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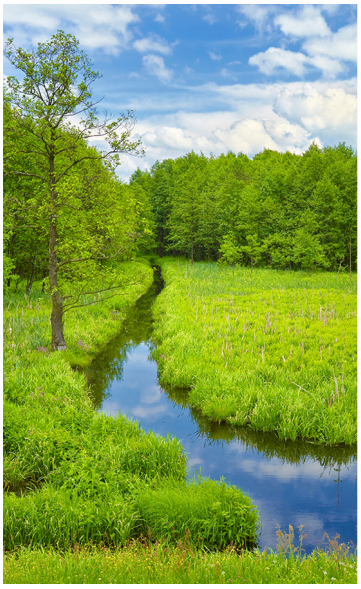

Report

SECOND SEMIANNUAL 2013 GROUNDWATER MONITORING REPORT

Delta Western, Incorporated
Dillingham Auto
315 Main Street
Dillingham, Alaska
ADEC File ID: 2540.26.003

Prepared for: Alaska Department of Environmental Conservation

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

February 2013 • 073011 • Report No. 13

Partners in Sustainability

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ADEC File ID: 2540.26.003

Prepared For:

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FEBRUARY 2014

REF. NO. 073011 (13)

TABLE OF CONTENTS

Page

LIST OF FIGURES

(Following Text)

LIST OF TABLES

(Following Text)

LIST OF APPENDICES

LIST OF ACRONYMS AND ABBREVIATIONS

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
ASTs	aboveground storage tanks
bgs	below ground surface
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
ft	feet
GRO	gasoline range organics
mg/l	milligrams per liter
P.G.	Professional Geologist
Ref. no.	reference number

1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) is submitting this *Second Semiannual 2013 Groundwater Monitoring Report* to the Alaska Department of Environmental Conservation (ADEC) on behalf of Delta Western, Incorporated (Delta Western) for the site referenced above. CRA prepared this report summarizing the September 2013 groundwater sampling in Dillingham, Alaska.

2.0 SITE BACKGROUND

The site is a former automotive repair shop located at 315 Main Street in Dillingham, Alaska (Figure 1). The former automotive shop building was demolished in 2010. Delta Western's bulk fuel terminal is directly southwest of the site. The property's legal description is U.S.S. 1922, west boundary and U.S.S. 1793, east boundary, Lot 1, Block 32, Dillingham Townsite. Site latitude and longitude are 59.0380° north and 158.4662° west. Site facilities include aboveground storage tanks (ASTs), fuel dispensers, a loading rack, product piping, a warehouse and a station building (Figure 2). Site photographs are presented as Appendix A.

Contaminants of Potential Concern and 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 (AAC) 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 current site groundwater and soil cleanup levels.

Hydrogeology

Dillingham is located in the northern arm of Bristol Bay. The Wood and Nushagak Rivers converge in Dillingham. The Nushagak River is located downgradient approximately 427 ft south of the current station building. Average annual precipitation in Dillingham is approximately 26 inches per year. Groundwater depths ranged from 0.36 (MW-8) to 5.31 (MW-7) feet (ft) below ground surface (bgs) on September 10, 2013. Groundwater flows to the southwest with a gradient of 0.04 ft/ft (Figure 2). Site subsurface sediments consist of sand to approximately 12 feet (ft) below ground surface (bgs), underlain by clay with silt to the total explored depth, approximately 15 ft bgs.

Conceptual Site Model

CRA submitted a conceptual site model (CSM) to the ADEC on November 29, 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*. Incidental ingestion of soil, groundwater and surface water, and inhalation of indoor and outdoor air were identified as complete exposure pathways.

3.0 SECOND SEMIANNUAL GROUNDWATER MONITORING AND SAMPLING

Groundwater Sampling

CRA gauged and sampled monitoring wells B1MW through B4MW, TW-2, and MW-5R through MW-10 on September 10 and 11, 2013. Each monitoring well was opened and the well cap removed to allow groundwater levels to stabilize. Monitoring wells were purged of approximately three well-casing volumes while collecting temperature, pH, dissolved oxygen, oxidation reduction potential, and conductivity data. All groundwater samples, including a duplicate sample, were collected using clean, disposable, Teflon bailers and decanted into clean containers supplied by the analytical laboratory. The samples were submitted under chain-of-custody to Pace Analytical of Minneapolis, Minnesota. Field sampling forms are presented as Appendix B.

Sampling-Derived Waste

Purged groundwater generated during sampling was stored onsite in a United States Department of Transportation approved 55-gallon drum and is awaiting disposal. ADEC approval for disposal was received via email on October 29, 2013. The groundwater was discharged to the surface within the source area in November 2013.

Groundwater Analytical Methods

- All groundwater samples were analyzed for the following:
- DRO by Alaska Series Method AK102
- GRO by Alaska Series Method AK101
- Benzene, toluene, ethylbenzene and xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260B.

Groundwater Analytical Results

No DRO was detected above the ADEC Table C Groundwater cleanup level in groundwater samples B2MW, B3MW, B4MW, TW-2, MW-6, and MW-9. No GRO was detected above cleanup levels in groundwater samples B2MW, B3MW, B4MW, TW-2, MW-5R, MW-6, MW-7, MW-9 and MW-10. No benzene was detected above regulatory cleanup levels in groundwater samples B3MW, B4MW, TW-2 and MW-9. Groundwater sample MW-10 contained the maximum DRO at 9.3 milligrams per liter (mg/l). The maximum GRO was detected in groundwater sample B1MW at 14.3 mg/l. The maximum benzene detected was in groundwater sample MW-7 at 0.23 mg/l.

Based on the quality assurance/quality control review, the data submitted were judged to be acceptable for use with the qualifications noted. The ADEC laboratory data review checklist and summary are presented as Appendix D.

CRA has collected geochemical parameters for dissolved oxygen (DO), temperature, pH, oxygen reduction potential (ORP) and conductivity measurements since August 2011 to establish data for evaluating natural attenuation at the site (Table 1). Dissolved oxygen was measured at 3.6 mg/L in source area well B1MW, where petroleum hydrocarbons exceeded ADEC Table C cleanup levels; and 4.63 mg/L and 4.36 mg/L DO in wells MW-9 and TW-2, where no petroleum hydrocarbons were detected above laboratory detection limits. The data suggests that aerobic biodegradation in occurring in the solute plume. Temperature is higher in source area well B1MW (3.51) than upgradient, non impacted well MW-9 (2.66 C), suggesting biodegradation maybe occurring near the source area. CRA will continue to collect groundwater geochemical parameters and evaluate if subsurface conditions are favorable for natural bioattenuation of the petroleum hydrocarbon impact.

4.0 CONCLUSIONS

No DRO, GRO, or BTEX was detected above regulatory cleanup levels in groundwater samples collected from wells B3MW, B4MW, TW-2 and MW-9. Petroleum hydrocarbons were detected above ADEC Table C Groundwater Cleanup Levels in downgradient monitoring wells MW-5R and MW-10 and crossgradient wells MW-7 and MW-8. Source area well B1MW contains the highest DRO, GRO and benzene concentrations but have decreased since October 2011. Upgradient groundwater sample MW-9 did not contain any petroleum hydrocarbons above laboratory detection limits and suggests that and offsite source is not impacting the Delta Western site west of the current dispenser islands. Well TW-2 has not contained petroleum hydrocarbons

above ADEC Table C cleanup levels in the last three sampling events. CRA will continue groundwater sampling in 2014 to further evaluate groundwater conditions.

Figures

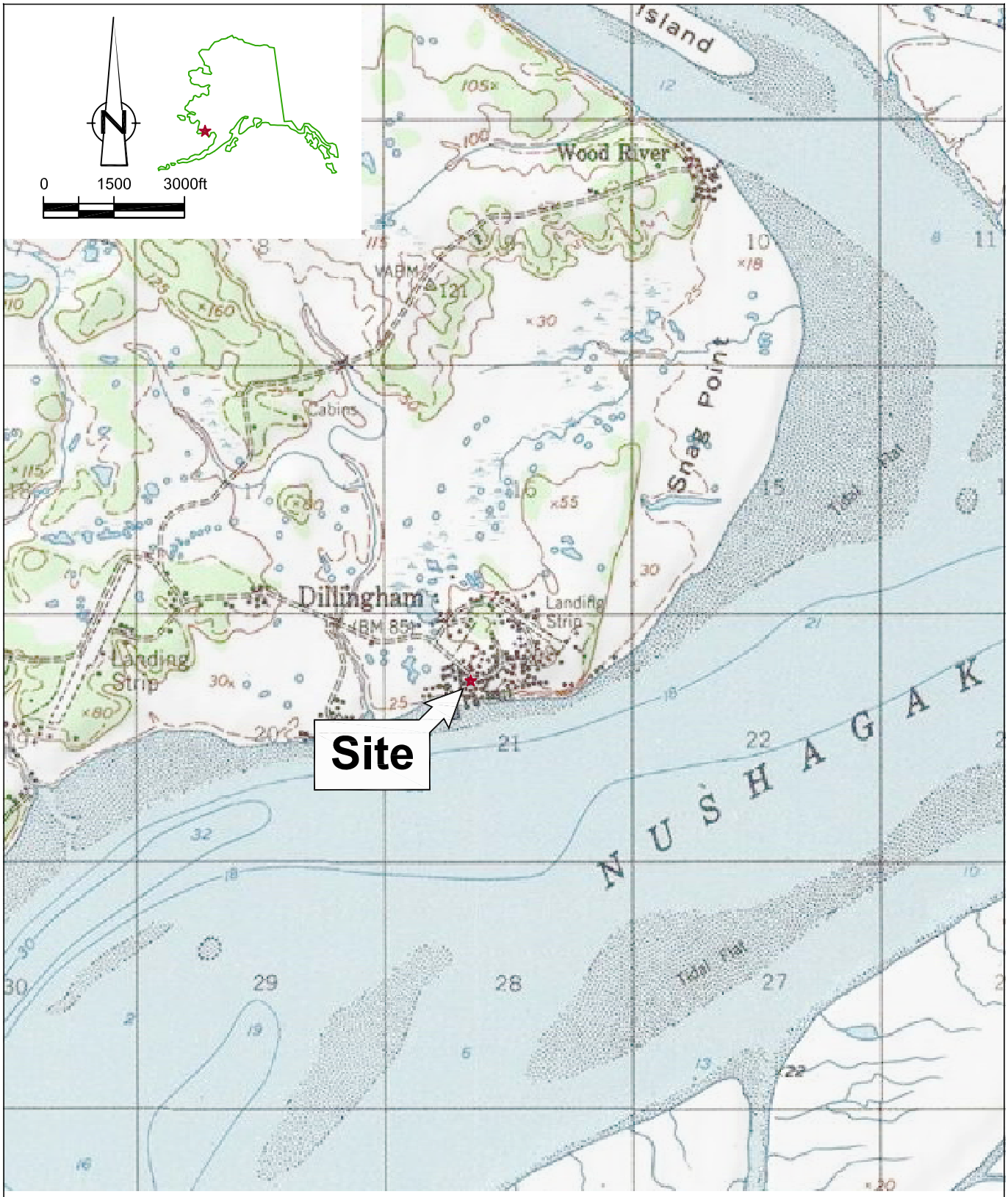

Figure 1

VICINITY MAP
DELTA WESTERN - DILLINGHAM AUTO
315 MAIN STREET
Dillingham, Alaska

072011-2011(001)GN-DN001.DWG

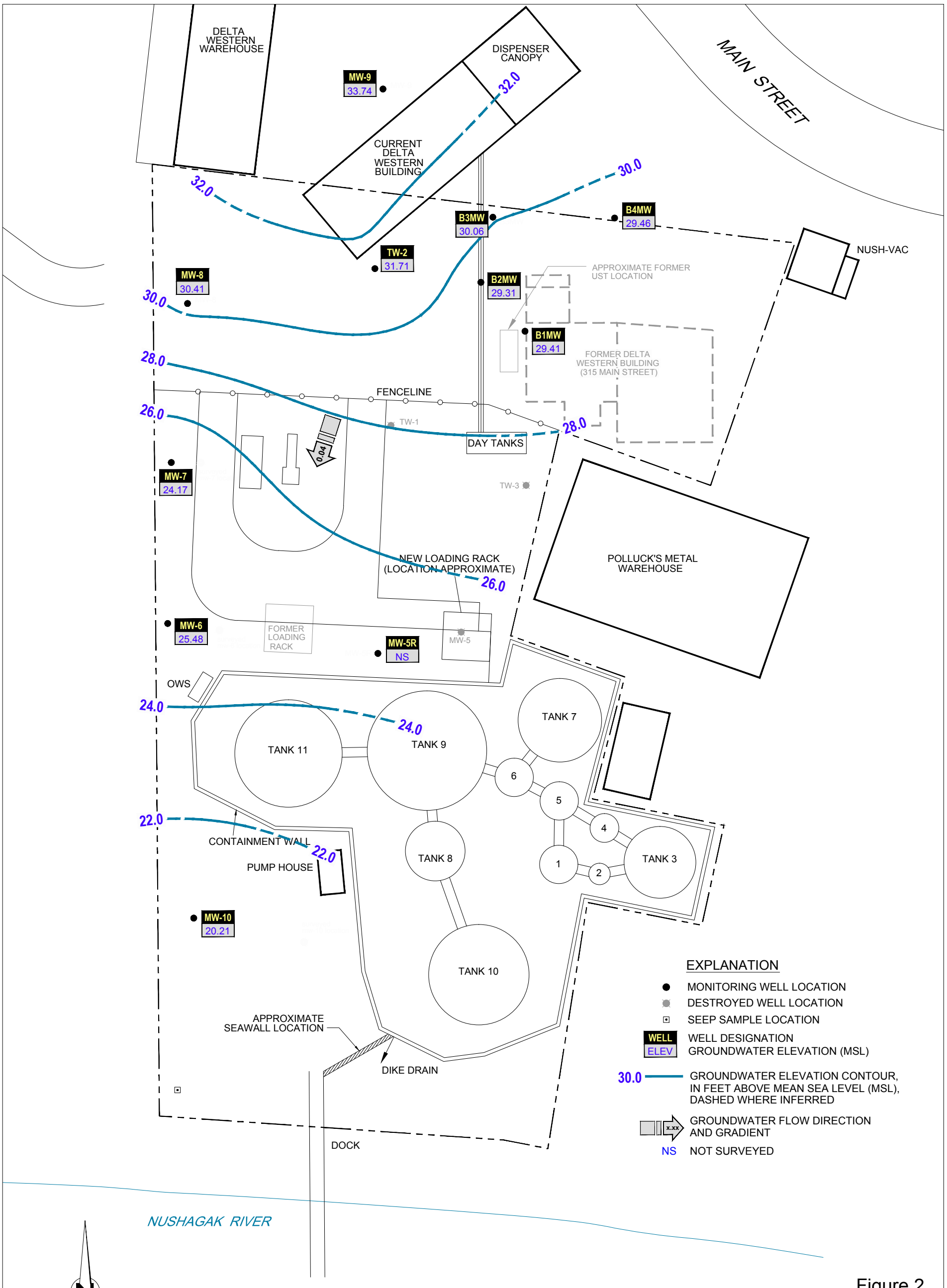

Figure 2

GROUNDWATER ELEVATION CONTOUR MAP
DELTA WESTERN - DILLINGHAM AUTO
315 MAIN STREET
Dillingham, Alaska
September 10, 2013

073011-2013(013)GN-DN002 NOV 13/2013

Tables

TABLE 1

GROUNDWATER ANALYTICAL RESULTS
DELTA WESTERN INCORPORATED
DILLINGHAM AUTO
315 MAIN STREET
DILLINGHAM, ALASKA

					HYDROCARBONS		*PRIMARY VOCS*				*FIELD PARAMETERS*				
Location	*Date*	*TOC*	*DTW*	*GWE*	*DRO*	*GRO*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*	*Conductivity*	*DO*	*ORP*	*pH*	*Temperature, sample*
	Units	*ft msl*	*fbg*	*ft msl*	*mg/l*	*mg/l*	*mg/l*	*mg/l*	*mg/l*	*mg/l*	*mS/cm*	*mg/l*	*millivolts*	*s.u.*	*Deg C*
ADEC Groundwater Cleanup Levels [a]					*1.5*	*2.2*	*0.005*	*1.0*	*0.7*	*10.0*					
B1MW	06/08/2006	101.77	2.01	97.6	0.15	<0.067	**1.20**	**5.93**	0.593	3.36	-	-	-	-	-
B1MW	08/19/2008	101.77	4.89	96.88	Analytical sample not collected										
B1MW	07/15/2010	101.77	3.20	98.57	<0.17	<0.05	**0.342**	0.653	0.202	1.57	-	-	-	-	-
B1MW	06/21/2011	31.11	1.38	29.73	**5.5 / 6.1**	**23 J / 23 J**	**0.470 / 0.540**	**1.6 / 1.900**	0.170 / 0.170	**10.000 / 11.000**	0.487	7.77	-20.2	6.3	5.79
B1MW	08/05/2011	31.11	2.05	29.06	**11.5**	**21.5**	**0.30**	0.93	0.24	5.7	0.499	7.65	-54.2	6.63	7.81
B1MW	10/03/2011	31.11	2.75	28.36	**7.8 / 10.5**	**11.4 / 10.6**	**0.51 / 0.53**	0.57 / 0.46	0.17 / 0.15	2.6 / 2.4	0.432	5.31	-54.2	7.34	7.2
B1MW	06/05/2012	31.11	2.34	28.77	**3.8 / 3.3**	**16.3 / 16.4**	**0.52 / 0.45**	**2.0 / 1.8**	0.51 / 0.47	4.5 / 4.3	0.45	4.15	-85.6	5.81	3.76
B1MW	09/16/2012	31.11	2.51	28.60	**3.0 / 4.1**	**8.3 J / 9.3**	**0.36 / 0.34**	0.68 / 0.67	0.18 / 0.20	1.8 / 1.7	0.341	5.23	-140.1	7.27	7.04
B1MW	06/05/2013	31.11	1.54	29.57	**7.8 / 7.7**	**33.3 / 31.8**	**0.32 / 0.37**	**1.7 / 2.0**	0.58 / 0.59	**10.2 / 9.6**	0.26	4.48	-29.5	6.59	3.13
B1MW	09/11/2013	31.11	1.7	29.41	**2.5**	**14.3 J**	**0.22**	0.95	0.21	2.9	0.423	3.60	1.9	6.84	3.51
B2MW	06/08/2006	100.11	2.32	97.79	<0.14	<0.067	**0.0275**	0.0113	0.00231	0.0145					
B2MW	08/19/2008	100.11	3.75	96.36	Analytical sample not collected										
B2MW	07/15/2010	100.11	3.35	96.76	<0.16	<0.05	0.00293	<0.00200	<0.00200	<0.00200	-	-	-	-	-
B2MW	06/21/2011	31.37	1.52	29.85	0.89	0.044 J	0.0031	<0.00030	<0.00012	<0.00069	0.287	5.88	107.1	6.05	3.79
B2MW	08/05/2011	31.37	2.09	29.28	0.61	0.066	**0.0093**	0.00028 J	<0.00020	0.0011 J	0.725	13.41	-54.3	6.52	5.27
B2MW	10/03/2011	31.37	3.30	28.07	0.52	<0.069 U	**0.012**	<0.0010 U	<0.0010 U	<0.0030 U	0.743	5.18	-112.4	8.18	6.7
B2MW	06/05/2012	31.37	2.88	28.49	0.50	0.14	**0.012**	0.0020	<0.00010	0.0017 J	0.675	3.46	-220.2	6.34	1.36
B2MW	09/16/2012	31.24	2.41	28.83	<0.38	0.19	**0.052**	0.0011	<0.00010	0.0038	0.582	5.54	-98.4	7.68	6.81
B2MW	06/05/2013	31.24	1.99	29.25	0.32 J	0.27 J	**0.044**	0.0055	<0.00024	0.0075	0.289	5.96	-5.4	6.63	1.33
B2MW	09/11/2013	31.24	1.93	29.31	0.26 J	0.24	**0.025**	0.015	<0.00024	0.0047	0.34	4.58	-12.4	6.63	3.99
B3MW	06/08/2006	-	3.05	-	<0.14	<0.067	**0.00856**	0.0120	0.0805	0.239	-	-	-	-	-
B3MW	08/19/2008	-	-	-	Well not located										
B3MW	07/15/2010	-	-	-	Well not located										
B3MW	06/21/2011	33.11	2.51	30.60	0.61	0.79	0.0028	0.0012	0.014	0.047	0.413	9.63	-25.5	5.91	5.29
B3MW	08/05/2011	33.11	3.16	29.95	0.85	1.4	0.0026	0.0017	0.016	0.058	0.534	6.11	-19.7	5.95	5.36
B3MW	10/03/2011	33.11	4.50	28.61	0.55	0.92	0.0016	0.0015	0.016	0.042	0.438	6.03	-46.2	7.41	7.06
B3MW	06/05/2012	33.11	3.31	29.80	0.54	1.2 J	0.0030	0.0026	0.027	0.085	0.488	5.48	-124	6.23	2.02
B3MW	09/16/2012	33.02	2.31	30.71	0.66	**3.1 J**	0.0036	0.0034	0.071	0.21	0.521	5.74	-68.9	7.42	6.89
B3MW	06/05/2013	33.02	2.11	30.91	0.60	1.1 J	0.0034	0.0024	0.027	0.074	0.221	3.75	-28.7	6.62	2.31
B3MW	09/11/2013	33.02	2.96	30.06	0.49	0.97	0.0048	0.0026	0.023	0.058	0.297	2.06	-33.1	6.69	2.99
B4MW	06/08/2006	-	2.95	-	<0.014	0.11	0.0017	0.0049	<0.0010	0.0390	-	-	-	-	-
B4MW	08/19/2008	-	-	-	Well not located										
B4MW	07/15/2010	-	3.70	-	<0.16	<0.05	<0.001	<0.001	<0.001	<0.003	-	-	-	-	-
B4MW	06/21/2011	32.27	1.79	30.48	1.1	0.019 J	0.00073	<0.00014 UJ	<0.0005	<0.00035	0.221	1.53	97.8	5.33	3.14
B4MW	08/05/2011	32.27	2.41	29.86	1.3	<0.020 UJ	0.00072 J	0.00013 J	0.00018 J	0.0013 J	0.469	5.63	145.4	5.08	4.26
B4MW	10/03/2011	32.27	3.00	29.27	0.70	<0.050 U	0.00095 J	<0.0010 U	<0.0010 U	<0.0030 U	0.344	7.75	139.8	7.19	6.65
B4MW	06/05/2012	32.27	1.35	30.92	0.18 J	<0.025	0.00053 J	<0.00010	<0.00010	<0.00030	-	-	-	-	-
B4MW	09/16/2012	32.27	2.84	29.43	**4.0**	<0.025	0.00040 J	<0.00010	0.00012 J	<0.0030 U	0.839	6.95	-149.9	7.09	5.76
B4MW	06/05/2013	32.27	2.72	29.55	**1.8**	<0.050	0.00073 J	<0.00023	<0.00024	<0.00072	0.111	2.73	30.8	6.15	1.49
B4MW	09/11/2013	32.27	2.81	29.46	0.51	<0.050	0.0010	<0.00023	<0.00024	<0.00072	0.269	2.29	-43.6	6.17	2.77
TW-1	08/19/2008	101.32	2.28	99.04	<0.014	<0.067	0.00437	0.00203	0.00468	0.0467	-	-	-	-	-
TW-1	07/16/2010	101.32	5.10	96.22	<0.014	<0.067	**0.01015**	0.164	<0.00200	0.00502	-	-	-	-	-
TW-1	06/21/2011	30.53	2.28	28.25	**3.6**	1.5	**0.027**	0.820	0.0011	0.0064	0.221	12.14	-23.7	6.38	5.28
TW-1	08/05/2011	30.53	2.84	27.69	0.62	0.071	**0.0051**	0.0024	<0.000070	<0.00013 UJ	0.159	10.16	35.2	6.9	5.13
TW-1	10/03/2011	30.53	2.35	28.18	0.78	<0.050 U	0.0028	<0.0010 U	0.0014	<0.0030 U	0.299	5.36	-71.3	8.24	5.91
TW-1	06/05/2012	30.53	2.35	28.18	Ice in well										
TW-1	09/15/2012	30.53	2.84	27.69	1.3	0.18	0.00062 J	0.074	0.00013 J	<0.0030 U	0.479	5.27529414	-84.3	6.99	6.59

TABLE 1

GROUNDWATER ANALYTICAL RESULTS
DELTA WESTERN INCORPORATED
DILLINGHAM AUTO
315 MAIN STREET
DILLINGHAM, ALASKA

					HYDROCARBONS		*PRIMARY VOCS*				*FIELD PARAMETERS*				
Location	*Date*	*TOC*	*DTW*	*GWE*	*DRO*	*GRO*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*	*Conductivity*	*DO*	*ORP*	*pH*	*Temperature, sample*
	Units	*ft msl*	*fbg*	*ft msl*	*mg/l*	*mg/l*	*mg/l*	*mg/l*	*mg/l*	*mg/l*	*mS/cm*	*mg/l*	*millivolts*	*s.u.*	*Deg C*
ADEC Groundwater Cleanup Levels [a]					***1.5***	***2.2***	***0.005***	***1.0***	***0.7***	***10.0***					
TW-2	08/19/2008	-	5.44	-	<0.014	<0.067	**1.23**	0.151	0.203	1.48	-	-	-	-	-
TW-2	07/16/2010	-	5.74	-	<0.014	<0.067	0.00459	<0.00200	<0.00200	<0.00200	-	-	-	-	-
TW-2	06/21/2011	34.35	3.24	31.11	0.93	**79**	**5.100**	**14.00**	0.470	4.70	0.133	9.10	20.6	6.67	6.98
TW-2	08/05/2011	34.35	2.91	31.44	0.89 / 0.89	1.7 / **2.4**	**0.025 / 0.031**	0.080 / 0.090	0.017 / 0.021	0.58 / 0.65	0.173	8.54	-62.6	6.79	9.22
TW-2	10/03/2011	34.35	5.78	28.57	0.97	1.8	**0.041**	0.0053	0.012	0.56	0.269	7.50	34.8	6.7	7.31
TW-2	06/05/2012	34.35	4.59	29.76	0.16 J	0.068	**0.013**	0.00044 J	0.00041 J	0.0032	0.386	12.74	-76.9	6.86	2.45
TW-2	09/16/2012	34.37	3.53	30.84	<0.38	<0.025	<0.00010	<0.00010	<0.00010	<0.0030 U	0.309	6.93	-68.8	8.03	6.27
TW-2	06/05/2013	34.37	3.13	31.24	0.12 J	<0.050	0.0014	<0.00023	<0.00024	<0.00072	0.089	8.24	-10.2	6.79	6.62
TW-2	09/11/2013	34.37	2.66	31.71	<0.22	<0.050	0.00034 J	<0.00023	<0.00024	<0.00072	0.371	4.36	-98.4	6.52	6.91
TW-3	08/19/2008	102.51	6.26	96.25	<0.14	<0.067	**0.158**	<0.00200	<0.00200	<0.00200	-	-	-	-	-
TW-3	07/16/2010	102.51	3.42	99.09	0.15	<0.067	**0.00927**	<0.00200	<0.00200	<0.00200	-	-	-	-	-
TW-3	06/21/2011	30.60	1.11	29.49	0.62	0.043 J	**0.0096**	<0.00016 UJ	<0.0005	<0.00032 U	0.267	7.09	2.8	6.47	5.32
TW-3	08/05/2011	30.60	2.50	28.10	0.35 J	0.24	**0.11**	0.00036 J	0.00034 J	0.0017 J	0.331	6.10	-30.4	6.45	5.04
TW-3	10/03/2011	30.60	3.50	27.10	0.51	0.23	**0.11**	<0.0010 U	<0.0010 U	<0.0030 U	0.238	3.68	-2.3	7.42	6.41
TW-3	06/05/2012	30.60	2.04	28.56	0.28 J	0.026 J	0.0046	0.00017 J	0.00020 J	0.00064 J	0.456	8.82	-34.3	6.33	3.86
TW-3	09/14/2012	30.60	2.75	27.85					Well Destroyed						
MW-5	06/22/2011	29.21	1.31	27.90	**8.4**	1.5	**0.083**	0.0052	0.022	0.100	0.312	25.36	21.4	6.67	2.8
MW-5	08/05/2011	29.21	2.04	27.17	**7.6**	1.8	**0.027**	0.0014	0.020	0.067	0.322	11.36	-14.1	6.6	4.71
MW-5	10/03/2011	29.21	2.69	26.52	**5.6**	1.7	**0.039**	0.00092 J	0.013	0.040	0.42	3.02	46.7	7.07	6.19
MW-5	06/05/2012	29.21	1.12	28.09	**5.2**	1.0	**0.12**	0.00095 J	0.0049	0.017	-	-	-	-	-
MW-5R	09/15/2012	--	2.60	--	**1.9**	1.4	**0.11**	0.0020	0.031	0.13	0.26	4.85	33.9	7.95	7.02
MW-5R	06/05/2012	--	1.63	--					**Ice in well; obstructed at 4.15 ft bgs**						
MW-5R	09/10/2013	--	2.91	--	2.6	1.1	**0.17**	0.0019	0.031	0.070	0.211	1.82	49.6	6.39	4.08
MW-5R	09/10/2013	--	2.91	--	**2.5**	1.2	**0.17**	0.0020	0.031	0.070	0.211	1.82	49.6	6.39	4.08
MW-6	06/22/2011	28.07	1.51	26.56	0.70	0.39	**0.150**	0.0004 J	0.00016 J	0.0014	0.29	6.26	-27.9	6.31	3.87
MW-6	08/05/2011	28.07	3.11	24.96	0.79	0.41	**0.14**	0.00036 J	0.00022 J	0.0016 J	0.304	7.37	-11.7	6.51	5.14
MW-6	10/03/2011	28.07	3.30	24.77	0.59	0.47	**0.18**	<0.0010 U	<0.0010 U	<0.0030 U	0.283	4.00	10.3	7.23	6.64
MW-6	06/05/2012	28.07	2.06	26.01	0.59	0.17	**0.083**	0.00047 J	<0.00010	0.00042 J	0.293	10.31	-59.4	6.78	2.29
MW-6	09/15/2012	28.19	3.50	24.69	0.98	0.087	**0.025**	<0.00010	<0.00010	<0.0030 U	0.293	5.77	102	7.13	6.54
MW-6	06/05/2013	28.19	1.59	26.6	0.39 J	0.34	**0.14**	0.00035 J	<0.00024	0.0013 J	0.329	1.89	-10.3	6.47	2.5
MW-6	09/10/2013	28.19	2.71	25.48	1.0	0.079 J	**0.017**	<0.00023	<0.00024	<0.00072	0.329	1.89	-10.3	6.46	3.99
MW-7	06/22/2011	29.48	5.20	24.28	**6.4**	**2.6 J**	**0.130**	0.011	0.050	0.340	0.269	25.43	19.8	6.55	4.17
MW-7	08/05/2011	29.48	5.26	24.22	-- / **11.1**	1.5 / 1.6	**0.19 / 0.20**	0.0017 / 0.0023	0.0056 J / 0.011 J	0.037 J / 0.068 J	0.357	6.43	-28	6.4	5.14
MW-7	10/03/2011	29.48	5.31	24.17	**11.5 / 8.0**	1.2 / 1.3	**0.14 / 0.18**	0.0025 / 0.0032	0.012 J / 0.020 J	0.070 J / 0.12 J	0.418	4.13	13.4	7.06	6.26
MW-7	06/05/2012	29.48	5.37	24.11	**1.7**	**2.4**	**0.24**	0.0057	0.019	0.14	0.398	5.75	-159.2	5.5	2.45
MW-7	09/15/2012	29.48	5.33	24.15	**7.7 / 9.4**	1.9 / 2.2	**0.16 / 0.15**	0.0070 / 0.0066	0.038 J / 0.036	0.20 J / 0.18	0.294	5.45	-38.7	6.98	7
MW-7	06/05/2013	29.48	5.36	24.12	**4.2**	2.1	**0.17**	0.0086	0.034	0.21	0.312	1.46	-72.8	6.52	5.09
MW-7	09/10/2013	29.48	5.31	24.17	**3.8**	2.0	**0.23**	0.0067	0.011	0.075	0.284	3.71	-47.7	6.39	2.99
MW-7	09/10/2013	29.48	5.31	24.17	**3.3**	1.9	**0.20**	0.0078	0.0085	0.060	0.284	3.71	-47.7	6.39	2.99

TABLE 1

GROUNDWATER ANALYTICAL RESULTS
DELTA WESTERN INCORPORATED
DILLINGHAM AUTO
315 MAIN STREET
DILLINGHAM, ALASKA

					HYDROCARBONS		*PRIMARY VOCS*				*FIELD PARAMETERS*				
Location	*Date*	*TOC*	*DTW*	*GWE*	*DRO*	*GRO*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*	*Conductivity*	*DO*	*ORP*	*pH*	*Temperature, sample*
	Units	*ft msl*	*fbg*	*ft msl*	*mg/l*	*mg/l*	*mg/l*	*mg/l*	*mg/l*	*mg/l*	*mS/cm*	*mg/l*	*millivolts*	*s.u.*	*Deg C*
ADEC Groundwater Cleanup Levels [a]					*1.5*	*2.2*	*0.005*	*1.0*	*0.7*	*10.0*					
MW-8	06/22/2011	30.60	0.55	30.05	**5.2**	**2.2 J**	**0.0074 J**	0.0027 J	0.130 J	0.470 J	0.287	6.40	-42.3	6.23	4.11
MW-8	08/05/2011	30.60	0.70	29.90	**7.3**	**3.4 J**	**0.0071**	0.0027	0.19	0.53	0.302	7.72	-44.3	6.67	9.95
MW-8	10/03/2011	30.60	2.13	28.47	**11.7**	**3.3 J**	**0.0070**	0.0025	0.15	0.51	0.307	4.06	-24.3	7.4	7.77
MW-8	06/05/2012	30.60	2.39	28.21	**4.7**	1.3	0.0025	0.00029 J	0.044	0.11	0.433	7.98	-124	6.7	1.99
MW-8	09/16/2012	30.77	0.64	30.13	**5.2**	**3.6 J**	**0.0064**	0.0020	0.16	0.50	0.633	5.74	-42.4	7.19	6.19
MW-8	06/05/2013	30.77	0.47	30.3	**4.8**	**2.5**	**0.0064**	0.0025	0.17	0.60	0.159	2.02	-75.9	7.11	1.08
MW-8	09/10/2013	30.77	0.36	30.41	**4.1**	**2.7**	**0.0072**	0.0029	0.15	0.56	0.32	3.31	56.8	6.29	4.78
MW-9	09/14/2012	34.25						Could not be gauged due to surface water runoff							
MW-9	06/05/2013	34.25	2.74	31.51	0.24 J	<0.050	<0.00024	<0.00023	<0.00024	<0.00072	0.067	5.24	49.7	6.42	2.86
MW-9	09/10/2013	34.25	0.51	33.74	<0.23	<0.050	<0.00024	<0.00023	<0.00024	<0.00072	0.127	5.28	45.5	6.39	2.73
MW-10	09/15/2012	24.01	3.00	21.01	**8.5**	0.72	**0.078**	0.0017	0.054	0.079	0.293	5.69	-38.8	6.92	7.05
MW-10	06/05/2013	24.01	6.77	17.24	**5.8**	0.60 J	**0.11**	0.0012	0.013	0.070	0.605	0.26	-6.4	6.43	3.21
MW-10	09/10/2013	24.01	3.8	20.21	**9.3**	0.62	**0.060**	<0.0016	0.043	0.076	0.286	4.63	-61	6.39	2.66
SEEP-1	09/15/2012	--	--	--	0.96	**3.8**	**0.38**	0.51	0.10	0.41	-	-	-	-	-
TRIP BLANK	06/21/2011	--	--	--	--	<0.05	<0.0005	<0.0005	<0.0005	<0.001	-	-	-	-	-
TRIP BLANK	06/22/2011	--	--	--	--	<0.05	<0.0005	<0.0005	<0.0005	<0.001	-	-	-	-	-
TRIP BLANK	08/05/2011	--	--	--	--	0.0093 J	0.000022 J	0.000033 J	**85**	0.000096 J	-	-	-	-	-
TRIP BLANK	10/03/2011	--	--	--	--	0.015 J	<0.00012	<0.00020	<0.00021	<0.00042	-	-	-	-	-
TRIP BLANK	06/05/2012	--	--	--	--	<0.025	<0.00010	<0.00010	<0.00010	<0.00030	-	-	-	-	-
TRIP BLANK	09/15/2012	--	--	--	--	<0.025	<0.00010	<0.00010	<0.00010	<0.0030 U	-	-	-	-	-
TRIP BLANK	06/05/2013	--	--	--	--	<0.050	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-	-
TRIP BLANK-1	09/11/2013	--	--	--	--	<0.050	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-	-
TRIP BLANK-2	09/11/2013	--	--	--	--	<0.050	<0.00024	<0.00023	<0.00024	<0.00072	-	-	-	-	-

Notes and Abbreviations

VOCs = Volatile organic compounds
TOC = Top of casing
DTW = Depth to water
GWE = Groundwater elevation
DRO = Diesel range organics Alaska Series Method AK102
GRO = Gasoline range organics by Alaska Series Method AK10
Benzene, toluene, ethylbenzene, and total xylenes by EPA Method 8260B
Total Xylenes = Sum of m-, o-, and p-xylenes
ft msl = Feet above mean sea level
fbg = Feet below grade
mg/l = Milligrams per liter
ADEC = Alaska Department of Environmental Conservation
[a] = Levels established in ADEC Table C Groundwater Cleanup Levels (18 AAC 75.345)
<x = Constituent not detected above x milligrams per liter
BOLD = Indicates concentration above the ADEC Table C Groundwater Cleanup Level
Y = The chromatographic response resembles a typical fuel pattern
x / y = Sample results / blind duplicate results
J = Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).
U = Qualified below Detection Limit.
UJ =Esitmated value below Detection Limit.
- = Not measured/not analyzed
EPA = Environmental Protection Agency
DO measurements were converted from %DO to mg/l using the equivalent 1% = 0.115686275 mg/L.

Appendix A

Site Photographs

1. View to west of truck loading rack.

2. Site layout, view to north.

3. Well B2MW after well vault repair.

4. Well TW-1 after well vault repair.

Appendix A

SITE PHOTOGRAPHS
DELTA WESTERN - DILLINGHAM AUTO
315 MAIN STREET
Dillingham, Alaska

5. MW-5, view to south.

6. MW-6, view to west.

7. MW-7, view to northwest.

8. MW-8 well development, view to northwest.

Appendix A

SITE PHOTOGRAPHS
DELTA WESTERN - DILLINGHAM AUTO
315 MAIN STREET
Dillingham, Alaska

Appendix B

Field Sampling Forms

CRA

Groundwater Monitoring Field Sheet

Well ID	Time	DTP	DTW	Depth to Bottom	Product Thickness	Amount of Product Removed	Casing Diam.	PID	Comments
B1MW	1119	–	1.70	9.65	–	–	2		good
B2MW	1120	–	1.93	8.42	–	–	2		casing need trim
B3MW	1124	–	2.96	9.21	–	–	2		ok
B4MW	1123	–	2.81	8.68	–	–	2		needs casing trim & cap
TW-2	1125	–	2.66	11.01	–	–	2		casing needs trim
MW-5R	1107	–	2.91	12.73	–	–	2		New vault & cap
MW-6	1057	–	2.71	13.62	–	–	2		vault filled w/ water -ok
MW-7	1112	–	5.31	13.84	–	–	2		water in vault -ok
MW-8	1048	–	0.36	12.41	–	–	2		OK
MW-9	1127	–	0.51	12.36	–	–	2		needs new vault & pad
MW-10	1055	–	3.80	12.92	–	–	2		good

GAC Filtered Water Volume: N/A **gallons** **Volume logged on *Portable GAC Volume Tracking Log*?** ☐

Project Name: Delta Western Auto

Project Number: 073011

Field Staff: T. Echtermeyer/E. Purcell

Date: 9/10/13

I:\Denver\FIELD FORMS\FIELD\GWS\GW Monitoring Form.doc

CONESTOGA-ROVERS & ASSOCIATES

WELL SAMPLING FORM
DISPOSABLE BAILER SAMPLING

Site ID: **Delta Western Auto**	CRA Mgr: John Riggi	Well ID: B1MW	
CRA Project No.: 073011	Date: 9/11/13	Field Staff:E Purcell/T Echtermeyer	
Street Address: 315 Main Street	City, State: Dillingham, Alaska	Purging Device:	Teflon Disp. Bailer ○ bailer ●
		Sampling Method:	Teflon Disp. Bailer ○ bailer ●
Depth to Water: 1.70	Depth to Bottom: 9.65	Water Column Height: 7.95	
Volume/ft: 0.16	1 Casing Volume: 1.2	3 Casing Volumes: 3.6	
Well Diameter: 2	Did Well Dewater?: No	Total Gallons Purged: 4	
Start Purge Time: 1643	Stop Purge Time: 1700	Total Time: 7 min	

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

NO PURGE APPROVED BY ADEC? ☐ **YES** ☐ **NO** *(If NO, please enter parameters below.)*

Time	Volume Purged (gallons)	Temp. (°C) ± 10%	DO ± 10%	pH ± 0.1	Cond. (mS) ± 3%	ORP (mv) ± 10	Comments
1645	1.0	5.71	15.8	6.81	0.391	10.4	
1650	2.0	4.66	24.3	6.83	0.414	6.1	
1655	3.0	3.84	27.6	6.83	0.420	3.2	
1700	4.0	3.59	31.1	6.84	0.423	1.9	

**** A minimum of three parameters must be monitored and recorded.****
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 _____ mg/L Nitrate _____ mg/L

Sample ID	Date	Time	Analytes / Analytical Method		
B1MW-091113	9/11/13	1700	● DRO by AK102	○ SVOCs by TCL8270	○ PAHs by 8270
			○ RRO by AK103	○ Lead by 6010	○ PAHs by 8270SIM
			○ Alkalinity by 2320B	○ Methane by 8015B	○ Nitrate/Nitrite by 353.2
			○ Sulfate by 300	○ _____	○ _____
			● GRO by AK101		
			● BTEX by 8021B	● BTEX by 8260B	○ EDB by 8011
			○ HVOCs by 8260B	○ MtBE by 8260B	○ 1,2-DCA by 8260B

Additional Comments:

CONESTOGA-ROVERS & ASSOCIATES

WELL SAMPLING FORM
DISPOSABLE BAILER SAMPLING

Site ID: **Delta Western Auto**	CRA Mgr: John Riggi	Well ID: B2MW	
CRA Project No.: 073011	Date: 9/11/13	Field Staff:E Purcell/T Echtermeyer	
Street Address: 315 Main Street	City, State: Dillingham, Alaska	Purging Device:	Teflon Disp. Bailer ○ ___ ○
		Sampling Method:	Teflon Disp. Bailer ○ ___ ○
Depth to Water: 1.93	Depth to Bottom: 8.42	Water Column Height: 6.49	
Volume/ft: 0.16	1 Casing Volume: 1.0	3 Casing Volumes: 3.0	
Well Diameter: 2	Did Well Dewater?: No	Total Gallons Purged: 3.0	
Start Purge Time: 1701	Stop Purge Time: 1715	Total Time:	

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

NO PURGE APPROVED BY ADEC? ☐ **YES** ☐ **NO** *(If NO, please enter parameters below.)*

Time	Volume Purged (gallons)	Temp. (°C) ± 10%	DO ± 10%	pH ± 0.1	Cond. (mS) ± 3%	ORP (mv) ± 10	Comments
1705	1.0	5.07	23.7	6.61	0.301	-15.9	
1710	2.0	4.76	33.4	6.61	0.329	-13.9	
1715	3.0	3.99	39.6	6.63	0.340	-12.4	

**** A minimum of three parameters must be monitored and recorded.****
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 _____ mg/L Nitrate _____ mg/L

Sample ID	Date	Time	Analytes / Analytical Method		
B2mw-091113	9/11/13	1715	● DRO by AK102	○ SVOCs by TCL8270	○ PAHs by 8270
			○ RRO by AK103	○ Lead by 6010	○ PAHs by 8270SIM
			○ Alkalinity by 2320B	○ Methane by 8015B	○ Nitrate/Nitrite by 353.2
			○ Sulfate by 300	○ ___	○ ___
			● GRO by AK101		
			○ BTEX by 8021B	● BTEX by 8260B	○ EDB by 8011
			○ HVOCs by 8260B	○ MtBE by 8260B	○ 1,2-DCA by 8260B

Additional Comments:

CONESTOGA-ROVERS & ASSOCIATES

WELL SAMPLING FORM
DISPOSABLE BAILER SAMPLING

Site ID: **Delta Western Auto**	CRA Mgr: John Riggi	Well ID: B3MW	
CRA Project No.: 073011	Date: 9/11/13	Field Staff:E Purcell/T Echtermeyer	
Street Address: 315 Main Street	City, State: Dillingham, Alaska	Purging Device:	Teflon Disp. Bailer ○ ___ ○
		Sampling Method:	Teflon Disp. Bailer ○ ___ ○
Depth to Water: 2.96	Depth to Bottom: 9.21	Water Column Height: 6.25	
Volume/ft: 0.16	1 Casing Volume: 1.0	3 Casing Volumes: 3.0	
Well Diameter: 2	Did Well Dewater?: No	Total Gallons Purged: 3.0	
Start Purge Time: 1722	Stop Purge Time: 1730	Total Time: 8 min	

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

NO PURGE APPROVED BY ADEC? ☐ **YES** ☐ **NO** *(If NO, please enter parameters below.)*

Time	Volume Purged (gallons)	Temp. (°C) ± 10%	DO ± 10%	pH ± 0.1	Cond. (mS) ± 3%	ORP (mv) ± 10	Comments
1725	1.0	4.18	41.1	6.61	0.358	-15.7	
1727	2.0	3.10	26.6	6.69	0.341	-32.3	
1730	3.0	2.99	17.8	6.69	0.297	-33.1	

**** A minimum of three parameters must be monitored and recorded.****
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 _____ mg/L Nitrate _____ mg/L

Sample ID	Date	Time	Analytes / Analytical Method		
B3MW-091113	9/11/13	1730	◉ DRO by AK102	○ SVOCs by TCL8270	○ PAHs by 8270
			○ RRO by AK103	○ Lead by 6010	○ PAHs by 8270SIM
			○ Alkalinity by 2320B	○ Methane by 8015B	○ Nitrate/Nitrite by 353.2
			○ Sulfate by 300	○ ___	○ ___
			◉ GRO by AK101		
			○ BTEX by 8021B	◉ BTEX by 8260B	○ EDB by 8011
			○ HVOCs by 8260B	○ MtBE by 8260B	○ 1,2-DCA by 8260B

Additional Comments:

CONESTOGA-ROVERS & ASSOCIATES

WELL SAMPLING FORM
DISPOSABLE BAILER SAMPLING

Site ID: **Delta Western Auto**	CRA Mgr: John Riggi	Well ID: B4MW	
CRA Project No.: 073011	Date: 9/11/13	Field Staff:E Purcell/T Echtermeyer	
Street Address: 315 Main Street	City, State: Dillingham, Alaska	Purging Device:	Teflon Disp. Bailer ○ ___ ○
		Sampling Method:	Teflon Disp. Bailer ○ ___ ○
Depth to Water: 2.81	Depth to Bottom: 8.68	Water Column Height: 5.87	
Volume/ft: 0.16	1 Casing Volume: 1.0	3 Casing Volumes: 3.0	
Well Diameter: 2	Did Well Dewater?: No	Total Gallons Purged: 3.	
Start Purge Time: 1738	Stop Purge Time: 1745	Total Time: 7	

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

NO PURGE APPROVED BY ADEC? ☐ **YES** ☐ **NO** *(If NO, please enter parameters below.)*

Time	Volume Purged (gallons)	Temp. (°C) ± 10%	DO ± 10%	pH ± 0.1	Cond. (mS) ± 3%	ORP (mv) ± 10	Comments
1739	1.0	3.13	30.3	6.17	0.257	-30.7	
1742	2.0	2.99	24.4	6.17	0.269	-39.0	
1745	3.0	2.73	19.8	6.17	0.269	-43.6	

**** A minimum of three parameters must be monitored and recorded.****
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 _____ mg/L Nitrate _____ mg/L

Sample ID	Date	Time	Analytes / Analytical Method
B4mw-091113	9/11/13	1745	● DRO by AK102 ○ SVOCs by TCL8270 ○ PAHs by 8270 ○ RRO by AK103 ○ Lead by 6010 ○ PAHs by 8270SIM ○ Alkalinity by 2320B ○ Methane by 8015B ○ Nitrate/Nitrite by 353.2 ○ Sulfate by 300 ○ ___ ○ ___ ● GRO by AK101 ○ BTEX by 8021B ● BTEX by 8260B ○ EDB by 8011 ○ HVOCs by 8260B ○ MtBE by 8260B ○ 1,2-DCA by 8260B

Additional Comments:

CONESTOGA-ROVERS & ASSOCIATES

WELL SAMPLING FORM
DISPOSABLE BAILER SAMPLING

Site ID: **Delta Western Auto**	CRA Mgr: John Riggi	Well ID: TW-2	
CRA Project No.: 073011	Date: 9/11/13	Field Staff:E Purcell/T Echtermeyer	
Street Address: 315 Main Street	City, State: Dillingham, Alaska	Purging Device:	Teflon Disp. Bailer ◉ ___ ○
		Sampling Method:	Teflon Disp. Bailer ◉ ___ ○
Depth to Water: 2.66	Depth to Bottom: 11.01	Water Column Height: 8.35	
Volume/ft: 0.16	1 Casing Volume: 1.3	3 Casing Volumes: 3.9	
Well Diameter: 2	Did Well Dewater?: no	Total Gallons Purged: 40	
Start Purge Time:	Stop Purge Time:	Total Time:	

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

NO PURGE APPROVED BY ADEC? ☐ **YES** ☐ **NO** *(If NO, please enter parameters below.)*

Time	Volume Purged (gallons)	Temp. (°C) ± 10%	DO ± 10%	pH ± 0.1	Cond. (mS) ± 3%	ORP (mv) ± 10	Comments
1754	1.0	6.26	51.6	6.51	0.345	-110.7	
1757	2.5	6.30	49.4	6.52	0.363	-104.2	
1800	4.0	6.91	37.7	6.52	0.371	-98.4	

**** A minimum of three parameters must be monitored and recorded.****
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 _____ mg/L Nitrate _____ mg/L

Sample ID	Date	Time	Analytes / Analytical Method
TW-2-091113	9/11/13	1800	◉ DRO by AK102 ○ SVOCs by TCL8270 ○ PAHs by 8270 ○ RRO by AK103 ○ Lead by 6010 ○ PAHs by 8270SIM ○ Alkalinity by 2320B ○ Methane by 8015B ○ Nitrate/Nitrite by 353.2 ○ Sulfate by 300 ○ ___ ○ ___ ◉ GRO by AK101 ○ BTEX by 8021B ◉ BTEX by 8260B ○ EDB by 8011 ○ HVOCs by 8260B ○ MtBE by 8260B ○ 1,2-DCA by 8260B

Additional Comments:

CONESTOGA-ROVERS & ASSOCIATES

WELL SAMPLING FORM
DISPOSABLE BAILER SAMPLING

Site ID: **Delta Western Auto**	CRA Mgr: John Riggi	Well ID: MW-5R	
CRA Project No.: 073011	Date: 9/10/13	Field Staff:E Purcell/T Echtermeyer	
Street Address: 315 Main Street	City, State: Dillingham, Alaska	Purging Device:	Teflon Disp. Bailer ◉ ○
		Sampling Method:	Teflon Disp. Bailer ◉ ○
Depth to Water: 2.91	Depth to Bottom: 12.73	Water Column Height: 9.82	
Volume/ft: 0.16	1 Casing Volume: 1.5	3 Casing Volumes: 4.5	
Well Diameter: 2	Did Well Dewater?: No	Total Gallons Purged: 5.0	
Start Purge Time: 1721	Stop Purge Time:	Total Time:	

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

NO PURGE APPROVED BY ADEC? ☐ **YES** ☐ **NO** *(If NO, please enter parameters below.)*

Time	Volume Purged (gallons)	Temp. (°C) ± 10%	DO ± 10%	pH ± 0.1	Cond. (mS) ± 3%	ORP (mv) ± 10	Comments
1720	1.5	3.47	29.9	6.31	0.199	56.4	
1725	3.0	4.12	17.8	6.39	0.210	50.6	
1730	4.5	4.08	15.7	6.39	0.211	49.6	

**** A minimum of three parameters must be monitored and recorded.****
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 _____ mg/L Nitrate _____ mg/L

Sample ID	Date	Time	Analytes / Analytical Method		
MW-5R-091013	9/10/13	1730	◉ DRO by AK102	○ SVOCs by TCL8270	○ PAHs by 8270
			○ RRO by AK103	○ Lead by 6010	○ PAHs by 8270SIM
			○ Alkalinity by 2320B	○ Methane by 8015B	○ Nitrate/Nitrite by 353.2
			○ Sulfate by 300	○ _____	○ _____
			◉ GRO by AK101		
DUP-2			○ BTEX by 8021B	◉ BTEX by 8260B	○ EDB by 8011
			○ HVOCs by 8260B	○ MtBE by 8260B	○ 1,2-DCA by 8260B

Additional Comments:

CONESTOGA-ROVERS & ASSOCIATES

WELL SAMPLING FORM
DISPOSABLE BAILER SAMPLING

Site ID: **Delta Western Auto**	CRA Mgr: John Riggi	Well ID: MW-6	
CRA Project No.: 073011	Date: 9/10/13	Field Staff:E Purcell/T Echtermeyer	
Street Address: 315 Main Street	City, State: Dillingham, Alaska	Purging Device:	Teflon Disp. Bailer ◉ ○
		Sampling Method:	Teflon Disp. Bailer ◉ ○
Depth to Water: 2.71	Depth to Bottom: 13.62	Water Column Height: 10.91	
Volume/ft: 0.46	1 Casing Volume: 1.75	3 Casing Volumes: 5.25	
Well Diameter: 2	Did Well Dewater?: No	Total Gallons Purged: 5.5	
Start Purge Time: 1600	Stop Purge Time: 1615	Total Time: 15	

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

NO PURGE APPROVED BY ADEC? ☐ **YES** ☐ **NO** *(If NO, please enter parameters below.)*

Time	Volume Purged (gallons)	Temp. (°C) ± 10%	DO ± 10%	pH ± 0.1	Cond. (mS) ± 3%	ORP (mv) ± 10	Comments
1605	2.0	5.11	45.4	6.61	0.273	-1.7	
1610	4.0	4.63	37.8	6.47	0.288	-15.4	
1615	6.0	3.99	33.3	6.46	0.300	-18.0	

**** A minimum of three parameters must be monitored and recorded.****
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 _____ mg/L Nitrate _____ mg/L

Sample ID	Date	Time	Analytes / Analytical Method		
MW-6-091013	9/10/13	1615	◉ DRO by AK102	○ SVOCs by TCL8270	○ PAHs by 8270
			○ RRO by AK103	○ Lead by 6010	○ PAHs by 8270SIM
			○ Alkalinity by 2320B	○ Methane by 8015B	○ Nitrate/Nitrite by 353.2
			○ Sulfate by 300	○ _____	○ _____
			◉ GRO by AK101		
			○ BTEX by 8021B	◉ BTEX by 8260B	○ EDB by 8011
			○ HVOCs by 8260B	○ MtBE by 8260B	○ 1,2-DCA by 8260B

Additional Comments:

CONESTOGA-ROVERS & ASSOCIATES

WELL SAMPLING FORM
DISPOSABLE BAILER SAMPLING

Site ID: **Delta Western Auto**	CRA Mgr: John Riggi	Well ID: MW-7	
CRA Project No.: 073011	Date: 9/10/13	Field Staff:E Purcell/T Echtermeyer	
Street Address: 315 Main Street	City, State: Dillingham, Alaska	Purging Device:	Teflon Disp. Bailer ◉ ○
		Sampling Method:	Teflon Disp. Bailer ◉ ○
Depth to Water: 5.31	Depth to Bottom: 13.84	Water Column Height: 8.53	
Volume/ft: 0.16	1 Casing Volume: 1.3	3 Casing Volumes: 39	
Well Diameter: 2	Did Well Dewater?: No	Total Gallons Purged: 4	
Start Purge Time:	Stop Purge Time:	Total Time:	

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

NO PURGE APPROVED BY ADEC? ☐ **YES** ☐ **NO** *(If NO, please enter parameters below.)*

Time	Volume Purged (gallons)	Temp. (°C) ± 10%	DO ± 10%	pH ± 0.1	Cond. (mS) ± 3%	ORP (mv) ± 10	Comments
1621	1.5	4.12	35.6	6.40	0.260	-64.1	
1624	2.5	3.63	31.4	6.40	0.273	-53.1	
1630	4.0	2.99	32.1	6.39	0.284	-47.7	

**** A minimum of three parameters must be monitored and recorded.****
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 _____ mg/L Nitrate _____ mg/L

Sample ID	Date	Time	Analytes / Analytical Method		
MW-7-091013	9/10/13	1630	◉ DRO by AK102	○ SVOCs by TCL8270	○ PAHs by 8270
			○ RRO by AK103	○ Lead by 6010	○ PAHs by 8270SIM
			○ Alkalinity by 2320B	○ Methane by 8015B	○ Nitrate/Nitrite by 353.2
			○ Sulfate by 300	○ _____	○ _____
			◉ GRO by AK101		
DUP-1			○ BTEX by 8021B	◉ BTEX by 8260B	○ EDB by 8011
			○ HVOCs by 8260B	○ MtBE by 8260B	○ 1,2-DCA by 8260B

Additional Comments:

CONESTOGA-ROVERS & ASSOCIATES

WELL SAMPLING FORM
DISPOSABLE BAILER SAMPLING

Site ID: **Delta Western Auto**	CRA Mgr: John Riggi	Well ID: MW-8	
CRA Project No.: 073011	Date: 9/10/13	Field Staff:E Purcell/T Echtermeyer	
Street Address: 315 Main Street	City, State: Dillingham, Alaska	Purging Device:	Teflon Disp. Bailer ○ ○
		Sampling Method:	Teflon Disp. Bailer ○ ○
Depth to Water: 0.36	Depth to Bottom: 12.41	Water Column Height: 12.05	
Volume/ft: 0.16	1 Casing Volume: 1.9	3 Casing Volumes: 3.7	
Well Diameter: 2.0	Did Well Dewater?: NO	Total Gallons Purged: 4.0	
Start Purge Time: 1745	Stop Purge Time: 1800	Total Time: 15	

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

NO PURGE APPROVED BY ADEC? ☐ **YES** ☐ **NO** *(If NO, please enter parameters below.)*

Time	Volume Purged (gallons)	Temp. (°C) ± 10%	DO ± 10%	pH ± 0.1	Cond. (mS) ± 3%	ORP (mv) ± 10	Comments
1750	1.0	5.10	39.4	6.31	0.311	47.8	
1755	2.5	4.91	29.9	6.31	0.321	51.3	
1800	4.0	4.78	28.6	6.29	0.320	56.8	

**** A minimum of three parameters must be monitored and recorded.****
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 _____ mg/L Nitrate _____ mg/L

Sample ID	Date	Time	Analytes / Analytical Method
MW-8-091013	9/10/13	1800	◉ DRO by AK102 ○ SVOCs by TCL8270 ○ PAHs by 8270 ○ RRO by AK103 ○ Lead by 6010 ○ PAHs by 8270SIM ○ Alkalinity by 2320B ○ Methane by 8015B ○ Nitrate/Nitrite by 353.2 ○ Sulfate by 300 ○ _____ ○ _____ ◉ GRO by AK101 ○ BTEX by 8021B ◉ BTEX by 8260B ○ EDB by 8011 ○ HVOCs by 8260B ○ MtBE by 8260B ○ 1,2-DCA by 8260B

Additional Comments:

CONESTOGA-ROVERS & ASSOCIATES

WELL SAMPLING FORM
DISPOSABLE BAILER SAMPLING

Site ID: **Delta Western Auto**	CRA Mgr: John Riggi	Well ID: MW-9	
CRA Project No.: 073011	Date: 9/10/13	Field Staff:E Purcell/T Echtermeyer	
Street Address: 315 Main Street	City, State: Dillingham, Alaska	Purging Device:	Teflon Disp. Bailer ◉ ○
		Sampling Method:	Teflon Disp. Bailer ◉ ○
Depth to Water: 8.51	Depth to Bottom: 12.36	Water Column Height: 11.85	
Volume/ft: 0.16	1 Casing Volume: 1.9	3 Casing Volumes: 3.7	
Well Diameter: 2	Did Well Dewater?: No	Total Gallons Purged: 4.0	
Start Purge Time: 1820	Stop Purge Time: 1830	Total Time: 10	

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

NO PURGE APPROVED BY ADEC? ☐ **YES** ☐ **NO** *(If NO, please enter parameters below.)*

Time	Volume Purged (gallons)	Temp. (°C) ± 10%	DO ± 10%	pH ± 0.1	Cond. (mS) ± 3%	ORP (mv) ± 10	Comments
1820	1.0	2.60	40.7	6.39	0.110	42.7	
1825	2.0	3.10	47.1	6.39	0.125	43.9	
1830	4.0	2.73	45.6	6.39	0.127	45.5	

**** A minimum of three parameters must be monitored and recorded.****

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 _____ mg/L Nitrate _____ mg/L

Sample ID	Date	Time	Analytes / Analytical Method
MW-9-091013	9/10/13	1830	◉ DRO by AK102 ○ SVOCs by TCL8270 ○ PAHs by 8270 ○ RRO by AK103 ○ Lead by 6010 ○ PAHs by 8270SIM ○ Alkalinity by 2320B ○ Methane by 8015B ○ Nitrate/Nitrite by 353.2 ○ Sulfate by 300 ○ _____ ○ _____ ◉ GRO by AK101 ○ BTEX by 8021B ◉ BTEX by 8260B ○ EDB by 8011 ○ HVOCs by 8260B ○ MtBE by 8260B ○ 1,2-DCA by 8260B

Additional Comments:

CONESTOGA-ROVERS & ASSOCIATES

WELL SAMPLING FORM
DISPOSABLE BAILER SAMPLING

Site ID: **Delta Western Auto**	CRA Mgr: John Riggi	Well ID: MW-10	
CRA Project No.: 073011	Date: 9/10/13	Field Staff:E Purcell/T Echtermeyer	
Street Address: 315 Main Street	City, State: Dillingham, Alaska	Purging Device:	Teflon Disp. Bailer ☒ ☐
		Sampling Method:	Teflon Disp. Bailer ☒ ☐
Depth to Water: 3.80	Depth to Bottom: 12.92	Water Column Height: 9.12	
Volume/ft: 0.16	1 Casing Volume: 1.5	3 Casing Volumes: 4.5	
Well Diameter: 2	Did Well Dewater?: No	Total Gallons Purged: 5.0	
Start Purge Time: 1535	Stop Purge Time: 1600	Total Time: 25	

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

NO PURGE APPROVED BY ADEC? ☐ **YES** ☐ **NO** *(If NO, please enter parameters below.)*

Time	Volume Purged (gallons)	Temp. (°C) ± 10%	DO ± 10%	pH ± 0.1	Cond. (mS) ± 3%	ORP (mv) ± 10	Comments
1540	1.0	4.37	35.7	6.41	0.310	-104	
1550	3.0	2.86	39.6	6.39	0.296	-53.2	
1600	5.0	2.66	40.0	6.39	0.286	~~-61.0~~ 61.0	

**** A minimum of three parameters must be monitored and recorded.****

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 _____ mg/L Nitrate _____ mg/L

Sample ID	Date	Time	Analytes / Analytical Method		
MW-10-091013	9/10/13	1600	☒ DRO by AK102	☐ SVOCs by TCL8270	☐ PAHs by 8270
			☐ RRO by AK103	☐ Lead by 6010	☐ PAHs by 8270SIM
			☐ Alkalinity by 2320B	☐ Methane by 8015B	☐ Nitrate/Nitrite by 353.2
			☐ Sulfate by 300	☐ _____	☐ _____
			☒ GRO by AK101		
			☐ BTEX by 8021B	☒ BTEX by 8260B	☐ EDB by 8011
			☐ HVOCs by 8260B	☐ MtBE by 8260B	☐ 1,2-DCA by 8260B

Additional Comments:

Appendix C

Pace Analytical Laboratory Analytical Report

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

October 08, 2013

John Riggi
Conestoga-Rovers Association
14998 W. 26th Ave
Suite 800
Golden, CO 80401

RE: Project: 073011 Delta Western Auto
Pace Project No.: 10242065

Dear John Riggi:
Enclosed are the analytical results for sample(s) received by the laboratory on September 14, 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,

Shawn Davis for
Jennifer Gross
jennifer.gross@pacelabs.com
Project Manager

Enclosures

cc: Jeffrey Cloud, Conestoga-Rovers Association
Siobhan Pritchard, Conestoga-Rovers Association
Eric Purcell, Conestoga-Rovers & Associates

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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CERTIFICATIONS

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

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

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SAMPLE SUMMARY

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10242065001	**B1MW-091113**	Water	09/11/13 17:00	09/14/13 15:30
10242065002	**B2MW-091113**	Water	09/11/13 17:15	09/14/13 15:30
10242065003	**B3MW-091113**	Water	09/11/13 17:30	09/14/13 15:30
10242065004	**B4MW-091113**	Water	09/11/13 17:45	09/14/13 15:30
10242065005	**TW-2-091113**	Water	09/11/13 18:00	09/14/13 15:30
10242065006	**MW-5R-091013**	Water	09/10/13 19:30	09/14/13 15:30
10242065007	**MW-6-091013**	Water	09/10/13 16:15	09/14/13 15:30
10242065008	**MW-7-091013**	Water	09/10/13 16:30	09/14/13 15:30
10242065009	**MW-8-091013**	Water	09/10/13 18:00	09/14/13 15:30
10242065010	**MW-9-091013**	Water	09/10/13 18:30	09/14/13 15:30
10242065011	**MW-10-091013**	Water	09/10/13 16:00	09/14/13 15:30
10242065012	**DUP-1-091013**	Water	09/10/13 00:00	09/14/13 15:30
10242065013	**DUP-2-091013**	Water	09/10/13 00:00	09/14/13 15:30
10242065014	**TRIP BLANK-1-091113**	Water	09/10/13 00:00	09/14/13 15:30
10242065015	**TRIP BLANK-2-091113**	Water	09/10/13 00:00	09/14/13 15:30

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SAMPLE ANALYTE COUNT

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10242065001	**B1MW-091113**	Alaska 102/103	JRH	3	PASI-M
		Alaska 101	MJH	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242065002	**B2MW-091113**	Alaska 102/103	JRH	3	PASI-M
		Alaska 101	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242065003	**B3MW-091113**	Alaska 102/103	JRH	3	PASI-M
		Alaska 101	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242065004	**B4MW-091113**	Alaska 102/103	JRH	3	PASI-M
		Alaska 101	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242065005	**TW-2-091113**	Alaska 102/103	JRH	3	PASI-M
		Alaska 101	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242065006	**MW-5R-091013**	Alaska 102/103	JRH	3	PASI-M
		Alaska 101	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242065007	**MW-6-091013**	Alaska 102/103	JRH	3	PASI-M
		Alaska 101	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242065008	**MW-7-091013**	Alaska 102/103	JRH	3	PASI-M
		Alaska 101	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242065009	**MW-8-091013**	Alaska 102/103	JRH	3	PASI-M
		Alaska 101	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242065010	**MW-9-091013**	Alaska 102/103	JRH	3	PASI-M
		Alaska 101	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242065011	**MW-10-091013**	Alaska 102/103	JRH	3	PASI-M
		Alaska 101	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242065012	**DUP-1-091013**	Alaska 102/103	JRH	3	PASI-M
		Alaska 101	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242065013	**DUP-2-091013**	Alaska 102/103	JRH	3	PASI-M

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SAMPLE ANALYTE COUNT

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		Alaska 101	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242065014	**TRIP BLANK-1-091113**	Alaska 101	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242065015	**TRIP BLANK-2-091113**	Alaska 101	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M

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PROJECT NARRATIVE

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

Method: **Alaska 102/103**
Description: DRO and RRO by AK102/103
Client: CRA_Dillingham Alaska
Date: October 08, 2013

General Information:
13 samples were analyzed for Alaska 102/103. 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, where applicable, 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/23101

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

- B1MW-091113 (Lab ID: 10242065001)
  - DRO by AK 102
- B2MW-091113 (Lab ID: 10242065002)
  - DRO by AK 102
- B3MW-091113 (Lab ID: 10242065003)
  - DRO by AK 102
- B4MW-091113 (Lab ID: 10242065004)
  - DRO by AK 102
- BLANK (Lab ID: 1532646)
  - DRO by AK 102

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PROJECT NARRATIVE

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

Method: **Alaska 102/103**
Description: DRO and RRO by AK102/103
Client: CRA_Dillingham Alaska
Date: October 08, 2013

Analyte Comments:

QC Batch: OEXT/23101

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

- DUP-1-091013 (Lab ID: 10242065012)
  - DRO by AK 102
- DUP-2-091013 (Lab ID: 10242065013)
  - DRO by AK 102
- LCS (Lab ID: 1532647)
  - DRO by AK 102
- LCSD (Lab ID: 1532648)
  - DRO by AK 102
- MW-10-091013 (Lab ID: 10242065011)
  - DRO by AK 102
- MW-5R-091013 (Lab ID: 10242065006)
  - DRO by AK 102
- MW-6-091013 (Lab ID: 10242065007)
  - DRO by AK 102
- MW-7-091013 (Lab ID: 10242065008)
  - DRO by AK 102
- MW-8-091013 (Lab ID: 10242065009)
  - DRO by AK 102
- MW-9-091013 (Lab ID: 10242065010)
  - DRO by AK 102
- TW-2-091113 (Lab ID: 10242065005)
  - DRO by AK 102

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PROJECT NARRATIVE

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

Method: **Alaska 101**
Description: AK101 GCV
Client: CRA_Dillingham Alaska
Date: October 08, 2013

General Information:
15 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.

H1: Analysis conducted outside the recognized method holding time.
- B1MW-091113 (Lab ID: 10242065001)

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, where applicable, 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/11300

N2: The lab does not hold TNI accreditation for this parameter.
- B2MW-091113 (Lab ID: 10242065002)
  - AK101 Gasoline Range Organics
- B3MW-091113 (Lab ID: 10242065003)
  - AK101 Gasoline Range Organics
- B4MW-091113 (Lab ID: 10242065004)
  - AK101 Gasoline Range Organics

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PROJECT NARRATIVE

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

Method: **Alaska 101**
Description: AK101 GCV
Client: CRA_Dillingham Alaska
Date: October 08, 2013

Analyte Comments:

QC Batch: GCV/11300

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

- BLANK (Lab ID: 1528039)
  - AK101 Gasoline Range Organics
- DUP-1-091013 (Lab ID: 10242065012)
  - AK101 Gasoline Range Organics
- DUP-2-091013 (Lab ID: 10242065013)
  - AK101 Gasoline Range Organics
- LCS (Lab ID: 1528040)
  - AK101 Gasoline Range Organics
- LCSD (Lab ID: 1528041)
  - AK101 Gasoline Range Organics
- MS (Lab ID: 1528042)
  - AK101 Gasoline Range Organics
- MSD (Lab ID: 1528043)
  - AK101 Gasoline Range Organics
- MW-10-091013 (Lab ID: 10242065011)
  - AK101 Gasoline Range Organics
- MW-5R-091013 (Lab ID: 10242065006)
  - AK101 Gasoline Range Organics
- MW-6-091013 (Lab ID: 10242065007)
  - AK101 Gasoline Range Organics
- MW-7-091013 (Lab ID: 10242065008)
  - AK101 Gasoline Range Organics
- MW-8-091013 (Lab ID: 10242065009)
  - AK101 Gasoline Range Organics
- MW-9-091013 (Lab ID: 10242065010)
  - AK101 Gasoline Range Organics
- TRIP BLANK-1-091113 (Lab ID: 10242065014)
  - AK101 Gasoline Range Organics
- TRIP BLANK-2-091113 (Lab ID: 10242065015)
  - AK101 Gasoline Range Organics
- TW-2-091113 (Lab ID: 10242065005)
  - AK101 Gasoline Range Organics

QC Batch: GCV/11343

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

- B1MW-091113 (Lab ID: 10242065001)
  - AK101 Gasoline Range Organics
- BLANK (Lab ID: 1540190)
  - AK101 Gasoline Range Organics
- DUP (Lab ID: 1545142)
  - AK101 Gasoline Range Organics
- LCS (Lab ID: 1540191)
  - AK101 Gasoline Range Organics

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PROJECT NARRATIVE

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

Method: **Alaska 101**
Description: AK101 GCV
Client: CRA_Dillingham Alaska
Date: October 08, 2013

Analyte Comments:

QC Batch: GCV/11343

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

- LCSD (Lab ID: 1540192)
  - AK101 Gasoline Range Organics
- MS (Lab ID: 1545141)
  - AK101 Gasoline Range Organics

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PROJECT NARRATIVE

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

Method: **EPA 8260**
Description: 8260 MSV UST
Client: CRA_Dillingham Alaska
Date: October 08, 2013

General Information:
15 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, where applicable, with any exceptions noted below.

QC Batch: MSV/25017

B: Analyte was detected in the associated method blank.
- BLANK for HBN 269201 [MSV/2501 (Lab ID: 1530552)
  - Toluene

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:

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

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ANALYTICAL RESULTS

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

Sample: B1MW-091113 **Lab ID: 10242065001** Collected: 09/11/13 17:00 Received: 09/14/13 15:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
DRO and RRO by AK102/103	Analytical Method: Alaska 102/103 Preparation Method: EPA 3510								
DRO by AK 102	**2.5**	mg/L	0.42	0.21	1	09/24/13 07:18	09/28/13 15:19		N2
Surrogates									
o-Terphenyl (S)	87	%	50-150		1	09/24/13 07:18	09/28/13 15:19	84-15-1	
n-Triacontane (S)	103	%	50-150		1	09/24/13 07:18	09/28/13 15:19	638-68-6	
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**14.3**	mg/L	1.0	0.50	10		10/03/13 00:53		H1,N2
Surrogates									
a,a,a-Trifluorotoluene (S)	76	%	60-120		10		10/03/13 00:53	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**0.22**	mg/L	0.0010	0.00024	1		09/22/13 17:08	71-43-2	
Ethylbenzene	**0.21**	mg/L	0.0010	0.00024	1		09/22/13 17:08	100-41-4	
Toluene	**0.95**	mg/L	0.010	0.0023	10		09/23/13 15:04	108-88-3	
Xylene (Total)	**2.9**	mg/L	0.030	0.0072	10		09/23/13 15:04	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	108	%	75-125		1		09/22/13 17:08	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1		09/22/13 17:08	2037-26-5	
4-Bromofluorobenzene (S)	103	%	75-125		1		09/22/13 17:08	460-00-4	

Sample: B2MW-091113 **Lab ID: 10242065002** Collected: 09/11/13 17:15 Received: 09/14/13 15:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
DRO and RRO by AK102/103	Analytical Method: Alaska 102/103 Preparation Method: EPA 3510								
DRO by AK 102	**0.26J**	mg/L	0.42	0.21	1	09/24/13 07:18	09/28/13 15:42		N2
Surrogates									
o-Terphenyl (S)	81	%	50-150		1	09/24/13 07:18	09/28/13 15:42	84-15-1	
n-Triacontane (S)	99	%	50-150		1	09/24/13 07:18	09/28/13 15:42	638-68-6	
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**0.24**	mg/L	0.10	0.050	1		09/20/13 07:23		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	96	%	60-120		1		09/20/13 07:23	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**0.025**	mg/L	0.0010	0.00024	1		09/23/13 11:01	71-43-2	
Ethylbenzene	**<0.00024**	mg/L	0.0010	0.00024	1		09/23/13 11:01	100-41-4	
Toluene	**0.015**	mg/L	0.0010	0.00023	1		09/23/13 11:01	108-88-3	
Xylene (Total)	**0.0047**	mg/L	0.0030	0.00072	1		09/23/13 11:01	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	75-125		1		09/23/13 11:01	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1		09/23/13 11:01	2037-26-5	
4-Bromofluorobenzene (S)	104	%	75-125		1		09/23/13 11:01	460-00-4	

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ANALYTICAL RESULTS

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

Sample: B3MW-091113 **Lab ID: 10242065003** Collected: 09/11/13 17:30 Received: 09/14/13 15:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
DRO and RRO by AK102/103	Analytical Method: Alaska 102/103 Preparation Method: EPA 3510								
DRO by AK 102	**0.49**	mg/L	0.42	0.21	1	09/24/13 07:18	09/28/13 16:04		N2
Surrogates									
o-Terphenyl (S)	78	%	50-150		1	09/24/13 07:18	09/28/13 16:04	84-15-1	
n-Triacontane (S)	95	%	50-150		1	09/24/13 07:18	09/28/13 16:04	638-68-6	
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**0.97**	mg/L	0.10	0.050	1		09/20/13 07:43		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	107	%	60-120		1		09/20/13 07:43	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**0.0048**	mg/L	0.0010	0.00024	1		09/23/13 11:16	71-43-2	
Ethylbenzene	**0.023**	mg/L	0.0010	0.00024	1		09/23/13 11:16	100-41-4	
Toluene	**0.0026**	mg/L	0.0010	0.00023	1		09/23/13 11:16	108-88-3	
Xylene (Total)	**0.058**	mg/L	0.0030	0.00072	1		09/23/13 11:16	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	107	%	75-125		1		09/23/13 11:16	17060-07-0	
Toluene-d8 (S)	102	%	75-125		1		09/23/13 11:16	2037-26-5	
4-Bromofluorobenzene (S)	104	%	75-125		1		09/23/13 11:16	460-00-4	

Sample: B4MW-091113 **Lab ID: 10242065004** Collected: 09/11/13 17:45 Received: 09/14/13 15:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
DRO and RRO by AK102/103	Analytical Method: Alaska 102/103 Preparation Method: EPA 3510								
DRO by AK 102	**0.51**	mg/L	0.38	0.19	1	09/24/13 07:18	09/28/13 22:27		N2
Surrogates									
o-Terphenyl (S)	89	%	50-150		1	09/24/13 07:18	09/28/13 22:27	84-15-1	
n-Triacontane (S)	108	%	50-150		1	09/24/13 07:18	09/28/13 22:27	638-68-6	
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**<0.050**	mg/L	0.10	0.050	1		09/20/13 08:43		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	92	%	60-120		1		09/20/13 08:43	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**0.0010**	mg/L	0.0010	0.00024	1		09/23/13 11:31	71-43-2	
Ethylbenzene	**<0.00024**	mg/L	0.0010	0.00024	1		09/23/13 11:31	100-41-4	
Toluene	**<0.00023**	mg/L	0.0010	0.00023	1		09/23/13 11:31	108-88-3	
Xylene (Total)	**<0.00072**	mg/L	0.0030	0.00072	1		09/23/13 11:31	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%	75-125		1		09/23/13 11:31	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1		09/23/13 11:31	2037-26-5	
4-Bromofluorobenzene (S)	105	%	75-125		1		09/23/13 11:31	460-00-4	

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ANALYTICAL RESULTS

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

Sample: TW-2-091113 **Lab ID: 10242065005** Collected: 09/11/13 18:00 Received: 09/14/13 15:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
DRO and RRO by AK102/103	Analytical Method: Alaska 102/103 Preparation Method: EPA 3510								
DRO by AK 102	**<0.22**	mg/L	0.43	0.22	1	09/24/13 07:18	09/28/13 16:27		N2
Surrogates									
o-Terphenyl (S)	85	%	50-150		1	09/24/13 07:18	09/28/13 16:27	84-15-1	
n-Triacontane (S)	109	%	50-150		1	09/24/13 07:18	09/28/13 16:27	638-68-6	
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**<0.050**	mg/L	0.10	0.050	1		09/20/13 09:03		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	94	%	60-120		1		09/20/13 09:03	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**0.00034J**	mg/L	0.0010	0.00024	1		09/23/13 11:47	71-43-2	
Ethylbenzene	**<0.00024**	mg/L	0.0010	0.00024	1		09/23/13 11:47	100-41-4	
Toluene	**<0.00023**	mg/L	0.0010	0.00023	1		09/23/13 11:47	108-88-3	
Xylene (Total)	**<0.00072**	mg/L	0.0030	0.00072	1		09/23/13 11:47	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%	75-125		1		09/23/13 11:47	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1		09/23/13 11:47	2037-26-5	
4-Bromofluorobenzene (S)	104	%	75-125		1		09/23/13 11:47	460-00-4	

Sample: MW-5R-091013 **Lab ID: 10242065006** Collected: 09/10/13 19:30 Received: 09/14/13 15:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
DRO and RRO by AK102/103	Analytical Method: Alaska 102/103 Preparation Method: EPA 3510								
DRO by AK 102	**2.6**	mg/L	0.45	0.23	1	09/24/13 07:18	09/28/13 16:49		N2
Surrogates									
o-Terphenyl (S)	83	%	50-150		1	09/24/13 07:18	09/28/13 16:49	84-15-1	
n-Triacontane (S)	100	%	50-150		1	09/24/13 07:18	09/28/13 16:49	638-68-6	
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**1.1**	mg/L	0.10	0.050	1		09/20/13 03:24		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	97	%	60-120		1		09/20/13 03:24	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**0.17**	mg/L	0.0010	0.00024	1		09/21/13 01:02	71-43-2	
Ethylbenzene	**0.031**	mg/L	0.0010	0.00024	1		09/21/13 01:02	100-41-4	
Toluene	**0.0019**	mg/L	0.0010	0.00023	1		09/21/13 01:02	108-88-3	B
Xylene (Total)	**0.070**	mg/L	0.0030	0.00072	1		09/21/13 01:02	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	75-125		1		09/21/13 01:02	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1		09/21/13 01:02	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1		09/21/13 01:02	460-00-4	

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ANALYTICAL RESULTS

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

Sample: MW-6-091013 **Lab ID: 10242065007** Collected: 09/10/13 16:15 Received: 09/14/13 15:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
DRO and RRO by AK102/103	Analytical Method: Alaska 102/103 Preparation Method: EPA 3510								
DRO by AK 102	**1.0**	mg/L	0.45	0.23	1	09/24/13 07:18	09/28/13 17:12		N2
Surrogates									
o-Terphenyl (S)	86	%	50-150		1	09/24/13 07:18	09/28/13 17:12	84-15-1	
n-Triacontane (S)	106	%	50-150		1	09/24/13 07:18	09/28/13 17:12	638-68-6	
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**0.079J**	mg/L	0.10	0.050	1		09/20/13 03:44		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	95	%	60-120		1		09/20/13 03:44	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**0.017**	mg/L	0.0010	0.00024	1		09/20/13 23:15	71-43-2	
Ethylbenzene	**<0.00024**	mg/L	0.0010	0.00024	1		09/20/13 23:15	100-41-4	
Toluene	**<0.00023**	mg/L	0.0010	0.00023	1		09/20/13 23:15	108-88-3	
Xylene (Total)	**<0.00072**	mg/L	0.0030	0.00072	1		09/20/13 23:15	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%	75-125		1		09/20/13 23:15	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1		09/20/13 23:15	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-125		1		09/20/13 23:15	460-00-4	

Sample: MW-7-091013 **Lab ID: 10242065008** Collected: 09/10/13 16:30 Received: 09/14/13 15:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
DRO and RRO by AK102/103	Analytical Method: Alaska 102/103 Preparation Method: EPA 3510								
DRO by AK 102	**3.8**	mg/L	0.42	0.21	1	09/24/13 07:18	09/28/13 17:34		N2
Surrogates									
o-Terphenyl (S)	87	%	50-150		1	09/24/13 07:18	09/28/13 17:34	84-15-1	
n-Triacontane (S)	108	%	50-150		1	09/24/13 07:18	09/28/13 17:34	638-68-6	
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**2.0**	mg/L	0.10	0.050	1		09/20/13 09:43		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%	60-120		1		09/20/13 09:43	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**0.23**	mg/L	0.0010	0.00024	1		09/20/13 22:54	71-43-2	
Ethylbenzene	**0.011**	mg/L	0.0010	0.00024	1		09/20/13 22:54	100-41-4	
Toluene	**0.0067**	mg/L	0.0010	0.00023	1		09/20/13 22:54	108-88-3	
Xylene (Total)	**0.075**	mg/L	0.0030	0.00072	1		09/20/13 22:54	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%	75-125		1		09/20/13 22:54	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1		09/20/13 22:54	2037-26-5	
4-Bromofluorobenzene (S)	102	%	75-125		1		09/20/13 22:54	460-00-4	

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ANALYTICAL RESULTS

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

Sample: MW-8-091013 **Lab ID: 10242065009** Collected: 09/10/13 18:00 Received: 09/14/13 15:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
DRO and RRO by AK102/103	Analytical Method: Alaska 102/103 Preparation Method: EPA 3510								
DRO by AK 102	**4.1**	mg/L	0.39	0.20	1	09/24/13 07:18	09/28/13 17:57		N2
Surrogates									
o-Terphenyl (S)	87	%	50-150		1	09/24/13 07:18	09/28/13 17:57	84-15-1	
n-Triacontane (S)	108	%	50-150		1	09/24/13 07:18	09/28/13 17:57	638-68-6	
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**2.7**	mg/L	0.10	0.050	1		09/20/13 04:04		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	105	%	60-120		1		09/20/13 04:04	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**0.0072**	mg/L	0.0010	0.00024	1		09/20/13 23:36	71-43-2	
Ethylbenzene	**0.15**	mg/L	0.0010	0.00024	1		09/20/13 23:36	100-41-4	
Toluene	**0.0029**	mg/L	0.0010	0.00023	1		09/20/13 23:36	108-88-3	B
Xylene (Total)	**0.56**	mg/L	0.0030	0.00072	1		09/20/13 23:36	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%	75-125		1		09/20/13 23:36	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1		09/20/13 23:36	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-125		1		09/20/13 23:36	460-00-4	

Sample: MW-9-091013 **Lab ID: 10242065010** Collected: 09/10/13 18:30 Received: 09/14/13 15:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
DRO and RRO by AK102/103	Analytical Method: Alaska 102/103 Preparation Method: EPA 3510								
DRO by AK 102	**<0.23**	mg/L	0.45	0.23	1	09/24/13 07:18	09/28/13 18:19		N2
Surrogates									
o-Terphenyl (S)	81	%	50-150		1	09/24/13 07:18	09/28/13 18:19	84-15-1	
n-Triacontane (S)	103	%	50-150		1	09/24/13 07:18	09/28/13 18:19	638-68-6	
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**<0.050**	mg/L	0.10	0.050	1		09/20/13 05:04		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	95	%	60-120		1		09/20/13 05:04	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**<0.00024**	mg/L	0.0010	0.00024	1		09/20/13 23:58	71-43-2	
Ethylbenzene	**<0.00024**	mg/L	0.0010	0.00024	1		09/20/13 23:58	100-41-4	
Toluene	**<0.00023**	mg/L	0.0010	0.00023	1		09/20/13 23:58	108-88-3	
Xylene (Total)	**<0.00072**	mg/L	0.0030	0.00072	1		09/20/13 23:58	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%	75-125		1		09/20/13 23:58	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1		09/20/13 23:58	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-125		1		09/20/13 23:58	460-00-4	

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ANALYTICAL RESULTS

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

Sample: MW-10-091013 **Lab ID: 10242065011** Collected: 09/10/13 16:00 Received: 09/14/13 15:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
DRO and RRO by AK102/103	Analytical Method: Alaska 102/103 Preparation Method: EPA 3510								
DRO by AK 102	**9.3**	mg/L	0.39	0.20	1	09/24/13 07:18	09/28/13 18:42		N2
Surrogates									
o-Terphenyl (S)	85	%	50-150		1	09/24/13 07:18	09/28/13 18:42	84-15-1	
n-Triacontane (S)	100	%	50-150		1	09/24/13 07:18	09/28/13 18:42	638-68-6	
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**0.62**	mg/L	0.10	0.050	1		09/20/13 05:24		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	93	%	60-120		1		09/20/13 05:24	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**0.060**	mg/L	0.0010	0.00024	1		09/20/13 22:32	71-43-2	
Ethylbenzene	**0.043**	mg/L	0.0010	0.00024	1		09/20/13 22:32	100-41-4	
Toluene	**0.0016**	mg/L	0.0010	0.00023	1		09/20/13 22:32	108-88-3	B
Xylene (Total)	**0.076**	mg/L	0.0030	0.00072	1		09/20/13 22:32	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%	75-125		1		09/20/13 22:32	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1		09/20/13 22:32	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-125		1		09/20/13 22:32	460-00-4	

Sample: DUP-1-091013 **Lab ID: 10242065012** Collected: 09/10/13 00:00 Received: 09/14/13 15:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
DRO and RRO by AK102/103	Analytical Method: Alaska 102/103 Preparation Method: EPA 3510								
DRO by AK 102	**3.3**	mg/L	0.48	0.24	1	09/24/13 07:18	09/28/13 19:04		N2
Surrogates									
o-Terphenyl (S)	80	%	50-150		1	09/24/13 07:18	09/28/13 19:04	84-15-1	
n-Triacontane (S)	100	%	50-150		1	09/24/13 07:18	09/28/13 19:04	638-68-6	
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**1.9**	mg/L	0.10	0.050	1		09/20/13 05:44		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	104	%	60-120		1		09/20/13 05:44	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**0.20**	mg/L	0.0020	0.00048	2		09/22/13 14:05	71-43-2	
Ethylbenzene	**0.0085**	mg/L	0.0010	0.00024	1		09/21/13 00:19	100-41-4	
Toluene	**0.0078**	mg/L	0.0010	0.00023	1		09/21/13 00:19	108-88-3	
Xylene (Total)	**0.060**	mg/L	0.0030	0.00072	1		09/21/13 00:19	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%	75-125		1		09/21/13 00:19	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1		09/21/13 00:19	2037-26-5	
4-Bromofluorobenzene (S)	102	%	75-125		1		09/21/13 00:19	460-00-4	

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ANALYTICAL RESULTS

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

Sample: DUP-2-091013 **Lab ID: 10242065013** Collected: 09/10/13 00:00 Received: 09/14/13 15:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
DRO and RRO by AK102/103	Analytical Method: Alaska 102/103 Preparation Method: EPA 3510								
DRO by AK 102	**2.5**	mg/L	0.48	0.24	1	09/24/13 07:18	09/28/13 19:27		N2
Surrogates									
o-Terphenyl (S)	86	%	50-150		1	09/24/13 07:18	09/28/13 19:27	84-15-1	
n-Triacontane (S)	104	%	50-150		1	09/24/13 07:18	09/28/13 19:27	638-68-6	
AK101 GCV	Analytical Method: Alaska 101								
AK101 Gasoline Range Organics	**1.2**	mg/L	0.10	0.050	1		09/20/13 06:04		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%	60-120		1		09/20/13 06:04	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**0.17**	mg/L	0.0010	0.00024	1		09/21/13 00:41	71-43-2	
Ethylbenzene	**0.031**	mg/L	0.0010	0.00024	1		09/21/13 00:41	100-41-4	
Toluene	**0.0020**	mg/L	0.0010	0.00023	1		09/21/13 00:41	108-88-3	B
Xylene (Total)	**0.070**	mg/L	0.0030	0.00072	1		09/21/13 00:41	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%	75-125		1		09/21/13 00:41	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1		09/21/13 00:41	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-125		1		09/21/13 00:41	460-00-4	

Sample: TRIP BLANK-1-091113 **Lab ID: 10242065014** Collected: 09/10/13 00:00 Received: 09/14/13 15:30 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		09/20/13 02:44		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	95	%	60-120		1		09/20/13 02:44	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**<0.00024**	mg/L	0.0010	0.00024	1		09/20/13 19:41	71-43-2	
Ethylbenzene	**<0.00024**	mg/L	0.0010	0.00024	1		09/20/13 19:41	100-41-4	
Toluene	**<0.00023**	mg/L	0.0010	0.00023	1		09/20/13 19:41	108-88-3	B
Xylene (Total)	**<0.00072**	mg/L	0.0030	0.00072	1		09/20/13 19:41	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%	75-125		1		09/20/13 19:41	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1		09/20/13 19:41	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1		09/20/13 19:41	460-00-4	

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ANALYTICAL RESULTS

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

Sample: TRIP BLANK-2-091113 **Lab ID: 10242065015** Collected: 09/10/13 00:00 Received: 09/14/13 15:30 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		09/20/13 02:24		N2
Surrogates									
a,a,a-Trifluorotoluene (S)	94	%	60-120		1		09/20/13 02:24	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**<0.00024**	mg/L	0.0010	0.00024	1		09/20/13 20:03	71-43-2	
Ethylbenzene	**<0.00024**	mg/L	0.0010	0.00024	1		09/20/13 20:03	100-41-4	
Toluene	**<0.00023**	mg/L	0.0010	0.00023	1		09/20/13 20:03	108-88-3	
Xylene (Total)	**<0.00072**	mg/L	0.0030	0.00072	1		09/20/13 20:03	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%	75-125		1		09/20/13 20:03	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1		09/20/13 20:03	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1		09/20/13 20:03	460-00-4	

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QUALITY CONTROL DATA

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

QC Batch: GCV/11300 — Analysis Method: Alaska 101
QC Batch Method: Alaska 101 — Analysis Description: AK101W GCV Water
Associated Lab Samples: 10242065002, 10242065003, 10242065004, 10242065005, 10242065006, 10242065007, 10242065008, 10242065009, 10242065010, 10242065011, 10242065012, 10242065013, 10242065014, 10242065015

METHOD BLANK: 1528039 — Matrix: Water
Associated Lab Samples: 10242065002, 10242065003, 10242065004, 10242065005, 10242065006, 10242065007, 10242065008, 10242065009, 10242065010, 10242065011, 10242065012, 10242065013, 10242065014, 10242065015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
AK101 Gasoline Range Organics	mg/L	<0.050	0.10	09/20/13 02:04	N2
a,a,a-Trifluorotoluene (S)	%	93	60-120	09/20/13 02:04	

LABORATORY CONTROL SAMPLE & LCSD: 1528040 1528041

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	0.94	0.84	94	84	60-120	11	20	N2
a,a,a-Trifluorotoluene (S)	%				98	99	60-120			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1528042 1528043

Parameter	Units	10242114005 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	<100 ug/L	1	1	1.3	1.3	131	131	70-142	.4	30	N2
a,a,a-Trifluorotoluene (S)	%						102	103	60-120			

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QUALITY CONTROL DATA

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

QC Batch: GCV/11343 | Analysis Method: Alaska 101
QC Batch Method: Alaska 101 | Analysis Description: AK101W GCV Water
Associated Lab Samples: 10242065001

METHOD BLANK: 1540190 | Matrix: Water
Associated Lab Samples: 10242065001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
AK101 Gasoline Range Organics	mg/L	<0.050	0.10	10/02/13 18:11	N2
a,a,a-Trifluorotoluene (S)	%	77	60-120	10/02/13 18:11	

LABORATORY CONTROL SAMPLE & LCSD: 1540191 1540192

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	0.95	0.94	95	94	60-120	1	20	N2
a,a,a-Trifluorotoluene (S)	%				82	80	60-120			

MATRIX SPIKE SAMPLE: 1545141

Parameter	Units	10242639005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
AK101 Gasoline Range Organics	mg/L	<0.050	1	1.3	124	70-142	N2
a,a,a-Trifluorotoluene (S)	%				113	60-120	

SAMPLE DUPLICATE: 1545142

Parameter	Units	10242639006 Result	Dup Result	RPD	Max RPD	Qualifiers
AK101 Gasoline Range Organics	mg/L	<0.050	<0.050		30	N2
a,a,a-Trifluorotoluene (S)	%	77	77	.4		

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QUALITY CONTROL DATA

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

QC Batch: MSV/25017 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 10242065006, 10242065007, 10242065008, 10242065009, 10242065010, 10242065011, 10242065012, 10242065013, 10242065014, 10242065015

METHOD BLANK: 1530552 | Matrix: Water
Associated Lab Samples: 10242065006, 10242065007, 10242065008, 10242065009, 10242065010, 10242065011, 10242065012, 10242065013, 10242065014, 10242065015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	mg/L	<0.00024	0.0010	09/20/13 18:59	
Ethylbenzene	mg/L	<0.00024	0.0010	09/20/13 18:59	
Toluene	mg/L	0.00033J	0.0010	09/20/13 18:59	
Xylene (Total)	mg/L	<0.00072	0.0030	09/20/13 18:59	
1,2-Dichloroethane-d4 (S)	%	95	75-125	09/20/13 18:59	
4-Bromofluorobenzene (S)	%	102	75-125	09/20/13 18:59	
Toluene-d8 (S)	%	100	75-125	09/20/13 18:59	

LABORATORY CONTROL SAMPLE: 1530553

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	mg/L	.02	0.020	99	75-125	
Ethylbenzene	mg/L	.02	0.020	101	75-125	
Toluene	mg/L	.02	0.021	103	75-125	
Xylene (Total)	mg/L	.06	0.062	103	75-125	
1,2-Dichloroethane-d4 (S)	%			96	75-125	
4-Bromofluorobenzene (S)	%			100	75-125	
Toluene-d8 (S)	%			101	75-125	

MATRIX SPIKE SAMPLE: 1531556

Parameter	Units	10242003001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	mg/L	ND	.02	0.021	102	70-135	
Ethylbenzene	mg/L	ND	.02	0.021	106	75-125	
Toluene	mg/L	ND	.02	0.022	107	75-125	
Xylene (Total)	mg/L	ND	.06	0.066	109	75-125	
1,2-Dichloroethane-d4 (S)	%				98	75-125	
4-Bromofluorobenzene (S)	%				102	75-125	
Toluene-d8 (S)	%				101	75-125	

SAMPLE DUPLICATE: 1531557

Parameter	Units	10242003002 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	mg/L	ND	<0.00024		30	
Ethylbenzene	mg/L	ND	<0.00024		30	
Toluene	mg/L	ND	<0.00023		30	
Xylene (Total)	mg/L	ND	<0.00072		30	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

SAMPLE DUPLICATE: 1531557

Parameter	Units	10242003002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane-d4 (S)	%	98	97	1		
4-Bromofluorobenzene (S)	%	100	100	.3		
Toluene-d8 (S)	%	100	99	.4		

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QUALITY CONTROL DATA

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

QC Batch: MSV/25019 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 10242065001

METHOD BLANK: 1531540 | Matrix: Water
Associated Lab Samples: 10242065001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	mg/L	<0.00024	0.0010	09/22/13 09:54	
Ethylbenzene	mg/L	<0.00024	0.0010	09/22/13 09:54	
Toluene	mg/L	<0.00023	0.0010	09/22/13 09:54	
Xylene (Total)	mg/L	<0.00072	0.0030	09/22/13 09:54	
1,2-Dichloroethane-d4 (S)	%	101	75-125	09/22/13 09:54	
4-Bromofluorobenzene (S)	%	103	75-125	09/22/13 09:54	
Toluene-d8 (S)	%	102	75-125	09/22/13 09:54	

LABORATORY CONTROL SAMPLE: 1531541

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	mg/L	.02	0.017	86	75-125	
Ethylbenzene	mg/L	.02	0.017	84	75-125	
Toluene	mg/L	.02	0.017	85	75-125	
Xylene (Total)	mg/L	.06	0.050	84	75-125	
1,2-Dichloroethane-d4 (S)	%			106	75-125	
4-Bromofluorobenzene (S)	%			105	75-125	
Toluene-d8 (S)	%			102	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1531558 1531559

Parameter	Units	10241823001 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	0.019	0.019	96	97	70-135	.9	30	
Ethylbenzene	mg/L	ND	.02	.02	0.019	0.019	94	94	75-125	.1	30	
Toluene	mg/L	ND	.02	.02	0.019	0.019	93	94	75-125	.9	30	
Xylene (Total)	mg/L	ND	.06	.06	0.056	0.055	93	92	75-125	1	30	
1,2-Dichloroethane-d4 (S)	%						107	107	75-125			
4-Bromofluorobenzene (S)	%						105	104	75-125			
Toluene-d8 (S)	%						101	102	75-125			

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QUALITY CONTROL DATA

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

QC Batch: MSV/25025 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 10242065002, 10242065003, 10242065004, 10242065005

METHOD BLANK: 1531919 Matrix: Water
Associated Lab Samples: 10242065002, 10242065003, 10242065004, 10242065005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	mg/L	<0.00024	0.0010	09/23/13 09:57	
Ethylbenzene	mg/L	<0.00024	0.0010	09/23/13 09:57	
Toluene	mg/L	<0.00023	0.0010	09/23/13 09:57	
Xylene (Total)	mg/L	<0.00072	0.0030	09/23/13 09:57	
1,2-Dichloroethane-d4 (S)	%	105	75-125	09/23/13 09:57	
4-Bromofluorobenzene (S)	%	104	75-125	09/23/13 09:57	
Toluene-d8 (S)	%	101	75-125	09/23/13 09:57	

LABORATORY CONTROL SAMPLE: 1531920

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	mg/L	.02	0.019	97	75-125	
Ethylbenzene	mg/L	.02	0.018	90	75-125	
Toluene	mg/L	.02	0.018	91	75-125	
Xylene (Total)	mg/L	.06	0.053	89	75-125	
1,2-Dichloroethane-d4 (S)	%			109	75-125	
4-Bromofluorobenzene (S)	%			107	75-125	
Toluene-d8 (S)	%			102	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1532441 1532442

Parameter	Units	10242943003 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	0.018	0.019	91	96	70-135	5	30	
Ethylbenzene	mg/L	ND	.02	.02	0.017	0.018	87	92	75-125	5	30	
Toluene	mg/L	ND	.02	.02	0.017	0.018	86	91	75-125	5	30	
Xylene (Total)	mg/L	ND	.06	.06	0.051	0.054	85	91	75-125	6	30	
1,2-Dichloroethane-d4 (S)	%						109	108	75-125			
4-Bromofluorobenzene (S)	%						104	104	75-125			
Toluene-d8 (S)	%						101	101	75-125			

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

QUALITY CONTROL DATA

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

QC Batch: OEXT/23101 — Analysis Method: Alaska 102/103
QC Batch Method: EPA 3510 — Analysis Description: AK1023 GCS
Associated Lab Samples: 10242065001, 10242065002, 10242065003, 10242065004, 10242065005, 10242065006, 10242065007, 10242065008, 10242065009, 10242065010, 10242065011, 10242065012, 10242065013

METHOD BLANK: 1532646 — Matrix: Water
Associated Lab Samples: 10242065001, 10242065002, 10242065003, 10242065004, 10242065005, 10242065006, 10242065007, 10242065008, 10242065009, 10242065010, 10242065011, 10242065012, 10242065013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
DRO by AK 102	mg/L	<0.20	0.40	09/28/13 14:12	N2
n-Triacontane (S)	%	92	60-120	09/28/13 14:12	
o-Terphenyl (S)	%	79	60-120	09/28/13 14:12	

LABORATORY CONTROL SAMPLE & LCSD: 1532647 1532648

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
DRO by AK 102	mg/L	2	1.8	1.6	88	80	75-125	9	20	N2
n-Triacontane (S)	%				101	90	60-120			
o-Terphenyl (S)	%				96	89	60-120			

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

QUALIFIERS

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

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.

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

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
H1	Analysis conducted outside the recognized method holding time.
N2	The lab does not hold TNI accreditation for this parameter.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 073011 Delta Western Auto
Pace Project No.: 10242065

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10242065001	**B1MW-091113**	EPA 3510	OEXT/23101	Alaska 102/103	GCSV/12125
10242065002	**B2MW-091113**	EPA 3510	OEXT/23101	Alaska 102/103	GCSV/12125
10242065003	**B3MW-091113**	EPA 3510	OEXT/23101	Alaska 102/103	GCSV/12125
10242065004	**B4MW-091113**	EPA 3510	OEXT/23101	Alaska 102/103	GCSV/12125
10242065005	**TW-2-091113**	EPA 3510	OEXT/23101	Alaska 102/103	GCSV/12125
10242065006	**MW-5R-091013**	EPA 3510	OEXT/23101	Alaska 102/103	GCSV/12125
10242065007	**MW-6-091013**	EPA 3510	OEXT/23101	Alaska 102/103	GCSV/12125
10242065008	**MW-7-091013**	EPA 3510	OEXT/23101	Alaska 102/103	GCSV/12125
10242065009	**MW-8-091013**	EPA 3510	OEXT/23101	Alaska 102/103	GCSV/12125
10242065010	**MW-9-091013**	EPA 3510	OEXT/23101	Alaska 102/103	GCSV/12125
10242065011	**MW-10-091013**	EPA 3510	OEXT/23101	Alaska 102/103	GCSV/12125
10242065012	**DUP-1-091013**	EPA 3510	OEXT/23101	Alaska 102/103	GCSV/12125
10242065013	**DUP-2-091013**	EPA 3510	OEXT/23101	Alaska 102/103	GCSV/12125
10242065001	**B1MW-091113**	Alaska 101	GCV/11343		
10242065002	**B2MW-091113**	Alaska 101	GCV/11300		
10242065003	**B3MW-091113**	Alaska 101	GCV/11300		
10242065004	**B4MW-091113**	Alaska 101	GCV/11300		
10242065005	**TW-2-091113**	Alaska 101	GCV/11300		
10242065006	**MW-5R-091013**	Alaska 101	GCV/11300		
10242065007	**MW-6-091013**	Alaska 101	GCV/11300		
10242065008	**MW-7-091013**	Alaska 101	GCV/11300		
10242065009	**MW-8-091013**	Alaska 101	GCV/11300		
10242065010	**MW-9-091013**	Alaska 101	GCV/11300		
10242065011	**MW-10-091013**	Alaska 101	GCV/11300		
10242065012	**DUP-1-091013**	Alaska 101	GCV/11300		
10242065013	**DUP-2-091013**	Alaska 101	GCV/11300		
10242065014	**TRIP BLANK-1-091113**	Alaska 101	GCV/11300		
10242065015	**TRIP BLANK-2-091113**	Alaska 101	GCV/11300		
10242065001	**B1MW-091113**	EPA 8260	MSV/25019		
10242065002	**B2MW-091113**	EPA 8260	MSV/25025		
10242065003	**B3MW-091113**	EPA 8260	MSV/25025		
10242065004	**B4MW-091113**	EPA 8260	MSV/25025		
10242065005	**TW-2-091113**	EPA 8260	MSV/25025		
10242065006	**MW-5R-091013**	EPA 8260	MSV/25017		
10242065007	**MW-6-091013**	EPA 8260	MSV/25017		
10242065008	**MW-7-091013**	EPA 8260	MSV/25017		
10242065009	**MW-8-091013**	EPA 8260	MSV/25017		
10242065010	**MW-9-091013**	EPA 8260	MSV/25017		
10242065011	**MW-10-091013**	EPA 8260	MSV/25017		
10242065012	**DUP-1-091013**	EPA 8260	MSV/25017		
10242065013	**DUP-2-091013**	EPA 8260	MSV/25017		
10242065014	**TRIP BLANK-1-091113**	EPA 8260	MSV/25017		
10242065015	**TRIP BLANK-2-091113**	EPA 8260	MSV/25017		

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1150, 1151, 1154

CHAIN-OF-CUSTODY / Analytical Request Document

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

10242065

Page: 1 of 2

1681769

Section A Required Client Information:

Company: CRA
Address: 14998 W 6th Ave Ste 800
Golden CO 80401
Email To: jriggi@crworld.com
Phone: 720-974-0935 Fax:
Requested Due Date/TAT: 10 business days

Section B Required Project Information:

Report To: John Riggi
Copy To: Jeff Clond
Eric Purcell
Purchase Order No.:
Project Name: Dallas Western Auto
Project Number: 073011

Section C Invoice Information:

Attention: John Riggi
Company Name: CRA
Address:
Pace Quote Reference:
Pace Project Manager: Jenni Gorse
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)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N): DRO AK102	BTEX 8260	GRO AK101	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	B1mw-091113	W				9/11/13	1700		8				X					X	X	X		10242065001
2	B2mw-091113	W				9/11	1715		8				X					X	X	X		002
3	B3mw-091113	W				9/11	1730		8				X					X	X	X		003
4	B4mw-091113	W				9/11	1745		8				X					X	X	X		004
5	TB-2-091113	W				9/11	1800		8				X					X	X	X		005
6	mw-5R-091013	W				9/10	1730		14				X					X	X	X		006
7	mw-6-091013	W				9/10	1615		14				X					X	X	X		007
8	mw-7-091013	W				9/10	1630		14				X					X	X	X		008
9	mw-8-091013	W				9/10	1800		14				X					X	X	X		009
10	mw-9-091013	W				9/10	1830		14				X					X	X	X		010
11	mw-10-091013	W				9/10	1600		14				X					X	X	X		011
12	DUP-1-091013	W				9/10	—		14				X					X	X	X		012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Report in ug/L to MDL	[signature]	9/12/13	1000	[signature]	9/12	1630	3.2	Y	Y	Y
	[signature]	9/13	1200	[signature] PACE	9/14	15:30	3.7	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Eric Purcell

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 9/12/13

ORIGINAL

*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.

Page: 2 of 2

1681770

Section A Required Client Information:

Company: CRA
Address:
Email To:
Phone: Fax:
Requested Due Date/TAT: 10 bus days

Section B Required Project Information:

Report To: John Riggi
Copy To: Jeff Lond
Eric Purcell
Purchase Order No.:
Project Name: Delta Western Auto
Project Number: 073011

Section C Invoice Information:

Attention: John Riggi
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)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start Date	Composite Start Time	Composite End/Grab Date	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	GRO AK101	BTEX 8260	Residual Chlorine (Y/N)	Pace Project No./Lab I.D.
1	DUP-2-091013	W				9/10	—		14				X					X	X	X		10241005 013
2	TRIP BLANK-1-091113	W				—	—		4				X						X	X		014
3	TRIP BLANK-2-091113	W				—	—		4				X						X	X		015
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 ng/L to mdl	[signature]	9/12/13	1500	[signature] Pace	9/13	1630	3.1	Y	Y	Y
	[signature]	9/13	1200	[signature] PACE	9/14	1530	5.0	Y	Y	Y

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

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Eric Purcell

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 9/12/13

ORIGINAL

*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

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#: 10242065

10242065

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

Tracking Number:

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

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other: **Temp Blank?** ☒ Yes ☐ No

Thermom. Used: ☒ 988A912167504 ☐ 80512447 ☐ 72337080 **Type of Ice:** ☐ Wet ☒ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temp Read (°C): 4.5 **Cooler Temp Corrected (°C):** 5.0 **Biological Tissue Frozen?** ☐ Yes ☐ No

Temp should be above freezing to 6°C **Correction Factor:** +.5 **Date and Initials of Person Examining Contents:** CB 9-16-13

				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. TB samples not labeled 1 or 2, but COC does show 1 or 2
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: CB 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): 060313-3 060417-3				

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: **Date/Time:**

Comments/Resolution:

Project Manager Review: Ewu Gross **Date:** 9/16/13

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 #: 10242065

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

Tracking Number: _____

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

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other: _____ **Temp Blank?** ☒ Yes ☐ No

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

Cooler Temp Read (°C): 3.2 **Cooler Temp Corrected (°C):** 3.7 **Biological Tissue Frozen?** ☐ Yes ☐ No

Temp should be above freezing to 6°C **Correction Factor:** +.5 **Date and Initials of Person Examining Contents:** CB 9-14-13

				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. B1MW, B4MW, MW-9 rec'd some semi broken
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: CB 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): _____				

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Jenni Gross **Date:** 9/16/13

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)

Goldstreak

MSP

027 ANC 8517 8166

AS	090	SEA	1300
AS	036	MSP	0655

Date: 13 SEP 13

Pieces: 7

Total Weight: 248

Piece Weight:

Box Number: 2

SHIPPER PHONE #: 6126071700

CONSIGNEE PHONE #: 6126071700

Alaska Air Cargo

www.alaskaair.com

Goldstreak Goldstreak

Pace Analytical®

SIGNATUR

CUSTODY SEAL

907-854-4084

Pace Analytical
Client - CRA
Cooler 2 of 3
Minneapolis, MN 612-607-1700

nalytical®

SIGNATUR

TODY SEAL

MSP

Goldstreak

027 ANC 8517 8166

AS	090	SEA	1300
AS	036	MSP	0655

Date 13 SEP 13

Pieces 7

Total Weight 248

Piece Weight

Box Number 6

SHIPPER PHONE # 6126071700

CONSIGNEE PHONE # 6126071700

Alaska Air Cargo

www.alaskaair.com

Goldstreak

Goldstreak

Pace Analytical®
CUSTODY SEAL

SIGNATURE

DA

Neil Barnack
Pace Analytical
Anchorage, AK
907-854-4084

Pace Analytical
Client -
Cooler
Minneapolis, MN 612-607-1700

Pace Analytical®
CUSTODY SEAL

SIGNATURE

DAT

Data File: \\192.168.10.12\chem\10msv1.i\092213A.B/09221330.D

Report Date: 09/24/2013

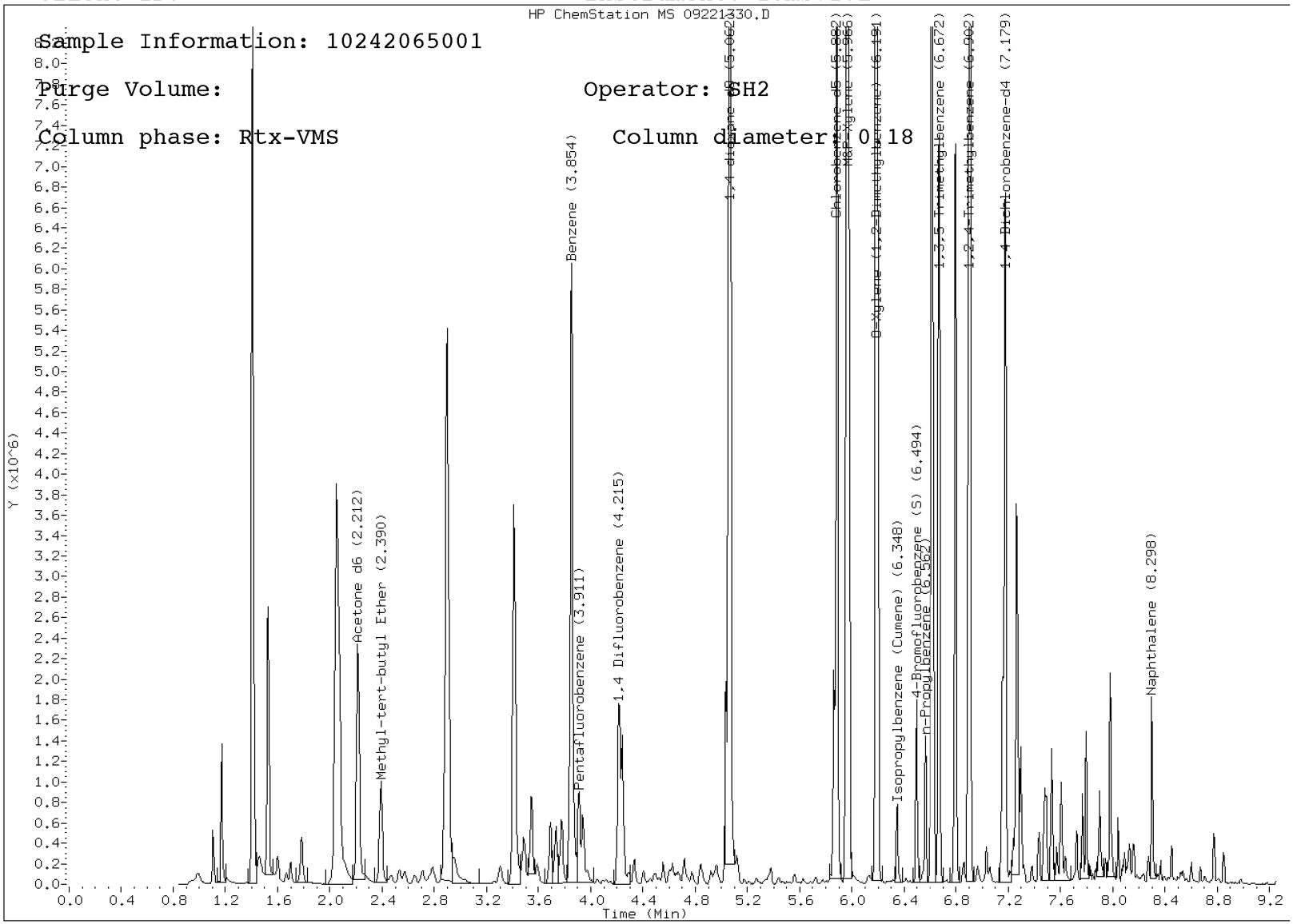
Sample ID: 10242065001

Client ID: Instrument: 10msv1.i

Sample Information: 10242065001

Purge Volume: Operator: SH2

Column phase: Rtx-VMS Column diameter: 0.18



Data File: \\192.168.10.12\chem\10msv1.i\092313A.B/09231308.D

Report Date: 09/24/2013

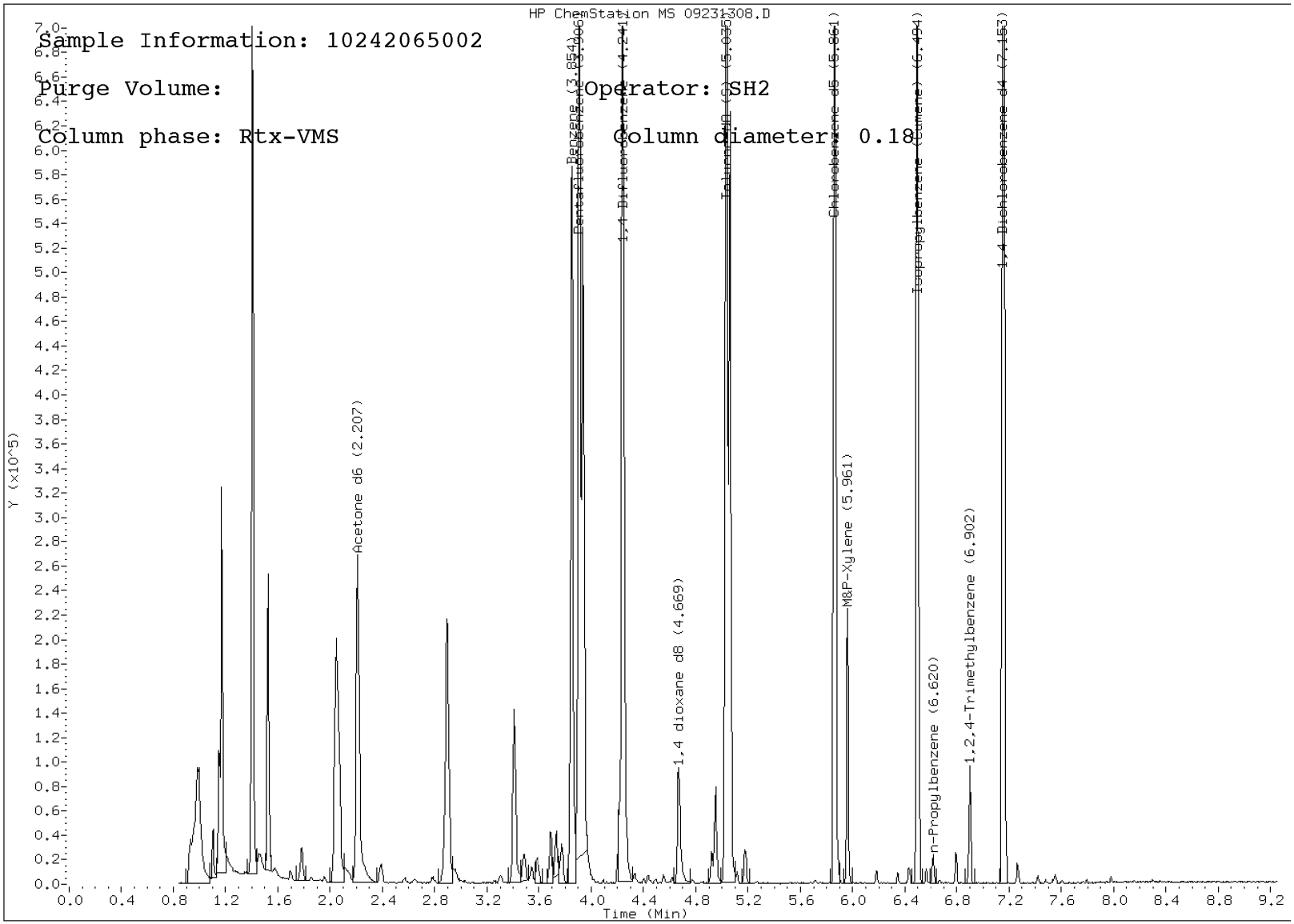
Sample ID: 10242065002

Client ID: Instrument: 10msv1.i

Sample Information: 10242065002

Purge Volume: Operator: SH2

Column phase: Rtx-VMS Column diameter: 0.18



Data File: \\192.168.10.12\chem\10msv1.i\092313A.B/09231309.D

Report Date: 09/24/2013

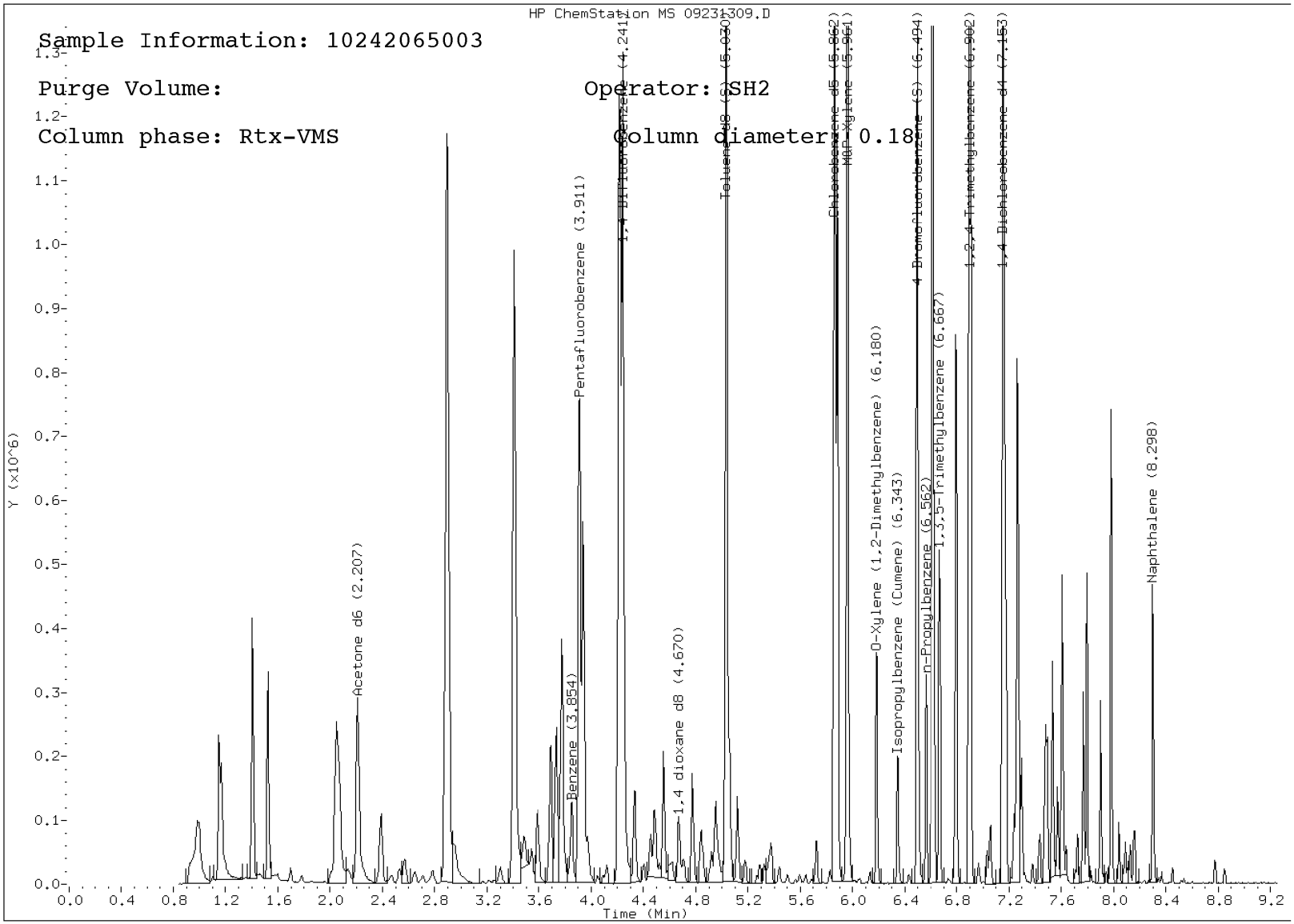
Sample ID: 10242065003

Client ID: Instrument: 10msv1.i

Sample Information: 10242065003

Purge Volume: Operator: SH2

Column phase: Rtx-VMS Column diameter: 0.18



Data File: \\192.168.10.12\chem\10msv1.i\092313A.B/09231310.D

Report Date: 09/24/2013

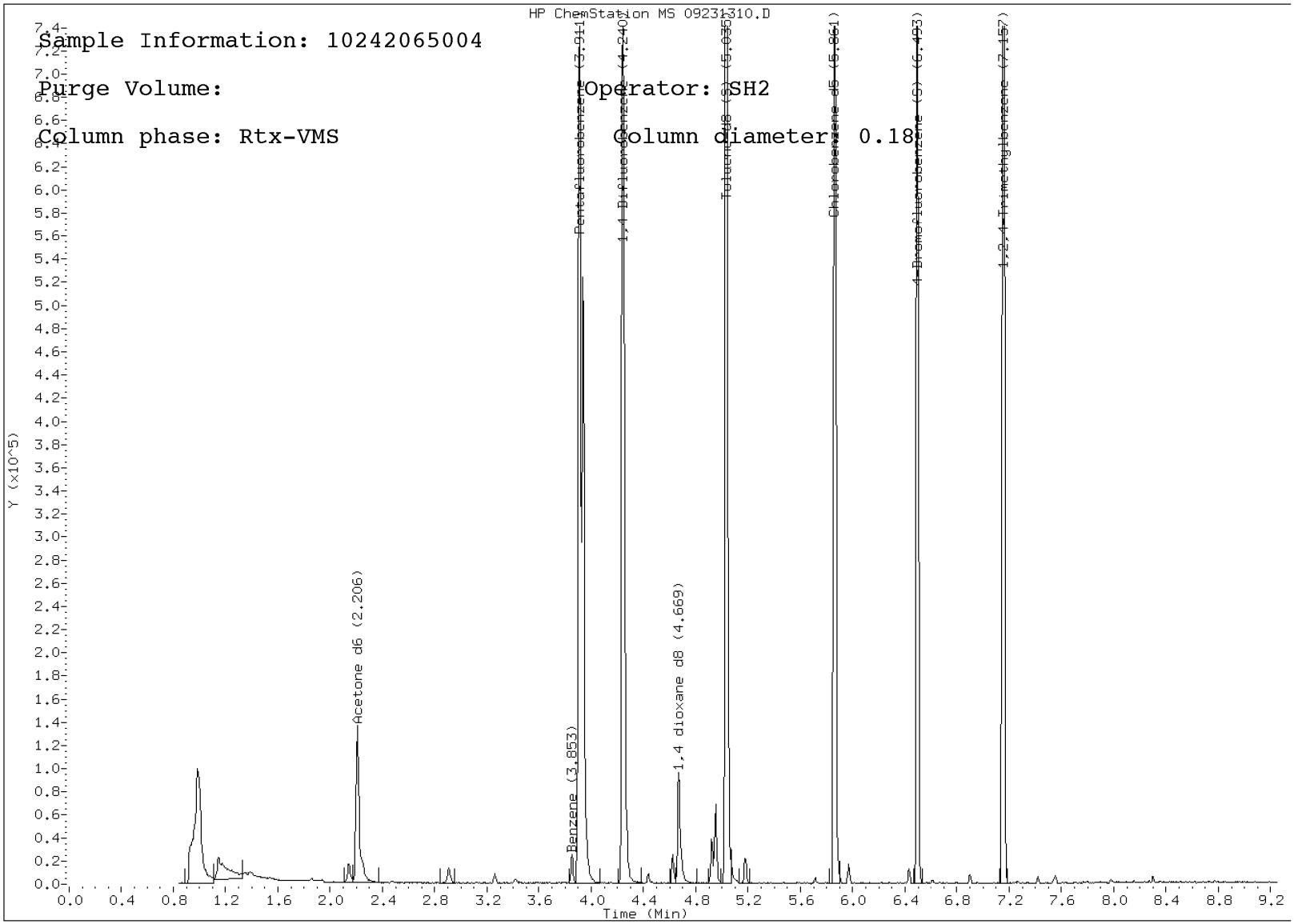
Sample ID: 10242065004

Client ID: Instrument: 10msv1.i

Sample Information: 10242065004

Purge Volume: Operator: SH2

Column phase: Rtx-VMS Column diameter: 0.18



Data File: \\192.168.10.12\chem\10msv1.i\092313A.B/09231311.D

Report Date: 09/24/2013

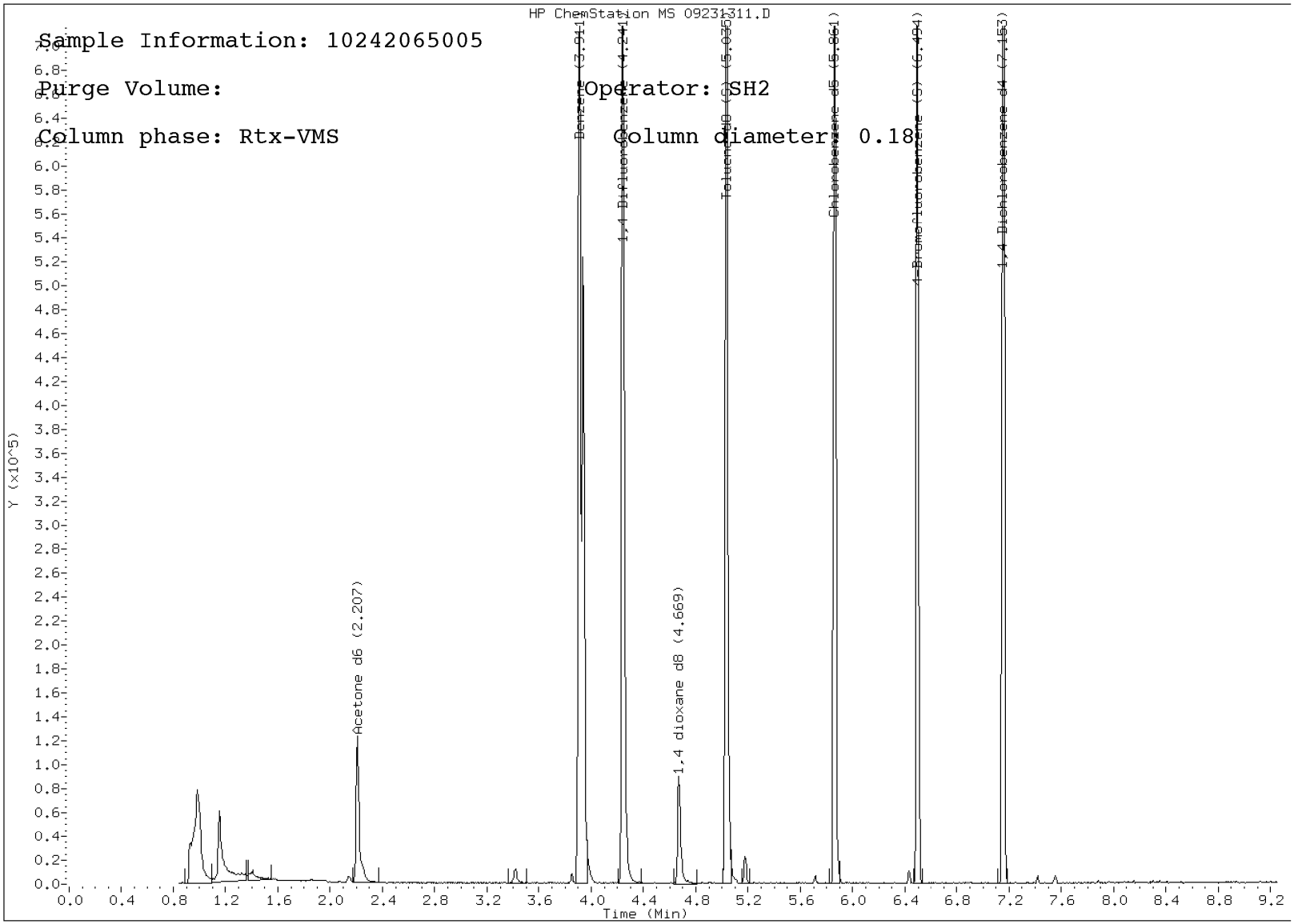
Sample ID: 10242065005

Client ID: Instrument: 10msv1.i

Sample Information: 10242065005

Purge Volume: Operator: SH2

Column phase: Rtx-VMS Column diameter: 0.18



Data File: \\192.168.10.12\chem\10msv5.i\092013b.b/09201350.D

Report Date: 09/22/2013

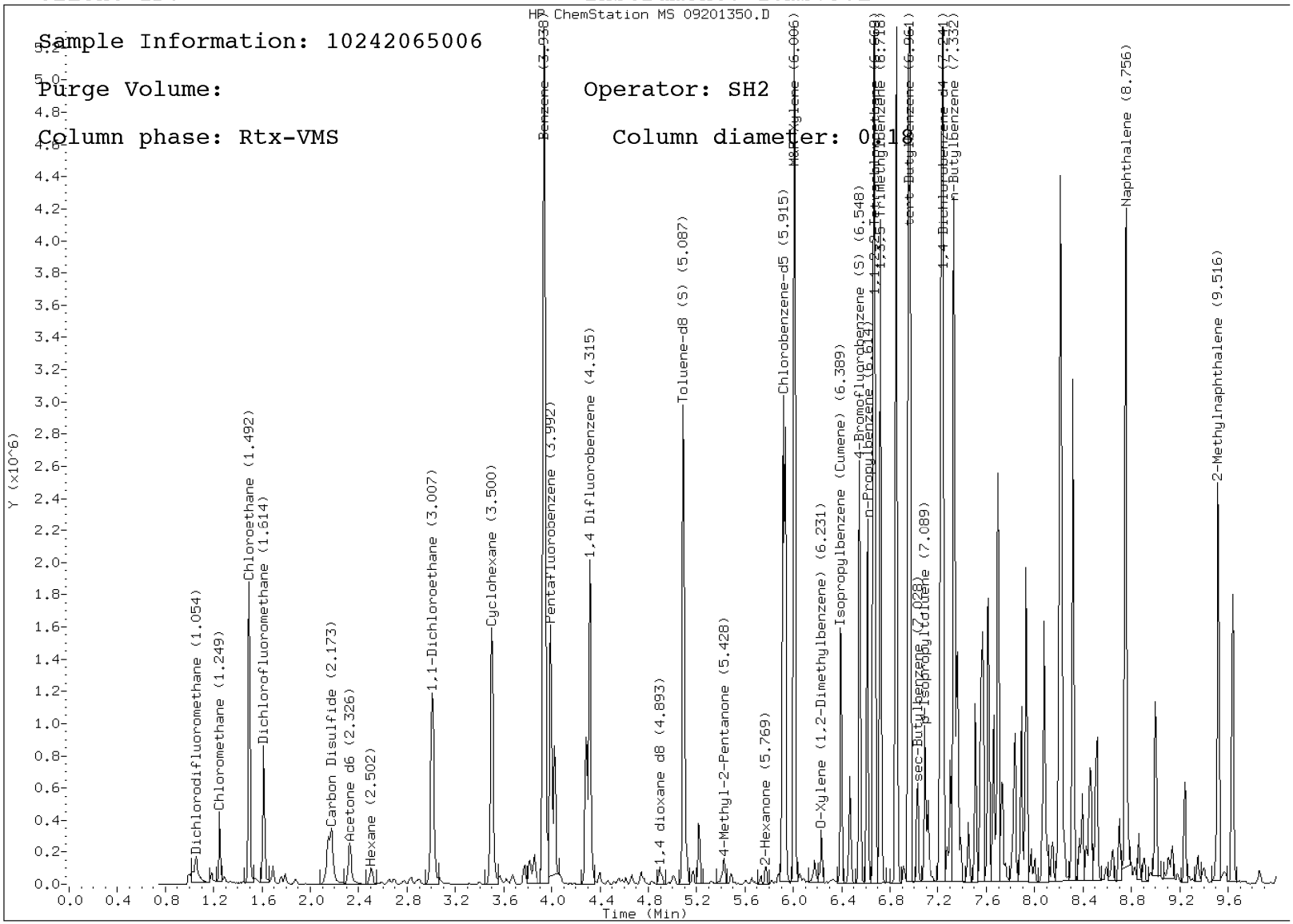
Sample ID: 10242065006

Client ID: Instrument: 10msv5.i

Sample Information: 10242065006

Purge Volume: Operator: SH2

Column phase: Rtx-VMS Column diameter: 0.18



Data File: \\192.168.10.12\chem\10msv5.i\092013b.b/09201345.D

Report Date: 09/22/2013

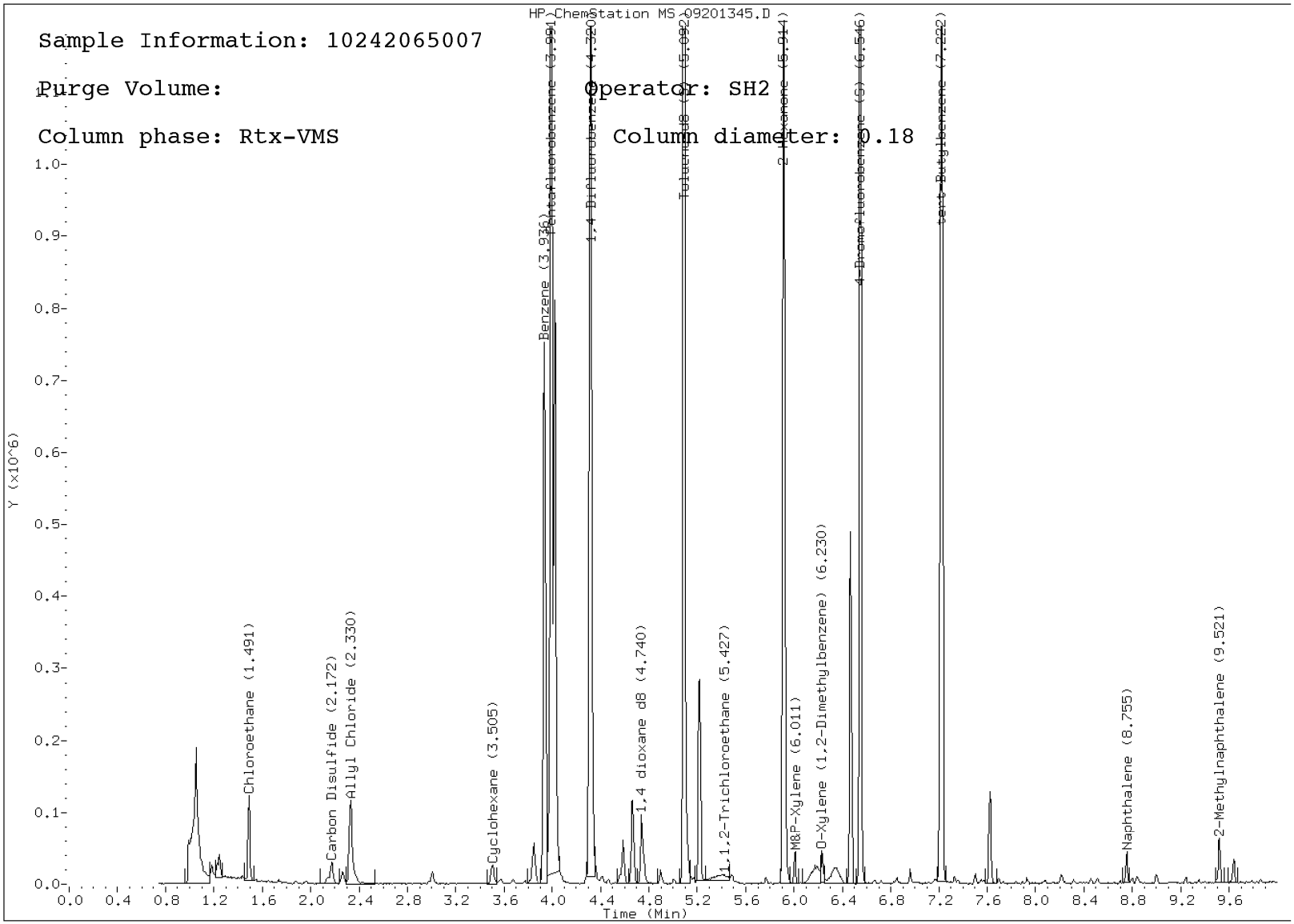
Sample ID: 10242065007

Client ID: Instrument: 10msv5.i

Sample Information: 10242065007

Purge Volume: Operator: SH2

Column phase: Rtx-VMS Column diameter: 0.18



Data File: \\192.168.10.12\chem\10msv5.i\092013b.b/09201344.D

Report Date: 09/22/2013

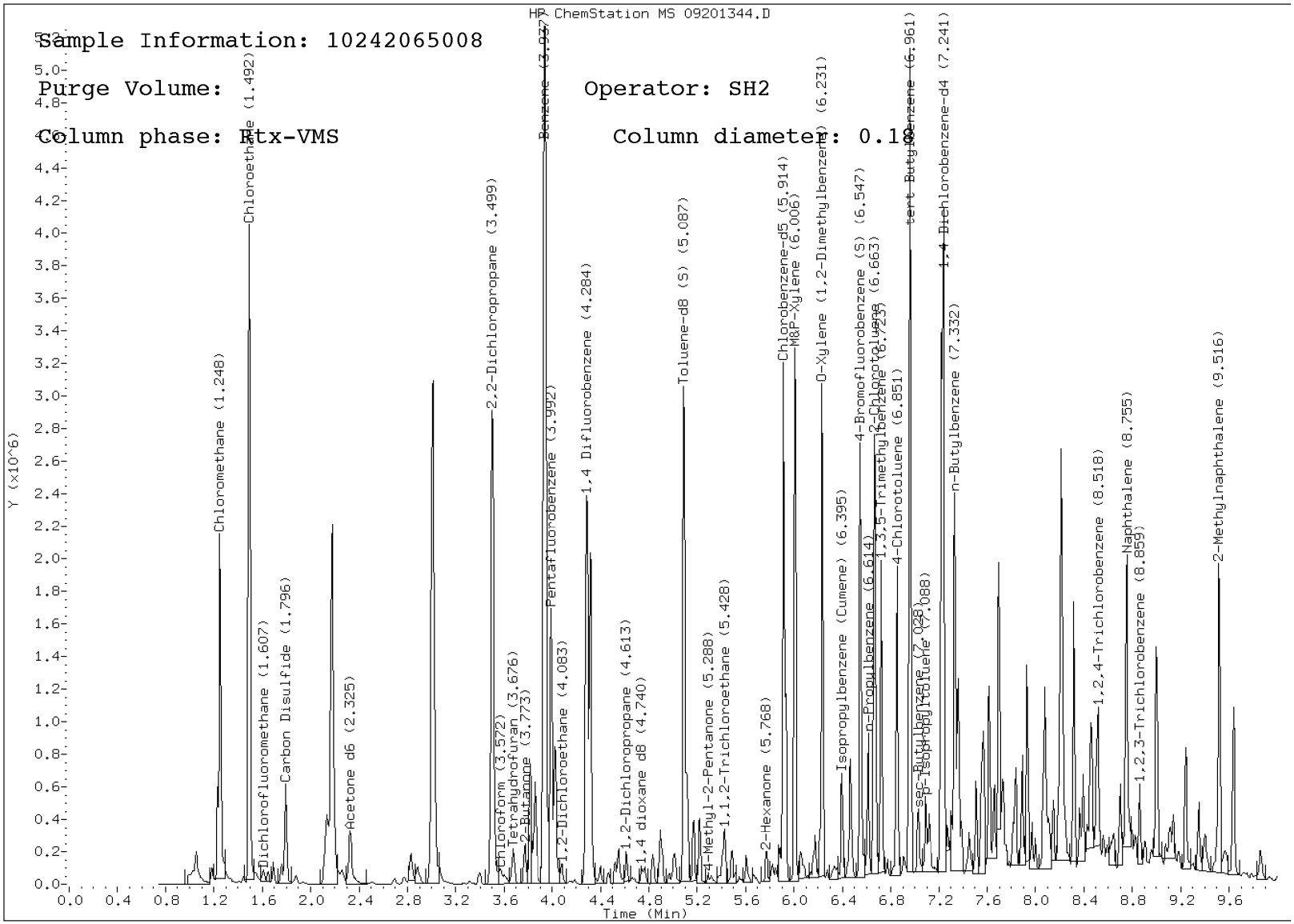
Sample ID: 10242065008

Client ID: Instrument: 10msv5.i

Sample Information: 10242065008

Purge Volume: Operator: SH2

Column phase: Rtx-VMS Column diameter: 0.18



Data File: \\192.168.10.12\chem\10msv5.i\092013b.b/09201346.D

Report Date: 09/22/2013

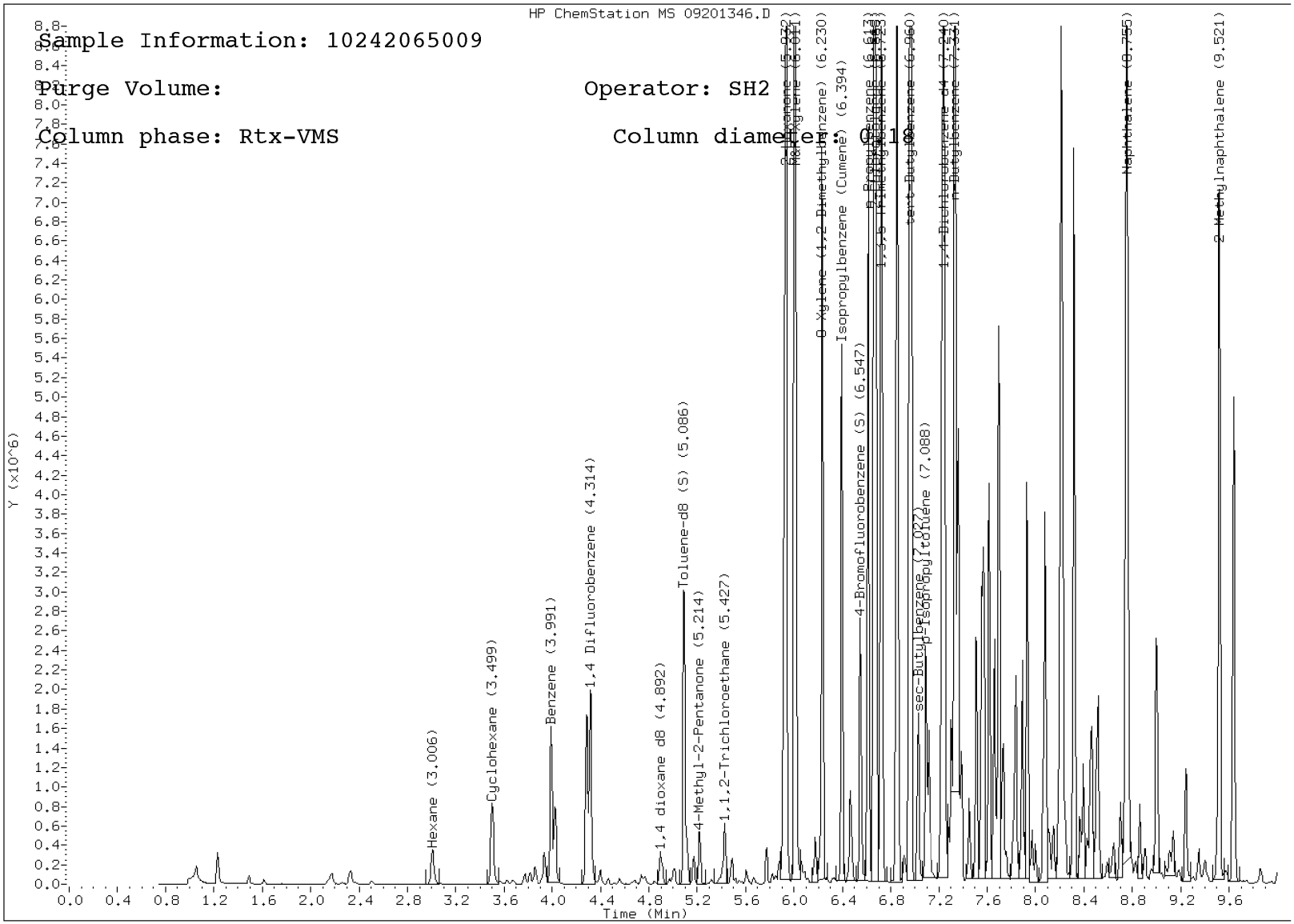
Sample ID: 10242065009

Client ID: Instrument: 10msv5.i

Sample Information: 10242065009

Purge Volume: Operator: SH2

Column phase: Rtx-VMS Column diameter: 0.18



Data File: \\192.168.10.12\chem\10msv1.i\092213A.B/09221317.D

Report Date: 09/22/2013

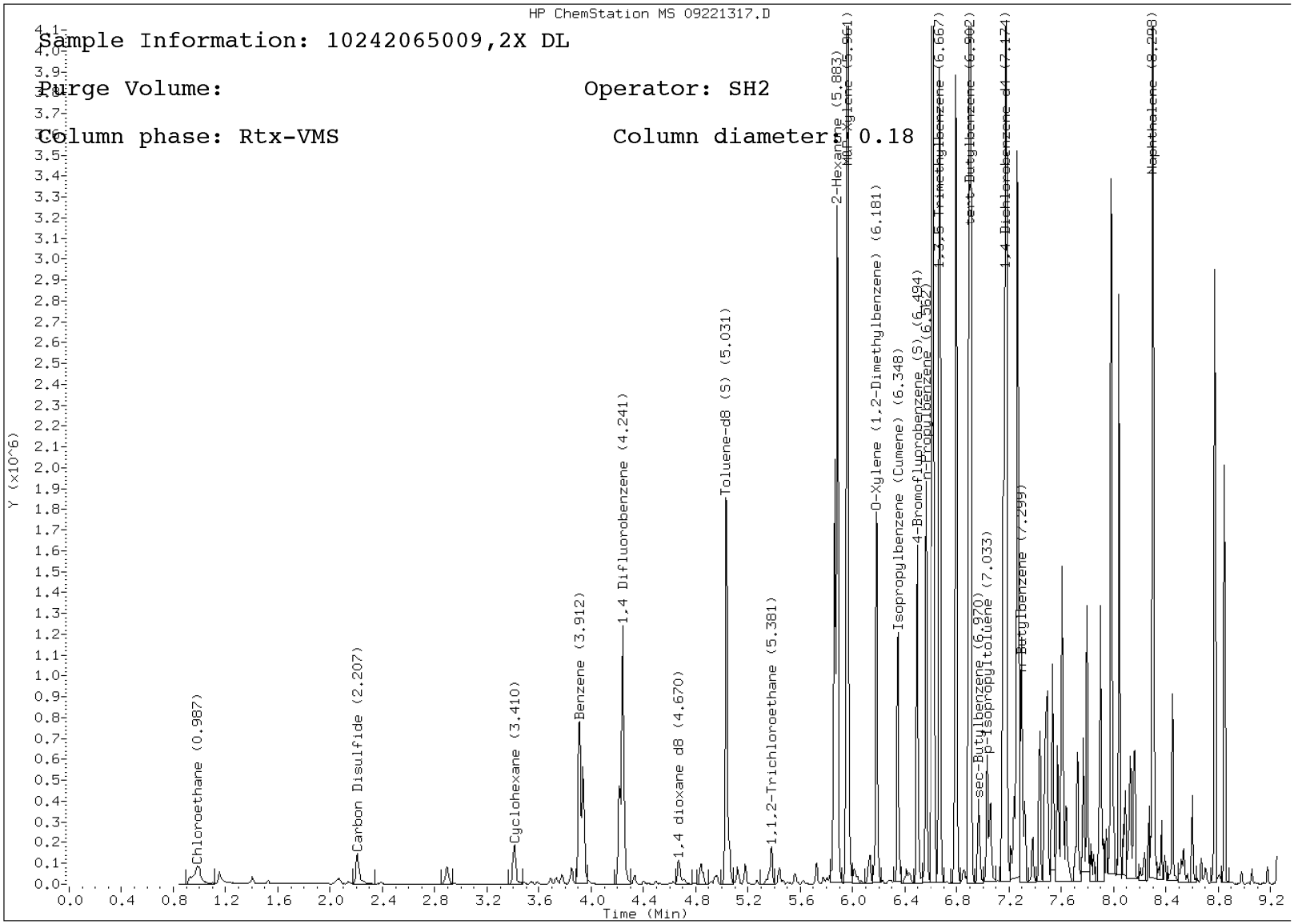
Sample ID: 10242065009

Client ID: Instrument: 10msv1.i

Sample Information: 10242065009,2X DL

Purge Volume: Operator: SH2

Column phase: Rtx-VMS Column diameter: 0.18



Data File: \\192.168.10.12\chem\10msv5.i\092013b.b/09201347.D

Report Date: 09/26/2013

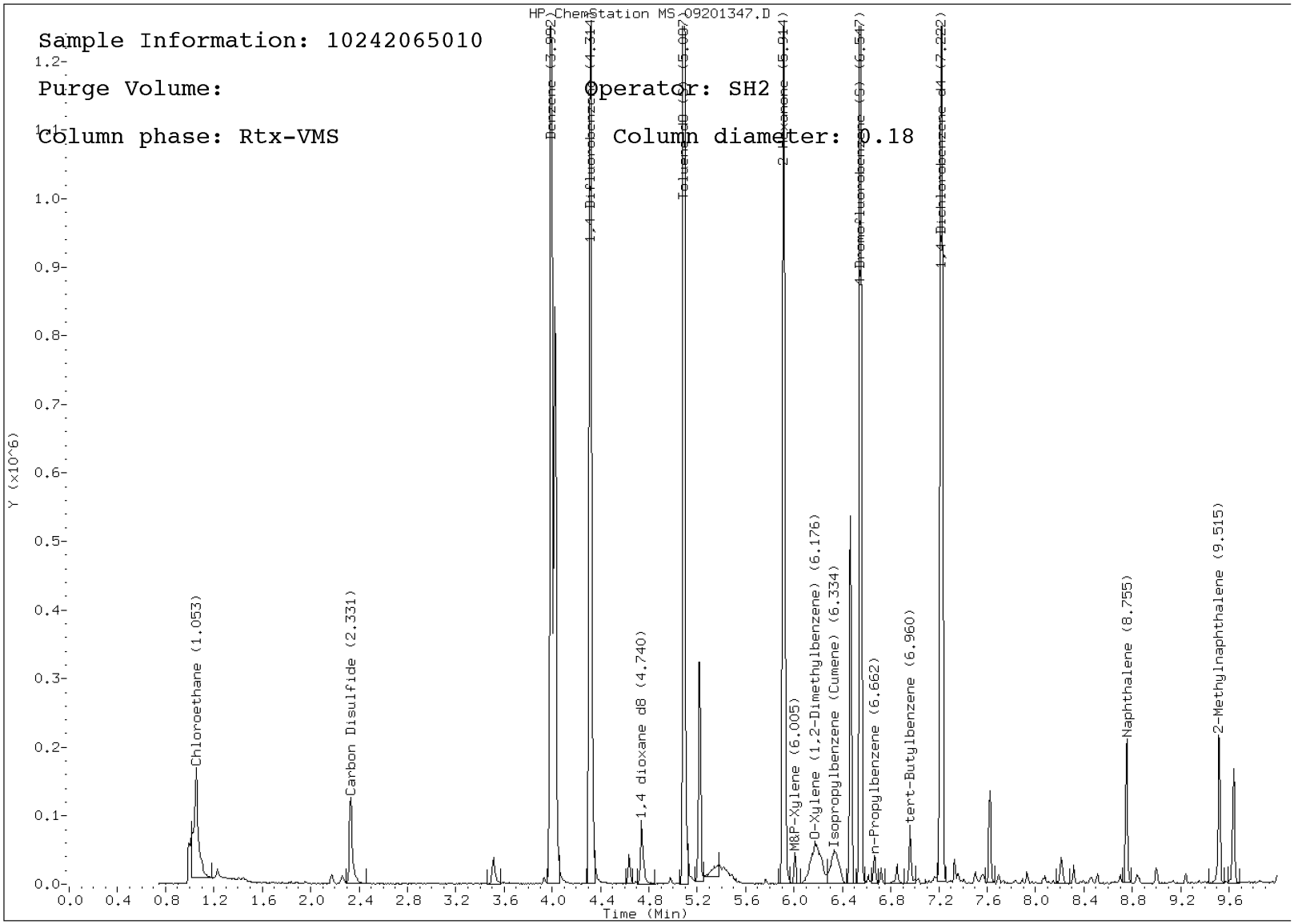
Sample ID: 10242065010

Client ID: Instrument: 10msv5.i

Sample Information: 10242065010

Purge Volume: Operator: SH2

Column phase: Rtx-VMS Column diameter: 0.18



Appendix D

ADEC Laboratory Data Review Checklist and Summary

CONESTOGA-ROVERS & ASSOCIATES

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MEMORANDUM

TO:	ADEC	REF. NO.:	073011
FROM:	Jeffrey Cloud	DATE:	February 11, 2014
CC:	John Riggi		**Send via E-Mail and U.S. Mail**
RE:	**QA/QC Review Dillingham Auto Job #10242065 September 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 the exception of the method AK101 analysis for sample B1MW. The GRO result for sample B1MW was 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.

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 toluene present at a low concentration. The toluene result for sample MW-10 was qualified as non-detect.

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

Matrix spikes (MS) were not prepared or analyzed for project related samples. Precision, for methods AK101 and AK102, was determined to be acceptable based on LCS/LCSD recoveries. Precision for method 8260 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.

Field duplicates were collected and submitted blind to the laboratory. The sample IDs and their duplicates were MW-7/DUP-1 and MW-5R/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.

Laboratory Data Review Checklist

Completed by: J Cloud

Title: Project Chemist Date: February 11, 2014

CS Report Name: 2nd Semiannual 2013 GW Report Report Date: 10/8/13

Consultant Firm: Conestoga-Rovers & Associates

Laboratory Name: Pace Analytical Services Laboratory Report Number: 10242065

ADEC File Number: 2540.26.003 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:

Method AK101 for sample B1MW was analyzed outside of the acceptable 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:

The GRO result for sample B1MW was qualified as estimated.

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:

Toluene was observed in a method blank

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

MW-10

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

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

The toluene result for sample MW-10 was qualified as non-detect

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

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

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?
☐Yes ☐ No X NA (Please explain.) Comments:

No metals/inorganics

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

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

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

No failed surrogates

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

Comments:

None

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: