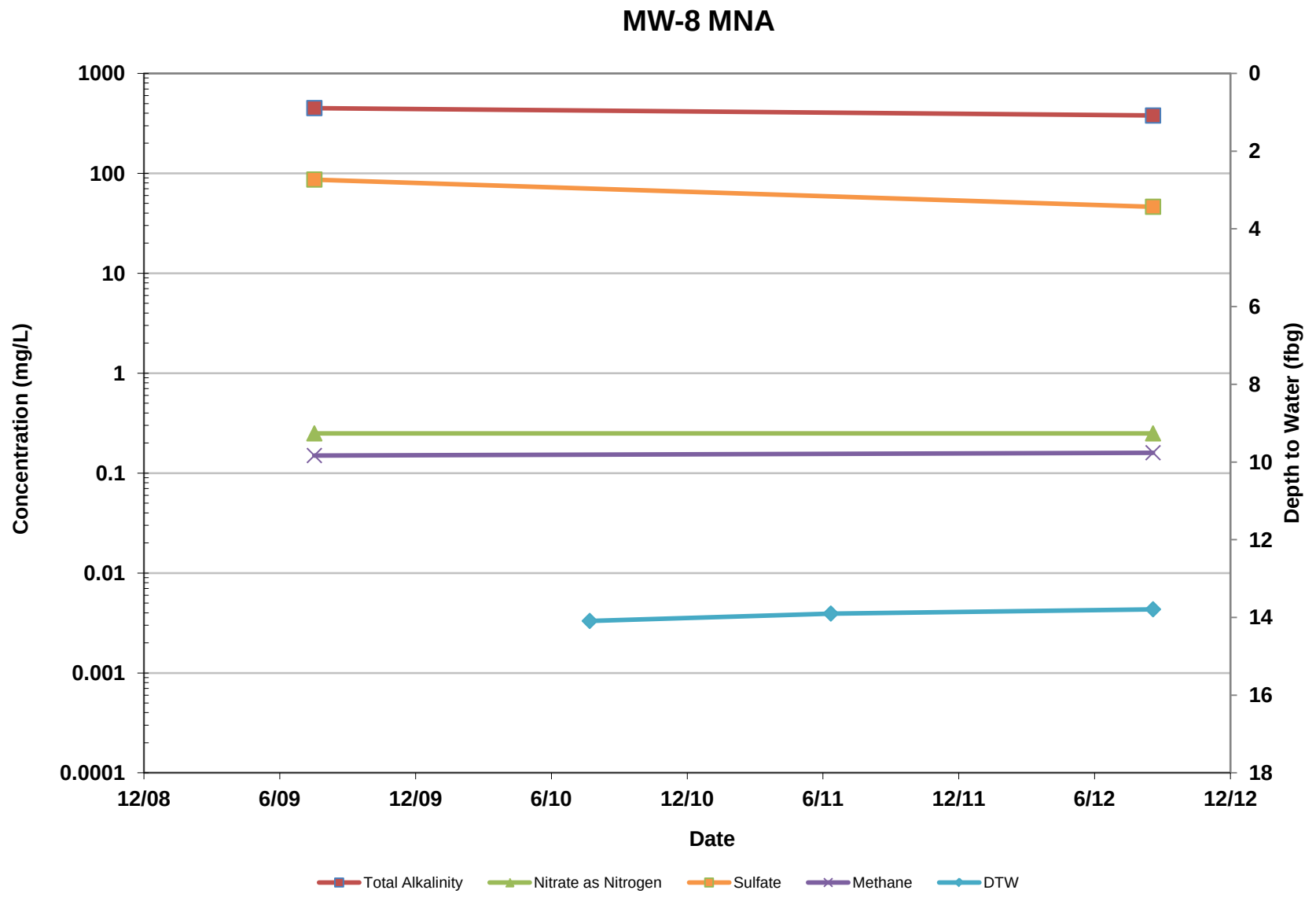

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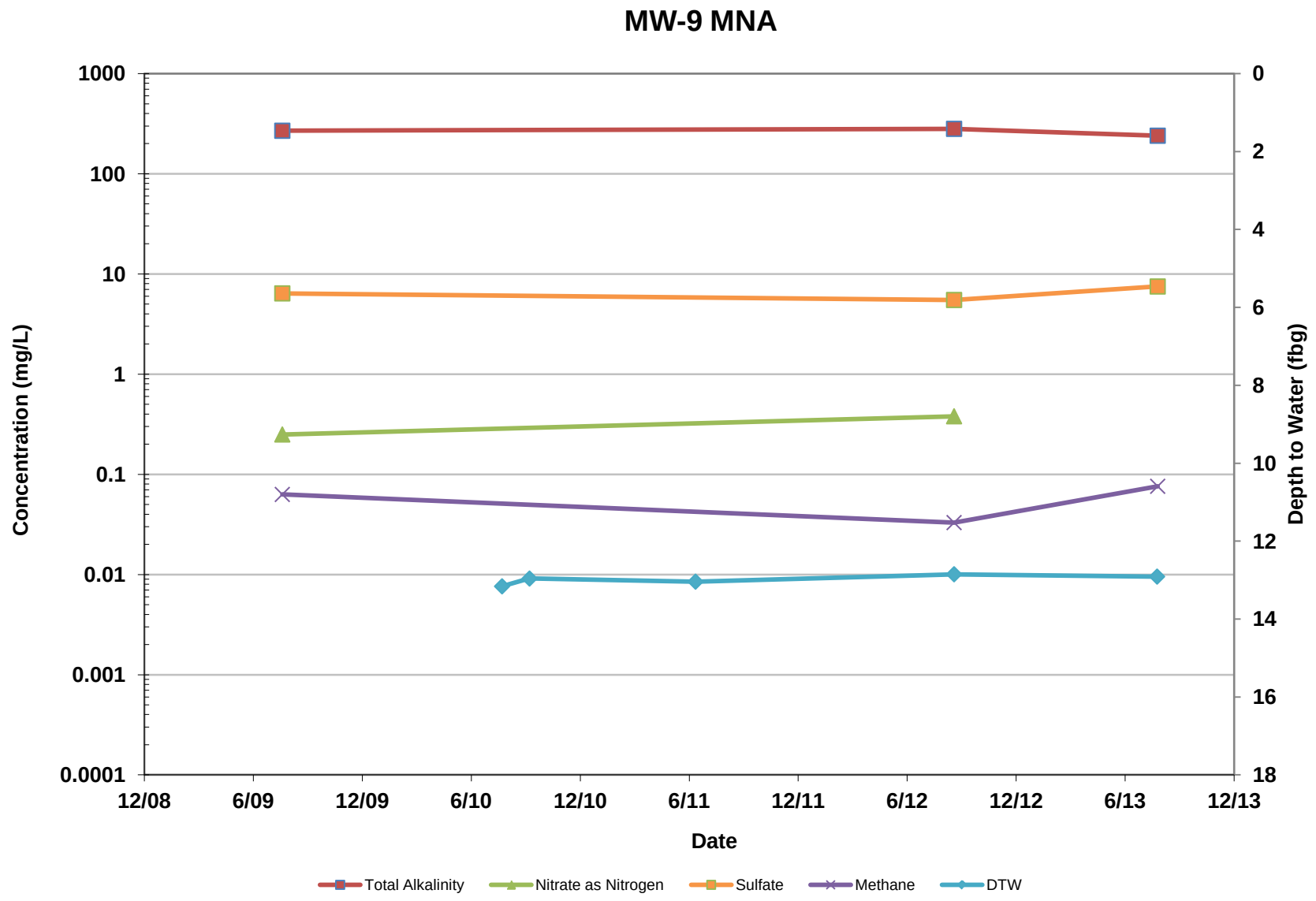
Fairbanks, Alaska



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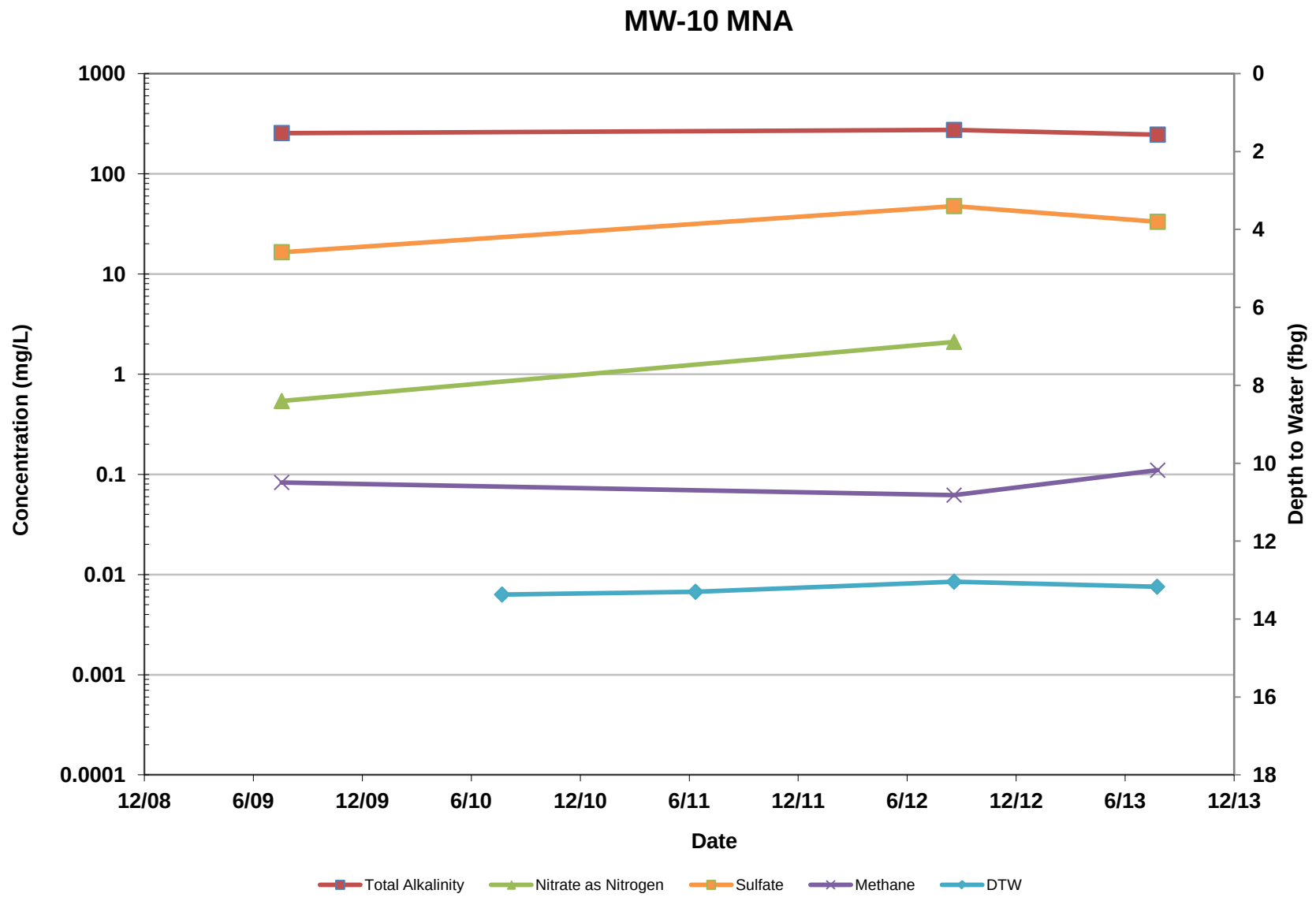

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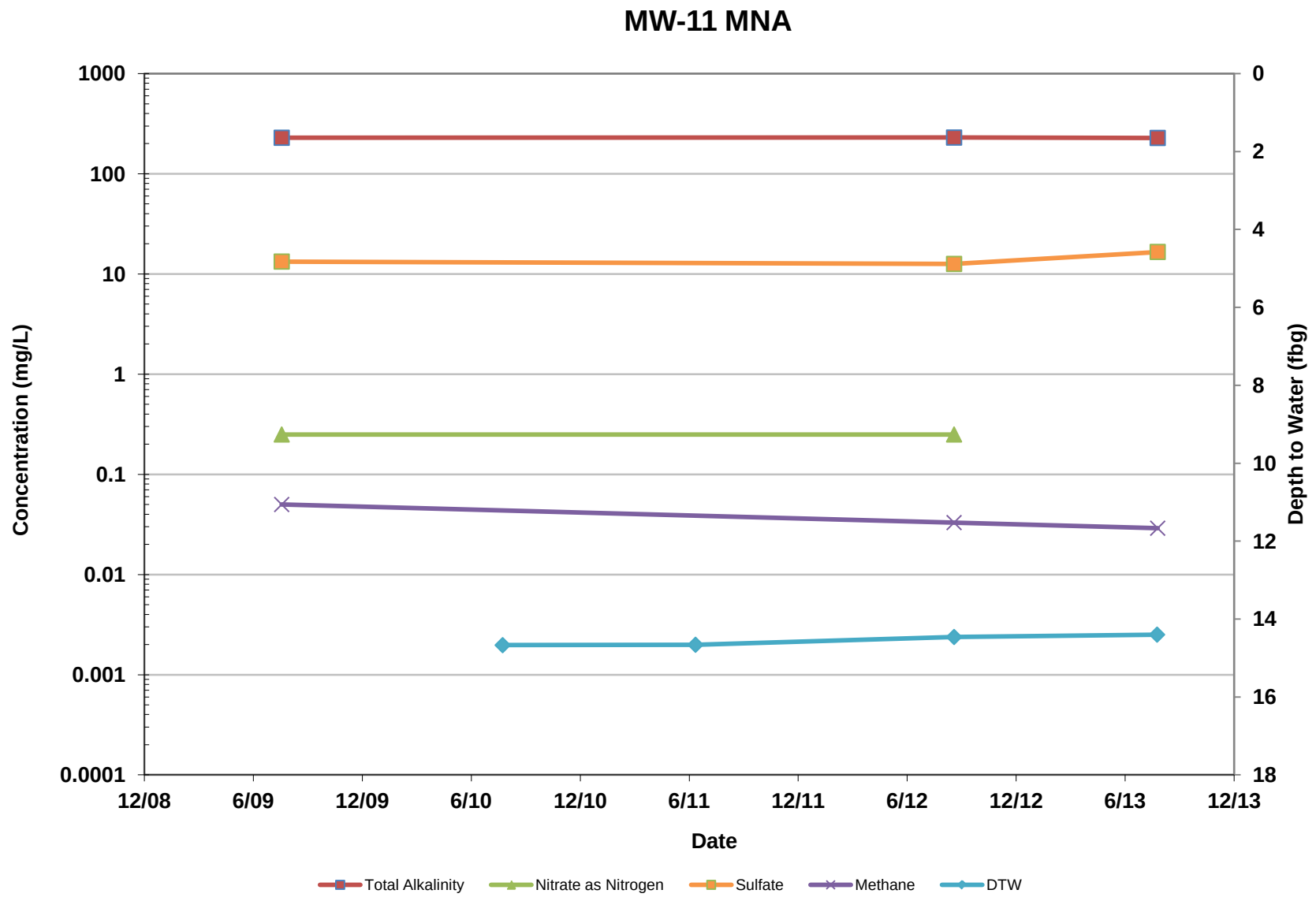
Fairbanks, Alaska



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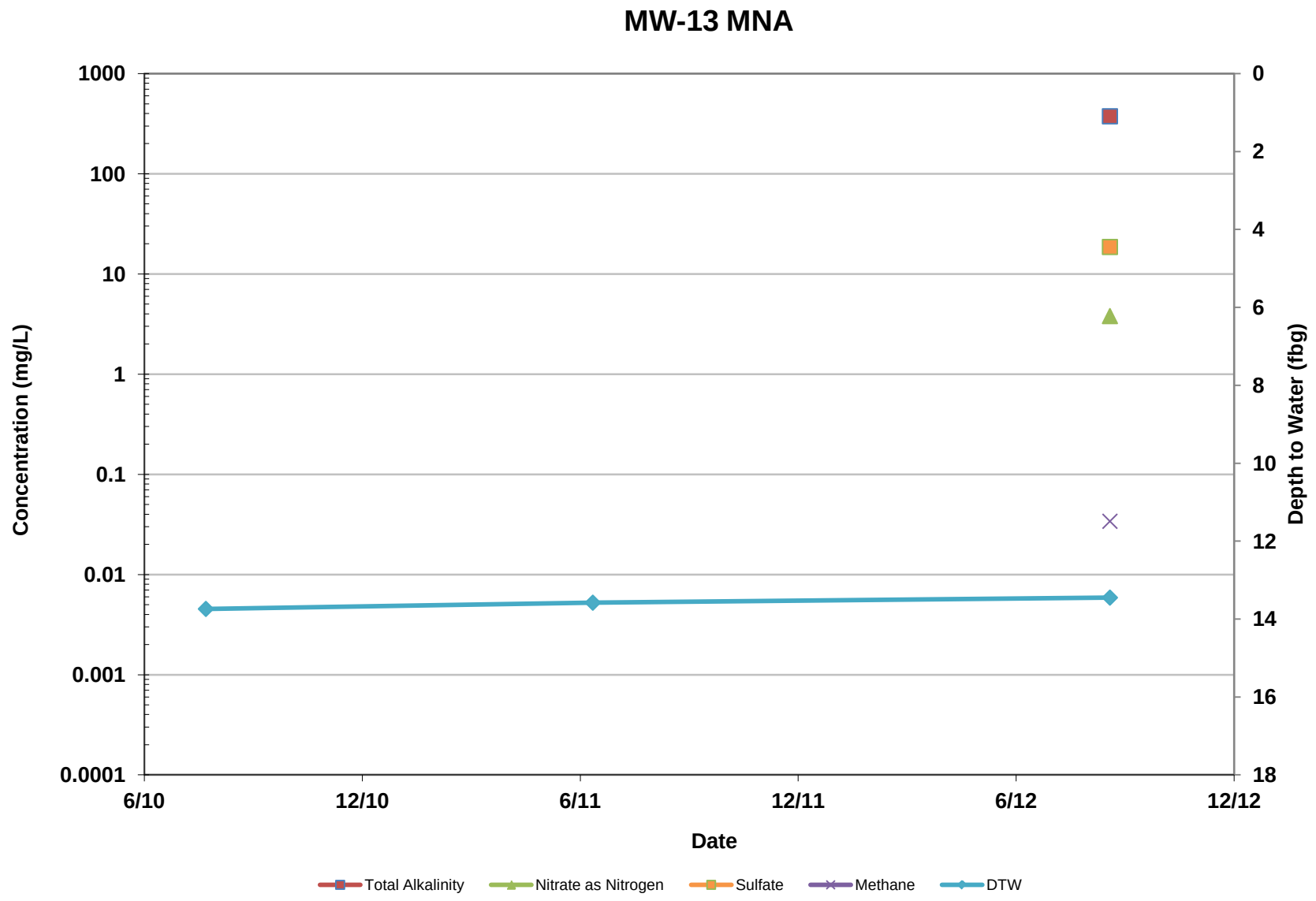

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Fairbanks, Alaska

Appendix F

ADEC Laboratory Data Review Checklist and Memorandum

Laboratory Data Review Checklist

Completed by: J Cloud

Title: Project Chemist

Date: November 5, 2013

CS Report Name: Annual 2013 Groundwater Monitoring and Sampling Report

Report Date: 8/13/13

Consultant Firm: Conestoga-Rovers & Associates

Laboratory Name: Pace Analytical Services

Laboratory Report Number: 10236896

ADEC File Number: 102.26.015

ADEC RecKey Number:

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

      b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?
      ☐Yes ☐ No X NA (Please explain.) Comments:

      Samples not transferred

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

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

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

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

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

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

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

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

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

No discrepancies

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

Comments:

None

4. Case Narrative

a. Present and understandable?

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

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

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

c. Were all corrective actions documented?

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

No corrective actions

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

Comments:

None

5. Samples Results

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

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

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

All samples for method 3500 and 4500 analysis were run out of hold time

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

No soils

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

e. Data quality or usability affected?
Comments:

All nitrite and ferrous iron results were qualified as estimted

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

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

The method AK102 and DRO present at a low concentration

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

No affected samples

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

No affected samples

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

All associated sample results were significantly greater than the blank. No qualification of the data was deemed necessary.

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

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

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

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

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

No project related MS/MSD sets or lab dups were analyzed for method 4500

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

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

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

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

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

Comments:

No affected samples

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

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

No affected samples

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

Comments:

None

c. Surrogates – Organics Only

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

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

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

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

Samples MW-1, MW-11 and DUP-1 had high method AK101 recoveries

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

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

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

Comments:

The GRO results for samples MW-1, MW-11 and DUP-1 were qualified as estimated

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

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

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

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

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

iii. All results less than PQL?

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

iv. If above PQL, what samples are affected?

Comments:

No affected samples

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

Comments:

None

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?
X Yes ☐ No ☐NA (Please explain.) Comments:

ii. Submitted blind to lab?
X Yes ☐ No ☐NA (Please explain.) Comments:

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

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

Where R_1 = Sample Concentration
R_2 = Field Duplicate Concentration

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

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

Comments:

None

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

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

Not collected

i. All results less than PQL?

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

Not collected

ii. If above PQL, what samples are affected?

Comments:

Not collected

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

Comments:

Not collected

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)
   a. Defined and appropriate?
      X Yes ☐ No ☐NA (Please explain.) Comments:

CONESTOGA-ROVERS & ASSOCIATES

20818 44th Ave W, Suite 190
Lynnwood, WA 98036
Telephone: (425) 563-6515 Fax: (425) 563-6599
www.CRAworld.com

MEMORANDUM

TO:	ADEC	REF. NO.:	065003
FROM:	Jeffrey Cloud	DATE:	November 5, 2013
CC:	Siobhan Pritchard		**Send via E-Mail and U.S. Mail**
RE:	**QA/QC Review** **ChevronTexaco Site # 211079** **Job #10236896** **July 2013**		

INTRODUCTION

Groundwater samples were submitted to Pace Analytical Services, located in Minneapolis, Minnesota. Samples were analyzed for the methods requested on the Chain of Custody.

A full data package was received from Pace Analytical Services. The final results and supporting quality assurance/quality control (QA/QC) data were reviewed. Evaluation of the data was based on information obtained from the Chain of Custody forms, finished report forms, blank data, and spike recoveries.

QA/QC REVIEW

All samples were prepared and/or analyzed within the required holding times with a few exceptions. All samples for method 3500 and 4500 were analyzed out of the acceptable hold times. All nitrite and ferrous iron results were qualified as estimated. All samples were properly preserved and cooled after collection.

All appropriate samples and blanks were spiked with surrogate compounds prior to sample preparation and/or analysis in accordance with the organic methods. All surrogate spike recoveries met the associated method criteria indicating adequate analytical efficiency with the exceptions of a few high method AK101 recoveries. The GRO results for samples MW-1, MW-11 and DUP-1 were qualified as estimated.

Method blanks were prepared and analyzed with the samples for all parameters. All blank results were non-detect for the analytes of interest with the exception of DRO present at a low concentration. The associated sample results were significantly greater than the blank and would not have been impacted. No qualification of the data was deemed necessary.

Laboratory control samples (LCS) were analyzed for all parameters. LCS for methods RSK175, AK101, AK102 and 2320 were analyzed in duplicate. All recoveries were within required control limits showing adequate analytical accuracy and precision.

Matrix spikes (MS) were prepared and analyzed for methods AK101, 8260, 2320, 3500 and D516. MS were analyzed in duplicate for methods 2320 and D516. All recoveries were within required control limits

showing adequate analytical accuracy and precision. Precision, for methods RSK175 and AK102, was determined to be acceptable based on LCS/LCSD recoveries. Precision, for methods AK101, 8260 and 3500, was determined to be acceptable based on laboratory duplicate recoveries. Precision for method 4500 could not be determined.

Trip blanks were collected and analyzed with the investigative samples. All trip blank results were non-detect for the compounds of interest.

A field duplicate was collected and submitted blind to the laboratory. The sample ID was MW-5 and its duplicate was DUP-1. A comparison of the results showed good analytical and sampling precision.

CONCLUSION

Based on the QA/QC review, the data submitted were judged to be acceptable for use with the qualifications noted.

Date	Project Name	Project #	Total Hrs	DV Level	VO Samples
8/26/2013	UPRR - Plainville, KS	058322-0095-2065	1.5	Reduced	24
8/27/2013	UPRR - Mountain View, CA	058324-0095-1875	8.0	Reduced	78
8/27/2013	UPRR - Colfax, CA	058324-0095-1270	4.5	Reduced	3
8/27/2013	Delta Western - Sitka, AK	082723-2013-P10	2.5	Reduced	18
8/28/2013	UPRR - Dunsmuir, CA	058324-0095-1350	8.0	Reduced	14
8/30/2013	Shell - Anchorage, AK	060583-2013-03	1.5	Reduced	5
9/8/2013	UPRR - S. San Francisco, CA	058324-0095-2385	25.0	Reduced	153
9/11/2013	UPRR - Willits, CA	058324-0095-2680	40.0	Reduced	232
9/11/2013	Frederick Ramond Facility, Cerritos, CA	048616-01-101	6.0	Reduced	75
9/12/2013	Frederick Ramond Facility, Cerritos, CA	048616-01-101	3.0	Reduced	28
9/12/2013	UPRR - Laramie, WY	058323-0095-1725	1.5	Reduced	0
9/16/2013	UPRR - Mertens, TX	058326-0095-1834	3.0	Reduced	7
9/16/2013	UPRR - Storrie, CA	058324-0095-2435	8.0	Reduced	47
9/17/2013	UPRR - Storrie, CA	058324-0095-2435	1.5	Reduced	17
9/17/2013	UPRR - Aulne, KS	058322-0095-1068	1.0	Reduced	0
9/17/2013	UPRR - Wichita, KS	058322-0095-2660	1.0	Reduced	8
9/17/2013	UPRR - Wichita, KS	058322-0095-2660	1.0	Reduced	4
9/18/2013	Chevron - Anchroage, AK	065001-2013-M10	1.0	Reduced	4
9/18/2013	UPRR - Buckeye, AZ	058323-0095-1134	1.0	Reduced	11
9/18/2013	Chevron - Fairbanks, AK	065004-2013-M10	1.5	Reduced	20
9/18/2013	UPRR - Cheyenne, WY	058323-0095-1205	3.0	Reduced	42
9/19/2013	Gilman Partners, Berkley, CA	082887-03-05	2.5	Reduced	42
9/23/2013	Gilman Partners, Berkley, CA	082887-03-05	1.5	Reduced	19
9/25/2013	UPRR - Roseville, CA	058324-0095-2185	2.5	Reduced	16
9/25/2013	Shell - Anchorage, AK	060577-2013-02	1.5	Reduced	3
9/25/2013	UPRR - Tucson, AK	058323-0095-2510	1.0	Reduced	6
9/25/2013	Shell - Anchorage, AK	060580-2013-01	1.0	Reduced	5
9/25/2013	UPRR - Tucson, AK	058323-0095-2520	1.0	Reduced	3
9/25/2013	Shell - Anchorage, AK	060576-2013-01	1.5	Reduced	15
9/25/2013	UPRR - Alamogordo, NM	058323-0095-1015	1.5	Reduced	5
9/26/2013	Dillingham Auto - Dillingham, AK	073011-2013-03	2.0	Reduced	24
9/26/2013	UPRR - Proviso, IL	058325-0095-2137	1.0	Reduced	2
9/26/2013	Shell - Anchorage, AK	060578-2013-02	1.5	Reduced	13
9/26/2013	Shell - Anchorage, AK	060578-2013-02	1.5	Reduced	16
9/26/2013	UPRR - Proviso, IL	058325-0095-2138	1.0	Reduced	3
9/26/2013	Chevron - Anchroage, AK	065008-2013-GWS	5.5	Reduced	29
9/26/2013	UPRR - Tucson, AK	058323-0095-2510	1.0	Reduced	2
9/27/2013	Chevron - Fairbanks, AK	065003-2013-GWS	3.5	Reduced	26

Cs	PCBS		SVOCs		Metals		Gen Chem		
Batches	Samples	Batches	Samples	Batches	Samples	Batches	Samples	Batches	Ave # of Methods per Sample
3	0	0	0	0	0	0	0	0	0
11	0	0	11	1	0	0	93	16	5
3	0	0	64	9	5	3	0	0	0
4	0	0	16	5	0	0	0	0	0
6	0	0	16	1	28	5	105	20	8
3	0	0	4	2	2	2	0	0	0
40	0	0	111	19	147	22	0	0	0
16	0	0	679	65	616	43	0	0	0
22	0	0	73	10	0	0	0	0	0
7	0	0	15	4	0	0	65	11	5
0	0	0	20	3	0	0	0	0	0
0	0	0	24	4	12	2	0	0	0
13	0	0	17	2	22	4	66	11	6
3	0	0	8	1	0	0	0	0	0
0	0	0	0	0	6	1	0	0	0
2	0	0	0	0	0	0	8	2	2
2	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	5	1	0	0	0
7	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
2	0	0	16	2	16	2	0	0	0
2	0	0	5	3	5	3	2	2	2
4	0	0	1	1	0	0	3	3	3
2	0	0	4	2	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0
5	0	0	14	2	2	2	2	2	2
5	0	0	8	2	0	0	0	0	0
4	0	0	11	1	0	0	0	0	0
1	0	0	2	1	0	0	0	0	0
4	0	0	3	3	6	1	0	0	0
4	0	0	3	3	8	3	2	2	2
1	0	0	3	1	0	0	0	0	0
5	0	0	8	1	11	1	55	5	5
4	0	0	0	0	0	0	0	0	0
6	0	0	8	1	0	0	32	4	4

Samples	**SDGs**	**Samples**	**SDGs**	**Samples**	**SDGs**

Organic Data Review Notes

PROJECT INFORMATION

Project Name and Site: CHEVRON · FAIRBANKS · AK

Project Number: 065003 · 2013 · GWS

SDG: 10236896 · PACE · MN

Parameter: AK101 · AK102 · SULFATE · RSK · 2320 · 3500 · NITRITE 8260

Sample Matrix: GH_2O

Chemist: J CLOUD

Date: 9/27/13

Level of Data Review: Validation Verification

DV Guidelines NFG Reg III Reg II SOW Other_____

QAPP _____

HOLDING TIME

	Date	Criteria	Criteria Met?
Collect			
Extract			
Analyze			

TEMPERATURE OK

Qualifications: 9/27

NITRITE ←

3500 ←

SURROGATES

Check Calcs: _____

Criteria: Lab Method QAPP Other_____

Unable to assess some due to: Interference _____

Dilutions _____

% Rec Met Criteria? _____

Qualifications:

AK101 · MW·1 ↑ SUR ←

MW·11 ↑ SUR ←

DUP·1 ↑ SUR ←

METHOD BLANKS

RSK · 17906 · ND

AK101 · 11133 · ND

11144 · ND

8260 · 24473 · ND

24478 · ND

24492 ND

AK102 · 22484 · 0.022J → 0.11 All 75X

2320 · 31638 · ND

3500 · 42722 · ND

D516 · 15688 · ND

4500 · 15630 · ND

LCS/ LCSDs

RSK · 17906 · %R & RPD OK

AK101 · 11133 · %R & RPD OK

11144 · %R & RPD OK

8260 · 24473 · %R OK

24478 · %R OK

24492 · %R OK

AK102 · 22484 · %R & RPD OK

2320 · 31638 · %R & RPD OK

3500 · 42722 · %R OK

D516 · 15688 · %R OK

4500 · 15630 · %R OK

LAB DUP

AK101 · 11133 · MW · 2 · OK

8260 · 24478 · MW · 2 · OK

3500 · 42722 · MW · 4 · OK

C Gra

MS/MSDs

RSK · 17906 · N/A

AK101 · 11133 · MW·4 · %R OK

11144 · NP

8260 · 24473 · NP

24478 · MW·4 · %R OK

24492 · NP

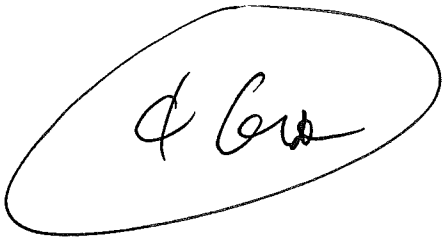
AK102 · 22484 · N/A

2320 · 31638 · MW·9 · %R & RPD OK

3500 · 42722 · DUP·1 · %R OK

D516 · 15688 · MW·11 · %R & RPD OK

4500 · 15630 · NP



FIELD DUPLICATES

Frequency: 1/Batch 1/Day None Other_____

Sample ID: _____

Check Calcs: _____

%D Criteria: _____

RPDs Met Criteria? MW-5/DUP-1

Qualifications:

OK

FIELD BLANKS

Type: Rinse Blank Field Blank Trip Blank

Frequency: 1/Batch 1/Day 1/Cooler None

Detections: _____

Qualifications:

1 TB - ALL ND