FINAL
Groundwater Study Report
ADOT&PF Aniak Airport
Aniak, Alaska

June 2014

Submitted To:
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32-1-17636

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ACRONYMS AND ABBREVIATIONS

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
ADOT&PF	Alaska Department of Transportation and Public Facilities
AK	Alaska Method
AST	Aboveground storage tanks
bgs	Below ground surface
BTEX	Benzene, toluene, ethylbenzene, and xylenes
COC	Contaminant of Concern
COPC	Contaminant of Potential Concern
CSM	Conceptual Site Model
DRO	Diesel range organics
DQO	Data quality objective
Emerald	Emerald Alaska, Inc.
EPA	Environmental Protection Agency
GPS	Global Positioning System
GRO	Gasoline range organics
KSD	Kuspuk School District
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
L/min	Liters per minute
LOQ	Limit of quantitation
mg/L	Milligrams per liter
MS/MSD	Matrix spike/matrix spike duplicate
PAH	Polycyclic aromatic hydrocarbons
RPD	Relative percent difference
SGS	SGS North America Inc.
TCE	Trichloroethene
UST	Underground storage tank
VOC	Volatile organic compounds

GROUNDWATER STUDY REPORT
ADOT&PF ANIAK AIRPORT
ANIAK, ALASKA

1.0 INTRODUCTION

This report presents the results of Shannon & Wilson Inc.'s May 2014 groundwater and potable water sampling activities in Aniak, Alaska. The purpose of this project was to evaluate contaminant trends in the groundwater in the vicinity of the Aniak Airport, and to conduct a field reconnaissance of a land spread area located adjacent to the Aniak Runway. The objective of the project was to gather additional groundwater and drinking water data in an effort to assist the Alaska Department of Environmental Conservation (ADEC) with developing a better understanding of the potential threat to human health, safety, and welfare, and the environment from site contamination.

Authorization to proceed with the project was provided by the ADEC in the form of Notice to Proceed Number 18803603018, dated March 12, 2014. The work was conducted in general accordance with our *Final Groundwater Study Work Plan, ADOT&PF Aniak Airport, Aniak, Alaska*, dated April 2014. The work plan was approved by Mr. Grant Lidren of the ADEC on April 22, 2014 via email.

2.0 SITE AND PROJECT DESCRIPTION

Aniak is located approximately 90 miles northeast of Bethel and approximately 320 miles west of Anchorage. Aniak is located in the Kuskokwim River flood plain, bordered by the Kuskokwim River to the north and Aniak Slough to the southeast, as shown on Figure 1. The main village is located around the Aniak Airport which is operated by the Alaska Department of Transportation and Public Facilities (ADOT&PF) and serves as an air hub for the surrounding area. Historic releases of petroleum hydrocarbons and hazardous substances at several ADOT&PF sites have resulted in areas of groundwater contamination. As part of this project, groundwater sampling was conducted at three areas:

- The ADOT&PF Aniak Runway Apron (Figure 2)
- The Former MarkAir Facility – Aniak Airport (Figure 3)
- The ADOT&PF Aniak Maintenance Building, including the Former AST Area (Figure 4) and the Former Underground Pipeline Area (Figure 5)

In 2011, approximately 3,100 cubic yards of soil were land spread south of the Aniak Runway in four areas, designated LS1 through LS4 (Figure 6). As part of this project, the current condition of the land spread area was visually evaluated. The project also included potable well sampling at 13 locations (Figure 7).

3.0 FIELD ACTIVITIES

The field effort included conducting a field reconnaissance of the land spread area and collecting groundwater and potable water samples. SGS North America Inc. (SGS) performed analytical testing of the groundwater and potable water samples. Emerald Alaska, Inc. (Emerald) treated impacted purge water.

3.1 Variances from Work Plan

The project scope consisted of sampling 12 groundwater monitoring wells and 13 drinking water wells. Several changes to the work plan were implemented due to conditions encountered in the field. The ADEC was notified of variances to the work plan while our field crew was in the field, including the following:

- Well MW-4 was not sampled due to lack of groundwater recharge.
- Well MW-12 was covered by drums and supersacks (Photo 1) and was not sampled.
- Approximately 4 inches of product were observed in Well PL-MW9 (Photo 2). This well was not sampled.
- Because only 10 groundwater samples were submitted for laboratory analysis, only one field duplicate sample was required.
- A drinking water sample was not collected from the former Inland Air building as the occupants noted that the well was not currently functioning. A drinking water sample was collected from the Ryan Air building instead.
- According to local residents, the Ikmiq Court Lot 26 residence was unoccupied. A drinking water sample from the Ikmiq Court Lot 28 residence was collected instead.
- The Block 9, Lot 9 residence was unoccupied. A sample from the neighboring house located to the east of Block 9, Lot 9 on Boundary Avenue (labeled Boundary Avenue House in Tables 2 and 4) was collected instead.

3.2 Land Spread Reconnaissance

The land spread areas were located using previous field notes, photographs, and Global Positioning System (GPS) coordinates. The four areas were visually evaluated and

photographed. The current condition of the land spread areas, including amount of vegetation and visible erosion, was recorded. Current dimensions of the land spread areas were measured with a measuring wheel and the corners of the land spread areas were documented with GPS coordinates.

Vegetation is beginning to grow on Land Spread Areas LS1 (Photos 6 through 9) and LS2 (Photo 10). Land Spread Areas LS3 (Photo 11) and LS4 (Photo 12) are vegetated and difficult to distinguish from surrounding areas. No evidence of erosion or other disturbances was visible on the land spread areas. Dimensions of the land spread areas are recorded in the field notes (Appendix B), and GPS coordinates of the land spread areas are shown on Figure 6.

3.3 Monitoring Well Sampling

Groundwater samples were collected from 10 groundwater monitoring wells (Runway Apron Monitoring Wells RA-MW6, RA-MW8, and RA-MW9; Former MarkAir Facility Wells MW-9, MW-10, and MW-11; and ADOT&PF Aniak Maintenance Building Wells PL-MW10, PL-MW11, AST-MW1, and AST-MW7). The wells were sampled using low-flow methods. Depth-to-water and total well depth measurements were collected from each well prior to purging. The wells were purged and sampled using submersible pumps placed within 2 feet of the groundwater interface, and disposable polyethylene tubing. The pump rate was set at 0.1 to 0.5 liters per minute (L/min) with a goal of limiting the sustained water drawdown to a maximum of 0.1 meter (4 inches). The pumps were decontaminated between use at each well.

The purging volume was based on stabilization of key water quality parameters (pH, temperature, conductivity, and turbidity) which were recorded along with purge volume at 3- to 5-minute intervals. When the four water quality parameters stabilized, purging was stopped and a groundwater sample collected. The stabilization criteria consisted of three successive readings with pH within 0.1 unit, temperature within 3 percent (minimum of 0.2° C), conductivity within 3 percent, and turbidity within 10 percent or three consecutive readings of less than 10 Napthelometric Turbidity Units (NTU). If water quality measurements did not stabilize within 1 hour, and at least one well volume had been removed, the well was sampled after 80 percent recovery. Analytical samples were collected in decreasing order of volatility. Groundwater purging data, including final parameter measurements, are summarized in Table 1.

3.4 Potable Water Sampling

Potable water samples were collected from thirteen sites around the Aniak Airport (Figure 7). A right-of-access request was sent to Kuspuk School District (KSD) notifying personnel of planned

activities and requesting permission to access Aniak Middle School and Aniak High School. Permission to access the KSD properties was granted in the form of an access request letter signed by Mr. Jeromy Hoeldt, Director of Maintenance, on May 12, 2014. An ADEC supplied property access agreement was given to other Aniak property owners at the time of sampling. Copies of the signed access agreements are included in Appendix B.

The water samples were generally collected from indoor faucets after purging the water for approximately fifteen minutes. With the exception of the Alaska State Trooper building (Sample DW11) and the Boundary Avenue House (Sample DW18), wells that were sampled did not use a water treatment system, according to occupants. At the Alaska State Trooper building, samples were collected from an outside spigot which, according to the building's occupants, is located prior to the treatment system. The drinking water well at the Runway Apron was sampled using a submersible pump. Approximately 20 gallons were purged from the well prior to sample collection. The purge water was discharged to the ground surface. Sampling details are summarized in Table 2.

3.5 IDW Management

Approximately 30 gallons of purge water and decontamination water were generated from Wells RA-MW9, MW-9, MW10, PL-MW9, and PL-MW11 and containerized in a 55-gallon drum. The drum was shipped via Northern Air Cargo to Emerald for disposal. A copy of the IDW disposal receipt is included in Appendix D. The purge water from the remaining, historically clean wells was discharged to the ground surface in the vicinity of the purged wells.

4.0 LABORATORY ANALYSIS

The monitoring well and potable water samples were submitted to SGS for analysis using chain-of-custody procedures. Ten groundwater samples and one duplicate sample were analyzed for gasoline range organics (GRO) by Alaska Method (AK) 101, diesel range organics (DRO) by AK 102, and volatile organic compounds (VOCs) by Environmental Protection Agency (EPA) Method 8260B. Thirteen drinking water samples and two duplicate samples were analyzed for VOCs by EPA Method 524.2. Five drinking water samples, including one duplicate, were also analyzed for DRO by AK 102.

Under the sample numbering scheme used for this project, a typical analytical sample number is '17636-' followed by the sample name (e.g. DW3 or MW9). For brevity in the text of this report, the '17636-' prefix is omitted.

5.0 DISCUSSION OF RESULTS

The analytical results were compared with the applicable cleanup levels listed in the Oil and Other Hazardous Substances Pollution Control Regulations (18 Alaska Administrative Code [AAC] 75, April 2012). Analytical results and applicable cleanup levels are listed in Tables 3 and 4. Historical data for the groundwater monitoring wells sampled are summarized in Table 5.

5.1 Monitoring Well Samples

5.1.1 Runway Apron Wells

Trichloroethene (TCE) was detected in the sample collected from Monitoring Well RA-MW9 at a concentration of 0.011 milligrams per liter (mg/L), which exceeds the ADEC cleanup level of 0.005 mg/L. This TCE detection is consistent with historical analytical results for Well RA-MW9. No other analytes were detected in the samples from the Runway Apron monitoring wells (RA-MW-6 and RA-MW8) which is also consistent with previous sampling events.

5.1.2 Former MarkAir Facility

The sample collected from Monitoring Well MW-9 contained 0.112 mg/L methylene chloride which is greater than the ADEC cleanup level (0.005 mg/L). Samples from Well MW-9 have not previously been analyzed for VOCs; therefore contaminant trends regarding methylene chloride cannot be evaluated. Consistent with the 2010 groundwater analytical results, no other analytes exceeded ADEC cleanup levels in the samples collected from the Former MarkAir Facility. As shown on Table 5, concentrations of GRO, DRO, and benzene, toluene, ethylbenzene, and xylenes (BTEX) in Monitoring Wells MW-9, MW-10, MW-11, and MW-12 have shown generally decreasing trends in the last 10 years.

5.1.3 ADOT&PF Aniak Maintenance Building Area

At the ADOT&PF Aniak Maintenance Former Underground Pipeline Area, four inches of product was observed in Monitoring Well PL-MW9. Historically, concentrations of DRO (ranging from 2.41 to 15.4 mg/L) and benzene (0.000651 mg/L) greater than ADEC cleanup levels have been observed in this well; however, this is the first sampling event in which product has been documented. DRO was detected in the sample from Monitoring Well PL-MW10 at a concentration of 1.90 mg/L, which exceeds the ADEC cleanup level of 1.5 mg/L. Although DRO has been detected in this well historically, this is the first sampling event in which the detected concentration has exceeded the cleanup level. No other analytes exceeded ADEC

cleanup levels in the samples from the Former Underground Pipeline Area. Historically, concentrations of BTEX in Wells PL-MW9, PL-MW10, and PL-MW11, and DRO in Well PL-MW11, have shown decreasing trends over the last 15 years and have not exceeded ADEC cleanup levels since 1999.

At the ADOT&PF Aniak Maintenance Former AST Area, concentrations of GRO, DRO, and BTEX in Wells AST-MW1 and AST-MW7 did not exceed the applicable cleanup levels. This is consistent with the historical sample results from these wells.

5.2 Potable Water Samples

Estimated concentrations of dichlorodifluoromethane (also known as Freon-12) were detected at concentrations less than ADEC groundwater cleanup standards in drinking water samples DW9, DW12, and DW17. Freon-12 was not detected in drinking water samples collected in 2010. Freon-12 was formerly used as a refrigerant and propellant and was banned in the United States in 1986. An estimated concentration of cis-1,2-dichloroethene, which is a daughter product of TCE, was detected in drinking water sample DW1, which was collected from the inactive drinking water well in the Runway Apron area. Cis-1,2-dichloroethene has not been previously documented in samples collected from this well. In the Runway Apron area, TCE has been detected historically in Monitoring Well RA-MW9, approximately 375 feet west of the drinking water well, although cis-1,2-dichloroethene has not been detected in this groundwater monitoring well. No other analytes were detected in the drinking water samples.

5.3 Quality Assurance Samples

The project laboratory follows on-going quality assurance/quality control procedures to evaluate conformance to applicable ADEC data quality objectives (DQOs). Internal laboratory controls to assess data quality for this project include surrogates, method blanks, matrix spike/matrix spike duplicates (MS/MSD), and laboratory control sample/laboratory control sample duplicates (LCS/LCSD) to assess precision, accuracy, and matrix bias. If a DQO was not met, the project laboratory provides a brief narrative concerning the problem in the case narrative of their laboratory reports (see Appendix C).

External quality controls included duplicate samples and trip blanks. Three duplicate sets, including one groundwater (RA-MW9/RA-MW90) and two drinking water (DW3/DW30 and DW4/DW40) duplicates, were collected to assess precision of the sampling and analysis processes using the calculated relative percent difference (RPD). The RPDs are within the ADEC recommended DQO of 30 percent for water and are considered usable for this project.

One groundwater trip blank was analyzed for VOCs by EPA Method 8260B and GRO by AK 101. One drinking water trip blank was analyzed for VOCs by EPA Method 524.2. The groundwater trip blank did not contain detectable concentrations of GRO or VOCs, with the exception of chloromethane which was detected at an estimated concentration. Project samples with detections of chloromethane within five times the trip blank concentration are reported as non-detect at the LOQ and B-qualified in Table 3. The drinking water trip blank did not contain detectable concentrations of VOCs, with the exception of methylene chloride at a concentration of 0.000720 mg/L which was detected below the ADEC cleanup level (0.0005 mg/L). Methylene chloride was not detected in the project samples; therefore the usability of the data is not adversely affected by this trip blank detection.

Shannon & Wilson conducted a limited data assessment to review the laboratory's compliance with precision, accuracy, sensitivity, and completeness to the data quality objectives. Shannon & Wilson reviewed the SGS data deliverables and completed the ADEC's Laboratory Data Review Checklist, which is included in Appendix C. No non-conformances that would adversely affect the quality or usability of the data were noted, with the exception of the following:

- GRO was detected at an estimated concentration in a laboratory method blank and in three associated samples at similar concentrations. Therefore, the GRO results of the three samples are reported as non-detect at the LOQ and B-qualified in Table 3. The GRO results are less than the ADEC cleanup level; therefore the method blank detection does not affect the usability of the GRO data.

6.0 CONCEPTUAL SITE MODELS

Conceptual site models (CSMs) were previously prepared for the Aniak ADOT&PF sites and presented in Shannon & Wilson Inc.'s April 2012 *Excavation and Land Spreading Report, ADOT&PF Aniak Area-Wide, Aniak Alaska*. Based on the results of the current project, the CSMs were revised for the Runway Apron, ADOT&PF Aniak Maintenance Building Former ASTs, and the Former MarkAir Facility. The CSM for the ADOT&PF Aniak Maintenance Building Former ASTs site also includes data from the Former Underground Pipeline area. The CSMs were developed in general accordance with the ADEC's *Policy Guidance on Developing Conceptual Site Models* (October 2010), using ADEC's CSM Human Health Graphic and Scoping Forms. Copies of the Human Health Graphic and Scoping Forms are included as Appendix E.

The CSMs include discussions of release mechanisms, contaminants of potential concern (COPCs), potential receptors, and potentially complete or complete exposure pathways. The

CSMs are based on the current site use and the contaminant levels found in 2014 and previous samples. A re-examination of potential exposure pathways may be needed if land use, access, or other site conditions change. The narrative also includes descriptions of site-specific considerations that increase or decrease the viability of each pathway at this site.

6.1 Release Mechanisms

At the Runway Apron site, release mechanisms include spills and/or leaks associated with drums and ASTs. At the ADOT&PF Maintenance Building Former ASTs and Former Mark Air Facility sites, release mechanisms include spills and/or leaks from drums, underground storage tanks (USTs), ASTs, dispensers, and pipelines.

6.2 Potential Current Receptors

Potential current receptors at each site include commercial/industrial site workers, site visitors, and trespassers. At the ADOT&PF Maintenance Building Former ASTs site, off-site residents are also potential current receptors, based on the proximity to the Alaska State Trooper housing, which is approximately 100 feet to the east. Residents are considered potential future receptors at each of the sites due to use of drinking water wells in the vicinity and uncertain future land use.

The sites are not intended for public use, and are currently owned by the ADOT&PF. Access controls are used at the Runway Apron and Former MarkAir Facility sites. Specifically, the Former MarkAir Facility is fenced and locked, although contaminated media may be present outside of the fenced area. The frontage road to the Runway Apron site is nominally closed to public use, although it is not fenced or locked.

6.3 Contaminants of Potential Concern

A compound or group of compounds is identified as a COPC if it has been identified in soil or groundwater samples at a site. The primary COPCs are petroleum hydrocarbons (primarily DRO and/or benzene, but also including GRO and other BTEX analytes). VOCs are COPCs at the Runway Apron site and the ADOT&PF Aniak Maintenance Building Former ASTs. Polycyclic aromatic hydrocarbons (PAHs) are COPCs for the Runway Apron, ADOT&PF Aniak Maintenance Building Former ASTs, and the Former MarkAir Facility.

6.4 Contaminants of Concern

Contaminants of concern (COCs) are compounds or a group of compounds which have been identified in a site's soil or groundwater above the applicable ADEC cleanup levels. The primary COCs in soil and groundwater at the three sites are petroleum hydrocarbons (primarily DRO and/or benzene, but also including GRO and other BTEX analytes). PAHs, including 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene, are considered COCs in soil at the Runway Apron and the ADOT&PF Aniak Maintenance Building Former AST Area. VOCs, including TCE at the Runway Apron and methylene chloride at the former MarkAir facility, are considered COCs in groundwater.

6.5 Potentially Complete Exposure Pathways

6.5.1 Soil

The concentrations of known COCs were compared to the applicable risk-based cleanup level listed in Table B1 or B2, 18 AAC 75.341, for the "Under 40 Inch [precipitation] Zone," to assess whether each potentially complete pathway requires additional evaluation.

COCs have been documented in soil in the top 15 feet below ground surface (bgs) at each site, at concentrations greater than $1/10^{th}$ the direct contact (Table B1) or ingestion (Table B2) standard. The soil ingestion pathway is considered potentially complete for DRO at each site; GRO at the Runway Apron, ADOT&PF Aniak Maintenance Building Former ASTs, and Former MarkAir Facility; and PAHs (1- and 2-methylnaphthalene) at the Runway Apron and ADOT&PF Aniak Maintenance Building Former ASTs.

The dermal absorption of contaminants in soil pathway is considered potentially complete if contaminants listed in Appendix B of the CSM guidance document have been identified. The concentration of these analytes are compared to 1/10th the "Direct Contact" to determine the significance of this pathway. The dermal absorption of contaminants in soil pathway is considered potentially complete at all four sites.

- The dermal absorption pathway is considered complete at the Runway Apron site and ADOT&PF Maintenance Building Former ASTs (based on PAH concentrations in soil samples collected in 2011).

- At the Former MarkAir Facility, PAH analytes were detected in 2001 samples at concentrations less than 1/10th the direct contact standard. Therefore dermal absorption pathway is considered insignificant, but complete.

The "inhalation of fugitive dust" pathway is considered complete if non-volatile compounds (as defined by Appendix D of the CSM guidance document) are identified in the top 2 centimeters of soil, and respirable particles were present. Although grain size analysis was not conducted, silts (and therefore potentially respirable particles [less than 10 micrometers]) were documented at each site, based on visual classification.

- At the Runway Apron site, the 2011 land spreading efforts have placed soil containing non-volatile contaminants (pesticides and certain PAHs) at concentrations less than 1/10th the direct contact standard. Therefore this pathway is considered complete but insignificant.

- At the ADOT&PF Aniak Maintenance Building Former ASTs site and Former MarkAir Facility, non-volatile PAHs been identified in soils below than 1.5 feet bgs, but not been in the top 2 centimeters. Therefore, this pathway is not considered complete.

6.5.2 Groundwater

The ingestion of groundwater is considered a complete exposure pathway unless a groundwater use determination is conducted in accordance with 18 AAC 75.350, and that determination finds that the groundwater is not "a currently or reasonably expected future source of drinking water." Drinking water wells are located at the Runway Apron and the ADOT&PF Maintenance Building. Off-property drinking water wells are present at the Alaska State Trooper building (near the Former AST Area), and the Ravn Air and Ryan Air buildings (near the Former MarkAir Facility). Based on the current use of groundwater in the vicinity of the sites, the ingestion of groundwater pathway is considered complete.

Inhalation of volatile compounds in tap water is considered potentially complete if volatile compounds (as defined by Appendix D of the CSM guidance document) have been identified. Volatile contaminants have been detected in groundwater at each of the sites. Therefore, the inhalation of volatile compounds in tap water is considered complete.

The dermal absorption of contaminants in groundwater pathway is considered potentially complete if contaminants listed in Appendix B of the CSM guidance document have been identified. Groundwater is not expected to be encountered during construction activities, based

on historic groundwater depths. Therefore, the groundwater pathways are not considered currently complete at the sites, but are potentially complete future exposure pathways.

6.5.3 Inhalation

Outdoor inhalation pathway is considered potentially complete if volatile compounds have been identified in the top 15 feet. The indoor inhalation (vapor intrusion) pathway is considered potentially complete if volatile compounds have been identified within 30 horizontal feet of a building, or 100 feet if a preferential pathway is believed to be present. The pathways are considered insignificant if the greatest concentrations in the soil samples are less than 1/10th the Table B1 or B2 "Outdoor Inhalation" concentrations. GRO and DRO are not evaluated for vapor intrusion.

- The outdoor inhalation standard is currently complete for the Runway Apron, ADOT&PF Aniak Maintenance Building Former ASTs, and the Former MarkAir Facility based on documented levels of DRO and/or GRO in excess of the ADEC's outdoor inhalation cleanup standards.

- The indoor inhalation pathway is currently complete for the Former MarkAir Facility. The remaining three sites either do not currently contain a building (Runway Apron), or are considered insignificant (ADOT&PF Maintenance Building Former ASTs), based on 2011 and historic sample results. It is noted that the buildings at the ADOT&PF Maintenance Building Former ASTs and Former MarkAir Facility are not continuously occupied.

6.5.4 Other

Other impacted media, including sediment, surface water, and biota were not identified at the sites.

7.0 CONCLUSIONS

This project consisted of documenting land spread area conditions, collecting groundwater samples from 10 monitoring wells, and collecting 13 potable water samples. No erosion or disturbance of the land spread areas was noted.

Estimated concentrations of VOCs (Freon-12 and/or cis-1,2-dichloroethene) were detected in four drinking water samples. No other analytes were detected in the drinking water samples.

Petroleum hydrocarbons and/or VOCs were detected in groundwater samples collected from each site:

- At the Runway Apron, TCE was detected at a concentration greater than the ADEC cleanup level in a sample collected from Well RA-MW9, which is consistent with previous sample results.

- At the Former MarkAir Facility, methylene chloride was detected at a concentration above the ADEC cleanup level in a groundwater sample collected from Well MW-9. Groundwater contaminant concentrations have generally decreased over the last 10 years.

- At the ADOT&PF Maintenance Building Area, free-phase product was observed in Well PL-MW9 and DRO was detected at a concentration greater than the ADEC cleanup level in Well PL-MW10. This is the first sampling event that free-phase product has been documented in any of the ADOT&PF Aniak wells. The DRO detected in PL-MW10 represents an increase in concentration from previous sampling events.

8.0 CLOSURE/LIMITATIONS

This report was prepared for the exclusive use of our client and their representatives in the study of this site. The findings we have presented within this report are based on the limited research, sampling, and analyses that we conducted at this site. They should not be construed as definite conclusions regarding the site's soil quality. As a result, the analysis and sampling performed can only provide you with our professional judgment as to the environmental characteristics of this site, and in no way guarantees that an agency or its staff will reach the same conclusions as Shannon & Wilson, Inc. The data presented in this report should be considered representative of the time of our site assessment. Changes in site conditions can occur over time, due to natural forces or human activity.

In addition, changes in government codes, regulations, or laws may occur. Because of such changes beyond our control, our observations and interpretations may need to be revised. Shannon & Wilson has prepared the attachment in Appendix F "Important Information About Your Geotechnical/Environmental Report" to assist you and others in understanding the use and limitations of our report.

You are advised that various state and federal agencies (ADEC, EPA, etc.) may require the reporting of this information. Shannon & Wilson does not assume the responsibility for

reporting these findings and therefore will not disclose the results of this study, except with your permission or as required by law.

Copies of documents that may be relied upon by our client are limited to the printed copies (also known as hard copies) that are signed or sealed by Shannon & Wilson with a wet, blue ink signature. Files provided in electronic media format are furnished solely for the convenience of the client. Any conclusion or information obtained or derived from such electronic files shall be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, or you question the authenticity of the report please contact the undersigned.

We appreciate this opportunity to be of service and your continued confidence in our firm. If you have questions or comments concerning this submittal, please contact Dan P. McMahon or the undersigned at (907) 561-2120.

SHANNON & WILSON, INC.

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TABLE 1 - MONITORING WELL SAMPLING LOG

WATER LEVEL DATA

	Runway Apron Area			Former MarkAir Facility				
Well Number	RA-MW6	RA-MW8	RA-MW-9	MW-4	MW-9	MW-10	MW-11	MW-12
Date Water Level Measured	5/13/2014	5/13/2014	5/13/2014	5/13/2014	5/13/2014	5/13/2014	5/13/2014	-
Time Water Level Measured	9:27	9:21	9:31	10:20	11:28	11:10	11:12	-
Measured Depth to Water (ft below MP)	24.60	27.27	25.39	24.01	24.83	23.19	23.05	-

PURGING DATA

Well Number	RA-MW6	RA-MW8	RA-MW-9	MW-4	MW-9	MW-10	MW-11	MW-12
Date Sampled	5/13/2014	5/13/2014	5/13/2014	NS	5/14/2014	5/14/2014	5/14/2014	NS
Time Sampled	16:20	14:05	15:12	NS	12:05	10:50	10:59	NS
Measured Depth to Water (ft below MP)	24.60	27.27	25.39	24.01	24.83	23.19	23.05	-
Total Depth of Well (ft below MP)	29.90	33.50	29.67	24.74	29.52	29.40	29.37	-
Water Column in Well (ft)	5.30	6.23	4.28	0.73	4.69	6.21	6.32	-
Gallons per Foot	0.16	0.16	0.16	0.16	0.16	0.16	0.16	-
Water Column Volume (gallons)	0.85	1.00	0.68	0.12	0.75	0.99	1.01	-
Total Volume Purged (gallons)	2.1	2.5	1.7	-	1.0	1.2	2.3	-
Purging/Sampling Method	Submersible Pump	Submersible Pump	Submersible Pump	-	Submersible Pump	Submersible Pump	Submersible Pump	-
Diameter of Well Casing	2-inch	2-inch	2-inch	2-inch	2-inch	2-inch	2-inch	-
Remarks				Well purged dry; no recharge				Unable to locate well

WATER QUALITY DATA

WELL NUMBER	RA-MW6	RA-MW8	RA-MW-9	MW-4	MW-9	MW-10	MW-11	MW-12
Temperature (^{o}C)	6.92	6.20	6.20	-	3.89	3.80	3.73	-
Specific Conductance (µS/cm)	485	520	536	-	461	370	317	-
pH (Standard Units)	6.37	6.14	6.47	-	6.75	6.13	6.25	-
Turbidity (NTU)	1.97	21.75	77.28	-	0.01	2.15	0.19	-

KEY	DESCRIPTION
^{o}C	Degrees Celsius
ft	Feet
µS/cm	Microsiemens per Centimeter
MP	Measuring Point
NTU	Nephelometric Turbidity Units
-	Not Measured/Not Applicable
NS	Not Sampled

TABLE 1 - MONITORING WELL SAMPLING LOG

WATER LEVEL DATA

	ADOT&PF Aniak Maintenance Building				
Well Number	PL-MW9	PL-MW10	PL-MW11	AST-MW1	AST-MW7
Date Water Level Measured	5/13/2014	5/13/2014	5/13/2014	5/13/2014	5/13/2014
Time Water Level Measured	9:58	9:48	9:53	10:13	10:08
Measured Depth to Water (ft below MP)	27.13	25.84	23.60	23.93	23.31

PURGING DATA

Well Number	PL-MW9	PL-MW10	PL-MW11	AST-MW1	AST-MW7
Date Sampled	NS	5/13/2014	5/14/2014	5/14/2014	5/13/2014
Time Sampled	NS	18:00	15:17	14:26	18:47
Measured Depth to Water (ft below MP)	27.13	25.84	23.60	23.93	23.31
Total Depth of Well (ft below MP)	33.06	29.94	29.96	31.18	24.70
Water Column in Well (ft)	5.93	4.10	6.36	7.25	1.39
Gallons per Foot	0.16	0.16	0.16	0.16	0.16
Water Column Volume (gallons)	0.95	0.66	1.02	1.16	0.22
Total Volume Purged (gallons)	-	3.2	2.0	1.3	1.5
Purging/Sampling Method	-	Submersible Pump	Submersible Pump	Submersible Pump	Submersible Pump
Diameter of Well Casing	2-inch	2-inch	2-inch	2-inch	2-inch
Remarks	4 inches of product in well				

WATER QUALITY DATA

WELL NUMBER	PL-MW9	PL-MW10	PL-MW11	AST-MW1	AST-MW7
Temperature (^{o}C)	-	3.99	4.94	4.77	3.30
Specific Conductance (µS/cm)	-	722	422	350	487
pH (Standard Units)	-	6.85	6.79	6.88	6.72
Turbidity (NTU)	-	8.61	6.16	3.30	4.51

KEY	DESCRIPTION
^{o}C	Degrees Celsius
ft	Feet
µS/cm	Microsiemens per Centimeter
MP	Measuring Point
NTU	Nephelometric Turbidity Units
-	Not Measured/Not Applicable
NS	Not Sampled

TABLE 2 - POTABLE WATER WELL SAMPLING LOG

Well Number	DW1	DW2	DW3	DW4	DW6	DW7	DW9	DW10
Property	Runway Apron	Aniak Middle School	Aniak High School	ADOT&PF Maintenance Building	Salmon Court #13	143 Airport Road (Era/Ravn Alaska)	Block 9, Lot 12	Ikmiq Ct., Lot 25
Sample Location	Drinking Water Well (RA-DW)	Kitchen Faucet	Kitchen Faucet	Bathroom Faucet	Kitchen Faucet	Faucet in waiting area	Kitchen Faucet	Kitchen Faucet
Water treatment system	No	No	No	No	No	No	No	No
Date Sampled	5/12/2014	5/12/2014	5/12/2014	5/12/2014	5/12/2014	5/12/2014	5/12/2014	5/12/2014
Time Sampled	20:08	14:36	14:15	15:25	17:10	16:20	16:40	15:00
Purge time - minutes	20	15	15	15	15	15	15	15
Remarks								

Well Number	DW11	DW12	DW16	DW17	DW18
Property	State Trooper Building	Block 9, Lots 14 and 15	Ryan Air	Ikmiq Ct., Lot 28	Boundary Avenue House
Sample Location	Outside spigot	Kitchen Faucet	Bathroom Faucet	Kitchen Faucet	Kitchen Faucet
Water treatment system	Softener and filter	No	No	No	Condenser
Date Sampled	5/12/2014	5/12/2014	5/12/2014	5/13/2014	5/13/2014
Time Sampled	15:33	16:53	16:08	19:13	19:49
Purge time - minutes	15	10	15	13	-
Remarks	Sample collected prior to softener and filter		Sulfur odor		

KEY	DESCRIPTION
-	Not Measured

TABLE 3 - SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

			Sample ID Number^ and Groundwater Depth in Feet (See Table 1 and Figures 2 through 5)						
			Runway Apron				Former MarkAir Facility		
Parameter Tested	**Method***	**Cleanup Level (mg/L)****	RA-MW6 24.60	RA-MW8 27.27	RA-MW9 25.39	RA-MW90~ 25.39	MW-9 24.83	MW-10 23.19	MW-11 23.05
Gasoline Range Organics (GRO) - mg/L	AK 101	2.2	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.100 B	<0.100 B
Diesel Range Organics (DRO) - mg/L	AK 102	1.5	<0.310	<0.319	<0.300	<0.300	<0.306	<0.300	<0.310
Volatile Organic Compounds (VOC)									
Benzene - mg/L	EPA 8260B	0.005	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Toluene - mg/L	EPA 8260B	1.0	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Ethylbenzene - mg/L	EPA 8260B	0.7	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Xylenes (total) - mg/L	EPA 8260B	10.0	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150
1,2,4-Trimethylbenzene - mg/L	EPA 8260B	1.8	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Bromochloromethane - mg/L	EPA 8260B	-	<0.000500	<0.000500	<0.000500	<0.000500	0.000320 J	<0.000500	<0.000500
Chloromethane - mg/L	EPA 8260B	0.066	<0.00100 B	<0.000500	<0.00100 B	<0.00100 B	<0.000500	<0.00100 B	<0.00100 B
Dichlorodifluoromethane - mg/L	EPA 8260B	7.3	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	0.000400 J	0.000510 J
Methylene chloride - mg/L	EPA 8260B	0.005	<0.00250	<0.00250	<0.00250	<0.00250	**0.112**	<0.00250	<0.00250
sec-Butylbenzene - mg/L	EPA 8260B	0.37	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Trichloroethene - mg/L	EPA 8260B	0.005	<0.000500	<0.000500	**0.0111**	**0.0114**	<0.000500	<0.000500	<0.000500
Trichlorofluoromethane - mg/L	EPA 8260B	11	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Other VOC analytes	EPA 8260B	Various	ND	ND	ND	ND	ND	ND	ND

KEY	DESCRIPTION
*	See Appendix C for compounds tested, methods, and laboratory reporting limits
**	Groundwater cleanup levels are listed in Table C, 18 AAC 75.345 (April 2012)
~	Duplicate of preceding sample
^	Sample ID No. preceded by "17636-" on the chain of custody form
0.0111	Reported concentration exceeds groundwater cleanup level
<0.0500	Analyte not detected; laboratory reporting limit of 0.0500 mg/L
-	Not applicable or sample not tested for this analyte
mg/L	Milligrams per liter
J	Estimated concentration less than the limit of quantitation. See the SGS laboratory report for more details.
B	Compound detected in trip blank or method blank at an estimated concentration. Sample assigned a nondetect value at the limit of quantitation (LOQ).
ND	Not detected above laboratory's reporting limit

TABLE 3 - SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

			Sample ID Number^ and Groundwater Depth in Feet (See Table 1 and Figures 2 through 5)				
		Cleanup Level	ADOT&PF Aniak Maintenance Building				Quality Control
			PL-MW10	PL-MW11	AST-MW1	AST-MW7	TB1
Parameter Tested	**Method***	**(mg/L)****	25.84	23.60	23.93	23.31	-
Gasoline Range Organics (GRO) - mg/L	AK 101	2.2	0.0372 J	<0.0500	<0.100 B	0.0318 J	<0.0500
Diesel Range Organics (DRO) - mg/L	AK 102	1.5	**1.90**	1.35	<0.300	0.534 J	-
Volatile Organic Compounds (VOC)							
Benzene - mg/L	EPA 8260B	0.005	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Toluene - mg/L	EPA 8260B	1.0	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Ethylbenzene - mg/L	EPA 8260B	0.7	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Xylenes (total) - mg/L	EPA 8260B	10.0	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150
1,2,4-Trimethylbenzene - mg/L	EPA 8260B	1.8	0.000480 J	<0.000500	<0.000500	<0.000500	<0.000500
Bromochloromethane - mg/L	EPA 8260B	-	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Chloromethane - mg/L	EPA 8260B	0.066	<0.00100 B	<0.000500	<0.00100 B	<0.00100 B	0.000340 J
Dichlorodifluoromethane - mg/L	EPA 8260B	7.3	0.00238	<0.000500	<0.000500	<0.000500	<0.000500
Methylene chloride - mg/L	EPA 8260B	0.005	<0.00250	<0.00250	<0.00250	<0.00250	<0.00250
sec-Butylbenzene - mg/L	EPA 8260B	0.37	<0.000500	0.000390 J	<0.000500	<0.000500	<0.000500
Trichloroethene - mg/L	EPA 8260B	0.005	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Trichlorofluoromethane - mg/L	EPA 8260B	11	0.00181	<0.000500	<0.000500	<0.000500	<0.000500
Other VOC analytes	EPA 8260B	Various	ND	ND	ND	ND	ND

KEY	DESCRIPTION
*	See Appendix C for compounds tested, methods, and laboratory reporting limits
**	Groundwater cleanup levels are listed in Table C, 18 AAC 75.345 (April 2012)
~	Duplicate of preceding sample
^	Sample ID No. preceded by "17636-" on the chain of custody form
0.0111	Reported concentration exceeds groundwater cleanup level
<0.0500	Analyte not detected; laboratory reporting limit of 0.0500 mg/L
-	Not applicable or sample not tested for this analyte
mg/L	Milligrams per liter
J	Estimated concentration less than the limit of quantitation. See the SGS laboratory report for more details.
B	Compound detected in trip blank or method blank at an estimated concentration. Sample assigned a nondetect value at the limit of quantitation (LOQ).
ND	Not detected above laboratory's reporting limit

TABLE 4 - SUMMARY OF POTABLE WATER ANALYTICAL RESULTS

Parameter Tested	Method*	Cleanup Level (mg/L)**	Sample ID Number^ (See Table 2 and Figure 7)							
			DW1	DW2	DW3	DW30~	DW4	DW40~	DW6	DW7
Diesel Range Organics (DRO) - mg/L	AK 102	1.5	<0.300	-	-	-	<0.300	<0.300	-	<0.300
Volatile Organic Compounds (VOCs)										
cis-1,2-Dichloroethene - mg/L	EPA 524.2	0.07	0.000200 J	<0.000250	<0.000250	<0.000250	<0.000250	<0.000250	<0.000250	<0.000250
Dichlorodifluoromethane - mg/L	EPA 524.2	7.3	<0.000250	<0.000250	<0.000250	<0.000250	<0.000250	<0.000250	<0.000250	<0.000250
Methylene Chloride - mg/L	EPA 524.2	0.005	<0.000250	<0.000250	<0.000250	<0.000250	<0.000250	<0.000250	<0.000250	<0.000250
Other VOC analytes	EPA 524.2	Various	ND	ND	ND	ND	ND	ND	ND	ND

Parameter Tested	Method*	Cleanup Level (mg/L)**	Sample ID Number^ (See Table 2 and Figure 7)							
			DW9	DW10	DW11	DW12	DW16	DW17	DW18	TB2
Diesel Range Organics (DRO) - mg/L	AK 102	1.5	-	-	<0.300	-	<0.300	-	-	-
Volatile Organic Compounds (VOCs)										
cis-1,2-Dichloroethene - mg/L	EPA 524.2	0.07	<0.000250	<0.000250	<0.000250	<0.000250	<0.000250	<0.000250	<0.000250	<0.000250
Dichlorodifluoromethane - mg/L	EPA 524.2	7.3	0.000210 J	<0.000250	<0.000250	0.000200 J	<0.000250	0.000190 J	<0.000250	<0.000250
Methylene Chloride - mg/L	EPA 524.2	0.005	<0.000250	<0.000250	<0.000250	<0.000250	<0.000250	<0.000250	<0.000250	0.000720
Other VOC analytes	EPA 524.2	Various	ND	ND	ND	ND	ND	ND	ND	ND

KEY	DESCRIPTION
*	See Appendix C for compounds tested, methods, and laboratory reporting limits
**	Groundwater cleanup levels are listed in Table C, 18 AAC 75.345 (April 2012)
^	Sample ID No. preceded by "17636-" on the chain of custody form
<0.300	Analyte not detected; laboratory reporting limit of 0.300 mg/L
-	Not applicable or sample not tested for this analyte
mg/L	Milligrams per liter
J	Estimated concentration less than the limit of quantitation. See the SGS laboratory report for more details.
~	Duplicate of preceding sample
ND	Not detected above laboratory's reporting limit

TABLE 5 - HISTORICAL GROUNDWATER ANALYTICAL RESULTS

Monitoring Well	Date	DTW BTOC (ft)	GRO mg/L	DRO mg/L	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Xylenes mg/L	TCE mg/L
Runway Apron Monitoring Wells									
RA-MW1	11/8/1998	25.16	<0.0400	**1.55**	<0.0010	**0.00126**	<0.0010	<0.0010	-
	4/2/1999	24.65	<0.0900	**2.16**	<0.00050	<0.0020	<0.0020	<0.0020	-
	8/11/1999	21.43	-	**0.882**	-	-	-	-	-
	3/16/2004	23.08	-	**0.456**	<0.000500	<0.00200	<0.00200	<0.00200	-
	10/19/2005	23.99	-	**0.792**	-	-	-	-	-
	6/3/2008	21.01	-	-	-	-	-	-	<0.00100
	5/18/2010	23.36	<0.100	<0.838	<0.000500	<0.00200	<0.00200	<0.00400	-
	2011	Decommissioned							
RA-MW2	11/11/1998	25.91	<0.0400	**0.656**	<0.0010	<0.0010	<0.0010	<0.0010	-
	4/2/1999	24.94	<0.0900	<0.309	<0.00050	<0.0020	<0.0020	<0.0020	-
	8/11/1999	21.80	-	<0.319	-	-	-	-	-
	2004	Decommissioned							
RA-MW3	11/8/1998	27.27	<0.0400	**0.184**	<0.0010	<0.0010	<0.0010	<0.0010	-
	4/2/1999	26.77	<0.0900	<0.345	<0.00050	<0.0020	<0.0020	<0.0020	-
	3/16/2004	24.93	-	<0.313	<0.000500	<0.00200	<0.00200	<0.00200	-
	6/3/2008	22.72	-	-	-	-	-	-	<0.00100
	2013	Decommissioned							
RA-MW4	4/2/1999	26.20	**0.290**	<0.337	**0.00127**	**0.0163**	**0.00519**	**0.121**	-
	8/11/1999	23.09	-	**0.518**	-	-	-	-	-
	3/16/2004	24.39	-	<0.330	<0.000500	<0.00200	<0.00200	<0.00200	-
	6/3/2008	22.22	-	-	-	-	-	-	<0.00100
	2011	Decommissioned							

KEY	DESCRIPTION
-	Not applicable or sample not tested for this analyte
<0.0400	Reported analyte concentration less than laboratory reporting limit of 0.0400 mg/L
1.55	Concentration exceeds the groundwater cleanup level listed in Table C, 18 AAC 75.345 (April 2012)
0.882	Indicates analyte detected
mg/L	Milligrams per liter
DTW	Depth to Water
ft	Feet
BTOC	Below top of casing
GRO	Gasoline Range Organics
DRO	Diesel Range Organics
TCE	Trichloroethylene

TABLE 5 - HISTORICAL GROUNDWATER ANALYTICAL RESULTS

Monitoring Well	Date	DTW BTOC (ft)	GRO mg/L	DRO mg/L	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Xylenes mg/L	TCE mg/L
Runway Apron Monitoring Wells									
RA-MW5	4/2/1999	23.95	<0.0900	<0.326	<0.00050	<0.0020	<0.0020	<0.0020	-
	3/16/2004	22.13	-	<0.316	<0.000500	<0.00200	<0.00200	<0.00200	-
	2004	Decommissioned							
RA-MW6	4/2/1999	26.81	<0.0900	<0.313	<0.00050	<0.0020	<0.0020	<0.0020	<0.00100
	8/11/1999	23.68	-	-	-	-	-	-	<0.00100
	3/17/2004	25.24	-	<0.345	<0.000400	<0.00100	<0.00100	<0.00200	<0.00100
	6/3/2008	22.85	-	-	-	-	-	-	<0.00100
	5/13/2014	24.60	<0.0500	<0.310	<0.000200	<0.000500	<0.000500	<0.00150	<0.000500
RA-MW8	4/2/1999	28.90	<0.0900	<0.333	<0.00050	<0.0020	<0.0020	<0.0020	<0.00100
	8/11/1999	25.77	-	-	-	-	-	-	<0.00100
	6/3/2008	25.56	-	-	-	-	-	-	<0.00100
	5/13/2014	27.27	<0.0500	<0.319	<0.000200	<0.000500	<0.000500	<0.00150	<0.000500
RA-MW9	4/2/1999	27.33	<0.0900	<0.326	<0.00050	<0.0020	<0.0020	<0.0020	**0.00968**
	8/11/1999	24.18	-	-	-	-	-	-	**0.0169**
	5/30/2000	25.10	-	-	-	-	-	-	**0.0197**
	3/17/2004	25.98	-	<0.326	<0.000400	<0.00100	<0.00100	<0.00200	**0.00864**
	10/19/2005	26.70	-	<0.323	<0.000400	<0.00100	<0.00100	<0.00200	**0.00899**
	6/3/2008	23.70	-	-	-	-	-	-	**0.0133**
	5/18/2010	25.83	<0.100	<0.874	<0.000500	<0.00200	<0.00200	<0.00400	**0.0125**
	5/13/2014	25.39	<0.0500	<0.300	<0.000200	<0.000500	<0.000500	<0.00150	**0.0111**

KEY	DESCRIPTION
-	Not applicable or sample not tested for this analyte
<0.0900	Reported analyte concentration less than laboratory reporting limit of 0.0900 mg/L
0.00968	Concentration exceeds the groundwater cleanup level listed in Table C, 18 AAC 75.345 (April 2012)
mg/L	Milligrams per liter
DTW	Depth to Water
ft	Feet
BTOC	Below top of casing
GRO	Gasoline Range Organics
DRO	Diesel Range Organics
TCE	Trichloroethylene

TABLE 5 - HISTORICAL GROUNDWATER ANALYTICAL RESULTS

Monitoring Well	Date	DTW BTOC (ft)	GRO mg/L	DRO mg/L	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Xylenes mg/L	Methylene chloride mg/L
Former MarkAir Facility Monitoring Wells									
MW-4	5/14/2014	24.01	Not sampled; low water volume						
MW-5	8/19/2001	24.70	<0.0900	<0.602	<0.000500	<0.00200	<0.00200	<0.00200	-
	9/12/2002	26.09	<0.0900	<0.538	**0.00140**	<0.00200	<0.00200	**0.00216**	-
	5/14/2004	22.02	-	<0.323	<0.000500	<0.00200	<0.00200	<0.00200	-
	5/22/2006	22.46	-	-	-	-	-	-	-
	2013	Decommissioned							
MW-6	8/19/2001	24.35	<0.0900	<0.575	<0.000500	<0.00200	<0.00200	<0.00200	-
	9/12/2002	25.65	<0.0900	<0.532	**0.000898**	<0.00200	<0.00200	<0.00200	-
	5/14/2004	21.54	-	<0.333	<0.000500	<0.00200	<0.00200	<0.00200	-
	5/22/2006	-	-	-	-	-	-	-	-
	2013	Decommissioned							
MW-7	8/19/2001	25.41	**0.0924**	<0.625	<0.000500	<0.00200	<0.00202	<0.00772	-
	9/12/2002	26.32	<0.0900	<0.543	**0.000568**	<0.00200	<0.00200	<0.00200	-
	5/14/2004	22.19	-	<0.361	<0.000500	<0.00200	<0.00200	<0.00200	-
	5/22/2006	22.59	-	<0.303	<0.000500	<0.00200	<0.00200	<0.00200	-
	2013	Decommissioned							
MW-8	8/19/2001	24.58	<0.0900	<0.568	<0.000500	<0.00200	<0.00200	<0.00200	-
	9/12/2002	25.88	<0.0900	<0.521	<0.000500	<0.00200	<0.00200	<0.00200	-
	5/14/2004	21.73	-	<0.341	<0.000500	<0.00200	<0.00200	<0.00200	-
	5/22/2006	22.23	-	<0.303	<0.000500	<0.00200	<0.00200	<0.00200	-
	2013	Decommissioned							

KEY	DESCRIPTION
-	Not applicable or sample not tested for this analyte
<0.0900	Reported analyte concentration less than laboratory reporting limit of 0.0900 mg/L
0.0014	Indicates analyte detected
mg/L	Milligrams per liter
DTW	Depth to Water
ft	Feet
BTOC	Below top of casing
GRO	Gasoline Range Organics
DRO	Diesel Range Organics
TCE	Trichloroethylene

TABLE 5 - HISTORICAL GROUNDWATER ANALYTICAL RESULTS

Monitoring Well	Date	DTW BTOC (ft)	GRO mg/L	DRO mg/L	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Xylenes mg/L	Methylene chloride mg/L
Former MarkAir Facility Monitoring Wells									
MW-9	8/19/2001	24.78	**3.77**	<0.581	**0.016**	**0.822**	**0.0149**	**0.0592**	-
	9/12/2002	26.04	**0.0980**	**2.86**	**0.00199**	**0.00765**	<0.00200	<0.00200	-
	5/14/2004	21.74	**0.870**	**6.09**	**0.0235**	**0.224**	<0.00400	**0.0379**	-
	5/19/2010	25.42	<0.100	<0.838	<0.000500	<0.00200	<0.00200	<0.00400	-
	5/14/2014	24.83	<0.0500	<0.306	<0.000200	<0.000500	<0.000500	<0.00150	**0.112**
MW-10	8/20/2001	22.98	<0.0900	**0.719**	<0.000500	<0.00200	<0.00200	<0.00200	-
	9/12/2002	24.30	<0.0900	**1.51**	<0.000500	<0.00200	<0.00200	<0.00200	-
	5/14/2004	19.99	-	**0.729**	<0.000500	<0.00200	<0.00200	<0.00200	-
	5/19/2010	23.76	<0.100	<0.883	<0.000500	<0.00200	<0.00200	<0.00400	-
	5/14/2014	23.19	<0.0500	<0.300	<0.000200	<0.000500	<0.000500	<0.00150	<0.00250
MW-11	8/20/2001	22.82	<0.0900	**0.952**	<0.000500	<0.00200	<0.00200	<0.00200	-
	9/12/2002	24.22	<0.0900	**0.643**	<0.000500	<0.00200	<0.00200	<0.00200	-
	5/14/2004	19.74	-	**0.374**	<0.000500	<0.00200	<0.00200	<0.00200	-
	5/19/2010	23.69	<0.100	<0.842	<0.000500	<0.00200	<0.00200	<0.00400	-
	5/14/2014	23.05	<0.0500	<0.310	<0.000200	<0.000500	<0.000500	<0.00150	<0.00250
MW-12	8/20/2001	23.73	**0.347**	**0.899**	**0.00202**	<0.0200	<0.0200	<0.0200	-
	9/12/2002	24.83	<0.0900	**1.34**	**0.000783**	<0.0200	<0.0200	<0.0200	-
	5/14/2004	20.43	-	**0.876**	**0.000672**	<0.0200	<0.0200	<0.0200	-
	5/22/2006	20.98	-	**1.98**	<0.00500	<0.0200	<0.0200	<0.0200	-
	5/14/2014	Not sampled; unable to locate well							

KEY	DESCRIPTION
-	Not applicable or sample not tested for this analyte
<0.581	Reported analyte concentration less than laboratory reporting limit of 0.581 mg/L
3.77	Concentration exceeds the groundwater cleanup level listed in Table C, 18 AAC 75.345 (April 2012)
0.0980	Indicates analyte detected
mg/L	Milligrams per liter
DTW	Depth to Water
ft	Feet
BTOC	Below top of casing
GRO	Gasoline Range Organics
DRO	Diesel Range Organics
TCE	Trichloroethylene

TABLE 5 - HISTORICAL GROUNDWATER ANALYTICAL RESULTS

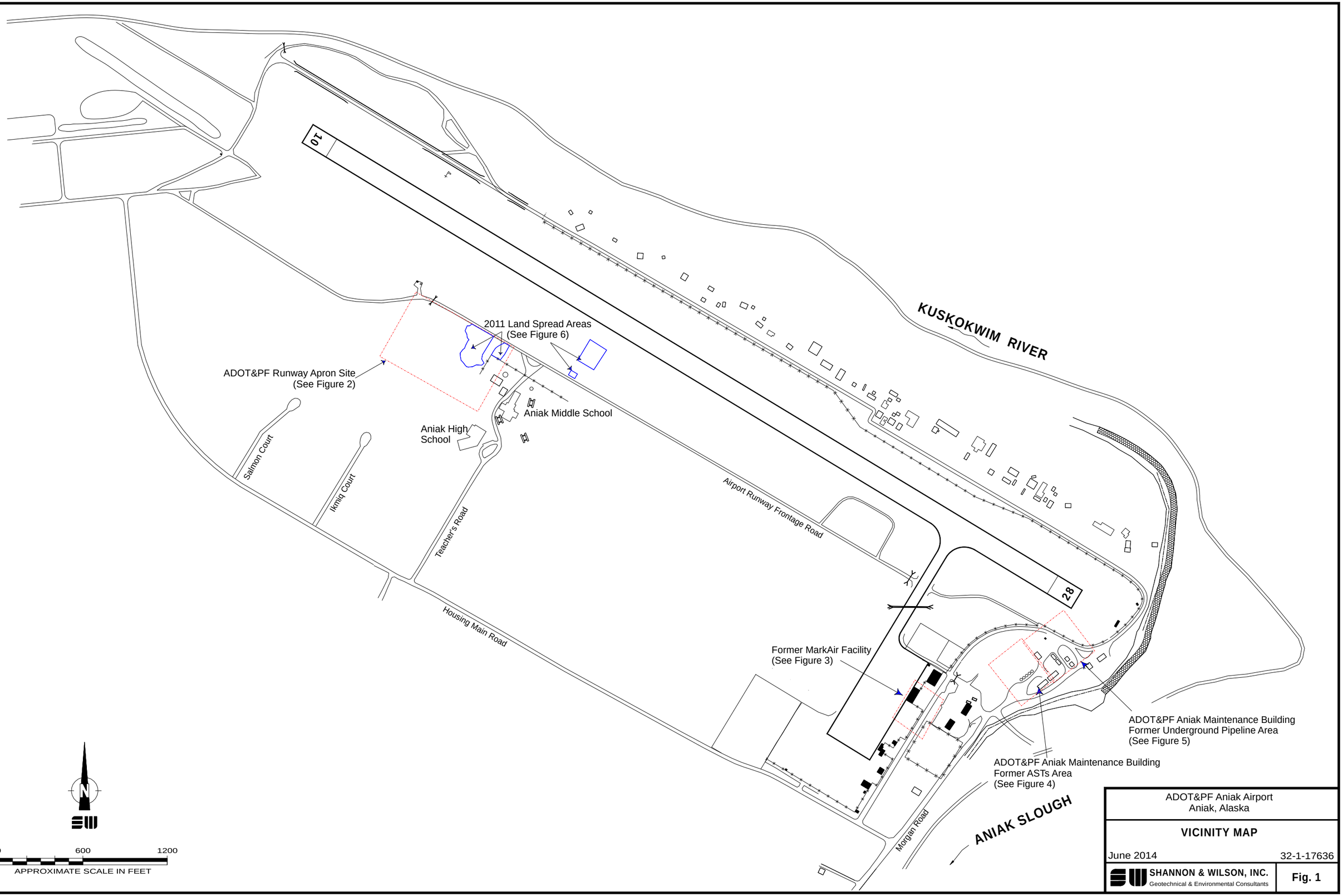
Monitoring Well	Date	DTW BTOC (ft)	GRO mg/L	DRO mg/L	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Xylenes mg/L	VOCs mg/L
ADOT&PF Aniak Maintenance Building - Former AST Area									
AST-MW1	11/10/1998	27.05	<0.0400	**0.162**	<0.0010	<0.0010	<0.0010	**0.00188**	-
	4/4/1999	25.61	<0.0900	**0.342**	<0.00050	<0.0020	<0.0020	<0.0020	-
	8/12/1999	23.08	-	<0.316	-	-	-	-	-
	3/16/2004	22.20	-	<0.323	<0.000500	<0.00200	<0.00200	<0.00200	-
	5/20/2010	24.60	<0.100	<0.865	<0.000500	<0.00200	<0.00200	<0.00400	-
	5/14/2014	23.93	<0.100 B	<0.300	<0.000200	<0.000500	<0.000500	<0.00150	ND
AST-MW3	11/10/1998	28.67	**0.170**	**17.5**	<0.0010	**0.00110**	**0.00183**	**0.00407**	-
	4/4/1999	27.14	<0.0900	**8.36**	<0.00050	<0.0020	<0.0020	<0.0020	-
	8/12/1999	24.61	-	**10.4**	-	-	-	-	-
	3/16/2004	23.70	-	**13.0**	<0.000500	<0.00200	<0.00200	<0.00200	-
	2005	Destroyed							
AST-MW4	11/10/1998	29.00	<0.0400	**0.389**	<0.0010	<0.0010	<0.0010	<0.0010	-
	4/4/1999	27.50	<0.0900	<0.319	<0.00050	<0.0020	<0.0020	<0.0020	-
	8/12/1999	24.96	-	**0.416**	-	-	-	-	-
	3/16/2004	24.10	-	**0.365**	<0.000500	<0.00200	<0.00200	<0.00200	-
	5/20/2010	26.51	<0.100	<0.870	<0.000500	<0.00200	<0.00200	<0.00400	-
	2011	Decommissioned							
AST-MW5	4/4/1999	30.58	<0.0900	**3.21**	<0.00050	**0.00357**	<0.0020	<0.0020	-
	8/12/1999	28.04	-	**7.45**	-	-	-	-	-
	3/16/2004	27.20	-	**9.43**	<0.000500	<0.00200	<0.00200	<0.00200	-
	10/19/2005	30.32	-	**11.7**	-	-	-	-	-
	5/20/2010	29.88	<0.100	**5.32**	<0.000500	<0.00200	<0.00200	<0.00400	-
	2011	Decommissioned							

KEY	DESCRIPTION
-	Not applicable or sample not tested for this analyte
<0.0400	Reported analyte concentration less than laboratory reporting limit of 0.0400 mg/L
17.5	Concentration exceeds the groundwater cleanup level listed in Table C, 18 AAC 75.345 (April 2012)
0.162	Indicates analyte detected
mg/L	Milligrams per liter
DTW	Depth to Water
ft	Feet
BTOC	Below top of casing
GRO	Gasoline Range Organics
DRO	Diesel Range Organics
TCE	Trichloroethylene
ND	Not detected above laboratory reporting limit
B	Compound detected in trip blank or method blank at an estimated concentration. Sample assigned a nondetect value at the limit of quantitation (LOQ).

TABLE 5 - HISTORICAL GROUNDWATER ANALYTICAL RESULTS

Monitoring Well	Date	DTW BTOC (ft)	GRO mg/L	DRO mg/L	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Xylenes mg/L	VOCs mg/L
ADOT&PF Aniak Maintenance Building - Former AST Area									
AST-MW6	4/4/1999	27.46	<0.0900	**0.808**	<0.00050	<0.0020	<0.0020	<0.0020	-
	8/12/1999	24.97	-	**0.536**	-	-	-	-	-
	3/16/2004	24.09	-	**0.822**	<0.000500	<0.00200	<0.00200	<0.00200	-
	2013	Decommissioned							
AST-MW7	5/18/2004	20.86	<0.0900	<0.333	<0.000500	<0.00200	<0.00200	<0.00200	-
	5/13/2014	23.31	**0.0318 J**	**0.534 J**	<0.000200	<0.000500	<0.000500	<0.00150	ND
ADOT&PF Aniak Maintenance Building - Former Underground Pipeline Area									
PL-MW9	4/4/1999	28.53	**0.600**	**3.39**	**0.00651**	**0.00586**	**0.0297**	**0.0859**	-
	8/12/1999	25.94	-	**2.59**	-	-	-	-	-
	3/15/2004	25.06	-	**2.41**	**0.000924**	<0.00200	**0.00246**	**0.00314**	-
	10/19/2005	28.28	-	**15.4**	-	-	-	-	-
	5/20/2010	27.43	**0.243**	**2.91**	<0.000500	<0.00200	**0.00341**	**0.0154**	-
	5/14/2014	27.13	Not sampled; 4 inches of product in well						
PL-MW10	4/4/1999	27.56	<0.0900	<0.326	<0.00050	**0.00242**	<0.0020	<0.0020	-
	8/12/1999	24.98	-	**0.380**	-	-	-	-	-
	3/15/2004	24.12	-	<0.319	<0.000500	<0.00200	<0.00200	<0.00200	-
	5/13/2014	25.84	**0.0372 J**	**1.9**	<0.000200	<0.000500	<0.000500	<0.00150	ND
PL-MW11	4/4/1999	25.40	**0.180**	**1.51**	<0.00050	**0.00219**	**0.00261**	**0.0104**	-
	8/12/1999	22.78	-	**0.861**	-	-	-	-	-
	3/15/2004	21.97	-	<0.316	<0.000500	<0.00200	<0.00200	<0.00200	-
	5/13/2014	23.05	<0.0500	**1.35**	<0.000200	<0.000500	<0.000500	<0.00150	ND
PL-MW12	4/4/1999	26.48	<0.0900	<0.330	<0.00050	<0.0020	<0.0020	<0.0020	-
	2004	Decommissioned							

KEY	DESCRIPTION
-	Not applicable or sample not tested for this analyte
<0.0900	Reported analyte concentration less than laboratory reporting limit of 0.0900 mg/L
3.39	Concentration exceeds the groundwater cleanup level listed in Table C, 18 AAC 75.345 (April 2012)
0.808	Indicates analyte detected
mg/L	Milligrams per liter
DTW	Depth to Water
ft	Feet
BTOC	Below top of casing
GRO	Gasoline Range Organics
DRO	Diesel Range Organics
TCE	Trichloroethylene
J	Estimated concentration less than the limit of quantitation
ND	Not detected above laboratory reporting limit



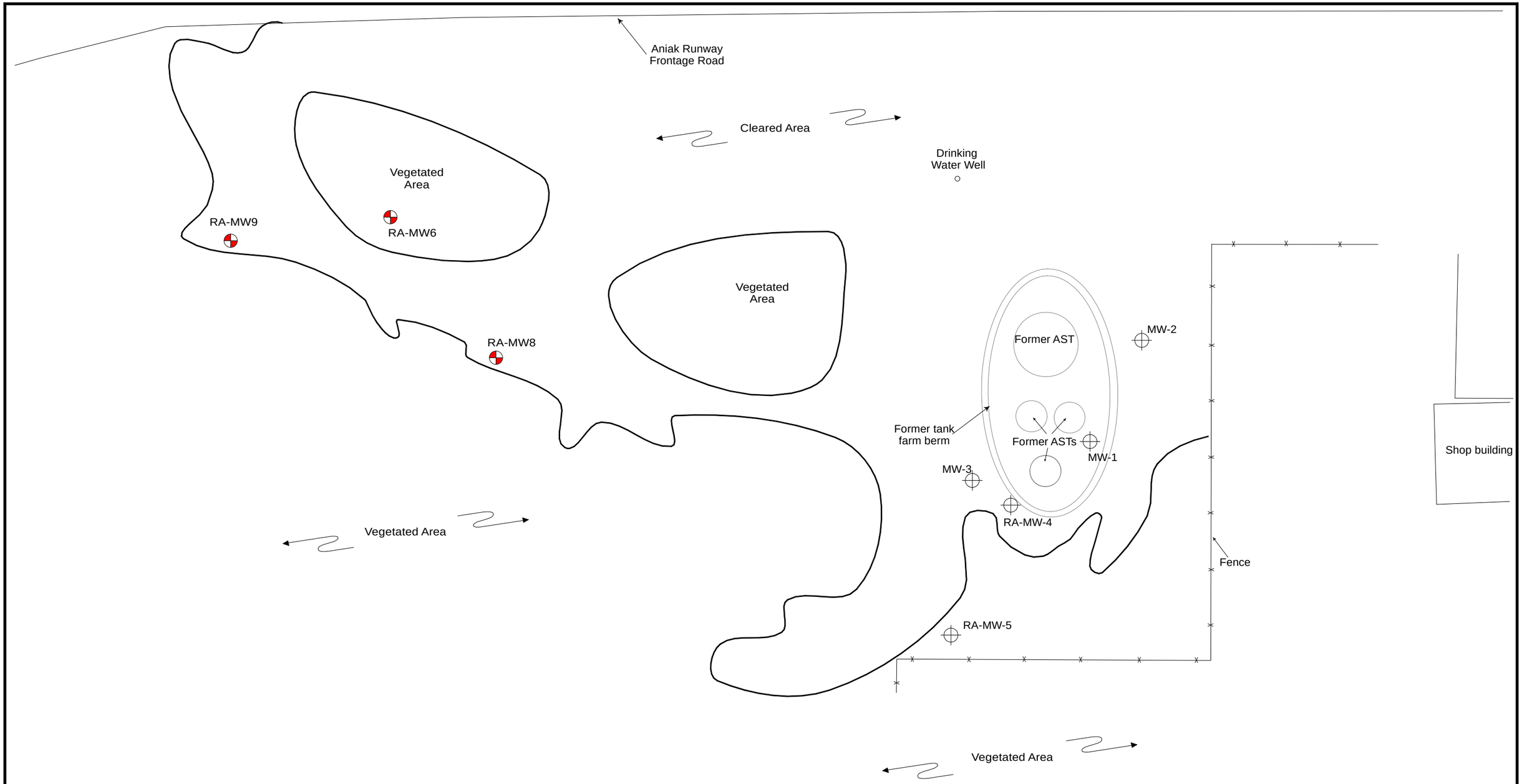
ADOT&PF Aniak Airport
Aniak, Alaska

VICINITY MAP

June 2014 32-1-17636

SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

Fig. 1



LEGEND

RA-MW-6 Approximate location of Monitoring Well RA-MW6, sampled by Shannon & Wilson in May 2014

RA-MW-5 Approximate location of former Monitoring Well RA-MW5.

0 50 100

APPROXIMATE SCALE IN FEET

ADOT&PF Aniak Airport
Aniak, Alaska

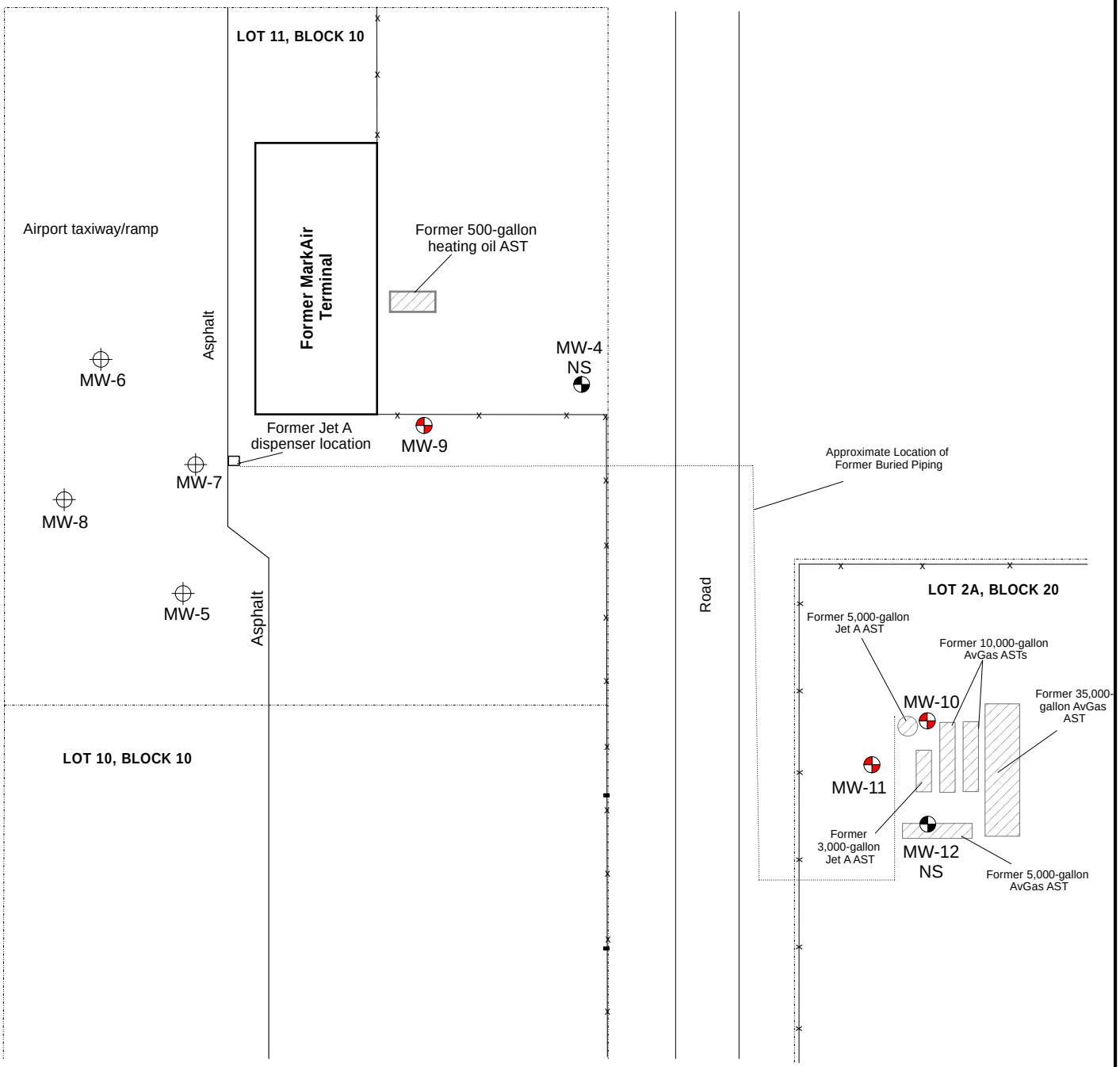
RUNWAY APRON SITE PLAN

June 2014

32-1-17636

SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

Fig. 2



LEGEND

MW-9 — Approximate location of Monitoring Well MW-9, sampled by Shannon & Wilson in May 2014

MW-1 — Approximate location of former Monitoring Well MW-1.

MW-4 NS — Approximate location of Monitoring Well MW-4. Not sampled in 2014.

0 60 120

APPROXIMATE SCALE IN FEET

ADOT&PF Aniak Airport
Aniak, Alaska

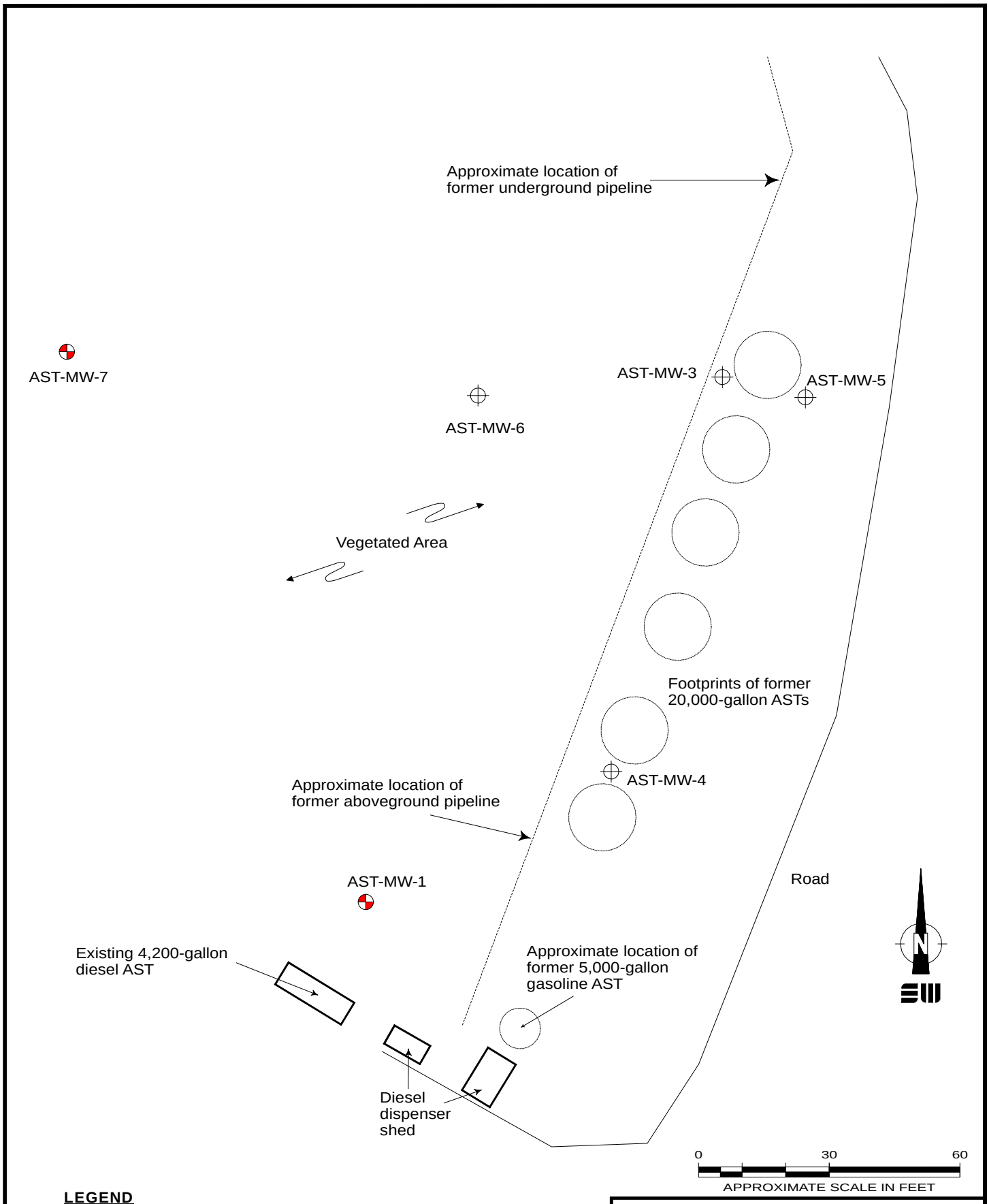
FORMER MARKAIR FACILITY
SITE PLAN

June 2014

32-1-17636

SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

Fig. 3



LEGEND

AST-MW-7 — Approximate location of Monitoring Well AST-MW-7, sampled by Shannon & Wilson in May 2014.

AST-MW-3 — Approximate location of former Monitoring Well AST-MW-3.

ADOT&PF Aniak Airport
Aniak, Alaska

ADOT&PF ANIAK MAINTENANCE BUILDING
FORMER AST AREA
SITE PLAN

June 2014

32-1-17636

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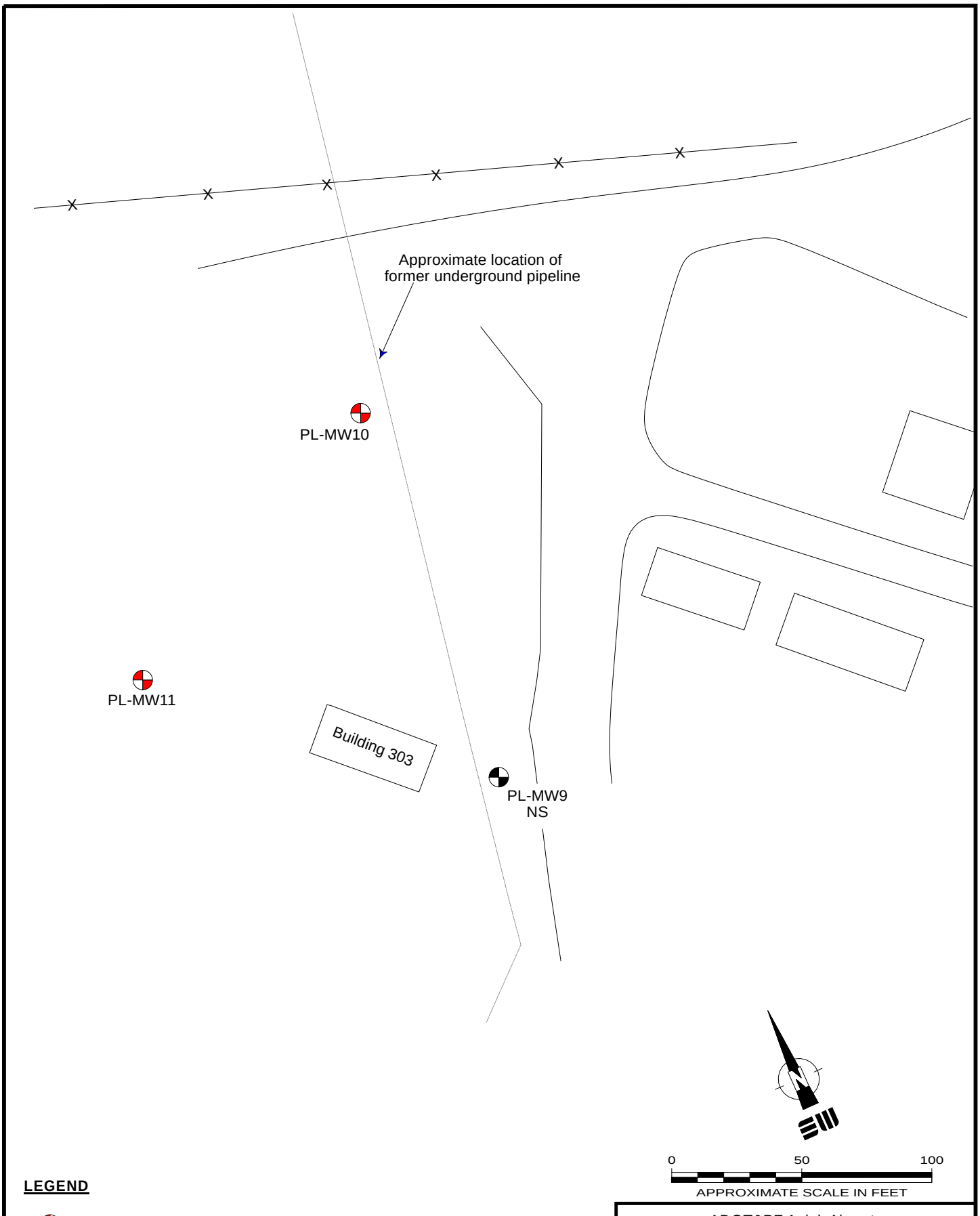
Geotechnical & Environmental Consultants

Fig. 4



LEGEND

PL-MW11 — Approximate location of Monitoring Well PL-MW11, sampled by Shannon & Wilson in May 2014

PL-MW9 NS — Approximate location of Monitoring Well PL-MW9. Not sampled in 2014.

ADOT&PF Aniak Airport
Aniak, Alaska

ADOT&PF ANIAK MAINTENANCE BUILDING
FORMER UNDERGROUND PIPELINE AREA
SITE PLAN

June 2014

32-1-17636

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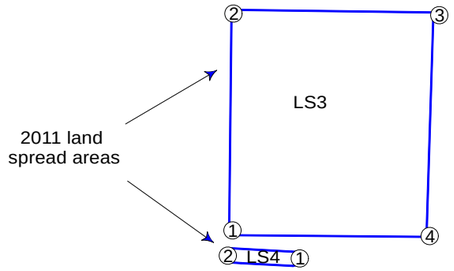
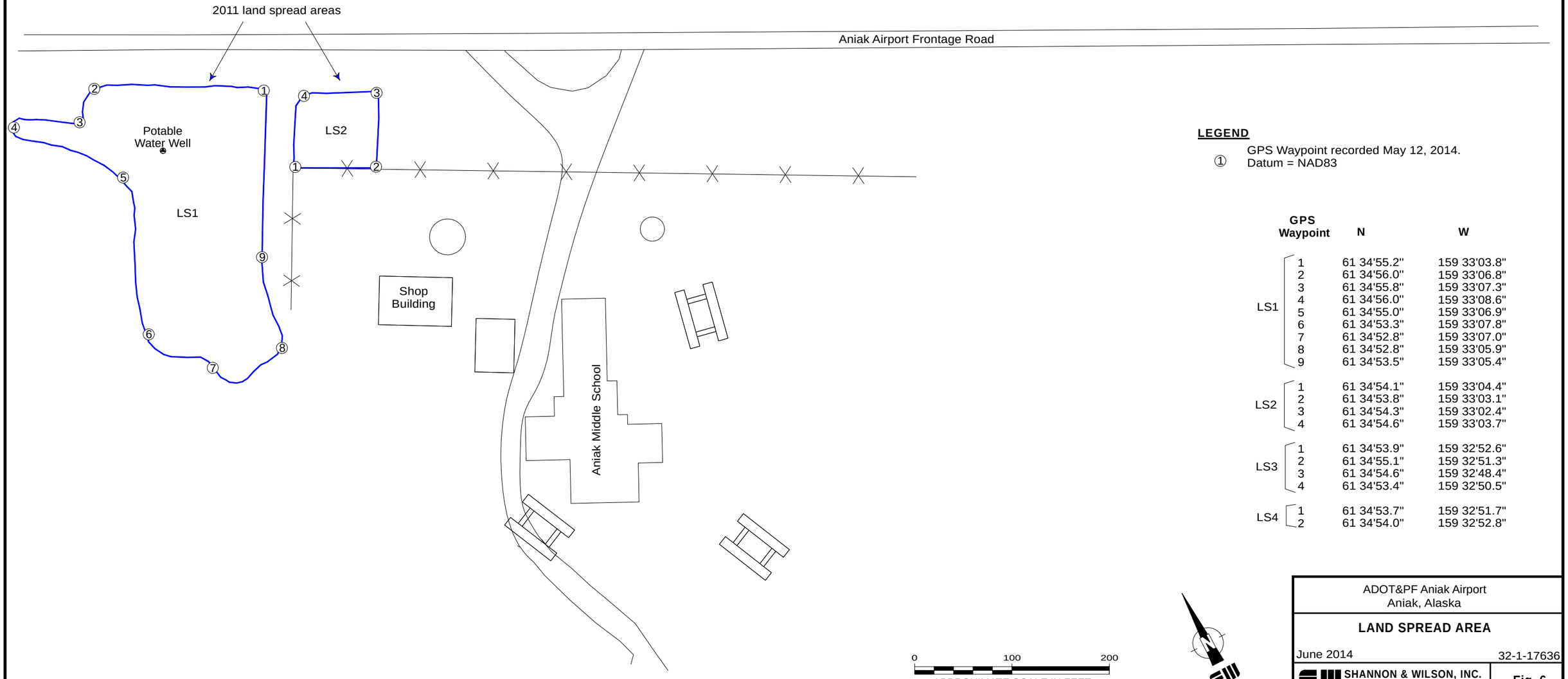
Geotechnical & Environmental Consultants

Fig. 5





LEGEND

① GPS Waypoint recorded May 12, 2014.
Datum = NAD83

	GPS Waypoint	N	W
LS1	1	61 34'55.2"	159 33'03.8"
	2	61 34'56.0"	159 33'06.8"
	3	61 34'55.8"	159 33'07.3"
	4	61 34'56.0"	159 33'08.6"
	5	61 34'55.0"	159 33'06.9"
	6	61 34'53.3"	159 33'07.8"
	7	61 34'52.8"	159 33'07.0"
	8	61 34'52.8"	159 33'05.9"
	9	61 34'53.5"	159 33'05.4"
LS2	1	61 34'54.1"	159 33'04.4"
	2	61 34'53.8"	159 33'03.1"
	3	61 34'54.3"	159 33'02.4"
	4	61 34'54.6"	159 33'03.7"
LS3	1	61 34'53.9"	159 32'52.6"
	2	61 34'55.1"	159 32'51.3"
	3	61 34'54.6"	159 32'48.4"
	4	61 34'53.4"	159 32'50.5"
LS4	1	61 34'53.7"	159 32'51.7"
	2	61 34'54.0"	159 32'52.8"

ADOT&PF Aniak Airport
Aniak, Alaska

LAND SPREAD AREA

June 2014 32-1-17636

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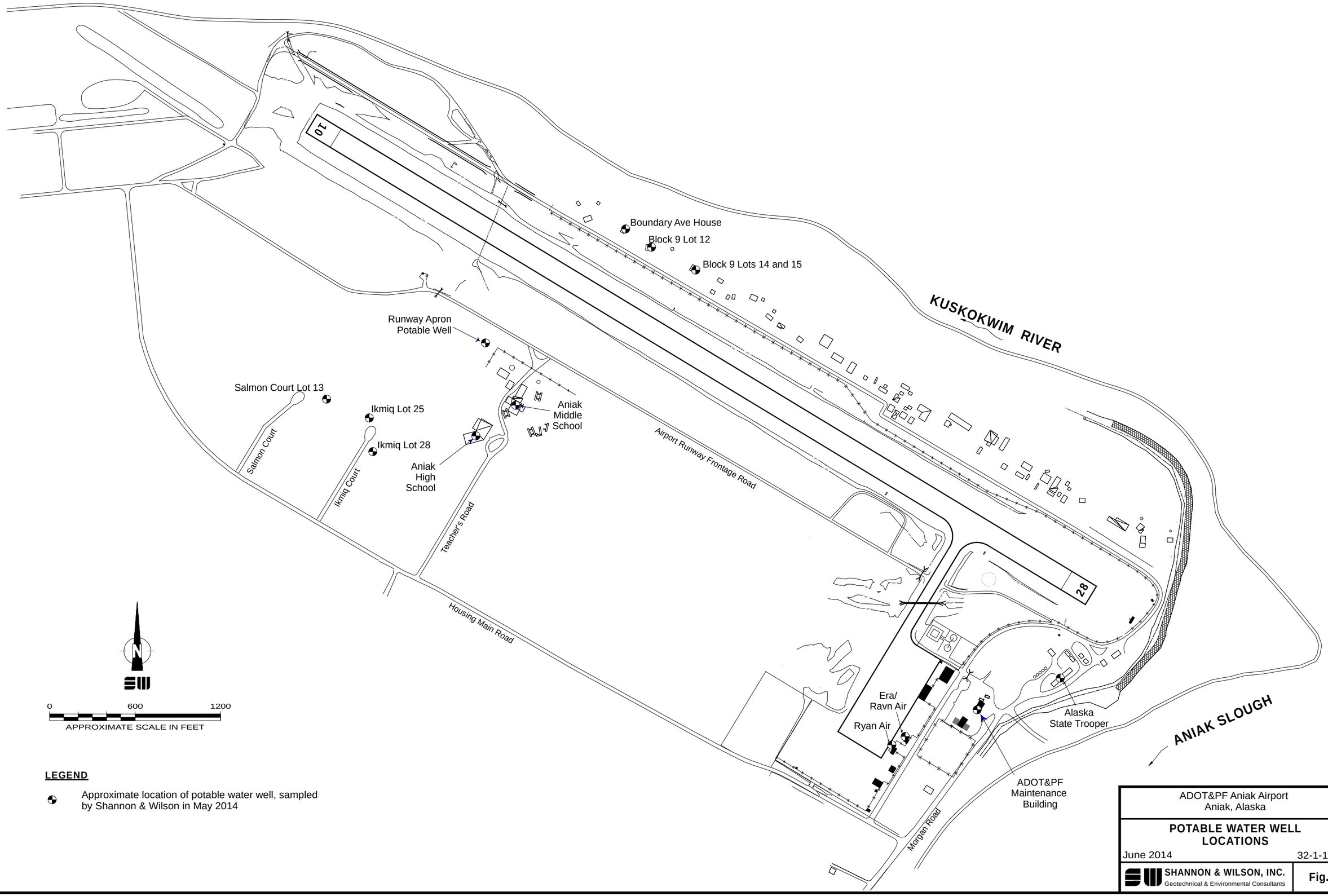
Fig. 6



LEGEND

Approximate location of potable water well, sampled by Shannon & Wilson in May 2014

ADOT&PF Aniak Airport
Aniak, Alaska

POTABLE WATER WELL LOCATIONS

June 2014 32-1-17636

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Fig. 7

APPENDIX A

PROJECT PHOTOGRAPHS

Photo 1: Looking south at drums and supersacks covering Monitoring Well MW-12 at the Former MarkAir Facility. (5/14/2014)

Photo 2: Approximately 4 inches of product in Monitoring Well PL-MW9. (5/14/2014)

ADOT&PF Aniak Airport
Aniak, Alaska

PHOTOS 1 AND 2

June 2014 32-1-17636

SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

Photo 3: Sampling Monitoring Well MW-11 at the Former MarkAir Facility. (5/14/2014)

Photo 4: Looking north, Monitoring Well RA-MW6 is located in an area of standing surface water at the Runway Apron area. (5/13/2014)

ADOT&PF Aniak Airport
Aniak, Alaska

PHOTOS 3 AND 4

June 2014 32-1-17636

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Photo 5: Looking south, frost jacking at Monitoring Well RA-MW8 at the Runway Apron area. (5/13/2014)

Photo 6: Looking west at Land Spread Area LS1. (5/12/2014)

Photo 7: Looking west at Land Spread Area LS1. (5/12/2014)

Photo 8: Looking south at Land Spread Area LS1. (5/12/2014)

Photo 9: Looking south at the potable drinking water well at the Runway Apron in Land Spread Area LS1. (5/12/2014)

Photo 10: Looking south at Land Spread Area LS2. (5/12/2014)

Photo 11: Looking north at Land Spread Area LS3. (5/12/2014)

Photo 12: Looking east at Land Spread Area LS4. (5/12/2014)

ADOT&PF Aniak Airport
Aniak, Alaska

PHOTOS 11 AND 12

June 2014 32-1-17636

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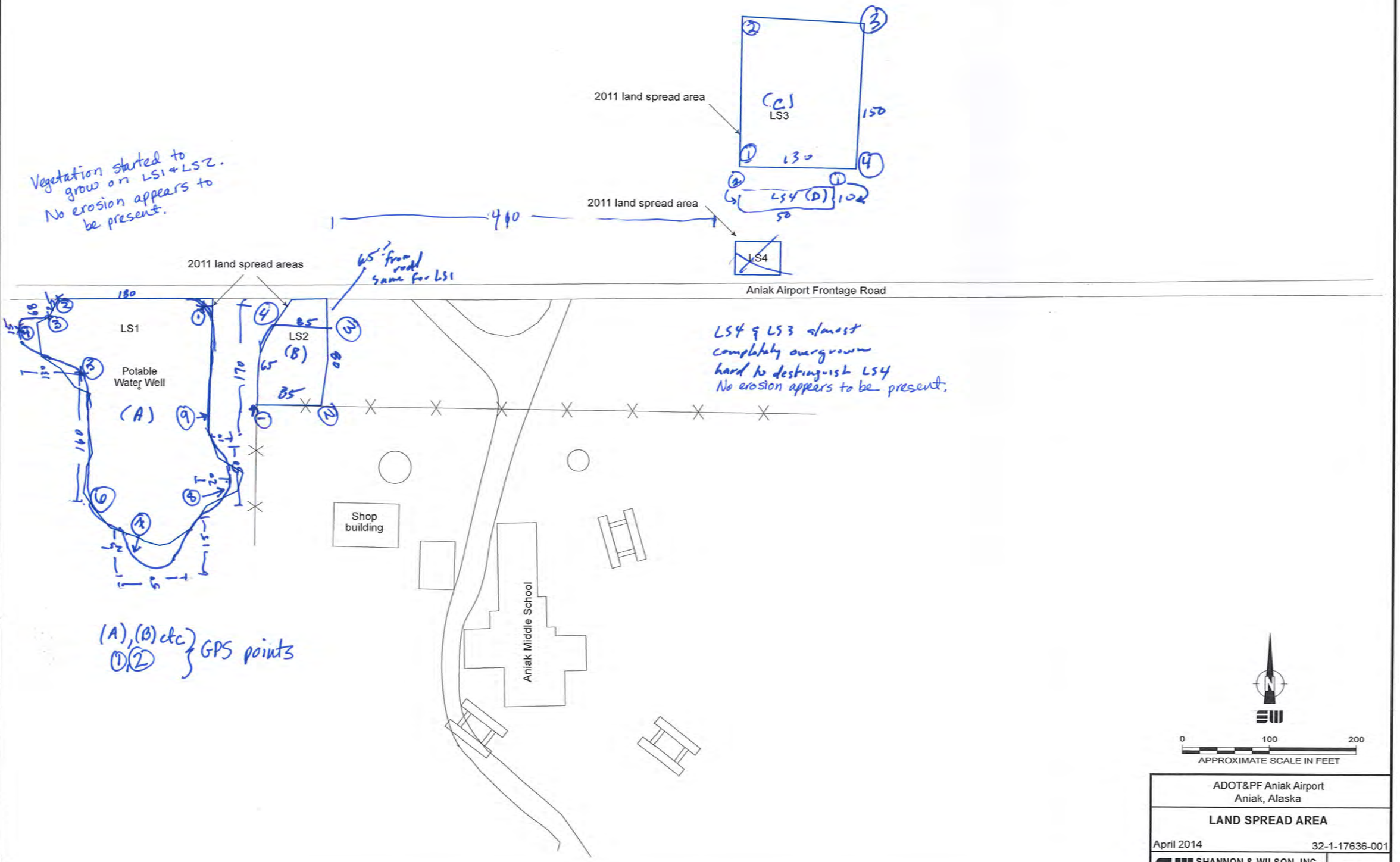
APPENDIX B

FIELD NOTES


Vegetation started to grow on LS1 & LS2. No erosion appears to be present.
2011 land spread area
LS3
150
130
LS4 (D)
10
50
2011 land spread area
410
LS4
2011 land spread areas
65' from road same for LS1
Aniak Airport Frontage Road
LS4 & LS3 almost completely overgrown hard to distinguish LS4 No erosion appears to be present.
180
160
LS1
Potable Water Well
(A)
LS2
(B)
65
85
170
160
Shop building
Aniak Middle School
(A), (B) etc
① ② } GPS points
N
0
100
200
APPROXIMATE SCALE IN FEET
ADOT&PF Aniak Airport
Aniak, Alaska
LAND SPREAD AREA
April 2014
32-1-17636-001
SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants
Fig. 6

LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 17636-001 Location: Ariak Runway Apron Weather: Sunny, 70°

Well No.: RA-MW-C6

Date: 5/13/2014 Time Started: ~1535 Time Completed: ~1630

Develop Date: — Develop End Time: — (24 hour break)

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 0927 Date of Depth Measurement: 5/13/2014

Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:

Diameter of Casing: 2" PVC Well Screen Interval: —

Total Depth of Well Below MP: 29.90 Product Thickness, if noted: —

Depth-to-Water (DTW) Below MP: 24.60

Water Column in Well: 5.30 (Total Depth of Well Below MP - DTW Below MP)

Gallons per foot: 0.16

Gallons in Well: 0.85 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/13/2014 Time Started: ~1552 Time Completed: ~1620

Three Well Volumes: 2.55 (Gallons in Well x 3)

Gallons Purged: 2.1 Depth of Pump (generally 2 ft from bottom): ~27 ft

Max. Drawdown (generally 0.3 ft): 0.01 Pump Rate: 0.2 - 0.4

Well Purged Dry: Yes ☐ No ☒ (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
1558	0.5	0.3	—	—	4.44	486	7.14	6.55	100.5	35.88
1601	0.8	0.4	24.63	—	4.56	485	5.06	6.47	102.2	29.19
1604	0.9	0.2	~~29.~~	—	7.09	479	3.62	6.38	99.8	27.48
1608	1.1	0.2	24.62	0.01	7.39	493	3.57	6.40	96.0	22.05
1612	1.4	0.2	—	—	7.01	488	3.43	6.44	95.3	5.64
1615	1.7	0.2	—	—	6.91	486	3.34	6.41	98.3	2.16
1618	2.1	0.9	—	—	6.92	485	3.26	6.37	101.9	1.97

1620 - sample

SAMPLING DATA

Odor: none Color: clear

Sample Designation: RA-MW-C6 Time / Date: 1620 5/13/2014

QC Sample Designation: — Time / Date: —

QA Sample Designation: — Time / Date: —

Evacuation Method: Bladder Pump / Submersible Pump / Other:

Sampling Method: Bladder Pump / Submersible Pump / Other:

Water Quality Instruments Used/Manufacturer/Model Number YSI 556

Calibration Info (Time, Ranges, etc) YSI 556 at ~1245 on 5/13/2014

Remarks: well casing/monument in good condition

Sampling Personnel: EJK / JCT

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65

ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23

LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 17636-001 Location: Aniak Runway Apron Weather: Clear 55°F

Well No.: RA-MW-8

Date: 5/13/2014 Time Started: 1300 Time Completed: ~1415

Develop Date: — Develop End Time: — (24 hour break)

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 0921 Date of Depth Measurement: 5/13/2014

Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:

Diameter of Casing: 2" Well Screen Interval: —

Total Depth of Well Below MP: 33.50 Product Thickness, if noted: —

Depth-to-Water (DTW) Below MP: 27.27

Water Column in Well: 6.23 (Total Depth of Well Below MP - DTW Below MP)

Gallons per foot: 0.16

Gallons in Well: 1.0 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/13/14 Time Started: 1305 Time Completed: 1400

Three Well Volumes: 3.0 (Gallons in Well x 3)

Gallons Purged: 2.5 Depth of Pump (generally 2 ft from bottom): ~29'

Max. Drawdown (generally 0.3 ft): 0.02 Pump Rate: 0.3 to 0.2

Well Purged Dry: Yes ☐ No ☒ (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
1313	0.5	0.4	—	—	8.5	538	—	5.66	—	463.3
1318	0.75	0.2	—	—	7.6	523	—	5.87	—	372.3
1325	1.0	0.2	27.28	0.01	6.5	526	—	6.01	—	120.3
1330	1.2	0.2	—	—	6.2	515	—	5.99	—	86.61
1335	1.4	0.2	—	—	6.3	520	—	6.10	—	77.49
1340	1.6	0.2	27.28	0.01	6.2	578	—	6.04	—	34.61

SAMPLING DATA

Odor: NA Color: light brown to clear

Sample Designation: 17636-RA-MW8 Time / Date: 1405 5/13/14

QC Sample Designation: — Time / Date: —

QA Sample Designation: — Time / Date: —

Evacuation Method: Bladder Pump / Submersible Pump / Other:

Sampling Method: Bladder Pump / Submersible Pump / Other:

Water Quality Instruments Used/Manufacturer/Model Number Hanna, Turbidimeter

Calibration Info (Time, Ranges, etc) Hanna #2 at 1245 on 5/13/14

Remarks: apparent frost jacking - casing above top of monument; well monument casing broken

Sampling Personnel: Jake Tracy

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65

ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23

LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Continued from previous page

Job No: 17636-001 Location: Anvik Runway Apron Site: Anvik

Well No.: MW-B

Date: 5/13/14

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
1345	1.8	0.2	-	-	6.3	521	-	6.10	-	67.33
1350	2	0.2	-	-	6.2	522	-	6.12	-	47.04
1355	2.25	0.2	27.29	0.02	6.2	525	-	6.15	-	50.70
1400	2.45	0.2	-	-	6.2	520	-	6.14	-	21.75
1405	Sample	time								

STABILIZATION PARAMETERS

	Interval (minutes)	Pump Rate (mL/min):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
ADEC ay 2010)	3 to 5	100 to 150	<0.0328	±3% or ±0.2	±3%	±10%	±0.1	±10	±10%
EPA n. 2010)	5	50	<0.3	±3%	±3%	±10% or <0.5	±0.1	±10	±10% or <5 NTU

EPA guidance requires all parameters to stabilize for 3 consecutive readings before sampling. If not stable within 2 hours, collect sample.

ADEC guidance requires 3 parameters (4 if using temperature) to stabilize for 3 consecutive readings before sampling.

LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 17636-001 Location: Aniak Runway Apron Weather: sunny, 60's
Well No.: RA-MW9
Date: 5/13/2014 Time Started: ~900 Time Completed: ~1540
Develop Date: — Develop End Time: — (24 hour break)

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 0931 Date of Depth Measurement: 5/13/2014
Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:
Diameter of Casing: 2" Well Screen Interval: —
Total Depth of Well Below MP: 29.67 Product Thickness, if noted: —
Depth-to-Water (DTW) Below MP: 25.39
Water Column in Well: 4.28 (Total Depth of Well Below MP - DTW Below MP)
Gallons per foot: 0.16
Gallons in Well: 0.68 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/13/2014 Time Started: ~1440 Time Completed: ~1530
Three Well Volumes: 2.04 (Gallons in Well x 3)
Gallons Purged: 1.7 Depth of Pump (generally 2 ft from bottom): ~27 ft
Max. Drawdown (generally 0.3 ft): 0.01 Pump Rate: ~0.2

Well Purged Dry: Yes ☐ No ☒ (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
1443	0.25	0.3	—	—	7.12	530	8.43	6.79	82.2	—
1447	0.4	0.2	25.44	—	6.49	532	6.60	6.68	81.2	194.2
1451	0.7	0.2	25.43	0.01	6.49	531	5.98	6.59	81.5	139.5
1456	1	0.2	—	—	5.68	536	5.93	6.50	85.3	130.5
1459	0.2	0.2	25.43	0.01	5.90	532	5.65	6.44	89.3	93.31
1502	0.3	0.2	—	—	6.22	534	5.52	6.42	90.5	77.41

SAMPLING DATA

Odor: none Color: clear
Sample Designation: RA-MW9 Time / Date: 1512 5/13/2014
QC Sample Designation: RA-MW90 Time / Date: 1522 5/13/2014
QA Sample Designation: — Time / Date: —

Evacuation Method: Bladder Pump / Submersible Pump / Other:
Sampling Method: Bladder Pump / Submersible Pump / Other:
Water Quality Instruments Used/Manufacturer/Model Number YSI 556
Calibration Info (Time, Ranges, etc) YSI at ~1245 on 5/13/2014
Remarks: well casing/monument in good condition — a little frost jacking lock won't close - replaced lock
Sampling Personnel: EJC

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65
ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23

LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Continued from previous page

Job No: 17636-001 Location: Aivak Runway Apron Site: Amiak
Well No.: RAMW-9
Date: 5/13/2014

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
1506	1.4	0.2	—	—	6.18	533	5.53	6.45	90.0	75.43
1510	1.7	0.2	—	—	6.20	536	5.60	6.47	89.2	77.28
1512-sample										

STABILIZATION PARAMETERS

	Interval (minutes)	Pump Rate (mL/min):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
ADEC ay 2010)	3 to 5	100 to 150	<0.0328	±3% or ±0.2	±3%	±10%	±0.1	±10	±10%
EPA n. 2010)	5	50	<0.3	±3%	±3%	±10% or <0.5	±0.1	±10	±10% or <5 NTU

EPA guidance requires all parameters to stabilize for 3 consecutive readings before sampling. If not stable within 2 hours, collect sample.
ADEC guidance requires 3 parameters (4 if using temperature) to stabilize for 3 consecutive readings before sampling.

LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 17636-001 Location: Aniak Former MarkAir Weather: Sunny, 60°

Well No.: MW-4

Date: 5/13/2014 Time Started: ~0920 Time Completed: ~1600

Develop Date: — Develop End Time: — (24 hour break)

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1020 Date of Depth Measurement: 5/13/2014

Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:

Diameter of Casing: 2" Well Screen Interval: —

Total Depth of Well Below MP: 24.74 Product Thickness, if noted: —

Depth-to-Water (DTW) Below MP: 24.01

Water Column in Well: 0.73 (Total Depth of Well Below MP - DTW Below MP)

Gallons per foot: 0.16

Gallons in Well: 0.12 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/14/2014 Time Started: ~0920 Time Completed: —

Three Well Volumes: 0.35 (Gallons in Well x 3)

Gallons Purged: — Depth of Pump (generally 2 ft from bottom): —

Max. Drawdown (generally 0.3 ft): — Pump Rate: —

Well Purged Dry: Yes ☒ No ☐ (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
0920	0	—	24.32	—	—	—	—	—	—	—
0935	~0.05	—	24.58	0.26	—	—	—	—	—	—
0940	~0.02	—	24.66	0.34	not enough water for parameters					
1555	—	—	24.68							
				not enough water to sample						

SAMPLING DATA

Odor: Color:

Sample Designation: Time / Date:

QC Sample Designation: Time / Date:

QA Sample Designation: Time / Date:

Evacuation Method: Bladder Pump / Submersible Pump / Other:

Sampling Method: Bladder Pump / Submersible Pump / Other:

Water Quality Instruments Used/Manufacturer/Model Number

Calibration Info (Time, Ranges, etc)

Remarks: monument/casing in good condition - flushmount

tried purging w/ pump 5/13/2014 → not enough water in well; tried w/ bailer 5/14/2014

Sampling Personnel: ESK

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65

ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23

WELL PURGED DRY LOG

Shannon & Wilson, Inc.

Job No: 17636-001 Location: Adak Former Mak Air Weather: sunny, 60°
Concern: — Well No.: MW-4
Date: 5/14/2014 Time Started: ~0920 Time Completed: ~1600

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1020 Date of Depth Measurement: 5/13/2014
Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:
Diameter of Casing: 2" Well Screen Interval: —
Total Depth of Well Below MP: 24.74 Product Thickness, if noted: —
Depth-to-Water (DTW) Below MP: 24.01
Water Column in Well: 0.73 (Total Depth of Well Below MP - DTW Below MP)
Gallons per foot: 0.16
Gallons in Well: 0.12 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/14/2014 Time Started: 0920 Time Completed: ~1600
80% Recovery Water Column: — (Water Column in Well x 0.8)
80% Recovery DTW: — (Initial DTW + (Water Col. – 80% Recovery Water Col.)

Purging	Time Well Purged Dry	Time Well Was 80% Recovered	DTW	Pump Rate
1	0945	—	—	—
2				
3				

well did not recharge

SAMPLING DATA

Odor: Color:
Sample Designation: Time / Date:
QC Sample Designation: Time / Date:
QA Sample Designation: Time / Date:

Evacuation Method: Bladder Pump / Other:
Sampling Method: Bladder Pump / Other:

Remarks:

Sampling Personnel: EJK

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16
ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23

LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 17636-001 Location: Ariak Former MarkAir Weather: 55°F Clear
Well No.: MW-9
Date: 5/13/2014 Time Started: 1130 Time Completed: 1220
Develop Date: — Develop End Time: — (24 hour break)

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1128 Date of Depth Measurement: 5/13/2014
Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:
Diameter of Casing: 2" Well Screen Interval: —
Total Depth of Well Below MP: 29.52 Product Thickness, if noted: —
Depth-to-Water (DTW) Below MP: 24.83 24.94 5/14/2014
Water Column in Well: 4.58 (Total Depth of Well Below MP - DTW Below MP)
Gallons per foot: 0.16
Gallons in Well: 0.73 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/14/14 Time Started: 1143 Time Completed: 1203
Three Well Volumes: 2.2 (Gallons in Well x 3)
Gallons Purged: ~1.0 Depth of Pump (generally 2 ft from bottom): ~27'
Max. Drawdown (generally 0.3 ft): 0.06 Pump Rate: ~0.2

Well Purged Dry: Yes ☐ No ☒ (If yes, use Well Purged Dry Log)

Time:	~Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
1150	0.5	~0.2	—	—	3.78	473	5.96	6.84	131.3	1.05
1153	0.6	~0.1	—	—	4.15	473	4.53	6.61	131.7	0.45
1156	0.75	0.2	25.0	0.06	3.96	470	3.94	6.69	123.9	0.45
1159	0.9	0.2	—	—	3.90	466	3.64	6.74	120.1	0.93
1202	1.0	0.1	—	—	3.89	461	3.61	6.75	115.6	0.01
1205	Sample time									

SAMPLING DATA

Odor: NA Color: Clear
Sample Designation: 17636-MW9 Time / Date: 1205 5/14/14
QC Sample Designation: 17636-MW19 Time / Date: 1220 5/14/14
QA Sample Designation: — Time / Date: —

Evacuation Method: Bladder Pump / Submersible Pump / Other:
Sampling Method: Bladder Pump / Submersible Pump / Other:
Water Quality Instruments Used/Manufacturer/Model Number YSI 556, Turbidimeter
Calibration Info (Time, Ranges, etc) YSI 556 at ~1245 on 5/13/2014
Remarks: monument/casing in good condition - flushmount

Sampling Personnel: JCT & EJK

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65
ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23

LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 17636-001 Location: Anial Farmer Market Weather: 50°F Clear

Well No.: MW-10

Date: 5/13/2014 Time Started: 1020 Time Completed: 1100

Develop Date: — Develop End Time: — (24 hour break)

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1110 Date of Depth Measurement: 5/13/2014

Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:

Diameter of Casing: 2" Well Screen Interval: —

Total Depth of Well Below MP: 29.40 Product Thickness, if noted: —

Depth-to-Water (DTW) Below MP: 23.19 / 23.25 on 5/14

Water Column in Well: 6.15 (Total Depth of Well Below MP - DTW Below MP)

Gallons per foot: 0.16

Gallons in Well: 0.98 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/14/14 Time Started: 1030 Time Completed: 1050

Three Well Volumes: 2.95 (Gallons in Well x 3)

Gallons Purged: ~1.15 Depth of Pump (generally 2 ft from bottom): ~26'

Max. Drawdown (generally 0.3 ft): 0.1 Pump Rate: ~0.3 to 0.2

Well Purged Dry: Yes ☐ No ☒ (If yes, use Well Purged Dry Log)

Time:	~Gallons:	~Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
1035	0.25	~0.2	—	—	4.6	367	—	6.25	—	8.34
1040	0.5	0.2	23.35	0.1	4.0	367	—	6.15	—	6.69
1043	0.7	0.2	—	—	3.9	365	—	6.13	—	4.51
1046	0.9	0.2	23.34	0.09	3.8	367	—	6.10	—	2.49
1049	1.1	0.2	—	—	3.8	370	—	6.13	—	2.15
1050	Sample time									

SAMPLING DATA

Odor: NA Color: Clear

Sample Designation: 17636-MW10 Time / Date: 1050 5/14/14

QC Sample Designation: — Time / Date: —

QA Sample Designation: — Time / Date: —

Evacuation Method: Bladder Pump / Submersible Pump / Other:

Sampling Method: Bladder Pump / Submersible Pump / Other:

Water Quality Instruments Used/Manufacturer/Model Number Hanna, Turbidimeter

Calibration Info (Time, Ranges, etc) Hanna at 900 on 5/14/14

Remarks: casing/mounment in good condition - flushmount

Sampling Personnel: Jake Tracy

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65

ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23

LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 17636-001 Location: Aniak former Markair Weather: sunny, 60°F

Well No.: MW-11

Date: 5/13/2014 Time Started: ~1020 Time Completed: ~1115

Develop Date: — Develop End Time: — (24 hour break)

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1112 Date of Depth Measurement: 5/13/2014

Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:

Diameter of Casing: 2" Well Screen Interval: —

Total Depth of Well Below MP: 29.37 Product Thickness, if noted: —

Depth-to-Water (DTW) Below MP: 23.05

Water Column in Well: 6.32 (Total Depth of Well Below MP - DTW Below MP)

Gallons per foot: 0.16

Gallons in Well: 1.01 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/14/2014 Time Started: 1025 Time Completed: ~1100

Three Well Volumes: 3.0 (Gallons in Well x 3)

Gallons Purged: 2.3 Depth of Pump (generally 2 ft from bottom): ~26 ft

Max. Drawdown (generally 0.3 ft): 0.05 Pump Rate: 0.2 to 0.3

Well Purged Dry: Yes ☐ No ☒ (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
1029	0.25	0.2	23.23	—	3.79	451	4.28	5.87	179.5	
1033	0.5	0.2	—	—	4.05	428	3.74	5.77	183.1	16.35
1037	0.75	0.2	23.26	0.03	4.18	388	4.46	5.95	177.5	8.49
1042	1.0	0.2	—	—	3.93	328	5.05	6.14	168.2	5.48
1047	1.4	0.3	23.28	0.05	3.90	324	5.03	6.17	166.2	4.61
1051	1.7	0.3	—	—	3.65	321	4.81	6.34	146.9	0.00

SAMPLING DATA

Odor: none Color: clear

Sample Designation: 17636-MW11 Time / Date: 1059 5/14/2013

QC Sample Designation: — Time / Date: —

QA Sample Designation: — Time / Date: —

Evacuation Method: Bladder Pump / Submersible Pump / Other:

Sampling Method: Bladder Pump / Submersible Pump / Other:

Water Quality Instruments Used/Manufacturer/Model Number YSI 556, turbidimeter

Calibration Info (Time, Ranges, etc) YSI at ~1245 on 5/13/2014

Remarks: Monument/casing in good condition - flushmount

Sampling Personnel: EJC

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65

ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23

LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Continued from previous page

Job No: 17636-001 Location: Anvik Former MarkAir Site: Anvik

Well No.: MW11

Date: 5/14/2013

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
1055	2.0	0.2	3.28	0.05	3.62	319	4.49	6.28	154.8	0.00
1058	2.3	0.3	—	—	3.73	317	4.30	6.25	157.1	0.19
1059	sample									

STABILIZATION PARAMETERS

	Interval (minutes)	Pump Rate (mL/min):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
ADEC ay 2010)	3 to 5	100 to 150	<0.0328	±3% or ±0.2	±3%	±10%	±0.1	±10	±10%
EPA n. 2010)	5	50	<0.3	±3%	±3%	±10% or <0.5	±0.1	±10	±10% or <5 NTU

EPA guidance requires all parameters to stabilize for 3 consecutive readings before sampling. If not stable within 2 hours, collect sample.

ADEC guidance requires 3 parameters (4 if using temperature) to stabilize for 3 consecutive readings before sampling.

LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 17636-001 Location: Aniak Maintenance Weather: sunny, 70°F

Well No.: PL-MW-9

Date: 5/13/2014 Time Started: ~1535 Time Completed: ~1550

Develop Date: — Develop End Time: — (24 hour break)

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 0958 Date of Depth Measurement: 5/13/2014

Measuring Point (MP): (Top of PVC Casing) / Top of Steel Protective Casing / Other: _____

Diameter of Casing: 2" Well Screen Interval: —

Total Depth of Well Below MP: 33.06 Product Thickness, if noted: ~4"

Depth-to-Water (DTW) Below MP: 27.13 27.29 1535 5/14/2014

Water Column in Well: 5.93 (Total Depth of Well Below MP - DTW Below MP)

Gallons per foot: 0.16

Gallons in Well: 0.95 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/14/2014 Time Started: ~~1535~~ Time Completed: —

Three Well Volumes: _____ (Gallons in Well x 3)

Gallons Purged: _____ Depth of Pump (generally 2 ft from bottom): _____

Max. Drawdown (generally 0.3 ft): _____ Pump Rate: _____

Well Purged Dry: Yes ☐ No ☐ (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
						product in well no sample				

SAMPLING DATA

Odor: strong HC odor Color: clear

Sample Designation: — Time / Date: —

QC Sample Designation: — Time / Date: —

QA Sample Designation: — Time / Date: —

Evacuation Method: Bladder Pump / Submersible Pump / Other: _____

Sampling Method: Bladder Pump / Submersible Pump / Other: _____ removed product w/ bailer

Water Quality Instruments Used/Manufacturer/Model Number _____

Calibration Info (Time, Ranges, etc) _____

Remarks: well monument cover broken

checked for product w/ bailer 5/14/2014 → ~4" product (see photo)

Sampling Personnel: SCT/EJK

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65

ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23

LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 17636-001 Location: Anvik Maintenance Weather: sunny, ~65°
Well No.: PL-MW-10
Date: 5/13/2014 Time Started: ~1720 Time Completed: ~1810
Develop Date: — Develop End Time: — (24 hour break)

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 0948 Date of Depth Measurement: 5/13/2014
Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:
Diameter of Casing: 2" Well Screen Interval: —
Total Depth of Well Below MP: 29.94 Product Thickness, if noted: —
Depth-to-Water (DTW) Below MP: 25.84
Water Column in Well: 4.10 (Total Depth of Well Below MP - DTW Below MP)
Gallons per foot: ~~0.66~~ 0.16
Gallons in Well: 0.66 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/13/2014 Time Started: 1727 Time Completed: ~1800
Three Well Volumes: 2.0 (Gallons in Well x 3)
Gallons Purged: 3.2 Depth of Pump (generally 2 ft from bottom): ~27 ft
Max. Drawdown (generally 0.3 ft): 0 Pump Rate: 0.2 to 0.4

Well Purged Dry: Yes ☐ No ☒ (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
1730	0.3	0.3	—	—	3.35	655	13.12	6.89	103.6	88.03
1733	0.6	0.3	—	—	3.12	670	6.92	6.91	99.3	54.00
1736	1.0	0.4	—	—	3.14	692	3.93	6.87	94.2	28.02
1739	1.4	0.4	26.12	—	3.10	702	3.34	6.87	90.2	20.85
1743	1.8	0.4	—	—	3.47	707	2.74	6.86	86.9	37.28
1747	2.1	0.3	—	—	3.83	709	3.30	6.84	84.5	24.72

SAMPLING DATA

Odor: none Color: clear
Sample Designation: PL-MW10 Time / Date: 1800 5/13/12
QC Sample Designation: — Time / Date: —
QA Sample Designation: — Time / Date: —

Evacuation Method: Bladder Pump / Submersible Pump / Other:
Sampling Method: Bladder Pump / Submersible Pump / Other:

Water Quality Instruments Used/Manufacturer/Model Number YSI 556
Calibration Info (Time, Ranges, etc) YSI 556 at ~1245 on 5/13/2014
Remarks: well cap missing - replaced cap; monument cover broken; well surrounded by trees - hard to get to; no well name on well
a little ice on pump when removed from well
Sampling Personnel: EJK/JCT

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65
ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23

LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Continued from previous page

Job No: 17636-001 Location: Aniak Maintenance Site: Aniak
Well No.: PL-MW10
Date: 5/13/2014

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
1750	2.5	0.4	26.12	0	4.13	712	2.20	6.84	82.2	15.41
1753	2.7	0.2	—	—	4.04	723	2.05	6.85	80.3	9.26
1756	3.0	0.3	—	—	4.00	722	2.25	6.85	78.0	8.92
1759	3.2	0.2	—	—	3.99	722	2.52	6.85	76.3	8.61
1800 -	sample									

STABILIZATION PARAMETERS

	Interval (minutes)	Pump Rate (mL/min):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
ADEC ay 2010)	3 to 5	100 to 150	<0.0328	±3% or ±0.2	±3%	±10%	±0.1	±10	±10%
EPA n. 2010)	5	50	<0.3	±3%	±3%	±10% or <0.5	±0.1	±10	±10% or <5 NTU

EPA guidance requires all parameters to stabilize for 3 consecutive readings before sampling. If not stable within 2 hours, collect sample.
ADEC guidance requires 3 parameters (4 if using temperature) to stabilize for 3 consecutive readings before sampling.

LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 17636-001 Location: Aniak Maintenance Weather: sunny, 70° F
Well No.: PL-MW-11
Date: 5/13/2014 Time Started: ~1445 Time Completed: ~1530
Develop Date: — Develop End Time: — (24 hour break)

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 0953 Date of Depth Measurement: 5/13/2014
Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other: _____
Diameter of Casing: 2" Well Screen Interval: —
Total Depth of Well Below MP: 29.96 Product Thickness, if noted: —
Depth-to-Water (DTW) Below MP: 23.60 23.70 5/14/2013 1448
Water Column in Well: 6.36 (Total Depth of Well Below MP - DTW Below MP)
Gallons per foot: 0.16
Gallons in Well: 1.02 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/14/2014 Time Started: 1451 Time Completed: ~1530
Three Well Volumes: 3.05 (Gallons in Well x 3)
Gallons Purged: 2.0 Depth of Pump (generally 2 ft from bottom): ~27 ft
Max. Drawdown (generally 0.3 ft): _____ Pump Rate: 0.2 to 0.4

Well Purged Dry: Yes ☐ No ☒ (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
1454	0.2	0.2	—	—	6.18	412	7.29	7.05	106.5	29.87
1457	0.4	0.2	—	—	4.57	415	4.16	7.04	103.1	12.73
1500	0.6	0.2	23.92	—	4.14	419	4.44	6.67	113.5	7.64
~~1503~~	~~0.9~~									
1507	1.2	0.2	—	—	4.60	422	3.11	6.80	104.1	10.21
1510	1.5	0.2	—	—	4.76	422	2.05	6.80	99.3	9.11

SAMPLING DATA

Odor: none Color: clear
Sample Designation: PL-MW11 Time / Date: 1517 5/14/2014
QC Sample Designation: — Time / Date: —
QA Sample Designation: — Time / Date: —

Evacuation Method: Bladder Pump / Submersible Pump / Other: _____
Sampling Method: Bladder Pump / Submersible Pump / Other: _____
Water Quality Instruments Used/Manufacturer/Model Number YSI 556, turbidimeter
Calibration Info (Time, Ranges, etc) YSI 556 at 1245 on 5/13/2014
Remarks: monument cover broken; well name not on well
battery died at 1503 - replaced battery 1505
Sampling Personnel: EJK/JCT

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65
ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23

LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Continued from previous page

Job No: 17636-001 Location: Aniak Maintenance Site: Aniak
Well No.: PL-MW11
Date: 5/14/2014

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
1513	1.8	0.4	23.83	0.09	4.87	423	1.78	6.79	96.4	8.61
1516	2.0	0.4	—	—	4.94	422	1.57	6.79	93.8	6.16
1517	Sample									

STABILIZATION PARAMETERS

	Interval (minutes)	Pump Rate (mL/min):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
ADEC ay 2010)	3 to 5	100 to 150	<0.0328	±3% or ±0.2	±3%	±10%	±0.1	±10	±10%
EPA n. 2010)	5	50	<0.3	±3%	±3%	±10% or <0.5	±0.1	±10	±10% or <5 NTU

EPA guidance requires all parameters to stabilize for 3 consecutive readings before sampling. If not stable within 2 hours, collect sample.
ADEC guidance requires 3 parameters (4 if using temperature) to stabilize for 3 consecutive readings before sampling.

LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 17636-001 Location: Aniak Maintenance Weather: sunny, 70°F
Well No.: AST-MW-1
Date: 5/13/2014 Time Started: 1355 Time Completed: ~1440
Develop Date: — Develop End Time: — (24 hour break)

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1013 Date of Depth Measurement: 5/13/2014
Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:
Diameter of Casing: 2" Well Screen Interval: —
Total Depth of Well Below MP: 31.18 Product Thickness, if noted: —
Depth-to-Water (DTW) Below MP: 23.93 24.03 5/14/2014 1400
Water Column in Well: 7.15 (Total Depth of Well Below MP - DTW Below MP)
Gallons per foot: 0.16
Gallons in Well: 1.14 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/14/14 Time Started: 1405 Time Completed: ~1430
Three Well Volumes: 3.4 (Gallons in Well x 3)
Gallons Purged: 1.3 Depth of Pump (generally 2 ft from bottom): ~28 ft
Max. Drawdown (generally 0.3 ft): 0.04 Pump Rate: 0.2 to 0.3

Well Purged Dry: Yes ☐ No ☒ (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
1410	0.25	0.2	—	—	5.77	346	6.80	7.10	89.5	2.35
1413	0.4	0.3	24.07	0.14	5.69	343	~~6.77~~	6.89	92.5	4.48
1416	0.6	0.2	—	—	5.40	347	5.25 ~~6.69~~	6.69	95.0	3.55
1419	0.8	0.2	24.07	0.04	4.92	350	4.90	6.82	85.8	2.69
1422	1.1	0.3	—	—	4.88	349	4.36	6.84	81.4	3.26
1425	1.3	0.3	—	—	4.77	350	4.38	6.88	75.5	3.30

1426 - sample

SAMPLING DATA

Odor: none Color: clear
Sample Designation: AST-MW1 Time / Date: 1426 5/14/2014
QC Sample Designation: — Time / Date: —
QA Sample Designation: — Time / Date: —

Evacuation Method: Bladder Pump / Submersible Pump / Other:
Sampling Method: Bladder Pump / Submersible Pump / Other:
Water Quality Instruments Used/Manufacturer/Model Number YSI 556, turbidimeter
Calibration Info (Time, Ranges, etc) YSI 556 at ~1245 on 5/13/2014
Remarks: monument/casing in good condition

Sampling Personnel: JCT/EJK

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65
ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23

LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 17636-001 Location: Aniak Maintenance Weather: clear, 50's
Well No.: AST-MW-7
Date: 5/13/2014 Time Started: ~1820 Time Completed: ~1855
Develop Date: — Develop End Time: — (24 hour break)

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1008 Date of Depth Measurement: 5/13/2014
Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:
Diameter of Casing: 2" Well Screen Interval: —
Total Depth of Well Below MP: 24.70 Product Thickness, if noted: —
Depth-to-Water (DTW) Below MP: 23.31
Water Column in Well: ~~1.41~~ 1.39 (Total Depth of Well Below MP - DTW Below MP)
Gallons per foot: 0.16
Gallons in Well: 0.23 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/13/2014 Time Started: 1832 Time Completed: ~1855
Three Well Volumes: 0.68 (Gallons in Well x 3)
Gallons Purged: 1.5 Depth of Pump (generally 2 ft from bottom): ~24 ft
Max. Drawdown (generally 0.3 ft): — Pump Rate: 0.3 to 0.4

Well Purged Dry: Yes ☐ No ☒ (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
1835	0.6	0.4	—	—	3.25	493	10.50	7.03	94.5	24.61
1839	0.9	0.3	—	—	3.33	488	7.53	6.81	98.6	5.02
1843	1.2	0.3	—	—	3.34	487	6.80	6.73	98.0	5.99
1846	1.5	0.3	—	—	3.30	487	6.50	6.72	97.4	4.51
1847	sample									

SAMPLING DATA

Odor: none Color: clear
Sample Designation: AST-MW7 Time / Date: 1847 5/13/2014
QC Sample Designation: — Time / Date: —
QA Sample Designation: — Time / Date: —

Evacuation Method: Bladder Pump / Submersible Pump / Other:
Sampling Method: Bladder Pump / Submersible Pump / Other:

Water Quality Instruments Used/Manufacturer/Model Number YSI 556
Calibration Info (Time, Ranges, etc) YSI 556 at ~1245 on 5/13/2014
Remarks: well monument/casing in good condition; water level below top of whale pump → cannot measure DTW during purging
Sampling Personnel: JCT/EJK

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65
ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23

SHANNON & WILSON, INC.

DRINKING WATER WELL SAMPLING FORM

Address /

Owner/Occupant

Mailing address

Telephone

Project Number 32-1-17636-001

Project Name Anvik GW Study

Date 5/12/2014

Time Purge start = 1948

Sampled by EJK

Sample Location Runway Apron ☐ Before ☐ After water treatment system
Drinking Water Well no treatment

Sample Number DW - 1 Time 2008

Duplicate DW - / Time /

(As Applicable)

Analysis (Circle As Applicable) VOCs (EPA 524.2)/DRO (AK 102)

Purge Time 20 minutes

Notes: collected samples after ~20 gal purged
Water was orange/reddish at first ⇒ clear after ~7 minutes of purging.

SHANNON & WILSON, INC.

DRINKING WATER WELL SAMPLING FORM

Address —
Project Number 32-1-17636-001
Owner/Occupant Aniak Middle School
Project Name Aniak GW Study
Mailing address Box 49
Date 5/12/2014
Time 1420
Telephone 907-675-4250
Sampled by EJK/JCT
Sample Location kitchen sink faucet ☐ Before ☐After water treatment system (*)
no treatment

Sample Number DW - 2
Time 1436
Duplicate DW - —
Time —
(As Applicable)

Analysis (Circle As Applicable) VOCs (EPA 524.2)/DRO (AK 102)

Purge Time 15 minutes

Notes: (*) Director of Maintenance (Jeromy Hoelscher) notes that there is no treatment system.

SHANNON & WILSON, INC.

DRINKING WATER WELL SAMPLING FORM

Address —

Owner/Occupant Aniak High School

Mailing address Box 49

Telephone 907-675-4250

Project Number 32-1-17636-001

Project Name Aniak GW study

Date 5/12/2014

Time 1400

Sampled by EJK / JCT

Sample Location kitchen sink faucet ☐ Before ☐After water treatment system (*)

no treatment

Sample Number DW - 3 Time 1415

Duplicate DW - 30 Time 1430

(As Applicable)

Analysis (Circle As Applicable) VOCs (EPA 524.2)/DRO (AK 102)

Purge Time 15 minutes

Notes: (*) Jeromy Hoeldt (Director of Maintenance) says there is no treatment system

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

ALASKA
CALIFORNIA
COLORADO
FLORIDA
MISSOURI
OREGON
WASHINGTON
WISCONSIN

May 5, 2014

Kuspuk School District
Aniak, Alaska

Attn: Mr. Jeromy Hoeldt, Director of Maintenance

RE: REQUEST FOR RIGHT-OF-ENTRY PERMIT, ANIAK MIDDLE SCHOOL AND HIGH SCHOOL, ANIAK, ALASKA

Shannon & Wilson is currently under contract with the Alaska Department of Environmental Conservation (ADEC) to perform water sampling in the vicinity of the Aniak Airport. As part of this project, the ADEC has requested that Shannon & Wilson collect drinking water samples from the Aniak High School and Aniak Middle School. We are requesting a Right-of-Entry permit open from May 12 through 14, 2014 to cover these activities, if possible. We would be glad to schedule a sampling time that will not interfere with maintenance and/or school activities. Please contact the undersigned with questions or comments regarding this Right-of-Entry Permit request.

Sincerely,

SHANNON & WILSON, INC.

Dan P. McMahon
Sr. Principal Environmental Scientist

ACCEPTANCE

I grant permission to access the property at the Aniak Middle School and High School to collect drinking water samples

By: Jeromy Yoeldt Date: 5-12-14
Authorized Signature

Printed Name, Title, and Agency: Jeromy Hoeldt
Director of Maintenance

5430 FAIRBANKS STREET•SUITE 3
ANCHORAGE, ALASKA 99518
907-561-2120 • FAX 907-561-4483

SHANNON & WILSON, INC.

DRINKING WATER WELL SAMPLING FORM

Address —
Owner/Occupant ADOT+PF Maintenance
Mailing address —

Telephone (907) 675-4345
Sample Location Bathroom faucet ☐ Before ☐After water treatment system
No treatment

Project Number 32-1-17636-001
Project Name Anvik GW Study
Date 5/12/14
Time 1510
Sampled by JCT

Sample Number DW - 4 Time 1525
Duplicate DW - 40 Time 1545
(As Applicable)

Analysis (Circle As Applicable) VOCs (EPA 524.2)/DRO (AK 102)

Purge Time 15 minutes

Notes: Terry said there is no treatment for the drinking water.

Alaska Department of Environmental Conservation

Aniak Airport Groundwater Study 2014

Property Access Agreement

Dear Property Owner,

The Alaska Department of Environmental Conservation (ADEC) is conducting a groundwater study in Aniak, Alaska. The purpose of the investigation is to evaluate groundwater trends in the vicinity of the Aniak Airport.

We are requesting permission for our contractor, Shannon & Wilson, Inc. to access your property so that we can collect a sample of your drinking water. The project will be conducted between May 12 and 14, 2014.

If you agree to allow us access to your property, please sign below. You will be provided with the data from the samples collected on your property as soon as it is received from the laboratory if you provide contact information, such as an address, phone number, or email address.

Your cooperation is greatly appreciated. If you have any questions you may contact the ADEC Project Manager, Grant Lidren at 907-269-8685.

I grant permission to ADEC and their contractor to access my property for the purpose of collecting a drinking water sample.

Signature: Terry T Hoffman Date 05-12-14

Printed Name: Terry T. Hoffman

Property Address: Aniak DOT/PF 0073 Blvd. Rd. Aniak Ak. 99557

Contact Information: (907) 675-4345

SHANNON & WILSON, INC.

DRINKING WATER WELL SAMPLING FORM

Address Salmon Ct #13
Owner/Occupant Jeanette Hoffman
Mailing address
Telephone 907-675-4454
Sample Location Kitchen sink ☐ Before ☐After water treatment system
no treatment?

Project Number 32-1-17636-001
Project Name Aniak GW Study
Date 5/12/2014
Time ~~1710~~ 1655
Sampled by JCT/EJK

Sample Number DW - 6 Time 1710
Duplicate DW - — Time —
(As Applicable)

Analysis (Circle As Applicable) VOCs (EPA 524.2)/DRO (AK 102)

Purge Time 15 minutes

Notes: Jeannette did not think there is a treatment system

Alaska Department of Environmental Conservation

Aniak Airport Groundwater Study 2014

Property Access Agreement

Dear Property Owner,

The Alaska Department of Environmental Conservation (ADEC) is conducting a groundwater study in Aniak, Alaska. The purpose of the investigation is to evaluate groundwater trends in the vicinity of the Aniak Airport.

We are requesting permission for our contractor, Shannon & Wilson, Inc. to access your property so that we can collect a sample of your drinking water. The project will be conducted between May 12 and 14, 2014.

If you agree to allow us access to your property, please sign below. You will be provided with the data from the samples collected on your property as soon as it is received from the laboratory if you provide contact information, such as an address, phone number, or email address.

Your cooperation is greatly appreciated. If you have any questions you may contact the ADEC Project Manager, Grant Lidren at 907-269-8685.

I grant permission to ADEC and their contractor to access my property for the purpose of collecting a drinking water sample.

Signature: Jeanette L Hoffman Date 5-12-14

Printed Name: Jeanette L Hoffman

Property Address: Salmon Court #13 Aniak, AK 99557

Contact Information: 907-675-4454

SHANNON & WILSON, INC.

DRINKING WATER WELL SAMPLING FORM

Address 143 Airport Rd.
Project Number 32-1-17636-001
Owner/Occupant ERA / RAVN Alaska
Project Name Anak GW Study
Mailing address —
Date 5/12/14
Time 1605
Telephone
Sampled by JCT
Sample Location Faucet in waiting Area ☐ Before ☐ After water treatment system
No treatment

Sample Number DW - 7
Time 1620
Duplicate DW - —
Time —
(As Applicable)

Analysis (Circle As Applicable) VOCs (EPA 524.2)/DRO (AK 102)

Purge Time 15 min

Notes: Margie with ERA said no treatment

Alaska Department of Environmental Conservation

Aniak Airport Groundwater Study 2014

Property Access Agreement

Dear Property Owner,

The Alaska Department of Environmental Conservation (ADEC) is conducting a groundwater study in Aniak, Alaska. The purpose of the investigation is to evaluate groundwater trends in the vicinity of the Aniak Airport.

We are requesting permission for our contractor, Shannon & Wilson, Inc. to access your property so that we can collect a sample of your drinking water. The project will be conducted between May 12 and 14, 2014.

If you agree to allow us access to your property, please sign below. You will be provided with the data from the samples collected on your property as soon as it is received from the laboratory if you provide contact information, such as an address, phone number, or email address.

Your cooperation is greatly appreciated. If you have any questions you may contact the ADEC Project Manager, Grant Lidren at 907-269-8685.

I grant permission to ADEC and their contractor to access my property for the purpose of collecting a drinking water sample.

Signature: Margie Simeon Date 5/12/14

Printed Name: Margie Simeon

Property Address: 143 Airport RD

Contact Information: Margie Simeon
Raven Alaska
Box 143
Aniak AK 99557

SHANNON & WILSON, INC.

DRINKING WATER WELL SAMPLING FORM

Address Block 9, Lot 12
Owner/Occupant David Diehl
Mailing address Box 192
Telephone 907 675 4367
Sample Location kitchen sink ☐ Before ☐After water treatment system
no treatment

Project Number 32-1-17636-001
Project Name Aniak GW Study
Date 5/12/2014
Time 1625
Sampled by JCT/EJK

Sample Number DW-9 Time 1640
Duplicate DW- — Time —
(As Applicable)

Analysis (Circle As Applicable) VOCs (EPA 524.2)/DRO (AK 102)

Purge Time 15 minutes

Notes:

Alaska Department of Environmental Conservation

Aniak Airport Groundwater Study 2014

Property Access Agreement

Dear Property Owner,

The Alaska Department of Environmental Conservation (ADEC) is conducting a groundwater study in Aniak, Alaska. The purpose of the investigation is to evaluate groundwater trends in the vicinity of the Aniak Airport.

We are requesting permission for our contractor, Shannon & Wilson, Inc. to access your property so that we can collect a sample of your drinking water. The project will be conducted between May 12 and 14, 2014.

If you agree to allow us access to your property, please sign below. You will be provided with the data from the samples collected on your property as soon as it is received from the laboratory if you provide contact information, such as an address, phone number, or email address.

Your cooperation is greatly appreciated. If you have any questions you may contact the ADEC Project Manager, Grant Lidren at 907-269-8685.

I grant permission to ADEC and their contractor to access my property for the purpose of collecting a drinking water sample.

Signature: _____ Date 5/12/14

Printed Name: Richie Diehl

Property Address: PO Box 192 Aniak, AK 99557

Contact Information: (907) 675-4367

SHANNON & WILSON, INC.

DRINKING WATER WELL SAMPLING FORM

Address Ikmiq Court Lot 25
Owner/Occupant Balassa Golley
Mailing address —

Telephone —
Sample Location kitchen sink faucet ☐ Before ☐After water treatment system
no treatment

Project Number 32-1-17636-001
Project Name Aniak GW Study
Date 5/12/2014
Time 1445
Sampled by JCT/EJK

Sample Number DW - 10
Time ~~1446~~ 1500
Duplicate DW - —
Time —
(As Applicable)

Analysis (Circle As Applicable) VOCs (EPA 524.2)/DRO (AK 102)

Purge Time 15 minutes

Notes: Balassa does not know if there is a treatment system. There does not appear to be one.

Alaska Department of Environmental Conservation

Aniak Airport Groundwater Study 2014

Property Access Agreement

Dear Property Owner,

The Alaska Department of Environmental Conservation (ADEC) is conducting a groundwater study in Aniak, Alaska. The purpose of the investigation is to evaluate groundwater trends in the vicinity of the Aniak Airport.

We are requesting permission for our contractor, Shannon & Wilson, Inc. to access your property so that we can collect a sample of your drinking water. The project will be conducted between May 12 and 14, 2014.

If you agree to allow us access to your property, please sign below. You will be provided with the data from the samples collected on your property as soon as it is received from the laboratory if you provide contact information, such as an address, phone number, or email address.

Your cooperation is greatly appreciated. If you have any questions you may contact the ADEC Project Manager, Grant Lidren at 907-269-8685.

I grant permission to ADEC and their contractor to access my property for the purpose of collecting a drinking water sample.

Signature: Barbara Golley Date 5/12/2014

Printed Name: Barbara Golley

Property Address: Ikmiq Court Lot 25

Contact Information: _____

_____

_____

SHANNON & WILSON, INC.

DRINKING WATER WELL SAMPLING FORM

Address —
Owner/Occupant State Trooper Building
Mailing address —

Telephone 907-675-4498
Sample Location outside spigot ☒ Before ☐ After water treatment system
↳ before water softener/filter?

Project Number 32-1-17636-001
Project Name Aniak GW Study
Date 5/12/2014
Time 1518
Sampled by EJK

Sample Number DW - 11 Time 1533
Duplicate DW - — Time —
(As Applicable)

Analysis (Circle As Applicable) VOCs (EPA 524.2) / DRO (AK 102)

Purge Time 15 min

Notes: Troopers on duty believe that the outside spigot water is not softened/filtered

Alaska Department of Environmental Conservation

Aniak Airport Groundwater Study 2014

Property Access Agreement

Dear Property Owner,

The Alaska Department of Environmental Conservation (ADEC) is conducting a groundwater study in Aniak, Alaska. The purpose of the investigation is to evaluate groundwater trends in the vicinity of the Aniak Airport.

We are requesting permission for our contractor, Shannon & Wilson, Inc. to access your property so that we can collect a sample of your drinking water. The project will be conducted between May 12 and 14, 2014.

If you agree to allow us access to your property, please sign below. You will be provided with the data from the samples collected on your property as soon as it is received from the laboratory if you provide contact information, such as an address, phone number, or email address.

Your cooperation is greatly appreciated. If you have any questions you may contact the ADEC Project Manager, Grant Lidren at 907-269-8685.

I grant permission to ADEC and their contractor to access my property for the purpose of collecting a drinking water sample.

Signature: David M Bower Date 5-12-14

Printed Name: David M. Bower

Property Address: State Trooper Building

Contact Information: _____

_____

_____

SHANNON & WILSON, INC.

DRINKING WATER WELL SAMPLING FORM

Address: Block 9, Lots 14 and 15
Project Number: 32-1-17636-001
Owner/Occupant: George Givot
Project Name: Aniak GW Study
Mailing address: PO Box 102
Date: 5/12/2014
Time: 1043
Telephone: 907 675 4301
Sampled by: JCT/EJK
Sample Location: kitchen sink ☐ Before ☐ After water treatment system
no treatment

Sample Number: DW - 12
Time: 1053
Duplicate: DW - ——
Time: ——
(As Applicable)

Analysis (Circle As Applicable): VOCs (EPA 524.2)/DRO (AK 102)

Purge Time: ~10 minutes

Notes: Sampled after whole pump turned on

Alaska Department of Environmental Conservation

Aniak Airport Groundwater Study 2014

Property Access Agreement

Dear Property Owner,

The Alaska Department of Environmental Conservation (ADEC) is conducting a groundwater study in Aniak, Alaska. The purpose of the investigation is to evaluate groundwater trends in the vicinity of the Aniak Airport.

We are requesting permission for our contractor, Shannon & Wilson, Inc. to access your property so that we can collect a sample of your drinking water. The project will be conducted between May 12 and 14, 2014.

If you agree to allow us access to your property, please sign below. You will be provided with the data from the samples collected on your property as soon as it is received from the laboratory if you provide contact information, such as an address, phone number, or email address.

Your cooperation is greatly appreciated. If you have any questions you may contact the ADEC Project Manager, Grant Lidren at 907-269-8685.

I grant permission to ADEC and their contractor to access my property for the purpose of collecting a drinking water sample.

Signature: _____ Date 5-12-14

Printed Name: George Givot

Property Address: PO Box 102 Aniak 99557

Contact Information: 907 675 4361

SHANNON & WILSON, INC.

DRINKING WATER WELL SAMPLING FORM

Address —
Owner/Occupant Ryan Air
Mailing address PO Box 113
Aniak AK 99557
Telephone 907-675-4295
Sample Location bathroom sink ☐ Before ☐ After water treatment system
no treatment

Project Number 32-1-17636-001
Project Name Aniak GW Study
Date 5/12/2014
Time 1552
Sampled by EJK

Sample Number DW - 160 Time ~~1555~~ 1608
Duplicate DW - — Time —
(As Applicable)

Analysis (Circle As Applicable) VOCs (EPA 524.2)/DRO (AK 102)

Purge Time 15 minutes

Notes: Well is not functioning at former Inland Air building. Ryan / Pen Air building near Era building is closest substitute available.

Sulfur odor

Alaska Department of Environmental Conservation

Aniak Airport Groundwater Study 2014

Property Access Agreement

Dear Property Owner,

The Alaska Department of Environmental Conservation (ADEC) is conducting a groundwater study in Aniak, Alaska. The purpose of the investigation is to evaluate groundwater trends in the vicinity of the Aniak Airport.

We are requesting permission for our contractor, Shannon & Wilson, Inc. to access your property so that we can collect a sample of your drinking water. The project will be conducted between May 12 and 14, 2014.

If you agree to allow us access to your property, please sign below. You will be provided with the data from the samples collected on your property as soon as it is received from the laboratory if you provide contact information, such as an address, phone number, or email address.

Your cooperation is greatly appreciated. If you have any questions you may contact the ADEC Project Manager, Grant Lidren at 907-269-8685.

I grant permission to ADEC and their contractor to access my property for the purpose of collecting a drinking water sample.

Signature: _____ Date 5-12-14

Printed Name: Danny Wheeler - Ryan Air

Property Address: P.O. Box 113 Aniak, AK. 99557

Contact Information: 907-675-4295

aniak@ryanalaska.com

SHANNON & WILSON, INC.

DRINKING WATER WELL SAMPLING FORM

Address Ikmiq Ct, Lot 28
Owner/Occupant Jason Ward
Mailing address ~~Ikmiq Ct~~ Box 343
Telephone 907-675-4562
Sample Location Kitchen sink ☐ Before ☐ After water treatment system no treatment

Project Number 32-1-17636-001
Project Name Aniak GW Study
Date 5/13/2014
Time ~~1913~~ 1900
Sampled by JCT/EJK

Sample Number DW - 17 Time 1913
Duplicate DW - — Time —
(As Applicable)

Analysis (Circle As Applicable) VOCs (EPA 524.2)/DRO (AK 102)

Purge Time 13 minutes

Notes:

Alaska Department of Environmental Conservation

Aniak Airport Groundwater Study 2014

Property Access Agreement

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Your cooperation is greatly appreciated. If you have any questions you may contact the ADEC Project Manager, Grant Lidren at 907-269-8685.

I grant permission to ADEC and their contractor to access my property for the purpose of collecting a drinking water sample.

Signature: Jason Ward Date 5-13-14

Printed Name: Jason Ward

Property Address: Box 343 1st Rd Housing #343

Contact Information: Box 343
Aniak, Ak. 99557
907-675-4562

SHANNON & WILSON, INC.

DRINKING WATER WELL SAMPLING FORM

Address Boundary ~~Rd~~ Ave Lot 5 (*)
Owner/Occupant Joan Welses
Mailing address Box 41

Telephone

Project Number 32-1-17636-001
Project Name Aniak GW Study
Date 5/13/2014
Time 1940
Sampled by JCT/EJK

Sample Location Kitchen sink ☐ Before ☒ After water treatment system condenser

Sample Number DW - 18 Time 1949
Duplicate DW - — Time —
(As Applicable)

Analysis (Circle As Applicable) VOCs (EPA 524.2)/DRO (AK 102)

Purge Time 0 minutes

Notes: Joan requested that she collect the samples. She was just doing dishes so water was running prior to our arrival. She said she thinks ~~she~~ the house is on city water, but she also uses some sort of condensing ~~treatment~~ system.

(*) one house east of Lot 9, Block 9

Alaska Department of Environmental Conservation

Aniak Airport Groundwater Study 2014

Property Access Agreement

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We are requesting permission for our contractor, Shannon & Wilson, Inc. to access your property so that we can collect a sample of your drinking water. The project will be conducted between May 12 and 14, 2014.

If you agree to allow us access to your property, please sign below. You will be provided with the data from the samples collected on your property as soon as it is received from the laboratory if you provide contact information, such as an address, phone number, or email address.

Your cooperation is greatly appreciated. If you have any questions you may contact the ADEC Project Manager, Grant Lidren at 907-269-8685.

I grant permission to ADEC and their contractor to access my property for the purpose of collecting a drinking water sample.

Signature: Joan Walser Date 13 May 2014

Printed Name: Joan Walser

Property Address: Boundary RD

Contact Information: Box 41
Aniak, AK 99557
joan.walser@gmail.com

Would be very interested in learning the results of this study.

APPENDIX C

RESULTS OF ANALYTICAL TESTING BY

SGS NORTH AMERICA INC.

OF ANCHORAGE, ALASKA AND

ADEC LABORATORY DATA REVIEW CHECKLIST

Laboratory Report of Analysis

To: Shannon & Wilson, Inc.
5430 Fairbanks Street, Suite 3
Anchorage, AK 99518
(907)433-3223

Report Number: **1141977**

Client Project: **17636-001 Aniak GW**

Dear Dan McMahon,

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.

SGS North America Inc.
Environmental Services – Alaska Division
Project Manager

Victoria Pennick
2014.05.30
09:46:38 -08'00'

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

Print Date: 05/30/2014 9:24:13AM

Case Narrative

SGS Client: **Shannon & Wilson, Inc.**
SGS Project: **1141977**
Project Name/Site: **17636-001 Aniak GW**
Project Contact: **Dan McMahon**

Refer to sample receipt form for information on sample condition.

17636-PL-MW10 (1141977018) PS

AK102 - The pattern is consistent with a weathered middle distillate.

17636-MW19 (1141977025) PS

Sample cancelled per client request.

17636-PL-MW11 (1141977027) PS

AK102 - The pattern is consistent with a weathered middle distillate.

CCV for HBN 1545967 [VMS/14146 (1211052) CCV

8260B - CCV recoveries for chloroethane and trichlorofluoromethane do not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.

LB for HBN 1542163 [TCLP/7328] (1210638) LB

1311/8260 - The temperature during tumbling for TCLP VOC (20.4 – 21.1 degrees C) did not meet method requirements of 23+/-2 C.

LCS for HBN 1545966 [VXX/25879 (1211049) LCS

8260B - LCS recovery for chloroethane does not meet QC criteria (biased high). This analyte was not detected above the LOQ in the associated samples.

LCSD for HBN 1544761 [VXX/2587 (1210890) LCSD

8260B - LCS/LCSD RPD for acetone and MEK is outside of QC criteria. These analytes were not detected above the LOQ in the associated samples.

LCSD for HBN 1545966 [VXX/2587 (1211050) LCSD

8260B - LCS/LCSD RPD for chloroethane is outside of QC criteria. This analyte was not detected above the LOQ in the associated samples.

LCSD for HBN 1546161 [VXX/2588 (1211084) LCSD

8260B - LCS/LCSD RPD for 1,2-dichloro-3-chloropropane is outside of QC criteria. This analyte was not detected above the LOQ in the associated samples.

LCSD for HBN 1551161 [VXX/2589 (1211398) LCSD

8260B - LCS/LCSD RPD for 1,2-dibromo-3-chloropropane does not meet QC criteria (biased high). This analyte was not detected above the LOQ in the associated samples.

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

SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

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 (<http://www.sgs.com/terms_and_conditions.htm>), 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.

SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
17636-DW3	1141977001	05/12/2014	05/19/2014	Drinking Water
17636-DW30	1141977002	05/12/2014	05/19/2014	Drinking Water
17636-DW2	1141977003	05/12/2014	05/19/2014	Drinking Water
17636-DW10	1141977004	05/12/2014	05/19/2014	Drinking Water
17636-DW4	1141977005	05/12/2014	05/19/2014	Drinking Water
17636-DW11	1141977006	05/12/2014	05/19/2014	Drinking Water
17636-DW40	1141977007	05/12/2014	05/19/2014	Drinking Water
17636-DW16	1141977008	05/12/2014	05/19/2014	Drinking Water
17636-DW7	1141977009	05/12/2014	05/19/2014	Drinking Water
17636-DW9	1141977010	05/12/2014	05/19/2014	Drinking Water
17636-DW12	1141977011	05/12/2014	05/19/2014	Drinking Water
17636-DW6	1141977012	05/12/2014	05/19/2014	Drinking Water
17636-DW1	1141977013	05/12/2014	05/19/2014	Drinking Water
17636-RA-MW8	1141977014	05/13/2014	05/19/2014	Water (Surface, Eff., Ground)
17636-RA-MW9	1141977015	05/13/2014	05/19/2014	Water (Surface, Eff., Ground)
17636-RA-MW90	1141977016	05/13/2014	05/19/2014	Water (Surface, Eff., Ground)
17636-RA-MW6	1141977017	05/13/2014	05/19/2014	Water (Surface, Eff., Ground)
17636-PL-MW10	1141977018	05/13/2014	05/19/2014	Water (Surface, Eff., Ground)
17636-AST-MW7	1141977019	05/13/2014	05/19/2014	Water (Surface, Eff., Ground)
17636-DW17	1141977020	05/13/2014	05/19/2014	Drinking Water
17636-DW18	1141977021	05/13/2014	05/19/2014	Drinking Water
17636-MW10	1141977022	05/14/2014	05/19/2014	Water (Surface, Eff., Ground)
17636-MW11	1141977023	05/14/2014	05/19/2014	Water (Surface, Eff., Ground)
17636-MW9	1141977024	05/14/2014	05/19/2014	Water (Surface, Eff., Ground)
17636-MW19	1141977025	05/14/2014	05/19/2014	Water (Surface, Eff., Ground)
17636-AST-MW1	1141977026	05/14/2014	05/19/2014	Water (Surface, Eff., Ground)
17636-PL-MW11	1141977027	05/14/2014	05/19/2014	Water (Surface, Eff., Ground)
Trip Blank 1	1141977028	05/12/2014	05/19/2014	Water (Surface, Eff., Ground)
Trip Blank 2	1141977029	05/12/2014	05/19/2014	Drinking Water
NA	1141977030	05/22/2014	05/23/2014	Water (Surface, Eff., Ground)

Method	Method Description
AK102	Diesel Range Organics (W)
AK101	Gasoline Range Organics (W)
SW8260B	Volatile Organic Compounds (W) FULL
EPA 524.2	Volatile Organics by 524.2 (DW)

Detectable Results Summary

Client Sample ID: **17636-DW9**			
Lab Sample ID: 1141977010	Parameter	Result	Units
Volatile GC/MS	Dichlorodifluoromethane	0.210J	ug/L
Client Sample ID: **17636-DW12**			
Lab Sample ID: 1141977011	Parameter	Result	Units
Volatile GC/MS	Dichlorodifluoromethane	0.200J	ug/L
Client Sample ID: **17636-DW1**			
Lab Sample ID: 1141977013	Parameter	Result	Units
Volatile GC/MS	cis-1,2-Dichloroethene	0.200J	ug/L
Client Sample ID: **17636-RA-MW9**			
Lab Sample ID: 1141977015	Parameter	Result	Units
Volatile GC/MS	Chloromethane	0.360J	ug/L
	Trichloroethene	11.1	ug/L
Client Sample ID: **17636-RA-MW90**			
Lab Sample ID: 1141977016	Parameter	Result	Units
Volatile GC/MS	Chloromethane	0.430J	ug/L
	Trichloroethene	11.4	ug/L
Client Sample ID: **17636-RA-MW6**			
Lab Sample ID: 1141977017	Parameter	Result	Units
Volatile GC/MS	Chloromethane	0.440J	ug/L
Client Sample ID: **17636-PL-MW10**			
Lab Sample ID: 1141977018	Parameter	Result	Units
Semivolatile Organic Fuels	Diesel Range Organics	1.90	mg/L
Volatile Fuels	Gasoline Range Organics	0.0372J	mg/L
Volatile GC/MS	1,2,4-Trimethylbenzene	0.480J	ug/L
	Chloromethane	0.420J	ug/L
	Dichlorodifluoromethane	2.38	ug/L
	Trichlorofluoromethane	1.81	ug/L
Client Sample ID: **17636-AST-MW7**			
Lab Sample ID: 1141977019	Parameter	Result	Units
Semivolatile Organic Fuels	Diesel Range Organics	0.534J	mg/L
Volatile Fuels	Gasoline Range Organics	0.0318J	mg/L
Volatile GC/MS	Chloromethane	0.430J	ug/L
Client Sample ID: **17636-DW17**			
Lab Sample ID: 1141977020	Parameter	Result	Units
Volatile GC/MS	Dichlorodifluoromethane	0.190J	ug/L
Client Sample ID: **17636-MW10**			
Lab Sample ID: 1141977022	Parameter	Result	Units
Volatile Fuels	Gasoline Range Organics	0.0387J	mg/L
Volatile GC/MS	Chloromethane	0.440J	ug/L
	Dichlorodifluoromethane	0.400J	ug/L

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Detectable Results Summary

Client Sample ID: **17636-MW11**
Lab Sample ID: 1141977023
Volatile Fuels
Volatile GC/MS

Parameter	Result	Units
Gasoline Range Organics	0.0342J	mg/L
Chloromethane	0.380J	ug/L
Dichlorodifluoromethane	0.510J	ug/L

Client Sample ID: **17636-MW9**
Lab Sample ID: 1141977024
Volatile GC/MS

Parameter	Result	Units
Bromochloromethane	0.320J	ug/L
Methylene chloride	112	ug/L

Client Sample ID: **17636-AST-MW1**
Lab Sample ID: 1141977026
Volatile Fuels
Volatile GC/MS

Parameter	Result	Units
Gasoline Range Organics	0.0326J	mg/L
Chloromethane	0.390J	ug/L

Client Sample ID: **17636-PL-MW11**
Lab Sample ID: 1141977027
Semivolatile Organic Fuels
Volatile GC/MS

Parameter	Result	Units
Diesel Range Organics	1.35	mg/L
sec-Butylbenzene	0.390J	ug/L

Client Sample ID: **Trip Blank 1**
Lab Sample ID: 1141977028
Volatile GC/MS

Parameter	Result	Units
Chloromethane	0.340J	ug/L

Client Sample ID: **Trip Blank 2**
Lab Sample ID: 1141977029
Volatile GC/MS

Parameter	Result	Units
Methylene chloride	0.720	ug/L

SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
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Results of **17636-DW3**

Client Sample ID: **17636-DW3**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977001
Lab Project ID: 1141977

Collection Date: 05/12/14 14:15
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
1,1,1-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<200)	05/22/14 16:58
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
1,1,2-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 16:58
1,1-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
1,1-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<7)	05/22/14 16:58
1,1-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
1,2,3-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
1,2,3-Trichloropropane	0.250	U	0.500	0.180	ug/L	1		05/22/14 16:58
1,2,4-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 16:58
1,2,4-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
1,2-Dibromo-3-chloropropane	1.00	U	2.00	0.620	ug/L	1		05/22/14 16:58
1,2-Dibromoethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
1,2-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<600)	05/22/14 16:58
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 16:58
1,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 16:58
1,3,5-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
1,3-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<75)	05/22/14 16:58
2,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
2-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
4-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
4-Isopropyltoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
Benzene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 16:58
Bromobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
Bromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
Bromoform	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
Bromomethane	1.00	U	2.00	0.620	ug/L	1		05/22/14 16:58
Carbon tetrachloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 16:58
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 16:58
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 16:58
Chloroform	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
Chloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
cis-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 16:58
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Results of **17636-DW3**

Client Sample ID: **17636-DW3**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977001
Lab Project ID: 1141977

Collection Date: 05/12/14 14:15
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
Dibromomethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
Dichlorodifluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
Ethylbenzene	0.250	U	0.500	0.150	ug/L	1	(<700)	05/22/14 16:58
Hexachlorobutadiene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
Isopropylbenzene (Cumene)	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
Methyl-t-butyl ether	0.500	U	1.00	0.500	ug/L	1		05/22/14 16:58
Methylene chloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 16:58
n-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
n-Propylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
Naphthalene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
o-Xylene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
P & M -Xylene	0.500	U	1.00	0.310	ug/L	1		05/22/14 16:58
sec-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
Styrene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 16:58
tert-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
Tetrachloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 16:58
Toluene	0.250	U	0.500	0.150	ug/L	1	(<1000)	05/22/14 16:58
Total Trihalomethanes	1.00	U	2.00	0.600	ug/L	1	(<80)	05/22/14 16:58
trans-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 16:58
trans-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
Trichloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 16:58
Trichlorofluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:58
Vinyl chloride	0.200	U	0.400	0.120	ug/L	1	(<2)	05/22/14 16:58
Xylenes (total)	0.750	U	1.50	0.500	ug/L	1	(<10000)	05/22/14 16:58
Surrogates								
1,2-Dichloroethane-D4	97.8		70-130		%	1		05/22/14 16:58
4-Bromofluorobenzene	97.3		70-130		%	1		05/22/14 16:58
Toluene-d8	96		70-130		%	1		05/22/14 16:58

Batch Information

Analytical Batch: VMS14147
Analytical Method: EPA 524.2
Analyst: KCT
Analytical Date/Time: 05/22/14 16:58
Container ID: 1141977001-A

Prep Batch: VXX25880
Prep Method: SW5030B
Prep Date/Time: 05/22/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/30/2014 9:24:17AM

Results of **17636-DW30**

Client Sample ID: **17636-DW30**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977002
Lab Project ID: 1141977

Collection Date: 05/12/14 14:30
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
1,1,1-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<200)	05/22/14 17:15
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
1,1,2-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:15
1,1-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
1,1-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<7)	05/22/14 17:15
1,1-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
1,2,3-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
1,2,3-Trichloropropane	0.250	U	0.500	0.180	ug/L	1		05/22/14 17:15
1,2,4-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 17:15
1,2,4-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
1,2-Dibromo-3-chloropropane	1.00	U	2.00	0.620	ug/L	1		05/22/14 17:15
1,2-Dibromoethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
1,2-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<600)	05/22/14 17:15
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:15
1,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:15
1,3,5-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
1,3-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<75)	05/22/14 17:15
2,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
2-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
4-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
4-Isopropyltoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
Benzene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:15
Bromobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
Bromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
Bromoform	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
Bromomethane	1.00	U	2.00	0.620	ug/L	1		05/22/14 17:15
Carbon tetrachloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:15
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 17:15
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 17:15
Chloroform	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
Chloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
cis-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 17:15
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15

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Results of **17636-DW30**

Client Sample ID: **17636-DW30**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977002
Lab Project ID: 1141977

Collection Date: 05/12/14 14:30
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
Dibromomethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
Dichlorodifluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
Ethylbenzene	0.250	U	0.500	0.150	ug/L	1	(<700)	05/22/14 17:15
Hexachlorobutadiene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
Isopropylbenzene (Cumene)	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
Methyl-t-butyl ether	0.500	U	1.00	0.500	ug/L	1		05/22/14 17:15
Methylene chloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:15
n-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
n-Propylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
Naphthalene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
o-Xylene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
P & M -Xylene	0.500	U	1.00	0.310	ug/L	1		05/22/14 17:15
sec-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
Styrene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 17:15
tert-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
Tetrachloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:15
Toluene	0.250	U	0.500	0.150	ug/L	1	(<1000)	05/22/14 17:15
Total Trihalomethanes	1.00	U	2.00	0.600	ug/L	1	(<80)	05/22/14 17:15
trans-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 17:15
trans-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
Trichloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:15
Trichlorofluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:15
Vinyl chloride	0.200	U	0.400	0.120	ug/L	1	(<2)	05/22/14 17:15
Xylenes (total)	0.750	U	1.50	0.500	ug/L	1	(<10000)	05/22/14 17:15
Surrogates								
1,2-Dichloroethane-D4	101		70-130		%	1		05/22/14 17:15
4-Bromofluorobenzene	97.7		70-130		%	1		05/22/14 17:15
Toluene-d8	99		70-130		%	1		05/22/14 17:15

Batch Information

Analytical Batch: VMS14147
Analytical Method: EPA 524.2
Analyst: KCT
Analytical Date/Time: 05/22/14 17:15
Container ID: 1141977002-A

Prep Batch: VXX25880
Prep Method: SW5030B
Prep Date/Time: 05/22/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/30/2014 9:24:17AM

Results of **17636-DW2**

Client Sample ID: **17636-DW2**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977003
Lab Project ID: 1141977

Collection Date: 05/12/14 14:36
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
1,1,1-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<200)	05/22/14 17:32
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
1,1,2-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:32
1,1-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
1,1-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<7)	05/22/14 17:32
1,1-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
1,2,3-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
1,2,3-Trichloropropane	0.250	U	0.500	0.180	ug/L	1		05/22/14 17:32
1,2,4-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 17:32
1,2,4-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
1,2-Dibromo-3-chloropropane	1.00	U	2.00	0.620	ug/L	1		05/22/14 17:32
1,2-Dibromoethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
1,2-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<600)	05/22/14 17:32
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:32
1,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:32
1,3,5-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
1,3-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<75)	05/22/14 17:32
2,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
2-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
4-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
4-Isopropyltoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
Benzene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:32
Bromobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
Bromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
Bromoform	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
Bromomethane	1.00	U	2.00	0.620	ug/L	1		05/22/14 17:32
Carbon tetrachloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:32
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 17:32
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 17:32
Chloroform	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
Chloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
cis-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 17:32
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32

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Results of **17636-DW2**

Client Sample ID: **17636-DW2**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977003
Lab Project ID: 1141977

Collection Date: 05/12/14 14:36
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
Dibromomethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
Dichlorodifluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
Ethylbenzene	0.250	U	0.500	0.150	ug/L	1	(<700)	05/22/14 17:32
Hexachlorobutadiene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
Isopropylbenzene (Cumene)	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
Methyl-t-butyl ether	0.500	U	1.00	0.500	ug/L	1		05/22/14 17:32
Methylene chloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:32
n-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
n-Propylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
Naphthalene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
o-Xylene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
P & M -Xylene	0.500	U	1.00	0.310	ug/L	1		05/22/14 17:32
sec-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
Styrene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 17:32
tert-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
Tetrachloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:32
Toluene	0.250	U	0.500	0.150	ug/L	1	(<1000)	05/22/14 17:32
Total Trihalomethanes	1.00	U	2.00	0.600	ug/L	1	(<80)	05/22/14 17:32
trans-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 17:32
trans-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
Trichloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:32
Trichlorofluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:32
Vinyl chloride	0.200	U	0.400	0.120	ug/L	1	(<2)	05/22/14 17:32
Xylenes (total)	0.750	U	1.50	0.500	ug/L	1	(<10000)	05/22/14 17:32
Surrogates								
1,2-Dichloroethane-D4	94.3		70-130		%	1		05/22/14 17:32
4-Bromofluorobenzene	97.9		70-130		%	1		05/22/14 17:32
Toluene-d8	99.6		70-130		%	1		05/22/14 17:32

Batch Information

Analytical Batch: VMS14147
Analytical Method: EPA 524.2
Analyst: KCT
Analytical Date/Time: 05/22/14 17:32
Container ID: 1141977003-A

Prep Batch: VXX25880
Prep Method: SW5030B
Prep Date/Time: 05/22/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/30/2014 9:24:17AM

Results of **17636-DW10**

Client Sample ID: **17636-DW10**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977004
Lab Project ID: 1141977

Collection Date: 05/12/14 15:00
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
1,1,1-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<200)	05/22/14 17:49
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
1,1,2-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:49
1,1-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
1,1-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<7)	05/22/14 17:49
1,1-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
1,2,3-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
1,2,3-Trichloropropane	0.250	U	0.500	0.180	ug/L	1		05/22/14 17:49
1,2,4-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 17:49
1,2,4-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
1,2-Dibromo-3-chloropropane	1.00	U	2.00	0.620	ug/L	1		05/22/14 17:49
1,2-Dibromoethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
1,2-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<600)	05/22/14 17:49
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:49
1,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:49
1,3,5-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
1,3-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<75)	05/22/14 17:49
2,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
2-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
4-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
4-Isopropyltoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
Benzene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:49
Bromobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
Bromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
Bromoform	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
Bromomethane	1.00	U	2.00	0.620	ug/L	1		05/22/14 17:49
Carbon tetrachloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:49
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 17:49
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 17:49
Chloroform	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
Chloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
cis-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 17:49
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49

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Results of **17636-DW10**

Client Sample ID: **17636-DW10**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977004
Lab Project ID: 1141977

Collection Date: 05/12/14 15:00
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
Dibromomethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
Dichlorodifluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
Ethylbenzene	0.250	U	0.500	0.150	ug/L	1	(<700)	05/22/14 17:49
Hexachlorobutadiene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
Isopropylbenzene (Cumene)	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
Methyl-t-butyl ether	0.500	U	1.00	0.500	ug/L	1		05/22/14 17:49
Methylene chloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:49
n-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
n-Propylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
Naphthalene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
o-Xylene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
P & M -Xylene	0.500	U	1.00	0.310	ug/L	1		05/22/14 17:49
sec-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
Styrene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 17:49
tert-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
Tetrachloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:49
Toluene	0.250	U	0.500	0.150	ug/L	1	(<1000)	05/22/14 17:49
Total Trihalomethanes	1.00	U	2.00	0.600	ug/L	1	(<80)	05/22/14 17:49
trans-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 17:49
trans-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
Trichloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 17:49
Trichlorofluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 17:49
Vinyl chloride	0.200	U	0.400	0.120	ug/L	1	(<2)	05/22/14 17:49
Xylenes (total)	0.750	U	1.50	0.500	ug/L	1	(<10000)	05/22/14 17:49
Surrogates								
1,2-Dichloroethane-D4	96.6		70-130		%	1		05/22/14 17:49
4-Bromofluorobenzene	96.5		70-130		%	1		05/22/14 17:49
Toluene-d8	97.2		70-130		%	1		05/22/14 17:49

Batch Information

Analytical Batch: VMS14147
Analytical Method: EPA 524.2
Analyst: KCT
Analytical Date/Time: 05/22/14 17:49
Container ID: 1141977004-A

Prep Batch: VXX25880
Prep Method: SW5030B
Prep Date/Time: 05/22/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/30/2014 9:24:17AM

Results of **17636-DW4**

Client Sample ID: **17636-DW4**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977005
Lab Project ID: 1141977

Collection Date: 05/12/14 15:25
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.300	U	0.600	0.180	mg/L	1		05/23/14 09:42
Surrogates								
5a Androstane	88.3		50-150		%	1		05/23/14 09:42

Batch Information

Analytical Batch: XFC11323
Analytical Method: AK102
Analyst: HM
Analytical Date/Time: 05/23/14 09:42
Container ID: 1141977005-D

Prep Batch: XXX31061
Prep Method: SW3520C
Prep Date/Time: 05/22/14 09:50
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

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Results of **17636-DW4**

Client Sample ID: **17636-DW4**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977005
Lab Project ID: 1141977

Collection Date: 05/12/14 15:25
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
1,1,1-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<200)	05/22/14 18:06
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
1,1,2-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:06
1,1-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
1,1-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<7)	05/22/14 18:06
1,1-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
1,2,3-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
1,2,3-Trichloropropane	0.250	U	0.500	0.180	ug/L	1		05/22/14 18:06
1,2,4-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 18:06
1,2,4-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
1,2-Dibromo-3-chloropropane	1.00	U	2.00	0.620	ug/L	1		05/22/14 18:06
1,2-Dibromoethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
1,2-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<600)	05/22/14 18:06
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:06
1,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:06
1,3,5-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
1,3-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<75)	05/22/14 18:06
2,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
2-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
4-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
4-Isopropyltoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
Benzene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:06
Bromobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
Bromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
Bromoform	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
Bromomethane	1.00	U	2.00	0.620	ug/L	1		05/22/14 18:06
Carbon tetrachloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:06
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 18:06
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:06
Chloroform	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
Chloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
cis-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 18:06
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06

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Results of **17636-DW4**

Client Sample ID: **17636-DW4**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977005
Lab Project ID: 1141977

Collection Date: 05/12/14 15:25
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
Dibromomethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
Dichlorodifluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
Ethylbenzene	0.250	U	0.500	0.150	ug/L	1	(<700)	05/22/14 18:06
Hexachlorobutadiene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
Isopropylbenzene (Cumene)	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
Methyl-t-butyl ether	0.500	U	1.00	0.500	ug/L	1		05/22/14 18:06
Methylene chloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:06
n-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
n-Propylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
Naphthalene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
o-Xylene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
P & M -Xylene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:06
sec-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
Styrene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 18:06
tert-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
Tetrachloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:06
Toluene	0.250	U	0.500	0.150	ug/L	1	(<1000)	05/22/14 18:06
Total Trihalomethanes	1.00	U	2.00	0.600	ug/L	1	(<80)	05/22/14 18:06
trans-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 18:06
trans-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
Trichloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:06
Trichlorofluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:06
Vinyl chloride	0.200	U	0.400	0.120	ug/L	1	(<2)	05/22/14 18:06
Xylenes (total)	0.750	U	1.50	0.500	ug/L	1	(<10000)	05/22/14 18:06
Surrogates								
1,2-Dichloroethane-D4	98.6		70-130		%	1		05/22/14 18:06
4-Bromofluorobenzene	96.7		70-130		%	1		05/22/14 18:06
Toluene-d8	96.3		70-130		%	1		05/22/14 18:06

Batch Information

Analytical Batch: VMS14147
Analytical Method: EPA 524.2
Analyst: KCT
Analytical Date/Time: 05/22/14 18:06
Container ID: 1141977005-A

Prep Batch: VXX25880
Prep Method: SW5030B
Prep Date/Time: 05/22/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/30/2014 9:24:17AM

Results of **17636-DW11**

Client Sample ID: **17636-DW11**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977006
Lab Project ID: 1141977

Collection Date: 05/12/14 15:33
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.300	U	0.600	0.180	mg/L	1		05/23/14 10:02
Surrogates								
5a Androstane	84.5		50-150		%	1		05/23/14 10:02

Batch Information

Analytical Batch: XFC11323
Analytical Method: AK102
Analyst: HM
Analytical Date/Time: 05/23/14 10:02
Container ID: 1141977006-D

Prep Batch: XXX31061
Prep Method: SW3520C
Prep Date/Time: 05/22/14 09:50
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

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Results of **17636-DW11**

Client Sample ID: **17636-DW11**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977006
Lab Project ID: 1141977

Collection Date: 05/12/14 15:33
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
1,1,1-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<200)	05/22/14 18:23
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
1,1,2-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:23
1,1-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
1,1-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<7)	05/22/14 18:23
1,1-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
1,2,3-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
1,2,3-Trichloropropane	0.250	U	0.500	0.180	ug/L	1		05/22/14 18:23
1,2,4-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 18:23
1,2,4-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
1,2-Dibromo-3-chloropropane	1.00	U	2.00	0.620	ug/L	1		05/22/14 18:23
1,2-Dibromoethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
1,2-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<600)	05/22/14 18:23
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:23
1,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:23
1,3,5-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
1,3-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<75)	05/22/14 18:23
2,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
2-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
4-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
4-Isopropyltoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
Benzene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:23
Bromobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
Bromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
Bromoform	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
Bromomethane	1.00	U	2.00	0.620	ug/L	1		05/22/14 18:23
Carbon tetrachloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:23
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 18:23
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:23
Chloroform	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
Chloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
cis-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 18:23
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23

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Results of **17636-DW11**

Client Sample ID: **17636-DW11**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977006
Lab Project ID: 1141977

Collection Date: 05/12/14 15:33
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
Dibromomethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
Dichlorodifluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
Ethylbenzene	0.250	U	0.500	0.150	ug/L	1	(<700)	05/22/14 18:23
Hexachlorobutadiene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
Isopropylbenzene (Cumene)	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
Methyl-t-butyl ether	0.500	U	1.00	0.500	ug/L	1		05/22/14 18:23
Methylene chloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:23
n-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
n-Propylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
Naphthalene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
o-Xylene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
P & M -Xylene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:23
sec-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
Styrene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 18:23
tert-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
Tetrachloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:23
Toluene	0.250	U	0.500	0.150	ug/L	1	(<1000)	05/22/14 18:23
Total Trihalomethanes	1.00	U	2.00	0.600	ug/L	1	(<80)	05/22/14 18:23
trans-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 18:23
trans-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
Trichloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:23
Trichlorofluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:23
Vinyl chloride	0.200	U	0.400	0.120	ug/L	1	(<2)	05/22/14 18:23
Xylenes (total)	0.750	U	1.50	0.500	ug/L	1	(<10000)	05/22/14 18:23
Surrogates								
1,2-Dichloroethane-D4	95.5		70-130		%	1		05/22/14 18:23
4-Bromofluorobenzene	95		70-130		%	1		05/22/14 18:23
Toluene-d8	94.7		70-130		%	1		05/22/14 18:23

Batch Information

Analytical Batch: VMS14147
Analytical Method: EPA 524.2
Analyst: KCT
Analytical Date/Time: 05/22/14 18:23
Container ID: 1141977006-A

Prep Batch: VXX25880
Prep Method: SW5030B
Prep Date/Time: 05/22/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/30/2014 9:24:17AM

Results of **17636-DW40**

Client Sample ID: **17636-DW40**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977007
Lab Project ID: 1141977

Collection Date: 05/12/14 15:45
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.300	U	0.600	0.180	mg/L	1		05/23/14 10:22
Surrogates								
5a Androstane	87.7		50-150		%	1		05/23/14 10:22

Batch Information

Analytical Batch: XFC11323
Analytical Method: AK102
Analyst: HM
Analytical Date/Time: 05/23/14 10:22
Container ID: 1141977007-D

Prep Batch: XXX31061
Prep Method: SW3520C
Prep Date/Time: 05/22/14 09:50
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

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Results of **17636-DW40**

Client Sample ID: **17636-DW40**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977007
Lab Project ID: 1141977

Collection Date: 05/12/14 15:45
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
1,1,1-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<200)	05/22/14 18:40
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
1,1,2-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:40
1,1-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
1,1-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<7)	05/22/14 18:40
1,1-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
1,2,3-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
1,2,3-Trichloropropane	0.250	U	0.500	0.180	ug/L	1		05/22/14 18:40
1,2,4-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 18:40
1,2,4-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
1,2-Dibromo-3-chloropropane	1.00	U	2.00	0.620	ug/L	1		05/22/14 18:40
1,2-Dibromoethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
1,2-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<600)	05/22/14 18:40
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:40
1,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:40
1,3,5-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
1,3-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<75)	05/22/14 18:40
2,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
2-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
4-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
4-Isopropyltoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
Benzene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:40
Bromobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
Bromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
Bromoform	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
Bromomethane	1.00	U	2.00	0.620	ug/L	1		05/22/14 18:40
Carbon tetrachloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:40
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 18:40
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:40
Chloroform	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
Chloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
cis-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 18:40
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40

Results of **17636-DW40**

Client Sample ID: **17636-DW40**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977007
Lab Project ID: 1141977

Collection Date: 05/12/14 15:45
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
Dibromomethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
Dichlorodifluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
Ethylbenzene	0.250	U	0.500	0.150	ug/L	1	(<700)	05/22/14 18:40
Hexachlorobutadiene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
Isopropylbenzene (Cumene)	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
Methyl-t-butyl ether	0.500	U	1.00	0.500	ug/L	1		05/22/14 18:40
Methylene chloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:40
n-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
n-Propylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
Naphthalene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
o-Xylene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
P & M -Xylene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:40
sec-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
Styrene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 18:40
tert-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
Tetrachloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:40
Toluene	0.250	U	0.500	0.150	ug/L	1	(<1000)	05/22/14 18:40
Total Trihalomethanes	1.00	U	2.00	0.600	ug/L	1	(<80)	05/22/14 18:40
trans-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 18:40
trans-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
Trichloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:40
Trichlorofluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:40
Vinyl chloride	0.200	U	0.400	0.120	ug/L	1	(<2)	05/22/14 18:40
Xylenes (total)	0.750	U	1.50	0.500	ug/L	1	(<10000)	05/22/14 18:40
Surrogates								
1,2-Dichloroethane-D4	102		70-130		%	1		05/22/14 18:40
4-Bromofluorobenzene	98.3		70-130		%	1		05/22/14 18:40
Toluene-d8	98.5		70-130		%	1		05/22/14 18:40

Batch Information

Analytical Batch: VMS14147
Analytical Method: EPA 524.2
Analyst: KCT
Analytical Date/Time: 05/22/14 18:40
Container ID: 1141977007-A

Prep Batch: VXX25880
Prep Method: SW5030B
Prep Date/Time: 05/22/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/30/2014 9:24:17AM

Results of **17636-DW16**

Client Sample ID: **17636-DW16**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977008
Lab Project ID: 1141977

Collection Date: 05/12/14 16:08
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.300	U	0.600	0.180	mg/L	1		05/23/14 10:42
Surrogates								
5a Androstane	86.8		50-150		%	1		05/23/14 10:42

Batch Information

Analytical Batch: XFC11323
Analytical Method: AK102
Analyst: HM
Analytical Date/Time: 05/23/14 10:42
Container ID: 1141977008-D

Prep Batch: XXX31061
Prep Method: SW3520C
Prep Date/Time: 05/22/14 09:50
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

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Results of **17636-DW16**

Client Sample ID: **17636-DW16**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977008
Lab Project ID: 1141977

Collection Date: 05/12/14 16:08
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
1,1,1-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<200)	05/22/14 18:57
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
1,1,2-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:57
1,1-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
1,1-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<7)	05/22/14 18:57
1,1-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
1,2,3-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
1,2,3-Trichloropropane	0.250	U	0.500	0.180	ug/L	1		05/22/14 18:57
1,2,4-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 18:57
1,2,4-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
1,2-Dibromo-3-chloropropane	1.00	U	2.00	0.620	ug/L	1		05/22/14 18:57
1,2-Dibromoethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
1,2-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<600)	05/22/14 18:57
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:57
1,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:57
1,3,5-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
1,3-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<75)	05/22/14 18:57
2,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
2-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
4-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
4-Isopropyltoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
Benzene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:57
Bromobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
Bromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
Bromoform	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
Bromomethane	1.00	U	2.00	0.620	ug/L	1		05/22/14 18:57
Carbon tetrachloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:57
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 18:57
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:57
Chloroform	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
Chloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
cis-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 18:57
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57

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Results of **17636-DW16**

Client Sample ID: **17636-DW16**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977008
Lab Project ID: 1141977

Collection Date: 05/12/14 16:08
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
Dibromomethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
Dichlorodifluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
Ethylbenzene	0.250	U	0.500	0.150	ug/L	1	(<700)	05/22/14 18:57
Hexachlorobutadiene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
Isopropylbenzene (Cumene)	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
Methyl-t-butyl ether	0.500	U	1.00	0.500	ug/L	1		05/22/14 18:57
Methylene chloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:57
n-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
n-Propylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
Naphthalene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
o-Xylene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
P & M -Xylene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:57
sec-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
Styrene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 18:57
tert-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
Tetrachloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:57
Toluene	0.250	U	0.500	0.150	ug/L	1	(<1000)	05/22/14 18:57
Total Trihalomethanes	1.00	U	2.00	0.600	ug/L	1	(<80)	05/22/14 18:57
trans-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 18:57
trans-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
Trichloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 18:57
Trichlorofluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:57
Vinyl chloride	0.200	U	0.400	0.120	ug/L	1	(<2)	05/22/14 18:57
Xylenes (total)	0.750	U	1.50	0.500	ug/L	1	(<10000)	05/22/14 18:57
Surrogates								
1,2-Dichloroethane-D4	92.5		70-130		%	1		05/22/14 18:57
4-Bromofluorobenzene	96.6		70-130		%	1		05/22/14 18:57
Toluene-d8	95.8		70-130		%	1		05/22/14 18:57

Batch Information

Analytical Batch: VMS14147
Analytical Method: EPA 524.2
Analyst: KCT
Analytical Date/Time: 05/22/14 18:57
Container ID: 1141977008-A

Prep Batch: VXX25880
Prep Method: SW5030B
Prep Date/Time: 05/22/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/30/2014 9:24:17AM

Results of **17636-DW7**

Client Sample ID: **17636-DW7**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977009
Lab Project ID: 1141977

Collection Date: 05/12/14 16:20
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.300	U	0.600	0.180	mg/L	1		05/23/14 11:01
Surrogates								
5a Androstane	87.2		50-150		%	1		05/23/14 11:01

Batch Information

Analytical Batch: XFC11323
Analytical Method: AK102
Analyst: HM
Analytical Date/Time: 05/23/14 11:01
Container ID: 1141977009-D

Prep Batch: XXX31061
Prep Method: SW3520C
Prep Date/Time: 05/22/14 09:50
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

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Results of **17636-DW7**

Client Sample ID: **17636-DW7**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977009
Lab Project ID: 1141977

Collection Date: 05/12/14 16:20
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Naphthalene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
o-Xylene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
P & M -Xylene	0.500	U	1.00	0.310	ug/L	1		05/22/14 19:14
sec-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
Styrene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 19:14
tert-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
Tetrachloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:14
Toluene	0.250	U	0.500	0.150	ug/L	1	(<1000)	05/22/14 19:14
Total Trihalomethanes	1.00	U	2.00	0.600	ug/L	1	(<80)	05/22/14 19:14
trans-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 19:14
trans-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
Trichloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:14
Trichlorofluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
Vinyl chloride	0.200	U	0.400	0.120	ug/L	1	(<2)	05/22/14 19:14
Xylenes (total)	0.750	U	1.50	0.500	ug/L	1	(<10000)	05/22/14 19:14
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
1,1,1-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<200)	05/22/14 19:14
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
1,1,2-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:14
1,1-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
1,1-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<7)	05/22/14 19:14
1,1-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
1,2,3-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
1,2,3-Trichloropropane	0.250	U	0.500	0.180	ug/L	1		05/22/14 19:14
1,2,4-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 19:14
1,2,4-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
1,2-Dibromo-3-chloropropane	1.00	U	2.00	0.620	ug/L	1		05/22/14 19:14
1,2-Dibromoethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
1,2-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<600)	05/22/14 19:14
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:14
1,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:14
1,3,5-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
1,3-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<75)	05/22/14 19:14
2,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
2-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14

Results of **17636-DW7**

Client Sample ID: **17636-DW7**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977009
Lab Project ID: 1141977

Collection Date: 05/12/14 16:20
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
4-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
4-Isopropyltoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
Benzene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:14
Bromobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
Bromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
Bromoform	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
Bromomethane	1.00	U	2.00	0.620	ug/L	1		05/22/14 19:14
Carbon tetrachloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:14
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 19:14
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 19:14
Chloroform	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
Chloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
cis-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 19:14
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
Dibromomethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
Dichlorodifluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
Ethylbenzene	0.250	U	0.500	0.150	ug/L	1	(<700)	05/22/14 19:14
Hexachlorobutadiene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
Isopropylbenzene (Cumene)	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
Methyl-t-butyl ether	0.500	U	1.00	0.500	ug/L	1		05/22/14 19:14
Methylene chloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:14
n-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
n-Propylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:14
Surrogates								
1,2-Dichloroethane-D4	94.1		70-130		%	1		05/22/14 19:14
4-Bromofluorobenzene	97.3		70-130		%	1		05/22/14 19:14
Toluene-d8	96.5		70-130		%	1		05/22/14 19:14

Batch Information

Analytical Batch: VMS14147
Analytical Method: EPA 524.2
Analyst: KCT
Analytical Date/Time: 05/22/14 19:14
Container ID: 1141977009-A

Prep Batch: VXX25880
Prep Method: SW5030B
Prep Date/Time: 05/22/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-DW9**

Client Sample ID: **17636-DW9**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977010
Lab Project ID: 1141977

Collection Date: 05/12/14 16:40
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
1,1,1-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<200)	05/22/14 19:31
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
1,1,2-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:31
1,1-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
1,1-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<7)	05/22/14 19:31
1,1-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
1,2,3-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
1,2,3-Trichloropropane	0.250	U	0.500	0.180	ug/L	1		05/22/14 19:31
1,2,4-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 19:31
1,2,4-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
1,2-Dibromo-3-chloropropane	1.00	U	2.00	0.620	ug/L	1		05/22/14 19:31
1,2-Dibromoethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
1,2-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<600)	05/22/14 19:31
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:31
1,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:31
1,3,5-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
1,3-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<75)	05/22/14 19:31
2,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
2-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
4-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
4-Isopropyltoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
Benzene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:31
Bromobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
Bromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
Bromoform	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
Bromomethane	1.00	U	2.00	0.620	ug/L	1		05/22/14 19:31
Carbon tetrachloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:31
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 19:31
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 19:31
Chloroform	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
Chloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
cis-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 19:31
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31

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Results of **17636-DW9**

Client Sample ID: **17636-DW9**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977010
Lab Project ID: 1141977

Collection Date: 05/12/14 16:40
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
Dibromomethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
Dichlorodifluoromethane	0.210	J	0.500	0.150	ug/L	1		05/22/14 19:31
Ethylbenzene	0.250	U	0.500	0.150	ug/L	1	(<700)	05/22/14 19:31
Hexachlorobutadiene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
Isopropylbenzene (Cumene)	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
Methyl-t-butyl ether	0.500	U	1.00	0.500	ug/L	1		05/22/14 19:31
Methylene chloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:31
n-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
n-Propylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
Naphthalene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
o-Xylene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
P & M -Xylene	0.500	U	1.00	0.310	ug/L	1		05/22/14 19:31
sec-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
Styrene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 19:31
tert-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
Tetrachloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:31
Toluene	0.250	U	0.500	0.150	ug/L	1	(<1000)	05/22/14 19:31
Total Trihalomethanes	1.00	U	2.00	0.600	ug/L	1	(<80)	05/22/14 19:31
trans-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 19:31
trans-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
Trichloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:31
Trichlorofluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:31
Vinyl chloride	0.200	U	0.400	0.120	ug/L	1	(<2)	05/22/14 19:31
Xylenes (total)	0.750	U	1.50	0.500	ug/L	1	(<10000)	05/22/14 19:31
Surrogates								
1,2-Dichloroethane-D4	90.9		70-130		%	1		05/22/14 19:31
4-Bromofluorobenzene	95.3		70-130		%	1		05/22/14 19:31
Toluene-d8	96		70-130		%	1		05/22/14 19:31

Batch Information

Analytical Batch: VMS14147
Analytical Method: EPA 524.2
Analyst: KCT
Analytical Date/Time: 05/22/14 19:31
Container ID: 1141977010-A

Prep Batch: VXX25880
Prep Method: SW5030B
Prep Date/Time: 05/22/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/30/2014 9:24:17AM

Results of **17636-DW12**

Client Sample ID: **17636-DW12**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977011
Lab Project ID: 1141977

Collection Date: 05/12/14 16:53
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
1,1,1-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<200)	05/22/14 19:48
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
1,1,2-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:48
1,1-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
1,1-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<7)	05/22/14 19:48
1,1-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
1,2,3-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
1,2,3-Trichloropropane	0.250	U	0.500	0.180	ug/L	1		05/22/14 19:48
1,2,4-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 19:48
1,2,4-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
1,2-Dibromo-3-chloropropane	1.00	U	2.00	0.620	ug/L	1		05/22/14 19:48
1,2-Dibromoethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
1,2-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<600)	05/22/14 19:48
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:48
1,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:48
1,3,5-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
1,3-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<75)	05/22/14 19:48
2,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
2-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
4-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
4-Isopropyltoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
Benzene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:48
Bromobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
Bromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
Bromoform	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
Bromomethane	1.00	U	2.00	0.620	ug/L	1		05/22/14 19:48
Carbon tetrachloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:48
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 19:48
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 19:48
Chloroform	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
Chloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
cis-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 19:48
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48

Results of **17636-DW12**

Client Sample ID: **17636-DW12**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977011
Lab Project ID: 1141977

Collection Date: 05/12/14 16:53
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
Dibromomethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
Dichlorodifluoromethane	0.200	J	0.500	0.150	ug/L	1		05/22/14 19:48
Ethylbenzene	0.250	U	0.500	0.150	ug/L	1	(<700)	05/22/14 19:48
Hexachlorobutadiene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
Isopropylbenzene (Cumene)	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
Methyl-t-butyl ether	0.500	U	1.00	0.500	ug/L	1		05/22/14 19:48
Methylene chloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:48
n-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
n-Propylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
Naphthalene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
o-Xylene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
P & M -Xylene	0.500	U	1.00	0.310	ug/L	1		05/22/14 19:48
sec-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
Styrene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 19:48
tert-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
Tetrachloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:48
Toluene	0.250	U	0.500	0.150	ug/L	1	(<1000)	05/22/14 19:48
Total Trihalomethanes	1.00	U	2.00	0.600	ug/L	1	(<80)	05/22/14 19:48
trans-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 19:48
trans-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
Trichloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 19:48
Trichlorofluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 19:48
Vinyl chloride	0.200	U	0.400	0.120	ug/L	1	(<2)	05/22/14 19:48
Xylenes (total)	0.750	U	1.50	0.500	ug/L	1	(<10000)	05/22/14 19:48
Surrogates								
1,2-Dichloroethane-D4	94.5		70-130		%	1		05/22/14 19:48
4-Bromofluorobenzene	95.9		70-130		%	1		05/22/14 19:48
Toluene-d8	95.5		70-130		%	1		05/22/14 19:48

Batch Information

Analytical Batch: VMS14147
Analytical Method: EPA 524.2
Analyst: KCT
Analytical Date/Time: 05/22/14 19:48
Container ID: 1141977011-A

Prep Batch: VXX25880
Prep Method: SW5030B
Prep Date/Time: 05/22/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/30/2014 9:24:17AM

Results of **17636-DW6**

Client Sample ID: **17636-DW6**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977012
Lab Project ID: 1141977

Collection Date: 05/12/14 17:10
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
1,1,1-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<200)	05/22/14 20:05
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
1,1,2-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:05
1,1-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
1,1-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<7)	05/22/14 20:05
1,1-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
1,2,3-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
1,2,3-Trichloropropane	0.250	U	0.500	0.180	ug/L	1		05/22/14 20:05
1,2,4-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 20:05
1,2,4-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
1,2-Dibromo-3-chloropropane	1.00	U	2.00	0.620	ug/L	1		05/22/14 20:05
1,2-Dibromoethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
1,2-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<600)	05/22/14 20:05
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:05
1,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:05
1,3,5-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
1,3-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<75)	05/22/14 20:05
2,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
2-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
4-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
4-Isopropyltoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
Benzene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:05
Bromobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
Bromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
Bromoform	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
Bromomethane	1.00	U	2.00	0.620	ug/L	1		05/22/14 20:05
Carbon tetrachloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:05
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 20:05
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 20:05
Chloroform	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
Chloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
cis-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 20:05
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05

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Results of **17636-DW6**

Client Sample ID: **17636-DW6**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977012
Lab Project ID: 1141977

Collection Date: 05/12/14 17:10
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
Dibromomethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
Dichlorodifluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
Ethylbenzene	0.250	U	0.500	0.150	ug/L	1	(<700)	05/22/14 20:05
Hexachlorobutadiene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
Isopropylbenzene (Cumene)	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
Methyl-t-butyl ether	0.500	U	1.00	0.500	ug/L	1		05/22/14 20:05
Methylene chloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:05
n-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
n-Propylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
Naphthalene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
o-Xylene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
P & M -Xylene	0.500	U	1.00	0.310	ug/L	1		05/22/14 20:05
sec-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
Styrene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 20:05
tert-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
Tetrachloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:05
Toluene	0.250	U	0.500	0.150	ug/L	1	(<1000)	05/22/14 20:05
Total Trihalomethanes	1.00	U	2.00	0.600	ug/L	1	(<80)	05/22/14 20:05
trans-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 20:05
trans-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
Trichloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:05
Trichlorofluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:05
Vinyl chloride	0.200	U	0.400	0.120	ug/L	1	(<2)	05/22/14 20:05
Xylenes (total)	0.750	U	1.50	0.500	ug/L	1	(<10000)	05/22/14 20:05
Surrogates								
1,2-Dichloroethane-D4	95.6		70-130		%	1		05/22/14 20:05
4-Bromofluorobenzene	95.2		70-130		%	1		05/22/14 20:05
Toluene-d8	95.1		70-130		%	1		05/22/14 20:05

Batch Information

Analytical Batch: VMS14147
Analytical Method: EPA 524.2
Analyst: KCT
Analytical Date/Time: 05/22/14 20:05
Container ID: 1141977012-A

Prep Batch: VXX25880
Prep Method: SW5030B
Prep Date/Time: 05/22/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/30/2014 9:24:17AM

Results of **17636-DW1**

Client Sample ID: **17636-DW1**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977013
Lab Project ID: 1141977

Collection Date: 05/12/14 20:08
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.300	U	0.600	0.180	mg/L	1		05/23/14 11:21
Surrogates								
5a Androstane	84		50-150		%	1		05/23/14 11:21

Batch Information

Analytical Batch: XFC11323
Analytical Method: AK102
Analyst: HM
Analytical Date/Time: 05/23/14 11:21
Container ID: 1141977013-D

Prep Batch: XXX31061
Prep Method: SW3520C
Prep Date/Time: 05/22/14 09:50
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

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Results of **17636-DW1**

Client Sample ID: **17636-DW1**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977013
Lab Project ID: 1141977

Collection Date: 05/12/14 20:08
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
1,1,1-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<200)	05/22/14 20:21
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
1,1,2-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:21
1,1-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
1,1-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<7)	05/22/14 20:21
1,1-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
1,2,3-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
1,2,3-Trichloropropane	0.250	U	0.500	0.180	ug/L	1		05/22/14 20:21
1,2,4-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 20:21
1,2,4-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
1,2-Dibromo-3-chloropropane	1.00	U	2.00	0.620	ug/L	1		05/22/14 20:21
1,2-Dibromoethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
1,2-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<600)	05/22/14 20:21
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:21
1,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:21
1,3,5-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
1,3-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<75)	05/22/14 20:21
2,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
2-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
4-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
4-Isopropyltoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
Benzene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:21
Bromobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
Bromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
Bromoform	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
Bromomethane	1.00	U	2.00	0.620	ug/L	1		05/22/14 20:21
Carbon tetrachloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:21
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 20:21
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 20:21
Chloroform	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
Chloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
cis-1,2-Dichloroethene	0.200	J	0.500	0.150	ug/L	1	(<70)	05/22/14 20:21
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21

Results of **17636-DW1**

Client Sample ID: **17636-DW1**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977013
Lab Project ID: 1141977

Collection Date: 05/12/14 20:08
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
Dibromomethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
Dichlorodifluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
Ethylbenzene	0.250	U	0.500	0.150	ug/L	1	(<700)	05/22/14 20:21
Hexachlorobutadiene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
Isopropylbenzene (Cumene)	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
Methyl-t-butyl ether	0.500	U	1.00	0.500	ug/L	1		05/22/14 20:21
Methylene chloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:21
n-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
n-Propylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
Naphthalene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
o-Xylene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
P & M -Xylene	0.500	U	1.00	0.310	ug/L	1		05/22/14 20:21
sec-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
Styrene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 20:21
tert-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
Tetrachloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:21
Toluene	0.250	U	0.500	0.150	ug/L	1	(<1000)	05/22/14 20:21
Total Trihalomethanes	1.00	U	2.00	0.600	ug/L	1	(<80)	05/22/14 20:21
trans-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 20:21
trans-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
Trichloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:21
Trichlorofluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:21
Vinyl chloride	0.200	U	0.400	0.120	ug/L	1	(<2)	05/22/14 20:21
Xylenes (total)	0.750	U	1.50	0.500	ug/L	1	(<10000)	05/22/14 20:21
Surrogates								
1,2-Dichloroethane-D4	98.5		70-130		%	1		05/22/14 20:21
4-Bromofluorobenzene	98.3		70-130		%	1		05/22/14 20:21
Toluene-d8	98.3		70-130		%	1		05/22/14 20:21

Batch Information

Analytical Batch: VMS14147
Analytical Method: EPA 524.2
Analyst: KCT
Analytical Date/Time: 05/22/14 20:21
Container ID: 1141977013-A

Prep Batch: VXX25880
Prep Method: SW5030B
Prep Date/Time: 05/22/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/30/2014 9:24:17AM

Results of **17636-RA-MW8**

Client Sample ID: **17636-RA-MW8**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977014
Lab Project ID: 1141977

Collection Date: 05/13/14 14:05
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.319	U	0.638	0.191	mg/L	1		05/23/14 11:41
Surrogates								
5a Androstane	88		50-150		%	1		05/23/14 11:41

Batch Information

Analytical Batch: XFC11323
Analytical Method: AK102
Analyst: HM
Analytical Date/Time: 05/23/14 11:41
Container ID: 1141977014-G

Prep Batch: XXX31061
Prep Method: SW3520C
Prep Date/Time: 05/22/14 09:50
Prep Initial Wt./Vol.: 940 mL
Prep Extract Vol: 1 mL

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Results of **17636-RA-MW8**

Client Sample ID: **17636-RA-MW8**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977014
Lab Project ID: 1141977

Collection Date: 05/13/14 14:05
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		05/22/14 18:11
Surrogates								
4-Bromofluorobenzene	87.7		50-150		%	1		05/22/14 18:11

Batch Information

Analytical Batch: VFC11892
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 05/22/14 18:11
Container ID: 1141977014-D

Prep Batch: VXX25881
Prep Method: SW5030B
Prep Date/Time: 05/22/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-RA-MW8**

Client Sample ID: **17636-RA-MW8**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977014
Lab Project ID: 1141977

Collection Date: 05/13/14 14:05
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 14:49
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 14:49
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		05/21/14 14:49
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 14:49
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
1,3-Dichloropropane	0.200	U	0.400	0.120	ug/L	1		05/21/14 14:49
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 14:49
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 14:49
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		05/21/14 14:49
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 14:49
Benzene	0.200	U	0.400	0.120	ug/L	1		05/21/14 14:49
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 14:49
Bromoform	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
Bromomethane	5.00	U	10.0	3.10	ug/L	1		05/21/14 14:49
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		05/21/14 14:49
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 14:49
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49

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Results of **17636-RA-MW8**

Client Sample ID: **17636-RA-MW8**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977014
Lab Project ID: 1141977

Collection Date: 05/13/14 14:05
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		05/21/14 14:49
Chloromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/21/14 14:49
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 14:49
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		05/21/14 14:49
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		05/21/14 14:49
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
Naphthalene	5.00	U	10.0	3.10	ug/L	1		05/21/14 14:49
o-Xylene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		05/21/14 14:49
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
Styrene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
Toluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:49
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		05/21/14 14:49
Surrogates								
1,2-Dichloroethane-D4	103		70-120		%	1		05/21/14 14:49
4-Bromofluorobenzene	108		75-120		%	1		05/21/14 14:49
Toluene-d8	104		85-120		%	1		05/21/14 14:49

Results of **17636-RA-MW8**

Client Sample ID: **17636-RA-MW8**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977014
Lab Project ID: 1141977

Collection Date: 05/13/14 14:05
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS14145
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 05/21/14 14:49
Container ID: 1141977014-A

Prep Batch: VXX25875
Prep Method: SW5030B
Prep Date/Time: 05/21/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-RA-MW9**

Client Sample ID: **17636-RA-MW9**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977015
Lab Project ID: 1141977

Collection Date: 05/13/14 15:12
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.300	U	0.600	0.180	mg/L	1		05/23/14 12:01
Surrogates								
5a Androstane	85.2		50-150		%	1		05/23/14 12:01

Batch Information

Analytical Batch: XFC11323
Analytical Method: AK102
Analyst: HM
Analytical Date/Time: 05/23/14 12:01
Container ID: 1141977015-G

Prep Batch: XXX31061
Prep Method: SW3520C
Prep Date/Time: 05/22/14 09:50
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

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Results of **17636-RA-MW9**

Client Sample ID: **17636-RA-MW9**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977015
Lab Project ID: 1141977

Collection Date: 05/13/14 15:12
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		05/22/14 18:31
Surrogates								
4-Bromofluorobenzene	93		50-150		%	1		05/22/14 18:31

Batch Information

Analytical Batch: VFC11892
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 05/22/14 18:31
Container ID: 1141977015-D

Prep Batch: VXX25881
Prep Method: SW5030B
Prep Date/Time: 05/22/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-RA-MW9**

Client Sample ID: **17636-RA-MW9**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977015
Lab Project ID: 1141977

Collection Date: 05/13/14 15:12
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 15:38
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 15:38
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		05/21/14 15:38
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 15:38
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
1,3-Dichloropropane	0.200	U	0.400	0.120	ug/L	1		05/21/14 15:38
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 15:38
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 15:38
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		05/21/14 15:38
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 15:38
Benzene	0.200	U	0.400	0.120	ug/L	1		05/21/14 15:38
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 15:38
Bromoform	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
Bromomethane	5.00	U	10.0	3.10	ug/L	1		05/21/14 15:38
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		05/21/14 15:38
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 15:38
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38

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Results of **17636-RA-MW9**

Client Sample ID: **17636-RA-MW9**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977015
Lab Project ID: 1141977

Collection Date: 05/13/14 15:12
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		05/21/14 15:38
Chloromethane	0.360	J	1.00	0.310	ug/L	1		05/21/14 15:38
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/21/14 15:38
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 15:38
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		05/21/14 15:38
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		05/21/14 15:38
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
Naphthalene	5.00	U	10.0	3.10	ug/L	1		05/21/14 15:38
o-Xylene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		05/21/14 15:38
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
Styrene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
Toluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
Trichloroethene	11.1		1.00	0.310	ug/L	1		05/21/14 15:38
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:38
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		05/21/14 15:38
Surrogates								
1,2-Dichloroethane-D4	98.1		70-120		%	1		05/21/14 15:38
4-Bromofluorobenzene	108		75-120		%	1		05/21/14 15:38
Toluene-d8	104		85-120		%	1		05/21/14 15:38

Results of **17636-RA-MW9**

Client Sample ID: **17636-RA-MW9**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977015
Lab Project ID: 1141977

Collection Date: 05/13/14 15:12
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS14145
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 05/21/14 15:38
Container ID: 1141977015-A

Prep Batch: VXX25875
Prep Method: SW5030B
Prep Date/Time: 05/21/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-RA-MW90**

Client Sample ID: **17636-RA-MW90**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977016
Lab Project ID: 1141977

Collection Date: 05/13/14 15:22
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.300	U	0.600	0.180	mg/L	1		05/23/14 12:20
Surrogates								
5a Androstane	86		50-150		%	1		05/23/14 12:20

Batch Information

Analytical Batch: XFC11323
Analytical Method: AK102
Analyst: HM
Analytical Date/Time: 05/23/14 12:20
Container ID: 1141977016-G

Prep Batch: XXX31061
Prep Method: SW3520C
Prep Date/Time: 05/22/14 09:50
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

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Results of **17636-RA-MW90**

Client Sample ID: **17636-RA-MW90**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977016
Lab Project ID: 1141977

Collection Date: 05/13/14 15:22
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		05/22/14 18:50
Surrogates								
4-Bromofluorobenzene	98.1		50-150		%	1		05/22/14 18:50

Batch Information

Analytical Batch: VFC11892
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 05/22/14 18:50
Container ID: 1141977016-D

Prep Batch: VXX25881
Prep Method: SW5030B
Prep Date/Time: 05/22/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-RA-MW90**

Client Sample ID: **17636-RA-MW90**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977016
Lab Project ID: 1141977

Collection Date: 05/13/14 15:22
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 15:54
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 15:54
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		05/21/14 15:54
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 15:54
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
1,3-Dichloropropane	0.200	U	0.400	0.120	ug/L	1		05/21/14 15:54
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 15:54
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 15:54
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		05/21/14 15:54
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 15:54
Benzene	0.200	U	0.400	0.120	ug/L	1		05/21/14 15:54
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 15:54
Bromoform	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
Bromomethane	5.00	U	10.0	3.10	ug/L	1		05/21/14 15:54
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		05/21/14 15:54
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 15:54
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54

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Results of **17636-RA-MW90**

Client Sample ID: **17636-RA-MW90**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977016
Lab Project ID: 1141977

Collection Date: 05/13/14 15:22
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		05/21/14 15:54
Chloromethane	0.430	J	1.00	0.310	ug/L	1		05/21/14 15:54
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/21/14 15:54
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 15:54
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		05/21/14 15:54
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		05/21/14 15:54
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
Naphthalene	5.00	U	10.0	3.10	ug/L	1		05/21/14 15:54
o-Xylene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		05/21/14 15:54
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
Styrene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
Toluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
Trichloroethene	11.4		1.00	0.310	ug/L	1		05/21/14 15:54
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 15:54
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		05/21/14 15:54
Surrogates								
1,2-Dichloroethane-D4	103		70-120		%	1		05/21/14 15:54
4-Bromofluorobenzene	109		75-120		%	1		05/21/14 15:54
Toluene-d8	104		85-120		%	1		05/21/14 15:54

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Results of **17636-RA-MW90**

Client Sample ID: **17636-RA-MW90**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977016
Lab Project ID: 1141977

Collection Date: 05/13/14 15:22
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS14145
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 05/21/14 15:54
Container ID: 1141977016-A

Prep Batch: VXX25875
Prep Method: SW5030B
Prep Date/Time: 05/21/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-RA-MW6**

Client Sample ID: **17636-RA-MW6**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977017
Lab Project ID: 1141977

Collection Date: 05/13/14 16:20
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.310	U	0.619	0.186	mg/L	1		05/23/14 12:40
Surrogates								
5a Androstane	89.7		50-150		%	1		05/23/14 12:40

Batch Information

Analytical Batch: XFC11323
Analytical Method: AK102
Analyst: HM
Analytical Date/Time: 05/23/14 12:40
Container ID: 1141977017-G

Prep Batch: XXX31061
Prep Method: SW3520C
Prep Date/Time: 05/22/14 09:50
Prep Initial Wt./Vol.: 970 mL
Prep Extract Vol: 1 mL

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Results of **17636-RA-MW6**

Client Sample ID: **17636-RA-MW6**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977017
Lab Project ID: 1141977

Collection Date: 05/13/14 16:20
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		05/22/14 19:09
Surrogates								
4-Bromofluorobenzene	98.8		50-150		%	1		05/22/14 19:09

Batch Information

Analytical Batch: VFC11892
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 05/22/14 19:09
Container ID: 1141977017-D

Prep Batch: VXX25881
Prep Method: SW5030B
Prep Date/Time: 05/22/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-RA-MW6**

Client Sample ID: **17636-RA-MW6**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977017
Lab Project ID: 1141977

Collection Date: 05/13/14 16:20
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:11
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:11
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:11
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:11
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
1,3-Dichloropropane	0.200	U	0.400	0.120	ug/L	1		05/21/14 16:11
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:11
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:11
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:11
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:11
Benzene	0.200	U	0.400	0.120	ug/L	1		05/21/14 16:11
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:11
Bromoform	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
Bromomethane	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:11
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:11
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:11
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11

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Results of **17636-RA-MW6**

Client Sample ID: **17636-RA-MW6**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977017
Lab Project ID: 1141977

Collection Date: 05/13/14 16:20
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		05/21/14 16:11
Chloromethane	0.440	J	1.00	0.310	ug/L	1		05/21/14 16:11
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:11
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:11
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:11
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		05/21/14 16:11
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
Naphthalene	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:11
o-Xylene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		05/21/14 16:11
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
Styrene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
Toluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:11
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		05/21/14 16:11
Surrogates								
1,2-Dichloroethane-D4	101		70-120		%	1		05/21/14 16:11
4-Bromofluorobenzene	107		75-120		%	1		05/21/14 16:11
Toluene-d8	106		85-120		%	1		05/21/14 16:11

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Results of **17636-RA-MW6**

Client Sample ID: **17636-RA-MW6**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977017
Lab Project ID: 1141977

Collection Date: 05/13/14 16:20
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS14145
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 05/21/14 16:11
Container ID: 1141977017-A

Prep Batch: VXX25875
Prep Method: SW5030B
Prep Date/Time: 05/21/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-PL-MW10**

Client Sample ID: **17636-PL-MW10**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977018
Lab Project ID: 1141977

Collection Date: 05/13/14 18:00
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	1.90		0.619	0.186	mg/L	1		05/23/14 13:00
Surrogates								
5a Androstane	86.1		50-150		%	1		05/23/14 13:00

Batch Information

Analytical Batch: XFC11323
Analytical Method: AK102
Analyst: HM
Analytical Date/Time: 05/23/14 13:00
Container ID: 1141977018-G

Prep Batch: XXX31061
Prep Method: SW3520C
Prep Date/Time: 05/22/14 09:50
Prep Initial Wt./Vol.: 970 mL
Prep Extract Vol: 1 mL

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Results of **17636-PL-MW10**

Client Sample ID: **17636-PL-MW10**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977018
Lab Project ID: 1141977

Collection Date: 05/13/14 18:00
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0372	J	0.100	0.0310	mg/L	1		05/22/14 19:28
Surrogates								
4-Bromofluorobenzene	94.8		50-150		%	1		05/22/14 19:28

Batch Information

Analytical Batch: VFC11892
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 05/22/14 19:28
Container ID: 1141977018-D

Prep Batch: VXX25881
Prep Method: SW5030B
Prep Date/Time: 05/22/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-PL-MW10**

Client Sample ID: **17636-PL-MW10**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977018
Lab Project ID: 1141977

Collection Date: 05/13/14 18:00
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:27
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:27
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
1,2,4-Trimethylbenzene	0.480	J	1.00	0.310	ug/L	1		05/21/14 16:27
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:27
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:27
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
1,3-Dichloropropane	0.200	U	0.400	0.120	ug/L	1		05/21/14 16:27
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:27
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:27
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:27
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:27
Benzene	0.200	U	0.400	0.120	ug/L	1		05/21/14 16:27
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:27
Bromoform	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
Bromomethane	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:27
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:27
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:27
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27

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Results of **17636-PL-MW10**

Client Sample ID: **17636-PL-MW10**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977018
Lab Project ID: 1141977

Collection Date: 05/13/14 18:00
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		05/21/14 16:27
Chloromethane	0.420	J	1.00	0.310	ug/L	1		05/21/14 16:27
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:27
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:27
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
Dichlorodifluoromethane	2.38		1.00	0.310	ug/L	1		05/21/14 16:27
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:27
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		05/21/14 16:27
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
Naphthalene	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:27
o-Xylene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		05/21/14 16:27
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
Styrene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
Toluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
Trichlorofluoromethane	1.81		1.00	0.310	ug/L	1		05/21/14 16:27
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:27
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		05/21/14 16:27
Surrogates								
1,2-Dichloroethane-D4	107		70-120		%	1		05/21/14 16:27
4-Bromofluorobenzene	108		75-120		%	1		05/21/14 16:27
Toluene-d8	104		85-120		%	1		05/21/14 16:27

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Results of **17636-PL-MW10**

Client Sample ID: **17636-PL-MW10**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977018
Lab Project ID: 1141977

Collection Date: 05/13/14 18:00
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS14145
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 05/21/14 16:27
Container ID: 1141977018-A

Prep Batch: VXX25875
Prep Method: SW5030B
Prep Date/Time: 05/21/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-AST-MW7**

Client Sample ID: **17636-AST-MW7**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977019
Lab Project ID: 1141977

Collection Date: 05/13/14 18:47
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.534	J	0.600	0.180	mg/L	1		05/23/14 13:19
Surrogates								
5a Androstane	88.8		50-150		%	1		05/23/14 13:19

Batch Information

Analytical Batch: XFC11323
Analytical Method: AK102
Analyst: HM
Analytical Date/Time: 05/23/14 13:19
Container ID: 1141977019-G

Prep Batch: XXX31061
Prep Method: SW3520C
Prep Date/Time: 05/22/14 09:50
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

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Results of **17636-AST-MW7**

Client Sample ID: **17636-AST-MW7**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977019
Lab Project ID: 1141977

Collection Date: 05/13/14 18:47
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0318	J	0.100	0.0310	mg/L	1		05/22/14 19:48
Surrogates								
4-Bromofluorobenzene	103		50-150		%	1		05/22/14 19:48

Batch Information

Analytical Batch: VFC11892
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 05/22/14 19:48
Container ID: 1141977019-D

Prep Batch: VXX25881
Prep Method: SW5030B
Prep Date/Time: 05/22/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-AST-MW7**

Client Sample ID: **17636-AST-MW7**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977019
Lab Project ID: 1141977

Collection Date: 05/13/14 18:47
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:44
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:44
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:44
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:44
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
1,3-Dichloropropane	0.200	U	0.400	0.120	ug/L	1		05/21/14 16:44
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:44
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:44
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:44
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:44
Benzene	0.200	U	0.400	0.120	ug/L	1		05/21/14 16:44
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:44
Bromoform	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
Bromomethane	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:44
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:44
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:44
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44

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Results of **17636-AST-MW7**

Client Sample ID: **17636-AST-MW7**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977019
Lab Project ID: 1141977

Collection Date: 05/13/14 18:47
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		05/21/14 16:44
Chloromethane	0.430	J	1.00	0.310	ug/L	1		05/21/14 16:44
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:44
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 16:44
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:44
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		05/21/14 16:44
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
Naphthalene	5.00	U	10.0	3.10	ug/L	1		05/21/14 16:44
o-Xylene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		05/21/14 16:44
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
Styrene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
Toluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 16:44
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		05/21/14 16:44
Surrogates								
1,2-Dichloroethane-D4	101		70-120		%	1		05/21/14 16:44
4-Bromofluorobenzene	107		75-120		%	1		05/21/14 16:44
Toluene-d8	104		85-120		%	1		05/21/14 16:44

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Results of **17636-AST-MW7**

Client Sample ID: **17636-AST-MW7**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977019
Lab Project ID: 1141977

Collection Date: 05/13/14 18:47
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS14145
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 05/21/14 16:44
Container ID: 1141977019-A

Prep Batch: VXX25875
Prep Method: SW5030B
Prep Date/Time: 05/21/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-DW17**

Client Sample ID: **17636-DW17**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977020
Lab Project ID: 1141977

Collection Date: 05/13/14 19:13
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
1,1,1-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<200)	05/22/14 20:38
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
1,1,2-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:38
1,1-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
1,1-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<7)	05/22/14 20:38
1,1-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
1,2,3-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
1,2,3-Trichloropropane	0.250	U	0.500	0.180	ug/L	1		05/22/14 20:38
1,2,4-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 20:38
1,2,4-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
1,2-Dibromo-3-chloropropane	1.00	U	2.00	0.620	ug/L	1		05/22/14 20:38
1,2-Dibromoethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
1,2-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<600)	05/22/14 20:38
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:38
1,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:38
1,3,5-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
1,3-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<75)	05/22/14 20:38
2,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
2-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
4-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
4-Isopropyltoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
Benzene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:38
Bromobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
Bromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
Bromoform	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
Bromomethane	1.00	U	2.00	0.620	ug/L	1		05/22/14 20:38
Carbon tetrachloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:38
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 20:38
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 20:38
Chloroform	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
Chloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
cis-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 20:38
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38

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Results of **17636-DW17**

Client Sample ID: **17636-DW17**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977020
Lab Project ID: 1141977

Collection Date: 05/13/14 19:13
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
Dibromomethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
Dichlorodifluoromethane	0.190	J	0.500	0.150	ug/L	1		05/22/14 20:38
Ethylbenzene	0.250	U	0.500	0.150	ug/L	1	(<700)	05/22/14 20:38
Hexachlorobutadiene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
Isopropylbenzene (Cumene)	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
Methyl-t-butyl ether	0.500	U	1.00	0.500	ug/L	1		05/22/14 20:38
Methylene chloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:38
n-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
n-Propylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
Naphthalene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
o-Xylene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
P & M -Xylene	0.500	U	1.00	0.310	ug/L	1		05/22/14 20:38
sec-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
Styrene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 20:38
tert-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
Tetrachloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:38
Toluene	0.250	U	0.500	0.150	ug/L	1	(<1000)	05/22/14 20:38
Total Trihalomethanes	1.00	U	2.00	0.600	ug/L	1	(<80)	05/22/14 20:38
trans-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 20:38
trans-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
Trichloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:38
Trichlorofluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:38
Vinyl chloride	0.200	U	0.400	0.120	ug/L	1	(<2)	05/22/14 20:38
Xylenes (total)	0.750	U	1.50	0.500	ug/L	1	(<10000)	05/22/14 20:38
Surrogates								
1,2-Dichloroethane-D4	102		70-130		%	1		05/22/14 20:38
4-Bromofluorobenzene	98.4		70-130		%	1		05/22/14 20:38
Toluene-d8	99		70-130		%	1		05/22/14 20:38

Batch Information

Analytical Batch: VMS14147
Analytical Method: EPA 524.2
Analyst: KCT
Analytical Date/Time: 05/22/14 20:38
Container ID: 1141977020-A

Prep Batch: VXX25880
Prep Method: SW5030B
Prep Date/Time: 05/22/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/30/2014 9:24:17AM

Results of **17636-DW18**

Client Sample ID: **17636-DW18**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977021
Lab Project ID: 1141977

Collection Date: 05/13/14 19:49
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
1,1,1-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<200)	05/22/14 20:55
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
1,1,2-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:55
1,1-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
1,1-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<7)	05/22/14 20:55
1,1-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
1,2,3-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
1,2,3-Trichloropropane	0.250	U	0.500	0.180	ug/L	1		05/22/14 20:55
1,2,4-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 20:55
1,2,4-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
1,2-Dibromo-3-chloropropane	1.00	U	2.00	0.620	ug/L	1		05/22/14 20:55
1,2-Dibromoethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
1,2-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<600)	05/22/14 20:55
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:55
1,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:55
1,3,5-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
1,3-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<75)	05/22/14 20:55
2,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
2-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
4-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
4-Isopropyltoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
Benzene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:55
Bromobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
Bromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
Bromoform	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
Bromomethane	1.00	U	2.00	0.620	ug/L	1		05/22/14 20:55
Carbon tetrachloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:55
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 20:55
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 20:55
Chloroform	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
Chloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
cis-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 20:55
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55

Results of **17636-DW18**

Client Sample ID: **17636-DW18**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977021
Lab Project ID: 1141977

Collection Date: 05/13/14 19:49
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
Dibromomethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
Dichlorodifluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
Ethylbenzene	0.250	U	0.500	0.150	ug/L	1	(<700)	05/22/14 20:55
Hexachlorobutadiene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
Isopropylbenzene (Cumene)	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
Methyl-t-butyl ether	0.500	U	1.00	0.500	ug/L	1		05/22/14 20:55
Methylene chloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:55
n-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
n-Propylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
Naphthalene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
o-Xylene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
P & M -Xylene	0.500	U	1.00	0.310	ug/L	1		05/22/14 20:55
sec-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
Styrene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 20:55
tert-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
Tetrachloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:55
Toluene	0.250	U	0.500	0.150	ug/L	1	(<1000)	05/22/14 20:55
Total Trihalomethanes	1.00	U	2.00	0.600	ug/L	1	(<80)	05/22/14 20:55
trans-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 20:55
trans-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
Trichloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 20:55
Trichlorofluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 20:55
Vinyl chloride	0.200	U	0.400	0.120	ug/L	1	(<2)	05/22/14 20:55
Xylenes (total)	0.750	U	1.50	0.500	ug/L	1	(<10000)	05/22/14 20:55
Surrogates								
1,2-Dichloroethane-D4	98.6		70-130		%	1		05/22/14 20:55
4-Bromofluorobenzene	96.5		70-130		%	1		05/22/14 20:55
Toluene-d8	99		70-130		%	1		05/22/14 20:55

Batch Information

Analytical Batch: VMS14147
Analytical Method: EPA 524.2
Analyst: KCT
Analytical Date/Time: 05/22/14 20:55
Container ID: 1141977021-A

Prep Batch: VXX25880
Prep Method: SW5030B
Prep Date/Time: 05/22/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/30/2014 9:24:17AM

Results of **17636-MW10**

Client Sample ID: **17636-MW10**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977022
Lab Project ID: 1141977

Collection Date: 05/14/14 10:50
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.300	U	0.600	0.180	mg/L	1		05/23/14 13:40
Surrogates								
5a Androstane	83.8		50-150		%	1		05/23/14 13:40

Batch Information

Analytical Batch: XFC11323
Analytical Method: AK102
Analyst: HM
Analytical Date/Time: 05/23/14 13:40
Container ID: 1141977022-G

Prep Batch: XXX31061
Prep Method: SW3520C
Prep Date/Time: 05/22/14 09:50
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

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Results of **17636-MW10**

Client Sample ID: **17636-MW10**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977022
Lab Project ID: 1141977

Collection Date: 05/14/14 10:50
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0387	J	0.100	0.0310	mg/L	1		05/23/14 16:19
Surrogates								
4-Bromofluorobenzene	103		50-150		%	1		05/23/14 16:19

Batch Information

Analytical Batch: VFC11893
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 05/23/14 16:19
Container ID: 1141977022-D

Prep Batch: VXX25882
Prep Method: SW5030B
Prep Date/Time: 05/23/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-MW10**

Client Sample ID: **17636-MW10**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977022
Lab Project ID: 1141977

Collection Date: 05/14/14 10:50
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:00
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:00
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:00
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:00
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
1,3-Dichloropropane	0.200	U	0.400	0.120	ug/L	1		05/21/14 17:00
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:00
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:00
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:00
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:00
Benzene	0.200	U	0.400	0.120	ug/L	1		05/21/14 17:00
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:00
Bromoform	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
Bromomethane	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:00
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:00
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:00
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00

Results of **17636-MW10**

Client Sample ID: **17636-MW10**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977022
Lab Project ID: 1141977

Collection Date: 05/14/14 10:50
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		05/21/14 17:00
Chloromethane	0.440	J	1.00	0.310	ug/L	1		05/21/14 17:00
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:00
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:00
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
Dichlorodifluoromethane	0.400	J	1.00	0.310	ug/L	1		05/21/14 17:00
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:00
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		05/21/14 17:00
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
Naphthalene	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:00
o-Xylene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		05/21/14 17:00
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
Styrene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
Toluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:00
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		05/21/14 17:00
Surrogates								
1,2-Dichloroethane-D4	108		70-120		%	1		05/21/14 17:00
4-Bromofluorobenzene	108		75-120		%	1		05/21/14 17:00
Toluene-d8	105		85-120		%	1		05/21/14 17:00

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Results of **17636-MW10**

Client Sample ID: **17636-MW10**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977022
Lab Project ID: 1141977

Collection Date: 05/14/14 10:50
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS14145
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 05/21/14 17:00
Container ID: 1141977022-A

Prep Batch: VXX25875
Prep Method: SW5030B
Prep Date/Time: 05/21/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-MW11**

Client Sample ID: **17636-MW11**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977023
Lab Project ID: 1141977

Collection Date: 05/14/14 10:59
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.310	U	0.619	0.186	mg/L	1		05/23/14 14:00
Surrogates								
5a Androstane	87.6		50-150		%	1		05/23/14 14:00

Batch Information

Analytical Batch: XFC11323
Analytical Method: AK102
Analyst: HM
Analytical Date/Time: 05/23/14 14:00
Container ID: 1141977023-G

Prep Batch: XXX31061
Prep Method: SW3520C
Prep Date/Time: 05/22/14 09:50
Prep Initial Wt./Vol.: 970 mL
Prep Extract Vol: 1 mL

Print Date: 05/30/2014 9:24:17AM

Results of **17636-MW11**

Client Sample ID: **17636-MW11**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977023
Lab Project ID: 1141977

Collection Date: 05/14/14 10:59
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0342	J	0.100	0.0310	mg/L	1		05/23/14 16:00
Surrogates								
4-Bromofluorobenzene	102		50-150		%	1		05/23/14 16:00

Batch Information

Analytical Batch: VFC11893
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 05/23/14 16:00
Container ID: 1141977023-D

Prep Batch: VXX25882
Prep Method: SW5030B
Prep Date/Time: 05/23/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-MW11**

Client Sample ID: **17636-MW11**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977023
Lab Project ID: 1141977

Collection Date: 05/14/14 10:59
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:16
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:16
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:16
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:16
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
1,3-Dichloropropane	0.200	U	0.400	0.120	ug/L	1		05/21/14 17:16
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:16
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:16
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:16
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:16
Benzene	0.200	U	0.400	0.120	ug/L	1		05/21/14 17:16
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:16
Bromoform	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
Bromomethane	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:16
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:16
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:16
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16

Results of **17636-MW11**

Client Sample ID: **17636-MW11**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977023
Lab Project ID: 1141977

Collection Date: 05/14/14 10:59
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		05/21/14 17:16
Chloromethane	0.380	J	1.00	0.310	ug/L	1		05/21/14 17:16
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:16
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:16
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
Dichlorodifluoromethane	0.510	J	1.00	0.310	ug/L	1		05/21/14 17:16
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:16
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		05/21/14 17:16
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
Naphthalene	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:16
o-Xylene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		05/21/14 17:16
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
Styrene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
Toluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:16
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		05/21/14 17:16
Surrogates								
1,2-Dichloroethane-D4	104		70-120		%	1		05/21/14 17:16
4-Bromofluorobenzene	105		75-120		%	1		05/21/14 17:16
Toluene-d8	101		85-120		%	1		05/21/14 17:16

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Results of **17636-MW11**

Client Sample ID: **17636-MW11**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977023
Lab Project ID: 1141977

Collection Date: 05/14/14 10:59
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS14145
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 05/21/14 17:16
Container ID: 1141977023-A

Prep Batch: VXX25875
Prep Method: SW5030B
Prep Date/Time: 05/21/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-MW9**

Client Sample ID: **17636-MW9**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977024
Lab Project ID: 1141977

Collection Date: 05/14/14 12:05
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.306	U	0.612	0.184	mg/L	1		05/23/14 14:20
Surrogates								
5a Androstane	87.3		50-150		%	1		05/23/14 14:20

Batch Information

Analytical Batch: XFC11323
Analytical Method: AK102
Analyst: HM
Analytical Date/Time: 05/23/14 14:20
Container ID: 1141977024-G

Prep Batch: XXX31061
Prep Method: SW3520C
Prep Date/Time: 05/22/14 09:50
Prep Initial Wt./Vol.: 980 mL
Prep Extract Vol: 1 mL

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Results of **17636-MW9**

Client Sample ID: **17636-MW9**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977024
Lab Project ID: 1141977

Collection Date: 05/14/14 12:05
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		05/23/14 16:38
Surrogates								
4-Bromofluorobenzene	104		50-150		%	1		05/23/14 16:38

Batch Information

Analytical Batch: VFC11893
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 05/23/14 16:38
Container ID: 1141977024-D

Prep Batch: VXX25882
Prep Method: SW5030B
Prep Date/Time: 05/23/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-MW9**

Client Sample ID: **17636-MW9**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977024
Lab Project ID: 1141977

Collection Date: 05/14/14 12:05
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:33
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:33
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:33
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:33
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
1,3-Dichloropropane	0.200	U	0.400	0.120	ug/L	1		05/21/14 17:33
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:33
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:33
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:33
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:33
Benzene	0.200	U	0.400	0.120	ug/L	1		05/21/14 17:33
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
Bromochloromethane	0.320	J	1.00	0.310	ug/L	1		05/21/14 17:33
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:33
Bromoform	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
Bromomethane	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:33
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:33
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:33
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33

Results of **17636-MW9**

Client Sample ID: **17636-MW9**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977024
Lab Project ID: 1141977

Collection Date: 05/14/14 12:05
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		05/21/14 17:33
Chloromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:33
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:33
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:33
Methylene chloride	112		50.0	10.0	ug/L	10		05/23/14 23:58
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
Naphthalene	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:33
o-Xylene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		05/21/14 17:33
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
Styrene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
Toluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:33
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		05/21/14 17:33
Surrogates								
1,2-Dichloroethane-D4	84.8		70-120		%	1		05/21/14 17:33
4-Bromofluorobenzene	110		75-120		%	1		05/21/14 17:33
Toluene-d8	108		85-120		%	1		05/21/14 17:33

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Results of **17636-MW9**

Client Sample ID: **17636-MW9**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977024
Lab Project ID: 1141977

Collection Date: 05/14/14 12:05
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS14145
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 05/21/14 17:33
Container ID: 1141977024-A

Prep Batch: VXX25875
Prep Method: SW5030B
Prep Date/Time: 05/21/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Analytical Batch: VMS14152
Analytical Method: SW8260B
Analyst: SP
Analytical Date/Time: 05/23/14 23:58
Container ID: 1141977024-B

Prep Batch: VXX25890
Prep Method: SW5030B
Prep Date/Time: 05/23/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-AST-MW1**

Client Sample ID: **17636-AST-MW1**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977026
Lab Project ID: 1141977

Collection Date: 05/14/14 14:26
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.300	U	0.600	0.180	mg/L	1		05/23/14 15:20
Surrogates								
5a Androstane	75.8		50-150		%	1		05/23/14 15:20

Batch Information

Analytical Batch: XFC11323
Analytical Method: AK102
Analyst: HM
Analytical Date/Time: 05/23/14 15:20
Container ID: 1141977026-G

Prep Batch: XXX31061
Prep Method: SW3520C
Prep Date/Time: 05/22/14 09:50
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

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Results of **17636-AST-MW1**

Client Sample ID: **17636-AST-MW1**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977026
Lab Project ID: 1141977

Collection Date: 05/14/14 14:26
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0326	J	0.100	0.0310	mg/L	1		05/23/14 16:58
Surrogates								
4-Bromofluorobenzene	102		50-150		%	1		05/23/14 16:58

Batch Information

Analytical Batch: VFC11893
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 05/23/14 16:58
Container ID: 1141977026-D

Prep Batch: VXX25882
Prep Method: SW5030B
Prep Date/Time: 05/23/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-AST-MW1**

Client Sample ID: **17636-AST-MW1**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977026
Lab Project ID: 1141977

Collection Date: 05/14/14 14:26
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:49
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:49
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:49
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:49
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
1,3-Dichloropropane	0.200	U	0.400	0.120	ug/L	1		05/21/14 17:49
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:49
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:49
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:49
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:49
Benzene	0.200	U	0.400	0.120	ug/L	1		05/21/14 17:49
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:49
Bromoform	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
Bromomethane	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:49
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:49
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:49
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49

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Results of **17636-AST-MW1**

Client Sample ID: **17636-AST-MW1**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977026
Lab Project ID: 1141977

Collection Date: 05/14/14 14:26
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		05/21/14 17:49
Chloromethane	0.390	J	1.00	0.310	ug/L	1		05/21/14 17:49
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:49
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 17:49
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:49
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		05/21/14 17:49
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
Naphthalene	5.00	U	10.0	3.10	ug/L	1		05/21/14 17:49
o-Xylene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		05/21/14 17:49
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
Styrene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
Toluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 17:49
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		05/21/14 17:49
Surrogates								
1,2-Dichloroethane-D4	103		70-120		%	1		05/21/14 17:49
4-Bromofluorobenzene	107		75-120		%	1		05/21/14 17:49
Toluene-d8	106		85-120		%	1		05/21/14 17:49

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Results of **17636-AST-MW1**

Client Sample ID: **17636-AST-MW1**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977026
Lab Project ID: 1141977

Collection Date: 05/14/14 14:26
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS14145
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 05/21/14 17:49
Container ID: 1141977026-A

Prep Batch: VXX25875
Prep Method: SW5030B
Prep Date/Time: 05/21/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-PL-MW11**

Client Sample ID: **17636-PL-MW11**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977027
Lab Project ID: 1141977

Collection Date: 05/14/14 15:17
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	1.35		0.600	0.180	mg/L	1		05/23/14 15:39
Surrogates								
5a Androstane	80.1		50-150		%	1		05/23/14 15:39

Batch Information

Analytical Batch: XFC11323
Analytical Method: AK102
Analyst: HM
Analytical Date/Time: 05/23/14 15:39
Container ID: 1141977027-G

Prep Batch: XXX31061
Prep Method: SW3520C
Prep Date/Time: 05/22/14 09:50
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

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Results of **17636-PL-MW11**

Client Sample ID: **17636-PL-MW11**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977027
Lab Project ID: 1141977

Collection Date: 05/14/14 15:17
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		05/23/14 17:17
Surrogates								
4-Bromofluorobenzene	102		50-150		%	1		05/23/14 17:17

Batch Information

Analytical Batch: VFC11893
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 05/23/14 17:17
Container ID: 1141977027-D

Prep Batch: VXX25882
Prep Method: SW5030B
Prep Date/Time: 05/23/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17636-PL-MW11**

Client Sample ID: **17636-PL-MW11**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977027
Lab Project ID: 1141977

Collection Date: 05/14/14 15:17
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:04
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:04
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		05/22/14 18:04
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:04
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
1,3-Dichloropropane	0.200	U	0.400	0.120	ug/L	1		05/22/14 18:04
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:04
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		05/22/14 18:04
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		05/22/14 18:04
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		05/22/14 18:04
Benzene	0.200	U	0.400	0.120	ug/L	1		05/22/14 18:04
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:04
Bromoform	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
Bromomethane	5.00	U	10.0	3.10	ug/L	1		05/22/14 18:04
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		05/22/14 18:04
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:04
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04

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Results of **17636-PL-MW11**

Client Sample ID: **17636-PL-MW11**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977027
Lab Project ID: 1141977

Collection Date: 05/14/14 15:17
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		05/22/14 18:04
Chloromethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:04
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 18:04
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		05/22/14 18:04
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		05/22/14 18:04
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
Naphthalene	5.00	U	10.0	3.10	ug/L	1		05/22/14 18:04
o-Xylene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		05/22/14 18:04
sec-Butylbenzene	0.390	J	1.00	0.310	ug/L	1		05/22/14 18:04
Styrene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
Toluene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		05/22/14 18:04
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		05/22/14 18:04
Surrogates								
1,2-Dichloroethane-D4	106		70-120		%	1		05/22/14 18:04
4-Bromofluorobenzene	98.4		75-120		%	1		05/22/14 18:04
Toluene-d8	97.8		85-120		%	1		05/22/14 18:04

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Results of **17636-PL-MW11**

Client Sample ID: **17636-PL-MW11**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977027
Lab Project ID: 1141977

Collection Date: 05/14/14 15:17
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS14146
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 05/22/14 18:04
Container ID: 1141977027-A

Prep Batch: VXX25879
Prep Method: SW5030B
Prep Date/Time: 05/22/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **Trip Blank 1**

Client Sample ID: **Trip Blank 1**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977028
Lab Project ID: 1141977

Collection Date: 05/12/14 09:00
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		05/22/14 17:24
Surrogates								
4-Bromofluorobenzene	124		50-150		%	1		05/22/14 17:24

Batch Information

Analytical Batch: VFC11892
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 05/22/14 17:24
Container ID: 1141977028-B

Prep Batch: VXX25881
Prep Method: SW5030B
Prep Date/Time: 05/22/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **Trip Blank 1**

Client Sample ID: **Trip Blank 1**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977028
Lab Project ID: 1141977

Collection Date: 05/12/14 09:00
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 14:32
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 14:32
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		05/21/14 14:32
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 14:32
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
1,3-Dichloropropane	0.200	U	0.400	0.120	ug/L	1		05/21/14 14:32
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 14:32
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 14:32
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		05/21/14 14:32
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		05/21/14 14:32
Benzene	0.200	U	0.400	0.120	ug/L	1		05/21/14 14:32
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 14:32
Bromoform	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
Bromomethane	5.00	U	10.0	3.10	ug/L	1		05/21/14 14:32
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		05/21/14 14:32
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/21/14 14:32
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32

Results of **Trip Blank 1**

Client Sample ID: **Trip Blank 1**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977028
Lab Project ID: 1141977

Collection Date: 05/12/14 09:00
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		05/21/14 14:32
Chloromethane	0.340	J	1.00	0.310	ug/L	1		05/21/14 14:32
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/21/14 14:32
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/21/14 14:32
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		05/21/14 14:32
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		05/21/14 14:32
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
Naphthalene	5.00	U	10.0	3.10	ug/L	1		05/21/14 14:32
o-Xylene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		05/21/14 14:32
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
Styrene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
Toluene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		05/21/14 14:32
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		05/21/14 14:32
Surrogates								
1,2-Dichloroethane-D4	105		70-120		%	1		05/21/14 14:32
4-Bromofluorobenzene	109		75-120		%	1		05/21/14 14:32
Toluene-d8	106		85-120		%	1		05/21/14 14:32

Results of **Trip Blank 1**

Client Sample ID: **Trip Blank 1**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977028
Lab Project ID: 1141977

Collection Date: 05/12/14 09:00
Received Date: 05/19/14 10:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS14145
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 05/21/14 14:32
Container ID: 1141977028-A

Prep Batch: VXX25875
Prep Method: SW5030B
Prep Date/Time: 05/21/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **Trip Blank 2**

Client Sample ID: **Trip Blank 2**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977029
Lab Project ID: 1141977

Collection Date: 05/12/14 10:00
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
1,1,1-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<200)	05/22/14 16:41
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
1,1,2-Trichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 16:41
1,1-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
1,1-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<7)	05/22/14 16:41
1,1-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
1,2,3-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
1,2,3-Trichloropropane	0.250	U	0.500	0.180	ug/L	1		05/22/14 16:41
1,2,4-Trichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 16:41
1,2,4-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
1,2-Dibromo-3-chloropropane	1.00	U	2.00	0.620	ug/L	1		05/22/14 16:41
1,2-Dibromoethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
1,2-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<600)	05/22/14 16:41
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 16:41
1,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 16:41
1,3,5-Trimethylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
1,3-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<75)	05/22/14 16:41
2,2-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
2-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
4-Chlorotoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
4-Isopropyltoluene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
Benzene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 16:41
Bromobenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
Bromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
Bromoform	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
Bromomethane	1.00	U	2.00	0.620	ug/L	1		05/22/14 16:41
Carbon tetrachloride	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 16:41
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 16:41
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/22/14 16:41
Chloroform	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
Chloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
cis-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<70)	05/22/14 16:41
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41

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Results of **Trip Blank 2**

Client Sample ID: **Trip Blank 2**
Client Project ID: **17636-001 Aniak GW**
Lab Sample ID: 1141977029
Lab Project ID: 1141977

Collection Date: 05/12/14 10:00
Received Date: 05/19/14 10:07
Matrix: Drinking Water
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
Dibromomethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
Dichlorodifluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
Ethylbenzene	0.250	U	0.500	0.150	ug/L	1	(<700)	05/22/14 16:41
Hexachlorobutadiene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
Isopropylbenzene (Cumene)	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
Methyl-t-butyl ether	0.500	U	1.00	0.500	ug/L	1		05/22/14 16:41
Methylene chloride	0.720		0.500	0.150	ug/L	1	(<5)	05/22/14 16:41
n-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
n-Propylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
Naphthalene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
o-Xylene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
P & M -Xylene	0.500	U	1.00	0.310	ug/L	1		05/22/14 16:41
sec-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
Styrene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 16:41
tert-Butylbenzene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
Tetrachloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 16:41
Toluene	0.250	U	0.500	0.150	ug/L	1	(<1000)	05/22/14 16:41
Total Trihalomethanes	1.00	U	2.00	0.600	ug/L	1	(<80)	05/22/14 16:41
trans-1,2-Dichloroethene	0.250	U	0.500	0.150	ug/L	1	(<100)	05/22/14 16:41
trans-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
Trichloroethene	0.250	U	0.500	0.150	ug/L	1	(<5)	05/22/14 16:41
Trichlorofluoromethane	0.250	U	0.500	0.150	ug/L	1		05/22/14 16:41
Vinyl chloride	0.200	U	0.400	0.120	ug/L	1	(<2)	05/22/14 16:41
Xylenes (total)	0.750	U	1.50	0.500	ug/L	1	(<10000)	05/22/14 16:41
Surrogates								
1,2-Dichloroethane-D4	95.4		70-130		%	1		05/22/14 16:41
4-Bromofluorobenzene	97.5		70-130		%	1		05/22/14 16:41
Toluene-d8	96.1		70-130		%	1		05/22/14 16:41

Batch Information

Analytical Batch: VMS14147
Analytical Method: EPA 524.2
Analyst: KCT
Analytical Date/Time: 05/22/14 16:41
Container ID: 1141977029-A

Prep Batch: VXX25880
Prep Method: SW5030B
Prep Date/Time: 05/22/14 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/30/2014 9:24:17AM

Method Blank

Blank ID: MB for HBN 1544761 [VXX/25875]
Blank Lab ID: 1210888

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1141977014, 1141977015, 1141977016, 1141977017, 1141977018, 1141977019, 1141977022, 1141977023, 1141977024, 1141977026, 1141977028

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,1-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1,2,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,2-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethene	0.500U	1.00	0.310	ug/L
1,1-Dichloropropene	0.500U	1.00	0.310	ug/L
1,2,3-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,3-Trichloropropane	0.500U	1.00	0.310	ug/L
1,2,4-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,4-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,2-Dibromo-3-chloropropane	5.00U	10.0	3.10	ug/L
1,2-Dibromoethane	0.500U	1.00	0.310	ug/L
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,2-Dichloroethane	0.250U	0.500	0.150	ug/L
1,2-Dichloropropane	0.500U	1.00	0.310	ug/L
1,3,5-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,3-Dichloropropane	0.200U	0.400	0.120	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L
2,2-Dichloropropane	0.500U	1.00	0.310	ug/L
2-Butanone (MEK)	5.00U	10.0	3.10	ug/L
2-Chlorotoluene	0.500U	1.00	0.310	ug/L
2-Hexanone	5.00U	10.0	3.10	ug/L
4-Chlorotoluene	0.500U	1.00	0.310	ug/L
4-Isopropyltoluene	0.500U	1.00	0.310	ug/L
4-Methyl-2-pentanone (MIBK)	5.00U	10.0	3.10	ug/L
Benzene	0.200U	0.400	0.120	ug/L
Bromobenzene	0.500U	1.00	0.310	ug/L
Bromochloromethane	0.500U	1.00	0.310	ug/L
Bromodichloromethane	0.250U	0.500	0.150	ug/L
Bromoform	0.500U	1.00	0.310	ug/L
Bromomethane	5.00U	10.0	3.10	ug/L
Carbon disulfide	5.00U	10.0	3.10	ug/L
Carbon tetrachloride	0.500U	1.00	0.310	ug/L
Chlorobenzene	0.250U	0.500	0.150	ug/L
Chloroethane	0.500U	1.00	0.310	ug/L
Chloroform	0.500U	1.00	0.300	ug/L

Method Blank

Blank ID: MB for HBN 1544761 [VXX/25875]
Blank Lab ID: 1210888

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1141977014, 1141977015, 1141977016, 1141977017, 1141977018, 1141977019, 1141977022, 1141977023, 1141977024, 1141977026, 1141977028

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
Chloromethane	0.500U	1.00	0.310	ug/L
cis-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	ug/L
Dibromochloromethane	0.250U	0.500	0.150	ug/L
Dibromomethane	0.500U	1.00	0.310	ug/L
Dichlorodifluoromethane	0.500U	1.00	0.310	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
Hexachlorobutadiene	0.500U	1.00	0.310	ug/L
Isopropylbenzene (Cumene)	0.500U	1.00	0.310	ug/L
Methylene chloride	2.50U	5.00	1.00	ug/L
Methyl-t-butyl ether	5.00U	10.0	3.10	ug/L
Naphthalene	5.00U	10.0	3.10	ug/L
n-Butylbenzene	0.500U	1.00	0.310	ug/L
n-Propylbenzene	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
sec-Butylbenzene	0.500U	1.00	0.310	ug/L
Styrene	0.500U	1.00	0.310	ug/L
tert-Butylbenzene	0.500U	1.00	0.310	ug/L
Tetrachloroethene	0.500U	1.00	0.310	ug/L
Toluene	0.500U	1.00	0.310	ug/L
trans-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
trans-1,3-Dichloropropene	0.500U	1.00	0.310	ug/L
Trichloroethene	0.500U	1.00	0.310	ug/L
Trichlorofluoromethane	0.500U	1.00	0.310	ug/L
Vinyl chloride	0.500U	1.00	0.310	ug/L
Xylenes (total)	1.50U	3.00	1.00	ug/L
Surrogates				
1,2-Dichloroethane-D4	101	70-120		%
4-Bromofluorobenzene	109	75-120		%
Toluene-d8	105	85-120		%

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Method Blank

Blank ID: MB for HBN 1544761 [VXX/25875]
Blank Lab ID: 1210888

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1141977014, 1141977015, 1141977016, 1141977017, 1141977018, 1141977019, 1141977022, 1141977023, 1141977024, 1141977026, 1141977028

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units

Batch Information

Analytical Batch: VMS14145
Analytical Method: SW8260B
Instrument: VPA 780/5975 GC/MS
Analyst: NRB
Analytical Date/Time: 5/21/2014 11:39:00AM

Prep Batch: VXX25875
Prep Method: SW5030B
Prep Date/Time: 5/21/2014 12:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1141977 [VXX25875]
Blank Spike Lab ID: 1210889
Date Analyzed: 05/21/2014 12:05

Spike Duplicate ID: LCSD for HBN 1141977 [VXX25875]
Spike Duplicate Lab ID: 1210890
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1141977014, 1141977015, 1141977016, 1141977017, 1141977018, 1141977019, 1141977022, 1141977023, 1141977024, 1141977026, 1141977028

Results by **SW8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	30	31.0	103	30	31.0	103	(80-130)	0.10	(< 20)
1,1,1-Trichloroethane	30	31.8	106	30	32.5	108	(65-130)	2.30	(< 20)
1,1,2,2-Tetrachloroethane	30	33.0	110	30	35.2	117	(65-130)	6.50	(< 20)
1,1,2-Trichloroethane	30	28.7	96	30	29.5	98	(75-125)	2.70	(< 20)
1,1-Dichloroethane	30	32.2	107	30	32.2	107	(70-135)	0.19	(< 20)
1,1-Dichloroethene	30	32.4	108	30	32.3	108	(70-130)	0.28	(< 20)
1,1-Dichloropropene	30	30.5	102	30	31.6	105	(75-130)	3.70	(< 20)
1,2,3-Trichlorobenzene	30	32.2	107	30	31.9	106	(55-140)	0.81	(< 20)
1,2,3-Trichloropropane	30	32.1	107	30	34.9	116	(75-125)	8.40	(< 20)
1,2,4-Trichlorobenzene	30	32.1	107	30	31.8	106	(65-135)	1.10	(< 20)
1,2,4-Trimethylbenzene	30	33.4	111	30	33.3	111	(75-130)	0.09	(< 20)
1,2-Dibromo-3-chloropropane	30	28.5	95	30	29.0	97	(50-130)	1.90	(< 20)
1,2-Dibromoethane	30	30.3	101	30	31.0	103	(80-120)	2.50	(< 20)
1,2-Dichlorobenzene	30	35.4	118	30	35.6	119	(70-120)	0.48	(< 20)
1,2-Dichloroethane	30	33.1	110	30	34.8	116	(70-130)	5.00	(< 20)
1,2-Dichloropropane	30	33.3	111	30	34.4	115	(75-125)	3.20	(< 20)
1,3,5-Trimethylbenzene	30	32.9	110	30	32.8	109	(75-130)	0.21	(< 20)
1,3-Dichlorobenzene	30	35.9	120	30	35.9	120	(75-125)	0.11	(< 20)
1,3-Dichloropropane	30	30.8	103	30	31.5	105	(75-125)	2.30	(< 20)
1,4-Dichlorobenzene	30	31.8	106	30	32.0	107	(75-125)	0.72	(< 20)
2,2-Dichloropropane	30	33.5	112	30	33.8	113	(70-135)	0.92	(< 20)
2-Butanone (MEK)	90	86.2	96	90	109	121	(30-150)	23.10	* (< 20)
2-Chlorotoluene	30	35.8	119	30	35.4	118	(75-125)	1.10	(< 20)
2-Hexanone	90	83.2	92	90	99.1	110	(55-130)	17.50	(< 20)
4-Chlorotoluene	30	32.2	107	30	32.2	107	(75-130)	0.00	(< 20)
4-Isopropyltoluene	30	32.4	108	30	32.1	107	(75-130)	1.10	(< 20)
4-Methyl-2-pentanone (MIBK)	90	81.5	91	90	95.4	106	(60-135)	15.60	(< 20)
Benzene	30	34.4	115	30	34.8	116	(80-120)	1.20	(< 20)
Bromobenzene	30	35.2	117	30	35.8	119	(75-125)	1.60	(< 20)
Bromochloromethane	30	31.9	106	30	30.8	103	(65-130)	3.50	(< 20)
Bromodichloromethane	30	30.9	103	30	32.5	108	(75-120)	5.00	(< 20)
Bromoform	30	30.9	103	30	31.3	104	(70-130)	1.40	(< 20)
Bromomethane	30	32.0	107	30	32.3	108	(30-145)	0.99	(< 20)
Carbon disulfide	45	49.4	110	45	48.0	107	(35-160)	2.90	(< 20)

Blank Spike Summary

Blank Spike ID: LCS for HBN 1141977 [VXX25875]
Blank Spike Lab ID: 1210889
Date Analyzed: 05/21/2014 12:05

Spike Duplicate ID: LCSD for HBN 1141977 [VXX25875]
Spike Duplicate Lab ID: 1210890
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1141977014, 1141977015, 1141977016, 1141977017, 1141977018, 1141977019, 1141977022, 1141977023, 1141977024, 1141977026, 1141977028

Results by **SW8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Carbon tetrachloride	30	31.5	105	30	32.4	108	(65-140)	2.90	(< 20)
Chlorobenzene	30	34.2	114	30	34.6	115	(80-120)	1.10	(< 20)
Chloroethane	30	32.5	108	30	29.9	100	(60-135)	8.10	(< 20)
Chloroform	30	32.8	109	30	33.1	110	(65-135)	0.94	(< 20)
Chloromethane	30	31.2	104	30	31.7	106	(40-125)	1.50	(< 20)
cis-1,2-Dichloroethene	30	32.0	107	30	32.8	109	(70-125)	2.50	(< 20)
cis-1,3-Dichloropropene	30	31.4	105	30	32.7	109	(70-130)	4.00	(< 20)
Dibromochloromethane	30	31.7	106	30	32.3	108	(60-135)	1.90	(< 20)
Dibromomethane	30	30.5	102	30	32.7	109	(75-125)	7.20	(< 20)
Dichlorodifluoromethane	30	31.8	106	30	31.1	104	(30-155)	2.10	(< 20)
Ethylbenzene	30	34.8	116	30	35.0	117	(75-125)	0.60	(< 20)
Hexachlorobutadiene	30	33.6	112	30	33.2	111	(50-140)	1.20	(< 20)
Isopropylbenzene (Cumene)	30	31.9	106	30	32.0	107	(75-125)	0.34	(< 20)
Methyl-t-butyl ether	45	44.2	98	45	48.2	107	(65-125)	8.70	(< 20)
Methylene chloride	30	30.6	102	30	30.3	101	(55-140)	0.85	(< 20)
n-Butylbenzene	30	32.8	109	30	32.2	107	(70-135)	1.90	(< 20)
n-Propylbenzene	30	32.3	108	30	31.9	106	(70-130)	1.20	(< 20)
Naphthalene	30	30.9	103	30	32.4	108	(55-140)	4.70	(< 20)
o-Xylene	30	32.2	107	30	32.7	109	(80-120)	1.40	(< 20)
P & M -Xylene	60	64.3	107	60	64.2	107	(75-130)	0.16	(< 20)
sec-Butylbenzene	30	32.7	109	30	32.2	107	(70-125)	1.50	(< 20)
Styrene	30	32.0	107	30	32.2	107	(65-135)	0.72	(< 20)
tert-Butylbenzene	30	33.0	110	30	33.0	110	(70-130)	0.09	(< 20)
Tetrachloroethene	30	32.6	109	30	32.6	109	(45-150)	0.09	(< 20)
Toluene	30	33.2	111	30	33.1	110	(75-120)	0.45	(< 20)
trans-1,2-Dichloroethene	30	33.1	110	30	33.6	112	(60-140)	1.70	(< 20)
trans-1,3-Dichloropropene	30	31.5	105	30	31.0	103	(55-140)	1.50	(< 20)
Trichloroethene	30	33.5	112	30	34.3	114	(70-125)	2.30	(< 20)
Trichlorofluoromethane	30	31.5	105	30	31.1	104	(60-145)	1.30	(< 20)
Vinyl chloride	30	32.4	108	30	32.1	107	(50-145)	0.87	(< 20)
Xylenes (total)	90	96.5	107	90	96.9	108	(80-120)	0.38	(< 20)
Surrogates									
1,2-Dichloroethane-D4	30		98	30		102	(70-120)	4.00	

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1141977 [VXX25875]
Blank Spike Lab ID: 1210889
Date Analyzed: 05/21/2014 12:05

Spike Duplicate ID: LCSD for HBN 1141977 [VXX25875]
Spike Duplicate Lab ID: 1210890
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1141977014, 1141977015, 1141977016, 1141977017, 1141977018, 1141977019, 1141977022, 1141977023, 1141977024, 1141977026, 1141977028

Results by **SW8260B**

	Blank Spike (%)			Spike Duplicate (%)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
4-Bromofluorobenzene	30		110	30		109	(75-120)	0.30	
Toluene-d8	30		103	30		104	(85-120)	0.19	

Batch Information

Analytical Batch: **VMS14145**
Analytical Method: **SW8260B**
Instrument: **VPA 780/5975 GC/MS**
Analyst: **NRB**

Prep Batch: **VXX25875**
Prep Method: **SW5030B**
Prep Date/Time: **05/21/2014 00:00**
Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

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Method Blank

Blank ID: MB for HBN 1545966 [VXX/25879]
Blank Lab ID: 1211048

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1141977027

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,1-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1,2,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,2-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethene	0.500U	1.00	0.310	ug/L
1,1-Dichloropropene	0.500U	1.00	0.310	ug/L
1,2,3-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,3-Trichloropropane	0.500U	1.00	0.310	ug/L
1,2,4-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,4-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,2-Dibromo-3-chloropropane	5.00U	10.0	3.10	ug/L
1,2-Dibromoethane	0.500U	1.00	0.310	ug/L
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,2-Dichloroethane	0.250U	0.500	0.150	ug/L
1,2-Dichloropropane	0.500U	1.00	0.310	ug/L
1,3,5-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,3-Dichloropropane	0.200U	0.400	0.120	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L
2,2-Dichloropropane	0.500U	1.00	0.310	ug/L
2-Butanone (MEK)	5.00U	10.0	3.10	ug/L
2-Chlorotoluene	0.500U	1.00	0.310	ug/L
2-Hexanone	5.00U	10.0	3.10	ug/L
4-Chlorotoluene	0.500U	1.00	0.310	ug/L
4-Isopropyltoluene	0.500U	1.00	0.310	ug/L
4-Methyl-2-pentanone (MIBK)	5.00U	10.0	3.10	ug/L
Benzene	0.200U	0.400	0.120	ug/L
Bromobenzene	0.500U	1.00	0.310	ug/L
Bromochloromethane	0.500U	1.00	0.310	ug/L
Bromodichloromethane	0.250U	0.500	0.150	ug/L
Bromoform	0.500U	1.00	0.310	ug/L
Bromomethane	5.00U	10.0	3.10	ug/L
Carbon disulfide	5.00U	10.0	3.10	ug/L
Carbon tetrachloride	0.500U	1.00	0.310	ug/L
Chlorobenzene	0.250U	0.500	0.150	ug/L
Chloroethane	0.500U	1.00	0.310	ug/L
Chloroform	0.500U	1.00	0.300	ug/L

Method Blank

Blank ID: MB for HBN 1545966 [VXX/25879]
Blank Lab ID: 1211048

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1141977027

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
Chloromethane	0.500U	1.00	0.310	ug/L
cis-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	ug/L
Dibromochloromethane	0.250U	0.500	0.150	ug/L
Dibromomethane	0.500U	1.00	0.310	ug/L
Dichlorodifluoromethane	0.500U	1.00	0.310	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
Hexachlorobutadiene	0.500U	1.00	0.310	ug/L
Isopropylbenzene (Cumene)	0.500U	1.00	0.310	ug/L
Methylene chloride	2.50U	5.00	1.00	ug/L
Methyl-t-butyl ether	5.00U	10.0	3.10	ug/L
Naphthalene	5.00U	10.0	3.10	ug/L
n-Butylbenzene	0.500U	1.00	0.310	ug/L
n-Propylbenzene	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
sec-Butylbenzene	0.500U	1.00	0.310	ug/L
Styrene	0.500U	1.00	0.310	ug/L
tert-Butylbenzene	0.500U	1.00	0.310	ug/L
Tetrachloroethene	0.500U	1.00	0.310	ug/L
Toluene	0.500U	1.00	0.310	ug/L
trans-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
trans-1,3-Dichloropropene	0.500U	1.00	0.310	ug/L
Trichloroethene	0.500U	1.00	0.310	ug/L
Trichlorofluoromethane	0.500U	1.00	0.310	ug/L
Vinyl chloride	0.500U	1.00	0.310	ug/L
Xylenes (total)	1.50U	3.00	1.00	ug/L
Surrogates				
1,2-Dichloroethane-D4	101	70-120		%
4-Bromofluorobenzene	99.3	75-120		%
Toluene-d8	95.5	85-120		%

Method Blank

Blank ID: MB for HBN 1545966 [VXX/25879]
Blank Lab ID: 1211048

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1141977027

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units

Batch Information

Analytical Batch: VMS14146
Analytical Method: SW8260B
Instrument: HP 5890 Series II MS3 VNA
Analyst: NRB
Analytical Date/Time: 5/22/2014 2:00:00PM

Prep Batch: VXX25879
Prep Method: SW5030B
Prep Date/Time: 5/22/2014 12:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Leaching Blank

Blank ID: LB for HBN 1542163 [TCLP/7328]
Blank Lab ID: 1210638

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1141977027

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
1,1-Dichloroethene	25.0U	50.0	15.5	ug/L
1,2-Dichloroethane	12.5U	25.0	7.50	ug/L
1,4-Dichlorobenzene	12.5U	25.0	7.50	ug/L
2-Butanone (MEK)	250U	500	155	ug/L
Benzene	10.0U	20.0	6.00	ug/L
Carbon tetrachloride	25.0U	50.0	15.5	ug/L
Chlorobenzene	12.5U	25.0	7.50	ug/L
Chloroform	25.0U	50.0	15.0	ug/L
Hexachlorobutadiene	25.0U	50.0	15.5	ug/L
Tetrachloroethene	25.0U	50.0	15.5	ug/L
Trichloroethene	25.0U	50.0	15.5	ug/L
Vinyl chloride	25.0U	50.0	15.5	ug/L
Surrogates				
1,2-Dichloroethane-D4	103	70-120		%
4-Bromofluorobenzene	101	75-120		%
Toluene-d8	97.7	85-120		%

Batch Information

Analytical Batch: VMS14146
Analytical Method: SW8260B
Instrument: HP 5890 Series II MS3 VNA
Analyst: NRB
Analytical Date/Time: 5/22/2014 4:05:00PM

Prep Batch: VXX25879
Prep Method: SW5030B
Prep Date/Time: 5/22/2014 12:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1141977 [VXX25879]
Blank Spike Lab ID: 1211049
Date Analyzed: 05/22/2014 14:40

Spike Duplicate ID: LCSD for HBN 1141977 [VXX25879]
Spike Duplicate Lab ID: 1211050
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1141977027

Results by **SW8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	30	29.3	98	30	29.7	99	(80-130)	1.40	(< 20)
1,1,1-Trichloroethane	30	27.5	92	30	30.0	100	(65-130)	8.60	(< 20)
1,1,2,2-Tetrachloroethane	30	27.9	93	30	31.4	105	(65-130)	11.70	(< 20)
1,1,2-Trichloroethane	30	31.6	105	30	31.6	105	(75-125)	0.10	(< 20)
1,1-Dichloroethane	30	30.0	100	30	32.1	107	(70-135)	6.60	(< 20)
1,1-Dichloroethene	30	29.0	97	30	30.4	101	(70-130)	4.80	(< 20)
1,1-Dichloropropene	30	30.2	101	30	33.1	110	(75-130)	9.20	(< 20)
1,2,3-Trichlorobenzene	30	27.0	90	30	31.6	105	(55-140)	16.00	(< 20)
1,2,3-Trichloropropane	30	26.5	88	30	29.3	98	(75-125)	10.10	(< 20)
1,2,4-Trichlorobenzene	30	27.8	93	30	32.2	107	(65-135)	14.60	(< 20)
1,2,4-Trimethylbenzene	30	27.8	93	30	30.7	102	(75-130)	9.80	(< 20)
1,2-Dibromo-3-chloropropane	30	27.1	90	30	31.5	105	(50-130)	15.00	(< 20)
1,2-Dibromoethane	30	30.5	102	30	32.5	108	(80-120)	6.20	(< 20)
1,2-Dichlorobenzene	30	28.3	94	30	30.8	103	(70-120)	8.60	(< 20)
1,2-Dichloroethane	30	30.8	103	30	31.7	106	(70-130)	3.10	(< 20)
1,2-Dichloropropane	30	32.0	107	30	33.0	110	(75-125)	3.10	(< 20)
1,3,5-Trimethylbenzene	30	27.9	93	30	30.3	101	(75-130)	8.20	(< 20)
1,3-Dichlorobenzene	30	28.1	94	30	31.2	104	(75-125)	10.40	(< 20)
1,3-Dichloropropane	30	31.3	104	30	31.9	106	(75-125)	1.80	(< 20)
1,4-Dichlorobenzene	30	29.2	97	30	32.6	109	(75-125)	11.30	(< 20)
2,2-Dichloropropane	30	31.0	103	30	34.3	114	(70-135)	10.10	(< 20)
2-Butanone (MEK)	90	80.6	90	90	91.4	102	(30-150)	12.60	(< 20)
2-Chlorotoluene	30	28.6	95	30	32.1	107	(75-125)	11.60	(< 20)
2-Hexanone	90	79.4	88	90	88.8	99	(55-130)	11.10	(< 20)
4-Chlorotoluene	30	29.8	100	30	33.5	112	(75-130)	11.40	(< 20)
4-Isopropyltoluene	30	27.9	93	30	30.9	103	(75-130)	10.40	(< 20)
4-Methyl-2-pentanone (MIBK)	90	84.2	94	90	92.8	103	(60-135)	9.70	(< 20)
Benzene	30	31.2	104	30	33.0	110	(80-120)	5.70	(< 20)
Bromobenzene	30	28.5	95	30	31.9	106	(75-125)	11.30	(< 20)
Bromochloromethane	30	31.4	105	30	32.0	107	(65-130)	1.80	(< 20)
Bromodichloromethane	30	29.7	99	30	30.1	100	(75-120)	1.20	(< 20)
Bromoform	30	29.5	98	30	29.7	99	(70-130)	0.51	(< 20)
Bromomethane	30	34.4	115	30	34.6	115	(30-145)	0.61	(< 20)
Carbon disulfide	45	43.3	96	45	49.8	111	(35-160)	13.80	(< 20)

Blank Spike Summary

Blank Spike ID: LCS for HBN 1141977 [VXX25879]
Blank Spike Lab ID: 1211049
Date Analyzed: 05/22/2014 14:40

Spike Duplicate ID: LCSD for HBN 1141977 [VXX25879]
Spike Duplicate Lab ID: 1211050
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1141977027

Results by **SW8260B**

	Blank Spike (ug/L)				Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)		Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Carbon tetrachloride	30	29.1	97		30	31.0	103	(65-140)	6.30	(< 20)
Chlorobenzene	30	29.6	99		30	32.0	107	(80-120)	7.70	(< 20)
Chloroethane	30	43.2	144	*	30	30.3	101	(60-135)	35.00	* (< 20)
Chloroform	30	31.0	103		30	31.7	106	(65-135)	2.20	(< 20)
Chloromethane	30	30.5	102		30	31.9	106	(40-125)	4.30	(< 20)
cis-1,2-Dichloroethene	30	31.5	105		30	33.7	112	(70-125)	6.70	(< 20)
cis-1,3-Dichloropropene	30	30.8	103		30	32.0	107	(70-130)	3.80	(< 20)
Dibromochloromethane	30	29.0	97		30	30.1	100	(60-135)	3.90	(< 20)
Dibromomethane	30	31.7	106		30	32.2	107	(75-125)	1.70	(< 20)
Dichlorodifluoromethane	30	29.1	97		30	32.4	108	(30-155)	10.90	(< 20)
Ethylbenzene	30	27.6	92		30	29.9	100	(75-125)	8.00	(< 20)
Hexachlorobutadiene	30	27.5	92		30	31.2	104	(50-140)	12.40	(< 20)
Isopropylbenzene (Cumene)	30	28.7	96		30	29.3	98	(75-125)	2.30	(< 20)
Methyl-t-butyl ether	45	45.7	102		45	49.4	110	(65-125)	7.70	(< 20)
Methylene chloride	30	29.5	98		30	30.9	103	(55-140)	4.80	(< 20)
n-Butylbenzene	30	29.4	98		30	32.1	107	(70-135)	8.70	(< 20)
n-Propylbenzene	30	29.8	99		30	33.5	112	(70-130)	11.70	(< 20)
Naphthalene	30	27.5	92		30	32.4	108	(55-140)	16.50	(< 20)
o-Xylene	30	28.3	94		30	29.8	99	(80-120)	5.40	(< 20)
P & M -Xylene	60	55.6	93		60	59.7	99	(75-130)	7.00	(< 20)
sec-Butylbenzene	30	30.5	102		30	33.9	113	(70-125)	10.40	(< 20)
Styrene	30	29.2	97		30	30.2	101	(65-135)	3.30	(< 20)
tert-Butylbenzene	30	31.4	105		30	33.9	113	(70-130)	7.70	(< 20)
Tetrachloroethene	30	29.7	99		30	32.0	107	(45-150)	7.30	(< 20)
Toluene	30	28.4	95		30	30.8	103	(75-120)	8.00	(< 20)
trans-1,2-Dichloroethene	30	29.3	98		30	30.7	102	(60-140)	4.50	(< 20)
trans-1,3-Dichloropropene	30	29.2	97		30	29.8	100	(55-140)	2.30	(< 20)
Trichloroethene	30	33.1	110		30	34.4	115	(70-125)	3.80	(< 20)
Trichlorofluoromethane	30	36.9	123		30	34.7	116	(60-145)	6.10	(< 20)
Vinyl chloride	30	30.0	100		30	32.8	109	(50-145)	8.90	(< 20)
Xylenes (total)	90	83.9	93		90	89.5	99	(80-120)	6.50	(< 20)
Surrogates										
1,2-Dichloroethane-D4	30		100		30		96	(70-120)	3.50	

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1141977 [VXX25879]
Blank Spike Lab ID: 1211049
Date Analyzed: 05/22/2014 14:40

Spike Duplicate ID: LCSD for HBN 1141977 [VXX25879]
Spike Duplicate Lab ID: 1211050
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1141977027

Results by **SW8260B**

	Blank Spike (%)			Spike Duplicate (%)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
4-Bromofluorobenzene	30		91	30		99	(75-120)	8.20	
Toluene-d8	30		96	30		100	(85-120)	3.60	

Batch Information

Analytical Batch: **VMS14146**
Analytical Method: **SW8260B**
Instrument: **HP 5890 Series II MS3 VNA**
Analyst: **NRB**

Prep Batch: **VXX25879**
Prep Method: **SW5030B**
Prep Date/Time: **05/22/2014 00:00**
Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

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Method Blank

Blank ID: MB for HBN 1546161 [VXX/25880]
Blank Lab ID: 1211082

Matrix: Drinking Water

QC for Samples:
1141977001, 1141977002, 1141977003, 1141977004, 1141977005, 1141977006, 1141977007, 1141977008, 1141977009, 1141977010, 1141977011, 1141977012, 1141977013, 1141977020, 1141977021, 1141977029

Results by **EPA 524.2**

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,1-Trichloroethane	0.250U	0.500	0.150	ug/L
1,1,2,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,2-Trichloroethane	0.250U	0.500	0.150	ug/L
1,1-Dichloroethane	0.250U	0.500	0.150	ug/L
1,1-Dichloroethene	0.250U	0.500	0.150	ug/L
1,1-Dichloropropene	0.250U	0.500	0.150	ug/L
1,2,3-Trichlorobenzene	0.250U	0.500	0.150	ug/L
1,2,3-Trichloropropane	0.250U	0.500	0.180	ug/L
1,2,4-Trichlorobenzene	0.250U	0.500	0.150	ug/L
1,2,4-Trimethylbenzene	0.250U	0.500	0.150	ug/L
1,2-Dibromo-3-chloropropane	1.00U	2.00	0.620	ug/L
1,2-Dibromoethane	0.250U	0.500	0.150	ug/L
1,2-Dichlorobenzene	0.250U	0.500	0.150	ug/L
1,2-Dichloroethane	0.250U	0.500	0.150	ug/L
1,2-Dichloropropane	0.250U	0.500	0.150	ug/L
1,3,5-Trimethylbenzene	0.250U	0.500	0.150	ug/L
1,3-Dichlorobenzene	0.250U	0.500	0.150	ug/L
1,3-Dichloropropane	0.250U	0.500	0.150	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L
2,2-Dichloropropane	0.250U	0.500	0.150	ug/L
2-Chlorotoluene	0.250U	0.500	0.150	ug/L
4-Chlorotoluene	0.250U	0.500	0.150	ug/L
4-Isopropyltoluene	0.250U	0.500	0.150	ug/L
Benzene	0.250U	0.500	0.150	ug/L
Bromobenzene	0.250U	0.500	0.150	ug/L
Bromochloromethane	0.250U	0.500	0.150	ug/L
Bromodichloromethane	0.250U	0.500	0.150	ug/L
Bromoform	0.250U	0.500	0.150	ug/L
Bromomethane	1.00U	2.00	0.620	ug/L
Carbon tetrachloride	0.250U	0.500	0.150	ug/L
Chlorobenzene	0.250U	0.500	0.150	ug/L
Chloroethane	0.500U	1.00	0.310	ug/L
Chloroform	0.250U	0.500	0.150	ug/L
Chloromethane	0.250U	0.500	0.150	ug/L
cis-1,2-Dichloroethene	0.250U	0.500	0.150	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	ug/L
Dibromochloromethane	0.250U	0.500	0.150	ug/L

Method Blank

Blank ID: MB for HBN 1546161 [VXX/25880]
Blank Lab ID: 1211082

Matrix: Drinking Water

QC for Samples:
1141977001, 1141977002, 1141977003, 1141977004, 1141977005, 1141977006, 1141977007, 1141977008, 1141977009, 1141977010, 1141977011, 1141977012, 1141977013, 1141977020, 1141977021, 1141977029

Results by **EPA 524.2**

Parameter	Results	LOQ/CL	DL	Units
Dibromomethane	0.250U	0.500	0.150	ug/L
Dichlorodifluoromethane	0.250U	0.500	0.150	ug/L
Ethylbenzene	0.250U	0.500	0.150	ug/L
Hexachlorobutadiene	0.250U	0.500	0.150	ug/L
Isopropylbenzene (Cumene)	0.250U	0.500	0.150	ug/L
Methylene chloride	0.250U	0.500	0.150	ug/L
Methyl-t-butyl ether	0.500U	1.00	0.500	ug/L
Naphthalene	0.250U	0.500	0.150	ug/L
n-Butylbenzene	0.250U	0.500	0.150	ug/L
n-Propylbenzene	0.250U	0.500	0.150	ug/L
o-Xylene	0.250U	0.500	0.150	ug/L
P & M -Xylene	0.500U	1.00	0.310	ug/L
sec-Butylbenzene	0.250U	0.500	0.150	ug/L
Styrene	0.250U	0.500	0.150	ug/L
tert-Butylbenzene	0.250U	0.500	0.150	ug/L
Tetrachloroethene	0.250U	0.500	0.150	ug/L
Toluene	0.250U	0.500	0.150	ug/L
trans-1,2-Dichloroethene	0.250U	0.500	0.150	ug/L
trans-1,3-Dichloropropene	0.250U	0.500	0.150	ug/L
Trichloroethene	0.250U	0.500	0.150	ug/L
Trichlorofluoromethane	0.250U	0.500	0.150	ug/L
Vinyl chloride	0.200U	0.400	0.120	ug/L
Surrogates				
1,2-Dichloroethane-D4	99.6	70-130		%
4-Bromofluorobenzene	99.2	70-130		%
Toluene-d8	99.2	70-130		%

Batch Information

Analytical Batch: VMS14147
Analytical Method: EPA 524.2
Instrument: VPA 780/5975 GC/MS
Analyst: KCT
Analytical Date/Time: 5/22/2014 2:01:00PM

Prep Batch: VXX25880
Prep Method: SW5030B
Prep Date/Time: 5/22/2014 12:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1141977 [VXX25880]
Blank Spike Lab ID: 1211083
Date Analyzed: 05/22/2014 14:43

Spike Duplicate ID: LCSD for HBN 1141977 [VXX25880]
Spike Duplicate Lab ID: 1211084
Matrix: Drinking Water

QC for Samples: 1141977001, 1141977002, 1141977003, 1141977004, 1141977005, 1141977006, 1141977007, 1141977008, 1141977009, 1141977010, 1141977011, 1141977012, 1141977013, 1141977020, 1141977021, 1141977029

Results by **EPA 524.2**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	30	29.0	97	30	35.2	117	(70-130)	19.50	(< 30)
1,1,1-Trichloroethane	30	31.1	104	30	32.3	108	(70-130)	3.80	(< 30)
1,1,2,2-Tetrachloroethane	30	31.7	106	30	36.2	121	(70-130)	13.20	(< 30)
1,1,2-Trichloroethane	30	26.7	89	30	30.5	102	(70-130)	13.10	(< 30)
1,1-Dichloroethane	30	32.1	107	30	31.4	105	(70-130)	2.00	(< 30)
1,1-Dichloroethene	30	31.8	106	30	31.5	105	(70-130)	0.95	(< 30)
1,1-Dichloropropene	30	28.3	94	30	32.1	107	(70-130)	12.90	(< 30)
1,2,3-Trichlorobenzene	30	31.2	104	30	32.4	108	(70-130)	4.00	(< 30)
1,2,3-Trichloropropane	30	31.8	106	30	36.4	121	(70-130)	13.50	(< 30)
1,2,4-Trichlorobenzene	30	30.5	102	30	32.0	107	(70-130)	5.00	(< 30)
1,2,4-Trimethylbenzene	30	31.7	106	30	33.4	111	(70-130)	5.10	(< 30)
1,2-Dibromo-3-chloropropane	30	24.9	83	30	33.8	113	(70-130)	30.10 *	(< 30)
1,2-Dibromoethane	30	28.3	95	30	30.4	101	(70-130)	7.10	(< 30)
1,2-Dichlorobenzene	30	34.6	115	30	35.8	119	(70-130)	3.20	(< 30)
1,2-Dichloroethane	30	33.2	111	30	31.9	106	(70-130)	3.80	(< 30)
1,2-Dichloropropane	30	32.5	108	30	35.7	119	(70-130)	9.20	(< 30)
1,3,5-Trimethylbenzene	30	31.6	105	30	33.0	110	(70-130)	4.40	(< 30)
1,3-Dichlorobenzene	30	34.5	115	30	36.2	121	(70-130)	4.70	(< 30)
1,3-Dichloropropane	30	28.7	96	30	30.8	103	(70-130)	7.30	(< 30)
1,4-Dichlorobenzene	30	30.7	102	30	37.0	123	(70-130)	18.50	(< 30)
2,2-Dichloropropane	30	32.5	108	30	33.1	110	(70-130)	1.80	(< 30)
2-Chlorotoluene	30	33.7	112	30	36.8	123	(70-130)	8.80	(< 30)
4-Chlorotoluene	30	30.4	101	30	32.6	109	(70-130)	6.90	(< 30)
4-Isopropyltoluene	30	31.4	105	30	33.3	111	(70-130)	5.70	(< 30)
Benzene	30	32.5	108	30	34.1	114	(70-130)	4.70	(< 30)
Bromobenzene	30	34.6	115	30	35.7	119	(70-130)	3.20	(< 30)
Bromochloromethane	30	34.1	114	30	30.4	101	(70-130)	11.50	(< 30)
Bromodichloromethane	30	31.1	104	30	32.1	107	(70-130)	3.30	(< 30)
Bromoform	30	29.1	97	30	32.0	107	(70-130)	9.40	(< 30)
Bromomethane	30	30.2	101	30	29.4	98	(70-130)	2.60	(< 30)
Carbon tetrachloride	30	31.7	106	30	32.7	109	(70-130)	3.10	(< 30)
Chlorobenzene	30	33.1	110	30	34.4	115	(70-130)	3.80	(< 30)
Chloroethane	30	32.3	108	30	27.2	91	(70-130)	17.30	(< 30)
Chloroform	30	32.8	109	30	32.5	108	(70-130)	0.86	(< 30)

Blank Spike Summary

Blank Spike ID: LCS for HBN 1141977 [VXX25880]
Blank Spike Lab ID: 1211083
Date Analyzed: 05/22/2014 14:43

Spike Duplicate ID: LCSD for HBN 1141977 [VXX25880]
Spike Duplicate Lab ID: 1211084
Matrix: Drinking Water

QC for Samples: 1141977001, 1141977002, 1141977003, 1141977004, 1141977005, 1141977006, 1141977007, 1141977008, 1141977009, 1141977010, 1141977011, 1141977012, 1141977013, 1141977020, 1141977021, 1141977029

Results by **EPA 524.2**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Chloromethane	30	30.8	103	30	30.7	102	(70-130)	0.07	(< 30)
cis-1,2-Dichloroethene	30	31.8	106	30	32.0	107	(70-130)	0.82	(< 30)
cis-1,3-Dichloropropene	30	30.8	103	30	32.5	108	(70-130)	5.30	(< 30)
Dibromochloromethane	30	30.0	100	30	32.0	107	(70-130)	6.70	(< 30)
Dibromomethane	30	31.1	104	30	32.2	107	(70-130)	3.30	(< 30)
Dichlorodifluoromethane	30	29.8	99	30	29.0	97	(70-130)	2.80	(< 30)
Ethylbenzene	30	33.9	113	30	36.4	121	(70-130)	6.90	(< 30)
Hexachlorobutadiene	30	31.8	106	30	35.9	120	(70-130)	12.10	(< 30)
Isopropylbenzene (Cumene)	30	30.4	101	30	32.2	107	(70-130)	5.70	(< 30)
Methyl-t-butyl ether	45	44.4	99	45	54.1	120	(70-130)	19.80	(< 30)
Methylene chloride	30	31.5	105	30	30.1	100	(70-130)	4.70	(< 30)
n-Butylbenzene	30	31.2	104	30	32.3	108	(70-130)	3.40	(< 30)
n-Propylbenzene	30	30.3	101	30	32.2	107	(70-130)	6.10	(< 30)
Naphthalene	30	29.5	98	30	33.4	111	(70-130)	12.20	(< 30)
o-Xylene	30	31.2	104	30	32.2	107	(70-130)	3.20	(< 30)
P & M -Xylene	60	60.9	101	60	63.9	107	(70-130)	4.90	(< 30)
sec-Butylbenzene	30	31.0	103	30	32.7	109	(70-130)	5.20	(< 30)
Styrene	30	31.2	104	30	32.5	108	(70-130)	4.10	(< 30)
tert-Butylbenzene	30	31.7	106	30	33.4	111	(70-130)	5.20	(< 30)
Tetrachloroethene	30	29.9	100	30	34.1	114	(70-130)	13.30	(< 30)
Toluene	30	31.1	104	30	33.1	110	(70-130)	6.30	(< 30)
trans-1,2-Dichloroethene	30	32.0	107	30	32.5	108	(70-130)	1.60	(< 30)
trans-1,3-Dichloropropene	30	29.4	98	30	31.8	106	(70-130)	7.80	(< 30)
Trichloroethene	30	32.1	107	30	31.1	104	(70-130)	3.30	(< 30)
Trichlorofluoromethane	30	31.2	104	30	30.1	100	(70-130)	3.80	(< 30)
Vinyl chloride	30	31.6	105	30	31.1	104	(70-130)	1.40	(< 30)
Surrogates									
1,2-Dichloroethane-D4	30		92	30		94	(70-130)	1.90	
4-Bromofluorobenzene	30		100	30		102	(70-130)	2.50	
Toluene-d8	30		93	30		99	(70-130)	5.40	

Blank Spike Summary

Blank Spike ID: LCS for HBN 1141977 [VXX25880]
Blank Spike Lab ID: 1211083
Date Analyzed: 05/22/2014 14:43

Spike Duplicate ID: LCSD for HBN 1141977 [VXX25880]
Spike Duplicate Lab ID: 1211084
Matrix: Drinking Water

QC for Samples: 1141977001, 1141977002, 1141977003, 1141977004, 1141977005, 1141977006, 1141977007, 1141977008, 1141977009, 1141977010, 1141977011, 1141977012, 1141977013, 1141977020, 1141977021, 1141977029

Results by **EPA 524.2**

	Blank Spike (%)			Spike Duplicate (%)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL

Batch Information

Analytical Batch: **VMS14147**
Analytical Method: **EPA 524.2**
Instrument: **VPA 780/5975 GC/MS**
Analyst: **KCT**

Prep Batch: **VXX25880**
Prep Method: **SW5030B**
Prep Date/Time: **05/22/2014 00:00**
Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

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Method Blank

Blank ID: MB for HBN 1546662 [VXX/25881]
Blank Lab ID: 1211136

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1141977014, 1141977015, 1141977016, 1141977017, 1141977018, 1141977019, 1141977028

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L
Surrogates				
4-Bromofluorobenzene	98.6	50-150		%

Batch Information

Analytical Batch: VFC11892
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 5/22/2014 9:03:00AM

Prep Batch: VXX25881
Prep Method: SW5030B
Prep Date/Time: 5/22/2014 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1141977 [VXX25881]
Blank Spike Lab ID: 1211139
Date Analyzed: 05/22/2014 10:01

Spike Duplicate ID: LCSD for HBN 1141977 [VXX25881]
Spike Duplicate Lab ID: 1211140
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1141977014, 1141977015, 1141977016, 1141977017, 1141977018, 1141977019, 1141977028

Results by **AK101**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics	1.00	1.01	101	1.00	1.03	103	(60-120)	1.20	(< 20)
Surrogates									
4-Bromofluorobenzene	0.0500		104	0.0500		102	(50-150)	2.60	

Batch Information

Analytical Batch: **VFC11892**
Analytical Method: **AK101**
Instrument: **Agilent 7890A PID/FID**
Analyst: **ST**

Prep Batch: **VXX25881**
Prep Method: **SW5030B**
Prep Date/Time: **05/22/2014 08:00**
Spike Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL

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Method Blank

Blank ID: MB for HBN 1547061 [VXX/25882]
Blank Lab ID: 1211169

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1141977022, 1141977023, 1141977024, 1141977026, 1141977027

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Gasoline Range Organics	0.0478J	0.100	0.0310	mg/L
Surrogates				
4-Bromofluorobenzene	89.2	50-150		%

Batch Information

Analytical Batch: VFC11893
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 5/23/2014 3:02:00PM

Prep Batch: VXX25882
Prep Method: SW5030B
Prep Date/Time: 5/23/2014 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1141977 [VXX25882]
Blank Spike Lab ID: 1211170
Date Analyzed: 05/23/2014 15:40

Spike Duplicate ID: LCSD for HBN 1141977 [VXX25882]
Spike Duplicate Lab ID: 1211171
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1141977022, 1141977023, 1141977024, 1141977026, 1141977027

Results by **AK101**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics	1.00	1.02	102	1.00	1.05	105	(60-120)	2.80	(< 20)
Surrogates									
4-Bromofluorobenzene	0.0500		108	0.0500		102	(50-150)	5.50	

Batch Information

Analytical Batch: **VFC11893**
Analytical Method: **AK101**
Instrument: **Agilent 7890A PID/FID**
Analyst: **ST**

Prep Batch: **VXX25882**
Prep Method: **SW5030B**
Prep Date/Time: **05/23/2014 08:00**
Spike Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL

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Method Blank

Blank ID: MB for HBN 1551161 [VXX/25890]
Blank Lab ID: 1211396

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1141977024

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
Methylene chloride	2.50U	5.00	1.00	ug/L
Surrogates				
1,2-Dichloroethane-D4	90.7	70-120		%
4-Bromofluorobenzene	99.8	75-120		%
Toluene-d8	100	85-120		%

Batch Information

Analytical Batch: VMS14152
Analytical Method: SW8260B
Instrument: VPA 780/5975 GC/MS
Analyst: SP
Analytical Date/Time: 5/23/2014 3:46:00PM

Prep Batch: VXX25890
Prep Method: SW5030B
Prep Date/Time: 5/23/2014 12:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1141977 [VXX25890]
Blank Spike Lab ID: 1211397
Date Analyzed: 05/23/2014 16:52

Spike Duplicate ID: LCSD for HBN 1141977 [VXX25890]
Spike Duplicate Lab ID: 1211398
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1141977024

Results by **SW8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Methylene chloride	30	26.7	89	30	29.7	99	(55-140)	10.60	(< 20)
Surrogates									
1,2-Dichloroethane-D4	30		89	30		90	(70-120)	1.50	
4-Bromofluorobenzene	30		102	30		102	(75-120)	0.39	
Toluene-d8	30		106	30		101	(85-120)	4.20	

Batch Information

Analytical Batch: **VMS14152**
Analytical Method: **SW8260B**
Instrument: **VPA 780/5975 GC/MS**
Analyst: **SP**

Prep Batch: **VXX25890**
Prep Method: **SW5030B**
Prep Date/Time: **05/23/2014 00:00**
Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

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Method Blank

Blank ID: MB for HBN 1543762 [XXX/31061]
Blank Lab ID: 1210798

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1141977005, 1141977006, 1141977007, 1141977008, 1141977009, 1141977013, 1141977014, 1141977015, 1141977016, 1141977017, 1141977018, 1141977019, 1141977022, 1141977023, 1141977024, 1141977026, 1141977027

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	0.300U	0.600	0.180	mg/L
Surrogates				
5a Androstane	92.7	60-120		%

Batch Information

Analytical Batch: XFC11323
Analytical Method: AK102
Instrument: HP 7890A FID SV E R
Analyst: HM
Analytical Date/Time: 5/23/2014 8:43:00AM

Prep Batch: XXX31061
Prep Method: SW3520C
Prep Date/Time: 5/22/2014 9:50:44AM
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1141977 [XXX31061]
Blank Spike Lab ID: 1210799
Date Analyzed: 05/23/2014 09:03

Spike Duplicate ID: LCSD for HBN 1141977 [XXX31061]
Spike Duplicate Lab ID: 1210800
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1141977005, 1141977006, 1141977007, 1141977008, 1141977009, 1141977013, 1141977014, 1141977015, 1141977016, 1141977017, 1141977018, 1141977019, 1141977022, 1141977023, 1141977024, 1141977026, 1141977027

Results by **AK102**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Diesel Range Organics	5	5.11	102	5	5.13	103	(75-125)	0.29	(< 20)
Surrogates									
5a Androstane	0.1		93	0.1		94	(60-120)	0.80	

Batch Information

Analytical Batch: **XFC11323**
Analytical Method: **AK102**
Instrument: **HP 7890A FID SV E R**
Analyst: **HM**

Prep Batch: **XXX31061**
Prep Method: **SW3520C**
Prep Date/Time: **05/22/2014 09:50**
Spike Init Wt./Vol.: 5 mg/L Extract Vol: 1 mL
Dupe Init Wt./Vol.: 5 mg/L Extract Vol: 1 mL

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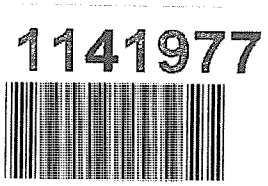

Pennick, Victoria (Anchorage)

From: Dan McMahon [DXM@shanwil.com]
Sent: Friday, May 30, 2014 9:19 AM
To: Pennick, Victoria (Anchorage)
Subject: RE: 1141977 - Aniak GW samples

We will not require the sample which is on hold. Please close out the report. Thank you.

From: Pennick, Victoria (Anchorage) [mailto:Victoria.Pennick@sgs.com]
Sent: Friday, May 30, 2014 9:17 AM
To: Dan McMahon
Subject: 1141977 - Aniak GW samples

Good morning,
For this workorder, MW19 (our #25) was "on hold" at receipt. The rest of the work is done. Was this sample waiting for results, or can we cancel it and close out the report?
Thank you~
Tori

Tori (Victoria) Pennick ~ Project Manager
Environmental Services ~ Alaska Division
SGS – North America Inc.
200 W. Potter Drive, Anchorage, AK 99518
Phone: +00 1 **907 562 2343**
Direct Dial Line: +00 1 **907 550 3208**
Feedback? env.alaska.feedback@sgs.com
Data Deliverables at: https://engage.sgs.com

1141977

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

CHAIN-OF-CUSTODY RECORD

Laboratory SGS
Attn: Tori Pennick

400 N. 34th Street, Suite 100
Seattle, WA 98103
(206) 632-8020

2043 Westport Center Drive
St. Louis, MO 63146-3564
(314) 699-9660

303 Wellsian Way
Richland, WA 99352
(509) 946-6309

2355 Hill Road
Fairbanks, AK 99709
(907) 479-0600

5430 Fairbanks Street, Suite 3
Anchorage, AK 99518
(907) 561-2120

2255 S.W. Canyon Road
Portland, OR 97201-2498
(503) 223-6147

1200 17th Street, Suite 1024
Denver, Co 80202
(303) 825-3800

Analysis Parameters/Sample Container Description
(include preservative if used)

Sample Identity	Lab No.	Time	Date Sampled	Comp.	Grab	VOCs EPA 524.2 HCl	DRO AK 102 HCl					Total Number of Containers	Remarks/Matrix
17636 - DW3	(1) A-C	1415	5/12/14		x	X						3	Drinking Water
DW30	(2) A-C	1430			x	X						3	
DW2	(3) A-C	1436			x	X						3	
DW10	(4) A-C	1500			x	X						3	
DW4	(5) A-E	1525			x	X	X					5	
DW11	(6) A-E	1533			x	X	X					5	
DW40	(7) A-E	1545			x	X	X					5	
DW16	(8) A-E	1608			x	X	X					5	
DW7	(9) A-E KMW 5/14	1620			x	X	X					5	
DW9	(10) A-BC	1640			x	X						3	

Project Information		Sample Receipt	
Project Number:	17636-001	Total Number of Containers	
Project Name:	Anvik GW	COC Seals/Intact? Y/N/NA	
Contact:	DPM	Received Good Cond./Cold	
Ongoing Project?	Yes ☒ No ☐	Delivery Method:	
Sampler:	JCT & EJK	(attach shipping bill, if any)	

Instructions	
Requested Turnaround Time:	Standard
Special Instructions:	Level II deliverables Quote # 11095

Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Signature: Time: 1007	Signature: Time:	Signature: Time:
Printed Name: Jake Tracy Date: 5/17/14	Printed Name: Date:	Printed Name: Date:
Company: Shannon & Wilson	Company:	Company:

Received By: 1.	Received By: 2.	Received By: 3.
Signature: Time:	Signature: Time:	Signature: Time: 1007
Printed Name: Date:	Printed Name: Date:	Printed Name: Kayla Wagenfehr Date: 5/19/14
Company:	Company:	Company: SGS

Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
Yellow - w/shipment - for consignee files
Pink - Shannon & Wilson - Job File

F-19-91/UR

Cooler #1 4.1°/#239 Cooler #2 5.4°/#238 Cooler #3 2.1°/#238 Cooler #4 3.1°/#239

No. 302178

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

CHAIN-OF-CUSTODY RECORD

Laboratory SGS
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(907) 561-2120

2255 S.W. Canyon Road
Portland, OR 97201-2498
(503) 223-6147

1200 17th Street, Suite 1024
Denver, Co 80202
(303) 825-3800

Analysis Parameters/Sample Container Description
(include preservative if used)

Sample Identity	Lab No.	Time	Date Sampled	Comp.	Grab	VOCs EPA 524.2	VOCs EPA 8260B	GRO AK101	DRO AK102			Total Number of Containers	Remarks/Matrix
17636-DW12	(11) A-C	1653	5/12/14		X	X						3	Drinking water
DW6	(12) A-C	1710	↓		X	X						3	↓
DW1	(13) A-E	2008	↓		X	X			X			5	↓
RA-MW8	(14) A-G	1405	5/13/14		X		X	X	X			7	Ground water (only 1 DRO jar)
RA-MW9	(15) A-H	1512	↓		X		X	X	X			8	Ground water
RA-MW90	(16) A-H	1522	↓		X		X	X	X			8	↓
RA-MW6	(17) A-H	1620	↓		X		X	X	X			8	↓
PL-MW10	(18) A-H	1800	↓		X		X	X	X			8	↓
AST-MW7	(19) A-H	1847	↓		X		X	X	X			8	↓
DW17	(20) A-C	1913	↓		X	X						3	Drinking Water

Project Information		Sample Receipt	
Project Number: 17636-001		Total Number of Containers	
Project Name: Amiak GW		COC Seals/Intact? Y/N/NA	
Contact: DPM		Received Good Cond./Cold	
Ongoing Project? Yes ☑ No ☐		Delivery Method:	
Sampler: JCT & EJK		(attach shipping bill, if any)	

Instructions
Requested Turnaround Time: Standard
Special Instructions: Level II deliverables Quote # 11095

Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Signature: Jake Tracy Time: 1008	Signature: Time:	Signature: Time:
Printed Name: Jake Tracy Date: 5/19/14	Printed Name: Date:	Printed Name: Date:
Company: Shannon & Wilson	Company:	Company:

Received By: 1.	Received By: 2.	Received By: 3.
Signature: Time:	Signature: Time:	Signature: Time: 1007
Printed Name: Date:	Printed Name: Date:	Printed Name: Kayla Waggoner Date: 5/19/14
Company:	Company:	Company: SGS

Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
Yellow - w/shipment - for consignee files
Pink - Shannon & Wilson - Job File

F-19-91/UR

No. 30219

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

CHAIN-OF-CUSTODY RECORD

Laboratory SGS
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2255 S.W. Canyon Road
Portland, OR 97201-2498
(503) 223-6147

1200 17th Street, Suite 1024
Denver, Co 80202
(303) 825-3800

Analysis Parameters/Sample Container Description
(include preservative if used)

Sample Identity	Lab No.	Time	Date Sampled	Comp.	Grab	VOCs EPA 524.2	VOCs EPA 8260B	GRO AK 101	DRO AK 102			Total Number of Containers	Remarks/Matrix
17636-DW18	(21) A-C	1949	5/13/14		X	X						3	Drinking Water
MW10	(22) A-H	1050	5/14/14		X		X	X	X			8	Groundwater
MW11	(23) A-H	1059	↓		X		X	X	X			8	↓
MW9	(24) A-H	1205			X		X	X	X			8	
MW19	(25) A-H	1220			X		X	X	X			8	Hold
AST-MW1	(26) A-H	1426			X		X	X	X			8	Groundwater
PL-MW11	(27) A-H	1517	↓		X		X	X	X			8	↓
TB1	(28) A-C	0900	5/12/14				X	X					Trip blank Groundwater
TB2	(29) A-C	1000	↓			X							Trip blank Drinking water

Project Information	Sample Receipt
Project Number: 17636-001	Total Number of Containers
Project Name: Hawk GW	COC Seals/Intact? Y/N/NA
Contact: DPM	Received Good Cond./Cold
Ongoing Project? Yes ☒ No ☐	Delivery Method:
Sampler: JCT & EJK	(attach shipping bill, if any)

Instructions

Requested Turnaround Time: Standard

Special Instructions: Level II deliverables

Quote # 11095

Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Signature: Time: 1008	Signature: Time:	Signature: Time:
Printed Name: Jake Tracy Date: 5/19/14	Printed Name: Date:	Printed Name: Date:
Company: Shannon & Wilson	Company:	Company:

Received By: 1.	Received By: 2.	Received By: 3.
Signature: Time:	Signature: Time:	Signature: Time: 1007
Printed Name: Date:	Printed Name: Date:	Printed Name: Date: 5/19/14
Company:	Company:	Company: SGS

Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
Yellow - w/shipment - for consignee files
Pink - Shannon & Wilson - Job File

F-19-91/UR

No. 30220

SGS

1141977

SAMPLE RECEIPT FORM

Review Criteria:	Condition:	Action Taken:
Were **custody seals** intact? Note # & location, if applicable. COC accompanied samples?	Yes No N/A Yes No N/A	
Temperature blank compliant* (i.e., 0-6°C after CF)? * *Note: Exemption permitted for chilled samples collected less than 8 hours ago.* Cooler ID: 1 @ 4.1 w/ Therm.ID: 239 Cooler ID: 2 @ 5.4 w/ Therm.ID: 238 Cooler ID: 3 @ 2.1 w/ Therm.ID: 238 Cooler ID: 4 @ 3.1 w/ Therm.ID: 239 Cooler ID: ___ @ ___ w/ Therm.ID: ___ *Note: If non-compliant, use form FS-0029 to document affected samples/analyses.* If samples are received without 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 nor cooler temp can be obtained, note "ambient" or "chilled." **If temperature(s) <0°C, were all sample containers ice free?**	Yes No N/A Yes No N/A	
Delivery method (specify all that apply): Client USPS Alert Courier C&D Delivery AK Air Lynden Carlile ERA PenAir FedEx UPS NAC Other: → *For WO# with airbills, was the WO# & airbill info recorded in the Front Counter eLog?*	Note ABN# tracking # See Attached or N/A Yes No N/A	
→ For samples received with payment, note amount ($) and cash / check / CC (**circle one**) or note: N/A → For samples **received in FBKS**, ANCH staff will verify all criteria are reviewed.		SRF Initiated by: KMW N/A
Were samples received within hold time? *Note: Refer to form F-083 "Sample Guide" for hold time information.* Do samples **match COC*** (i.e., sample IDs, dates/times collected)? * *Note: Exemption permitted if times differ <1hr; in that case, use times on COC.* Were analyses requested unambiguous?	Yes No N/A Yes No N/A Yes No N/A	
Were samples in **good condition** (no leaks/cracks/breakage)? Packing material used (specify all that apply): Bubble Wrap Separate plastic bags Vermiculite Other:	Yes No N/A	
Were all VOA vials **free of headspace** (i.e., bubbles ≤6 mm)? Were all soil VOAs **field extracted** with MeOH+BFB?	Yes No N/A Yes No N/A	
Were **proper containers** (type/mass/volume/preservative*) used? * *Note: Exemption permitted for waters to be analyzed for metals.* Were **Trip Blanks** (i.e., VOAs, LL-Hg) in cooler with samples?	Yes No N/A KMW Yes No N/A	Sample - 14 Limited volume for DRO KMW 5/19/14
For **special handling** (e.g., "MI" or foreign soils, lab filter limited volume, Ref Lab), were bottles/paperwork flagged (e.g., sticker)?	Yes No N/A KMW	5/19/14
For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was **pH verified and compliant**? If pH was adjusted, were bottles flagged (i.e., stickers)?	Yes No N/A Yes No N/A	
For **RUSH/SHORT Hold Time**, were COC/Bottles flagged accordingly? Was Rush/Short HT email sent, if applicable?	Yes No N/A	
For **SITE-SPECIFIC QC, e.g. BMS/BMSD/BDUP**, were containers / paperwork flagged accordingly?	Yes No N/A	
For any question answered "No," has the PM been notified and the problem resolved (or paperwork put in their bin)?	Yes No N/A	SRF Completed by: KMW PM = VLP N/A
Was **PEER REVIEW** of ***sample numbering/labeling completed?***	Yes No N/A	Peer Reviewed by: VLP N/A

Additional notes (if applicable):

VOA vials had a lot with bubbles. The ones that had bubbles larger than 6mm are. -3(B,C); -14(C,D,E,F); -15(D,E,F); -17(C,D,E,F); -18(D,E,F); -19(D,E,F); -20(C); -27(F)

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	Container Id	Preservative	Container Condition
1141977001-A	HCL to pH < 2	OK	1141977011-C	HCL to pH < 2	OK
1141977001-B	HCL to pH < 2	OK	1141977012-A	HCL to pH < 2	OK
1141977001-C	HCL to pH < 2	OK	1141977012-B	HCL to pH < 2	OK
1141977002-A	HCL to pH < 2	OK	1141977012-C	HCL to pH < 2	OK
1141977002-B	HCL to pH < 2	OK	1141977013-A	HCL to pH < 2	OK
1141977002-C	HCL to pH < 2	OK	1141977013-B	HCL to pH < 2	OK
1141977003-A	HCL to pH < 2	OK	1141977013-C	HCL to pH < 2	OK
1141977003-B	HCL to pH < 2	BU	1141977013-D	HCL to pH < 2	OK
1141977003-C	HCL to pH < 2	BU	1141977013-E	HCL to pH < 2	OK
1141977004-A	HCL to pH < 2	OK	1141977014-A	HCL to pH < 2	OK
1141977004-B	HCL to pH < 2	OK	1141977014-B	HCL to pH < 2	BU
1141977004-C	HCL to pH < 2	OK	1141977014-C	HCL to pH < 2	BU
1141977005-A	HCL to pH < 2	OK	1141977014-D	HCL to pH < 2	OK
1141977005-B	HCL to pH < 2	OK	1141977014-E	HCL to pH < 2	BU
1141977005-C	HCL to pH < 2	OK	1141977014-F	HCL to pH < 2	BU
1141977005-D	HCL to pH < 2	OK	1141977014-G	HCL to pH < 2	OK
1141977005-E	HCL to pH < 2	OK	1141977015-A	HCL to pH < 2	OK
1141977006-A	HCL to pH < 2	OK	1141977015-B	HCL to pH < 2	OK
1141977006-B	HCL to pH < 2	OK	1141977015-C	HCL to pH < 2	BU
1141977006-C	HCL to pH < 2	OK	1141977015-D	HCL to pH < 2	OK
1141977006-D	HCL to pH < 2	OK	1141977015-E	HCL to pH < 2	BU
1141977006-E	HCL to pH < 2	OK	1141977015-F	HCL to pH < 2	BU
1141977007-A	HCL to pH < 2	OK	1141977015-G	HCL to pH < 2	OK
1141977007-B	HCL to pH < 2	OK	1141977015-H	HCL to pH < 2	OK
1141977007-C	HCL to pH < 2	OK	1141977016-A	HCL to pH < 2	OK
1141977007-D	HCL to pH < 2	OK	1141977016-B	HCL to pH < 2	OK
1141977007-E	HCL to pH < 2	OK	1141977016-C	HCL to pH < 2	OK
1141977008-A	HCL to pH < 2	OK	1141977016-D	HCL to pH < 2	OK
1141977008-B	HCL to pH < 2	OK	1141977016-E	HCL to pH < 2	OK
1141977008-C	HCL to pH < 2	OK	1141977016-F	HCL to pH < 2	OK
1141977008-D	HCL to pH < 2	OK	1141977016-G	HCL to pH < 2	OK
1141977008-E	HCL to pH < 2	OK	1141977016-H	HCL to pH < 2	OK
1141977009-A	HCL to pH < 2	OK	1141977017-A	HCL to pH < 2	OK
1141977009-B	HCL to pH < 2	OK	1141977017-B	HCL to pH < 2	BU
1141977009-C	HCL to pH < 2	OK	1141977017-C	HCL to pH < 2	BU
1141977009-D	HCL to pH < 2	OK	1141977017-D	HCL to pH < 2	OK
1141977009-E	HCL to pH < 2	OK	1141977017-E	HCL to pH < 2	BU
1141977010-A	HCL to pH < 2	OK	1141977017-F	HCL to pH < 2	BU
1141977010-B	HCL to pH < 2	OK	1141977017-G	HCL to pH < 2	OK
1141977010-C	HCL to pH < 2	OK	1141977017-H	HCL to pH < 2	OK
1141977011-A	HCL to pH < 2	OK	1141977018-A	HCL to pH < 2	OK
1141977011-B	HCL to pH < 2	OK	1141977018-B	HCL to pH < 2	OK

Container Id	Preservative	Container Condition
1141977018-C	HCL to pH < 2	BU
1141977018-D	HCL to pH < 2	OK
1141977018-E	HCL to pH < 2	BU
1141977018-F	HCL to pH < 2	BU
1141977018-G	HCL to pH < 2	OK
1141977018-H	HCL to pH < 2	OK
1141977019-A	HCL to pH < 2	OK
1141977019-B	HCL to pH < 2	OK
1141977019-C	HCL to pH < 2	BU
1141977019-D	HCL to pH < 2	OK
1141977019-E	HCL to pH < 2	BU
1141977019-F	HCL to pH < 2	BU
1141977019-G	HCL to pH < 2	OK
1141977019-H	HCL to pH < 2	OK
1141977020-A	HCL to pH < 2	OK
1141977020-B	HCL to pH < 2	OK
1141977020-C	HCL to pH < 2	BU
1141977021-A	HCL to pH < 2	OK
1141977021-B	HCL to pH < 2	OK
1141977021-C	HCL to pH < 2	OK
1141977022-A	HCL to pH < 2	OK
1141977022-B	HCL to pH < 2	OK
1141977022-C	HCL to pH < 2	OK
1141977022-D	HCL to pH < 2	OK
1141977022-E	HCL to pH < 2	OK
1141977022-F	HCL to pH < 2	OK
1141977022-G	HCL to pH < 2	OK
1141977022-H	HCL to pH < 2	OK
1141977023-A	HCL to pH < 2	OK
1141977023-B	HCL to pH < 2	OK
1141977023-C	HCL to pH < 2	OK
1141977023-D	HCL to pH < 2	OK
1141977023-E	HCL to pH < 2	OK
1141977023-F	HCL to pH < 2	OK
1141977023-G	HCL to pH < 2	OK
1141977023-H	HCL to pH < 2	OK
1141977024-A	HCL to pH < 2	OK
1141977024-B	HCL to pH < 2	OK
1141977024-C	HCL to pH < 2	OK
1141977024-D	HCL to pH < 2	OK
1141977024-E	HCL to pH < 2	OK
1141977024-F	HCL to pH < 2	OK
1141977024-G	HCL to pH < 2	OK
1141977024-H	HCL to pH < 2	OK
1141977025-A	HCL to pH < 2	OK
1141977025-B	HCL to pH < 2	OK
1141977025-C	HCL to pH < 2	OK
1141977025-D	HCL to pH < 2	OK
1141977025-E	HCL to pH < 2	OK
1141977025-F	HCL to pH < 2	OK
1141977025-G	HCL to pH < 2	OK
1141977025-H	HCL to pH < 2	OK
1141977026-A	HCL to pH < 2	OK
1141977026-B	HCL to pH < 2	OK
1141977026-C	HCL to pH < 2	OK
1141977026-D	HCL to pH < 2	OK
1141977026-E	HCL to pH < 2	OK
1141977026-F	HCL to pH < 2	OK
1141977026-G	HCL to pH < 2	OK
1141977026-H	HCL to pH < 2	OK
1141977027-A	HCL to pH < 2	OK
1141977027-B	HCL to pH < 2	OK
1141977027-C	HCL to pH < 2	OK
1141977027-D	HCL to pH < 2	OK
1141977027-E	HCL to pH < 2	OK
1141977027-F	HCL to pH < 2	BU
1141977027-G	HCL to pH < 2	OK
1141977027-H	HCL to pH < 2	OK
1141977028-A	HCL to pH < 2	OK
1141977028-B	HCL to pH < 2	OK
1141977028-C	HCL to pH < 2	OK
1141977029-A	HCL to pH < 2	OK
1141977029-B	HCL to pH < 2	OK
1141977029-C	HCL to pH < 2	OK

Container Id	Preservative	Container Condition	Container Id	Preservative	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.

LABORATORY DATA REVIEW CHECKLIST

CS Report Name: Groundwater Study Report, ADOT&PF Aniak Airport, Aniak, Alaska

Date: June 2014

Laboratory Report Date: May 30, 2014

Consultant Firm: Shannon & Wilson, Inc.

Completed by: Erika Knight
Title: Environmental Scientist
Laboratory Name: SGS North America Inc.
Work Order Number: 1141977
ADEC File Number: 2404.38.015

(**NOTE**: ***NA*** = not applicable; Text in *italics* added by Shannon & Wilson, Inc.)

1. Laboratory

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

b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS-approved?
Yes / No / NA
Comments: *The samples were not transferred to another "network" laboratory or sub-contracted to an alternate laboratory.*

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?
Yes / No / NA (Please explain.)
Comments**:**

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

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?
Yes / No / NA (Please explain.)
Comments: *Four coolers were submitted within range (2.1 to 5.4° C).*

b. Sample preservation acceptable - acidified waters, Methanol-preserved VOC soil (GRO, BTEX, VOCs, etc.)? **Yes / No / NA (Please explain.)**
Comments:

c. Sample condition documented - broken, leaking (soil MeOH), zero headspace (VOC vials)? **Yes / No / NA (Please explain.)**
Comments: *The sample receipt form notes that:*

- *VOA vials for samples DW2,RA-MW8, RA-MW9, RA-MW6, PL-MW10, AST-MW7, DW17, and PL-MW11 contained headspace >6mm.*
- *Limited volume was available for DRO analysis for sample RA-MW8. Only one 1-liter bottle was submitted.*

d. If there were any discrepancies, were they documented (e.g., incorrect sample containers/preservation, sample temperatures outside range, insufficient sample size, missing samples)? **Yes / No / NA (Please explain.)**
Comments: *No discrepancies were noted on the sample receipt form.*

e. Data quality or usability affected? **(Please Explain.)**
Comments*: VOA vials with <6mm headspace were used for the analyses. The DRO analysis for sample RA-MW8 was completed using the available sample volume. Therefore, data quality/usability is unaffected.*

4. Case Narrative

a. Present and understandable? **Yes / No / NA (Please explain.)**
Comments:

b. Discrepancies, errors or QC failures noted by the lab? **Yes / No / NA (Please explain.)**
Comments: *The case narrative notes that:*

- *CCV recoveries for cloroethane and trichlorofluoromethane for EPA method 8260B did not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.*
- *The LCS recovery for chloroethane did not meet QC criteria (biased high). The analyte was not detected above the LOQ in the associated samples.*
- *The LCS/LCSD RPDs for acetone, MEK, chloroethane, and 1,2-dichloro-3-chloropropane were outside QC criteria. These analytes were not detected above the LOQ in the associated samples.*

c. Were corrective actions documented? **Yes / No / NA (Please explain.)**
Comments: *No corrective actions were necessary.*

d. What is the effect on data quality/usability, according to the case narrative? **NA**
Comments: *The case narrative does not discuss data quality/usability.*

5. Sample Results

a. Correct analyses performed/reported as requested on COC? **Yes / No / NA (Please explain.)**
Comments:

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

c. All soils reported on a dry-weight basis? **Yes / No / NA (Please explain.)**
Comments: *Soil samples were not submitted with this work order.*

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project? **Yes / No / NA (Please explain.)**
Comments*: LOQs for 1,2,3-trichloropropane, 1,2-dibromoethane, and vinyl chloride exceed the ADEC cleanup levels.*

e. Data quality or usability affected? **(Please explain.) NA**
Comments: *It is not possible to determine whether 1,2,3-trichloropropane, 1,2-dibromoethane, or vinyl chloride are present in the project samples at concentrations below the LOQ but above the associated cleanup levels.*

6. QC Samples

a. Method Blank

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

ii. All method blank results less than LOQ? **Yes / No / NA (Please explain.)**
Comments: *However, an estimated concentration of GRO was detected in the method blank associated with samples MW10, MW11, MW9, AST-MW1, and PL-MW11 at a level below the LOQ.*

iii. If above LOQ, what samples are affected? ***NA***
Comments:

iv. Do the affected sample(s) have data flags? **Yes / No / NA**
Comments:

If so, are the data flags clearly defined? **Yes / No / NA**
Comments: *Samples with detected concentrations of GRO within five times the method blank concentration (MW10, MW11, and AST-MW1) are reported as non-detect and flagged "B" in the report tables.*

v. Data quality or usability affected? **(Please explain.)** ***NA***
Comments: *See above.*

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

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

ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples? **Yes / No / NA (Please explain.)**
Comments: *Samples were not tested for metals/inorganics.*

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages) **Yes / No / NA (Please explain.)**
Comments: *The LCS/LCSD %R for chloroethane (EPA 8260B) is outside QC limits (biased high).*

Precision – All relative percent differences (RPDs) 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: *The LCS/LCSD RPD for 1,2-dibromo-3-chloropropane (EPA 524.2) is outside QC limits. The LCS/LCSD RPDs for chloroethane and 2-butanone (EPA 8260B) are outside QC limits.*

iv. If %R or RPD is outside of acceptable limits, what samples are affected? ***NA***
Comments: *Cloroethane, 2-butanone, and 1,2-dibromo-3-chloropropane were not detected in the associated project samples.*

v. Do the affected samples(s) have data flags? **Yes / No / NA**
Comments: *Associated project sample results are non-detect, therefore data flags are not required.*

If so, are the data flags clearly defined? **Yes / No / NA**
Comments:

vi. Data quality or usability affected? Explain. ***NA***
Comments: *Data quality/usability is unaffected.*

c. Surrogates - Organics Only

i. Are surrogate recoveries reported for organic analyses, field, QC, and laboratory samples? **Yes / No / NA (Please explain.)**
Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages) **Yes / No / NA (Please explain.)**
Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? **Yes / No / NA (Please explain.)**
Comments:
If so, are the data flags clearly defined? **Yes / No / NA**
Comments:

iv. Data quality or usability affected? Explain.
Comments: *Data quality/usability is unaffected.*

d. Trip Blank - Volatile analyses only (GRO, BTEX, VOCs, etc.) Water and Soil

i. One trip blank reported per matrix, analysis and cooler? **Yes / No / NA (Please explain.)**
Comments:

ii. Is the cooler used to transport the trip blank and volatile samples clearly indicated on the COC? **Yes / No / NA (Please explain if NA or no.)**
Comments: *Volatile samples and trip blanks were transported in one cooler.*

iii. All results less than LOQ? **Yes / No / NA (Please explain.)**
Comments: *Methylene chloride was detected in Trip Blank 2 (EPA 524.2). In addition, an estimated concentration of chloromethane was detected at a level less than the LOQ in Trip Blank 1 (EPA 8260B).*

iv. If above LOQ, what samples are affected? **NA**
Comments**:** *Methylene chloride was not detected in the drinking water samples associated with Trip Blank 2. Concentrations of chloromethane within five times the concentration of cloromethane detected in the Trip Blank 1 were detected in seven groundwater samples. These samples are flagged "B" in Table 3.*

v. Data quality or usability affected? Explain. **NA**
Comments: *See above.*

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?
Yes / No / NA (Please explain.)
Comments: *Field duplicates submitted with this work order are RA-MW9/RA-MW90, DW3/DW30, and DW4/DW40.*

ii. Were the field duplicates submitted blind to the lab? **Yes / No / NA (Please explain.)**
Comments:

iii. Precision – All relative percent differences (RPDs) less than specified DQOs?
(Recommended: 30% for water, 50% for soil) **Yes / No / NA (Please explain.)**
Comments:

iv. Data quality or usability affected? Explain.
Comments: *Data quality/usability is unaffected.*

f. Decontamination or Equipment Blank (if not applicable, a comment stating why must be entered below)

Yes / No / NA (Please explain.) *An equipment blank was not submitted as part of the project, in accordance with our ADEC-approved work plan.*

i. All results less than LOQ? **Yes / No / NA (Please explain.)**
Comments:

ii. If results are above LOQ, what samples are affected? ***NA***
Comments:

iii. Data quality or usability affected? Explain. ***NA***
Comments:

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

a. Are they defined and appropriate? **Yes / No / NA**
Comments: *Laboratory-specific flags are defined on in the laboratory report.*

APPENDIX D

DISPOSAL RECEIPT FROM

EMERALD ALASKA INC.

*** IN CASE OF EMERGENCY CALL 1-800-424-9300 Contract# 7619 *** AK21994 (RP)

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. C E S Q G

Manifest Document No. 21994 2. Page 1 of 1

3. Generator's Name and Mailing Address
ADEC - ANIAK AIRPORT GROUNDWATER S
555 CORDOVA STREET
ANCHORAGE, AK 99501

Site Address
ADEC - ANIAK AIRPORT GROUNDWATER
555 CORDOVA STREET (G. LIDREN)
ANCHORAGE, AK 99501
JAKE GANO

4. Generator's Phone (907) 561-2120

5. Transporter 1 Company Name ~~ACE AIR CARGO~~ Northern Air Cargo
6. US EPA ID Number A K R 0 0 0 2 0 0 2 9 5
A. State Transporter's ID
B. Transporter 1 Phone (907) 334-5100

7. Transporter 2 Company Name EMERALD SERVICES, INC.
8. US EPA ID Number W A D 0 5 8 3 6 4 6 4 7
C. State Transporter's ID
D. Transporter 2 Phone (206) 832-3000

9. Designated Facility Name and Site Address
EMERALD ALASKA, INC.
2020 VIKING DRIVE
ANCHORAGE, AK 99501
10. US EPA ID Number A K R 0 0 0 0 0 4 1 8 4
E. State Facility's ID
F. Facility's Phone (907) 258-1558

11. WASTE DESCRIPTION	Containers No.	Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. MATERIAL NOT REGULATED BY D.O.T.		DM		P
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above
1) EA0302 IDW DECON WATER

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
I certify that this material is not regulated nor mixed with waste regulated as a Hazardous Waste under 40CFR261 or TSCA regulated waste under 40CFR761. All used oil meets the definition under 40CFR279. Generator agrees to indemnify and hold harmless Emerald Alaska or its subsidiary for any damages, costs, attorneys and expert fees arising from or related to the above certification.

GENERATOR

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name	Signature	Date (Month Day Year)
Erika Knight	Erika J Knight	5 15 2014

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
Rhiannon Kelila Rhiannon Kelila	Rhiannon Kelila	5 15 2014

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
Morgan Kuhnke		5 2014

FACILITY

19. Discrepancy Indication Space
Line 1 Received 10m at 188 Pounds

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name	Signature	Date (Month Day Year)
Patricia L. Beasley	Patricia L. Beasley	05 22 14

NON-HAZARDOUS WASTE

CERTIFICATE OF DISPOSAL/RECYCLE

GENERATOR: ADEC - ANIAK AIRPORT GROUNDWATER STUDY
555 CORDOVA STREET (G. LIDREN)
ANCHORAGE AK 99501

DISPOSAL FACILITY: EMERALD ALASKA, INC.
2020 VIKING DRIVE
ANCHORAGE AK 99501

EPA ID NUMBER: CESQG
MANIFEST/DOCUMENT #: 21994
DATE OF DISPOSAL/RECYCLE: 05/21/2014

LINE	WASTE DESCRIPTION	CONTAINERS	TYPE	QUANTITY	UOM
1	IDW DECON WATER	1	DM	188	P

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above described waste was managed in compliance with all applicable laws, regulations, permits, and licenses on the date listed above.

PREPARED BY: PATRICIA BEASLEY

SIGNATURE: Patricia J. Beasley **DATE:** 5/22/2014

APPENDIX E

CONCEPTUAL SITE MODEL

GRAPHIC AND SCOPING FORMS

HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Site: ADOT&PF Aniak Runway Apron
ADEC File No. 2404.38.006

Completed By: Shannon & WIlson
Date Completed: June 2014

***Instructions*: Follow the numbered directions below. Do not consider contaminant concentrations or engineering/land use controls when describing pathways.**

(1)
Check the media that could be directly affected by the release.

(2)
For each medium identified in (1), follow the top arrow and check possible transport mechanisms. Check additional media under (1) if the media acts as a secondary source.

(3)
Check all exposure media identified in (2).

(4)
*Check all pathways that could be complete. The pathways identified in this column **must** agree with Sections 2 and 3 of the Human Health CSM Scoping Form.*

(5)
Identify the receptors potentially affected by each exposure pathway: Enter "C" for current receptors, "F" for future receptors, "C/F" for both current and future receptors, or "I" for insignificant exposure.

Current & Future Receptors

Media	Transport Mechanisms	Exposure Media	Exposure Pathway/Route	Residents (adults or children)	Commercial or industrial workers	Site visitors, trespassers, or recreational users	Construction workers	Farmers or subsistence harvesters	Subsistence consumers	Other
☑ Surface Soil (0-2 ft bgs)	☑ Direct release to surface soil — check soil	☑ soil	☑ Incidental Soil Ingestion	F	C/F	C/F	F			
	☑ Migration to subsurface — check soil		☑ Dermal Absorption of Contaminants from Soil	F	C/F	C/F	F			
	☑ Migration to groundwater — check groundwater		☑ Inhalation of Fugitive Dust	F	C/F	C/F	F			
	☑ Volatilization — check air									
	☐ Runoff or erosion — check surface water									
	☑ Uptake by plants or animals — check biota									
	☐ Other (list):									
☑ Subsurface Soil (2-15 ft bgs)	☑ Direct release to subsurface soil — check soil	☑ groundwater	☑ Ingestion of Groundwater	F	F	F	F			
	☑ Migration to groundwater — check groundwater		☑ Dermal Absorption of Contaminants in Groundwater	F	F	F	F			
	☑ Volatilization — check air		☑ Inhalation of Volatile Compounds in Tap Water	F	F	F	F			
	☑ Uptake by plants or animals — check biota									
	☐ Other (list):									
☑ Ground-water	☑ Direct release to groundwater — check groundwater	☑ air	☑ Inhalation of Outdoor Air	F	C/F	C/F	F			
	☑ Volatilization — check air		☑ Inhalation of Indoor Air	F	F	F	F			
	☐ Flow to surface water body — check surface water		☑ Inhalation of Fugitive Dust	F	C/F	C/F	F			
	☐ Flow to sediment — check sediment									
	☐ Uptake by plants or animals — check biota									
	☐ Other (list):									
☐ Surface Water	☐ Direct release to surface water — check surface water	☐ surface water	☐ Ingestion of Surface Water							
	☐ Volatilization — check air		☐ Dermal Absorption of Contaminants in Surface Water							
	☐ Sedimentation — check sediment		☐ Inhalation of Volatile Compounds in Tap Water							
	☐ Uptake by plants or animals — check biota									
	☐ Other (list):									
☐ Sediment	☐ Direct release to sediment — check sediment	☐ sediment	☐ Direct Contact with Sediment							
	☐ Resuspension, runoff, or erosion — check surface water									
	☐ Uptake by plants or animals — check biota									
	☐ Other (list):									
		☑ biota	☐ Ingestion of Wild or Farmed Foods							

Revised, 10/01/2010

Print Form

Human Health Conceptual Site Model
Scoping Form

Site Name: ADOT&PF Aniak Runway Apron

File Number: 2404.38.006

Completed by: Shannon & Wilson Inc.

Introduction

The form should be used to reach agreement with the Alaska Department of Environmental Conservation (DEC) about which exposure pathways should be further investigated during site characterization. From this information, summary text about the CSM and a graphic depicting exposure pathways should be submitted with the site characterization work plan and updated as needed in later reports.

General Instructions: Follow the italicized instructions in each section below.

1. General Information:

Sources *(check potential sources at the site)*

- ☐ USTs
- ☒ ASTs
- ☐ Dispensers/fuel loading racks
- ☒ Drums
- ☒ Vehicles
- ☐ Landfills
- ☒ Transformers
- ☒ Other: Dump/disposal area

Release Mechanisms *(check potential release mechanisms at the site)*

- ☒ Spills
- ☒ Leaks
- ☒ Direct discharge
- ☐ Burning
- ☐ Other:

Impacted Media *(check potentially-impacted media at the site)*

- ☒ Surface soil (0-2 feet bgs*)
- ☒ Subsurface soil (>2 feet bgs)
- ☒ Air
- ☐ Sediment
- ☒ Groundwater
- ☐ Surface water
- ☐ Biota
- ☐ Other:

Receptors *(check receptors that could be affected by contamination at the site)*

- ☒ Residents (adult or child)
- ☒ Commercial or industrial worker
- ☒ Construction worker
- ☐ Subsistence harvester (i.e. gathers wild foods)
- ☐ Subsistence consumer (i.e. eats wild foods)
- ☒ Site visitor
- ☒ Trespasser
- ☐ Recreational user
- ☐ Farmer
- ☐ Other:

* bgs - below ground surface

2. Exposure Pathways: *(The answers to the following questions will identify complete exposure pathways at the site. Check each box where the answer to the question is "yes".)*

a) Direct Contact -

1. Incidental Soil Ingestion

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site-specific basis.) ☒

If the box is checked, label this pathway complete: Complete

Comments:

The extent and/or concentration of TCE in soil is not known and therefore cannot be considered insignificant.

2. Dermal Absorption of Contaminants from Soil

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.) ☒

Can the soil contaminants permeate the skin (see Appendix B in the guidance document)? ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

1- and 2-methylnapthalene were detected in the 2011 soil samples, and are listed in Appendix B of the guidance document.

b) Ingestion -

1. Ingestion of Groundwater

Have contaminants been detected or are they expected to be detected in the groundwater, or are contaminants expected to migrate to groundwater in the future? ☒

Could the potentially affected groundwater be used as a current or future drinking water source? Please note, only leave the box unchecked if DEC has determined the ground-water is not a currently or reasonably expected future source of drinking water according to 18 AAC 75.350. ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

An inactive drinking water well is present at the site.

2. Ingestion of Surface Water

Have contaminants been detected or are they expected to be detected in surface water, or are contaminants expected to migrate to surface water in the future? ☒

Could potentially affected surface water bodies be used, currently or in the future, as a drinking water source? Consider both public water systems and private use (i.e., during residential, recreational or subsistence activities). ☐

If both boxes are checked, label this pathway complete: Incomplete

Comments:

No permanent surface water bodies are present at the site.

3. Ingestion of Wild and Farmed Foods

Is the site in an area that is used or reasonably could be used for hunting, fishing, or harvesting of wild or farmed foods? ☐

Do the site contaminants have the potential to bioaccumulate (see Appendix C in the guidance document)? ☒

Are site contaminants located where they would have the potential to be taken up into biota? (i.e. soil within the root zone for plants or burrowing depth for animals, in groundwater that could be connected to surface water, etc.) ☒

If all of the boxes are checked, label this pathway complete: Incomplete

Comments:

The site is not anticipated to be used for hunting, fishing, or harvesting. This site is located within the fenced runway apron, access is restricted to both wild game and hunters.

c) Inhalation-

1. Inhalation of Outdoor Air

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.) ☒

Are the contaminants in soil volatile (see Appendix D in the guidance document)? ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

Known contaminants at the site include DRO, RRO, BTEX, and TCE. The extent and/or concentration of TCE in soil is not known, and cannot be considered insignificant.

2. Inhalation of Indoor Air

Are occupied buildings on the site or reasonably expected to be occupied or placed on the site in an area that could be affected by contaminant vapors? (within 30 horizontal or vertical feet of petroleum contaminated soil or groundwater; within 100 feet of non-petroleum contaminted soil or groundwater; or subject to "preferential pathways," which promote easy airflow like utility conduits or rock fractures) ☐

Are volatile compounds present in soil or groundwater (see Appendix D in the guidance document)? ☒

If both boxes are checked, label this pathway complete: Incomplete

Comments:

No occupied buildings are nearby. However, future land use is uncertain. In the event that a building is placed on this property, this pathway will require further evaluation.

3. **Additional Exposure Pathways:** *(Although there are no definitive questions provided in this section, these exposure pathways should also be considered at each site. Use the guidelines provided below to determine if further evaluation of each pathway is warranted.)*

Dermal Exposure to Contaminants in Groundwater and Surface Water

Dermal exposure to contaminants in groundwater and surface water may be a complete pathway if:

- Climate permits recreational use of waters for swimming.
- Climate permits exposure to groundwater during activities, such as construction.
- Groundwater or surface water is used for household purposes, such as bathing or cleaning.

Generally, DEC groundwater cleanup levels in 18 AAC 75, Table C, are assumed to be protective of this pathway.

Check the box if further evaluation of this pathway is needed: ☒

Comments:

Considered a potentially complete pathway; in the event that the land use at this site changes, further evaluation of this pathway will be required.

Inhalation of Volatile Compounds in Tap Water

Inhalation of volatile compounds in tap water may be a complete pathway if:

- The contaminated water is used for indoor household purposes such as showering, laundering, and dish washing.
- The contaminants of concern are volatile (common volatile contaminants are listed in Appendix D in the guidance document.)

Generally, DEC groundwater cleanup levels in 18 AAC 75, Table C, are assumed to be protective of this pathway.

Check the box if further evaluation of this pathway is needed: ☒

Comments:

The drinking water well at the site is currently not in use. If site use changes or the existing drinking water well is returned to service, evaluation of this pathway may be needed.

Inhalation of Fugitive Dust

Inhalation of fugitive dust may be a complete pathway if:

- Nonvolatile compounds are found in the top 2 centimeters of soil. The top 2 centimeters of soil are likely to be dispersed in the wind as dust particles.
- Dust particles are less than 10 micrometers (Particulate Matter - PM_{10}). Particles of this size are called respirable particles and can reach the pulmonary parts of the lungs when inhaled.
- Chromium is present in soil that can be dispersed as dust particles of any size.

Generally, DEC direct contact soil cleanup levels in Table B1 of 18 AAC 75 are protective of this pathway because it is assumed most dust particles are incidentally ingested instead of inhaled to the lower lungs. The inhalation pathway only needs to be evaluated when very small dust particles are present (e.g., along a dirt roadway or where dusts are a nuisance). This is not true in the case of chromium. Site specific cleanup levels will need to be calculated in the event that inhalation of dust containing chromium is a complete pathway at a site.

Check the box if further evaluation of this pathway is needed: ☐

Comments:

The previously identified contaminants are "volatile" as defined by Appendix D in the guidance document, and therefore do not require evaluation.

Direct Contact with Sediment

This pathway involves people's hands being exposed to sediment, such as during some recreational, subsistence, or industrial activity. People then incidentally ingest sediment from normal hand-to-mouth activities. In addition, dermal absorption of contaminants may be of concern if the the contaminants are able to permeate the skin (see Appendix B in the guidance document). This type of exposure should be investigated if:

- Climate permits recreational activities around sediment.
- The community has identified subsistence or recreational activities that would result in exposure to the sediment, such as clam digging.

Generally, DEC direct contact soil cleanup levels in 18 AAC 75, Table B1, are assumed to be protective of direct contact with sediment.

Check the box if further evaluation of this pathway is needed: ☐

Comments:

4. Other Comments *(Provide other comments as necessary to support the information provided in this form.)*

APPENDIX A

BIOACCUMULATIVE COMPOUNDS OF POTENTIAL CONCERN

Organic compounds are identified as bioaccumulative if they have a BCF equal to or greater than 1,000 or a log K_{ow} greater than 3.5. Inorganic compounds are identified as bioaccumulative if they are listed as such by EPA (2000). Those compounds in Table B-1 of 18 AAC 75.341 that are bioaccumulative, based on the definition above, are listed below.

Aldrin	DDT	Lead
Arsenic	Dibenzo(a,h)anthracene	Mercury
Benzo(a)anthracene	Dieldrin	Methoxychlor
Benzo(a)pyrene	Dioxin	Nickel
Benzo(b)fluoranthene	Endrin	PCBs
Benzo(k)fluoranthene	Fluoranthene	
Cadmium	Heptachlor	Pyrene
Chlordane	Heptachlor epoxide	Selenium
Chrysene	Hexachlorobenzene	Silver
Copper	Hexachlorocyclopentadiene	Toxaphene
DDD	Indeno(1,2,3-c,d)pyrene	Zinc
DDE		

Because BCF values can relatively easily be measured or estimated, the BCF is frequently used to determine the potential for a chemical to bioaccumulate. A compound with a BCF greather than 1,000 is considered to bioaccumulate in tissue (EPA 2004b).

For inorganic compounds, the BCF approach has not been shown to be effective in estimating the compound's ability to bioaccumulate. Information available, either through scientific literature or site-specific data, regarding the bioaccumulative potential of an inorganic site contaminant should be used to determine if the pathway is complete.

The list was developed by including organic compounds that either have a BCF equal to or greater than 1,000 or a log K_{ow} greater than 3.5 and inorganic compounds that are listed by the United States Environmental Protection Agency (EPA) as being bioaccumulative (EPA 2000).

The list was developed by including organic compounds that either have a BCF equal to or greater than 1,000 or a log K_{ow} greater than 3.5 and inorganic compounds that are listed by the United States Environmental Protection Agency (EPA) as being bioaccumulative (EPA 2000). The BCF can also be estimated from a chemical's physical and chemical properties. A chemical's octanol-water partitioning coefficient (K_{ow}) along with defined regression equations can be used to estimate the BCF. EPA's Persistent, Bioaccumulative, and Toxic (PBT) Profiler (EPA 2004) can be used to estimate the BCF using the K_{ow} and linear regressions presented by Meylan et al. (1996). The PBT Profiler is located at http://www.pbtprofiler.net/. For compounds not found in the PBT Profiler, DEC recommends using a log K_{ow} greater than 3.5 to determine if a compound is bioaccumulative.

APPENDIX B

VOLATILE COMPOUNDS OF POTENTIAL CONCERN

A chemical is identified here as sufficiently volatile and toxic for further evaluation if the Henry's Law constant is 1 x 10^{-5} atm-m^3/mol or greater, the molecular weight is less than 200 g/mole (EPA 2004a), and the vapor concentration of the pure component posed an incremental lifetime cancer risk greater than 10^{-6} or a non-cancer hazard quotient of 0.1, or other available scientific data indicates the chemical should be considered a volatile. Chemicals that are solid at typical soil temperatures and do not sublime are generally not considered volatile.

Acetone	Mercury (elemental)
Benzene	Methyl bromide (Bromomethane)
Bis(2-chloroethyl)ether	Methyl chloride (Chloromethane)
Bromodichloromethane	Methyl ethyl ketone (MEK)
Bromoform	Methyl isobutyl ketone (MIBK)
n-Butylbenzene	Methylene bromide
sec-Butylbenzene	Methylene chloride
tert-Buytlbenzene	**1-Methylnaphthalene**
Carbon disulfide	**2-Methylnaphthalene**
Carbon tetrachloride	Methyl *tert*-butyl ether (MTBE)
Chlorobenzene	**Naphthalene**
Chlorodibromomethane (Dibromochloromethane)	Nitrobenzene
Chloroethane	n-Nitrosodimethylamine
Chloroform	**n-Propylbenzene**
2-Chlorophenol	**Styrene**
1,2-Dichlorobenzene	1,1,2,2-Tetrachlorethane
1,3-Dichlorobenzene	Tetrachloroethylene (PCE)
1,4-Dichlorobenzene	**Toluene**

Dichlorodifluoromethane	1,2,4-Trichlorobenzene
1,1-Dichloroethane	1,1,1-Trichloroethane
1,2-Dichloroethane	1,1,2-Trichloroethane
1,1-Dichloroethylene	Trichloroethane
cis-1,2-Dichloroethylene	2,4,6-Trichlorophenol
trans-1,2-Dichloroethylene	1,2,3-Trichloropropane
1,2-Dichloropropane	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)
1,3-Dichloropropane	Trichlorofluoromethane (Freon-11)
Ethylbenzene	**1,2,4-Trimethylbenzene**
Ethylene dibromide (1,2-Dibromoethane)	**1,3,5-Trimethylbenzene**
Hexachlorobenzene	Vinyl acetate
Hexachloro-1,3-butadiene	Vinyl chloride (Chloroethene)
Hexachlorocyclopentadiene	**Xylenes (total)**
Hexachloroethane	GRO (see note 3 below)
Hydrazine	DRO (see note 3 below)
Isopropylbenzene (Cumene)	RRO (see note 3 below)

Notes:

1. Bolded chemicals should be investigated as volatile compounds when petroleum is present. If fuel containing additives (e.g., 1,2-dichloroethane, ethylene dibromide, methyl *tert*-butyl ether) were spilled, these chemicals should also be investigated.
2. If a chemical is not on this list, and not in Tables B of 18 AAC 75.345, the chemical has not been evaluated for volatility. Contact the ADEC risk assessor to determine if the chemical is volatile.
3. At this time, ADEC does not require evaluation of petroleum ranges GRO, DRO, or RRO for the indoor air inhalation (vapor intrusion) pathway.

HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Site: Former MarkAir Facility
ADEC File No. 2404.38.010

Completed By: Shannon & Wilson, Inc.
Date Completed: June 2014

***Instructions*: Follow the numbered directions below. Do not consider contaminant concentrations or engineering/land use controls when describing pathways.**

(1)
Check the media that could be directly affected by the release.

(2)
For each medium identified in (1), follow the top arrow and check possible transport mechanisms. Check additional media under (1) if the media acts as a secondary source.

(3)
Check all exposure media identified in (2).

(4)
*Check all pathways that could be complete. The pathways identified in this column **must** agree with Sections 2 and 3 of the Human Health CSM Scoping Form.*

(5)
Identify the receptors potentially affected by each exposure pathway: Enter "C" for current receptors, "F" for future receptors, "C/F" for both current and future receptors, or "I" for insignificant exposure.

Current & Future Receptors

Media	Transport Mechanisms	Exposure Media	Exposure Pathway/Route	Residents (adults or children)	Commercial or industrial workers	Site visitors, trespassers, or recreational users	Construction workers	Farmers or subsistence harvesters	Subsistence consumers	Other
☑ Surface Soil (0-2 ft bgs)	☑ Direct release to surface soil — check soil	☑ soil	☑ Incidental Soil Ingestion	F	C/F	C/F	F			
	☑ Migration to subsurface — check soil		☑ Dermal Absorption of Contaminants from Soil	F	C/F	C/F	F			
	☑ Migration to groundwater — check groundwater		☐ Inhalation of Fugitive Dust							
	☑ Volatilization — check air									
	☐ Runoff or erosion — check surface water									
	☑ Uptake by plants or animals — check biota									
	☐ Other (list):									
☑ Subsurface Soil (2-15 ft bgs)	☑ Direct release to subsurface soil — check soil	☑ groundwater	☑ Ingestion of Groundwater	F	F	F	F			
	☑ Migration to groundwater — check groundwater		☑ Dermal Absorption of Contaminants in Groundwater	F	F	F	F			
	☑ Volatilization — check air		☑ Inhalation of Volatile Compounds in Tap Water	F	F	F	F			
	☑ Uptake by plants or animals — check biota									
	☐ Other (list):									
☑ Ground-water	☑ Direct release to groundwater — check groundwater	☑ air	☑ Inhalation of Outdoor Air	F	C/F	C/F	F			
	☑ Volatilization — check air		☑ Inhalation of Indoor Air	F	C/F	C/F	F			
	☐ Flow to surface water body — check surface water		☑ Inhalation of Fugitive Dust							
	☐ Flow to sediment — check sediment									
	☐ Uptake by plants or animals — check biota									
	☐ Other (list):									
☐ Surface Water	☐ Direct release to surface water — check surface water	☑ surface water	☐ Ingestion of Surface Water							
	☐ Volatilization — check air		☐ Dermal Absorption of Contaminants in Surface Water							
	☐ Sedimentation — check sediment		☐ Inhalation of Volatile Compounds in Tap Water							
	☐ Uptake by plants or animals — check biota									
	☐ Other (list):									
☐ Sediment	☐ Direct release to sediment — check sediment	☐ sediment	☐ Direct Contact with Sediment							
	☐ Resuspension, runoff, or erosion — check surface water									
	☐ Uptake by plants or animals — check biota									
	☐ Other (list):									
		☑ biota	☐ Ingestion of Wild or Farmed Foods							

Revised, 10/01/2010

Print Form

Human Health Conceptual Site Model Scoping Form

Site Name: Former MarkAir Facility

File Number: 2404.38.010

Completed by: Shannon & Wilson Inc.

Introduction

The form should be used to reach agreement with the Alaska Department of Environmental Conservation (DEC) about which exposure pathways should be further investigated during site characterization. From this information, summary text about the CSM and a graphic depicting exposure pathways should be submitted with the site characterization work plan and updated as needed in later reports.

General Instructions: Follow the italicized instructions in each section below.

1. General Information:

Sources *(check potential sources at the site)*

- ☒ USTs
- ☒ ASTs
- ☒ Dispensers/fuel loading racks
- ☒ Drums
- ☐ Vehicles
- ☐ Landfills
- ☐ Transformers
- ☒ Other: Pipelines

Release Mechanisms *(check potential release mechanisms at the site)*

- ☒ Spills
- ☒ Leaks
- ☒ Direct discharge
- ☐ Burning
- ☐ Other:

Impacted Media *(check potentially-impacted media at the site)*

- ☒ Surface soil (0-2 feet bgs*)
- ☒ Subsurface soil (>2 feet bgs)
- ☒ Air
- ☐ Sediment
- ☒ Groundwater
- ☐ Surface water
- ☒ Biota
- ☐ Other:

Receptors *(check receptors that could be affected by contamination at the site)*

- ☒ Residents (adult or child)
- ☒ Commercial or industrial worker
- ☒ Construction worker
- ☐ Subsistence harvester (i.e. gathers wild foods)
- ☐ Subsistence consumer (i.e. eats wild foods)
- ☒ Site visitor
- ☒ Trespasser
- ☐ Recreational user
- ☐ Farmer
- ☐ Other:

* bgs - below ground surface

2. Exposure Pathways: *(The answers to the following questions will identify complete exposure pathways at the site. Check each box where the answer to the question is "yes".)*

a) Direct Contact -

1. Incidental Soil Ingestion

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site-specific basis.) ☒

If the box is checked, label this pathway complete: Complete

Comments:

GRO, DRO, BTEX, and PAH contaminated soil has been encountered at the site.

2. Dermal Absorption of Contaminants from Soil

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.) ☒

Can the soil contaminants permeate the skin (see Appendix B in the guidance document)? ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

Some previously detected PAH analytes are listed in Appendix B.

b) Ingestion -

1. Ingestion of Groundwater

Have contaminants been detected or are they expected to be detected in the groundwater, or are contaminants expected to migrate to groundwater in the future? ☒

Could the potentially affected groundwater be used as a current or future drinking water source? Please note, only leave the box unchecked if DEC has determined the ground-water is not a currently or reasonably expected future source of drinking water according to 18 AAC 75.350. ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

Groundwater samples have previously contained elevated concentrations of GRO and BTEX. However, 2014 groundwater samples were non-detect for GRO, DRO and BTEX, although Well MW-9 contained methylene chloride greater than ADEC CUL. Drinking water sample collected from adjacent property in 2010 was non-detect for VOCs.

2. Ingestion of Surface Water

Have contaminants been detected or are they expected to be detected in surface water, or are contaminants expected to migrate to surface water in the future? ☒

Could potentially affected surface water bodies be used, currently or in the future, as a drinking water source? Consider both public water systems and private use (i.e., during residential, recreational or subsistence activities). ☐

If both boxes are checked, label this pathway complete: Incomplete

Comments:

No permanent surface water bodies are present at the site. Changes in site use may require additional evaluation of this pathway.

3. Ingestion of Wild and Farmed Foods

Is the site in an area that is used or reasonably could be used for hunting, fishing, or harvesting of wild or farmed foods? ☐

Do the site contaminants have the potential to bioaccumulate (see Appendix C in the guidance document)? ☐

Are site contaminants located where they would have the potential to be taken up into biota? (i.e. soil within the root zone for plants or burrowing depth for animals, in groundwater that could be connected to surface water, etc.) ☒

If all of the boxes are checked, label this pathway complete: Incomplete

Comments:

This site is not anticipated to be reasonably used for hunting ,fishing, or harvesting of wild foods.

c) Inhalation-

1. Inhalation of Outdoor Air

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.) ☒

Are the contaminants in soil volatile (see Appendix D in the guidance document)? ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

Volatile contaminants, including GRO, DRO, and BTEX, are present in soil at the site.

2. Inhalation of Indoor Air

Are occupied buildings on the site or reasonably expected to be occupied or placed on the site in an area that could be affected by contaminant vapors? (within 30 horizontal or vertical feet of petroleum contaminated soil or groundwater; within 100 feet of non-petroleum contaminted soil or groundwater; or subject to "preferential pathways," which promote easy airflow like utility conduits or rock fractures) ☒

Are volatile compounds present in soil or groundwater (see Appendix D in the guidance document)? ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

The Former MarkAir building is used for equipment storage and may be occupied for short periods of time. BTEX contaminated soil samples were collected from within 30 feet of the building in 2001. Note that ADEC does not presently require evaluation of GRO or DRO for vapor intrusion.

3. **Additional Exposure Pathways:** *(Although there are no definitive questions provided in this section, these exposure pathways should also be considered at each site. Use the guidelines provided below to determine if further evaluation of each pathway is warranted.)*

Dermal Exposure to Contaminants in Groundwater and Surface Water

Dermal exposure to contaminants in groundwater and surface water may be a complete pathway if:

- Climate permits recreational use of waters for swimming.
- Climate permits exposure to groundwater during activities, such as construction.
- Groundwater or surface water is used for household purposes, such as bathing or cleaning.

Generally, DEC groundwater cleanup levels in 18 AAC 75, Table C, are assumed to be protective of this pathway.

Check the box if further evaluation of this pathway is needed: ☒

Comments:

The pathway is currently incomplete by the above-mentioned criteria (groundwater only) but could be potentially complete should groundwater be used for household purpose. Therefore, future receptors have been noted on the Graphic Form. 2

Inhalation of Volatile Compounds in Tap Water

Inhalation of volatile compounds in tap water may be a complete pathway if:

- The contaminated water is used for indoor household purposes such as showering, laundering, and dish washing.
- The contaminants of concern are volatile (common volatile contaminants are listed in Appendix D in the guidance document.)

Generally, DEC groundwater cleanup levels in 18 AAC 75, Table C, are assumed to be protective of this pathway.

Check the box if further evaluation of this pathway is needed: ☒

Comments:

The pathway is considered incomplete by the above-mentioned criteria, but could be potentially complete if land use changes.

Inhalation of Fugitive Dust

Inhalation of fugitive dust may be a complete pathway if:

- Nonvolatile compounds are found in the top 2 centimeters of soil. The top 2 centimeters of soil are likely to be dispersed in the wind as dust particles.
- Dust particles are less than 10 micrometers (Particulate Matter - PM_{10}). Particles of this size are called respirable particles and can reach the pulmonary parts of the lungs when inhaled.
- Chromium is present in soil that can be dispersed as dust particles of any size.

Generally, DEC direct contact soil cleanup levels in Table B1 of 18 AAC 75 are protective of this pathway because it is assumed most dust particles are incidentally ingested instead of inhaled to the lower lungs. The inhalation pathway only needs to be evaluated when very small dust particles are present (e.g., along a dirt roadway or where dusts are a nuisance). This is not true in the case of chromium. Site specific cleanup levels will need to be calculated in the event that inhalation of dust containing chromium is a complete pathway at a site.

Check the box if further evaluation of this pathway is needed: ☐

Comments:

Non-volatile PAHs have been indentified at the base of the excavations, but not in soils less than 1.5 feet bgs.

Direct Contact with Sediment

This pathway involves people's hands being exposed to sediment, such as during some recreational, subsistence, or industrial activity. People then incidentally ingest sediment from normal hand-to-mouth activities. In addition, dermal absorption of contaminants may be of concern if the the contaminants are able to permeate the skin (see Appendix B in the guidance document). This type of exposure should be investigated if:

- Climate permits recreational activities around sediment.
- The community has identified subsistence or recreational activities that would result in exposure to the sediment, such as clam digging.

Generally, DEC direct contact soil cleanup levels in 18 AAC 75, Table B1, are assumed to be protective of direct contact with sediment.

Check the box if further evaluation of this pathway is needed: ☐

Comments:

4. Other Comments *(Provide other comments as necessary to support the information provided in this form.)*

APPENDIX A

BIOACCUMULATIVE COMPOUNDS OF POTENTIAL CONCERN

Organic compounds are identified as bioaccumulative if they have a BCF equal to or greater than 1,000 or a log K_{ow} greater than 3.5. Inorganic compounds are identified as bioaccumulative if they are listed as such by EPA (2000). Those compounds in Table B-1 of 18 AAC 75.341 that are bioaccumulative, based on the definition above, are listed below.

Aldrin	DDT	Lead
Arsenic	Dibenzo(a,h)anthracene	Mercury
Benzo(a)anthracene	Dieldrin	Methoxychlor
Benzo(a)pyrene	Dioxin	Nickel
Benzo(b)fluoranthene	Endrin	PCBs
Benzo(k)fluoranthene	Fluoranthene	
Cadmium	Heptachlor	Pyrene
Chlordane	Heptachlor epoxide	Selenium
Chrysene	Hexachlorobenzene	Silver
Copper	Hexachlorocyclopentadiene	Toxaphene
DDD	Indeno(1,2,3-c,d)pyrene	Zinc
DDE		

Because BCF values can relatively easily be measured or estimated, the BCF is frequently used to determine the potential for a chemical to bioaccumulate. A compound with a BCF greather than 1,000 is considered to bioaccumulate in tissue (EPA 2004b).

For inorganic compounds, the BCF approach has not been shown to be effective in estimating the compound's ability to bioaccumulate. Information available, either through scientific literature or site-specific data, regarding the bioaccumulative potential of an inorganic site contaminant should be used to determine if the pathway is complete.

The list was developed by including organic compounds that either have a BCF equal to or greater than 1,000 or a log K_{ow} greater than 3.5 and inorganic compounds that are listed by the United States Environmental Protection Agency (EPA) as being bioaccumulative (EPA 2000).

The list was developed by including organic compounds that either have a BCF equal to or greater than 1,000 or a log K_{ow} greater than 3.5 and inorganic compounds that are listed by the United States Environmental Protection Agency (EPA) as being bioaccumulative (EPA 2000). The BCF can also be estimated from a chemical's physical and chemical properties. A chemical's octanol-water partitioning coefficient (K_{ow}) along with defined regression equations can be used to estimate the BCF. EPA's Persistent, Bioaccumulative, and Toxic (PBT) Profiler (EPA 2004) can be used to estimate the BCF using the K_{ow} and linear regressions presented by Meylan et al. (1996). The PBT Profiler is located at http://www.pbtprofiler.net/. For compounds not found in the PBT Profiler, DEC recommends using a log K_{ow} greater than 3.5 to determine if a compound is bioaccumulative.

APPENDIX B

VOLATILE COMPOUNDS OF POTENTIAL CONCERN

A chemical is identified here as sufficiently volatile and toxic for further evaluation if the Henry's Law constant is 1 x 10^{-5} atm-m^3/mol or greater, the molecular weight is less than 200 g/mole (EPA 2004a), and the vapor concentration of the pure component posed an incremental lifetime cancer risk greater than 10^{-6} or a non-cancer hazard quotient of 0.1, or other available scientific data indicates the chemical should be considered a volatile. Chemicals that are solid at typical soil temperatures and do not sublime are generally not considered volatile.

Acetone	Mercury (elemental)
Benzene	Methyl bromide (Bromomethane)
Bis(2-chloroethyl)ether	Methyl chloride (Chloromethane)
Bromodichloromethane	Methyl ethyl ketone (MEK)
Bromoform	Methyl isobutyl ketone (MIBK)
n-Butylbenzene	Methylene bromide
sec-Butylbenzene	Methylene chloride
tert-Buytlbenzene	**1-Methylnaphthalene**
Carbon disulfide	**2-Methylnaphthalene**
Carbon tetrachloride	Methyl *tert*-butyl ether (MTBE)
Chlorobenzene	**Naphthalene**
Chlorodibromomethane (Dibromochloromethane)	Nitrobenzene
Chloroethane	n-Nitrosodimethylamine
Chloroform	**n-Propylbenzene**
2-Chlorophenol	**Styrene**
1,2-Dichlorobenzene	1,1,2,2-Tetrachlorethane
1,3-Dichlorobenzene	Tetrachloroethylene (PCE)
1,4-Dichlorobenzene	**Toluene**

Dichlorodifluoromethane	1,2,4-Trichlorobenzene
1,1-Dichloroethane	1,1,1-Trichloroethane
1,2-Dichloroethane	1,1,2-Trichloroethane
1,1-Dichloroethylene	Trichloroethane
cis-1,2-Dichloroethylene	2,4,6-Trichlorophenol
trans-1,2-Dichloroethylene	1,2,3-Trichloropropane
1,2-Dichloropropane	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)
1,3-Dichloropropane	Trichlorofluoromethane (Freon-11)
Ethylbenzene	**1,2,4-Trimethylbenzene**
Ethylene dibromide (1,2-Dibromoethane)	**1,3,5-Trimethylbenzene**
Hexachlorobenzene	Vinyl acetate
Hexachloro-1,3-butadiene	Vinyl chloride (Chloroethene)
Hexachlorocyclopentadiene	**Xylenes (total)**
Hexachloroethane	GRO (see note 3 below)
Hydrazine	DRO (see note 3 below)
Isopropylbenzene (Cumene)	RRO (see note 3 below)

Notes:

1. Bolded chemicals should be investigated as volatile compounds when petroleum is present. If fuel containing additives (e.g., 1,2-dichloroethane, ethylene dibromide, methyl *tert*-butyl ether) were spilled, these chemicals should also be investigated.
2. If a chemical is not on this list, and not in Tables B of 18 AAC 75.345, the chemical has not been evaluated for volatility. Contact the ADEC risk assessor to determine if the chemical is volatile.
3. At this time, ADEC does not require evaluation of petroleum ranges GRO, DRO, or RRO for the indoor air inhalation (vapor intrusion) pathway.

HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Site: ADOT&PF Aniak Maintenance Building Former ASTs
ADEC File No. 2404.38.005

Completed By: Shannon & Wilson, Inc.
Date Completed: June 2014

***Instructions*: Follow the numbered directions below. Do not consider contaminant concentrations or engineering/land use controls when describing pathways.**

(1)
Check the media that could be directly affected by the release.

(2)
For each medium identified in (1), follow the top arrow and check possible transport mechanisms. Check additional media under (1) if the media acts as a secondary source.

(3)
Check all exposure media identified in (2).

(4)
*Check all pathways that could be complete. The pathways identified in this column **must** agree with Sections 2 and 3 of the Human Health CSM Scoping Form.*

(5)
Identify the receptors potentially affected by each exposure pathway: Enter "C" for current receptors, "F" for future receptors, "C/F" for both current and future receptors, or "I" for insignificant exposure.

Media / Transport Mechanisms / Exposure Media / Exposure Pathway/Route / Current & Future Receptors

Media	Transport Mechanisms (2)	Exposure Media (3)	Exposure Pathway/Route (4)	Residents (adults or children)	Commercial or industrial workers	Site visitors, trespassers, or recreational users	Construction workers	Farmers or subsistence harvesters	Subsistence consumers	Other
☑ Surface Soil (0-2 ft bgs)	☑ Direct release to surface soil — check soil	☑ soil	☑ Incidental Soil Ingestion	F	C/F	C/F	F			
	☑ Migration to subsurface — check soil		☑ Dermal Absorption of Contaminants from Soil	F	C/F	C/F	F			
	☑ Migration to groundwater — check groundwater		☐ Inhalation of Fugitive Dust							
	☑ Volatilization — check air									
	☐ Runoff or erosion — check surface water									
	☑ Uptake by plants or animals — check biota									
	☐ Other (list):									
☑ Subsurface Soil (2-15 ft bgs)	☑ Direct release to subsurface soil — check soil									
	☑ Migration to groundwater — check groundwater	☑ groundwater	☑ Ingestion of Groundwater	F	F	F	F			
	☑ Volatilization — check air		☑ Dermal Absorption of Contaminants in Groundwater	F	F	F	F			
	☑ Uptake by plants or animals — check biota		☑ Inhalation of Volatile Compounds in Tap Water	F	F	F	F			
	☐ Other (list):									
☑ Ground-water	☑ Direct release to groundwater — check groundwater									
	☑ Volatilization — check air	☑ air	☑ Inhalation of Outdoor Air	F	C/F	C/F	F			
	☐ Flow to surface water body — check surface water		☑ Inhalation of Indoor Air	F	C/F	C/F	F			
	☐ Flow to sediment — check sediment		☐ Inhalation of Fugitive Dust							
	☑ Uptake by plants or animals — check biota									
	☐ Other (list):									
☐ Surface Water	☐ Direct release to surface water — check surface water									
	☐ Volatilization — check air	☐ surface water	☐ Ingestion of Surface Water							
	☐ Sedimentation — check sediment		☐ Dermal Absorption of Contaminants in Surface Water							
	☐ Uptake by plants or animals — check biota		☐ Inhalation of Volatile Compounds in Tap Water							
	☐ Other (list):									
☐ Sediment	☐ Direct release to sediment — check sediment	☐ sediment	☐ Direct Contact with Sediment							
	☐ Resuspension, runoff, or erosion — check surface water									
	☐ Uptake by plants or animals — check biota	☑ biota	☑ Ingestion of Wild or Farmed Foods							
	☐ Other (list):									

Revised, 10/01/2010

Print Form

Human Health Conceptual Site Model
Scoping Form

Site Name: ADOT&PF Aniak Maintenance Building Former ASTs

File Number: 2404.38.005

Completed by: Shannon & Wilson Inc.

Introduction

The form should be used to reach agreement with the Alaska Department of Environmental Conservation (DEC) about which exposure pathways should be further investigated during site characterization. From this information, summary text about the CSM and a graphic depicting exposure pathways should be submitted with the site characterization work plan and updated as needed in later reports.

General Instructions: Follow the italicized instructions in each section below.

1. General Information:

Sources *(check potential sources at the site)*

- ☐ USTs
- ☒ ASTs
- ☒ Dispensers/fuel loading racks
- ☒ Drums
- ☐ Vehicles
- ☐ Landfills
- ☐ Transformers
- ☒ Other: Pipelines, former floor drains

Release Mechanisms *(check potential release mechanisms at the site)*

- ☒ Spills
- ☒ Leaks
- ☒ Direct discharge
- ☐ Burning
- ☐ Other:

Impacted Media *(check potentially-impacted media at the site)*

- ☒ Surface soil (0-2 feet bgs*)
- ☒ Subsurface soil (>2 feet bgs)
- ☒ Air
- ☐ Sediment
- ☒ Groundwater
- ☐ Surface water
- ☒ Biota
- ☐ Other:

Receptors *(check receptors that could be affected by contamination at the site)*

- ☒ Residents (adult or child)
- ☒ Commercial or industrial worker
- ☒ Construction worker
- ☐ Subsistence harvester (i.e. gathers wild foods)
- ☐ Subsistence consumer (i.e. eats wild foods)
- ☒ Site visitor
- ☒ Trespasser
- ☐ Recreational user
- ☐ Farmer
- ☐ Other:

* bgs - below ground surface

2. Exposure Pathways: *(The answers to the following questions will identify complete exposure pathways at the site. Check each box where the answer to the question is "yes".)*

a) Direct Contact -

1. Incidental Soil Ingestion

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site-specific basis.) ☒

If the box is checked, label this pathway complete: Complete

Comments:

Soil samples collected contained up to 29,500 mg/kg DRO.

2. Dermal Absorption of Contaminants from Soil

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.) ☒

Can the soil contaminants permeate the skin (see Appendix B in the guidance document)? ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

Several PAH analytes listed in Appendix B have been detected in soil samples at the site.

b) Ingestion -

1. Ingestion of Groundwater

Have contaminants been detected or are they expected to be detected in the groundwater, or are contaminants expected to migrate to groundwater in the future? ☒

Could the potentially affected groundwater be used as a current or future drinking water source? Please note, only leave the box unchecked if DEC has determined the ground-water is not a currently or reasonably expected future source of drinking water according to 18 AAC 75.350. ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

Drinking water wells are present in the vicinity of the facility.

2. Ingestion of Surface Water

Have contaminants been detected or are they expected to be detected in surface water, or are contaminants expected to migrate to surface water in the future? ☐

Could potentially affected surface water bodies be used, currently or in the future, as a drinking water source? Consider both public water systems and private use (i.e., during residential, recreational or subsistence activities). ☐

If both boxes are checked, label this pathway complete: Incomplete

Comments:

No permanent surface water bodies are present at the site. Changes in site use may require additional evaluation of this pathway.

3. Ingestion of Wild and Farmed Foods

Is the site in an area that is used or reasonably could be used for hunting, fishing, or harvesting of wild or farmed foods? ☐

Do the site contaminants have the potential to bioaccumulate (see Appendix C in the guidance document)? ☒

Are site contaminants located where they would have the potential to be taken up into biota? (i.e. soil within the root zone for plants or burrowing depth for animals, in groundwater that could be connected to surface water, etc.) ☒

If all of the boxes are checked, label this pathway complete: Incomplete

Comments:

The site has open access. The presence of edible wild plants was not evaluated. Several PAH analytes listed in Appendix C have been detected in soil samples at the site.

c) Inhalation-

1. Inhalation of Outdoor Air

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.) ☒

Are the contaminants in soil volatile (see Appendix D in the guidance document)? ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

DRO, GRO, and several PAH analytes have been detected at the site.

2. Inhalation of Indoor Air

Are occupied buildings on the site or reasonably expected to be occupied or placed on the site in an area that could be affected by contaminant vapors? (within 30 horizontal or vertical feet of petroleum contaminated soil or groundwater; within 100 feet of non-petroleum contaminted soil or groundwater; or subject to "preferential pathways," which promote easy airflow like utility conduits or rock fractures) ☒

Are volatile compounds present in soil or groundwater (see Appendix D in the guidance document)? ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

An unoccupied building (Building 303) is located within 30 horizontal feet the pipeline south excavation. Due to uncertainty in the extent of contamination and potential future changes in land use, this pathway is considered potentially complete.

3. **Additional Exposure Pathways:** *(Although there are no definitive questions provided in this section, these exposure pathways should also be considered at each site. Use the guidelines provided below to determine if further evaluation of each pathway is warranted.)*

Dermal Exposure to Contaminants in Groundwater and Surface Water

Dermal exposure to contaminants in groundwater and surface water may be a complete pathway if:

- Climate permits recreational use of waters for swimming.
- Climate permits exposure to groundwater during activities, such as construction.
- Groundwater or surface water is used for household purposes, such as bathing or cleaning.

Generally, DEC groundwater cleanup levels in 18 AAC 75, Table C, are assumed to be protective of this pathway.

Check the box if further evaluation of this pathway is needed: ☒

Comments:

A drinking water well is present at the nearby state trooper housing. Groundwater is used for household purposes. Note that the drinking water sample collected in 2014 was non-detect for VOCs.

Inhalation of Volatile Compounds in Tap Water

Inhalation of volatile compounds in tap water may be a complete pathway if:

- The contaminated water is used for indoor household purposes such as showering, laundering, and dish washing.
- The contaminants of concern are volatile (common volatile contaminants are listed in Appendix D in the guidance document.)

Generally, DEC groundwater cleanup levels in 18 AAC 75, Table C, are assumed to be protective of this pathway.

Check the box if further evaluation of this pathway is needed: ☒

Comments:

The pathway is complete by the above-mentioned criteria.

Inhalation of Fugitive Dust

Inhalation of fugitive dust may be a complete pathway if:

- Nonvolatile compounds are found in the top 2 centimeters of soil. The top 2 centimeters of soil are likely to be dispersed in the wind as dust particles.
- Dust particles are less than 10 micrometers (Particulate Matter - PM_{10}). Particles of this size are called respirable particles and can reach the pulmonary parts of the lungs when inhaled.
- Chromium is present in soil that can be dispersed as dust particles of any size.

Generally, DEC direct contact soil cleanup levels in Table B1 of 18 AAC 75 are protective of this pathway because it is assumed most dust particles are incidentally ingested instead of inhaled to the lower lungs. The inhalation pathway only needs to be evaluated when very small dust particles are present (e.g., along a dirt roadway or where dusts are a nuisance). This is not true in the case of chromium. Site specific cleanup levels will need to be calculated in the event that inhalation of dust containing chromium is a complete pathway at a site.

Check the box if further evaluation of this pathway is needed: ☐

Comments:

Non volatile PAHs have been identified at the site, but at a depth of greater than 2 feet.

Direct Contact with Sediment

This pathway involves people's hands being exposed to sediment, such as during some recreational, subsistence, or industrial activity. People then incidentally ingest sediment from normal hand-to-mouth activities. In addition, dermal absorption of contaminants may be of concern if the the contaminants are able to permeate the skin (see Appendix B in the guidance document). This type of exposure should be investigated if:

- Climate permits recreational activities around sediment.
- The community has identified subsistence or recreational activities that would result in exposure to the sediment, such as clam digging.

Generally, DEC direct contact soil cleanup levels in 18 AAC 75, Table B1, are assumed to be protective of direct contact with sediment.

Check the box if further evaluation of this pathway is needed: ☐

Comments:

4. Other Comments *(Provide other comments as necessary to support the information provided in this form.)*

APPENDIX A

BIOACCUMULATIVE COMPOUNDS OF POTENTIAL CONCERN

Organic compounds are identified as bioaccumulative if they have a BCF equal to or greater than 1,000 or a log K_{ow} greater than 3.5. Inorganic compounds are identified as bioaccumulative if they are listed as such by EPA (2000). Those compounds in Table B-1 of 18 AAC 75.341 that are bioaccumulative, based on the definition above, are listed below.

Aldrin	DDT	Lead
Arsenic	Dibenzo(a,h)anthracene	Mercury
Benzo(a)anthracene	Dieldrin	Methoxychlor
Benzo(a)pyrene	Dioxin	Nickel
Benzo(b)fluoranthene	Endrin	PCBs
Benzo(k)fluoranthene	Fluoranthene	
Cadmium	Heptachlor	Pyrene
Chlordane	Heptachlor epoxide	Selenium
Chrysene	Hexachlorobenzene	Silver
Copper	Hexachlorocyclopentadiene	Toxaphene
DDD	Indeno(1,2,3-c,d)pyrene	Zinc
DDE		

Because BCF values can relatively easily be measured or estimated, the BCF is frequently used to determine the potential for a chemical to bioaccumulate. A compound with a BCF greather than 1,000 is considered to bioaccumulate in tissue (EPA 2004b).

For inorganic compounds, the BCF approach has not been shown to be effective in estimating the compound's ability to bioaccumulate. Information available, either through scientific literature or site-specific data, regarding the bioaccumulative potential of an inorganic site contaminant should be used to determine if the pathway is complete.

The list was developed by including organic compounds that either have a BCF equal to or greater than 1,000 or a log K_{ow} greater than 3.5 and inorganic compounds that are listed by the United States Environmental Protection Agency (EPA) as being bioaccumulative (EPA 2000).

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APPENDIX B

VOLATILE COMPOUNDS OF POTENTIAL CONCERN

A chemical is identified here as sufficiently volatile and toxic for further evaluation if the Henry's Law constant is 1 x 10^{-5} atm-m^3/mol or greater, the molecular weight is less than 200 g/mole (EPA 2004a), and the vapor concentration of the pure component posed an incremental lifetime cancer risk greater than 10^{-6} or a non-cancer hazard quotient of 0.1, or other available scientific data indicates the chemical should be considered a volatile. Chemicals that are solid at typical soil temperatures and do not sublime are generally not considered volatile.

Acetone	Mercury (elemental)
Benzene	Methyl bromide (Bromomethane)
Bis(2-chloroethyl)ether	Methyl chloride (Chloromethane)
Bromodichloromethane	Methyl ethyl ketone (MEK)
Bromoform	Methyl isobutyl ketone (MIBK)
n-Butylbenzene	Methylene bromide
sec-Butylbenzene	Methylene chloride
tert-Buytlbenzene	**1-Methylnaphthalene**
Carbon disulfide	**2-Methylnaphthalene**
Carbon tetrachloride	Methyl *tert*-butyl ether (MTBE)
Chlorobenzene	**Naphthalene**
Chlorodibromomethane (Dibromochloromethane)	Nitrobenzene
Chloroethane	n-Nitrosodimethylamine
Chloroform	**n-Propylbenzene**
2-Chlorophenol	**Styrene**
1,2-Dichlorobenzene	1,1,2,2-Tetrachlorethane
1,3-Dichlorobenzene	Tetrachloroethylene (PCE)
1,4-Dichlorobenzene	**Toluene**

Dichlorodifluoromethane	1,2,4-Trichlorobenzene
1,1-Dichloroethane	1,1,1-Trichloroethane
1,2-Dichloroethane	1,1,2-Trichloroethane
1,1-Dichloroethylene	Trichloroethane
cis-1,2-Dichloroethylene	2,4,6-Trichlorophenol
trans-1,2-Dichloroethylene	1,2,3-Trichloropropane
1,2-Dichloropropane	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)
1,3-Dichloropropane	Trichlorofluoromethane (Freon-11)
Ethylbenzene	**1,2,4-Trimethylbenzene**
Ethylene dibromide (1,2-Dibromoethane)	**1,3,5-Trimethylbenzene**
Hexachlorobenzene	Vinyl acetate
Hexachloro-1,3-butadiene	Vinyl chloride (Chloroethene)
Hexachlorocyclopentadiene	**Xylenes (total)**
Hexachloroethane	GRO (see note 3 below)
Hydrazine	DRO (see note 3 below)
Isopropylbenzene (Cumene)	RRO (see note 3 below)

Notes:

1. Bolded chemicals should be investigated as volatile compounds when petroleum is present. If fuel containing additives (e.g., 1,2-dichloroethane, ethylene dibromide, methyl *tert*-butyl ether) were spilled, these chemicals should also be investigated.
2. If a chemical is not on this list, and not in Tables B of 18 AAC 75.345, the chemical has not been evaluated for volatility. Contact the ADEC risk assessor to determine if the chemical is volatile.
3. At this time, ADEC does not require evaluation of petroleum ranges GRO, DRO, or RRO for the indoor air inhalation (vapor intrusion) pathway.

APPENDIX F

IMPORTANT INFORMATION ABOUT

YOUR GEOTECHNICAL/ENVIRONMENTAL REPORT

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

Attachment to and part of Report 32-1-17636

Date: June 2014
To: Alaska Department of Environmental Conservation
Re: ADOT&PF Aniak Airport
Aniak, Alaska

Important Information About Your Geotechnical/Environmental Report

CONSULTING SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.

Consultants prepare reports to meet the specific needs of specific individuals. A report prepared for a civil engineer may not be adequate for a construction contractor or even another civil engineer. Unless indicated otherwise, your consultant prepared your report expressly for you and expressly for the purposes you indicated. No one other than you should apply this report for its intended purpose without first conferring with the consultant. No party should apply this report for any purpose other than that originally contemplated without first conferring with the consultant.

THE CONSULTANT'S REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

A geotechnical/environmental report is based on a subsurface exploration plan designed to consider a unique set of project-specific factors. Depending on the project, these may include: the general nature of the structure and property involved; its size and configuration; its historical use and practice; the location of the structure on the site and its orientation; other improvements such as access roads, parking lots, and underground utilities; and the additional risk created by scope-of-service limitations imposed by the client. To help avoid costly problems, ask the consultant to evaluate how any factors that change subsequent to the date of the report may affect the recommendations. Unless your consultant indicates otherwise, your report should not be used: (1) when the nature of the proposed project is changed (for example, if an office building will be erected instead of a parking garage, or if a refrigerated warehouse will be built instead of an unrefrigerated one, or chemicals are discovered on or near the site); (2) when the size, elevation, or configuration of the proposed project is altered; (3) when the location or orientation of the proposed project is modified; (4) when there is a change of ownership; or (5) for application to an adjacent site. Consultants cannot accept responsibility for problems that may occur if they are not consulted after factors, which were considered in the development of the report, have changed.

SUBSURFACE CONDITIONS CAN CHANGE.

Subsurface conditions may be affected as a result of natural processes or human activity. Because a geotechnical/environmental report is based on conditions that existed at the time of subsurface exploration, construction decisions should not be based on a report whose adequacy may have been affected by time. Ask the consultant to advise if additional tests are desirable before construction starts; for example, groundwater conditions commonly vary seasonally.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes, or groundwater fluctuations may also affect subsurface conditions and, thus, the continuing adequacy of a geotechnical/environmental report. The consultant should be kept apprised of any such events, and should be consulted to determine if additional tests are necessary.

MOST RECOMMENDATIONS ARE PROFESSIONAL JUDGMENTS.

Site exploration and testing identifies actual surface and subsurface conditions only at those points where samples are taken. The data were extrapolated by your consultant, who then applied judgment to render an opinion about overall subsurface conditions. The actual interface between materials may be far more gradual or abrupt than your report indicates. Actual conditions in areas not sampled may differ from those predicted in your report. While nothing can be done to prevent such situations, you and your consultant can work together to help reduce their impacts. Retaining your consultant to observe subsurface construction operations can be particularly beneficial in this respect.

A REPORT'S CONCLUSIONS ARE PRELIMINARY.

The conclusions contained in your consultant's report are preliminary because they must be based on the assumption that conditions revealed through selective exploratory sampling are indicative of actual conditions throughout a site. Actual subsurface conditions can be discerned only during earthwork; therefore, you should retain your consultant to observe actual conditions and to provide conclusions. Only the consultant who prepared the report is fully familiar with the background information needed to determine whether or not the report's recommendations based on those conclusions are valid and whether or not the contractor is abiding by applicable recommendations. The consultant who developed your report cannot assume responsibility or liability for the adequacy of the report's recommendations if another party is retained to observe construction.

THE CONSULTANT'S REPORT IS SUBJECT TO MISINTERPRETATION.

Costly problems can occur when other design professionals develop their plans based on misinterpretation of a geotechnical/environmental report. To help avoid these problems, the consultant should be retained to work with other project design professionals to explain relevant geotechnical, geological, hydrogeological, and environmental findings, and to review the adequacy of their plans and specifications relative to these issues.

BORING LOGS AND/OR MONITORING WELL DATA SHOULD NOT BE SEPARATED FROM THE REPORT.

Final boring logs developed by the consultant are based upon interpretation of field logs (assembled by site personnel), field test results, and laboratory and/or office evaluation of field samples and data. Only final boring logs and data are customarily included in geotechnical/environmental reports. These final logs should not, under any circumstances, be redrawn for inclusion in architectural or other design drawings, because drafters may commit errors or omissions in the transfer process.

To reduce the likelihood of boring log or monitoring well misinterpretation, contractors should be given ready access to the complete geotechnical engineering/environmental report prepared or authorized for their use. If access is provided only to the report prepared for you, you should advise contractors of the report's limitations, assuming that a contractor was not one of the specific persons for whom the report was prepared, and that developing construction cost estimates was not one of the specific purposes for which it was prepared. While a contractor may gain important knowledge from a report prepared for another party, the contractor should discuss the report with your consultant and perform the additional or alternative work believed necessary to obtain the data specifically appropriate for construction cost estimating purposes. Some clients hold the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing the best available information to contractors helps prevent costly construction problems and the adversarial attitudes that aggravate them to a disproportionate scale.

READ RESPONSIBILITY CLAUSES CLOSELY.

Because geotechnical/environmental engineering is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, consultants have developed a number of clauses for use in their contracts, reports and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where the consultant's responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

The preceding paragraphs are based on information provided by the
ASFE/Association of Engineering Firms Practicing in the Geosciences, Silver Spring, Maryland