

## ENVIRONMENTAL CONSULTANTS

#### FORMER CUSTOM TRUCK (CURRENTLY SIX ROBBLEE'S) 4748 OLD SEWARD HIGHWAY ANCHORAGE, ALASKA

#### **GROUNDWATER MONITORING REPORT**

#### **JULY 2014**

Submitted to:

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AAC	-	Alaska Administrative Code
ADEC	-	Alaska Department of Environmental Conservation
AK	-	Alaska Method
AWWU	-	Anchorage Water and Wastewater Utility
BGES	-	Braunstein Geological and Environmental Services
BTEX	-	Benzene, Toluene, Ethylbenzene, and Total Xylenes
С	-	Celsius
CSM	-	Conceptual Site Model
DRO	-	Diesel Range Organics
EPA	-	Environmental Protection Agency
GRO	-	Gasoline Range Organics
HCL	-	Hydrochloric Acid
LOQ	-	Limit of Quantitation
mg/L	-	Milligrams per Liter
ml/min	-	milliliters per minute
MRL	-	Method Reporting Limit
PAHs	-	Polynuclear Aromatic Hydrocarbons
QC	-	Quality Control
QP	-	Qualified Person
RPD	-	Relative Percent Difference
RRO	-	Residual Range Organics
SGS	-	SGS North America, Inc.
UST	-	Underground Storage Tank
VOCs	-	Volatile Organic Compounds

#### ACRONYMS

#### **1.0 INTRODUCTION**

BGES, Inc. (BGES) was retained by Andy Robblee of Six Robblee's, Inc. to conduct groundwater sampling at the Six Robblee's property located at 4748 Old Seward Highway, Anchorage, Alaska (Figure 1). The purpose of this groundwater monitoring event was to assess the groundwater quality at this site. The fieldwork for this round of sampling (the eighth round of groundwater sampling performed by BGES) was performed on April 28 and 29, 2014 in general accordance with the work plan prepared by BGES dated December 6, 2013 and updated in an email correspondence to the Alaska Department of Environmental Conservation (ADEC) Project Manager, Katrina Chambon, dated November 25, 2013 site is listed in the ADEC Contaminated Sites database as a site with a status of "cleanup-complete with institutional controls" (ADEC Hazard Identification Number 23658, Event Identification Number 404, and File Number 2100.26.252).

#### 2.0 BACKGROUND

The property is located in the central portion of Anchorage, Alaska (Figure 1). The property had previously operated for many years as an automotive dealership that had on-site underground storage tanks (USTs) for fuel needs. Fuel is no longer dispensed at the site, and the tanks were removed in 1994. A one-story building that is operated as an automotive shop and accessory retail store is located on the property. The area west of the building is used for bulk storage of truck tops and auto accessories.

Numerous previous assessments have been performed by various environmental consulting firms at the site, including a 2004 Site Closure Report performed by Chemtrack. On June 14, 2004 the ADEC issued a "No Further Remedial Action Planned" status for this site. In addition, a "Record of Decision" was also issued for the site on the same date. In these documents, it has been indicated that quarterly groundwater monitoring in accordance with an approved work plan must be instituted.

BGES was contracted in 2005 to review the previous work plan and to resume groundwater sampling activities in accordance with the No Further Remedial Action Planned and Institutional Control Record of Decision documentation. The results of the previous groundwater sampling event, completed in June of 2013, were presented in the July 2013 Groundwater Monitoring Report.

#### **3.0 PREVIOUS SITE WORK**

Two 5,000-gallon UST's, reportedly containing gasoline, were removed from the ground in 1994.

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Hydrocarbon contamination was observed in soils near the USTs and associated piping. In addition to removing the USTs, the excavation reportedly was continued to remove additional contaminated soil. Approximately 280 cubic yards of soil were reportedly removed from the site and treated at an off-site facility. Elevated concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX) were detected in remaining soils.

Groundwater sampling was first performed by BGES in June of 2005. Monitoring Wells that were sampled during this sampling event included; MW-1, MW-2, MW-5, MW-8, MW-11, MW-12, B6/VE, and the Tap Well (facility well). The results indicated contaminant concentrations exceeding the following ADEC cleanup criteria: gasoline range organics (GRO) in Monitoring Wells MW-1, MW-2, MW-8, and B6/VE; diesel range organics (DRO) in MW-1, MW-2, and B6/VE; benzene in MW-1, MW-2, MW-5, MW-8, MW-12, and B6/VE; toluene in MW-1, MW-2, and B6/VE; ethylbenzene in MW-1, MW-2, and B6/VE; and, total xylenes in MW-2. The water sample collected from the Tap Well (facility well) did not exhibit any analyte concentrations above the laboratory's method reporting limit (MRL) and the ADEC cleanup criteria.

Groundwater sampling was performed again by BGES in August of 2005. Monitoring wells that were sampled during this sampling event included MW-1, MW-2, MW-3, MW-5, B6/VE, MW-8, MW-9, MW-10, MW-11, MW-12, and MW-15. The results indicated contaminant concentrations exceeding the following ADEC cleanup criteria: GRO in MW-1, MW-2, MW-5, MW-8, MW-15, and B6/VE; DRO in MW-1, MW-2, MW-5, MW-11, MW-15, and B6/VE; residual range organics (RRO) in MW-1, MW-2, MW-5, B6/VE, MW-9, MW-11, MW-12, and MW-15; benzene in MW-1, MW-2, MW-5, B6/VE, MW-9, MW-11, MW-15.; toluene in MW-1, MW-2, MW-15, and B6/VE; ethylbenzene in MW-1, MW-2, MW-15, and B6/VE; and, total xylenes in MW-15.

Groundwater sampling was performed by BGES in March of 2006. Monitoring Wells that were sampled during this sampling event included MW-1, MW-2, B6/VE, MW-11, and MW-12. Water samples were analyzed for GRO, DRO, RRO, and BTEX. The results from the March 2006 sampling event indicated that GRO, DRO, RRO, and BTEX concentrations exceeded the ADEC cleanup criteria in Monitoring Wells MW-1, MW-2, and B6/VE (except for total xylenes in B6/VE). Benzene concentrations exceeded the ADEC cleanup criterion in Monitoring Wells MW-11 and MW-12. Additionally, the RRO concentration in Water Sample MW12 exceeded the ADEC cleanup criterion.

Groundwater sampling was performed by BGES in September of 2006. Wells that were sampled during this sampling event included MW-1, MW-2, B6/VE, MW-5, MW-8, MW-11, MW-12, and the

facility well. Water samples were analyzed for GRO, DRO, RRO, and BTEX. The results from the September 2006 sampling event indicated that GRO, DRO, and RRO concentrations exceeded the ADEC cleanup criteria in Monitoring Wells MW-1, MW-2, and B6/VE. Benzene concentrations exceeded the ADEC cleanup criterion in each of the wells sampled, including the facility well. Concentrations of toluene and ethylbenzene exceeded the ADEC cleanup criteria in MW-1 and MW-2. Additionally, the toluene concentration in Water Sample B6/VE exceeded the ADEC cleanup criterion.

Groundwater sampling was performed by BGES in October of 2007. During that round of groundwater sampling, Monitoring Wells MW-1, MW-2, MW-3, MW-5, MW-8, MW-9, MW-10, MW-11, MW-12, MW-15, and B6/VE were sampled and analyzed for GRO, DRO, RRO, and BTEX. Additionally, Monitoring Wells MW-2 and MW-102 (duplicate of MW-2) were analyzed for polynuclear aromatic hydrocarbons (PAHs) and volatile organic compounds (VOCs). The results from the October 2007 sampling event indicated that GRO, DRO, RRO, benzene, toluene and ethylbenzene concentrations exceeded the ADEC cleanup criteria in MW-1, MW-2, and B6/VE (except for the RRO concentration in B6/VE). Benzene concentrations exceeded the ADEC cleanup criterion in every well sampled, except for Monitoring Wells MW-3, MW-9, and MW-10. Monitoring Well MW-8 exhibited a GRO concentration that exceeded the ADEC cleanup criterion in addition to the benzene exceedance described above. Monitoring Well MW-15 contained GRO, DRO, benzene, toluene, and ethylbenzene concentrations above the applicable ADEC cleanup criteria. None of the samples analyzed contained xylenes concentrations that exceeded the ADEC cleanup criterion. Two off-site, downgradient wells (MW-11 and MW-12) were tested and exhibited levels of contaminants that exceeded ADEC cleanup criteria.

Groundwater sampling was performed by BGES in August and September of 2012. Wells that were sampled during that round of sampling event included MW-1, MW-2, MW-3, MW-5, MW-8, MW-9, MW-10, MW-11, MW-13, MW-14, MW-15, and B6/VE, and were analyzed for GRO, BTEX, DRO, and RRO. In addition, a water sample was collected from the facility well and labeled "Facility Well", and was analyzed for VOCs. The results from the August and September 2012 sampling events indicated that the water samples collected from Monitoring Wells MW-1 and MW-17 (duplicate of MW-1) exhibited concentrations of GRO, benzene, toluene, ethylbenzene, DRO, and RRO, which exceeded their respective ADEC cleanup criteria. The water samples collected from Monitoring Wells MW-8, and MW-15 exhibited concentrations of GRO, BTEX, DRO, and RRO, which exceeded their respective ADEC cleanup criteria. Water Samples MW-8 and MW-15 exhibited concentrations of benzene, which exceeded the ADEC cleanup criteria. In addition, Water Samples

B6/VE exhibited concentrations of GRO, benzene, toluene, DRO, and RRO, which exceeded ADEC cleanup criteria.

Prior to the current monitoring round, a building survey and some preliminary soil gas sampling, in addition to groundwater sampling, was performed by BGES in May and June of 2013. Sub-slab soil gas samples collected from beneath the concrete slab in the southeastern portion of the building did not exhibit any analyte concentrations above the ADEC target levels for shallow soil gas. The groundwater samples collected from Monitoring Wells MW-2, MW-14, MW-13, and MW-20 exhibited concentrations of GRO, BTEX, DRO, and RRO that exceeded the respective ADEC cleanup criteria for these contaminants. In addition, Groundwater Samples MW-13 and MW-20 (duplicate of MW-13) exhibited concentrations of 1,2,4-trimethylbenzene and n-propylbenzene that exceeded the respective ADEC cleanup criteria for these contaminants. The groundwater samples collected from Monitoring Wells MW-1 and B6/VE exhibited concentrations of GRO, benzene, toluene, ethylbenzene, DRO, and RRO that exceeded the respective ADEC cleanup criteria for these contaminants. Groundwater Sample MW-15 exhibited concentrations of GRO, benzene, DRO, and RRO that exceeded the respective ADEC cleanup criteria for these contaminants. Groundwater Sample MW-15 exhibited concentrations of GRO, benzene, DRO, and RRO that exceeded the respective ADEC cleanup criteria for these contaminants.

Quarterly groundwater monitoring activities that were performed in April of 2014 are the subject of this report, and details and the results of these activities are presented below.

#### 4.0 MAY 2014 SAMPLING AND ANALYSIS

BGES collected groundwater samples from Monitoring Wells MW-1, MW-2, MW-5, MW-11, MW-12 MW-13, MW-14, MW-15 and B6/VE on April 28 and 29, 2014 (Figure 2) in accordance with our work plan approved by the ADEC on December 6, 2013.

Prior to sample collection, the depths to water and the total depths of each well were measured using an electronic water level indicator that was decontaminated prior to its use in each well by washing it in an Alconox (laboratory-grade detergent) solution, followed by a potable water rinse. The depth to water, the total depth of the wells, and the water quality parameters are presented in Table 1. It should be noted that several of the wells had missing caps, were damaged, and/or exhibited evidence of frostjacking. As such, we were not able to calculate groundwater flow direction or gradient with any confidence for this sampling event.

Monitoring Wells MW-2, MW-3, MW-5, B6/VE, MW-8, MW-10, MW-13, MW-14, and MW-15 had broken or missing PVC well caps; and several of the wells exhibited damaged or ill-fitting metal

casing lids and evidence of frost-jacking.

Prior to the collection of groundwater samples, the casing volume for each well was calculated. The wells were purged utilizing a positive displacement bladder pump; a minimum of three casing volumes were removed from each well. During the purging activities, the stabilization parameters (pH, conductivity, oxidation-reduction potential, and temperature) were monitored, utilizing a YSI Professional Pro Multi-Parameter water quality meter. Upon completion of the purging activities, the groundwater samples were collected utilizing low-flow sampling technique and an approximate flow rate between 100 and 450 milliliters per minute (ml/min). Portions of the samples scheduled for volatiles analyses were collected first by filling laboratory-supplied containers that were preserved with hydrochloric acid (HCL). Care was taken during filling of the containers to ensure that no headspace was left within the containers and that none of the preservative was spilled. One duplicate water sample was collected from Monitoring Well MW-14 (labeled MW-16) and was submitted "blindly" to the laboratory for analyses.

The sample containers were labeled, placed in chilled coolers, and transported to SGS North America, Inc. (SGS), an ADEC-approved laboratory for analysis, under chain of custody protocol. As a quality control measure, a trip blank sample accompanied the water samples scheduled for volatile analyses during the entire sampling and handling process.

Investigation-derived waste generated (purge water) was containerized in two 55-gallon drums. The investigation-derived wastes are currently stored outside in the southwest corner of the facility yard. The 55-gallon drums were clearly labeled with the contact information and a description of the contents (potentially-contaminated water). Copies of field notes taken during groundwater monitoring activities are included in Appendix A.

#### 5.0 EVALUATION OF LABORATORY DATA

Laboratory analysis of the water samples were performed by SGS, an ADEC-approved laboratory. The analytical results for water samples are listed in Table 2 and copies of the laboratory data are included in Appendix B. The analytical results for water sample results were compared to the ADEC Method 2 Cleanup Criteria listed in Alaska Administrative Code (AAC) 75.345—Table C for groundwater.

The samples were analyzed at SGS by the following methods: GRO by Alaska Method (AK) 101; DRO by AK 102; RRO by AK 103; and BTEX by EPA Method 8021B.

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The water samples collected from the subject property were numbered, for example, MW-1-0428, where the prefix MW-1 indicates the monitoring well from which the water sample was collected; and 0428 indicates the month and day the sample was collected. For brevity in the text and in the associated figures, these samples are referred to as MW-1 with the date omitted. B6/VE is also a monitoring well and is labeled in the same format as described above.

Ten water samples, including a duplicate sample, were collected from nine existing monitoring wells at the site; Samples MW-1, MW-2, MW-5, MW-11, MW-12, MW-13, MW-14, MW-16 (duplicate of MW-14), MW-15, and B6/VE.

The samples collected from Monitoring Wells MW-13, MW-14 and MW-16 (duplicate of MW-14) exhibited concentrations of GRO, BTEX, DRO, and RRO; all of which exceeded the respective ADEC cleanup criteria for these analytes. The samples collected from Monitoring Wells MW-2 and B6/VE exhibited concentrations of GRO, benzene, toluene, ethylbenzene, DRO, and RRO that exceeded the respective ADEC cleanup criteria for these analytes. The sample collected from Monitoring Well MW-1 exhibited concentrations of GRO, benzene, toluene, ethylbenzene, and DRO that exceeded the respective ADEC cleanup criteria for these analytes. The sample from Monitoring Well MW-5 exhibited a concentration of benzene that exceeded the ADEC cleanup criterion for this analyte. The sample from Monitoring Well MW-12 exhibited a concentration of RRO that exceeded the ADEC cleanup criterion for this analyte. The sample from Monitoring Well MW-15 exhibited concentrations of GRO, benzene, DRO, and RRO that exceeded the ADEC cleanup criterion for this analyte. The sample from Monitoring Well MW-16 exhibited concentrations of GRO, benzene that exceeded the ADEC cleanup criterion for this analyte. The sample from Monitoring Well MW-15 exhibited concentrations of GRO, benzene, DRO, and RRO that exceeded the ADEC cleanup criteria for these analytes.

The remaining analytes within the field samples were either detected at concentrations that were below the applicable ADEC cleanup criteria, or were not detected above the laboratory limits of quantitation LOQs for the analyses. All of the LOQs for the non-detectable analytes were below the applicable ADEC cleanup criteria.

Analytical results for the groundwater samples are presented in Tables 2 and 3, the laboratory analytical data are included in Appendix B, and the sampling locations are shown on Figure 2.

#### 6.0 LABORATORY DATA QUALITY REVIEW

Data quality was reviewed in accordance with ADEC guidance and standard industry practices. An ADEC laboratory data review checklist was completed for the laboratory work order number, and this checklist is included in Appendix C. Sample analyses were provided by SGS of Anchorage, Alaska. All samples were hand-delivered to SGS by BGES personnel under chain of custody protocol.

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The samples contained the proper preservatives for the requested analyses. Trip blanks accompanied all volatile samples (GRO and BTEX) through the entirety of the sampling process and transportation to the laboratory.

A case narrative was included with the laboratory data. The case narrative provided with the data did not indicate any quality control (QC) failures or issues with data quality.

#### Work Order 1132689

The field samples collected during this sampling event were stored and transported in three coolers. All of the sample portions scheduled for volatile contaminant constituent analyses were transported in Cooler #3, along with a trip blank sample. The temperatures of Coolers 1, 2, and 3, were measured at the laboratory at the time of acceptance; and were recorded as -0.6, -0.3, and -0.1 degrees Celsius (C); respectively. The temperatures in the coolers were below the prescribed, optimal temperature range of 4 degrees Celsius +/- 2 degrees. However, because the recorded temperatures were slightly below the acceptance range, there is a reduced potential for contaminant loss within the samples due to natural attenuation. For this reason, it is our opinion that this QC failure does not affect the acceptability of the data for their intended use.

Sample MW-16 was a duplicate of Sample MW-14, and was collected and analyzed in order to facilitate evaluation of field sampling precision. Relative percent differences (RPDs) between the reported concentrations of several analytes for the original and duplicate samples were calculated, and these RPDs ranged between 2.61 percent and 37.9 percent. The RPDs between the reported concentrations of GRO, benzene, toluene, ethylbenzene, total xylenes, and DRO within the original and duplicate field sample were all below the recommended acceptance limit of 30 percent. This lends evidence to suggest generally good field sampling precision was achieved during the collection of the groundwater samples. For this reason, and because the only RPD that exceeded the acceptance limit of 30 percent was for the reported concentrations of RRO, and because this RPD only slightly exceeded the acceptance limit (RRO RPD was 37.97 percent); it is our opinion that good field sampling precision was achieved, and the data are acceptable for their intended use.

#### 7.0 CONCEPTUAL SITE MODEL

A graphical human health conceptual site model (CSM) was developed for this site and was included in our 2007 Groundwater Sampling Report (dated December 2007). It is our opinion that the CSM is still valid for this site, and as such has not been modified based on the results of this sampling event.

#### 8.0 CONCLUSIONS

A groundwater monitoring event at this site was conducted on April 28 and 29, 2014. Groundwater samples were collected from Monitoring Wells MW-1, MW-2, MW-5, MW-11, MW-12 MW-13, MW-14, MW-15 and B6/VE, and were analyzed for GRO, DRO, RRO, and BTEX. Many of the monitoring wells were in a damaged condition at the time of the sampling, and one of the wells (MW-9) was submerged in water and was therefore not sampled during this event. Monitoring Wells MW-2, MW-3, MW-5, B6/VE, MW-8, MW-10, MW-13, MW-14, and MW-15 had broken or missing PVC well caps; and several of the wells exhibited damaged or ill-fitting metal casing lids and evidence of frost-jacking. It is recommended that the wells be repaired as needed, and the tops of casings for the wells be re-surveyed after the repairs are made; in order to facilitate the calculation of accurate groundwater elevations, flow directions, and groundwater flow gradients during future sampling events.

Each of the wells sampled, with the exception of Monitoring Well MW-11, exhibited concentrations of one or more analytes that exceeded the applicable ADEC cleanup criteria. The samples collected from Monitoring Wells MW-13, MW-14 and MW-16 (duplicate of MW-14) exhibited concentrations of GRO, BTEX, DRO, and RRO; all of which exceeded the respective ADEC cleanup criteria for these analytes. The samples collected from Monitoring Wells MW-2 and B6/VE exhibited concentrations of GRO, benzene, toluene, ethylbenzene, DRO, and RRO that exceeded the respective ADEC cleanup criteria for these analytes. The sample collected from Monitoring Well MW-1 exhibited concentrations of GRO, benzene, toluene, ethylbenzene, and DRO that exceeded the respective ADEC cleanup criteria for these analytes. The sample from Monitoring Well MW-5 exhibited a concentration of benzene that exceeded the ADEC cleanup criterion for this analyte. The sample from Monitoring Well MW-12 exhibited a concentration of RRO that exceeded the ADEC cleanup criterion for this analyte. The sample from Monitoring Well MW-15 exhibited a concentration of RRO that exceeded the ADEC cleanup criterion for this analyte. The sample from Monitoring Well MW-15 exhibited concentrations of GRO, benzene, DRO, and RRO that exceeded the ADEC cleanup criterion for this analyte. The sample from Monitoring Well MW-15 exhibited concentrations of GRO, benzene, DRO, and RRO that exceeded the ADEC cleanup criteria for these analytes.

Historical trends demonstrate that the majority of the contaminant concentrations measured within samples collected from the onsite monitoring wells have been declining over the years, with the exception of MW-5. Historical laboratory analytic results are provided in Table 3, and graphical representations of contaminant concentrations within the wells as measured over time are provided in Appendix D. Based on the results of this groundwater monitoring event, no evidence of substantial expansion or migration of the plume of contamination at this site has been identified. For this reason, we recommend that a reduction in sampling frequency, to a yearly basis, be requested of the ADEC for

this site. It is also recommended that all purge water be disposed of at an appropriate disposal facility such as Emerald Alaska.

#### 9.0 EXCLUSIONS AND CONSIDERATIONS

This report presents facts, observations, and inferences based on conditions observed during the period of our project activities, and only those conditions that were evaluated as part of our scope of work. Our conclusions are based solely on our observations made and work conducted and only apply to the immediate vicinities of the locations where samples were collected. In addition, changes to site conditions may have occurred since the completion of our project activities. These changes may be from the actions of man or nature. Changes in regulations may also impact the interpretation of site conditions. BGES will not disclose our findings to any parties other than our client as listed above, except as directed by our client, or as required by law.

Groundwater sampling for this monitoring event was conducted, and this report was prepared by Trevor Crosby; Environmental Scientist II with BGES and a Qualified Person (QP) as defined by the ADEC. Mr. Crosby has conducted groundwater monitoring, site characterization, and remediation activities at numerous sites in the Anchorage area and throughout Alaska. This report was reviewed by Brian Braunstein, Senior Environmental Specialist of BGES. Brian Braunstein is a QP, as defined by the ADEC, and has conducted and managed numerous site characterization and remediation efforts throughout Alaska. This report was approved by Robert N. Braunstein, a Certified Professional Geologist (C.P.G.), who has over 30 years of professional geologic and environmental experience, and has performed or managed thousands of ESAs in the lower 48-States and in Alaska. He has extensive knowledge and experience with contaminated sites and remediation.

Prepared By:

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Robert N. Braunstein, C.P.G. Principal

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#### TABLE 1 4748 OLD SEWARD HIGHWAY ANCHORAGE, ALASKA MONITORING WELL SAMPLING DATA (APRIL 28 & 29, 2014)

Well Number	MW1	MW2	MW3	MW5	MW8	MW9	MW10	MW11	MW12	MW13	MW14	MW15	B6/VE
Date Sampled	4/28/2014	4/29/2014		4/28/2014				4/28/2014	4/28/2014	4/29/2014	4/29/2014	4/29/2014	4/29/2014
Date of Depth and Elevation Measurement	4/28/2014	4/28/2014	4/28/2014	4/28/2014	4/28/2014		4/28/2014	4/28/2014	4/28/2014	4/28/2014	4/28/2014	4/28/2014	4/28/2014
Time of Depth to Water Measurement	15:46	16:21	16:07	13:56	16:31		15:10	9:41	12:20	14:59	14:25	14:36	14:16
Time Sample Collected	17:02	17:05		14:48				11:26	13:20	19:15	13:07	15:30	11:50
Top of Casing Elevation (feet)	102.65	99.89	100.02	101.19	99.62		103.35	103.35	103.35	101.51	101.39	99.81	101.92
Depth to Water (feet below top of casing)	8.83	6.28	6.25	8.00	6.85		7.44	5.79	5.60	7.80	7.79	6.14	7.56
Water Elevation (feet)	93.82	93.61	93.77	93.19	92.77		95.91	97.56	97.75	93.71	93.60	93.67	94.36
Total Depth of Well (feet below top of casing)	21.93	13.49	9.21	13.08	14.88		14.92	13.95	8.94	11.63	13.38	10.40	14.04
Well Casing Diameter (Inches)	2	2	2	2	2		2	2	2	2	2	2	4
Standing Water Well Volume (gallons)	2.14	1.18	0.48	0.83	1.31		1.22	1.33	0.55	0.63	0.91	0.70	4.23
Purge Volume-Actual (gallons)	6.4	3.5		3.0				4.0	4.0	2.5	3.5	3.0	13.0
Temperature (degrees Celsius)	6.5/7.5/7.4/6.7/6.6	5.9/5.3/7.9/5.8		5.8/5.8/5.3				6.1/5.1/4.7/4.2	3.1/3.2/5.1	5.6/4.5/4.6	8.1/6.2/4.5	7.4/4.8/6.3	5
	6.94/6.80/6.78/6.7												6.32/6.71/6.65/6.78/6.77/6.73/6.88/6.89/6.9
pH (standard units)	8/6.89	6.19/6.27/6.31/5.97		6.98/6.64/6.68				6.26/7.29/7.38/8.15	7.26/6.92/7.46	4.62/5.06/5.26	7.09/6.73/6.67	6.68/6.46/6.48	1/6.94/6.96/6.91
	1227/1170/1156/1												677/592/619/657/634/628/681/698/724/728/
Conductivity (microsiemans per centimeter)	125/1200	760/790/738/703		851/998/1012				590/618/639/618	615/615/678	1327/1294/1301	970/694/851	622/512/481.2	702/685
	132.0/ 122.1/												85 2/ 120 0/ 02 2/ 102 2/ 00 5/ 85 0/ 86 6/
Oxidation Reduction Potential (millivolts)	120.1/-112.3/-	3 3/-21 2/-44 4/-52 6		-68 1/-62 7/-63 8				90 1/-66 1/-14 4/-93 2	-116 5/-120 2/-137	17 1/-41 5/-42 4	-38 5/-64 2/-59 1	-66 2/-51 7/-57 3	-63.2/-120.3/-53.3/-103.2/-55.3/-65.0/-60.0/- 93.8/-90.8/-83.8/-82.6/-72.2
Notes:	PVC and flush moun	t No PVC can present at	PVC can was	No PVC cap present	No PVC can	Flush mount	PVC cap was is in	PVC can was damaged	PVC cap present at	No PVC cap present	A duplicate sample	No PVC cap present	No PVC cap in present at time of sampling. Flush
Values separated by / indicate readings	cap in good operable	time of sampling.	damaged and may	at time of sampling.	present at time of	of cap submerged	moderately	and may need to be	time of sampling.	at time of sampling.	was collected from	at time of sampling.	mount cap present but not affixed to monitoring
for successive well volumes	condition.	Flush mount cap in	need to be	Flush mount cap in	sampling. Flush	in approx. 1.5	damaged	replaced. Flush mount	Flush mount cap in	Flush mount cap in	MW-14 and labeled	Flush mount cap in	well.
Sampler: T. Crosby		good operable	replaced. Flush	good operable	mount cap in	inches of	condition and may	cap present but not	good operable	good operable	MW-16. PVC cap	good operable	
Field parameters measured with a YSI		condition (no bolts in	mount cap in good	condition.	good operable	water. Not	need to be	affixed to monitoring	condition.	condition.	slightly broken and	condition.	
Profession Plus Multi-Meter		place to affix lid tightly	operable		condition (no	sampled.	replaced. Flush	well and filled with			may need to be		
Weather conditions on April 28 and 29, 2014 were		to cap).	condition.		bolts in place to	-	mount cap in good	sands.			replaced. Flush		
were partially cloudy to clear skies with		-			affix lid tightly		operable condition	l			and in good		
temperatures ranging from approximately					to cap).		(no bolts in place				operable condition.		
44°F to 57°F.							to affix lid tightly				*		
							to cap).						

#### TABLE 2 4748 OLD SEWARD HIGHWAY ANCHORAGE, ALASKA ANALYTICAL RESULTS - WATER (APRIL 2014)

		Results	LOQ	ADEC Soil Cleanup	
Vater Sample No.	Parameter	(mg/L)	(mg/L)	Criterion (mg/L) <sup>1</sup>	Analytical Meth
MW-1-0428	Gasoline Range Organics	29.800	10.0	2.2	AK101
	Benzene	2.420	0.0500	0.005	SW8021B
	Toluene	5.310	0.100	1.0	SW8021B
	Ethylbenzene	1.080	0.100	0.7	SW8021B
	Total Xylenes	6.150	0.200	10	SW8021B
	Diesel Range Organics	8.380	0.619	1.5	AK102
	Residual Range Organics	0.779	0.515	1.1	AK103
MW-2-0429	Gasoline Range Organics	64.400	10.0	2.2	AK101
	Benzene	8.460	0.0500	0.005	SW8021B
	Toluene	17.500	0.100	1.0	SW8021B
	Ethylbenzene	1.340	0.100	0.7	SW8021B
	Total Xylenes	8.970	0.200	10	SW8021B
	Diesel Range Organics	70.100	3.33	1.5	AK102
	Residual Range Organics	6.140	0.556	1.1	AK103
MW-5-0428	Gasoline Range Organics	0.207	0.1	2.2	AK101
	Benzene	0.0839	0.0005	0.005	SW8021B
	Toluene	ND	0.0010	1.0	SW8021B
	Ethylbenzene	ND	0.0010	0.7	SW8021B
	Total Xylenes	0.0121	0.002	10	SW8021B
	Diesel Range Organics	0.757	0.619	1.5	AK102
	Residual Range Organics	0.995	0.515	1.1	AK103
B6/VE-0429	Gasoline Range Organics	22.700	5.00	2.2	AK101
	Benzene	1.730	0.0250	0.005	SW8021B
	Toluene	3.870	0.0500	1.0	SW8021B
	Ethylbenzene	0.734	0.0500	0.7	SW8021B
	Total Xylenes	3.473	0.1000	10	SW8021B
	Diesel Range Organics	5.570	0.600	1.5	AK102
	Residual Range Organics	1.280	0.500	1.1	AK103
MW-11-0428	Gasoline Range Organics	ND	0.1	2.2	AK101
	Benzene	ND	0.0005	0.005	SW8021B
	Toluene	ND	0.001	1.0	SW8021B
	Ethylbenzene	ND	0.001	0.7	SW8021B
	Total Xylenes	ND	0.002	10	SW8021B
	Diesel Range Organics	ND	0.619	1.5	AK102
	Residual Range Organics	0.723	0.515	1.1	AK103
MW-12-0428	Gasoline Range Organics	ND	0.100	2.2	AK101
	Benzene	0.0011	0.0005	0.005	SW8021B
	Toluene	ND	0.001	1.0	SW8021B
	Ethylbenzene	ND	0.001	0.7	SW8021B
	Total Xylenes	ND	0.002	10	SW8021B
	Diesel Range Organics	0.611	0.600	1.5	AK102
	Residual Range Organics	1.220	0.500	1.1	AK103

BOLD

# TABLE 24748 OLD SEWARD HIGHWAYANCHORAGE, ALASKAANALYTICAL RESULTS - WATER (APRIL 2014)

			100	ADEC Soil Cleanup	
Water Comple No	Devementer	Results	LOQ	ADEC Soli Cleanup Criterion $(mg/I)^1$	Amelatical Mathad
Water Sample INO.	Parameter	(mg/L)	(mg/L)	Criterion (mg/L)	Analytical Method
WIW-13-0429	Gasoline Range Organics	159.000	20	2.2	AKIUI
	Benzene	10.600	0.100	0.005	SW8021B
	Toluene	42.200	0.200	1.0	SW8021B
	Ethylbenzene	5.600	0.200	0.7	SW8021B
	Total Xylenes	28.510	0.400	10	SW8021B
	Diesel Range Organics	22.300	2.40	1.5	AK102
	Residual Range Organics	2.720	0.500	1.1	AK103
MW-14-0429	Gasoline Range Organics	113.000	20	2.2	AK101
	Benzene	19.100	0.100	0.005	SW8021B
	Toluene	26.200	0.200	1.0	SW8021B
	Ethylbenzene	2.070	0.200	0.7	SW8021B
	Total Xylenes	15.240	0.400	10	SW8021B
	Diesel Range Organics	38.600	2.61	1.5	AK102
	Residual Range Organics	6.400	0.543	1.1	AK103
MW-16-0429					
(Duplicate of MW-14-0429	))				
RPD = 4.83%	Gasoline Range Organics	105.000	20	2.2	AK101
RPD = 9.89%	Benzene	16.400	0.100	0.005	SW8021B
RPD = 7.39%	Toluene	23.400	0.200	1.0	SW8021B
RPD = 2.61%	Ethylbenzene	1.990	0.200	0.7	SW8021B
RPD = 3.25%	Total Xylenes	14.510	0.400	10	SW8021B
RPD = 21.16%	Diesel Range Organics	52.300	2.67	1.5	AK102
RPD = 37.97%	Residual Range Organics	10.900	0.556	1.1	AK103
MW-15-0429	Gasoline Range Organics	7.980	1.00	2.2	AK101
	Benzene	1.790	0.0050	0.005	SW8021B
	Toluene	0.492	0.0100	1.0	SW8021B
	Ethylbenzene	0.113	0.0100	0.7	SW8021B
	Total Xylenes	0.367	0.0200	10	SW8021B
	Diesel Range Organics	1.830	0.619	1.5	AK102
	Residual Range Organics	2.250	0.515	1.1	AK103
<sup>1</sup> = Groundwater cleanup crite	ria based on 18 AAC 75.345 Table C;	April 8, 2012			
ADEC = Alaska Department of	of Environmental Conservation; AK =	Alaska Method			
mg/L = milligrams per Liter;	LOQ = Limit of Quantitation; RPD =	relative percent c	lifference;		
ND = Analyte not detected.					
BOLD	= indicates concentration excee	ds applicable cl	eanup criterion.		

#### TABLE 3 4748 OLD SEWARD HIGHWAY ANCHORAGE, ALASKA HISTORICAL GROUNDWATER SAMPLING ANALYTICAL RESULTS

																						ADEC Method Two
	Date Collected:	Jan-95	Jul-95	Mar-96	Dec-96	Nov-99	Aug-00	Nov-00	Jun-02	Nov-02	Jul-03	Jan-04	Jun-05	Aug-05	Mar-06	Sept-06	Oct-07	Sep-12	Jun-13	Apr-14	Analytical	Groundwater Cleanup
Well No	Parameter	(ma/l )	(ma/l )	(ma/L)	(ma/L)	(ma/l )	(ma/l)	(ma/l )	(ma/l )	(ma/L)	(ma/L)	(ma/l )	(ma/l )	(ma/l)	(ma/l )	(ma/l )	(mg/l )	(ma/l )	(ma/L)	(ma/l )	Method	l evel (mɑ/l ) <sup>1</sup>
	GRO	97.6			66.0		14.5		/18				30,600	53 300	54 400	28 100	50 400	32 /	40.6	20.80		1 3
		97.0 NIS		NS	2 /5		NIS		40	NS	NS	NS	21.3	37 200	10.3	20.100	28.2	22.4	20.1	23.00	AK102	1.5
	PPO	NS	NS	NS	NS		NS	NS			NS	NS	NS	<5.05	2.08	1.87	1 /6	1 45	1 32	0.30	AK102	1.5
	Bonzono	116		NG	11		1 40		47		NG	NG	2 1 4 0	5.00	7 010	0.100	2 210	2.42	2 720	2.42	SW/80216	0.005
	Toluono	27.6		NG	16.9		1.49		4.7 9.4		NG	NG	6 770	12 200	17 100	8 040	9.020	2.42	2.720	5.21	SW00210	1.0
	Ethylhonzono	27.0		NG	2 22		0.41		0.4	NG	NG	NG	0.770	1 /00	2 420	1 090	1 100	4.55	0.040	1.09	SW0021D SW0021b	0.7
		2.79		NO	2.23		0.41	NO	6.1		NO	NO	0.943	0.290	2.420	7.400	7,900	7.01	8,000	6.15		10.0
	Total Aylenes	14.0	INS	113	11.03	113	2.15	IN S	0.1	113	113	IN S	5.540	9.300	14.120	7.400	7.600	7.91	8.000	0.15	3000210	10.0
	CPO	156	109		152		59 5	162	80.5	NS	99 /00		111 000	107 000	121 000	41 000	27.20	7/1	047	64.40	AK101	13
10100-02		130	NC		152		30.3	NC	46.2	NO	00.400 50		FC 0	74 200	70.0	41.000	37.20	74.1 59.0	94.7	04.40 70.40	AK101	1.5
				NO NO	9.01		NO	NO	10.3 NC		<b>30</b>		<u> </u>	74.300	70.2	70.1	27.30	50.0 5.5	105	70.10	AK102	1.0
		20.0	00.7		110		5.00	1100	10.4		10.0		10.000	< 5.00	5.05	9.09	1.55	5.5	5.90	0.14	AK 103	1.1
	Benzene	32.8	20.7		25.8	NS NO	5.23	28.5	10.4	INS NO	10.2	NS NO	19.800	19.700	19.000	12.300	2.49	7.36	11.300	8.46	SVV8021D	0.005
	Ioluene	44	NS	NS	36.7	NS	7.48	28.7	10.6	NS	10.2	NS	26.500	23.100	31.800	20.200	6.68	19.8	22.600	17.50	SW8021b	1.0
	Ethylbenzene	3.4	NS	NS	4.4	NS	1.4	2.5	1.3	NS	10.2	NS	2.190	2.230	2.810	1.670	0.82	1.56	1.760	1.34	SW8021b	0.7
	I otal Xylenes	17.5	NS	NS	21.9	NS	9.47	13.45	7.5	NS	10.2	NS	10.550	10.860	14.190	9.500	4.950	10.23	10.120	8.97	SW8021b	10.0
	Naphthalene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.042	NS	NS	NS	8270C	0.7
	2-Methylnaphthalene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.013	NS	NS	NS	8270C	0.78
	1-Methylnaphthalene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.0062	NS	NS	NS	8270C	1.5
	Acenaphthalene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.000032	NS	NS	NS	8270C	2.2
	Acenaphthene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.000026	NS	NS	NS	8270C	2.2
	Fluorene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.000069	NS	NS	NS	8270C	1.46
	Phenanthrene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.000051	NS	NS	NS	8270C	11.0
	Anthracene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.0000097	NS	NS	NS	8270C	11.0
	Fluoranthene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.000016	NS	NS	NS	8270C	1.46
	Pyrene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.000020	NS	NS	NS	8270C	1.1
	Benzo[a]anthracene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.000019	NS	NS	NS	8270C	
	All other analytes	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	NS	NS	NS	8270C	varies
MW-03	GRO	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.090</td><td>NS</td><td>NS</td><td>&lt;0.0500</td><td>ND</td><td>NS</td><td>NS</td><td>AK101</td><td>1.3</td></mrl<></td></mrl<></td></mrl<>	NS	NS	NS	NS	<mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.090</td><td>NS</td><td>NS</td><td>&lt;0.0500</td><td>ND</td><td>NS</td><td>NS</td><td>AK101</td><td>1.3</td></mrl<></td></mrl<>	NS	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.090</td><td>NS</td><td>NS</td><td>&lt;0.0500</td><td>ND</td><td>NS</td><td>NS</td><td>AK101</td><td>1.3</td></mrl<>	NS	NS	NS	NS	<0.090	NS	NS	<0.0500	ND	NS	NS	AK101	1.3
	DRO	NS	NS	NS	NS	NS	NS	NS	0.41	NS	NS	NS	NS	0.333	NS	NS	<0.407	ND	NS	NS	AK102	1.5
	RRO	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.764	NS	NS	<0.407	0.556	NS	NS	AK103	1.1
	Benzene	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt; 0.0005</td><td>NS</td><td>NS</td><td>&lt; 0.0005</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>0.005</td></mrl<></td></mrl<></td></mrl<>	NS	NS	NS	NS	<mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt; 0.0005</td><td>NS</td><td>NS</td><td>&lt; 0.0005</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>0.005</td></mrl<></td></mrl<>	NS	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt; 0.0005</td><td>NS</td><td>NS</td><td>&lt; 0.0005</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>0.005</td></mrl<>	NS	NS	NS	NS	< 0.0005	NS	NS	< 0.0005	ND	NS	NS	SW8021b	0.005
	Toluene	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>NS</td><td>0.0008</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt; 0.002</td><td>NS</td><td>NS</td><td>&lt; 0.0005</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>1.0</td></mrl<></td></mrl<>	NS	NS	NS	NS	<mrl< td=""><td>NS</td><td>0.0008</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt; 0.002</td><td>NS</td><td>NS</td><td>&lt; 0.0005</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>1.0</td></mrl<>	NS	0.0008	NS	NS	NS	NS	< 0.002	NS	NS	< 0.0005	ND	NS	NS	SW8021b	1.0
	Ethylbenzene	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt; 0.002</td><td>NS</td><td>NS</td><td>&lt;0.0005</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>0.7</td></mrl<></td></mrl<>	NS	NS	NS	NS	NS	NS	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt; 0.002</td><td>NS</td><td>NS</td><td>&lt;0.0005</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>0.7</td></mrl<>	NS	NS	NS	NS	< 0.002	NS	NS	<0.0005	ND	NS	NS	SW8021b	0.7
	Total Xylenes	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.002</td><td>NS</td><td>NS</td><td>&lt;1.50</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>10.0</td></mrl<></td></mrl<></td></mrl<>	NS	NS	NS	NS	<mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.002</td><td>NS</td><td>NS</td><td>&lt;1.50</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>10.0</td></mrl<></td></mrl<>	NS	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.002</td><td>NS</td><td>NS</td><td>&lt;1.50</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>10.0</td></mrl<>	NS	NS	NS	NS	<0.002	NS	NS	<1.50	ND	NS	NS	SW8021b	10.0
	CRO	0.244	0.007	0.460	0 202	0.7	MDI	0 1 4 9	NC	NO	NC	NC	0.029	2 200		0 456	0 1 2 1		NC	0.007	41/101	1 2
10100-05	GRU	0.244	0.207	0.402	0.303	0.7		0.140	NO NC	NO NO	NO NC		0.930	2.200		0.456	0.121		NS NC	0.207	AKIUI	1.5
	DRU	INS NO	INS NO	INS NO	0.39	INS NO	NS NO	NS NO	INS NO	INS NO	NS NO	INS NO	0.603	1.24		0.700	< 0.407		NS NO	0.757	AK102	1.5
		NS	NS	NS	NS 0.15		NS	NS		NS	NS	NS	NS	1.79	NS	0.865	<0.407	0.974	NS	0.995	AK103	1.1
	Benzene	0.13	0.18	0.243	0.157	0.272	0.011	0.079	NS	NS	NS	NS	0.467	1.170	NS	0.180	0.0119	0.00113	NS	0.0839	SW8021b	0.005
	Toluene	<mrl< td=""><td>NS</td><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>&lt;0.020</td><td>NS</td><td>0.00450</td><td>0.000861</td><td>ND</td><td>NS</td><td>ND</td><td>SW8021b</td><td>1.0</td></mrl<></td></mrl<></td></mrl<></td></mrl<></td></mrl<></td></mrl<></td></mrl<>	NS	<mrl< td=""><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>&lt;0.020</td><td>NS</td><td>0.00450</td><td>0.000861</td><td>ND</td><td>NS</td><td>ND</td><td>SW8021b</td><td>1.0</td></mrl<></td></mrl<></td></mrl<></td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>&lt;0.020</td><td>NS</td><td>0.00450</td><td>0.000861</td><td>ND</td><td>NS</td><td>ND</td><td>SW8021b</td><td>1.0</td></mrl<></td></mrl<></td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>&lt;0.020</td><td>NS</td><td>0.00450</td><td>0.000861</td><td>ND</td><td>NS</td><td>ND</td><td>SW8021b</td><td>1.0</td></mrl<></td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>&lt;0.020</td><td>NS</td><td>0.00450</td><td>0.000861</td><td>ND</td><td>NS</td><td>ND</td><td>SW8021b</td><td>1.0</td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>&lt;0.020</td><td>NS</td><td>0.00450</td><td>0.000861</td><td>ND</td><td>NS</td><td>ND</td><td>SW8021b</td><td>1.0</td></mrl<></td></mrl<>	NS	NS	NS	NS	<mrl< td=""><td>&lt;0.020</td><td>NS</td><td>0.00450</td><td>0.000861</td><td>ND</td><td>NS</td><td>ND</td><td>SW8021b</td><td>1.0</td></mrl<>	<0.020	NS	0.00450	0.000861	ND	NS	ND	SW8021b	1.0
	Ethylbenzene	<mrl< td=""><td>NS</td><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>0.00236</td><td>&lt;0.020</td><td>NS</td><td>ND</td><td>&lt; 0.0005</td><td>ND</td><td>NS</td><td>ND</td><td>SW8021b</td><td>0.7</td></mrl<></td></mrl<></td></mrl<></td></mrl<></td></mrl<></td></mrl<>	NS	<mrl< td=""><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>0.00236</td><td>&lt;0.020</td><td>NS</td><td>ND</td><td>&lt; 0.0005</td><td>ND</td><td>NS</td><td>ND</td><td>SW8021b</td><td>0.7</td></mrl<></td></mrl<></td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>0.00236</td><td>&lt;0.020</td><td>NS</td><td>ND</td><td>&lt; 0.0005</td><td>ND</td><td>NS</td><td>ND</td><td>SW8021b</td><td>0.7</td></mrl<></td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>0.00236</td><td>&lt;0.020</td><td>NS</td><td>ND</td><td>&lt; 0.0005</td><td>ND</td><td>NS</td><td>ND</td><td>SW8021b</td><td>0.7</td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>0.00236</td><td>&lt;0.020</td><td>NS</td><td>ND</td><td>&lt; 0.0005</td><td>ND</td><td>NS</td><td>ND</td><td>SW8021b</td><td>0.7</td></mrl<></td></mrl<>	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>0.00236</td><td>&lt;0.020</td><td>NS</td><td>ND</td><td>&lt; 0.0005</td><td>ND</td><td>NS</td><td>ND</td><td>SW8021b</td><td>0.7</td></mrl<>	NS	NS	NS	NS	0.00236	<0.020	NS	ND	< 0.0005	ND	NS	ND	SW8021b	0.7
	Total Xylenes	<mrl< td=""><td>NS</td><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>0.00586</td><td>&lt;0.020</td><td>NS</td><td>0.02128</td><td>0.00204</td><td>ND</td><td>NS</td><td>0.0121</td><td>SW8021b</td><td>10.0</td></mrl<></td></mrl<></td></mrl<></td></mrl<></td></mrl<></td></mrl<>	NS	<mrl< td=""><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>0.00586</td><td>&lt;0.020</td><td>NS</td><td>0.02128</td><td>0.00204</td><td>ND</td><td>NS</td><td>0.0121</td><td>SW8021b</td><td>10.0</td></mrl<></td></mrl<></td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>0.00586</td><td>&lt;0.020</td><td>NS</td><td>0.02128</td><td>0.00204</td><td>ND</td><td>NS</td><td>0.0121</td><td>SW8021b</td><td>10.0</td></mrl<></td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>0.00586</td><td>&lt;0.020</td><td>NS</td><td>0.02128</td><td>0.00204</td><td>ND</td><td>NS</td><td>0.0121</td><td>SW8021b</td><td>10.0</td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>0.00586</td><td>&lt;0.020</td><td>NS</td><td>0.02128</td><td>0.00204</td><td>ND</td><td>NS</td><td>0.0121</td><td>SW8021b</td><td>10.0</td></mrl<></td></mrl<>	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>0.00586</td><td>&lt;0.020</td><td>NS</td><td>0.02128</td><td>0.00204</td><td>ND</td><td>NS</td><td>0.0121</td><td>SW8021b</td><td>10.0</td></mrl<>	NS	NS	NS	NS	0.00586	<0.020	NS	0.02128	0.00204	ND	NS	0.0121	SW8021b	10.0
GRO – Ge	soline Range Organics	DRO -	Diesel Ra	nge Organi	ics N	IS = Not St	ampled		)etected	NA = Not	Analyzed											
<mrl =="" td="" v<=""><td>alue less than Method Rei</td><td>porting Lin</td><td>nit.</td><td>mg/L = m</td><td>iligrams pe</td><td>r Liter</td><td>VOCs = Vo</td><td>olatile Orga</td><td>nic Compur</td><td>Ids</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></mrl>	alue less than Method Rei	porting Lin	nit.	mg/L = m	iligrams pe	r Liter	VOCs = Vo	olatile Orga	nic Compur	Ids												

**BOLD** = Value exceeds ADEC cleanup threshold. <sup>1</sup> Groundwater cleanup thresholds based on 18AAC 75.345 Table C.

#### TABLE 3 4748 OLD SEWARD HIGHWAY ANCHORAGE, ALASKA HISTORICAL GROUNDWATER SAMPLING ANALYTICAL RESULTS

Date Collegand:     Date Colle																							ADEC Method Two
Net No.     Parameter     Org.1     Org.2		Date Collected:	Jan-95	Jul-95	Mar-96	Dec-96	Nov-99	Aug-00	Nov-00	Jun-02	Nov-02	Jul-03	Jan-04	Jun-05	Aug-05	Mar-06	Sept-06	Oct-07	Sep-12	Jun-13	Apr-14	Analytical	Groundwater Cleanup
Boke     ORD     No	Well No.	Parameter	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	Method	Level (mg/L) <sup>1</sup>
Bit     NB	B6VE	GRO	20.7	23	13.5	18.6	24	42.1	25.9	15	NS	NS	NS	50.700	57.900	27.400	40.600	54.600	8.290	25.8	22.7	AK101	1.3
BRO     NS		DRO	NS	NS	NS	2.52	NS	NS	NS	1.6	NS	NS	NS	20.1	20.100	90.0	10.80	15.6	4.690	8.80	5.57	AK102	1.5
Bindback     Bindback     Tab     5.1     1.34     2.20     1.75     3.42     2.5     1.96     NS     NS <t< td=""><td></td><td>RRO</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>9.630</td><td>1.93</td><td>2.01</td><td>1.02</td><td>1.430</td><td>1.21</td><td>1.28</td><td>AK103</td><td>1.1</td></t<>		RRO	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	9.630	1.93	2.01	1.02	1.430	1.21	1.28	AK103	1.1
Totues     Site     NS     <		Benzene	1.53	3.11	1.34	2.29	1.75	3.82	2.5	1.69	NS	NS	NS	4.540	7.660	2.020	0.0939	3.880	1.060	2.750	1.730	SW8021b	0.005
Einsteame Tool Network     NS     NS<		Toluene	3.74	NS	2.21	4	3.12	4.48	3.16	1.9	NS	NS	NS	9.980	12.500	5.660	9.450	9.190	1.430	4.310	3.870	SW8021b	1.0
Taxit Methem     1.51     NS		Ethylbenzene	NS	NS	NS	NS	NS	NS	NS	0.231	NS	NS	NS	1.440	1.090	1.070	0.555	1.100	0.122	0.721	0.734	SW8021b	0.7
bW/06     BKO     A/6     94/6     94/6     NS		Total Xylenes	3.51	NS	2.2	2.3	2.9	3.36	2.9	1.5	NS	NS	NS	7.220	8.810	5.240	6.730	5.950	1.139	3.660	3.473	SW8021b	10.0
DRO     NS	MW-08	GRO	3.45	3.92	9.89	NS	1.8	1.2	5.3	9.5	NS	0.8	NS	2.070	4.220	NS	0.577	4.280	0.79	NS	NS	AK101	1.3
BRO     NS     NS     NS     NS     A0210     NS     A0230     NS     A0200     NS     NS     A0200     NS     NS     A0200     NS     A0200     NS     NS <th< td=""><td></td><td>DRO</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>14.4</td><td>2.06</td><td><mrl< td=""><td>NS</td><td>0.558</td><td>&lt;0.306</td><td>NS</td><td>ND</td><td>&lt;0.394</td><td>ND</td><td>NS</td><td>NS</td><td>AK102</td><td>1.5</td></mrl<></td></th<>		DRO	NS	NS	NS	NS	NS	NS	NS	14.4	2.06	<mrl< td=""><td>NS</td><td>0.558</td><td>&lt;0.306</td><td>NS</td><td>ND</td><td>&lt;0.394</td><td>ND</td><td>NS</td><td>NS</td><td>AK102</td><td>1.5</td></mrl<>	NS	0.558	<0.306	NS	ND	<0.394	ND	NS	NS	AK102	1.5
Bernarding     1.51     2.49     4.91     NS     0.69     0.231     3.6     NS     0.0005     NS     0.165     1.450     0.235     NS     NS     NS     0.005       Entylemersen     0.001     NS     0.11     -4MRL     -4MRL     -4MRL     -4MRL     -4MRL     NS     0.005     NS     0.0025     ND     NS     0.005     0.0027     ND     NS     NS     NS     NS     SW90201b     1.0       MW-09     GRO     -4MRL     -4MRL     NS     NS     NS     NS     0.0057     ND     NS     4.0017     0.0258     0.0027     ND     NS		RRO	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.510	NS	ND	<0.394	0.506	NS	NS	AK103	1.1
Tolenne     BURDZY     NS     NS     NS     NS     NS     OUND2     NS		Benzene	1.51	2.49	4.91	NS	0.69	0.5	2.31	3.6	NS	0.33	NS	1.090	2.180	NS	0.165	1.450	0.355	NS	NS	SW8021b	0.005
Ellydborszene     0.004     NS     0.1     d.kR.     d.kR.     d.kR.     d.kR.     d.kR.     d.kR.     d.kR.     d.kR.     NS     MML     MS     MM		Toluene	0.0027	NS	NS	NS	NS	NS	NS	0.016	NS	0.0008	NS	0.00285	<0.020	NS	0.0452	<0.025	ND	NS	NS	SW8021b	1.0
Tutal Xylames     0.007     NS     0.22     4MRL     4MRL     4MRL     NS     MMRL     NS     0.017     ND     NS     0.027     ND     NS     SW821b     1.0       MW-09     GRO     -dMRL     NS     NS     NS     MS     NS     NS     NS     NS     NS     AV(11)     1.3       DRO     NS     AV(11)     1.3       Drone     -4MRL     NS		Ethylbenzene	0.004	NS	0.1	<mrl< td=""><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>0.021</td><td>NS</td><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>&lt;0.020</td><td>NS</td><td>0.00415</td><td>&lt;0.025</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>0.7</td></mrl<></td></mrl<></td></mrl<></td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>0.021</td><td>NS</td><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>&lt;0.020</td><td>NS</td><td>0.00415</td><td>&lt;0.025</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>0.7</td></mrl<></td></mrl<></td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td><mrl< td=""><td>0.021</td><td>NS</td><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>&lt;0.020</td><td>NS</td><td>0.00415</td><td>&lt;0.025</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>0.7</td></mrl<></td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td>0.021</td><td>NS</td><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>&lt;0.020</td><td>NS</td><td>0.00415</td><td>&lt;0.025</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>0.7</td></mrl<></td></mrl<></td></mrl<>	0.021	NS	<mrl< td=""><td>NS</td><td><mrl< td=""><td>&lt;0.020</td><td>NS</td><td>0.00415</td><td>&lt;0.025</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>0.7</td></mrl<></td></mrl<>	NS	<mrl< td=""><td>&lt;0.020</td><td>NS</td><td>0.00415</td><td>&lt;0.025</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>0.7</td></mrl<>	<0.020	NS	0.00415	<0.025	ND	NS	NS	SW8021b	0.7
MW-02   GRO   -MRIL   NS   NS   NS   A0000   NS   NS   -0.000   NS   NS   NS   NS   -0.000   NS   N		Total Xylenes	0.007	NS	0.23	<mrl< td=""><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>0.34</td><td>NS</td><td><mrl< td=""><td>NS</td><td>0.0147</td><td>0.0256</td><td>NS</td><td>0.0539</td><td>&lt;0.075</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>10.0</td></mrl<></td></mrl<></td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>0.34</td><td>NS</td><td><mrl< td=""><td>NS</td><td>0.0147</td><td>0.0256</td><td>NS</td><td>0.0539</td><td>&lt;0.075</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>10.0</td></mrl<></td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td><mrl< td=""><td>0.34</td><td>NS</td><td><mrl< td=""><td>NS</td><td>0.0147</td><td>0.0256</td><td>NS</td><td>0.0539</td><td>&lt;0.075</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>10.0</td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td>0.34</td><td>NS</td><td><mrl< td=""><td>NS</td><td>0.0147</td><td>0.0256</td><td>NS</td><td>0.0539</td><td>&lt;0.075</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>10.0</td></mrl<></td></mrl<>	0.34	NS	<mrl< td=""><td>NS</td><td>0.0147</td><td>0.0256</td><td>NS</td><td>0.0539</td><td>&lt;0.075</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>10.0</td></mrl<>	NS	0.0147	0.0256	NS	0.0539	<0.075	ND	NS	NS	SW8021b	10.0
DRO     NS	MW-09	GRO	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.090</td><td>NS</td><td>NS</td><td>&lt;0.050</td><td>ND</td><td>NS</td><td>NS</td><td>AK101</td><td>1.3</td></mrl<></td></mrl<></td></mrl<>	NS	NS	NS	NS	<mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.090</td><td>NS</td><td>NS</td><td>&lt;0.050</td><td>ND</td><td>NS</td><td>NS</td><td>AK101</td><td>1.3</td></mrl<></td></mrl<>	NS	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.090</td><td>NS</td><td>NS</td><td>&lt;0.050</td><td>ND</td><td>NS</td><td>NS</td><td>AK101</td><td>1.3</td></mrl<>	NS	NS	NS	NS	<0.090	NS	NS	<0.050	ND	NS	NS	AK101	1.3
RRO     MS     NS     N		DRO	NS	NS	NS	NS	NS	NS	NS	0.44	NS	NS	NS	NS	0.798	NS	NS	<0.407	ND	NS	NS	AK102	1.5
Benzene     -MRL     NS     NS     -MRL     NS     -MRL     NS     -MRL     NS     NS     NS     NS     -0.0005     ND     NS     NS     Stresson       Total Systems     -MRL     NS		RRO	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.23	NS	NS	<0.407	ND	NS	NS	AK103	1.1
Totuone		Benzene	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.0005</td><td>NS</td><td>NS</td><td>&lt;0.0005</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>0.005</td></mrl<></td></mrl<></td></mrl<>	NS	NS	NS	NS	<mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.0005</td><td>NS</td><td>NS</td><td>&lt;0.0005</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>0.005</td></mrl<></td></mrl<>	NS	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.0005</td><td>NS</td><td>NS</td><td>&lt;0.0005</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>0.005</td></mrl<>	NS	NS	NS	NS	<0.0005	NS	NS	<0.0005	ND	NS	NS	SW8021b	0.005
Ethylberzene     eMRL     NS     NS     MR     NS     eMRL     NS     eMRL     NS     eMRL     NS     NS     NS     ND     NS     ND     NS     ND     NS     ND     NS     ND     NS     ND     NS <td></td> <td>Toluene</td> <td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.002</td><td>NS</td><td>NS</td><td>&lt;0.0005</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>1.0</td></mrl<></td></mrl<></td></mrl<></td>		Toluene	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.002</td><td>NS</td><td>NS</td><td>&lt;0.0005</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>1.0</td></mrl<></td></mrl<></td></mrl<>	NS	NS	NS	NS	<mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.002</td><td>NS</td><td>NS</td><td>&lt;0.0005</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>1.0</td></mrl<></td></mrl<>	NS	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.002</td><td>NS</td><td>NS</td><td>&lt;0.0005</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>1.0</td></mrl<>	NS	NS	NS	NS	<0.002	NS	NS	<0.0005	ND	NS	NS	SW8021b	1.0
Total Xylenes     cMRL     NS     NS     MRL     NS     NS     NS     NS     0.002     NS     NS     c.00015     ND     NS     NS     SW0021b     10.0       MW-10     GRO     NS		Ethylbenzene	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.002</td><td>NS</td><td>NS</td><td>&lt;0.0005</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>0.7</td></mrl<></td></mrl<></td></mrl<>	NS	NS	NS	NS	<mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.002</td><td>NS</td><td>NS</td><td>&lt;0.0005</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>0.7</td></mrl<></td></mrl<>	NS	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.002</td><td>NS</td><td>NS</td><td>&lt;0.0005</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>0.7</td></mrl<>	NS	NS	NS	NS	<0.002	NS	NS	<0.0005	ND	NS	NS	SW8021b	0.7
MW-10   GRO   NS		Total Xylenes	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.002</td><td>NS</td><td>NS</td><td>&lt;0.0015</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>10.0</td></mrl<></td></mrl<></td></mrl<>	NS	NS	NS	NS	<mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.002</td><td>NS</td><td>NS</td><td>&lt;0.0015</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>10.0</td></mrl<></td></mrl<>	NS	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.002</td><td>NS</td><td>NS</td><td>&lt;0.0015</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>10.0</td></mrl<>	NS	NS	NS	NS	<0.002	NS	NS	<0.0015	ND	NS	NS	SW8021b	10.0
DRO     NS	MW-10	GRO	NS	NS	NS	<mrl< td=""><td>NS</td><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.090</td><td>NS</td><td>NS</td><td>&lt;0.050</td><td>ND</td><td>NS</td><td>NS</td><td>AK101</td><td>1.3</td></mrl<></td></mrl<></td></mrl<></td></mrl<>	NS	<mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.090</td><td>NS</td><td>NS</td><td>&lt;0.050</td><td>ND</td><td>NS</td><td>NS</td><td>AK101</td><td>1.3</td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.090</td><td>NS</td><td>NS</td><td>&lt;0.050</td><td>ND</td><td>NS</td><td>NS</td><td>AK101</td><td>1.3</td></mrl<></td></mrl<>	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt;0.090</td><td>NS</td><td>NS</td><td>&lt;0.050</td><td>ND</td><td>NS</td><td>NS</td><td>AK101</td><td>1.3</td></mrl<>	NS	NS	NS	NS	<0.090	NS	NS	<0.050	ND	NS	NS	AK101	1.3
RRO     NS		DRO	NS	NS	NS	0.39	NS	NS	NS	0.32	NS	NS	NS	NS	<0.303	NS	NS	<0.391	ND	NS	NS	AK102	1.5
Benzene     NS     NS     NS     AMRL     AMRL     AMRL     AMRL     NS     NS     NS     NS     ND     ND     NS     ND     NS     SW0021b     0.0005       Toluene     NS     NS     NS     AMRL     AMRL     AMRL     AMRL     NS     NS     NS     ND     NS     NS     SW0021b     0.7       Total Xylenes     NS     NS     NS     AMRL     AMRL     AMRL     AMRL     NS     NS     NS     0.002     NS     NS     -0.0005     ND     NS     NS     SW0021b     0.7       Total Xylenes     NS     NS     AMRL     AMRL     NS     NS     NS     -0.002     NS     NS     -0.0005     ND     NS     NS     SW0021b     0.01     1.3       MW-11     DR     NS     NS     NS     NS     NS     NS     NS     NS     0.0233     ND     AK101     1.3       MW-12     GRO     NS     NS		RRO	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<0.505	NS	NS	<0.391	ND	NS	NS	AK103	1.1
Induce     NS     NS     AMRL     AMMRL     AMML     AMRL		Benzene	NS	NS	NS	<mrl< td=""><td>NS</td><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt; 0.0005</td><td>NS</td><td>NS</td><td>&lt;0.0005</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>0.005</td></mrl<></td></mrl<></td></mrl<></td></mrl<>	NS	<mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt; 0.0005</td><td>NS</td><td>NS</td><td>&lt;0.0005</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>0.005</td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt; 0.0005</td><td>NS</td><td>NS</td><td>&lt;0.0005</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>0.005</td></mrl<></td></mrl<>	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>&lt; 0.0005</td><td>NS</td><td>NS</td><td>&lt;0.0005</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b</td><td>0.005</td></mrl<>	NS	NS	NS	NS	< 0.0005	NS	NS	<0.0005	ND	NS	NS	SW8021b	0.005
Elinyberizerile     NS		I oluene	NS	NS	NS		NS				NS NC	NS	NS	NS	<0.002	NS	NS	<0.0005	ND	NS	NS	SVV8021b	1.0
Inda Ayleties     NS		Ethylbenzene	NS NC	NS NC	NS NS		NS NC				NS NS	NS NC	NS NC	NS NC	<0.002	NS NC	NS NC	<0.0005		NS NS	NS	SVV8021D	0.7
MW-11   GRO   NS   NS   NS   NS   NS   NS   NS   ARL   NS   -MRL   -MRL   -MRL   -MRL   -MRL   -0.050   ND   NS   ND   AK101   1.3     DRO   NS		Total Xylenes	NS	112	115	<ivirl< td=""><td>112</td><td></td><td><inirl< td=""><td><ivirl< td=""><td>112</td><td>N5</td><td>INS</td><td>INS</td><td>&lt;0.002</td><td>112</td><td>NS</td><td>&lt;0.0005</td><td>ND</td><td>NS</td><td>N5</td><td>50080210</td><td>10.0</td></ivirl<></td></inirl<></td></ivirl<>	112		<inirl< td=""><td><ivirl< td=""><td>112</td><td>N5</td><td>INS</td><td>INS</td><td>&lt;0.002</td><td>112</td><td>NS</td><td>&lt;0.0005</td><td>ND</td><td>NS</td><td>N5</td><td>50080210</td><td>10.0</td></ivirl<></td></inirl<>	<ivirl< td=""><td>112</td><td>N5</td><td>INS</td><td>INS</td><td>&lt;0.002</td><td>112</td><td>NS</td><td>&lt;0.0005</td><td>ND</td><td>NS</td><td>N5</td><td>50080210</td><td>10.0</td></ivirl<>	112	N5	INS	INS	<0.002	112	NS	<0.0005	ND	NS	N5	50080210	10.0
DRO     NS	MW-11	GRO	NS	NS	NS	NS	NS	NS	NS	<mrl< td=""><td>NS</td><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>&lt; 0.090</td><td>0.233</td><td>ND</td><td>&lt; 0.050</td><td>ND</td><td>NS</td><td>ND</td><td>AK101</td><td>1.3</td></mrl<></td></mrl<></td></mrl<></td></mrl<>	NS	<mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>&lt; 0.090</td><td>0.233</td><td>ND</td><td>&lt; 0.050</td><td>ND</td><td>NS</td><td>ND</td><td>AK101</td><td>1.3</td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td><mrl< td=""><td>&lt; 0.090</td><td>0.233</td><td>ND</td><td>&lt; 0.050</td><td>ND</td><td>NS</td><td>ND</td><td>AK101</td><td>1.3</td></mrl<></td></mrl<>	<mrl< td=""><td>&lt; 0.090</td><td>0.233</td><td>ND</td><td>&lt; 0.050</td><td>ND</td><td>NS</td><td>ND</td><td>AK101</td><td>1.3</td></mrl<>	< 0.090	0.233	ND	< 0.050	ND	NS	ND	AK101	1.3
RRO   NS   NS   NS   NS   NS   NS   NS   NS   NS   0.945   0.945   0.945   0.001   NS   0.723   AR103   1.1     Benzene   NS   0.00586   0.00280   0.0142   0.00576   ND   NS   ND   SW8021b   0.005     Toluene   NS   NS   NS   NS   NS   NS   MRL   NRL <mrl< td="">   &lt;0.002</mrl<>		DRO	NS	NS	NS	NS	NS	NS	NS	3.82	NS	1.72		1.16	2.01	0.650	0.481	0.759		NS		AK102	1.5
Benzene     NS     NS     NS     NS     NS     AMRL     NS     CMUL     Columate     Columate     ND     ND     ND     SW8021b     0.003       Toluene     NS		RRO	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS 0.004	NS	NS	3.45	0.945	0.535	1.79	0.601	NS	0.723	AK103	1.1
Inductive   NS		Benzene	NS NO	NS NC	NS NO	NS NO	NS NO	NS NC	NS NC		NS NO	0.004		0.000899	0.00586	0.02280	0.0142	0.00576		NS	ND	SVV8021D	0.005
Ethyloerizerie   NS   NS <td></td> <td>I Oluene</td> <td>NS NC</td> <td>NS NC</td> <td>NS NC</td> <td>NS NC</td> <td>NS NC</td> <td>NS NC</td> <td>NS NC</td> <td>0.0027</td> <td>NS NC</td> <td></td> <td></td> <td></td> <td>&lt;0.002</td> <td>0.0601</td> <td></td> <td>&lt;0.0005</td> <td></td> <td>NS NC</td> <td>ND</td> <td>SVV8021D</td> <td>1.0</td>		I Oluene	NS NC	NS NC	NS NC	NS NC	NS NC	NS NC	NS NC	0.0027	NS NC				<0.002	0.0601		<0.0005		NS NC	ND	SVV8021D	1.0
MW-12     GRO     NS     NS     NS     NS     NS     NS     AMRL     NS     AMRL     COUL     COUL     COULS     ND     NS     ND     NS     ND     NS     ND		Ethylbenzene	NS NS	NS NS	NS	NS NS	NS NS		NG		NS NS				<0.002	0.00059		<0.0005		NS NS		SVV8021D	0.7
MW-12   GRO   NS   NS   NS   NS   NS   MRL   NS   0.53 <mrl< th="">   0.635   1.170   0.262   0.497   0.035   NS   NS   ND   AK101   1.3     DRO   NS   NS   NS   NS   NS   NS   NS   0.44   NS   0.53   <mrl< th="">   0.497   0.035   NS   NS   NS   ND   AK101   1.3     DRO   NS   NS   NS   NS   NS   NS   0.44   NS   1.53   <mrl< th="">   0.498   0.756   0.415   0.588   0.714   NS   NS   NS   0.611   AK102   1.5     RRO   NS   0.44   NS   0.437   0.00218   0.247   0.398   0.101   0.205   0.142   NS   NS   NS   0.005   NS   NS   NS   0.005   NS   NS   NS   0.005   NS   NS   NS   0.005   NS   NS   NS</mrl<></mrl<></mrl<>		Total Ayleries	NO	113	113	113	113	INO.	113		113				<0.002	0.03412	ND	<0.0015	ND	NO	ND	3000210	10.0
DRO   NS   NS <t< td=""><td>MW-12</td><td>GRO</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>NS</td><td>0.53</td><td><mrl< td=""><td>0.635</td><td>1.170</td><td>0.262</td><td>0.497</td><td>0.035</td><td>NS</td><td>NS</td><td>ND</td><td>AK101</td><td>1.3</td></mrl<></td></mrl<></td></t<>	MW-12	GRO	NS	NS	NS	NS	NS	NS	NS	<mrl< td=""><td>NS</td><td>0.53</td><td><mrl< td=""><td>0.635</td><td>1.170</td><td>0.262</td><td>0.497</td><td>0.035</td><td>NS</td><td>NS</td><td>ND</td><td>AK101</td><td>1.3</td></mrl<></td></mrl<>	NS	0.53	<mrl< td=""><td>0.635</td><td>1.170</td><td>0.262</td><td>0.497</td><td>0.035</td><td>NS</td><td>NS</td><td>ND</td><td>AK101</td><td>1.3</td></mrl<>	0.635	1.170	0.262	0.497	0.035	NS	NS	ND	AK101	1.3
RRO   NS   NS <t< td=""><td></td><td>DRO</td><td>NS</td><td>NS</td><td>NS</td><td>0.44</td><td>NS</td><td>NS</td><td>NS</td><td>0.44</td><td>NS</td><td>1.53</td><td></td><td>0.498</td><td>0.756</td><td>0.415</td><td>0.588</td><td>0.714</td><td>NS</td><td>NS</td><td>0.611</td><td>AK102</td><td>1.5</td></t<>		DRO	NS	NS	NS	0.44	NS	NS	NS	0.44	NS	1.53		0.498	0.756	0.415	0.588	0.714	NS	NS	0.611	AK102	1.5
Benzene     NS     NS <t< td=""><td></td><td>RRO</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td></td><td>NS</td><td>2.730</td><td>1.77</td><td>0.536</td><td>1.060</td><td>NS</td><td>NS</td><td>1.22</td><td>AK103</td><td>1.1</td></t<>		RRO	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		NS	2.730	1.77	0.536	1.060	NS	NS	1.22	AK103	1.1
Induced   NS		Benzene	NS	NS	NS	NS	NS	NS	NS	<mrl< td=""><td>NS</td><td>0.237</td><td>0.00218</td><td>0.247</td><td>0.398</td><td>0.101</td><td>0.205</td><td>0.142</td><td>NS</td><td>NS</td><td>0.0011</td><td>SW8021b</td><td>0.005</td></mrl<>	NS	0.237	0.00218	0.247	0.398	0.101	0.205	0.142	NS	NS	0.0011	SW8021b	0.005
Ethylpenzene   NS		Ioluene	NS	NS	NS	NS	NS	NS	NS	<mrl< td=""><td>NS</td><td><mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>&lt; 0.002</td><td>0.0322</td><td>0.0176</td><td>&lt;0.0005</td><td>NS</td><td>NS</td><td>ND</td><td>SW8021b</td><td>1.0</td></mrl<></td></mrl<></td></mrl<></td></mrl<>	NS	<mrl< td=""><td><mrl< td=""><td><mrl< td=""><td>&lt; 0.002</td><td>0.0322</td><td>0.0176</td><td>&lt;0.0005</td><td>NS</td><td>NS</td><td>ND</td><td>SW8021b</td><td>1.0</td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td><mrl< td=""><td>&lt; 0.002</td><td>0.0322</td><td>0.0176</td><td>&lt;0.0005</td><td>NS</td><td>NS</td><td>ND</td><td>SW8021b</td><td>1.0</td></mrl<></td></mrl<>	<mrl< td=""><td>&lt; 0.002</td><td>0.0322</td><td>0.0176</td><td>&lt;0.0005</td><td>NS</td><td>NS</td><td>ND</td><td>SW8021b</td><td>1.0</td></mrl<>	< 0.002	0.0322	0.0176	<0.0005	NS	NS	ND	SW8021b	1.0
$\frac{1}{1} Croundwater cleanup threshold} = Value avecade ADEC alconup threshold = Value ADEC alconup threshold$		Ethylbenzene	NS NC	NS	NS	NS NC	NS	NS	NS NC		NS				< 0.002	0.00407	0.00260	<0.0005	NS	NS NC		SW8021b	U./ 10.0
GRU = Gasoline Range Organics DRU = Diesel Range Organics NS = Not Sampled ND = Not Detected NA = Not Analyzed < <u>MRL = Value less than Method Reporting Limit.</u> mg/L = miligrams per Liter VOCs = Volatile Organic Compunds <b>POLD</b> = Value avecade ADEC cleanup threshold 1 Groundwater cleanup thresholds based on 18AAC 75 345 Table C	0.00		6VI DDC	6/1	6VI	6/1	GVI	GVI	GVI		GVI		<ivikl< td=""><td><ivikl< td=""><td>&lt;0.002</td><td>0.02015</td><td>0.01967</td><td>&lt;0.0015</td><td>611</td><td>6N</td><td>ND</td><td>300021D</td><td>10.0</td></ivikl<></td></ivikl<>	<ivikl< td=""><td>&lt;0.002</td><td>0.02015</td><td>0.01967</td><td>&lt;0.0015</td><td>611</td><td>6N</td><td>ND</td><td>300021D</td><td>10.0</td></ivikl<>	<0.002	0.02015	0.01967	<0.0015	611	6N	ND	300021D	10.0
<MRL = Value less than Method Reporting Limit. mg/L = miligrams per Liter VOCs = Volatile Organic Compunds	GRO = Gaso	Ine Range Organics	DRO =	Diesel Ra	nge Organi	cs N	S = Not Sa	ampled	ND = Not [	Jetected	NA = Not	Analyzed											
	<mrl =="" td="" valu<=""><td>e less than Method Re</td><td></td><td>llt.</td><td>mg/L = m</td><td>iligrams pe</td><td>r Liter</td><td>VOUS = Vo</td><td>olatile Orga</td><td>inic Compun</td><td>0S 18440 75</td><td>215 Tabla C</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></mrl>	e less than Method Re		llt.	mg/L = m	iligrams pe	r Liter	VOUS = Vo	olatile Orga	inic Compun	0S 18440 75	215 Tabla C											

#### TABLE 3 4748 OLD SEWARD HIGHWAY ANCHORAGE, ALASKA HISTORICAL GROUNDWATER SAMPLING ANALYTICAL RESULTS

																						ADEC Method Two
	Date Collected:	Jan-95	Jul-95	Mar-96	Dec-96	Nov-99	Aug-00	Nov-00	Jun-02	Nov-02	Jul-03	Jan-04	Jun-05	Aug-05	Mar-06	Sept-06	Oct-07	Sep-12	Jun-13		Analytical	Groundwater Cleanup
Well No.	Parameter	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)		Method	Level (mg/L) <sup>1</sup>
MW-13	GRO	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	217	236	159	AK101	1.3
	DRO	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	20.1	31.1	22.3	AK102	1.5
	RRO	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.75	1.90	2.72	AK103	1.1
	Benzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	19.6	18.500	10.600	SW8021b	0.005
	Toluene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	63.9	58.300	42.200	SW8021b	1.0
	Ethylbenzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.29	4.900	5.600	SW8021b	0.7
	Total Xylenes	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	26.7	26.900	28.510	SW8021b	10.0
	1,2,4-Trimethylbenzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.140	NS	SW8260B	
	n-Propylbenzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.399	NS	SW8260B	
MW-14	GRO	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	118	140	113	AK101	1.3
	DRO	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	58.6	56.4	52.3	AK102	1.5
	RRO	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	8.88	9.52	10.9	AK103	1.1
	Benzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	19.6	17.300	19.100	SW8021b	0.005
	Toluene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	26.1	25.800	26.200	SW8021b	1.0
	Ethylbenzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.51	2.240	2.070	SW8021b	0.7
	Total Xylenes	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	14.78	15.320	15.240	SW8021b	10.0
MW-15	GRO	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	86.100	NS	NS	56.500	1.33	2.25	7.98	AK101	1.3
	DRO	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	14.6	NS	NS	4.96	1.03	2.01	1.83	AK102	1.5
	RRO	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.19	NS	NS	0.439	1.010	1.19	2.25	AK103	1.1
	Benzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	16.900	NS	NS	6.690	0.0467	0.517	1.790	SW8021b	0.005
	Toluene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	19.800	NS	NS	8.630	0.0514	0.213	0.492	SW8021b	1.0
	Ethylbenzene	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.030	NS	NS	1.270	0.0229	0.0567	0.1130	SW8021b	0.7
	Total Xylenes	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10.010	NS	NS	6.810	0.1119	0.2171	0.3670	SW8021b	10.0
Tap Well	GRO	NS	NS	<mrl< td=""><td>NS</td><td><mrl< td=""><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>0.305</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>AK101</td><td>1.3</td></mrl<></td></mrl<></td></mrl<></td></mrl<></td></mrl<>	NS	<mrl< td=""><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>0.305</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>AK101</td><td>1.3</td></mrl<></td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>0.305</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>AK101</td><td>1.3</td></mrl<></td></mrl<></td></mrl<>	NS	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>0.305</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>AK101</td><td>1.3</td></mrl<></td></mrl<>	NS	NS	NS	<mrl< td=""><td>NS</td><td>NS</td><td>0.305</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>AK101</td><td>1.3</td></mrl<>	NS	NS	0.305	NS	NS	NS	NS	AK101	1.3
(facility	DRO	NS	NS	NS	NS	NS	NS	NS	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>AK102</td><td>1.5</td></mrl<></td></mrl<>	NS	NS	NS	<mrl< td=""><td>NS</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>NS</td><td>NS</td><td>AK102</td><td>1.5</td></mrl<>	NS	NS	ND	NS	NS	NS	NS	AK102	1.5
well)	RRO	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	NS	NS	ND	NS	NS	NS	NS	AK103	1.1
	Benzene	NS	NS	<mrl< td=""><td>NS</td><td><mrl< td=""><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>0.0108</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b<sup>2</sup></td><td>0.005</td></mrl<></td></mrl<></td></mrl<></td></mrl<>	NS	<mrl< td=""><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>0.0108</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b<sup>2</sup></td><td>0.005</td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>0.0108</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b<sup>2</sup></td><td>0.005</td></mrl<></td></mrl<>	NS	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>0.0108</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b<sup>2</sup></td><td>0.005</td></mrl<>	NS	NS	NS	ND	NS	NS	0.0108	NS	ND	NS	NS	SW8021b <sup>2</sup>	0.005
	Toluene	NS	NS	<mrl< td=""><td>NS</td><td><mrl< td=""><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>0.0495</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b<sup>2</sup></td><td>1.0</td></mrl<></td></mrl<></td></mrl<></td></mrl<>	NS	<mrl< td=""><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>0.0495</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b<sup>2</sup></td><td>1.0</td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>0.0495</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b<sup>2</sup></td><td>1.0</td></mrl<></td></mrl<>	NS	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>0.0495</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b<sup>2</sup></td><td>1.0</td></mrl<>	NS	NS	NS	ND	NS	NS	0.0495	NS	ND	NS	NS	SW8021b <sup>2</sup>	1.0
	Ethylbenzene	NS	NS	<mrl< td=""><td>NS</td><td><mrl< td=""><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>0.00947</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b<sup>2</sup></td><td>0.7</td></mrl<></td></mrl<></td></mrl<></td></mrl<>	NS	<mrl< td=""><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>0.00947</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b<sup>2</sup></td><td>0.7</td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>0.00947</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b<sup>2</sup></td><td>0.7</td></mrl<></td></mrl<>	NS	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>0.00947</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b<sup>2</sup></td><td>0.7</td></mrl<>	NS	NS	NS	ND	NS	NS	0.00947	NS	ND	NS	NS	SW8021b <sup>2</sup>	0.7
	Total Xylenes	NS	NS	<mrl< td=""><td>NS</td><td><mrl< td=""><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>0.0613</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b<sup>2</sup></td><td>10.0</td></mrl<></td></mrl<></td></mrl<></td></mrl<>	NS	<mrl< td=""><td><mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>0.0613</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b<sup>2</sup></td><td>10.0</td></mrl<></td></mrl<></td></mrl<>	<mrl< td=""><td>NS</td><td><mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>0.0613</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b<sup>2</sup></td><td>10.0</td></mrl<></td></mrl<>	NS	<mrl< td=""><td>NS</td><td>NS</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>0.0613</td><td>NS</td><td>ND</td><td>NS</td><td>NS</td><td>SW8021b<sup>2</sup></td><td>10.0</td></mrl<>	NS	NS	NS	ND	NS	NS	0.0613	NS	ND	NS	NS	SW8021b <sup>2</sup>	10.0
	VOCs	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	NS	NS	NA	NS	ND	NS	NS	EPA 524.2	varies
GRO = Ga <mrl =="" td="" v<=""><td>soline Range Organics alue less than Method Rep</td><td>DRO =</td><td>Diesel Ra nit.</td><td>nge Organi mg/L = m</td><td>ics N iiligrams pe</td><td>IS = Not S er Liter</td><td>ampled VOCs = Vo</td><td>ND = Not [ olatile Orga</td><td>Detected nic Compur</td><td>NA = Not . nds</td><td>Analyzed</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></mrl>	soline Range Organics alue less than Method Rep	DRO =	Diesel Ra nit.	nge Organi mg/L = m	ics N iiligrams pe	IS = Not S er Liter	ampled VOCs = Vo	ND = Not [ olatile Orga	Detected nic Compur	NA = Not . nds	Analyzed											

**BOLD** = Value exceeds ADEC cleanup threshold. <sup>1</sup> Groundwater cleanup thresholds based on 18AAC 75.345 Table C.

APPENDIX A FIELD NOTES

24 4/28/14 Daptiellus churden 114°E	25
D8:30 BGES on site to set in and collect	Track well TTU TOW A Loten
water samples	15:40 Marin 8:83 21.93 Good condition
09:15 TRAFFIC CONTROL ON SITE to SET UP	16:21 MW17 6,28' 13.49' NO PVC cap in place.
barrier around MW 11 and MW 12.	16:07 MW3 6.25 9.71 PVC cap broken may need
09:30 Set up on MW-11, Report: sampled:	13:56 MW5 8.00' 13.08' NO PUC cap in place
deconned, MW-11-0478 at 11:712	14:16 BG/VE 7.56 14.04 no bolts on Lid. No PVC cap.
12:15 Completed MIN-11 Moved to MIN-12.	- MW9 Well submerged in approximately
12:20 Set up on MW-12 August sampled:	16:31 MWB 6.85' 14.88' No botts of bott holes in 11d.
deconned. MW-12-0428 at 13:20.	15:10 MWID 7.44' 14,92 No bolts on sid. (No holer
13:50 Completed MW-12 Moved to MW-5	09:41 MWII 5.79' 13.95' Lid not secure May
14:30 TRAFFIC CONTRO] OFF-site	12:20 MW12 5.60 8.94 Good condition
13:55 Set up on MW-5. Purged; sampled; deconned.	14:59 MW13 7.80' 11.63 Good condition No PVC
MW-5-0428 at 15:30 14:48	14325 MWI4 7.79 13.38 PVC cap slightly broken.
15:30 completed MW-S. moved to MW-1	14:36 mw15 6.14' 10.40 NO DUC cap in place.
15: Set up on MW-1. Purged; sampled; deconned.	
35 MW-1-0428 at 15:58	DTW = Depth to water
17:15 Completed mw-1	TOW = Total Depth of Well
17:30 BGBS off-site	
. A	a Suite
XCer	
X + The internet of the	
Killer of the start in the second sec	

	28 WFUL	Time purge	fine Semple	Bladden Intohe	volvene	poze	1				-		72	-							29
	BEIVE	09:30	11:50	8106'	~1370	150-500 mat														- 12	
	MW-14	12:26	13:07	8.29'	3 gal	350-400ml	1						-								
	MW-16 (dup	licet of mi	w-14) 13.9	50 -	_	- min	20								_						
	MW-15-042	9 14:45	15:30	8.641	3 gel	300 ml/min		-								16					
	MW-2-04	29 16:15	17:05	10.78'	3.5 g.l	250-350 mL	1						1				-				
	Mw-13-041	9 18:10	19:15	8.30'	2.5 gul	200-400	1	_													
					/		1		;		_		_	_							
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26 We	11 Fine	Time sample	Bladder	Volume	Purge Rate	4/29/14 CEFAC	27 - SKIBS, 44
MN	11 10:30	11:20	6,29	4 gais	150 mUmin	08:50 - Arrived on site-	
MW	12 12:45	13:20	6.1'	4 +.5 gal	\$400 mL/min	08:55 - SFET UP ON BG/UE, 2FPLACES	0 36" BLAEDER
MW	5 14:10	14:48	8.5	3 gals	400 mL/min	proved, Scupled, decound	
MW	1 15:58	17:02	9.33'	7 gals	400 mL/min	12:10 completed BG/UE. BGVE.	-0429 @
						12:20 set up on MWH4. proged, su	npled, Deconned
					1	-very difficult smalling due to b	adde Soapy
					/	Appearence - reducing surface de	uzion.
			12.0	/		MW14-0429@ 13:07 and du	plicate
				<pre>/</pre>		14:35 Sample MW +6-0429 (3:50.	•
			1.8			7.35 completed MW-14.	
			(		•	14:12. To moved to mw-15. Set up to.	purge, Semple
						and decon. MW15-042AQ	15-30
		٧, ١	1		3	16:00 completed MW15 moved to	MW-Z.
	Sec.	1251	1.			16:00 setup on Mui 2, panged, 5	inpled,
		41		- 4 - <sup>1</sup>		deamed. difficulty says ling 5	Similar to
	A	1/	-			MW-14.	
	alle			_		18:00 moved to MW-13 projed,	sciplich
	414					decorred. Travele of dead 1	atten,
					-	blodden played up with silty	deaned
	2				1	redeployed - worked mw-13-1	orta @ 19:15.
	/			1		BGF5 tet site @ - 19:40.	
	/						
		_					
					Sec. 14	4	2/17
						There it	
			-				

2.

		v	Vell	Number: <u>MW</u> -	1965
	Time Arrived On Site Date of Depth to Wa	e: ter Measurement: _4	28 1	We ۲	eather Conditions: <u>prhilly clandy</u> . 10mpf wind ne of Depth to Water Measurement:
	Top of Casing Eleva Depth to Water (feet Water Elevation:	tion: below TOC):		At apphalt grade 8.83'	Type of Sampling Equipment: MP 50 Controller, QEO Bladdor Punp - 1.75"
	Total Depth of Well ( Depth to Water (feet Water Column (feet)	feet below TOC): below TOC): :		2 .93' 3.83'  3.1'	
	Volume of well (gals Bladder pro-	p placed at a	P. 33	2.13'	=0.1632 X Water Column (For 2-inch well) =0.6528 X Water Column (For 4-inch well) =1.4688 X Water Column (For 6-inch well)
	Time of Sampling: Volume purged	17:02 7 gellons		PURGE A MININ	NUM OF THREE WELL VOLUMES ~ 6. 4 gillons
16:06	pH Conductivity ORP Temperature	6.94 1227 -152.3 6.5°C		pH Conductivity ORP Temperature	fotal volume atter 
16:13	pH Conductivity ORP Temperature	6.70 1170 -122.1 7.5°C		pH Conductivity ORP Temperature	punge rate = deprox 403 mL
16:21	pH Conductivity ORP Temperature	6.78 1156 -128.1 7.4°C		pH Conductivity ORP Temperature	Sample rate= 150 ml/min
16:31	pH Conductivity ORP Temperature	6.78 1125 -112.5 6.7°C		pH Conductivity ORP Temperature	
16:53	pH Conductivity ORP Temperature	6.89 1200 -110.5 6-6 °C		pH Conductivity ORP Temperature	
	pH Conductivity ORP Disolved Oxygen Temperature			pH Conductivity ORP Disolved Oxygen Temperature	
Wat	er Monitoring Log Form (Re	<i>ised 2/12</i> )	Pa	age 1 of	Project Number

#### Well Number: MW - Z

	Time Arrived On Si Date of Depth to W	te: ater Measurement: Ӌไฮฮไ	м І <b>м</b> т	leather Conditions: <u>८६००</u> ime of Depth to Water Measurement: <u>16:२</u>
	Top of Casing Eleven Depth to Water (fee Water Elevation:	ation: et below TOC):	44 asphalt god 6.28'	Mf 50 Controller, QB0 Bladden
	Total Depth of Well Depth to Water (fee Water Column (fee	(feet below TOC): et below TOC): t):	13.49' 6.25' 7.21'	
	Volume of well (gals Bladder prop	s) placed at 6.78.	<u>1.17</u> bulow T6C.	=0.1632 X Water Column (For 2-inch well) =0.6528 X Water Column (For 4-inch well) =1.4688 X Water Column (For 6-inch well)
	Time Purging Bega Time of Sampling: Volume purged	n: 16:15 17:05 3.5 gallene	PURGE A MIN	IMUM OF THREE WELL VOLUMES えろう らうしん
16:22	pH Conductivity ORP Temperature	6-19 760 3.3 5.9° -	pH Conductivity ORP Temperature	purge volume= 3.5 gelles total volume= 4.0 gelle
6.32	pH Conductivity ORP Temperature	6.27 790 - 21.2 5.3° c	pH Conductivity ORP Temperature	purge rate = 250-400
16:43	pH Conductivity ORP Temperature	6.31 738 -44.4 7.9°C	pH Conductivity ORP Temperature	Sample rate= 150ml
14:00	pH Conductivity ORP Temperature	5.97 703 -52.6 5.8°c	pH Conductivity ORP Temperature	punp to 7.78'.
	pH Conductivity ORP Temperature		pH Conductivity ORP Temperature	Now - flow - dropped bidded Any to 10.78 (2) 16:45
	pH Conductivity ORP Disolved Oxygen		pH Conductivity ORP Disolved Oxyge	en
	sampling Vocs ( not in favor difficult scorplan	Very dicticult! Socry for Voc sampling.	[Temperature <u>bubles</u> at sure (one when he	face at sample - surface tension as small at bittele due to
Wa	ater Monitoring Log Form (R	evised 2/12) F	Page 1 of	Project Number

ato

Well Number: MW - 5

	Time Arrived On Site: 13:56 Date of Depth to Water Measurement: 4/2	Weather Conditions: <u>Apprially cloudy</u> , 51°F Time of Depth to Water Measurement: <u>13:56</u>
	Top of Casing Elevation: Depth to Water (feet below TOC): Water Elevation:	At Asonalt grade Type of Sampling Equipment: 8.00' MP50 Controller, QED Bladder Pump 1.75"
	Total Depth of Well (feet below TOC): Depth to Water (feet below TOC): Water Column (feet):	13.08' 8.00' 5.08'
	Volume of well (gals) Bladder pump placed at 8.5 ' Time Purging Began: 14:10 Time of Sampling: 14:18 Volume purged 3 galow	.82 =0.1632 X Water Column (For 2-inch well) =0.6528 X Water Column (For 4-inch well) =1.4688 X Water Column (For 6-inch well) PURGE A MINIMUM OF THREE WELL VOLUMES
14:15	pH <u>6.98</u> Conductivity <del>85</del> 1 ORP <u>-68.1</u> Temperature <u>5.9°</u>	pH Conductivity ORP Temperature Temperature
14:27	pH6-64Conductivity99.8ORP-62.7Temperature5.8°C	pH Conductivity 3.5 gallons ORP Temperature Oldage Rate : Approx Yoom
14:36	pH6.68Conductivity1012ORP-63.8Temperature5.3°C	pH Conductivity sample Rate = 150 mL/ min. ORP Temperature
	pH Conductivity ORP Temperature	pH Conductivity ORP Temperature
۶.	pH Conductivity ORP Temperature	pH Conductivity ORP Temperature
	pH Conductivity ORP Disolved Oxygen Temperature	pH Conductivity ORP Disolved Oxygen Temperature
Wa	Semples collected and recorded	Page 1 of Project Number

Well Number: B6/VE

	Time Arrived On Sit Date of Depth to Wa	e: <u>03:50</u> ater Measurement: <u>4 25 1</u>	. We 1 Tin	eather Conditions: <u>CLFAH SULES</u> ne of Depth to Water Measurement: <u>14-6</u>	
	Top of Casing Eleva Depth to Water (feet Water Elevation:	tion: t below TOC):	AT Asphelt grade 7.56'	Type of Sampling Equipment: <u>MP 50 Controller, QED Bladder Aug</u> 	>
	Total Depth of Well Depth to Water (feet Water Column (feet)	(feet below TOC): t below TOC): ):	14.04' 7-56' 648'		
	Volume of well (gals Blode prop	placed the 3.06	4.23 below TOB. 9.06' 0 11:20	=0.1632 X Water Column (For 2-inch well) =0.6528 X Water Column (For 4-inch well) =1.4688 X Water Column (For 6-inch well)	
	Time Purging Began Time of Sampling: Volume purged	1:09:30 - Dropped to 11:50 - simple 12.5 gal. depth	PURGE A MININ = [0.66"	MUM OF THREE WELL VOLUMES えってgalle	n.J
09:38	pH Conductivity ORP Temperature	(0:32 (077 - 85.2 4.8° c	pH (6 <sup>:34</sup> Conductivity ORP Temperature	6.88 681 proje volume = 500 min -86.6 5.7°c total volume = 13 gal	-
09:45	pH Conductivity ORP Temperature	6.71 592 -120.9 4.2°C	pH 10:45 Conductivity ORP Temperature	6-89 698 -93.8 6100 punge rate = 2 400-500 kL nin	-/
09:53	pH Conductivity ORP Temperature	6.65 619 -93.3 4.7°C	pH <b>[/:03</b> Conductivity ORP Temperature	6.91 Sample rate - 150 nL/mil -90.8 6.5°C	~
10'.02	pH Conductivity ORP Temperature	6.78 657 -163.2 6.1°C	pH <u>l</u> [:18 Conductivity ORP Temperature	<u>6.94</u> (D Slowed How refe! <u>728</u> galloss discharged by <u>-83.9</u> 29 galloss discharged by <u>6.9°</u> 11:07.	
10:12	pH Conductivity ORP Temperature	6.77 634 ~99.5 5.5° c	pH // 3. Conductivity ORP Temperature	6.96 @At 11:20 pump lowerd 1.5' <del>TOZ</del> to increase flow rate <u>-82.6</u> at 11:30 pup lowerd 1.5' <u>6.600</u>	
10:23	pH Conductivity ORP Disolved Oxygen Temperature	6.73 628 - 85.0 	pH //:4 Conductivity ORP Disolved Oxygen Temperature	6.91 <u>6.91</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.91</u> <u>6.91</u> <u>6.91</u> <u>6.91</u> <u>6.91</u> <u>6.91</u> <u>6.91</u> <u>6.91</u> <u>6.91</u> <u>6.91</u> <u>6.91</u> <u>6.91</u> <u>6.91</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u> <u>6.50</u>	
	Flow rate from Appens to have	slow rehorge -	to = 175-20	sont Q 10:2000. Wel	

Water Monitoring Log Form (Revised 2/12)

Page 1 of \_\_\_\_ Project Number \_\_\_\_\_

MWI Well Number:

Weather Conditions: Partially doudy, 44°F Time Arrived On Site: 08:30 Date of Depth to Water Measurement: 4/28/14 Time of Depth to Water Measurement: 09:40 At Asphalt Grade Type of Sampling Equipment: Top of Casing Elevation: Depth to Water (feet below TOC): MP50 Controller, QED Bladder 5.79' Water Elevation: Pump 1.75" Total Depth of Well (feet below TOC): 13.95 Depth to Water (feet below TOC): 5.79 Water Column (feet): 8.14 1.33 Volume of well (gals) =0.1632 X Water Column (For 2-inch well) Bladder Pump Placed at 6.29' =0.6528 X Water Column (For 4-inch well) below Toc =1.4688 X Water Column (For 6-inch well) Time Purging Began: (0:30 Time of Sampling: 1:210 PURGE A MINIMUM OF THREE WELL VOLUMES gallons Volume purged le 7.10 pH pH Conductivity 59.0 Conductivity purged volume = Igals. total volume (after sampling) = 5 galo. ORP 90. ORP Temperature .1 \* ( Temperature 1.Z9 pH pH Conductivity 018 Conductivity ORP - lole. ORP 5.1°C Temperature Temperature Punge Rate: 250-300 ML/min DH pH 7,38 Conductivity Conductivity 639 Sample Rate: 150 mL lmin ORP ORP -14.4 Temperature Temperature pH pH Conductivity 618 Conductivity ORP 93.2 ORP Temperature Temperature Discharge Rate = (0.5 x Depth)+12 PSI of bladder pH pH Conductivity Conductivity ORP ORP Temperature Temperature pH pH Conductivity Conductivity ORP ORP **Disolved** Oxygen **Disolved** Oxygen Temperature Temperature 15 PSI for discharge per steve's (TTT) MPSD Controller set to instruction. Water samples collected and recorded at one gallon intervals

Water Monitoring Log Form (Revised 2/12)

11:00

11:15

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8.94

.54

Time Arrived On Site: 12:20 Date of Depth to Water Measurement: 4/28/14

Weather Conditions: Partially Chudy, 56 F Time of Depth to Water Measurement: 12:

MPSO Controller, QED Bladder

Top of Casing Elevation: Depth to Water (feet below TOC): Water Elevation:

Total Depth of Well (feet below TOC): Depth to Water (feet below TOC): Water Column (feet):

Volume of well (gals) Bladder Pump Placed at 6.1' below TOC

gals

Time Purging Began: 12 Time of Sampling:

Volume purged

1

13

PI

=0.1632 X Water Column (For 2-inch well) =0.6528 X Water Column (For 4-inch well) =1.4688 X Water Column (For 6-inch well)

#### PURGE A MINIMUM OF THREE WELL VOLUMES

Kingt grade Type of Sampling Equipment:

Pump 1.75"

		40 -		
L:50	pH Conductivity ORP Temperature	7.26 615 -116.5 3.1° C	pH Conductivity ORP Temperature	punged vol. = \$ gais total vol. after sampling
,00	pH Conductivity ORP Temperature	6.92 615 -120.2 3.2°C	pH Conductivity ORP Temperature	4.5 gals
:12	pH Conductivity ORP Temperature	7.46 678 -137 5.1°C	pH Conductivity ORP Temperature	purge rate = 400 mL/min Sample rate = 150 mL/min
	pH Conductivity ORP Temperature		pH Conductivity ORP Temperature	Discharge Rate = (0.5 x Depth) +10 PS1
	pH Conductivity ORP Temperature		pH Conductivity ORP Temperature	of bladder
	pH Conductivity ORP Disolved Oxygen		pH Conductivity ORP Disolved Oxygen	
	Temperature PURGED WOTER	- is discolored, ar	Temperature nd has slight sewer o	dor.
	one-gallon;	ntervals. HPGO	to	citchy

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#### Well Number: Mw - 13

Date of Depth to Water Measurement: <u>IPXTU</u> The of Depth to Water Measurement: <u>IPXTU</u> Depth to Water (feet below TOC): <u>A.sc</u> Water Elevation: <u>A.sc</u> Total Depth of Well (feet below TOC): <u>H.65'</u> Depth to Water (feet below TOC): <u>H.65'</u> Water Column (feet): <u>3.83'</u> Volume of well (gals) <u>0.62</u> Jackdam pump placed et 3.30' <u>0.62</u> Time Purging Began: <u>0.64</u> Time of Sampling: <u>1915</u> Volume purged <u>2.5 cpl - uncler</u> Volume purged <u>2.5 cpl - uncler</u> Volume purged <u>1917</u> PH <u>5.66</u> PH <u>6.62</u> Temperature <u>4.62</u> PH <u>5.66</u> Conductivity <u>0.08</u> ORP <u>74.55</u> T		Time Arrived On Site	e:	V	Neather Conditions: Clear, 55°F
Total Depth of Well (feet below TOC): Depth to Water (feet below TOC): Water Column (feet):Image Constant of the period State Column (feet):Volume of well (gals) Jackdan pump placed et $3-30$ ! Malew Tace.=0.1632 X Water Column (For 2-inch well)Use of the placed et $3-30$ ! Malew Tace.=0.1632 X Water Column (For 2-inch well)Time of well (gals) Jackdan pump placed et $3-30$ ! Malew Tace.=0.1632 X Water Column (For 2-inch well)Time Purging Began: Jackdan purge placed et $3-30$ ! Malew Tace.PURGE A MINIMUM OF THREE WELL VOLUMES 1.7 3Time of Sampling: Malew Tace.PURGE A MINIMUM OF THREE WELL VOLUMES 1.7 3Volume purged2.5 opt - water cleared Bod? will volume = $3.12^{-1/2}$ Volume purged2.5 opt - water cleared Bod? will volume = $3.12^{-1/2}$ PURGE A MINIMUM OF THREE WELL VOLUMES 1.7 3Volume purged2.5 opt - water cleared Bod? will volume = $3.12^{-1/2}$ PURGE A MINIMUM OF THREE WELL VOLUMES 1.7 3PURGE A MINIMUM OF THREE WELL VOLUMES 1.7 3 <td></td> <td>Top of Casing Eleva Depth to Water (feet Water Elevation:</td> <td>tion: below TOC):</td> <td>At applett grav</td> <td>Type of Sampling Equipment: <u>MP55 Controller</u>; <u>QED Bladder</u></td>		Top of Casing Eleva Depth to Water (feet Water Elevation:	tion: below TOC):	At applett grav	Type of Sampling Equipment: <u>MP55 Controller</u> ; <u>QED Bladder</u>
Volume of well (gals)   0.62   =0.1632 X Water Column (For 2-inch well =0.6528 X Water Column (For 4-inch well =0.6528 X Water Column (For 4-inch well =1.4688 X Water Column (For 6-inch well =1.4688 X Water Column (For 6-inch well =1.4688 X Water Column (For 6-inch well Yolume purged     78:78   PH   462   PH     78:78   PH   462   B0% well volume = 8.42'     78:78   PH   462   PH     Conductivity   132.7   ORP   PH     Temperature   5.60 C   PH   Gonductivity     0RP   132.7   ORP   Farl     19:0   ORP   12.4   ORP     19:0   ORP   5.60 C   PH   Gonductivity     19:0   ORP   742.4   ORP   Proper volume = 2     19:0   PH   5.26 C   PH   Proper volume = 2     19:10   PH   5.26 C   PH   Conductivity   Proper volume = 2     19:10   PH   5.26 C   PH   Proper volume = 2   Proper volume = 2     19:10   PH   5.26 C   PH   Conductivity   Solutivity   Solutivity     0RP   Temperature   PH <t< td=""><td></td><td>Total Depth of Well ( Depth to Water (feet Water Column (feet)</td><td>(feet below TOC): below TOC): :</td><td>1-63' 7-80' 3.83'</td><td>pourp 145</td></t<>		Total Depth of Well ( Depth to Water (feet Water Column (feet)	(feet below TOC): below TOC): :	1-63' 7-80' 3.83'	pourp 145
Inne of Sampling:   19:15   PURGE A MINIMUM OF THREE WELL VOLUMES 1.5 y     Volume purged   2.5 gnl - weler cleared   B0% will volume = 8.42'     /8:58   Conductivity   132.7     ORP   141   ORP     Temperature   5.66   PH     19:a/   ORP   141     ORP   141   ORP     Temperature   5.66   PH     Conductivity   10.294   Conductivity     ORP   14.5   Temperature     19:a/   ORP   -41.5     Temperature   4.5°c   Temperature     pH   5.26   PH     Conductivity   130.1   Conductivity     ORP   -41.5   Temperature     pH   5.26   PH     Conductivity   130.1   Conductivity     ORP   -41.6°c   Temperature     pH   Conductivity   ORP     Temperature   4.6°c   Temperature     pH   Conductivity   ORP     Temperature   PH   Conductivity     ORP   Temperature <t< td=""><td></td><td>Volume of well (gals)</td><td>) placed at 8-30</td><td>0.62 1. kelow TGC.</td><td>=0.1632 X Water Column (For 2-inch well) =0.6528 X Water Column (For 4-inch well) =1.4688 X Water Column (For 6-inch well)</td></t<>		Volume of well (gals)	) placed at 8-30	0.62 1. kelow TGC.	=0.1632 X Water Column (For 2-inch well) =0.6528 X Water Column (For 4-inch well) =1.4688 X Water Column (For 6-inch well)
18:58   PH Conductivity   132.7 (Conductivity   PH Conductivity   PH Conductivity   Proge Volume = 2 (Conductivity     19:0/   PH Conductivity   5:6° c   PH Conductivity   PH Conductivity   Proge Volume = 2 (PF)     19:0/   PH Conductivity   12:94 (Conductivity   ORP (Conductivity   PH Conductivity   PH Conductivity   PH Conductivity     19:0/   PH Conductivity   5:26 (Conductivity   PH Conductivity   Proge reter volume = 2 (PH)   PH Conductivity   PH Conductivity   PH Conductivity   PH Conductivity   PH Conductivity   PH Conductivity   Proge reter volume = 2 (PH)   PH Conductivity   PH Conductivity   PH Conductivity   PH Conductivity   PH Conductivity   Proge reter volume = 2 (PH)   PH Conductivity   PH Conductivity   PH Conductivity   Proge reter volume = 2 (PH)   PH Conductivity   PH		Time of Sampling: Volume purged		PURGE A MIN eared Boo	11MUM OF THREE WELL VOLUMES 1.8 gollows
19:0/   PH   5:06   PH     Conductivity   PI (2:94)   ORP   PH     Temperature   4:5°   PH   Conductivity     19:10   PH   5-26   PH   Programme     19:10   Conductivity   1301   ORP   Programme     19:10   Conductivity   1301   Conductivity   ORP     ORP   -42.4   Conductivity   ORP   Suplementaria     PH   Conductivity   1301   ORP   Suplementaria     ORP   -42.4   Temperature   Suplementaria   Suplementaria     PH   Conductivity   ORP   ORP   Suplementaria     Temperature   PH   Conductivity   ORP   Suplementaria     PH   Conductivity   ORP   ORP   Suplementaria     Temperature   PH   Conductivity   ORP   Suplementaria     PH   Conductivity   ORP   Suplementaria   Suplementaria     PH   Conductivity   ORP   Suplementaria   Suplementaria     PH   Conductivity   ORP   Suple	18:58	pH Conductivity ORP Temperature	4.62 1327 13-1 5.60C	pH Conductivity ORP Temperature	por ge volume = 2.5 gel
19:10 pH 5:26 pH pwrgl reter work   19:10 Conductivity 1301 Conductivity ORP Suplementer Suplementer   PH -42.4 Conductivity ORP Temperature Suplementer Suplementer   pH Conductivity -42.4 Temperature Suplementer Suplementer Suplementer   pH Conductivity ORP Temperature PH Conductivity Suplementer Iso   pH Conductivity ORP Temperature PH Conductivity Iso Iso   pH Conductivity ORP Temperature Iso Iso Iso   pH Conductivity ORP ORP Iso Iso Iso   pH Conductivity ORP Iso Iso Iso Iso   pH Conductivity ORP Iso Iso Iso Iso   oRP Temperature PH Conductivity Iso Iso Iso   oRP Temperature Iso Iso Iso Iso Iso   oRP Temperature Iso Iso Iso Iso   oRP Temperature	19:01	pH Conductivity ORP Temperature	5,06 1294 -41.5 4.5°c	pH Conductivity ORP Temperature	
pH	19:10	pH Conductivity ORP Temperature	5-26 1301 - 42.4 4.6°c	pH Conductivity ORP Temperature	Juplevole - 150 me
pH pH Conductivity Conductivity I8:45 ORP ORP ORP Temperature pup loggeal @46:32 Temperature pup loggeal @46:32 PH pH pup loggeal @46:32		pH Conductivity ORP Temperature		pH Conductivity ORP Temperature	
pH pupp - redeperd		pH Conductivity ORP Temperature		pH Conductivity ORP Temperature	18:45 18:45 Logged @thize - claus
Conductivity Conductivity   ORP ORP   Disolved Oxygen Disolved Oxygen		pH Conductivity ORP Disolved Oxygen		pH Conductivity ORP Disolved Oxyge	en ised 2 bledder prop >-
- 16:30 Battery (THT) died - flooked up to truck and ideled vehicle to continue Sarphing. 16:32 - NO more water pumping from well - pump about the fallon	-	16:30 Battery (THT) 16:32 - NO more	died-flooked up to	Temperature fruch and idele well - pomp	d vernicle to continue Sorphing. skowt 1/2 fallon

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### Well Number: MW-14

	Time Arrived On Site: Date of Depth to Water Measurement:	We <b>21/14</b> Tim	eather Conditions: <u>Partially cludy</u> . 5407 The of Depth to Water Measurement: 14:25
	Top of Casing Elevation: Depth to Water (feet below TOC): Water Elevation:	At Asphalt grade 7.79	Type of Sampling Equipment: MP 50 Controller, QEP Bladoler Drup 1.75" ×
	Total Depth of Well (feet below TOC): Depth to Water (feet below TOC): Water Column (feet):	(3.38' 7.79' 6.59'	
	Volume of well (gals) Bladder pump placed at 8.29'.	_0.9gd	=0.1632 X Water Column (For 2-inch well) =0.6528 X Water Column (For 4-inch well) =1.4688 X Water Column (For 6-inch well)
	Time of Sampling: 12.26   Volume purged 3.5 gol.	PURGE A MININ	IUM OF THREE WELL VOLUMES と 2.73 gal
N:35	pH7.01Conductivity970ORP-38.5Temperature8.1°C	pH Conductivity ORP Temperature	
12:55	pH6.73Conductivity694ORP-64.2Temperature6.2 °c	pH Conductivity ORP Temperature	punge note =400 nU/min
1:02	pH6.67Conductivity\$51ORP-59.1Temperature4.5°c	pH Conductivity ORP Temperature	Sample role (soul/min
	pH Conductivity ORP Temperature	pH Conductivity ORP Temperature	
	pH Conductivity ORP Temperature	pH Conductivity ORP Temperature	YMW16-0429-duplicate Somple collected@
	pH Conductivity ORP Disolved Oxygen Temperature	pH Conductivity ORP Disolved Oxygen Temperature	13:50.
	Dischargey rate dropped to 2025 m BIEX CAD Spamples viery de discorded Ave to d'Uticut sampling.	1/min - dropped b Bricult to senply Scopy/outdes as	e L Many Voc viels used and used appear to be reducing reducing

Water Monitoring Log Form (Revised 2/12)

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Project Number \_\_\_\_\_

)

#### Well Number: MW-15

Time Arrived On Site:

15:10

15:20

Date of Depth to Water Measurement: 4/26/14

Weather Conditions: CLEAC Stot Time of Depth to Water Measurement: \_\_\_\_\_\_\_

Top of Casing Eleva Depth to Water (fee Water Elevation:	ation: t below TOC):	At asphelt grade	Type of Sampling Equipment: MPSO Controller, QED Bladder prunp 1.75'
Total Depth of Well Depth to Water (fee Water Column (feet	(feet below TOC): t below TOC): ):	10-40' 6-14' 4-26 '	
Volume of well (gals Blodder popper p Time Purging Begar	s) Naced at 6.69' n: 14:45	0.69 scl	=0.1632 X Water Column (For 2-inch well) =0.6528 X Water Column (For 4-inch well) =1.4688 X Water Column (For 6-inch well)
Volume purged	15:30 3 gallons	PURGE A MINI	MUM OF THREE WELL VOLUMES う 2.08
pH Conductivity ORP Temperature	6.68 622 -66.2 7.4°C	pH Conductivity ORP Temperature	purge volume- 3gollon total volume-355 geho 3.25
pH Conductivity ORP Temperature	6.46 512 -51.7 4.8°c	pH Conductivity ORP Temperature	
pH Conductivity ORP Temperature	648 481.2 -57,3 6.3°C	pH Conductivity ORP Temperature	punge rate - 250 ml.
pH Conductivity ORP Temperature		pH Conductivity ORP Temperature	C 15:04 - dropped bledder prop 1.0' to increase
pH Conductivity ORP Temperature		pH Conductivity ORP Temperature	prove to 1.0' to
pH Conductivity ORP Disolved Oxygen		pH Conductivity ORP Disolved Oxyger	- tow flow rate,
	Depth to Water (fee Water Elevation: Total Depth of Well Depth to Water (fee Water Column (feet Volume of well (gals <b>Blidder property</b> Time Purging Begar Time of Sampling: Volume purged pH Conductivity ORP Temperature pH Conductivity ORP Temperature pH Conductivity ORP Temperature pH Conductivity ORP Temperature pH Conductivity ORP Temperature pH Conductivity ORP Temperature pH Conductivity ORP Temperature pH Conductivity ORP Temperature pH Conductivity ORP Temperature pH Conductivity ORP	Depth to Water (feet below TOC):     Water Elevation:     Total Depth of Well (feet below TOC):     Depth to Water (feet below TOC):     Water Column (feet):     Volume of well (gals)     Bladar prop placed at 6-64'     Time Purging Began:     14:45     Time of Sampling:     15:30     Volume purged     3 gellows     PH     Conductivity     ORP     -66:2     Temperature     7:4°C     PH     Conductivity     ORP     -51:7     Temperature     9H     Conductivity     9RP     7     9H     Conductivity     9RP     19H     19H	Depth to Water (feet below TOC):   Image: Constraint of the second sec

Water Monitoring Log Form (Revised 2/12)

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#### APPENDIX B LABORATORY ANALYTICAL DATA



#### Laboratory Report of Analysis

To: BGES Inc. 1042 E 6th Avenue Anchorage, AK 99501 (907) 644-2900

Report Number: **1141606** 

Client Project: Old Seward

Dear Jayne Martin,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of five years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Victoria at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely, SGS North America Inc.

Victoria Pennick Project Manager Victoria.Pennick@sgs.com Date

Print Date: 05/13/2014 3:42:07PM



#### **Case Narrative**

SGS Client: **BGES Inc.** SGS Project: **1141606** Project Name/Site: **Old Seward** Project Contact: **Jayne Martin** 

Refer to sample receipt form for information on sample condition.

#### MW-1-0428 (1141606001) PS

AK102/103 - Unknown hydrocarbon with several peaks is present.

#### MW-2-0429 (1141606002) PS

AK102/103 - Unknown hydrocarbon with several peaks is present.

#### MW-5-0428 (1141606003) PS

AK102/103 - Unknown hydrocarbon with several peaks is present.

#### B6/VE-0429 (1141606004) PS

AK102 - The pattern is consistent with a weathered gasoline. AK103 - Unknown hydrocarbon with several peaks is present.

#### MW-11-0428 (1141606005) PS

AK103 - Unknown hydrocarbon with several peaks is present.

#### MW-12-0428 (1141606006) PS

AK102/103 - Unknown hydrocarbon with several peaks is present.

#### MW-13-0429 (1141606007) PS

AK103 - Unknown hydrocarbon with several peaks is present.

#### MW-14-0429 (1141606008) PS

AK103 - Unknown hydrocarbon with several peaks is present.

#### MW-15-0429 (1141606009) PS

AK102 - The pattern is consistent with a weathered gasoline. AK103 - Unknown hydrocarbon with several peaks is present.

#### MW-16-0429 (1141606010) PS

AK102 - Unknown hydrocarbon with several peaks is present.

\*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

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#### Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. All work is provided under SGS general terms and conditions (<a href="http://www.sgs.com/terms\_and\_conditions.htm">http://www.sgs.com/terms\_and\_conditions.htm</a>), unless other written agreements have been accepted by both parties.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6020, 7470A, 7471B, 8021B, 8082A, 8260B, 8270D, 8270D-SIM, 9040B, 9045C, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

- \* The analyte has exceeded allowable regulatory or control limits.
- ! Surrogate out of control limits.
- B Indicates the analyte is found in a blank associated with the sample.
- CCV Continuing Calibration Verification
- CL Control Limit
- D The analyte concentration is the result of a dilution.
- DF Dilution Factor
- DL Detection Limit (i.e., maximum method detection limit)
- E The analyte result is above the calibrated range.
- F Indicates value that is greater than or equal to the DL
- GT Greater Than
- IB Instrument Blank
- ICV Initial Calibration Verification
- J The quantitation is an estimation.
- JL The analyte was positively identified, but the quantitation is a low estimation.
- LCS(D) Laboratory Control Spike (Duplicate)
- LOD Limit of Detection (i.e., 1/2 of the LOQ)
- LOQ Limit of Quantitation (i.e., reporting or practical quantitation limit)
- LT Less Than
- M A matrix effect was present.
- MB Method Blank
- MS(D) Matrix Spike (Duplicate)
- ND Indicates the analyte is not detected.
- Q QC parameter out of acceptance range.
- R Rejected
- RPD Relative Percent Difference
- U Indicates the analyte was analyzed for but not detected.
- Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.



		Sample Summ	ary	
Client Sample ID	Lab Sample ID	Collected	Received	<u>Matrix</u>
MW-1-0428	1141606001	04/28/2014	04/30/2014	Water (Surface, Eff., Ground)
MW-2-0429	1141606002	04/29/2014	04/30/2014	Water (Surface, Eff., Ground)
MW-5-0428	1141606003	04/28/2014	04/30/2014	Water (Surface, Eff., Ground)
B6/VE-0429	1141606004	04/29/2014	04/30/2014	Water (Surface, Eff., Ground)
MW-11-0428	1141606005	04/28/2014	04/30/2014	Water (Surface, Eff., Ground)
MW-12-0428	1141606006	04/28/2014	04/30/2014	Water (Surface, Eff., Ground)
MW-13-0429	1141606007	04/29/2014	04/30/2014	Water (Surface, Eff., Ground)
MW-14-0429	1141606008	04/29/2014	04/30/2014	Water (Surface, Eff., Ground)
MW-15-0429	1141606009	04/29/2014	04/30/2014	Water (Surface, Eff., Ground)
MW-16-0429	1141606010	04/29/2014	04/30/2014	Water (Surface, Eff., Ground)
Trip Blank	1141606011	04/28/2014	04/30/2014	Water (Surface, Eff., Ground)

<u>Method</u>
AK101
SW8021B
AK102
AK103

Method Description

AK101/8021 Combo.

AK101/8021 Combo.

Diesel/Residual Range Organics Water

Diesel/Residual Range Organics Water



#### Client Sample ID: MW-1-0428 Lab Sample ID: 1141606001 Parameter Result Units **Diesel Range Organics** 8.38 mg/L Semivolatile Organic Fuels **Residual Range Organics** 0.779 mg/L Benzene 2420 ug/L **Volatile Fuels** Ethylbenzene 1080 ug/L Gasoline Range Organics 29.8 mg/L o-Xylene 1960 ug/L P & M -Xylene 4190 ug/L Toluene 5310 ug/L Client Sample ID: MW-2-0429 Lab Sample ID: 1141606002 Parameter Result Units Semivolatile Organic Fuels **Diesel Range Organics** 70.1 mg/L **Residual Range Organics** 6.14 mg/L **Volatile Fuels** Benzene 8460 ug/L 1340 Ethylbenzene ug/L Gasoline Range Organics 64.4 mg/L o-Xylene 2630 ug/L P & M -Xylene 6340 ug/L Toluene 17500 ug/L Client Sample ID: MW-5-0428 Lab Sample ID: 1141606003 Units Parameter Result **Diesel Range Organics** 0.757 mg/L Semivolatile Organic Fuels **Residual Range Organics** 0.995 mg/L Benzene 83.9 ug/L **Volatile Fuels Gasoline Range Organics** 0.207 mg/L P & M -Xylene 12.1 ug/L Client Sample ID: B6/VE-0429 Lab Sample ID: 1141606004 Units Parameter Result **Diesel Range Organics** 5.57 mg/L Semivolatile Organic Fuels **Residual Range Organics** 1.28 mg/L Benzene 1730 ug/L **Volatile Fuels** Ethylbenzene 734 ug/L 22.7 **Gasoline Range Organics** mg/L o-Xylene 863 ug/L P & M -Xylene 2610 ug/L Toluene 3870 ug/L Client Sample ID: MW-11-0428 Lab Sample ID: 1141606005 Parameter Result Units Semivolatile Organic Fuels Residual Range Organics 0.723 mg/L

**Detectable Results Summary** 

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Detectable	Results	Summary	

Client Sample ID: MW-12-0428			
Lab Sample ID: 1141606006	<u>Parameter</u>	Result	Units
Semivolatile Organic Fuels	Diesel Range Organics	0.611	mg/L
	Residual Range Organics	1.22	mg/L
Volatile Fuels	Benzene	1.10	ug/L
Client Sample ID: MW-13-0429			
Lab Sample ID: 1141606007	Parameter	Result	Units
Semivolatile Organic Fuels	Diesel Range Organics	22.3	mg/L
-	Residual Range Organics	2.72	mg/L
Volatile Fuels	Benzene	10600	ug/L
	Ethylbenzene	5600	ug/L
	Gasoline Range Organics	159	mg/L
	o-Xylene	8710	ug/L
	P & M -Xylene	19800	ug/L
	Toluene	42200	ug/L
Client Sample ID: MW-14-0429			
Lab Sample ID: 1141606008	Parameter	Result	Units
Semivolatile Organic Fuels	Diesel Range Organics	38.6	mg/L
C	Residual Range Organics	6.40	mg/L
Volatile Fuels	Benzene	19100	ug/L
	Ethylbenzene	2070	ug/L
	Gasoline Range Organics	113	mg/L
	o-Xylene	4440	ug/L
	P & M -Xylene	10800	ug/L
	Toluene	26200	ug/L
Client Sample ID: MW-15-0429			
Lab Sample ID: 1141606009	<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Semivolatile Organic Fuels	Diesel Range Organics	1.83	mg/L
	Residual Range Organics	2.25	mg/L
Volatile Fuels	Benzene	1790	ug/L
	Ethylbenzene	113	ug/L
	Gasoline Range Organics	7.98	mg/L
	o-Xylene	103	ug/L
	P & M -Xylene	264	ug/L
	Toluene	492	ug/L

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#### **Detectable Results Summary**

4210

10300

23400

ug/L

ug/L

ug/L

#### Client Sample ID: MW-16-0429 Lab Sample ID: 1141606010 Units Parameter Result **Diesel Range Organics** Semivolatile Organic Fuels 52.3 mg/L **Residual Range Organics** 10.9 mg/L Benzene 16400 ug/L Volatile Fuels Ethylbenzene 1990 ug/L Gasoline Range Organics 105 mg/L

o-Xylene

Toluene

P & M -Xylene

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		1	Solids (%): Location:		, Ell., Glo	und)	
Results by <b>Semivolatile Organic Fuels</b> Parameter       F         Diesel Range Organics       F	Result Qual 8.38	<u>LOQ/CL</u> 0.619	<u>DL</u> 0.186	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 05/01/14 22:41
<b>urrogates</b> 5a Androstane	76.3	50-150		%	1		05/01/14 22:41
Batch Information							
Analytical Batch: XFC11290 Analytical Method: AK102 Analyst: AYC Analytical Date/Time: 05/01/14 22:41 Container ID: 1141606001-D			Prep Batch: Prep Method Prep Date/Tin Prep Initial W Prep Extract	XXX30945 : SW3520C me: 05/01/ <sup>,</sup> /t./Vol.: 970 Vol: 1 mL	) 14 09:50 ) mL		
Parameter E	<u>Result Qual</u> 0.779	<u>LOQ/CL</u> 0.515	<u>DL</u> 0.155	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> Limits	Date Analyzed
urrogates							
n-Triacontane-d62	76.6	50-150		%	1		05/01/14 22:4
Batch Information							
Analytical Batch: XFC11290 Analytical Method: AK103 Analyst: AYC Analytical Date/Time: 05/01/14 22:41 Container ID: 1141606001-D			Prep Batch: Prep Method Prep Date/Tin Prep Initial W Prep Extract	XXX30945 : SW3520C me: 05/01/ <sup>,</sup> /t./Vol.: 970 Vol: 1 mL	) 14 09:50 ) mL		

Results of <b>MW-1-0428</b>							
Client Sample ID: <b>MW-1-0428</b> Client Project ID: <b>Old Seward</b> Lab Sample ID: 1141606001 Lab Project ID: 1141606		Collection Date: 04/28/14 17:02 Received Date: 04/30/14 09:53 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:					
Results by Volatile Fuels							
<u>Parameter</u> Gasoline Range Organics	<u>Result Qual</u> 29.8	<u>LOQ/CL</u> 10.0	<u>DL</u> 3.10	<u>Units</u> mg/L	<u>DF</u> 100	<u>Allowable</u> <u>Limits</u>	Date Analyzed 05/07/14 08:24
Surrogates 4-Bromofluorobenzene	83.5	50-150		%	100		05/07/14 08:24
Batch Information							
Analytical Batch: VFC11870 Analytical Method: AK101 Analyst: HM Analytical Date/Time: 05/07/14 08:24 Container ID: 1141606001-B			Prep Batch: Prep Methoc Prep Date/Ti Prep Initial V Prep Extract	VXX25809 d: SW5030B ime: 05/06/1 Vt./Vol.: 5 m : Vol: 5 mL	4 08:00 L		
Parameter	Result Qual	LOQ/CL	DL	Units	DF	<u>Allowable</u> <u>Limits</u>	Date Analyzed
Benzene	2420	50.0	15.0	ug/L	100		05/07/14 08:24
Ethylbenzene	1080	100	31.0	ug/L	100		05/07/14 08:24
o-Xylene	1960	100	31.0	ug/L	100		05/07/14 08:24
Toluene	4190 5310	200 100	62.0 31.0	ug/L ug/L	100 100		05/07/14 08:24
Surrogates				0			
1,4-Difluorobenzene	98.6	77-115		%	100		05/07/14 08:24
Batch Information							
Analytical Batch: VFC11870 Analytical Method: SW8021B Analyst: HM			Prep Batch: Prep Methoc Prep Date/Ti Prep Initial V Prep Extract	VXX25809 d: SW5030B ime: 05/06/1 Vt./Vol.: 5 m	4 08:00 L		

Parameter       Result         Diesel Range Organics       70.         Surrogates       5a Androstane       78.	l <u>t Qual</u> 1	1.00/01					
Surrogates5a Androstane78.		<u>LOQ/CL</u> 3.33	<u>DL</u> 1.00	<u>Units</u> mg/L	<u>DF</u> 5	<u>Allowable</u> Limits	Date Analyzed 05/02/14 14:16
	4	50-150		%	5		05/02/14 14:16
Analyst: HM Analytical Date/Time: 05/02/14 14:16 Container ID: 1141606002-D Parameter Results 6 1	lt Qual	LOQ/CL	Prep Date/Tii Prep Initial W Prep Extract	me: 05/01/1 /t./Vol.: 900 Vol: 1 mL <u>Units</u> mg/l	4 09:50 mL <u>DF</u>	Allowable Limits	Date Analyzed
Surrogates       n-Triacontane-d62       74.	5	50-150	0.107	%	1		05/01/14 22:50
Batch Information							
Analytical Batch: XFC11290 Analytical Method: AK103 Analyst: AYC Analytical Date/Time: 05/01/14 22:50 Container ID: 1141606002-D			Prep Batch: Prep Method Prep Date/Tii Prep Initial W Prep Extract	XXX30945 : SW3520C me: 05/01/1 /t./Vol.: 900 Vol: 1 mL	4 09:50 mL		

Results of <b>MW-2-0429</b> Client Sample ID: <b>MW-2-0429</b> Client Project ID: <b>Old Seward</b> Lab Sample ID: 1141606002 Lab Project ID: 1141606		Collection Date: 04/29/14 17:05 Received Date: 04/30/14 09:53 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:						
Results by <b>Volatile Fuels</b> Parameter           Gasoline Range Organics	Result Qual 64.4	<u>LOQ/CL</u> 10.0	<u>DL</u> 3.10	<u>Units</u> mg/L	<u>DF</u> 100	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u> 05/07/14 08:43	
Gurrogates 4-Bromofluorobenzene	84.2	50-150		%	100		05/07/14 08:43	
Batch Information Analytical Batch: VFC11870 Analytical Method: AK101 Analyst: HM Analytical Date/Time: 05/07/14 08:43 Container ID: 1141606002-B			Prep Batch: Prep Methor Prep Date/T Prep Initial V Prep Extract	VXX25809 d: SW5030E ïme: 05/06/ Wt./Vol.: 5 m t Vol: 5 mL	3 14 08:00 hL			
Parameter Benzene	<u>Result Qual</u> 8460	LOQ/CL 50.0	<u>DL</u> 15.0	<u>Units</u> ug/L	<u>DF</u> 100	<u>Allowable</u> <u>Limits</u>	Date Analyzed 05/07/14 08:43	
Ethylbenzene o-Xylene	1340 2630	100 100	31.0 31.0	ug/L ug/L	100 100		05/07/14 08:43 05/07/14 08:43	
P & M -Xylene Toluene	6340 17500	200 100	62.0 31.0	ug/L ug/L	100 100		05/07/14 08:43 05/07/14 08:43	
Surrogates 1,4-Difluorobenzene	106	77-115		%	100		05/07/14 08:43	
Batch Information Analytical Batch: VFC11870 Analytical Method: SW8021B Analyst: HM Analytical Date/Time: 05/07/14 08:43 Container ID: 1141606002-B			Prep Batch: Prep Method Prep Date/T Prep Initial V Prep Extract	VXX25809 d: SW5030E ime: 05/06/ Nt./Vol.: 5 m t Vol: 5 mL	3 14 08:00 1L			

Client Sample ID <sup>.</sup> MW-5-0428		(	Collection D:	ate: 04/28	/14 14·48		
Client Project ID: <b>Old Seward</b> Lab Sample ID: 1141606003 Lab Project ID: 1141606		F T L	Received Da Matrix: Wate Solids (%): Location:	ate: 04/30/ er (Surface	14 09:53 , Eff., Gro	ound)	
Parameter Diesel Range Organics	Result Qual 0.757	<u>LOQ/CL</u> 0.619	<u>DL</u> 0.186	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> Limits	Date Analyzed 05/01/14 23:00
u <b>rrogates</b> 5a Androstane	67.5	50-150		%	1		05/01/14 23:0
Batch Information							
Analytical Batch: XFC11290 Analytical Method: AK102 Analyst: AYC Analytical Date/Time: 05/01/14 23:00 Container ID: 1141606003-D			Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract	XXX30945 I: SW35200 Ime: 05/01/ <sup>-</sup> Vt./Vol.: 970 Vol: 1 mL	C 14 09:50 ) mL		
Parameter Residual Range Organics	<u>Result Qual</u> 0.995	<u>LOQ/CL</u> 0.515	<u>DL</u> 0.155	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> Limits	<u>Date Analyze</u> 05/01/14 23:0
urrogates n-Triacontane-d62	70.5	50-150		%	1		05/01/14 23:0
Batch Information							
Analytical Batch: XFC11290 Analytical Method: AK103 Analyst: AYC Analytical Date/Time: 05/01/14 23:00 Container ID: 1141606003-D			Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract	XXX30945 I: SW35200 me: 05/01/ <sup>-</sup> Vt./Vol.: 970 Vol: 1 mL	C 14 09:50 ) mL		

Results of <b>MW-5-0428</b> Client Sample ID: <b>MW-5-0428</b> Client Project ID: <b>Old Seward</b> Lab Sample ID: 1141606003 Lab Project ID: 1141606		Collection Date: 04/28/14 14:48 Received Date: 04/30/14 09:53 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:					
Results by <b>Volatile Fuels</b> Parameter           Gasoline Range Organics	<u>Result Qual</u> 0.207	<u>LOQ/CL</u> 0.100	<u>DL</u> 0.0310	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> Limits	Date Analyzed 05/07/14 06:14
<b>urrogates</b> 4-Bromofluorobenzene	79.5	50-150		%	1		05/07/14 06:14
Batch Information Analytical Batch: VFC11870 Analytical Method: AK101 Analyst: HM Analytical Date/Time: 05/07/14 06:14 Container ID: 1141606003-B			Prep Batch: Prep Method Prep Date/Tir Prep Initial W Prep Extract	VXX25809 : SW5030E me: 05/06/ <sup>,</sup> (t./Vol.: 5 m Vol: 5 mL	3 14 08:00 1L		
Parameter Benzene	Result Qual	<u>LOQ/CL</u> 0.500	<u>DL</u> 0.150	<u>Units</u>	DF 1	Allowable Limits	Date Analyzed
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		05/07/14 06:14
o-Xylene	1.00 U	1.00	0.310	ug/L	1		05/07/14 06:14
P & M -Xylene	12.1	2.00	0.620	ug/L	1		05/07/14 06:14
Toluene	1.00 U	1.00	0.310	ug/L	1		05/07/14 06:14
urrogates 1,4-Difluorobenzene	104	77-115		%	1		05/07/14 06:14
Batch Information Analytical Batch: VFC11870			Prep Batch:	VXX25809			
Analytical Method: SW8021B Analyst: HM Analytical Date/Time: 05/07/14 06:14 Container ID: 1141606003-B			Prep Method Prep Date/Tir Prep Initial W Prep Extract	: SW5030E me: 05/06/ <sup>,</sup> /t./Vol.: 5 m Vol: 5 mL	3 14 08:00 1L		

Results of <b>B6/VE-0429</b> Client Sample ID: <b>B6/VE-0429</b> Client Project ID: <b>Old Seward</b> Lab Sample ID: 1141606004 Lab Project ID: 1141606		C F M S L	Collection Da Received Da Matrix: Wate Solids (%): ocation:	ate: 04/29/ te: 04/30/ er (Surface	/14 11:50 14 09:53 , Eff., Grc	ound)	
Results by <b>Semivolatile Organic Fuel</b> <u>Parameter</u> Diesel Range Organics	<b>s</b> <u>Result Qual</u> 5.57	<u>LOQ/CL</u> 0.600	<u>DL</u> 0.180	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 05/01/14 23:10
Surrogates 5a Androstane	80.1	50-150		%	1		05/01/14 23:10
Batch Information							
Analytical Batch: XFC11290 Analytical Method: AK102 Analyst: AYC Analytical Date/Time: 05/01/14 23:10 Container ID: 1141606004-D			Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract	XXX30945 : SW35200 me: 05/01/ <sup>,</sup> /t./Vol.: 100 Vol: 1 mL	C 14 09:50 )0 mL		
<u>Parameter</u> Residual Range Organics	<u>Result Qual</u> 1.28	<u>LOQ/CL</u> 0.500	<u>DL</u> 0.150	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 05/01/14 23:10
<b>Surrogates</b> n-Triacontane-d62	82.5	50-150		%	1		05/01/14 23:10
Batch Information							
Analytical Batch: XFC11290 Analytical Method: AK103 Analyst: AYC Analytical Date/Time: 05/01/14 23:10 Container ID: 1141606004-D			Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract	XXX30945 : SW3520C me: 05/01/ <sup>,</sup> /t./Vol.: 10C Vol: 1 mL	C 14 09:50 00 mL		

Results of B6/VE-0429								
Client Sample ID: <b>B6/VE-0429</b> Client Project ID: <b>Old Seward</b> Lab Sample ID: 1141606004 Lab Project ID: 1141606		C R M S L	Collection D Received Da Iatrix: Wat Colids (%): ocation:	ound)				
Results by Volatile Fuels								
Parameter	Result Qual	100/01	וח	Units	DE	<u>Allowable</u>	Date Analyze	
Gasoline Range Organics	22.7	<u>5.00</u>	<u>1.55</u>	mg/L	50	Linita	05/07/14 09:0	
				-				
4-Bromofluorobenzene	84 7	50-150		%	50		05/07/14 09.0	
	04.7	00 100		70	00		00/01/14 00:0	
Batch Information								
Analytical Batch: VFC11870			Prep Batch:	VXX25809				
Analytical Method: AK101			Prep Method	d: SW5030E	3			
Analyst: HM		Prep Date/Time: 05/06/14 08:00 Prep Initial Wt /Vol : 5 ml						
Container ID: 1141606004-B		Prep Extract Vol: 5 mL						
						Allowable		
Parameter	Result Qual	LOQ/CL	DL	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyze	
Benzene	1730	25.0	7.50	ug/L	50		05/07/14 09:0	
Ethylbenzene	734	50.0	15.5	ug/L	50		05/07/14 09:0	
o-Xylene	863	50.0	15.5	ug/L	50		05/07/14 09:0	
P & M -Xylene	2610	100	31.0	ug/L	50		05/07/14 09:0	
Toluene	3870	50.0	15.5	ug/L	50		05/07/14 09:0	
Surrogates								
1,4-Difluorobenzene	97.6	77-115		%	50		05/07/14 09:0	
Batch Information								
			Drop Datab	VVV0E000				
Analytical Method: SW8021B			Prep Batch. Prep Methor	VXX25609 d: SW5030F	3			
Analyst: HM			Prep Date/T	ime: 05/06/	14 08:00			
			Prep Initial V	Vt./Vol.: 5 m	۱L			
Analytical Date/Time: 05/07/14 09:01			Prep Extract	t Vol: 5 mL				

Results of MW-11-0428 Client Sample ID: MW-11-0428 Client Project ID: Old Seward Lab Sample ID: 1141606005 Lab Project ID: 1141606		C R M S L	ollection Da eceived Da latrix: Wate olids (%): ocation:	ate: 04/28/ ate: 04/30/ er (Surface	(14 11:26 14 09:53 , Eff., Grc	bund)	
Parameter Diesel Range Organics	Result Qual 0.619 U	<u>LOQ/CL</u> 0.619	<u>DL</u> 0.186	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> Limits	<u>Date Analyzed</u> 05/01/14 23:20
Surrogates 5a Androstane	75	50-150		%	1		05/01/14 23:20
Analytical Date/Time: 05/01/14 23:20 Container ID: 1141606005-D	Result Qual	LOQ/CL 0.515	Prep Initial W Prep Extract	Vol: 1 mL	<u>DF</u>	Allowable Limits	Date Analyzed
Surrogates n-Triacontane-d62	78.1	50-150	0.155	₩ %	1		05/01/14 23:20
Batch Information							
Analytical Batch: XFC11290 Analytical Method: AK103 Analyst: AYC Analytical Date/Time: 05/01/14 23:20 Container ID: 1141606005-D		F F F	Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract	XXX30945 I: SW35200 me: 05/01/ <sup>,</sup> /t./Vol.: 970 Vol: 1 mL	C 14 09:50 ) mL		

SGS	

Results of MW-11-0428							
Client Sample ID: <b>MW-11-0428</b> Client Project ID: <b>Old Seward</b> Lab Sample ID: 1141606005 Lab Project ID: 1141606		C R M S La	ollection Da eceived Da latrix: Wate olids (%): ocation:	tte: 04/28/ te: 04/30/´ rr (Surface)	14 11:26 14 09:53 , Eff., Grc	ound)	
Results by Volatile Fuels							
Parameter Gasoline Range Organics	<u>Result Qual</u> 0.100 U	<u>LOQ/CL</u> 0.100	<u>DL</u> 0.0310	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> Limits	Date Analyzed 05/07/14 06:32
Surrogates							
4-Bromofluorobenzene	70.8	50-150		%	1		05/07/14 06:32
Batch Information							
Analytical Batch: VFC11870 Analytical Method: AK101 Analyst: HM Analytical Date/Time: 05/07/14 06:32 Container ID: 1141606005-B		F F F	Prep Batch: Prep Method Prep Date/Tir Prep Initial W Prep Extract	VXX25809 : SW5030B me: 05/06/1 /t./Vol.: 5 m Vol: 5 mL	4 08:00 L		
						Allowable	
Parameter	Result Qual	LOQ/CL	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Limits</u>	Date Analyzed
Benzene	0.500 U	0.500	0.150	ug/L	1		05/07/14 06:32
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		05/07/14 06:32
o-Xylene	1.00 U	1.00	0.310	ug/L	1		05/07/14 06:32
	2.00 U	2.00	0.620	ug/L	1		05/07/14 06:32
louene	1.00 U	1.00	0.310	ug/L	I		05/07/14 06.32
Surrogates							
1,4-Difluorobenzene	102	77-115		%	1		05/07/14 06:32
Batch Information							
Analytical Batch: VFC11870 Analytical Method: SW8021B Analyst: HM Analytical Date/Time: 05/07/14 06:32 Container ID: 1141606005-B		F	Prep Batch: Prep Method Prep Date/Tir Prep Initial W Prep Extract	VXX25809 : SW5030B me: 05/06/1 /t./Vol.: 5 m Vol: 5 mL	4 08:00 L		

Client Sample ID: <b>MW-12-0428</b> Client Project ID: <b>Old Seward</b> Lab Sample ID: 1141606006 Lab Project ID: 1141606		Collection Date: 04/28/14 13:20 Received Date: 04/30/14 09:53 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:						
Results by <b>Semivolatile Organic Fuels</b> Parameter Diesel Range Organics	s <u>Result Qual</u> 0.611	<u>LOQ/CL</u> 0.600	<u>DL</u> 0.180	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 05/01/14 23:29	
Surrogates 5a Androstane	66.2	50-150		%	1		05/01/14 23:29	
Parameter Residual Range Organics	Result Qual 1.22	EOQ/CL 0.500	DL 0.150	Vol: 1 mL	<u>DF</u> 1	Allowable Limits	Date Analyzed 05/01/14 23:29	
Surrogates n-Triacontane-d62	68.1	50-150		%	1		05/01/14 23:29	
Batch Information Analytical Batch: XFC11290 Analytical Method: AK103 Analyst: AYC Analytical Date/Time: 05/01/14 23:29 Container ID: 1141606006-D		F F F F	Prep Batch: Prep Method Prep Date/Tii Prep Initial W Prep Extract	XXX30945 : SW3520C me: 05/01/ <sup>,</sup> /t./Vol.: 100 Vol: 1 mL	) 14 09:50 10 mL			

SGS	

Results of MW-12-0428							
Client Sample ID: <b>MW-12-0428</b> Client Project ID: <b>Old Seward</b> Lab Sample ID: 1141606006 Lab Project ID: 1141606		C R M Si La	ollection Da eceived Da latrix: Wate olids (%): ocation:	ate: 04/28/ te: 04/30/′ er (Surface,	14 13:20 14 09:53 , Eff., Grc	ound)	
results by volatile rueis							~
Parameter Gasoline Range Organics	<u>Result Qual</u> 0.100 U	<u>LOQ/CL</u> 0.100	<u>DL</u> 0.0310	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> Limits	Date Analyzed 05/07/14 06:51
Surrogates							
4-Bromofluorobenzene	74.6	50-150		%	1		05/07/14 06:51
Batch Information							
Analytical Batch: VFC11870 Analytical Method: AK101 Analyst: HM Analytical Date/Time: 05/07/14 06:51 Container ID: 1141606006-B		F	Prep Batch: Prep Method Prep Date/Tir Prep Initial W Prep Extract	VXX25809 : SW5030B me: 05/06/1 /t./Vol.: 5 m Vol: 5 mL	4 08:00 L		,
						Allowable	
Parameter	Result Qual	LOQ/CL	DL	<u>Units</u>	DF	Limits	Date Analyzed
Benzene	1.10	0.500	0.150	ug/L	1		05/07/14 06:51
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		05/07/14 06:51
o-Xylene	1.00 U	1.00	0.310	ug/L	1		05/07/14 06:51
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		05/07/14 06:51
Toluene	1.00 U	1.00	0.310	ug/L	1		05/07/14 06:51
Surrogates							
1,4-Difluorobenzene	99.7	77-115		%	1		05/07/14 06:51
Batch Information							
Analytical Batch: VFC11870 Analytical Method: SW8021B Analyst: HM Analytical Date/Time: 05/07/14 06:51 Container ID: 1141606006-B		F F F	Prep Batch: Prep Method Prep Date/Tir Prep Initial W Prep Extract	VXX25809 : SW5030B me: 05/06/1 /t./Vol.: 5 m Vol: 5 mL	4 08:00 L		

Results of MW-13-0429						
Client Sample ID: <b>MW-13-0429</b> Client Project ID: <b>Old Seward</b> Lab Sample ID: 1141606007 Lab Project ID: 1141606	Collection Date: 04/29/14 19:15 Received Date: 04/30/14 09:53 Matrix: Water (Surface, Eff., Groun Solids (%): Location:					
Results by Semivolatile Organic Fuels	5					Allowabl
Parameter	Result Qual	LOQ/CL	DL	<u>Units</u>	DF	Limits
Diesel Range Organics	22.3	2.40	0.720	mg/L	4	
Surrogatos						
Junogales						
5a Androstane	73.3	50-150		%	4	
5a Androstane Batch Information	73.3	50-150		%	4	
5a Androstane Batch Information Analytical Batch: XFC11291 Analytical Method: AK102 Analyst: HM Analytical Date/Time: 05/02/14 14:26 Container ID: 1141606007-D	73.3	50-150 F F F F	Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract	% XXX30945 : SW3520C me: 05/01/1 /t./Vol.: 100 Vol: 1 mL	<b>4</b> 4 09:50 0 mL	
5a Androstane Batch Information Analytical Batch: XFC11291 Analytical Method: AK102 Analyst: HM Analytical Date/Time: 05/02/14 14:26 Container ID: 1141606007-D Parameter	73.3	50-150	Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract	% XXX30945 : SW3520C me: 05/01/1 /t./Vol.: 100 Vol: 1 mL	4 22 24 09:50 0 mL DE	Allowabl

# Batch Information Analytical Batch: XFC11290 Analytical Method: AK103 Analytical Method: AK103 Analyst: AYC Analytical Date/Time: 05/01/14 23:39 Container ID: 1141606007-D

78.8

50-150

%

1

Print Date: 05/13/2014 3:42:10PM

n-Triacontane-d62

Date Analyzed 05/02/14 14:26

05/02/14 14:26

Date Analyzed 05/01/14 23:39

05/01/14 23:39

Results of MW-13-0429								
Client Sample ID: <b>MW-13-0429</b> Client Project ID: <b>Old Seward</b> Lab Sample ID: 1141606007 Lab Project ID: 1141606		Collection Date: 04/29/14 19:15 Received Date: 04/30/14 09:53 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:						
Results by Volatile Fuels								
<u>Parameter</u> Gasoline Range Organics	<u>Result Qual</u> 159	<u>LOQ/CL</u> 20.0	<u>DL</u> 6.20	<u>Units</u> mg/L	<u>DF</u> 200	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u> 05/07/14 09:20	
Surrogates								
4-Bromofluorobenzene	83	50-150		%	200		05/07/14 09:20	
Batch Information								
Analytical Batch: VFC11870 Analytical Method: AK101 Analyst: HM Analytical Date/Time: 05/07/14 09:20 Container ID: 1141606007-B		i i i i i i i i i i i i i i i i i i i	Prep Batch: Prep Methor Prep Date/T Prep Initial \ Prep Extrac	VXX25809 d: SW5030E ïme: 05/06/ <sup>,</sup> Nt./Vol.: 5 m t Vol: 5 mL	3 14 08:00 IL			
Deservator	Desult Quel	1.00/01		Linita		Allowable	Data Analyzad	
Parameter Benzene	<u>Result Qual</u> 10600	<u>LOQ/CL</u> 100	<u>DL</u> 30.0	<u>Units</u> ua/l	<u>DF</u> 200	Limits	05/07/14 09:20	
Ethylbenzene	5600	200	62.0	ug/L	200		05/07/14 09:20	
o-Xylene	8710	200	62.0	ug/L	200		05/07/14 09:20	
P & M -Xylene	19800	400	124	ug/L	200		05/07/14 09:20	
Toluene	42200	200	62.0	ug/L	200		05/07/14 09:20	
Surrogates								
1,4-Difluorobenzene	101	77-115		%	200		05/07/14 09:20	
Batch Information								
Analytical Batch: VFC11870 Analytical Method: SW8021B Analyst: HM Analytical Date/Time: 05/07/14 09:20 Container ID: 1141606007-B		i i i i i i i i i i i i i i i i i i i	Prep Batch: Prep Metho Prep Date/T Prep Initial \ Prep Extrac	VXX25809 d: SW5030E ïme: 05/06/ Wt./Vol.: 5 m t Vol: 5 mL	3 14 08:00 1L			

SGS	

Results of MW-14-0429							
Client Sample ID: <b>MW-14-0429</b> Client Project ID: <b>Old Seward</b> Lab Sample ID: 1141606008 Lab Project ID: 1141606			Collection Da Received Da Matrix: Wate Solids (%): Location:	nte: 04/29/ te: 04/30/ <sup>-</sup> er (Surface	14 13:07 14 09:53 , Eff., Gro	bund)	
Results by Semivolatile Organic Fuels							
<u>Parameter</u> Diesel Range Organics	<u>Result Qual</u> 38.6	<u>LOQ/CL</u> 2.61	<u>DL</u> 0.783	<u>Units</u> mg/L	<u>DF</u> 4	<u>Allowable</u> <u>Limits</u>	Date Analyzed 05/02/14 14:36
Surrogates							
5a Androstane	66.4	50-150		%	4		05/02/14 14:36
Batch Information							
Analytical Batch: XFC11291 Analytical Method: AK102 Analyst: HM Analytical Date/Time: 05/02/14 14:36 Container ID: 1141606008-D			Prep Batch: Prep Method Prep Date/Tir Prep Initial W Prep Extract	XXX30945 : SW35200 me: 05/01/ /t./Vol.: 920 Vol: 1 mL	;  4 09:50   mL		
Parameter Residual Range Organics	<u>Result Qual</u> 6.40	<u>LOQ/CL</u> 0.543	<u>DL</u> 0.163	<u>Units</u> mg/L	<u>DF</u> 1	Allowable Limits	Date Analyzed 05/01/14 23:49
Surrogates							
Surrogates n-Triacontane-d62	84.9	50-150		%	1		05/01/14 23:49
Surrogates n-Triacontane-d62 Batch Information	84.9	50-150		%	1		05/01/14 23:49
Surrogates n-Triacontane-d62 Batch Information Analytical Batch: XFC11290 Analytical Method: AK103 Analyst: AYC Analytical Date/Time: 05/01/14 23:49 Container ID: 1141606008-D	84.9	50-150	Prep Batch: Prep Method Prep Date/Tir Prep Initial W Prep Extract	% XXX30945 : SW35200 ne: 05/01/ t./Vol.: 920 Vol: 1 mL	1 2 14 09:50 1 mL		05/01/14 23:49

Client Sample ID: MW-14-0429 Client Project ID: Old Seward Lab Sample ID: 1141606008 Lab Project ID: 1141606		C R M S	ollection D eceived Da latrix: Wat olids (%):	ate: 04/29/ ate: 04/30/ <sup>.</sup> er (Surface	14 13:07 14 09:53 , Eff., Grc	ound)	
Posults by Volatila Eucle		L	ocation:				
Results by volatile Fuels						Allowable	
Parameter Gasoline Range Organics	<u>Result Qual</u> 113	<u>LOQ/CL</u> 20.0	<u>DL</u> 6.20	<u>Units</u> mg/L	<u>DF</u> 200	Limits	Date Analyzed 05/07/14 09:39
Surrogates 4-Bromofluorobenzene	81.6	50-150		%	200		05/07/14 09:39
Batch Information							
Analytical Batch: VFC11870 Analytical Method: AK101 Analyst: HM Analytical Date/Time: 05/07/14 09:39 Container ID: 1141606008-B			Prep Batch: Prep Method Prep Date/T Prep Initial V Prep Extract	VXX25809 d: SW5030E ime: 05/06/* Vt./Vol.: 5 m t Vol: 5 mL	14 08:00 L		
Parameter	Result Qual	LOQ/CL	DL	Units	DF	<u>Allowable</u> Limits	Date Analyzed
Benzene	19100	100	30.0	ug/L	200		05/07/14 09:39
Ethylbenzene	2070	200	62.0	ug/L	200		05/07/14 09:39
o-Xylene	4440	200	62.0	ug/L	200		05/07/14 09:3
P & M -Xylene	10800 26200	400 200	124 62 0	ug/L ug/l	200 200		05/07/14 09:39
	20200	200	02.0	69.2	200		00/01/11/00:0
1,4-Difluorobenzene	103	77-115		%	200		05/07/14 09:3
Batch Information							
Analytical Batch: VFC11870 Analytical Method: SW8021B Analyst: HM Analytical Date/Time: 05/07/14.09:39			Prep Batch: Prep Methor Prep Date/T Prep Initial V Prep Extract	VXX25809 d: SW5030E ime: 05/06/ Vt./Vol.: 5 m t Vol: 5 mL	8  4 08:00  L		

	R	eceived Da		14 10.00		
	Received Date: 04/30/14 09:53 Matrix: Water (Surface, Eff., Ground) Solids (%): Location:					
els .						
Result Qual	LOQ/CL	<u>DL</u> 0.186	<u>Units</u> ma/l	DF 1	Allowable Limits	Date Analyzed
1.05	0.013	0.100	mg/L	I		00/01/14 20:00
67.1	50-150		%	1		05/01/14 23:59
	i i i i	Prep Batch: Prep Method: Prep Date/Tir Prep Initial W Prep Extract	XXX30945 : SW3520C me: 05/01/1 /t./Vol.: 970 Vol: 1 mL	; 4 09:50 mL		
Result Qual			Units	DF	Allowable	Date Analyzed
2.25	0.515	0.155	mg/L	1		05/01/14 23:59
70.2	50-150		%	1		05/01/14 23:59
		Dron Databi	 			
	1	Prep Method: Prep Date/Tir Prep Initial W	: SW3520C me: 05/01/1 /t./Vol.: 970	;  4 09:50   mL		
	Result Qual       1.83       67.1       Result Qual       2.25       70.2	Result Qual       LOQ/CL         1.83       0.619         67.1       50-150         Result Qual       LOQ/CL         2.25       0.515         70.2       50-150	Image: system	Presult Qual       LOQ/CL       DL       Units         1.83       0.619       0.186       mg/L         67.1       50-150       %         Prep Batch: XXX30945 Prep Method: SW35200C Prep Date/Time: 05/01/1 Prep Initial Wt./Vol.: 970 Prep Extract Vol: 1 mL         Result Qual       LOQ/CL 0.515       DL 0.155       Units mg/L         70.2       50-150       %         Prep Batch: XXX30945 Prep Method: SW3520C Prep Date/Time: 05/01/1 Prep Initial Wt./Vol.: 970 Prep Date/Time: 05/01/1 Prep Initial Wt./Vol.: 970 Prep Extract Vol: 1 mL	Pesuit Qual         LOQ/CL         DL         Units         DF           1.83         0.619         0.186         mg/L         1           67.1         50-150         %         1           Prep Batch: XXX30945 Prep Method: SW3520C Prep Date/Time: 05/01/14 09:50 Prep Initial Wt./Vol.: 970 mL Prep Extract Vol: 1 mL           Result Qual         LOQ/CL 0.515         DL 0.155         Units         DF mg/L         1           70.2         50-150         %         1           Prep Batch: XXX30945 Prep Method: SW3520C Prep Date/Time: 05/01/14 09:50 Prep Method: SW3520C Prep Date/Time: 05/01/14 09:50 Prep Initial Wt./Vol.: 970 mL Prep Extract Vol: 1 mL	Pis       Allowable         Result Qual       LOQ/CL       DL       Units       DF       Limits         1.83       0.619       0.186       mg/L       1       Limits         67.1       50-150       %       1       Prep Batch: XXX30945         Prep Method:       SW3520C       Prep Date/Time:       05/01/14 09:50         Prep Initial Wt./Vol.:       970 mL       Prep Extract Vol:       1 mL         Result Qual       LOQ/CL       DL       Units       DF       Limits         70.2       50-150       %       1       Limits       Prep Batch: XXX30945         70.2       50-150       %       1       Prep Batch: XXX30945       Prep Method:       SW3520C         Prep Date/Time:       05/01/14 09:50       Prep Date/Time:       05/01/14 09:50       Prep Date/Time:       05/01/14 09:50         Prep Method:       SW3520C       Prep Date/Time:       05/01/14 09:50       Prep Date/Time:       05/01/14 09:50         Prep Date/Time:       05/01/14 09:50       Prep Date/Time:       05/01/14 09:50         Prep Date/Time:       05/01/14 09:50       Prep Date/Time:       05/01/14 09:50

Client Sample ID: <b>MW-15-0429</b> Client Project ID: <b>Old Seward</b> Lab Sample ID: 1141606009 Lab Project ID: 1141606		C R M S	ollection Da eceived Da latrix: Wate olids (%): ocation:	ate: 04/29/ ate: 04/30/ er (Surface	14 15:30 14 09:53 , Eff., Gro	bund)	
Results by Volatile Fuels							
Deservation	Describ Quest			1.1 14	DE	Allowable	Data Arrahmad
Parameter Gasoline Range Organics	7 98	<u>LOQ/CL</u> 1.00	<u>DL</u> 0.310	<u>Units</u> ma/l	<u>DF</u> 10	Limits	05/07/14 10:16
	7.50	1.00	0.510	mg/L	10		03/07/14 10.10
urrogates 4-Bromofluorobenzene	83.3	50-150		%	10		05/07/14 10:16
Analytical Batch: VFC11870 Analytical Method: AK101 Analyst: HM Analytical Date/Time: 05/07/14 10:16 Container ID: 1141606009-B		F F F	Prep Batch: Prep Methoc Prep Date/Ti Prep Initial V Prep Extract	VXX25809 d: SW5030E ime: 05/06/ Vt./Vol.: 5 m Vol: 5 mL	3 14 08:00 IL		
Parameter	Result Qual			Unite	DE	Allowable	Date Analyzed
Benzene	1790	<u>5.00</u>	<u>DL</u> 1.50	ug/L	10	Linits	05/08/14 19:24
Ethylbenzene	113	10.0	3.10	ug/L	10		05/08/14 19:24
o-Xylene	103	10.0	3.10	ug/L	10		05/08/14 19:24
P & M -Xylene	264	20.0	6.20	ug/L	10		05/08/14 19:24
Toluene	492	10.0	3.10	ug/L	10		05/08/14 19:24
urrogates							
1,4-Difluorobenzene	98.2	77-115		%	10		05/08/14 19:24
Batch Information							
Analytical Batch: VFC11874 Analytical Method: SW8021B Analyst: HM Analytical Date/Time: 05/08/14 19:24 Container ID: 1141606009-C		F F F	Prep Batch: Prep Methoc Prep Date/Ti Prep Initial V Prep Extract	VXX25819 d: SW5030E ime: 05/08/ <sup>-</sup> Vt./Vol.: 5 m Vol: 5 mL	3 14 08:00 IL		

Results of MW-16-0429							
Client Sample ID: <b>MW-16-0429</b> Client Project ID: <b>Old Seward</b> Lab Sample ID: 1141606010 Lab Project ID: 1141606			Collection Da Received Da Matrix: Wate Solids (%): Location:	ate: 04/29/ ate: 04/30/ <sup>:</sup> er (Surface	14 13:50 14 09:53 , Eff., Grc	pund)	
Results by Semivolatile Organic Fuels	5						
<u>Parameter</u> Diesel Range Organics	<u>Result Qual</u> 52.3	<u>LOQ/CL</u> 2.67	<u>DL</u> 0.800	<u>Units</u> mg/L	<u>DF</u> 4	<u>Allowable</u> <u>Limits</u>	Date Analyzed 05/02/14 14:46
Surrogates							
5a Androstane	108	50-150		%	4		05/02/14 14:46
Batch Information							
Analytical Batch: XFC11291 Analytical Method: AK102 Analyst: HM Analytical Date/Time: 05/02/14 14:46 Container ID: 1141606010-D			Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract	XXX30945 I: SW35200 me: 05/01/ <sup>,</sup> Vt./Vol.: 900 Vol: 1 mL	; 14 09:50 0 mL		
Parameter Residual Range Organics	<u>Result Qual</u> 10.9	<u>LOQ/CL</u> 0.556	<u>DL</u> 0.167	<u>Units</u> mg/L	<u>DF</u> 1	Allowable Limits	Date Analyzed 05/02/14 00:09
Surrogates							
n-Triacontane-d62	84.8	50-150		%	1		05/02/14 00:09
Batch Information							
Analytical Batch: XFC11290 Analytical Method: AK103 Analyst: AYC Analytical Date/Time: 05/02/14 00:09 Container ID: 1141606010-D			Prep Batch: Prep Method Prep Date/Ti Prep Initial W Prep Extract	XXX30945 I: SW35200 me: 05/01/ <sup>,</sup> Vt./Vol.: 900 Vol: 1 mL	;  4 09:50   mL		

Client Sample ID: <b>MW-16-0429</b> Client Project ID: <b>Old Seward</b> Lab Sample ID: 1141606010 Lab Project ID: 1141606		C R M Si La	ollection D eceived Da atrix: Wat olids (%): ocation:	ate: 04/29/ ate: 04/30/ <sup>,</sup> er (Surface	14 13:50 14 09:53 , Eff., Gro	ound)	
Results by <b>Volatile Fuels</b> <u>Parameter</u> Gasoline Range Organics	<u>Result Qual</u> 105	<u>LOQ/CL</u> 20.0	<u>DL</u> 6.20	<u>Units</u> mg/L	<u>DF</u> 200	<u>Allowable</u> <u>Limits</u>	Date Analyzed 05/07/14 09:57
urrogates 4-Bromofluorobenzene	82.4	50-150		%	200		05/07/14 09:57
Batch Information							
Analytical Batch: VFC11870 Analytical Method: AK101 Analyst: HM Analytical Date/Time: 05/07/14 09:57 Container ID: 1141606010-B		F F F	Prep Batch: Prep Methor Prep Date/T Prep Initial \ Prep Extrac	VXX25809 d: SW5030B ime: 05/06/1 Wt./Vol.: 5 m t Vol: 5 mL	8 14 08:00 L		
Parameter	Result Qual	LOQ/CL	DL	<u>Units</u>	DF	Allowable Limits	Date Analyzed
Benzene	16400	100	30.0	ug/L	200		05/07/14 09:5
Ethylbenzene	1990	200	62.0	ug/L	200		05/07/14 09:5
o-Xylene	4210	200	62.0	ug/L	200		05/07/14 09:5
P & M -Xylene Toluene	10300 23400	400 200	124 62.0	ug/L ug/L	200 200		05/07/14 09:5
urrogates				-			
1,4-Difluorobenzene	100	77-115		%	200		05/07/14 09:5
Batch Information							
Analytical Batch: VFC11870 Analytical Method: SW8021B Analyst: HM Analytical Date/Time: 05/07/14 09:57 Container ID: 1141606010-B		F F F F	Prep Batch: Prep Method Prep Date/T Prep Initial \ Prep Extrac	VXX25809 d: SW5030B ime: 05/06/1 Wt./Vol.: 5 m t Vol: 5 mL	8  4 08:00  L		

.ab Sample ID: 1141606011 .ab Project ID: 1141606		C R M S	ollection Da eceived Da latrix: Wate olids (%): ocation:	nte: 04/28/ te: 04/30/ <sup>;</sup> er (Surface	/14 11:26 14 09:53 , Eff., Gro	und)	
Results by Volatile Fuels							
<u>Parameter</u> Gasoline Range Organics	<u>Result Qual</u> 0.100 U	<u>LOQ/CL</u> 0.100	<u>DL</u> 0.0310	<u>Units</u> mg/L	<u>DF</u> 1	<u>Allowable</u> <u>Limits</u>	Date Analyzed 05/05/14 22:50
Jrrogates 1-Bromofluorobenzene	83.9	50-150		%	1		05/05/14 22:50
Analytical Batch: VFC11869 Analytical Method: AK101 Analyst: ST Analytical Date/Time: 05/05/14 22:50 Container ID: 1141606011-A			Prep Batch: Prep Method: Prep Date/Tir Prep Initial W Prep Extract	VXX25806 : SW5030E me: 05/05/ /t./Vol.: 5 m Vol: 5 mL	3 14 08:00 IL		
Parameter	Result Qual		ח	Units	DF	Allowable	Date Analyzed
3enzene	0.500 U	0.500	0.150	ug/L	1	Linito	05/05/14 22:50
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		05/05/14 22:50
o-Xylene	1.00 U	1.00	0.310	ug/L	1		05/05/14 22:50
<sup>o</sup> & M -Xylene	2.00 U	2.00	0.620	ug/L	1		05/05/14 22:50
ſoluene	1.00 U	1.00	0.310	ug/L	1		05/05/14 22:50
Jrrogates 1.4-Difluorobenzene	96.5	77-115		%	1		05/05/14 22:50
-							
Satch InformationAnalytical Batch: VFC11869Analytical Method: SW8021BAnalyst: STAnalytical Date/Time: 05/05/14 22:50Container ID: 1141606011-A			Prep Batch: Prep Method: Prep Date/Tir Prep Initial W Prep Extract	VXX25806 : SW5030E me: 05/05/ /t./Vol.: 5 m Vol: 5 mL	3 14 08:00 1L		

# SGS

Method Blank					
Blank ID: MB for HBN 1515 Blank Lab ID: 1208257	271 [VXX/25806]	Matrix	: Water (Surfa	ce, Eff., Ground)	
QC for Samples: 1141606011					
Results by <b>AK101</b>					
Parameter	Results	LOQ/CL	<u>DL</u>	<u>Units</u>	
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L	
Surrogates					
4-Bromofluorobenzene	81.4	50-150		%	
Batch Information		 			
Analytical Batch: VFC1186	9	Prep Ba	tch: VXX25806		
Analytical Method: AK101		Prep Me	thod: SW5030B	5	
Instrument: Agilent 7890 P	ID/FID	Prep Da	te/Time: 5/5/201	14 8:00:00AM	
Analyst: 51 Analytical Date/Time: 5/5/2	014 8·02·00PM	Prep Init Prep Ext	tract Vol: 5 m		
Analytical Date/Time: 5/5/2	014 8:02:00PM	Prep Exi	tract Vol: 5 mL		



Blank	Spike	Summary
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Blank Spike ID: LCS for HBN 1141606 [VXX25806] Blank Spike Lab ID: 1208260 Date Analyzed: 05/05/2014 18:47 Spike Duplicate ID: LCSD for HBN 1141606 [VXX25806] Spike Duplicate Lab ID: 1208261 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1141606011

Results by AK101			_						
	I	Blank Spike	e (mg/L)	S	pike Duplie	cate (mg/L)			
Parameter	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL
Gasoline Range Organics	1.00	0.999	100	1.00	0.916	92	(60-120)	8.70	(< 20)
Surrogates									
4-Bromofluorobenzene	0.0500		80	0.0500		78	(50-150)	2.40	
Batch Information									
Analytical Batch: VFC11869				Pre	Batch: V	XX25806			
Analytical Method: AK101				Pre	Method:	SW5030B			
Instrument: Agilent 7890 PID/	FID			Pre	Date/Tim	e: 05/05/201	4 08:00		
Analyst: ST				Spik	ke Init Wt./\	/ol.: 1.00 mg	g/L Extract \	/ol: 5 mL	
				Dup	e Init Wt./\	/ol.: 1.00 mg	J/L Extract V	ol: 5 mL	

### SGS

### Method Blank

Blank ID: MB for HBN 1515271 [VXX/25806] Blank Lab ID: 1208257

QC for Samples: 1141606011

#### Results by SW8021B

Parameter	Results	LOQ/CL	DL	<u>Units</u>
Benzene	0.250U	0.500	0.150	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
o-Xylene	0.500U	1.00	0.310	ug/L
P & M -Xylene	1.00U	2.00	0.620	ug/L
Toluene	0.500U	1.00	0.310	ug/L
Surrogates				
1,4-Difluorobenzene	100	77-115		%

#### **Batch Information**

Analytical Batch: VFC11869 Analytical Method: SW8021B Instrument: Agilent 7890 PID/FID Analyst: ST Analytical Date/Time: 5/5/2014 8:02:00PM Prep Batch: VXX25806 Prep Method: SW5030B Prep Date/Time: 5/5/2014 8:00:00AM Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL

Matrix: Water (Surface, Eff., Ground)



#### **Blank Spike Summary**

Blank Spike ID: LCS for HBN 1141606 [VXX25806] Blank Spike Lab ID: 1208258 Date Analyzed: 05/05/2014 19:06 Spike Duplicate ID: LCSD for HBN 1141606 [VXX25806] Spike Duplicate Lab ID: 1208259 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1141606011

### Results by SW8021B

		Blank Spike	e (ug/L)	;	Spike Dupli	cate (ug/L)			
Parameter	Spike	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL
Benzene	100	111	111	100	113	113	(80-120)	2.00	(< 20)
Ethylbenzene	100	112	112	100	114	114	(75-125)	1.80	(< 20)
o-Xylene	100	105	105	100	106	106	(80-120)	1.70	(< 20)
P & M -Xylene	200	217	109	200	221	110	(75-130)	1.80	(< 20)
Toluene	100	111	111	100	113	113	(75-120)	2.10	(< 20)
Surrogates									
1,4-Difluorobenzene	50		107	50		106	(77-115)	0.79	

#### **Batch Information**

Analytical Batch: VFC11869 Analytical Method: SW8021B Instrument: Agilent 7890 PID/FID Analyst: ST Prep Batch: VXX25806 Prep Method: SW5030B Prep Date/Time: 05/05/2014 08:00 Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL Dupe Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL

#### Method Blank

SG:

Blank ID: MB for HBN 1515411 [VXX/25809] Blank Lab ID: 1208570

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1141606001, 1141606002, 1141606003, 1141606004, 1141606005, 1141606006, 1141606007, 1141606008, 1141606009, 1141606010

#### Results by AK101

Parameter Gasoline Range Organics	<u>Results</u> 0.0500U	<u>LOQ/CL</u> 0.100	<u>DL</u> 0.0310	<u>Units</u> mg/L	
Surrogates					
4-Bromofluorobenzene	82.3	50-150		%	
Batch Information					
Analytical Batch: VFC11870 Analytical Method: AK101 Instrument: Agilent 7890 PID/FID Analyst: HM Analytical Date/Time: 5/7/2014 4:04:01AM		Prep Prep Prep Prep Prep	Batch: VXX25809 Method: SW5030B Date/Time: 5/6/201 Initial Wt./Vol.: 5 m Extract Vol: 5 mL	4 8:00:00AM L	



Blank Spike Summary         Blank Spike ID: LCS for HBN 1141606 [VXX25809]         Blank Spike Lab ID: 1208572         Date Analyzed: 05/07/2014 05:00         CG for Samples: 1141606001, 1141606002, 1141606003, 1141606005, 11416060		•									
Blank Spike ID: LCS for HBN 1141606 (VXX25809)         Spike Duplicate ID: LCSD for HBN 1141606 (VXX25809)           Date Analyzed: 05/07/2014 05:00         Spike Duplicate ID: 1208574 Matrix: Water (Surface, Eff., Ground)           QC for Samples:         1141606002, 1141606003, 1141606005, 1141606005, 1141606006, 1141606007, 1141606006, 1141606007, 1141606006, 1141606007, 1141606008, 1141606008, 1141606001           Result Sby AK101         Blank Spike (mg/L)         Spike Duplicate (mg/L)           Parameter         Spike Result Rec1(%)         Spike Result Rec1(%)         Spike Result Rec1(%)           Saurogates         0.0500         86         0.0500         88         (50-150)         2.30           Batch Information         Prep Batch: VXX25809         Prep Matrix: WX02809         Prep Date/Time: 63662014 08:00         Spike Init WL/Vol: 1.00 mg/L         Extract Vol: 5 mL		Blank Spike Summary									
OC for Samples:         1141606001, 1141606002, 1141606004, 1141606006, 1141606007, 1141606006, 1141606007, 1141606008, 1141606007, 1141606008, 1141606007, 1141606008, 1141606007, 1141606008, 1141606007, 1141606008, 1141606007, 1141606008, 1141606008, 1141606007, 1141606008, 1141606008, 1141606008, 1141606007, 1141606008, 1141606008, 1141606008, 1141606007, 1141606008, 1141606008, 1141606007, 1141606008, 1141606008, 1141606007, 1141606008, 1141606008, 1141606008, 1141606007, 1141606008, 1141608008, 1141608008, 1141608008, 1141608008, 1141608008, 1141608008, 1141608008, 1141608008, 1141608008, 114160808, 1141608008, 1141608008, 1141608008, 114160808, 11408808, 114160808, 114160808, 114160808, 114160808, 11416		Blank Spike ID: LCS for HBN 1 Blank Spike Lab ID: 1208572 Date Analyzed: 05/07/2014 (	141606 [ )5:00	VXX25809	<ul> <li>Spike Duplicate ID: LCSD for HBN 1141606</li> <li>[VXX25809]</li> <li>Spike Duplicate Lab ID: 1208574</li> <li>Matrix: Water (Surface, Eff., Ground)</li> </ul>						
Results by AK101           Blank Spike (mg/L)         Spike Duplicate (mg/L)           Parameter         Spike         Result         Rec (%)         Spike         Result         R		QC for Samples: 114160600 114160600	)1, 114160 )8, 114160	6002, 1141 6009, 1141	606003, 114 606010	1606004,	114160600	05, 1141606	006, 1141606	007,	
Blank Spike (mg/L)         Spike Duplicate (mg/L)         Spike Cup/Lab         Rec (%)         CL         RPD (%)         RPD (L)           Gasoline Range Organics         1.00         0.955         96         1.00         0.984         98         (60-120)         2.90         (<20)           Surrogates		Results by AK101			_						
Parameter         Spike         Result         Rec (%)         Spike         Result         Rec (%)         CL         RPD (%)         RPD (1)           Gasoline Range Organics         1.00         0.955         96         1.00         0.984         98         (60-120)         2.90         (<20)           Surrogates         -			E	Blank Spike	(mg/L)	S	pike Dupli	cate (mg/L)			
Gasoline Range Organics         1.00         0.955         96         1.00         0.984         98         (60-120)         2.90         (< 20)		Parameter	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL
Surrogates         4-Bronofluorobenzene       0.0500       86       0.0500       88       (50-150)       2.30         Eatch Information       Analytical Batch: VFC11870       Prep Batch: VXX25809       Prep Date/Time: 05/06/2014       08:00         Instrument: Aglient 7890 PID/FID       Prep Date/Time: 05/06/2014       08:00       Spike Init Wt./Vol.: 1.00 mg/L       Extract Vol: 5 mL         Uppe Init Wt./Vol.: 1.00 mg/L       Extract Vol: 5 mL       Dupe Init Wt./Vol.: 1.00 mg/L       Extract Vol: 5 mL		Gasoline Range Organics	1.00	0.955	96	1.00	0.984	98	(60-120)	2.90	(< 20)
4-Bromofluorobenzene       0.0500       86       0.0500       88       (50-150)       2.30         Eatch Information       Analytical Batch: VFC11870       Prep Batch: VXX25809       Prep Match: SVK9308         Instrument: Aglient 7890 PID/FID       Prep Date/Time: 05/06/2014 08:00       Spike Init WL/Vol.: 1.00 mg/L       Extract Vol: 5 mL         Analyst: HM       Dupe Init WL/Vol.: 1.00 mg/L       Extract Vol: 5 mL       Dupe Init WL/Vol.: 1.00 mg/L       Extract Vol: 5 mL	;	Surrogates									
Batch Information         Analytical Batch: VFC11870       Prep Batch: VXX25809         Analytical Method: AK101       Prep Method: SW5030B         Instrument: Agilent 7890 PID/FID       Prep Date/Time: 05/06/2014 08:00         Analyst: HM       Spike Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL         Dupe Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL		4-Bromofluorobenzene	0.0500		86	0.0500		88	(50-150)	2.30	
Analytical Batch: VFC11870       Prep Batch: VXX25809         Analytical Method: AK101       Prep Method: SW5030B         Instrument: Agilent 7890 PID/FID       Prep Date/Time: 05/06/2014 08:00         Analyst: HM       Spike Init Wt./Vol.: 1.00 mg/L         Extract Vol: 5 mL       Dupe Init Wt./Vol.: 1.00 mg/L         Extract Vol: 5 mL       Sinking and another the struct Vol: 5 mL		Batch Information									
		Analytical Batch: VFC11870 Analytical Method: AK101 Instrument: Agilent 7890 PID/FI Analyst: HM	D			Prej Prej Spik Dup	b Batch: V b Method: b Date/Tim ce Init Wt./\ e Init Wt./\	XX25809 SW5030B e: 05/06/20 Vol.: 1.00 m /ol.: 1.00 m	14 08:00 g/L Extract V 	Vol: 5 mL ol: 5 mL	

#### Method Blank

SG

Blank ID: MB for HBN 1515411 [VXX/25809] Blank Lab ID: 1208570 Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1141606001, 1141606002, 1141606003, 1141606004, 1141606005, 1141606006, 1141606007, 1141606008, 1141606009, 1141606010

Results by SW8021B					
Parameter	Results	LOQ/CL	DL	<u>Units</u>	
Benzene	0.250U	0.500	0.150	ug/L	
Ethylbenzene	0.500U	1.00	0.310	ug/L	
o-Xylene	0.500U	1.00	0.310	ug/L	
P & M -Xylene	1.00U	2.00	0.620	ug/L	
Toluene	0.500U	1.00	0.310	ug/L	
Surrogates					
1,4-Difluorobenzene	102	77-115		%	
Batch Information					

Analytical Batch: VFC11870 Analytical Method: SW8021B Instrument: Agilent 7890 PID/FID Analyst: HM Analytical Date/Time: 5/7/2014 4:04:01AM

Prep Batch: VXX25809 Prep Method: SW5030B Prep Date/Time: 5/6/2014 8:00:00AM Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL



#### **Blank Spike Summary**

Blank Spike ID: LCS for HBN 1141606 [VXX25809] Blank Spike Lab ID: 1208571 Date Analyzed: 05/07/2014 04:41 Spike Duplicate ID: LCSD for HBN 1141606 [VXX25809] Spike Duplicate Lab ID: 1208573 Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1141606001, 1141606002, 1141606003, 1141606004, 1141606005, 1141606006, 1141606007, 1141606008, 1141606009, 1141606010

Results by SW8021B									
		Blank Spike (ug/L)			Spike Duplicate (ug/L)				
Parameter	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>CL</u>	<u>RPD (%)</u>	RPD CL
Benzene	100	111	111	100	114	114	(80-120)	3.40	(< 20)
Ethylbenzene	100	111	111	100	115	115	(75-125)	3.50	(< 20)
o-Xylene	100	104	104	100	107	107	(80-120)	2.40	(< 20)
P & M -Xylene	200	214	107	200	222	111	(75-130)	3.40	(< 20)
Toluene	100	111	111	100	115	115	(75-120)	3.80	(< 20)
Surrogates									
1,4-Difluorobenzene	50		105	50		107	(77-115)	2.00	

#### **Batch Information**

Analytical Batch: VFC11870 Analytical Method: SW8021B Instrument: Agilent 7890 PID/FID Analyst: HM Prep Batch: VXX25809 Prep Method: SW5030B Prep Date/Time: 05/06/2014 08:00 Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL Dupe Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL

## SGS

### Method Blank

Blank ID: MB for HBN 1518361 [VXX/25819] Blank Lab ID: 1208811

QC for Samples: 1141606009

#### Results by SW8021B

Parameter	<u>Results</u>	LOQ/CL	DL	<u>Units</u>
Benzene	0.250U	0.500	0.150	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
o-Xylene	0.500U	1.00	0.310	ug/L
P & M -Xylene	1.00U	2.00	0.620	ug/L
Toluene	0.500U	1.00	0.310	ug/L
Surrogates				
1,4-Difluorobenzene	94.7	77-115		%

#### **Batch Information**

Analytical Batch: VFC11874 Analytical Method: SW8021B Instrument: Agilent 7890 PID/FID Analyst: HM Analytical Date/Time: 5/8/2014 3:57:01PM Prep Batch: VXX25819 Prep Method: SW5030B Prep Date/Time: 5/8/2014 8:00:00AM Prep Initial Wt./Vol.: 5 mL Prep Extract Vol: 5 mL

Matrix: Water (Surface, Eff., Ground)



#### **Blank Spike Summary**

Blank Spike ID: LCS for HBN 1141606 [VXX25819] Blank Spike Lab ID: 1208812 Date Analyzed: 05/08/2014 16:53 Spike Duplicate ID: LCSD for HBN 1141606 [VXX25819] Spike Duplicate Lab ID: 1208814 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1141606009

#### Results by SW8021B

Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Spike	Result	<u>Rec (%)</u>	Spike Result Rec (%)	<u>CL</u>	<u>RPD (%)</u>	RPD CL		
100	111	111	100	114	114	(80-120)	3.40	(< 20)
100	110	110	100	114	114	(75-125)	3.10	(< 20)
100	103	103	100	106	106	(80-120)	3.00	(< 20)
200	212	106	200	220	110	(75-130)	3.30	(< 20)
100	111	111	100	115	115	(75-120)	3.40	(< 20 )
50		101	50		109	(77-115)	7.60	
	<u>Spike</u> 100 100 200 100 50	Spike         Result           100         111           100         110           100         103           200         212           100         111	Blank Spike (ug/L)           Spike         Result         Rec (%)           100         111         111           100         110         110           100         103         103           200         212         106           100         111         111           50         101	Blank Spike (ug/L)         Spike           Spike         Result         Rec (%)         Spike           100         111         111         100           100         110         110         100           100         103         103         100           200         212         106         200           100         111         111         100           50         101         50	Blank Spike (ug/L)         Spike Dupli           Spike         Result         Rec (%)         Spike         Result           100         111         111         100         114           100         110         110         100         114           100         103         103         100         106           200         212         106         200         220           100         111         111         100         115           50         101         50         50         50	Blank Spike (ug/L)         Spike Duplicate (ug/L)           Spike         Result         Rec (%)         Spike         Result         Rec (%)           100         111         111         100         114         114           100         110         110         100         114         114           100         103         103         100         106         106           200         212         106         200         220         110           100         111         111         100         115         115           50         101         50         109         109	Blank Spike (ug/L)         Spike Duplicate (ug/L)           Spike         Result         Rec (%)         Spike         Result         Rec (%)         CL           100         111         111         100         114         114         (80-120)           100         110         110         100         114         114         (80-120)           100         103         103         100         106         106         (80-120)           200         212         106         200         220         110         (75-130)           100         111         111         100         115         115         (75-120)           50         101         50         109         (77-115)	Blank Spike (ug/L)         Spike Duplicate (ug/L)           Spike         Result         Rec (%)         Spike         Result         Rec (%)         CL         RPD (%)           100         111         111         100         114         114         (80-120)         3.40           100         110         110         100         114         114         (80-120)         3.40           100         103         103         100         106         106         (80-120)         3.00           200         212         106         200         220         110         (75-130)         3.30           100         111         111         100         115         115         (75-120)         3.40           50         101         50         109         (77-115)         7.60

#### **Batch Information**

Analytical Batch: VFC11874 Analytical Method: SW8021B Instrument: Agilent 7890 PID/FID Analyst: HM Prep Batch: VXX25819 Prep Method: SW5030B Prep Date/Time: 05/08/2014 08:00 Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL Dupe Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL
# SGS

### Method Blank

Blank ID: MB for HBN 1514367 [XXX/30945] Blank Lab ID: 1207604 Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1141606001, 1141606002, 1141606003, 1141606004, 1141606005, 1141606006, 1141606007, 1141606008, 1141606009, 1141606010

#### Results by AK102

-							
Parameter Diesel Range Organics	<u>Results</u> 0.278J	<u>LOQ/CL</u> 0.600	<u>DL</u> 0.180	<u>Units</u> mg/L			
Surrogates							
5a Androstane	72.4	60-120		%			
Batch Information							
Analytical Batch: XFC112	290	Prep Batch	n: XXX30945				
Analytical Method: AK102	Prep Metho						
Instrument: HP 6890 Ser	ies II FID SV D R	Prep Date/	Time: 5/1/201	4 9:50:00AM			
Analyst: AYC		Prep Initial Wt./Vol.: 1000 mL					
Analytical Date/Time: 5/1	/2014 10:11:00PM	Prep Extract Vol: 1 mL					

Print Date: 05/13/2014 3:42:21PM



Blank Spike Summary									
Blank Spike ID: LCS for H Blank Spike Lab ID: 12076 Date Analyzed: 05/01/20	BN 1141606 605 14 22:21	[XXX3094	5]	Spike Duplicate ID: LCSD for HBN 1141606 [XXX30945] Spike Duplicate Lab ID: 1207606 Matrix: Water (Surface, Eff., Ground)					
QC for Samples: 11416 11416	06001, 11416 06008, 11416	06002, 1141 06009, 1141	606003, 114 606010	41606004,	114160600	05, 1141606	006, 1141606	007,	
Results by AK102									
		Blank Spike	(mg/L)	5	Spike Dupli	cate (mg/L)			
Parameter	Spike	Result	<u>Rec (%)</u>	Spike	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL
Diesel Range Organics	5	4.64	93	5	4.32	86	(75-125)	7.20	(< 20)
urrogates									
5a Androstane	0.1		95	0.1		89	(60-120)	6.50	
Batch Information									
Analytical Batch: XFC1129	0			Pre	p Batch: X	XX30945			
Analytical Method: AK102				Pre	p Method:	SW3520C	4 00 50		
Analyst: AYC	SIIFIDSVDF	ζ.		Pre	p Date/ I im ke Init Wt /\	e: 05/01/201	Extract Vol	1 ml	
Analyst. ATO				Dup	be Init Wt./\	/ol.: 5 mg/L	Extract Vol:	1 mL	

Print Date: 05/13/2014 3:42:22PM

# SGS

#### Method Blank

Blank ID: MB for HBN 1514367 [XXX/30945] Blank Lab ID: 1207604

Instrument: HP 6890 Series II FID SV D R

Analytical Date/Time: 5/1/2014 10:11:00PM

Matrix: Water (Surface, Eff., Ground)

Prep Date/Time: 5/1/2014 9:50:00AM

Prep Initial Wt./Vol.: 1000 mL

Prep Extract Vol: 1 mL

QC for Samples:

Analyst: AYC

1141606001, 1141606002, 1141606003, 1141606004, 1141606005, 1141606006, 1141606007, 1141606008, 1141606009, 1141606010

#### Results by AK103 LOQ/CL <u>Units</u> Parameter **Results** DL **Residual Range Organics** 0.262J 0.500 0.150 mg/L Surrogates n-Triacontane-d62 79.4 60-120 % **Batch Information** Analytical Batch: XFC11290 Prep Batch: XXX30945 Analytical Method: AK103 Prep Method: SW3520C

Print Date: 05/13/2014 3:42:22PM



Blank Spike Summary											
Blank Spike ID: LCS for HBI Blank Spike Lab ID: 120760 Date Analyzed: 05/01/2014	N 1141606 5 1 22:21	[XXX3094	5]	Spike Duplicate ID: LCSD for HBN 1141606 [XXX30945] Spike Duplicate Lab ID: 1207606 Matrix: Water (Surface, Eff., Ground)							
QC for Samples: 1141606 1141606	6001, 114160 6008, 114160	06002, 1141 06009, 1141	606003, 114 606010	003, 1141606004, 1141606005, 1141606006, 1141606007, 0010							
Results by AK103											
		Blank Spike	(mg/L)	5	Spike Dupli	cate (mg/L)					
Parameter	<u>Spike</u>	Result	<u>Rec (%)</u>	<u>Spike</u>	Result	<u>Rec (%)</u>	CL	<u>RPD (%)</u>	RPD CL		
Residual Range Organics	5	5.04	101	5	4.84	97	(60-120)	4.00	(< 20 )		
Surrogates											
n-Triacontane-d62	0.1		87	0.1		81	(60-120)	6.50			
Batch Information											
Analytical Batch: XFC11290				Pre	p Batch: X	XX30945					
Analytical Method: AK103				Pre	p Method:	SW3520C					
Instrument: HP 6890 Series	II FID SV D R	2		Pre	p Date/Tim	e: 05/01/20'	14 09:50	1 ml			
Analyst: AYC				Dup	be Init Wt./\	/ol.: 5 mg/L /ol.: 5 mg/L	Extract Vol.	1 mL			

Print Date: 05/13/2014 3:42:23PM



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			BGES				Instr	uctio	ns: S	Sectio	ns 1	- 5 n	nust	be fil	led o	ut.		~
	CLIENT:						On	nissic	ons m	ay de	lay t	ne or	ISET C	or ana	aiysis	•	1	Page 1 of 2
-	CONTACT:	Jayne Martin PHC	ONE NO:	907-644-	2900	Sect	ion 3			Preservative								
ection .	PROJECT NAME:	PRO Old Seward PWS PERI	IECT/ D/ /IT#:		# C		HCI	HCL						$\square$				
0) O	REPORTS TO	): E-M	AIL:			O N	Туре											
		Jayne Martin	jayne	@bgesinc.co	m	Т	C = COMP			1								
	INVOICE TO: QUOTE #: 10772B BGES P.O. #:				В	A I N	GRAB Mi=	EX 021B)	0 \K103)									
	RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	E R S	Multi Incre- mental Soils	GRO/BTF (AK101/8	DRO/RR (AK102//									REMARKS/ LOC ID
	DA-F	MW-1-6428	04/28/14	17:02	WATER	5	G	Х	×									
	2)A-F	MW - 2 - 04 29	04/29/14	17:05	WATER	5	G	×	X									
	3A-E	MW-5-0428	04/28/14	14:48	WATER	5	G	×	×									
u0	(4)A-E	B6/VE - 0429	64/29/14	11:50	WATER	5	G	Х	x									
ecti	(3)A-E	MW-11-0428	04/28/14	11:26	WATER	5	6	x	x									
S	DA-E	MW-12-0428	04/22/14	13:20	WATER	5	6	×	x									
	DA-E.	MW-13-0429 MW-14-6429	64/29/14	19:15	LATER	5	G	X	х									
	8A-E	MW - 14- 0429	04/29/14	13:07	WATER	5	6	×	x									
	DA-E	MU-15-0429	04/29/14	15:30	WATER	5	6	×	×									
	DA-E	MW-16-6429	oy Izaliy	13:50	w ATRR	5	a	×	x									
Γ	Relinguishe	d By: (1)	Date	Time	Received By	<i>ı</i> :				Secti	on 4	DOD	Projec	ct? Ye	s No	Data	a Delive	erable Requirements:
	TARWON	- Gospony	4/30/14	9=53	france of the state of the state of the state		>			Coole	er ID: _					Œ	VEL Z	<u> </u>
	Relinquished	I By: (2)	Date	Time	Received By	1:				Reques	sted Tu	Irnarou	nd Tim	e and/	or Spec	ial Inst	ruction	s:
S N				and the second											30	cooutil	S(M	L GKOLDIEX
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	Relinquished	1 By: (4)	Date	Time A953	Received Fo	or Lebora	atory By:	ry By: or Ambient [] INTACT BROKEN				BROKEN ABSENT						
		and the second	ן יזיכוו	VIJ	Slin	MMaxi			(See	attach	ed San	iple Re	ceipt F	Form)	(See a	ttachec	I Sample Receipt Form)	

[ ] 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
 [ ] 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

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Alaska

2

198

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	CLIENT:	an tea ann an Arland ann an		Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.							Page 1 of 2							
	CONTACT	Jayne Martin Pl	IONE NO:	907-644-	2900	Sec	tion 3					Prese	vative					
ection 1	PROJECT	PF Old Seward PV PE	DJECT/ SID/ RMIT#:			# C		HCI	, HCI									/
S	REPORTS TO	: E-	MAIL:			O N	Туре											
		Jayne Martin	jayne	jayne@bgesinc.com			COMP G =											
	INVOICE TO:	Q BGES P.	JOTE #: ). #:	10772	2B	A I N	GRAB MI =	EX 021B)	0 VK103)									
	RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	E R S	Multi Incre- mental Soils	GRO/BTE (AK101/8	DRO/RR (AK102/4									REMARKS/ LOC ID
	MA-C	TRIP BLANK			•••	3		X										TRIP BLANK IN COOLER W GROBTEX
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2	N							1										
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F	Relinguished	i By: (1)	Date	Time	Received By	ŗ	<hr/>			Sect	ion 4	DOI	) Projec	ct? Ye	s(No)	Data	a Delive	erable Requirements:
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	Relinquished	By: (2)	Date	Time	Received By	V:	/			Reque	sted Tu	Irnarou	und Tim	ne and/	or Spec	ial Inst	tructior	ns:
n 5	)		ANY IS DOWN AND A REAL PROPERTY A REAL PROPERTY AND A REAL PROPERT	**********************													5 0001	EP-S) UL GROBIEX
ectic	Relinquished	By: (3)	Date	Time	Received B	y:				52	ANDA	ND	10	DA	শ	in	10	t 3 coolers,
Ň										Temp	Blank '	·c:(	5.14	+2	$\alpha$	Ch	ain of C	Custody Seal: (Circle)
	Relinquished	By: (4)	Date	Time	Recéived Fo	or Labor	atory By:	1				or Am	bient [	]		INT	АСТ	BROKEN ABSENT
	Helinguished by: (4) Jate Hind				Sound	H)	May	$\sim$	ノ	(See attached Sample Receipt Form) (See attached Sample Receip				d Sample Receipt Form)				

[ ] 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
 [ ] 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

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# SAMPLE RECEIPT FORM

Review Criteria:	Condition:	Comments/Action Taken:
Were <b>custody seals</b> intact? Note # & location, if applicable.	Yes No NAR	
COC accompanied samples?	Yes No N/A	
<b>Temperature blank</b> compliant* (i.e., 0-6°C after CF)?	Yes No N/A-	Rolar 3 had valatilas
* Note: Exemption permitted for chilled samples collected less than 8 hours ago.		Couler I rad volagites.
Cooler ID: @ $-U_i U_w$ w/ Therm.ID: $23F_w$		
Cooler ID: $2$ @ $-0, 3$ w/ Therm.ID: $20$		
Cooler ID: $3 @ -0.1 w/$ Therm.ID: $\pm 2.00$		
Cooler ID: @ w/ Therm.ID:		
Cooler ID: @ w/ Therm.ID:		
Note: If non-compliant, use form FS-0029 to document affected samples/analyses.		
If samples are received <u>without</u> a temperature blank, the "cooler		
temperature" will be documented in lieu of the temperature blank &		
"COOLER TEMP" will be noted to the right. In cases where neither a		
temp blank <u>nor</u> cooler temp can be obtained, note "ambient" or "chilled."		
If temperature(s) <0°C, were all sample containers ice free?	Yes No N/A	
Delivery method (specify all that apply):	Note ABN/	
USPS Alert Courier C&D Delivery AK Air	tracking #	
Lynden Carlile ERA PenAir	See Attached	
FedEx UPS NAC Other:	or MIA	
$\rightarrow$ For WO# with airbills, was the WO# & airbill	UI UIA	
info recorded in the Front Counter eLog?	Yes No (N/A)	
$\rightarrow$ For samples received with payment, note amount (\$) and	cash / check / CC	(circle one) or note:
→ For samples received in FBKS, ANCH staff will verify all criter	ia are reviewed.	SRF Initiated by: N/A
Were samples received within hold time?	Yes No N/A	
Note: Refer to form F-083 "Sample Guide" for hold time information.	$\sum_{i=1}^{n}$	
Do samples match COC* (i.e., sample IDs, dates/times collected)?	(Yes) No N/A	
* Note: Exemption permitted if times differ <1 hr; in that case, use times on COC.		
Were analyses requested unambiguous?	(Yes) No N/A	
Were samples in good condition (no leaks/cracks/breakage)?	Yes No N/A	
Packing material used (specify all that apply): Bubble Wrap		
Separate plastic bags Vermiculite Other:		
Were all VOA vials free of headspace (i.e., bubbles $\leq 6 \text{ mm}$ )?	(Yes) No N/A	
Were all soil VOAs field extracted with MeOH+BFB?	Yes No (N/A)	
Were proper containers (type/mass/volume/preservative*) used?	(Yes) No N/A	
* Note: Exemption permitted for waters to be analyzed for metals.		
Were <b>Trip Blanks</b> (i.e., VOAs, LL-Hg) in cooler with samples?	(Yes) No N/A	
For special handling (e.g., "MI" or foreign soils, lab filter, limited	Yes No N/A	
volume, Ref Lab), were bottles/paperwork flagged (e.g., sticker)?		
For preserved waters (other than VOA vials, LL-Mercury or	(Yes) No N/A	
microbiological analyses), was pH verified and compliant?		
If pH was adjusted, were bottles flagged (i.e., stickers)?	Yes No N/A)	
For RUSH/SHORT Hold Time, were COC/Bottles flagged	Yes No (N/A)	
accordingly? Was Rush/Short HT email sent, if applicable?		
For SITE-SPECIFIC QC, e.g. BMS/BMSD/BDUP, were	Yes No (N/A)	
containers / paperwork flagged accordingly?		
For any question answered "No," has the PM been notified and	Yes No (N/A)	SRF Completed by: 1
the problem resolved (or paperwork put in their bin)?		PM = 7' $NA$
Was PEER REVIEW of sample numbering/labeling completed?	Yes No (N/A)	Peer Reviewed by: (N/A)
Additional notes (if applicable):		

Note to Client: Any "no" circled above indicates non-compliance with standard procedures and may impact data quality.



# **Sample Containers and Preservatives**

Container Id	Preservative	Container Condition
1141606001-A	HCL to $pH < 2$	OK
1141606001-B	HCL to $pH < 2$	OK
1141606001-C	HCL to $pH < 2$	OK
1141606001-D	HCL to $pH < 2$	OK
1141606001-E	HCL to pH < 2	OK
1141606002-A	HCL to $pH < 2$	OK
1141606002-B	HCL to $pH < 2$	OK
1141606002-C	HCL to $pH < 2$	OK
1141606002-D	HCL to $pH < 2$	OK
1141606002-Е	HCL to $pH < 2$	OK
1141606003-A	HCL to $pH < 2$	OK
1141606003-В	HCL to $pH < 2$	OK
1141606003-C	HCL to pH < 2	ОК
1141606003-D	HCL to pH < 2	OK
1141606003-E	HCL to pH < 2	OK
1141606004-A	HCL to pH < 2	OK
1141606004-B	HCL to pH < 2	ОК
1141606004-C	HCL to pH < 2	OK
1141606004-D	HCL to pH < 2	OK
1141606004-E	HCL to pH < 2	OK
1141606005-A	HCL to pH < 2	OK
1141606005-В	HCL to pH < 2	ОК
1141606005-C	HCL to pH < 2	OK
1141606005-D	HCL to pH < 2	OK
1141606005-Е	HCL to pH < 2	OK
1141606006-A	HCL to pH < 2	OK
1141606006-В	HCL to pH < 2	OK
1141606006-C	HCL to pH < 2	OK
1141606006-D	HCL to pH < 2	OK
1141606006-Е	HCL to $pH < 2$	OK
1141606007-A	HCL to pH < 2	OK
1141606007-В	HCL to pH < 2	OK
1141606007-C	HCL to pH < 2	ОК
1141606007 <b>-</b> D	HCL to pH < 2	OK
1141606007-Е	HCL to pH < 2	OK
1141606008-A	HCL to pH < 2	OK
1141606008-В	HCL to pH < 2	OK
1141606008-C	HCL to pH < 2	OK
1141606008-D	HCL to pH < 2	OK
1141606008-E	HCL to pH < 2	OK
1141606009-A	HCL to $pH < 2$	OK
1141606009-B	HCL to pH < 2	OK

Container Id	Preservative	Container Condition
1141606009-C	HCL to pH < 2	OK
1141606009-D	HCL to pH < 2	ОК
1141606009-E	HCL to pH < 2	OK
1141606010-A	HCL to pH < 2	ОК
1141606010-В	HCL to pH < 2	ОК
1141606010-C	HCL to pH < 2	OK
1141606010-D	HCL to pH < 2	ОК
1141606010-E	HCL to pH < 2	ОК
1141606011-A	HCL to pH < 2	OK
1141606011-B	HCL to pH < 2	OK
1141606011-C	HCL to $pH < 2$	OK

Container Id

ι

Preservative

Container Condition

Container Id

<u>Preservative</u>

Container Condition

Container Condition Glossary

OK - The container was received at an acceptable pH for the analysis requested.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added. PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was

insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

BU - The container was received with headspace greater than 6mm.

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# APPENDIX C LABORATORY ANALYTICAL DATA QUALITY CONTROL CHECKLIST

# Laboratory Data Review Checklist

### 3. Laboratory Sample Receipt Documentation

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

The temperatures of Coolers 1, 2, and 3, were measured at -0.6, -0.3, and -0.1 degrees Celsius (C), respectively, by the laboratory at the time of receipt. The temperatures in the coolers were below the prescribed optimal temperature range of 4 degrees Celsius +/- 2 degrees. However, because this recorded temperature was below the acceptance range, there is a reduced potential for contaminant loss within the samples due to natural attenuation. For this reason, it is our opinion that this QC failure does not affect the acceptability of the data for their intended use.

		b.	Sample pres	servatio lorinate	on acceptable – acidified ed Solvents, etc.)?	waters, Meth	anol preserved VOC soil (GRO, BTEX,
			Yes	No	NA (Please explain.)		Comments:
		c.	Sample con Yes	dition No	documented – broken, les NA (Please explain.)	aking (Metha	nol), zero headspace (VOC vials)? Comments:
		N	o irregularit	ties or a	abnormalities with resp	ect to sample	e containers were reported.
		d.	If there wer containers/p samples, etc	e any c preserv c.?	liscrepancies, were they a ation, sample temperatur	documented? e outside of a	For example, incorrect sample cceptable range, insufficient or missing
			Yes	No	(NA) (Please explain.)		Comments:
		N	o irregulari	ties we	re reported or observed	d.	
		e.	Data quality	y or usa	bility affected? (Please e	explain.)	Comments:
		N	V/A				
4	C		T				
4.	<u>Cas</u>	<u>e r</u> a.	Present and Yes	unders No	tandable? NA (Please explain.)		Comments:
		b.	Discrepanci	ies, erro	ors or QC failures identif	ied by the lab	<u>)</u> ?
			Yes		NA (Please explain.)		Comments:
		c.	What is the Yes	effect No	on data quality/usability $(NA)$ (Please explain)	according to	the case narrative?
		G	Les Ah show	•	(111) Thease explain.)		comments.
		0	ee 40, abov	<b>C.</b>			Comments:
5.	<u>San</u>	npl	es Results				
		a.	Correct ana	lyses p	erformed/reported as req	uested on CC	IC?
				110	NA (I lease explain.)		comments.
		b.	All applicat	ole holo	ling times met?		
			Yes	No	NA (Please explain.)		Comments:

	c. 4	All soils rep	orted	on a dry weight basis?	
		Yes	No	NA Please explain.)	Comments:
	d. 1	Are the repo project?	orted F	QLs less than the Cleanup Lev	el or the minimum required detection level for the
	-	Yes	No	NA (Please explain.)	Comments:
	e. ]	Data quality Yes	or us No	ability affected?	Comments
6. <u>QC</u>	<u>C Sam</u> a. 1	u <u>ples</u> Method Bla	nk		
		i. One Yes	metho No	od blank reported per matrix, an NA (Please explain.)	nalysis and 20 samples? Comments:
		ii. All r Yes	nethoo No	d blank results less than PQL? NA (Please explain.)	Comments:
	L	iii. If ab	ove P	QL, what samples are affected	? Comments:
	N/	'A			
		iv. Do t	he aff	ected sample(s) have data flags	and if so, are the data flags clearly defined?
		Yes	No	(NA) (Please explain.)	Comments:
	N/	A			
		v. Data	quali	ty or usability affected? (Pleas	e explain.) Comments:
	N/	A			

- b. Laboratory Control Sample/Duplicate (LCS/LCSD)
  - i. Organics One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes	No	(NA)Please explain.)	Comments:	
ii. Met sam	als/Ino ples?	organics – one LCS and one sam	ple duplicate reported per matrix, analysis and 2	0
Yes	No	(NA) (Please explain.)	Comments:	
iii. Acc And AK	uracy l proje 102 75 No	<ul> <li>All percent recoveries (%R) rect specified DQOs, if applicable</li> <li>%-125%, AK103 60%-120%; a</li> <li>NA (Please explain )</li> </ul>	eported and within method or laboratory limits? (AK Petroleum methods: AK101 60%-120%, ll other analyses see the laboratory QC pages) 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)

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

- v. If %R or RPD is outside of acceptable limits, what samples are affected? Yes No (NA)Please explain.) Comments:
- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined? Yes No NA (Please explain.) Comments:

vii. Data quality or usability affected? (Use comment box to explain.) Yes No NA Please explain.) Comments:

### c. Surrogates – Organics Only

- i. Are surrogate recoveries reported for organic analyses field, QC and laboratory samples? Yes No NA (Please explain.) Comments:
- Accuracy All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

Yes No NA (Please explain.)

Comments:

	iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?	
	Yes No NA Please explain.)	Comments:
	iv. Data quality or usability affected? (Use the con	nment box to explain.)
		Comments:
d. Ti <u>Sc</u>	rip blank – Volatile analyses only (GRO, BTEX, Vo <u>pil</u>	latile Chlorinated Solvents, etc.): <u>Water and</u>
	i. One trip blank reported per matrix, analysis an (If not, enter explanation below.)	d for each cooler containing volatile samples?
	Yes No NA (Please explain.)	Comments:
	<ul><li>ii. Is the cooler used to transport the trip blank an (If not, a comment explaining why must be ento Yes) No NA (Please explain.)</li></ul>	d VOA samples clearly indicated on the COC ered below) Comments:
	iii. All results less than PQL? Yes No NA (Please explain.)	Comments:
	iv. If above PQL, what samples are affected?	Comments:
N/A		
	v. Data quality or usability affected? (Please expl	ain.) Comments:
N/A		
e. Fi	eld Duplicate	
	i. One field duplicate submitted per matrix, analy	vsis and 10 project samples?

Yes No NA (Please explain.)	Comments:
ii. Submitted blind to lab? Yes No NA (Please explain.)	Comments:
<ul><li>iii. Precision – All relative percent differences (R (Recommended: 30% water, 50% soil)</li></ul>	RPD) less than specified DQOs?
RPD (%) = Absolute value of: $\frac{(R_1-R_2)}{((R_1+R_2)/2)} x$	x 100
Where $R_1 =$ Sample Concentration	
$R_2 = Field Duplicate ConcentrationYes No NA (Please explain.)$	n Comments:
iv. Data quality or usability affected? (Use the co	omment box to explain why or why not.)
	Comments:
No	
Decontamination or Equipment Blank (If not used ex	zplain why).
Yes No (NA) (Please explain.)	Comments:
ot applicable. A decontamination or equipment bla proved scope of work.	ank was not collected; not part of our
i. All results less than PQL?	
Yes No (NA)(Please explain.)	Comments:
ot applicable. A decontamination or equipment bla pproved scope of work.	ank was not collected; not part of our
ii. If above PQL, what samples are affected?	
	Comments:
N/A	
iii. Data quality or usability affected? (Please exp	olain.)

N/A

Comments:

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

- a. Defined and appropriate?
  - Yes No NA (Please explain.)

Comments:

Not applicable for this project.

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# APPENDIX D GRAPHS OF HISTORICAL WATER QUALITY DATA

















Date Sampled



