

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

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ACRONYMS AND ABBREVIATIONS

| | |
|----------|--|
| AAC | Alaska Administrative Code |
| AK | Alaska Method |
| AST | Aboveground Storage Tank |
| ADEC | Alaska Department of Environmental Conservation |
| ADOT&PF | Alaska Department of Transportation and Public Facilities |
| bgs | Below ground surface |
| BTEX | Benzene, toluene, ethylbenzene, and xylene |
| CSM | Conceptual Site Model |
| CY | Cubic Yards |
| DQO | Data Quality Objective |
| DRO | Diesel Range Organics |
| Emerald | Emerald Alaska, Inc. |
| EPA | Environmental Protection Agency |
| GRO | Gasoline Range Organics |
| GPS | Global Positioning System |
| HVO | Halogenated Volatile Organics |
| IDW | Investigation Derived Waste |
| KSD | Kuspuk School District |
| LCS/LCSD | Laboratory Control Sample/ Laboratory Control Sample Duplicate |
| L/min | Liters per minute |
| mg/L | Milligrams per liter |
| MS/MSD | Matrix Spike/Matrix Spike Duplicate |
| µg/L | Micrograms per liter |
| PPE | Personal protective equipment |
| RPD | Relative percent difference |
| RRO | Residual Range Organics |
| SGS | SGS Environmental Services |
| TCE | Trichloroethene |
| VOCs | Volatile Organic Compounds |

**GROUNDWATER STUDY REPORT
ADOT&PF ANIAK AIRPORT
ANIAK, ALASKA**

1.0 INTRODUCTION

Shannon & Wilson is please to present the results of our 2010 groundwater sampling and well inventory in the vicinity of Alaska Department of Transportation and Public Facilities (ADOT&PF) owned property at the Aniak Airport. The purpose of this project is to evaluate contaminant trends in the groundwater at the Aniak Airport and to perform a site reconnaissance for potential future remedial activities. The objective is to collect groundwater samples to evaluate the potential threat to human health, safety, and welfare, and to the environment from site contamination; and to support the development of potential future remedial activities.

Authorization to proceed with the ADOT&PF Aniak Airport Groundwater Study was provided by the Alaska Department of Environmental Conservation (ADEC) in the form of Notice to Proceed 18-4002-12-007, dated March 8, 2010. The services were performed in general accordance with our April 2010 work plan, approved by Mr. Grant Lidren of the ADEC on April 1, 2010.

2.0 SITE AND PROJECT DESCRIPTION

2.1 Site Description

Aniak is located approximately 90 miles northeast of Bethel, and approximately 320 miles west of Anchorage. The city is situated on the Kuskokwim River flood plain, bordered by the Kuskokwim River to the north and Aniak Slough to the southeast, as shown in Figure 1. An unconfined aquifer, which appears to be hydraulically connected to the Kuskokwim River, is generally encountered at depths of 20 to 30 feet below ground surface (bgs) near the head of the island. The unconfined aquifer is used as a drinking water source in Aniak and numerous water wells are located throughout the village. Although the depth of the drinking water well at the Middle School is reportedly on the order of 100 feet, numerous wells in the village are reportedly installed at shallower depths of approximately 40 to 70 feet.

As shown in Figure 2, the main village is located around the Aniak Airport which is operated by the ADOT&PF and serves as a hub for the surrounding area. Historic releases of petroleum hydrocarbons and hazardous substances at several ADOT&PF sites have caused area-wide groundwater contamination. Four ADOT&PF properties were targeted for groundwater sampling for this project. Site Plans of the properties are included as Figures 3 through 7. These

properties were last sampled in 2004 (with the exception of the Runway Apron Area, which was sampled in 2008), and include the following:

- Runway Apron Area. The Runway Apron monitoring wells are divided between two areas, the Disposal Pit Area and the Former Tank Farm.
- Former MarkAir Site. The MarkAir site consists of the two adjacent lots. The former MarkAir terminal and the adjoining gravel parking lot and taxiway are on the west of the Aniak airport road. To the east of the Aniak airport road, three monitoring wells are located on an ADOT&PF lease lot associated with the former MarkAir tank farm.
- ADOT&PF Maintenance Station. The ADOT&PF Maintenance Station monitoring wells are located in two areas identified as the Aboveground Storage Tank (AST) Area and Pipeline Area.
- Aniak City Shop. The Aniak City shop monitoring wells are located to the north of the City Shop building, in a municipal storage lot.

2.2 Project Description

The project scope consisted of conducting groundwater sampling at four sites, collecting drinking water samples, a well inventory, and a site reconnaissance for future remediation activities. The investigation was conducted in accordance with the 18 Alaska Administrative Code (AAC) 75 Oil and Other Hazardous Substances regulations as amended through October 9, 2008. SGS Environmental Services (SGS) of Anchorage, Alaska, was retained as the project analytical laboratory. Emerald Alaska, Inc. (Emerald) of Anchorage, Alaska was retained coordinate shipping and disposal of investigation derived waste (IDW).

2.3 Previous Environmental Assessments and Cleanup Work

Background information pertaining to the areas of concern was obtained from the following sources:

- September 1999 “Environmental Site Assessment, ADOT&PF MarkAir Terminal, Aniak, Alaska” prepared by Shannon & Wilson, Inc.;
- September 1999 “August 1999 Groundwater Sampling at ADOT&PF Sites, Aniak, Alaska” prepared by Shannon & Wilson, Inc.;
- June 2000 “Drinking and Monitoring Well Survey and Sampling, Aniak Runway Apron, Aniak, Alaska” prepared by Shannon & Wilson, Inc.
- January 2002 “Interim Removal Action and Site Characterization, Former MarkAir Facility, Aniak, Alaska” prepared by Shannon & Wilson, Inc.

- June 2004 “Additional Site Characterization, ADOT&PF Aniak Airport Facilities, Aniak, Alaska” prepared by Shannon & Wilson, Inc.
- June 2004 “ADOT&PF Aniak Airport, Well Decommissioning and Drinking Water Well Survey, Aniak, Alaska” prepared by Shannon & Wilson, Inc.
- June 2006 “Drum and Battery Management and Water Sampling ADOT&PF Aniak Airport Sites Aniak, Alaska” prepared by Shannon & Wilson, Inc.
- March 2009 “TCE Characterization, Former WACS Middle School Site, Aniak, Alaska” prepared by Shannon and Wilson, Inc.

In November 1998, April 1999, and August 1999, groundwater samples were collected from monitoring wells at the Runway Apron and at the AST and Pipeline Areas of the ADOT&PF Maintenance Station. The samples results from Wells AST-MW3, AST-MW5, and PL-MW9 at the ADOT&PF Maintenance Station exceeded the applicable ADEC cleanup level for diesel range organics (DRO) with reported concentrations ranging from 2.59 to 10.4 milligrams per liter (mg/L) DRO. The other groundwater samples tested for DRO were either less than the cleanup level or were not detected. The samples collected from Runway Apron Monitoring Well RA-MW9 contained a maximum concentration of 0.0169 mg/L trichloroethene (TCE), which exceeded the applicable ADEC cleanup level.

Groundwater samples were collected from the Runway Apron on May 30, 2000. Samples collected from Monitoring Well RA-MW9 contained a maximum of 0.0197 mg/L TCE, exceeding the applicable cleanup level. The samples collected from Monitoring Wells RA-MW5, RA-MW6, and RA-MW8 did not contain detectable volatile organic compounds (VOCs). Drinking water samples were also collected during the May 2000 field efforts, from 14 residences and from the Aniak High School and Middle School drinking water wells. With the exception of Sample TS3, the samples did not contain detectable concentrations of VOCs. Sample TS3 was collected from the residence located about 1,600 feet northeast of Monitoring Well RA-MW9 along Boundary Avenue at Block 9, Lots 14 and 15 and contained 0.00108 mg/L toluene.

During 2001 remedial actions at the MarkAir Site, seven new monitoring wells were installed and groundwater samples were collected from the new and existing monitoring wells. A sample collected from Well MW9 contained gasoline range organics (GRO) and benzene in excess of the respective ADEC groundwater cleanup levels. The remaining wells either contained concentrations of GRO, DRO, or benzene, toluene, ethylbenzene, and xylene (BTEX) less than the applicable cleanup levels, or the target analytes were not detected in the project samples. Existing monitoring wells MW-1, MW-2, and MW-3, installed in 1993, were found to be damaged and were decommissioned at this time.

In May 2004, seven borings were advanced at the City Shop. DRO-impacted soil was encountered in Borings CSB2, CSB3, and CSB7. Five of the borings were completed as monitoring wells, designated Wells CS-MW1, CS-MW2, CS-MW4, CS-MW6, and CS-MW7. The groundwater samples collected from the monitoring wells at the Aniak City Shop did not contain concentrations of GRO, DRO, residual range organics (RRO), BTEX, or VOCs greater than the applicable cleanup levels. One boring was advanced at the former AST area at the ADOT&PF Maintenance Station and was completed as Monitoring Well AST-MW7. A groundwater sample was collected from Monitoring Well AST-MW7 did not contain detectable concentrations of DRO, GRO, or BTEX. Groundwater samples were also collected from Monitoring Wells MW-5 through MW-12 at the former MarkAir site. Samples collected from Monitoring Well MW-9 exceeded the applicable cleanup levels for DRO and benzene, and had a detection of GRO below the cleanup level. The remainder of the samples did not exceed the applicable cleanup levels for DRO or BTEX.

In 2004, Monitoring Well PL-MW12 at the ADOT&PF Maintenance Station Pipeline Area and Wells RA-MW2 and RA-MW5 at the Runway Apron were decommissioned.

In October 2005, groundwater samples were collected from monitoring wells at the Runway Apron, ADOT&PF Maintenance Station, and Aniak City Shop, and drinking water wells in the vicinity of the Aniak Airport. Sample RA-MW1 either contained concentrations of target analytes less than the applicable cleanup level, or were not detected. Sample RA-MW9 contained a TCE concentration greater than the ADEC cleanup level. Groundwater samples were collected from the wells at the Former AST and Pipeline area. Samples collected from Wells AST-MW5 and PLMW9 contained concentrations of DRO greater than the ADEC cleanup level. At that time, AST-MW7 did not contain sufficient water to sample, and AST-MW3 was found to be destroyed and could not be sampled. The groundwater sample collected from Monitoring Well CS-MW1 at the Aniak City Shop did not contain detectable concentrations of GRO, DRO, or BTEX. The remaining monitoring wells (Wells CS-MW2, CS-MW4, and CS-MW6) at the Aniak City Shop could not be sampled due to insufficient water columns.

On June 3, 2008, groundwater samples were collected for halogenated volatile organic (HVO) analysis in six monitoring wells at the Runway Apron site. TCE was detected in the sample from well RA-MW9 in excess of the ADEC Table C cleanup level. No other HVOs were detected in the samples.

Drinking water samples for VOC analysis by Environmental Protection Agency (EPA) Method 524.2 were collected in August 2008. The High School well sample did not have detectable concentrations of VOCs. The sample from the Middle School well (Sample MSW) also did not have detectable VOCs, with the exception of 0.54 micrograms per liter ($\mu\text{g/L}$) of

dichloromethane. The trip blank that accompanied the two samples from Aniak to the laboratory had 0.82 µg/L of dichloromethane. The 0.54 µg/L of dichloromethane in Sample MSW is probably the result of contamination introduced by the laboratory or during the sampling event.

3.0 FIELD INVESTIGATION

The field effort involved collecting monitoring well and drinking water well samples, conducting a monitoring well inventory, and additional site reconnaissance for potential future remediation efforts.

3.1 Field Work Preparation

A right-of-access request was sent to ADOT&PF and Kuspuk School District (KSD) notifying personnel of planned activities and requesting permission to access the project areas. Permission to access ADOT&PF properties was granted in the form of a access request letter signed by Tina Schimschat on May 4, 2010. Permission to access KSD properties, including the Aniak Middle School and Aniak High School, was granted in the form of a signed access request letter signed by Charlie Thacker on May 26, 2010. A letter of intent to sample and an ADEC supplied property access agreement was mailed to other Aniak property owners prior to sampling, or was given to them at the time of sampling. Copies of the signed access agreements are included in Appendix B.

3.2 Monitoring Well Sampling and Inventory

An inventory of existing wells was taken at each site. Each well was photographed, and its position was recorded using swing ties and a Thales Mobile Mapper differential global positioning system (GPS) unit. Condition of the well monument and riser were noted. Wells with frost-jacked casings were repaired. Depth-to-water and total well depth were recorded. A discussion of the well inventory for the individual sites is in Sections 3.2.1 through 3.2.4, and summarized in Table 1. Select photos are included in Appendix A, and copies of the Well Inventory Forms are included in Appendix B. The results of the monitoring well inventory are summarized in Sections 3.2.1 through 3.2.4.

Groundwater samples were collected using low-flow methods from nine monitoring wells and the Runway Apron drinking water well. The wells were sampled using low-flow methods, in general accordance with our March 2010 Work Plan.

The purging process was initiated by measuring the groundwater levels. The submersible pump was then placed about 2.5 feet below the static water level to have consistency between wells and to avoid sediment disturbance. 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 purging volume was based on stabilization of key water quality parameters, as measured using a flow-through cell. The first water quality measurements were recorded after a stable pump rate and water drawdown were established. Subsequent measurements were recorded at 3 to 5-minute intervals. Purging was considered complete when temperature, conductivity, pH, and turbidity had stabilized over 3 successive readings. Groundwater purging data, including final parameter measurements, are summarized in Table 2.

3.2.1 Runway Apron Wells

The approximate locations of the Runway Apron monitoring wells are shown on Figure 3. Although not included in the monitoring well inventory, the Runway Apron drinking water well casing was bent and did not have a protective cover, as shown in Photo 1. Monitoring Wells RA-MW-3 and RA-MW-4 are shown in Photo 2. Monitoring Wells RA-MW-8 and RA-MW-9 were cut down 0.27 and 0.21 feet, respectively, and ponded water was present in the RA-MW-9 casing. Well RA-MW-8's frost jacked casing can be seen in Photo 3. No other problems were noted with the site's wells.

3.2.2 Former MarkAir Site

The approximate locations of the Former MarkAir Site monitoring wells are shown on Figure 4. Monitoring Wells MW-12 and RW-1 were under new gravel fill and could not be found using swing ties and a metal detector sweep. As shown in Photo 5, the cement embedment around Monitoring Well MW-7, located on the airport taxiway, has been jacked from the adjacent asphalt pad. Two wells at the former MarkAir site, Wells MW-5 and MW-8, were obstructed by what appeared to be ice plugs at 3.23 feet bgs and 5.52 feet bgs, respectively.

3.2.3 ADOT&PF Aniak Maintenance Station

The approximate locations of the ADOT&PF Aniak Maintenance Station monitoring wells are shown on Figures 5 and 6. One well in the former AST Area, Monitoring Well AST-MW-3, could not be located. It appears that the stickup well cover and the above-ground portion of the PVC riser have been removed. One well, Monitoring Well AST-MW-6, could not be sampled due to an obstruction in the well. Attempts to remove the obstruction with deionized water were unsuccessful. It is appears that the obstruction is from damage to the PVC and not an ice plug. One well in the former pipeline area, Well PL-MW-10, was frost-jacked and had 0.15 feet cut from the top-of-casing to close the well cover.

3.2.4 Aniak City Shop

The approximate locations of the Aniak City Shop monitoring wells are shown on Figure 7. Two wells at the Aniak City shop, CS-MW-1 and CS-MW-7, could not be located with swing ties or a metal detector sweep. Both wells are in areas of active heavy equipment traffic, and may have been damaged or buried under gravel fill. The remaining wells had a very small water column (0.15 foot to 0.76 foot), likely because they were drilled in a high-water year. As shown in Photo 4, the wells at the Aniak City Shop are located in an active storage yard for used tanks and equipment. The wells may be susceptible to damage by activity in the yard, and may serve as conduits to groundwater for spills or leaks from the nearby equipment or tanks, if damaged.

Well CS-MW-2 was to be sampled at the Aniak City Shop; however, the water column (0.76 foot) was insufficient to collect a sample using a submersible pump and low-flow sampling procedures. In 2005 this well was dry, and the 2004 sample did not contain contaminants greater than the ADEC cleanup levels. With permission from the ADEC, no sample was collected from this well.

3.3 Potable Water Sampling

Potable water samples were collected from fourteen sites around the Aniak Airport. The water samples were generally collected from an inside faucet after purging the water for approximately fifteen minutes. With the exceptions noted below, wells that were sampled did not use a water treatment system, according to occupants. Because the sampling ports before the water treatment systems were not readily accessible, water samples from the Aniak Middle School (Sample DW2(2)), Aniak High School (Sample DW3), and the Alaska State Trooper building (Sample DW11) were collected after the water treatment system. Samples were not collected from the ERA building (former Yute Air building) or the Block 9 Lot 12 residence. The ERA/former Yute Air building burned down the previous winter, and their new facility reportedly imports drinking water. According to neighbors, the owner of the Block 9 Lot 12 residence died before our site visit, and the property was unoccupied during our field effort. Water quality parameters, including pH, temperature, conductivity, and turbidity were measured prior to collecting a sample. Sampling details, including final water quality parameter measurements, are summarized in Table 3.

3.4 IDW Management

IDW consisted of monitoring well purge water, water well purge water, decontamination water, and solid waste. Solid waste will included the personal protective equipment (PPE) and disposable sampling equipment. Non-contaminated solid wastes were collected periodically and transported to the Aniak Landfill. Liquid wastes, including purge water and decontamination

water, were containerized in a 55-gallon drum and flown to the Emerald Alaska facility in Anchorage for treatment and disposal. A copy of the IDW disposal receipt is included in Appendix D.

4.0 LABORATORY ANALYSIS

The monitoring well and drinking samples were submitted to SGS for analysis using chain-of-custody procedures on a standard two-week turnaround basis. Nine groundwater samples and two duplicate samples were analyzed for GRO by Alaska Method (AK) 101, DRO by AK 102, and BTEX by EPA Method 8021B. Well RA-MW9 at the Runway Apron was analyzed for VOCs by EPA Method 8260. Fourteen drinking water samples and one duplicate sample were analyzed for VOCs by EPA Method 524.2. Water trip blanks accompanied each work order and were analyzed for VOCs by EPA Method 524.2 and GRO by AK 101. Because VOC analysis by EPA 524.2 and EPA 8260 do not analyze for the same suite of VOCs, the lab recommended Trip Blank WTB1 also be analyzed for VOCs by EPA Method 8260b. Note that Trip Blank WTB1 was submitted as one sample, but the results for EPA 524.2 and EPA 8260B/AK101 were reported separately as Samples WTB1 and TRIP BLANK in the laboratory report, and are listed separately in Table 4.

5.0 DISCUSSION OF RESULTS

The analytical results were compared with applicable cleanup levels listed in the Oil and Other Hazardous Substances Pollution Control Regulations (18 AAC 75, October 2008). Analytical results and applicable cleanup levels are listed in Tables 4 and 5, respectively. Historical data for the groundwater monitoring wells sampled are summarized in Table 6.

5.1 Groundwater Monitoring Wells

5.1.1 Runway Apron Wells

Analytical samples were collected from Monitoring Wells RA-MW-1 and RA-MW-9. Sample RA-MW-9 contained 0.0125 mg/L TCE, which exceeds the ADEC cleanup level of 0.005 mg/L. GRO, DRO, and BTEX were not detected in either sample, and no other VOC analytes were detected the Sample RA-MW-9.

5.1.2 Former MarkAir Site

The groundwater samples collected from Monitoring Wells MW9, MW10, and MW11 did not contain detectable concentrations of GRO, DRO, or BTEX.

5.1.3 ADOT&PF Aniak Maintenance Station

One sample collected from Monitoring Well AST-MW-5 contained a concentration of 5.32 mg/L DRO, which exceeds the 1.5 mg/L ADEC cleanup level. Two samples (duplicate pair) collected from the Monitoring Well PL-MW-9 contained a maximum concentration of 2.91 mg/L DRO, which exceeds the ADEC cleanup level. Concentrations of GRO (maximum 0.243 mg/L), ethylbenzene (maximum 0.00341 mg/L), and total xylenes (maximum 0.0154 mg/L), which are less than the ADEC cleanup levels of 2.2 mg/L GRO, 0.7 mg/L ethylbenzene, and 10 mg/L total xylenes were also measured in the samples.

5.2 Drinking Water Samples

Fourteen drinking water samples and one duplicate were collected and submitted for volatile organic analysis by EPA Method 524.2. Volatile organics were not detected in the samples.

5.3 Quality Assurance/ Quality Control Samples

The project laboratory follows on-going quality assurance/quality control procedures to evaluate conformance to applicable ADEC data quality objectives (DQO). Internal laboratory controls to assess data quality include method blank, matrix spike/matrix spike duplicates (MS/MSD), and laboratory control sample/laboratory control sample duplicates (LCS/LCSD) to determine precision, accuracy, and matrix bias. If a DQO was not met, the project laboratory provides a report specific note identifying the problem in the Case Narrative section of their Laboratory Analysis Report (See Appendix C).

External quality controls included water trip blanks that accompanied the sample containers from the laboratory to the site during sampling activities and back again to SGS, and duplicate sample sets. Two water trip blanks accompanied the sample containers from the laboratory to the site during sampling activities and back again to SGS. Three duplicate sample sets, designated Samples PL-MW9/PL-MW12, MW9/MW13, and DW12/DW13 were collected to assess sampling precision and calculate the relative percent difference (RPD) between the project sample and its corresponding duplicate.

Shannon & Wilson reviewed the SGS data deliverables and completed the ADEC's Laboratory Data Review Checklist for each SGS work order, which are included in Appendix C. QC failures that do not affect the quality or usability of the data are discussed in the Laboratory Data Review Checklists. Key details of the data review are summarized below:

- The detection limit for 1,2-dibromoethane in Sample RA-MW-9 and the associated trip blank analyzed for VOCs by EPA 8260b were greater than the ADEC cleanup level. The

- Methylene chloride was detected in water trip blanks for both work orders. Methylene chloride is a common lab contaminant, and was not detected in the project samples. This detection should not affect the data quality or usability.
- The one water trip blank arrived at the lab with air bubbles in the headspace, potentially biasing the results of the trip blank low. However, the results of the volatile analysis for the associated project samples were below the cleanup level, indicating that cross contamination of volatile analytes had not occurred or had not affected the usability of the project sample results.

6.0 SITE RECONNAISSANCE

Based on our conversations with Aniak ADOT&PF representative Terry Hoffman, the preferred location for future landfarming activities in Aniak would be between the current Runway Apron monitoring wells and the access road to the north. The proposed location is shown on Figure 2. As shown in Photo 6, this site is flat, has open access, and is located several feet above the adjacent runway ditches. Therefore it is less prone to seasonal flooding than the surrounding area. Approximately one acre is currently cleared at the site; two acres or more could be available with additional clearing.

Moffitt Construction of Aniak owns the locally available earthmoving equipment and local gravel borrow pit. The approximate location of the gravel borrow pit is shown on Figure 1. Their earthmoving equipment is brought into service on an as-needed basis, and is available only during summer months. Locally available equipment includes two bucket-equipped front loaders, two off-road dump trucks (approximately 20 cubic yard capacity each), two excavators (3/4 and 5/8 cubic yard bucket capacities, respectively), a 450 bulldozer, and a bucket-equipped Bobcat miniature loader.

7.0 CONCEPTUAL SITE MODELS

Conceptual Site Models (CSMs) were produced to characterize potential risks to human health associated with contaminated media at the investigated sites. The CSMs were completed 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 in Appendix E. The CSMs include discussions of contaminant sources, release mechanisms and exposure routes, potential

receptors, and potentially complete or complete exposure pathways. The discussion in the following sections is based on the current site use. Reevaluation of potentially exposure pathways may be needed based on changes to land use, access, or other site conditions, as discussed in the Human Health Scoping Forms in Appendix E.

The primary release mechanisms at the ADOT&PF Aniak Airport sites are assumed to be historic spills and leaks, direct discharges, degradation of debris and materials, and leaching of contamination into the soil and groundwater. Current potential human receptors include commercial or industrial workers, site visitors or trespassers, and off-site residents. The following compounds have been identified at one or more of the sites included in this groundwater study: GRO, DRO, RRO, BTEX, and TCE.

7.1 Soil

At the Aniak Airport, complete pathways for human exposure include incidental soil ingestion or inhalation of fugitive dust at each of the four sites. The dermal absorption pathway is incomplete. Potential receptors include current and future workers, visitors, and trespassers. If land use changes or construction occurs, these exposure pathways will need to be reevaluated for other human receptors.

- At the Runway Apron Wells, GRO, DRO, RRO, and BTEX have been identified in soil samples. TCE has been identified in water samples, but its extent or concentration in soil has not been investigated. Note that human exposure to soil from this site is reduced because this site is secured from public access.
- At the Former MarkAir Site, GRO, DRO, and BTEX have been identified soil samples.
- Aniak City Shop, DRO and RRO have been identified.
- At ADOT&PF Maintenance Station, DRO was detected in soil samples. Note that in addition to workers, visitors, and trespassers, the nearby off-site residents at the State Trooper building are current potential receptors at this site.

7.2 Groundwater

Contaminated groundwater is present in water samples collected at each site. The ingestion, absorption, or inhalation of contaminants in groundwater are complete pathways for each site. The Runway Apron drinking water well is not in use and drinking water wells are not present at the Former MarkAir site. Therefore the groundwater exposure pathways are only complete for future receptors these sites. The Aniak City Shop and ADOT&PF Maintenance Station sites have drinking water wells in use.

As discussed in Section 5.2, drinking water well samples collected in 2010 in the vicinity of the Aniak Airport were non-detect for VOCs. The risk to construction workers of direct exposure to groundwater is low; depth to groundwater at the Aniak is greater than 20 feet bgs, and therefore construction activities are not likely to encounter contaminated groundwater.

7.3 Air

Because volatile contaminants have been identified in soil at the Aniak Airport sites, inhalation of contaminant gases and/or vapors in outdoor and/or indoor air is a complete pathway. DRO and RRO are the known contaminants at the City Shop; further evaluation of the vapor intrusion/indoor air pathway is generally not required by the ADEC. Note that the Former MarkAir Site building and Building 301 at the ADOT&PF Aniak Maintenance Station are not consistently occupied.

7.4 Surface Water, Sediment, and Biota

Permanent surface water bodies are not present on the Aniak Airport sites. The only water bodies observed during the investigation were seasonal puddles. Contact with contaminated surface water and/or sediment are not current complete pathways at the Aniak Airport. However if land use changes, this pathway may need further evaluation. Note that Aniak is subject to seasonal flooding. Seasonal flooding may also serve as a transport mechanism for contaminated surface water or sediments, if any.

The known contaminants at the Aniak Airport are not bioaccumulative compounds listed in Appendix C of the ADEC CSM guidance, and therefore ingestion of wild or farmed foods is not considered a complete pathway.

8.0 CONCLUSIONS AND RECOMMENDATIONS

On May 17 through 22, 2010, Shannon & Wilson personnel collected water samples from groundwater monitoring wells and drinking water wells in the vicinity of the Aniak Airport for laboratory analysis, and documented the location and condition of additional monitoring wells. Where practical, repairs were made to damaged monitoring wells.

We were unable to locate Wells CS-MW-1 and CS-MW-7 at the Aniak City Shop, MW-12 and RW-1 at the former MarkAir Site, and AST-MW-3 at the ADOT Aniak Maintenance Station. The monitoring wells at the Aniak City Shop contained water columns too small to collect a representative groundwater sample. The usefulness of the City Shop Wells in groundwater monitoring is limited and may be outweighed by their potential risk as a conduit for contaminants to groundwater. One well at the ADOT Aniak Maintenance Station, AST-MW-6,

was obstructed and appeared to have a damaged PVC riser. Decommissioning these wells is recommended.

At the Runway Apron Area, one groundwater sample collected from Monitoring Well RA-MW-9 contained a TCE concentration similar to that found in 2008 (0.133 mg/L TCE in 2008, compared to 0.125 mg/L TCE in 2010). At the ADOT Aniak Maintenance Station, samples from Monitoring Wells AST-MW-5 and PL-MW-9 contained DRO concentrations greater than the ADEC cleanup level. The concentration of DRO in Sample AST-MW-5 was less than the 2004 concentration (5.32 mg/L DRO in 2010, compared to 9.43 mg/L DRO in 2004), while the DRO concentration in Sample Monitoring Well PL-MW-9 was similar to historic concentrations (2.91 mg/L DRO in 2010, compared to 2.41 DRO in 2004). No other groundwater samples contained concentrations of GRO, DRO, or BTEX greater than the ADEC cleanup levels. At the former MarkAir Site, Sample Monitoring Well MW-9 contained DRO and benzene concentrations greater than the ADEC cleanup level in 2004; both were non-detect in the 2010 Sample MW-9. DRO concentrations in Former MarkAir Samples MW-10 and MW-11 also decreased from their 2004 values. No VOC analytes were detected in the drinking water samples. The CSMs prepared for the sites indicate several complete or potentially complete pathways exist at each of the sites, further investigation of these pathways may be warranted.

9.0 CLOSURE AND LIMITATIONS

This report was prepared for the exclusive use of our client 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. They should not be construed as definite conclusions regarding the sites' groundwater quality. It is possible that the areas selected for sampling missed higher levels of petroleum hydrocarbon and/or VOC constituents, although our intention was to sample areas likely to be impacted, in accordance with our ADEC-approved work plan. As a result, the sampling and analysis 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 attachments in Appendix F, *Important Information About Your Geotechnical/Environmental Report*, to clarify the use and limitations of our reports. 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 has not, and 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 hard copies, or you question the authenticity of the report, please contact the undersigned.

We appreciate this opportunity to be of service. Please call Mr. Stafford Glashan, P.E., or the undersigned at (907) 561-2120 with any questions or comments concerning the contents of this report.

Sincerely,

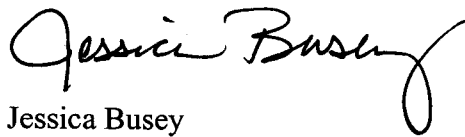
SHANNON & WILSON, INC.

Prepared by:



for: Jake Gano
Environmental Engineer

Reviewed by:



Jessica Busey
Sr. Environmental Scientist



TABLE 1 - MONITORING WELL INVENTORY SUMMARY

| Well No. | Date | Location (See Figures 3 through 7) | Latitude/Longitude† | | Depth (Feet)** | | Comments |
|--|-----------|--|---------------------|----------------|---------------------|-------|---|
| | | | °North | °West | DTW | Total | |
| <u>Runway Apron Monitoring Wells</u> | | | | | | | |
| * RA-MW-1 | 5/18/2010 | Former Runway Apron Tank Farm | 61°34'53.201" | 159°33'06.517" | 23.36 | 27.21 | No lock on well, no damage noted |
| RA-MW-3 | 5/18/2010 | Approximately 60 feet west-southwest of RA-MW-1 | 61°34'53.401" | 159°33'07.725" | 25.04 | 33.46 | No damage noted |
| RA-MW-4 | 5/18/2010 | Approximately 45 feet southwest of RA-MW-1 | 61°34'53.184" | 159°33'07.463" | 24.01 | 29.20 | No damage noted |
| RA-MW-6 | 5/18/2010 | Runway Apron Disposal Pit Area | 61°34'56.076" | 159°33'11.678" | 25.21 | 29.98 | No damage noted |
| RA-MW-8 | 5/18/2010 | Approximately 90 feet southeast of RA-MW-6 | 61°34'55.152" | 159°33'11.505" | 27.51 | 33.67 | 0.27 feet cut from top of casing |
| * RA-MW-9 | 5/18/2010 | Approximately 85 feet west of RA-MW-6 | 61°34'56.237" | 159°33'13.279" | 25.62 | 29.55 | 0.21 feet cut from top of casing (DTW and total depth adjusted) |
| <u>ADOT&PF Aniak City Shop Building</u> | | | | | | | |
| CS-MW-1 | 5/18/2010 | Unable to locate | - | - | - | - | Equipment and gravel fill over former location |
| CS-MW-2 | 5/18/2010 | Approximately 60 feet north of CS-MW-4 | 61°34'24.264" | 159°32'01.799" | 26.65 | 27.41 | No damage noted; low water volume |
| CS-MW-4 | 5/18/2010 | Approximately 72 feet north of northwest city shop building corner | 61°34'23.812" | 159°32'02.230" | 26.52 | 26.67 | Lock rusted shut; cover bolt broken |
| CS-MW-6 | 5/18/2010 | Approximately 60 feet northwest of CS-MW-2 | 61°34'25.069" | 159°32'01.396" | 25.69 | 25.94 | Lock rusted |
| CS-MW-7 | 5/18/2010 | Unable to locate | - | - | - | - | Equipment and gravel fill over former location |
| <u>Former MarkAir Site Monitoring Wells</u> | | | | | | | |
| MW-4 | 5/19/2010 | Gravel parking lot east of former MarkAir building | 61°34'29.809" | 159°32'01.280" | 24.20 | 24.90 | No damage noted |
| MW-5 | 5/19/2010 | Airport taxiway west of former MarkAir building | 61°34'29.766" | 159°32'04.681" | 3.23 to obstruction | - | Well casing fractured - vertical crack, monument frost jacked |
| MW-6 | 5/19/2010 | Airport taxiway west of former MarkAir building | 61°34'39.810" | 159°32'04.505" | 25.13 | 29.07 | 0.19 feet cut from top of casing; well cap damaged and replaced |
| MW-7 | 5/19/2010 | Airport taxiway west of former MarkAir building | 61°34'30.367" | 159°32'04.200" | 25.44 | 27.56 | Cement embedment is jacked from surrounding asphalt; 0.15 feet cut from top of casing |
| MW-8 | 5/18/2010 | Airport taxiway west of former MarkAir building | 61°34'30.421" | 159°32'05.331" | 5.52 to obstruction | - | 0.16 feet cut from top of casing |
| * MW-9 | 5/19/2010 | East of former MarkAir Building | 61°34'30.186" | 159°32'02.703" | 25.42 | 29.43 | No damage noted |
| * MW-10 | 5/19/2010 | ADOT&PF lease lot east of runway | 61°34'27.949" | 159°32'00.089" | 23.76 | 29.41 | No damage noted |
| * MW-11 | 5/19/2010 | ADOT&PF lease lot east of runway | 61°34'27.969" | 159°32'00.631" | 23.69 | 29.32 | No damage noted |
| MW-12 | 5/19/2010 | Unable to locate | - | - | - | - | Potentially covered with fill |
| RW-1 | 5/19/2010 | Unable to locate | - | - | - | - | Potentially covered with fill |
| <u>ADOT&PF Aniak Maintenance Station</u> | | | | | | | |
| * AST-MW-1 | 5/20/2010 | Brush north of existing AST | 61°34'31.867" | 159°31'47.747" | 24.59 | 31.13 | No damage noted |
| AST-MW-3 | 5/21/2010 | Unable to locate | - | - | - | - | Unable to locate |
| * AST-MW-4 | 5/20/2010 | Approximately 94 feet west of AST-MW-1, 43 feet from edge of road | 61°34'31.492" | 159°31'46.454" | 26.51 | 31.46 | No damage noted |
| * AST-MW-5 | 5/20/2010 | Approximately 73 feet east of AST-MW-6 | 61°34'32.268" | 159°31'44.499" | 29.18 | 32.47 | Protective casing loose, well frost jacked, 0.28 feet cut from top of casing |
| AST-MW-6 | 5/20/2010 | Former AST area, south of telephone pole | 61°34'32.458" | 159°31'45.976" | 2.23 to obstruction | - | Standing water with sheen inside stickup protective casing; blockage may be damaged well casing |
| AST-MW-7 | 5/20/2010 | Approximately 94 feet west of AST-MW-6 | 61°34'32.677" | 159°31'47.811" | 23.99 | 24.67 | No damage noted |
| * PL-MW-9 | 5/20/2010 | Former pipeline area, south of building 303 | 61°34'33.036" | 159°31'43.569" | 27.28 | 33.07 | 0.15 feet cut from top of casing |
| PL-MW-10 | 5/20/2010 | Former pipeline area, northwest of building 303 | 61°34'34.417" | 159°31'42.321" | 26.52 | 29.96 | Lock rusted shut; cover bolt broken |
| PL-MW-11 | 5/20/2010 | Former pipeline area, northeast of building 303 | 61°34'34.007" | 159°31'44.859" | 24.28 | 30.02 | Well plug replaced, no damage noted |

| KEY | DESCRIPTION |
|-----|---|
| * | Sample analyzed by project laboratory (See Tables 4 and 5) |
| † | Datum is WSG 1984 |
| ** | Depths listed are after any modifications to the well casings |
| - | Not measured or not applicable |

TABLE 2 - MONITORING WELL SAMPLING LOG

WATER LEVEL DATA

| | Runway Apron Area | | | Former MarkAir Site | | |
|---------------------------------------|-------------------|-----------|-----------|---------------------|-----------|-----------|
| Well Number | RA-DW | RA-MW-1 | RA-MW-9 | MW-9 | MW-10 | MW-11 |
| Date Water Level Measured | 5/17/2010 | 5/18/2010 | 5/18/2010 | 5/19/2010 | 5/19/2010 | 5/19/2010 |
| Time Water Level Measured | 14:14 | 10:20 | 11:56 | 9:35 | 17:08 | 12:05 |
| Measured Depth to Water (ft below MP) | 32.60 | 23.36 | 25.83 | 25.42 | 23.76 | 23.69 |

PURGING DATA

| Well Number | RA-DW | RA-MW-1 | RA-MW-9 | MW-9 | MW-10 | MW-11 |
|---------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Date Sampled | 5/17/2010 | 5/18/2010 | 5/18/2010 | 5/19/2010 | 5/19/2010 | 5/19/2010 |
| Time Sampled | 15:10 | 11:10 | 12:36 | 10:08 | 17:38 | 12:38 |
| Measured Depth to Water (ft below MP) | 32.60 | 23.36 | 25.83 | 25.42 | 23.76 | 23.69 |
| Total Depth of Well (ft below MP) | 37.50 | 27.21 | 29.76 | 29.43 | 29.41 | 29.32 |
| Water Column in Well (ft) | 4.90 | 3.85 | 3.93 | 4.01 | 5.65 | 5.63 |
| Gallons per Foot | 1.46 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| Water Column Volume (gallons) | 7.15 | 0.62 | 0.63 | 0.64 | 0.90 | 0.90 |
| Total Volume Purged (gallons) | 3.9 | 1.6 | 3.2 | 4.0 | 1.9 | 2.2 |
| Purging/Sampling Method | Submersible Pump | Submersible Pump | Submersible Pump | Submersible Pump | Submersible Pump | Submersible Pump |
| Diameter of Well Casing | 6-inch | 2-inch | 2-inch | 2-inch | 2-inch | 2-inch |
| Remarks | Sample DW1 | | | | | |

WATER QUALITY DATA

| WELL NUMBER | RA-DW | RA-MW-1 | RA-MW-9 | MW-9 | MW-10 | MW-11 |
|------------------------------|-------|---------|---------|------|-------|-------|
| Temperature (°C) | 4.35 | 4.10 | 4.68 | 3.82 | 3.39 | 6.24 |
| Specific Conductance (µS/cm) | 192 | 528 | 523 | 647 | 518 | 630 |
| pH (Standard Units) | 6.34 | 5.77 | 5.92 | 6.11 | 5.57 | 5.97 |
| Turbidity (NTU) | 7.68 | 2.67 | 5.06 | 2.80 | 4.59 | 4.64 |

KEY DESCRIPTION

| | |
|-------|-------------------------------|
| °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 - MONITORING WELL SAMPLING LOG

WATER LEVEL DATA

| | ADOT&PF Aniak Maintenance Station | | | | Aniak City Shop |
|---------------------------------------|-----------------------------------|-----------|-----------|-----------|-----------------|
| Well Number | AST-MW1 | AST-MW-4 | AST-MW-5 | PL-MW9 | CS-MW-2 |
| Date Water Level Measured | 5/20/2010 | 5/20/2010 | 5/20/2010 | 5/20/2010 | 5/18/2010 |
| Time Water Level Measured | 14:00 | 14:40 | 12:35 | 11:07 | 16:03 |
| Measured Depth to Water (ft below MP) | 24.60 | 26.51 | 29.88 | 27.43 | 26.65 |

PURGING DATA

| Well Number | AST-MW1 | AST-MW-4 | AST-MW-5 | PL-MW9 | CS-MW-2 |
|---------------------------------------|------------------|------------------|------------------|---------------------|---------|
| Date Sampled | 5/20/2010 | 5/20/2010 | 5/20/2010 | 5/20/2010 | NS |
| Time Sampled | 14:17 | 15:23 | 13:12 | 11:37 | NS |
| Measured Depth to Water (ft below MP) | 24.60 | 26.51 | 29.88 | 27.43 | 26.65 |
| Total Depth of Well (ft below MP) | 31.13 | 31.46 | 32.47 | 33.07 | 27.41 |
| Water Column in Well (ft) | 6.53 | 4.95 | 2.59 | 5.64 | 0.76 |
| Gallons per Foot | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| Water Column Volume (gallons) | 1.04 | 0.79 | 0.41 | 0.90 | 0.12 |
| Total Volume Purged (gallons) | 2.8 | 2.8 | 2.5 | 1.6 | 0.0 |
| 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 | | | | Sheen in purgewater | |

WATER QUALITY DATA

| WELL NUMBER | AST-MW1 | AST-MW-4 | AST-MW-5 | PL-MW9 | CS-MW-2 |
|------------------------------|---------|----------|----------|--------|---------|
| Temperature (°C) | 2.92 | 4.39 | 4.34 | 3.43 | NS |
| Specific Conductance (µS/cm) | 422 | 477 | 609 | 522 | NS |
| pH (Standard Units) | 6.40 | 6.39 | 6.06 | 6.43 | NS |
| Turbidity (NTU) | 2.82 | 3.16 | 11.3 | 7.49 | NS |

KEY DESCRIPTION

| | |
|-------|-------------------------------|
| °C | Degrees Celsius |
| ft | Feet |
| µS/cm | Microsiemens per Centimeter |
| MP | Measuring Point |
| NTU | Nephelometric Turbidity Units |
| - | Not Measured/Not Applicable |

TABLE 3 - DRINKING WATER WELL SAMPLING LOG**SAMPLING DATA**

| Well Number | DW1 | DW2 | DW2(2) | DW3 | DW4 | DW5 | DW6 | DW7 |
|------------------------------|-------------------------------|---------------------|----------------------------|-------------------|------------------------------|---------------------|------------------|---------------------------------------|
| Property | Runway Apron | Aniak Middle School | Aniak Middle School | Aniak High School | ADOT&PF Maintenance Building | Inland Air Building | Salmon Court #13 | Lease Lot Plat 94-2RSn (Aniak Clinic) |
| Sample Location | Drinking Water Well (RA-DW) | Bathroom Faucet | Bathroom Faucet | Bathroom Faucet | Bathroom Faucet | Bathroom Faucet | Kitchen Faucet | Water fountain |
| Water treatment system | No | Yes | Yes | Yes | No | No | No | No |
| Date Sampled | 5/17/2010 | 5/17/2010 | 5/21/2010 | 5/17/2010 | 5/18/2010 | 5/18/2010 | 5/18/2010 | 5/19/2010 |
| Time Sampled | 15:10 | 16:04 | 12:10 | 16:57 | 14:30 | 14:53 | 17:33 | 14:27 |
| Purge time - min | - | 15 | 15 | 16 | 15 | 15 | 15 | 15 |
| Estimated Flow - L/min | - | 9 | 2 | 5 | 5 | 4 | 5 | 2 |
| Temperature (°C) | 4.4 | 32.5 | 12.2 | 25.7 | 21.5 | 10.3 | 12.0 | 8.8 |
| Specific Conductance (µS/cm) | 192 | 259 | 238 | 208 | 178 | 155 | 199 | 220 |
| pH (Standard Units) | 6.34 | 6.68 | 7.82 | 6.62 | 6.47 | 8.22 | 6.99 | 6.73 |
| Turbidity (NTU) | 7.68 | 0.44 | 0.30 | 0.27 | 1.82 | 2.92 | 6.19 | 1.89 |
| Remarks | See Table 2 for sampling data | | Replacement for Sample DW2 | | | | | |

KEY DESCRIPTION

| | |
|-------|-------------------------------|
| °C | Degrees Celsius |
| µS/cm | Microsiemens per Centimeter |
| NTU | Nephelometric Turbidity Units |
| - | Not Measured/Not Applicable |
| L/min | Liters per minute |
| min | Minute |

TABLE 3 - DRINKING WATER WELL SAMPLING LOG**SAMPLING DATA**

| Well Number | DW8 | DW9 | DW10 | DW11 | DW12 | DW14 | DW15 |
|------------------------------|---------------------------------------|-----------------|-------------------|------------------------|-------------------------|------------------------------------|---------------------------------|
| Property | 3 Boundary Avenue (Aniak City Office) | Block 9, Lot 12 | Ikmiq Ct., Lot 25 | State Trooper Building | Block 9, Lots 14 and 15 | 1 Boundary Avenue (Aniak AC Store) | 4 Boundary Avenue (Aniak Lodge) |
| Sample Location | Bathroom Faucet | Kitchen Faucet | Kitchen Faucet | Breakroom Faucet | Basement Well Pumphead | Faucet in Back Room | Bathroom Faucet |
| Water treatment system | No | No | No | Softener and filter | No | No | No |
| Date Sampled | 5/19/2010 | 5/19/2010 | 5/19/2010 | 5/20/2010 | 5/20/2010 | 5/20/2010 | 5/21/2010 |
| Time Sampled | 14:52 | 15:30 | 16:15 | 8:55 | 10:23 | 16:51 | 13:35 |
| Purge time - min | 15 | 4 | 15 | 15 | 1 | 15 | 15 |
| Estimated Flow - L/min | 2 | 4 | 2 | 3 | 11 | 3 | - |
| Temperature (°C) | 17.5 | 8.7 | 8.9 | 15.2 | 10.0 | 5.1 | 8.5 |
| Specific Conductance (µS/cm) | 0 | 222 | 175 | 116 | 180 | 123 | 197 |
| pH (Standard Units) | 6.64 | 6.52 | 6.60 | 7.43 | 6.66 | 6.70 | 9.32 |
| Turbidity (NTU) | 12.30 | 0.71 | 0.74 | 0.74 | 0.61 | 0.14 | 1.25 |
| Remarks | Sulfur odor | | | | Duplicate Sample DW13 | | |

KEY DESCRIPTION

| | |
|-------|-------------------------------|
| °C | Degrees Celsius |
| µS/cm | Microsiemens per Centimeter |
| NTU | Nephelometric Turbidity Units |
| - | Not Measured/Not Applicable |
| L/min | Liters per minute |
| min | Minute |

TABLE 4 - SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

| Parameter Tested | Method* | Cleanup Level (mg/L)** | Sample ID Number^ and Collection Depth in Feet (See Tables 1 and 3 and Figures 3 through 7) | | | | | |
|--------------------------------------|------------------|------------------------|--|-----------------|---------------------|-----------------|----------------|----------------|
| | | | Runway Apron | | Former MarkAir Site | | | |
| | | | RA-MW1 23.36 | RA-MW9 25.83 | MW-9 25.42 | MW-13~ 25.42 | MW-10 23.76 | MW-11 23.69 |
| Gasoline Range Organics (GRO) - mg/L | AK 101 | 2.2 | <0.100 | <0.100 | <0.100 | <0.100 | <0.100 | <0.100 |
| Diesel Range Organics (DRO) - mg/L | AK 102 | 1.5 | <0.838 | <0.874 | <0.838 | <0.994 | <0.833 | <0.842 |
| Aromatic Volatile Organics (BTEX) | | | | | | | | |
| Benzene - mg/L | EPA 8021B /8260B | 0.005 | <0.000500 | <0.000500 | <0.000500 | <0.000500 | <0.000500 | <0.000500 |
| Toluene - mg/L | EPA 8021B /8260B | 1.0 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <0.00200 |
| Ethylbenzene - mg/L | EPA 8021B /8260B | 0.7 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <0.00200 |
| Xylenes (total) - mg/L | EPA 8021B /8260B | 10.0 | <0.00400 | <0.00400 | <0.00400 | <0.00400 | <0.00400 | <0.00400 |
| Volatile Organic Compounds (VOC) | | | | | | | | |
| Methylene chloride - mg/L | EPA 8260B | 0.005 | - | <0.000500 | - | - | - | - |
| Trichloroethene - mg/L | EPA 8260B | 0.005 | - | 0.0125 | - | - | - | - |
| Other VOC analytes | EPA 8260B | Varies | - | 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, October 2008 |
| ~ | Sample MW-13 is a duplicate of MW-9 |
| ^ | Sample ID No. preceded by "32-1-17349-" on the chain of custody form |
| 0.0125 | Reported concentration exceeds groundwater cleanup level |
| <0.100 | Analyte not detected; laboratory reporting limit of 0.100 mg/L |
| - | Not applicable or sample not tested for this analyte |
| mg/L | Milligrams per liter |

TABLE 4 - SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

| Parameter Tested | Method* | Cleanup Level (mg/L)** | Sample ID Number^ and Collection Depth in Feet (See Tables 1 and 3 and Figures 3 through 7) | | | | |
|--------------------------------------|-----------|------------------------|--|------------------|------------------|-----------------|-------------------|
| | | | ADOT&PF Aniak Maintenance Station | | | | |
| | | | AST-MW1 24.60 | AST-MW4 26.51 | AST-MW5 29.88 | PL-MW9 27.43 | PL-MW12~ 27.43 |
| Gasoline Range Organics (GRO) - mg/L | AK 101 | 2.2 | <0.100 | <0.100 | <0.100 | 0.229 J | 0.243 J |
| Diesel Range Organics (DRO) - mg/L | AK 102 | 1.5 | <0.865 | <0.870 | 5.32 | 2.43 | 2.91 |
| Aromatic Volatile Organics (BTEX) | | | | | | | |
| Benzene - mg/L | EPA 8021B | 0.005 | <0.000500 | <0.000500 | <0.000500 | <0.000500 | <0.000500 |
| Toluene - mg/L | EPA 8021B | 1.0 | <0.00200 | <0.00200 | <0.00200 | <0.00200 | <0.00200 |
| Ethylbenzene - mg/L | EPA 8021B | 0.7 | <0.00200 | <0.00200 | <0.00200 | 0.00327 | 0.00341 |
| Xylenes (total) - mg/L | EPA 8021B | 10.0 | <0.00400 | <0.00400 | <0.00400 | 0.0147 | 0.0154 |

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, October 2008 |
| ^ | Sample ID No. preceded by "32-1-17349-" on the chain of custody form |
| † | Sample WTB1 was submitted as one sample on the COC, but was reported as Samples WTB1 and TRIP BLANK in the labor |
| ~ | Sample PL-MW-12 is a duplicate of PL-MW-9 |
| 5.32 | Reported concentration exceeds groundwater cleanup level |
| 0.00327 | Indicates analyte detected |
| <0.100 | Analyte not detected; laboratory reporting limit of 0.100 mg/L |
| - | Not applicable or sample not tested for this analyte |
| mg/L | Milligrams per liter |
| J | Results are estimates due to failed surrogate recovery (biased high) |

TABLE 4 - SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

| Parameter Tested | Method* | Cleanup Level (mg/L)** | Sample ID Number^ and Collection Depth in Feet (See Tables 1 and 3 and Figures 3 through 7) | | |
|--------------------------------------|------------------|------------------------|--|------------|-----------------|
| | | | Quality Control | | |
| | | | WTB1† | TRIP BLANK | WTB2 |
| Gasoline Range Organics (GRO) - mg/L | AK 101 | 2.2 | - | <0.100 | <0.100 |
| Aromatic Volatile Organics (BTEX) | | | | | |
| Benzene - mg/L | EPA 524.2 /8260B | 0.005 | <0.000500 | <0.000400 | <0.000500 |
| Toluene - mg/L | EPA 524.2 /8260B | 1.0 | <0.000500 | <0.00100 | <0.000500 |
| Ethylbenzene - mg/L | EPA 524.2 /8260B | 0.7 | <0.000500 | <0.00100 | <0.000500 |
| Xylenes (total) - mg/L | EPA 524.2 /8260B | 10.0 | <0.00100 | <0.00300 | <0.00100 |
| Volatile Organic Compounds (VOC) | | | | | |
| Methylene chloride - mg/L | EPA 524.2 /8260B | 0.005 | 0.000580 | <0.00500 | 0.000550 |
| Trichloroethene - mg/L | EPA 524.2 /8260B | 0.005 | <0.000500 | <0.00100 | <0.000500 |
| Other VOC analytes | EPA 524.2 /8260B | Varies | 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, October 2008 |
| ^ | Sample ID No. preceded by "32-1-17349-" on the chain of custody form |
| † | Sample WTB1 was submitted as one sample on the COC, but was reported as Samples WTB1 and TRIP BLANK in the laboratory report. |
| 0.000580 | Indicates analyte detected |
| <0.100 | Analyte not detected; laboratory reporting limit of 0.100 mg/L |
| - | Not applicable or sample not tested for this analyte |
| mg/L | Milligrams per liter |

TABLE 5 - SUMMARY OF DRINKING WATER ANALYTICAL RESULTS

| Parameter Tested | Method* | Cleanup Level (mg/L)** | Sample ID Number^ and Collection Date (See Table 1) | | | | | | |
|-----------------------------------|-----------|------------------------|---|----------------------|------------------|------------------|------------------|------------------|-----------|
| | | | Drinking Water Samples | | | | | | |
| | | | DW1 5/17/2010 | DW2 (2) 5/21/2010 | DW3 5/17/2010 | DW4 5/18/2010 | DW5 5/18/2010 | DW6 5/18/2010 | |
| Volatile Organic Compounds (VOCs) | | | | | | | | | |
| Methylene Chloride - mg/L | EPA 524.2 | 0.005 | <0.000500 | <0.000500 | <0.000500 | <0.000500 | <0.000500 | <0.000500 | <0.000500 |
| Other VOC analytes | EPA 524.2 | Varies | ND | ND | ND | ND | ND | ND | ND |

| Parameter Tested | Method* | Cleanup Level (mg/L)** | Sample ID Number^ and Collection Date (See Table 1) | | | | | | |
|-----------------------------------|-----------|------------------------|---|------------------|------------------|-------------------|-------------------|-------------------|-----------|
| | | | Drinking Water Samples | | | | | | |
| | | | DW7 5/19/2010 | DW8 5/19/2010 | DW9 5/19/2010 | DW10 5/19/2010 | DW11 5/20/2010 | DW12 5/20/2010 | |
| Volatile Organic Compounds (VOCs) | | | | | | | | | |
| Methylene Chloride - mg/L | EPA 524.2 | 0.005 | <0.000500 | <0.000500 | <0.000500 | <0.000500 | <0.000500 | <0.000500 | <0.000500 |
| Other VOC analytes | EPA 524.2 | Varies | ND | ND | ND | ND | ND | ND | ND |

| Parameter Tested | Method* | Cleanup Level (mg/L)** | Sample ID Number^ and Collection Date (See Table 1) | | | | |
|-----------------------------------|-----------|------------------------|---|-------------------|-------------------|-------------------|-------------------|
| | | | Drinking Water Samples | | | Quality Control | |
| | | | DW13~ 5/20/2010 | DW14 5/20/2010 | DW15 5/21/2010 | WTB1 5/17/2010 | WTB2 5/21/2010 |
| Volatile Organic Compounds (VOCs) | | | | | | | |
| Methylene Chloride - mg/L | EPA 524.2 | 0.005 | <0.000500 | <0.000500 | <0.000500 | 0.000580 | 0.000550 |
| Other VOC analytes | EPA 524.2 | Varies | ND | ND | ND | ND | ND |

| KEY | DESCRIPTION |
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| | |
|-----------------|---|
| * | See Appendix C for compounds tested, methods, and laboratory reporting limits |
| ** | Groundwater cleanup levels are listed in Table C, 18 AAC 75.345, October 2008 |
| ^ | Sample ID No. preceded by "32-1-17349-" on the chain of custody form |
| <0.00200 | Analyte not detected; laboratory reporting limit of 0.00200 mg/L |
| 0.000580 | Indicates analyte detected |
| - | Not applicable or sample not tested for this analyte |
| mg/L | Milligrams per liter |
| ~ | Sample DW13 is a duplicate of DW12 |

TABLE 6 - HISTORICAL GROUNDWATER ANALYTICAL RESULTS

| Monitoring Well | Date | DTW ft | GRO mg/L | DRO mg/L | Benzene mg/L | Toluene mg/L | Ethylbenzene mg/L | Xylenes mg/L | TCE mg/L |
|--------------------------------------|------------|-----------|--------------|--------------|-----------------|-----------------|----------------------|-----------------|-------------|
| <i>Runway Apron Monitoring Wells</i> | | | | | | | | | |
| 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 | - |
| 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 | - | - | - | - | - |
| 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 |
| 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 |

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| - | Not tested for this parameter |
| <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, October 2008 |
| 0.882 | Indicates analyte detected |
| mg/L | Milligrams per liter |
| DTW | Depth to Water from Top of Well Casing |
| ft | Feet |
| GRO | Gasoline Range Organics |
| DRO | Diesel Range Organics |
| TCE | Trichloroethylene |

TABLE 6 - HISTORICAL GROUNDWATER ANALYTICAL RESULTS

| Monitoring Well | Date | DTW ft | GRO mg/L | DRO mg/L | Benzene mg/L | Toluene mg/L | Ethylbenzene mg/L | Xylenes mg/L | TCE mg/L |
|--------------------------------------|------------|-----------|-------------|-------------|-----------------|-----------------|----------------------|-----------------|----------------|
| <i>Runway Apron Monitoring Wells</i> | | | | | | | | | |
| 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 | - |
| 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 |
| 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 |
| 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 |

| KEY | DESCRIPTION |
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| | |
|----------------|--|
| - | Not tested for this parameter |
| <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, October 2008 |
| mg/L | Milligrams per liter |
| DTW | Depth to Water from Top of Well Casing |
| ft | Feet |
| GRO | Gasoline Range Organics |
| DRO | Diesel Range Organics |
| TCE | Trichloroethylene |

TABLE 6 - HISTORICAL GROUNDWATER ANALYTICAL RESULTS

| Monitoring Well | Date | DTW ft | GRO mg/L | DRO mg/L | Benzene mg/L | Toluene mg/L | Ethylbenzene mg/L | Xylenes mg/L | TCE mg/L |
|---|-----------|-----------|---------------|-------------|-----------------|-----------------|----------------------|-----------------|-------------|
| <i>Former MarkAir Site Monitoring Wells</i> | | | | | | | | | |
| 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 | - | - | - | - | - | - | - |
| 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 | - | - | - | - | - | - | - | - |
| 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 | - |
| 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 | - |

| KEY | DESCRIPTION |
|---------------|--|
| - | Not tested for this parameter |
| <0.0900 | Reported analyte concentration less than laboratory reporting limit of 0.0900 mg/L |
| 0.0924 | Indicates analyte detected |
| mg/L | Milligrams per liter |
| DTW | Depth to Water from Top of Well Casing |
| ft | Feet |
| GRO | Gasoline Range Organics |
| DRO | Diesel Range Organics |
| TCE | Trichloroethylene |

TABLE 6 - HISTORICAL GROUNDWATER ANALYTICAL RESULTS

| Monitoring Well | Date | DTW ft | GRO mg/L | DRO mg/L | Benzene mg/L | Toluene mg/L | Ethylbenzene mg/L | Xylenes mg/L | TCE mg/L |
|---|-----------|-----------|-------------|-------------|-----------------|-----------------|----------------------|-----------------|-------------|
| <i>Former MarkAir Site Monitoring Wells</i> | | | | | | | | | |
| 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 | - |
| 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 | - |
| 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 | - |

| KEY | DESCRIPTION |
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| | |
|--------|--|
| - | Not tested for this parameter |
| <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, October 2008 |
| 0.0980 | Indicates analyte detected |
| mg/L | Milligrams per liter |
| DTW | Depth to Water from Top of Well Casing |
| ft | Feet |
| GRO | Gasoline Range Organics |
| DRO | Diesel Range Organics |
| TCE | Trichloroethylene |

TABLE 6 - HISTORICAL GROUNDWATER ANALYTICAL RESULTS

| Monitoring Well | Date | DTW ft | GRO mg/L | DRO mg/L | Benzene mg/L | Toluene mg/L | Ethylbenzene mg/L | Xylenes mg/L | TCE mg/L |
|--|------------|-----------|--------------|--------------|-----------------|-----------------|----------------------|-----------------|-------------|
| <i>ADOT&PF Aniak Maintenance Station</i> | | | | | | | | | |
| 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 | - |
| 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 | - |
| 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 | - |
| 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 | - |

KEY DESCRIPTION

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|--------------|--|
| - | Not tested for this parameter |
| <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, October 2008 |
| 0.162 | Indicates analyte detected |
| mg/L | Milligrams per liter |
| DTW | Depth to Water from Top of Well Casing |
| ft | Feet |
| GRO | Gasoline Range Organics |
| DRO | Diesel Range Organics |
| TCE | Trichloroethylene |

TABLE 6 - HISTORICAL GROUNDWATER ANALYTICAL RESULTS

| Monitoring Well | Date | DTW ft | GRO mg/L | DRO mg/L | Benzene mg/L | Toluene mg/L | Ethylbenzene mg/L | Xylenes mg/L | TCE mg/L |
|--|------------|-----------|--------------|----------------|-----------------|-----------------|----------------------|-----------------|-------------|
| <i>ADOT&PF Aniak Maintenance Station</i> | | | | | | | | | |
| 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 | - |
| 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 | - |
| 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 | - |
| 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 | - |
| PL-MW12 | 4/4/1999 | 26.48 | <0.0900 | < 0.330 | <0.00050 | <0.0020 | <0.0020 | <0.0020 | - |

KEY DESCRIPTION

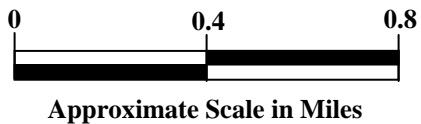
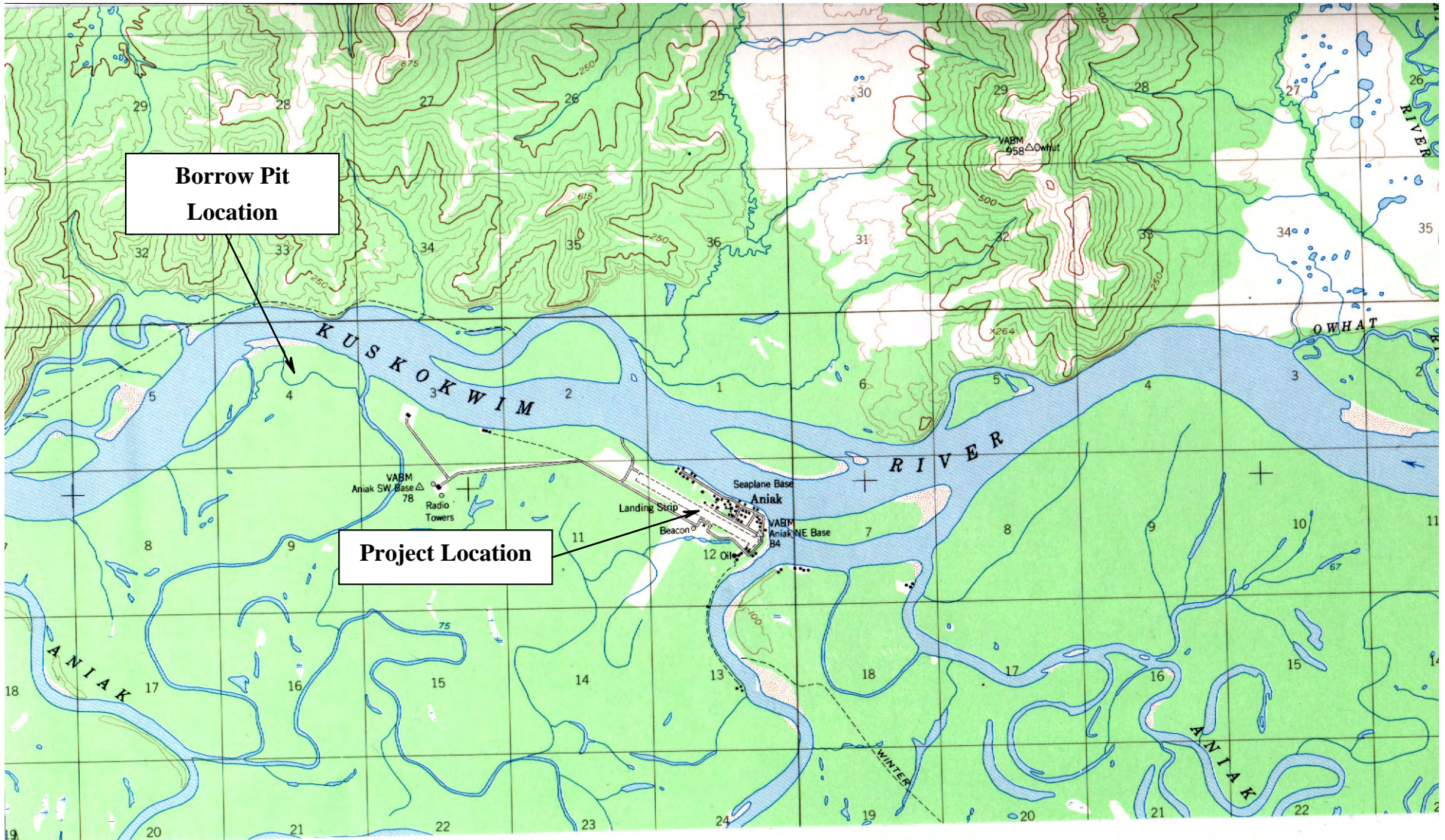
| | |
|--------------|--|
| - | Not tested for this parameter |
| <0.0900 | Reported analyte concentration less than laboratory reporting limit of 0.0900 mg/L |
| 3.39 | Concentration exceeds the groundwater cleanup level listed in Table C, 18 AAC 75.345, October 2008 |
| 0.808 | Indicates analyte detected |
| mg/L | Milligrams per liter |
| DTW | Depth to Water from Top of Well Casing |
| ft | Feet |
| GRO | Gasoline Range Organics |
| DRO | Diesel Range Organics |
| TCE | Trichloroethylene |

TABLE 6 - HISTORICAL GROUNDWATER ANALYTICAL RESULTS

| Monitoring Well | Date | DTW ft | GRO mg/L | DRO mg/L | Benzene mg/L | Toluene mg/L | Ethylbenzene mg/L | Xylenes mg/L | TCE mg/L |
|---|------------|-----------|--------------|--------------|-----------------|-----------------|----------------------|-----------------|-------------|
| <i>ADOT&PF Aniak City Shop Building</i> | | | | | | | | | |
| CS-MW2 | 5/17/2004 | 23.70 | 0.120 | 0.462 | <0.000400 | <0.00100 | <0.00100 | <0.00200 | - |
| | 10/19/2005 | Dry | - | - | - | - | - | - | - |
| | 5/18/2010 | 26.65 | NS | NS | NS | NS | NS | NS | - |
| CS-MW4 | 5/17/2004 | 24.41 | <0.0900 | <0.333 | <0.000500 | <0.00200 | <0.00200 | <0.00200 | - |
| | 10/19/2005 | Dry | - | - | - | - | - | - | - |
| | 5/18/2010 | 26.52 | - | - | - | - | - | - | - |
| CS-MW6 | 5/18/2004 | 23.11 | <0.0900 | <0.333 | <0.000500 | <0.00200 | <0.00200 | <0.00200 | - |
| | 10/19/2005 | Dry | - | - | - | - | - | - | - |
| | 5/18/2010 | 25.69 | - | - | - | - | - | - | - |

| KEY | DESCRIPTION |
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| | |
|--------------|--|
| - | Not tested for this parameter |
| <0.000400 | Reported analyte concentration less than laboratory reporting limit of 0.000400 mg/L |
| 0.120 | Indicates analyte detected |
| mg/L | Milligrams per liter |
| DTW | Depth to Water from Top of Well Casing |
| ft | Feet |
| GRO | Gasoline Range Organics |
| DRO | Diesel Range Organics |
| TCE | Trichloroethylene |
| NS | Not sampled due to low water volume |



Elevation in Feet
 Contour Interval 50 Feet
 Taken From
 Russian Mission C-3
 U.S. Geological Survey



ADOT&PF Aniak Airport
 Aniak, Alaska

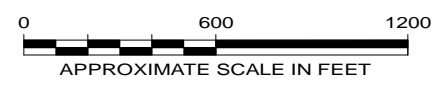
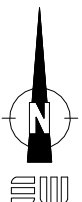
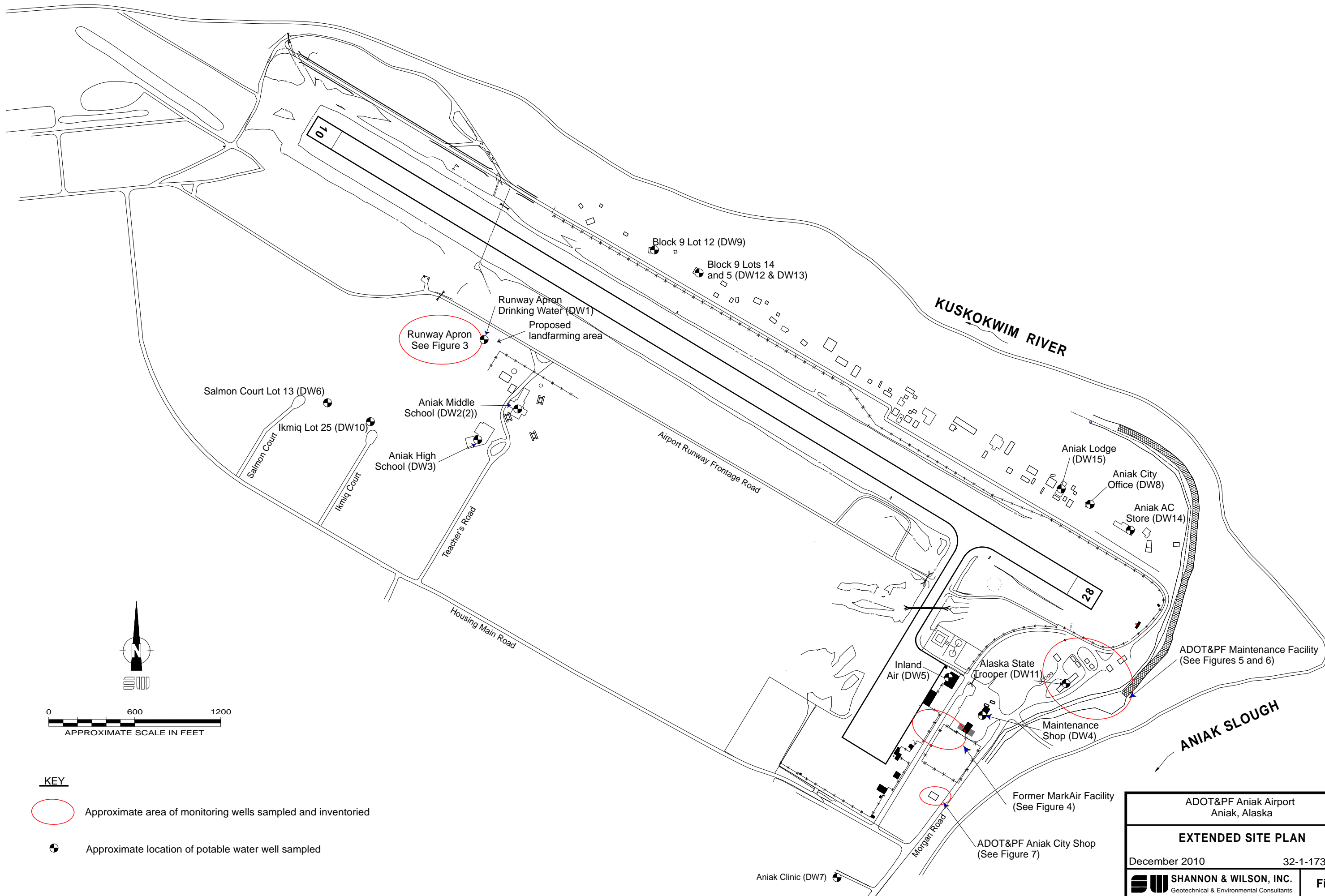
VICINITY MAP

December 2010

32-1-17349-103

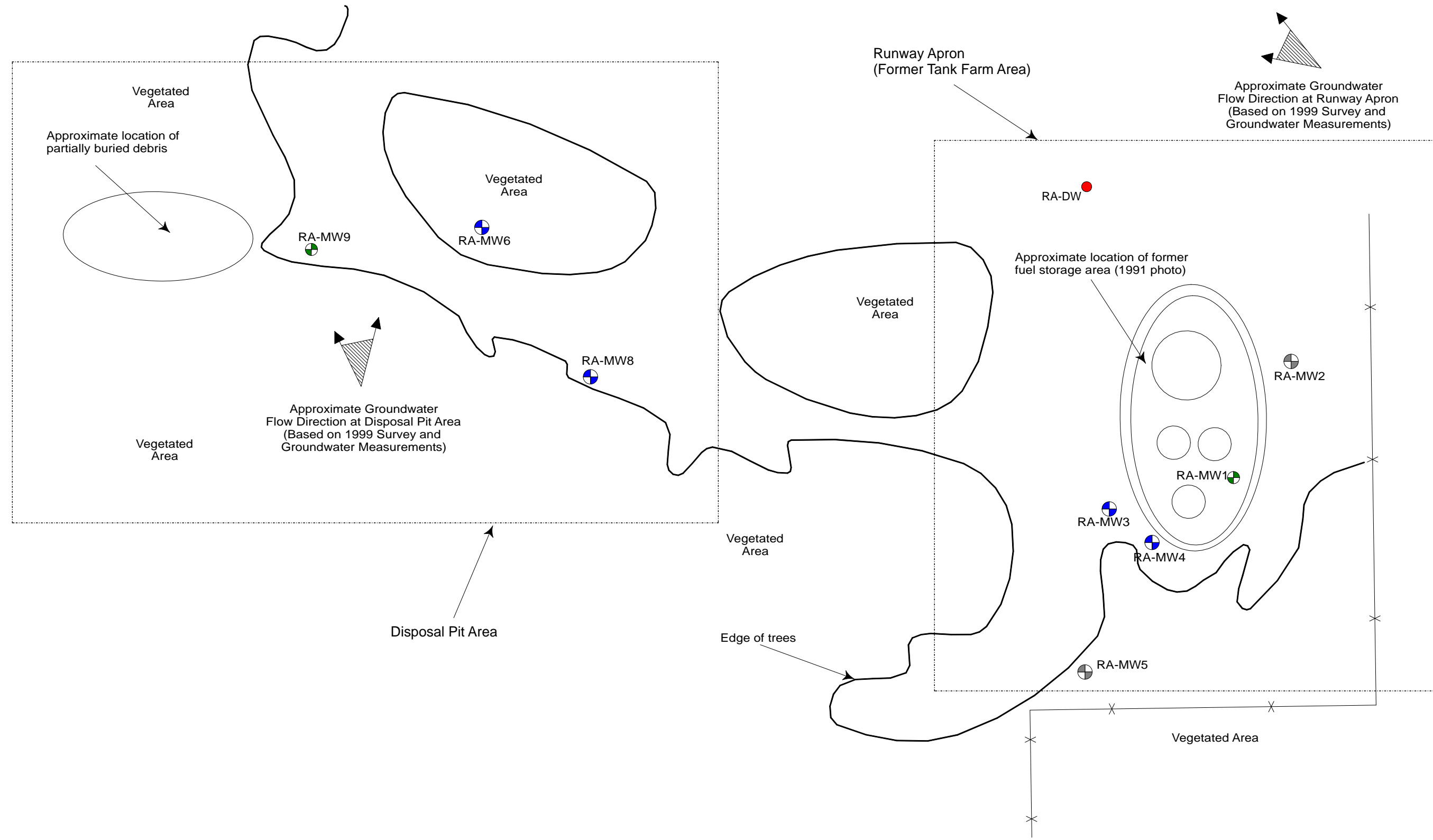
SHANNON & WILSON, INC.
 Geotechnical & Environmental Consultants

Fig. 1







- KEY**
- Approximate area of monitoring wells sampled and inventoried
 - Approximate location of potable water well sampled


| | |
|--|----------------|
| ADOT&PF Aniak Airport Aniak, Alaska | |
| EXTENDED SITE PLAN | |
| December 2010 | 32-1-17349-103 |
| SHANNON & WILSON, INC. <small>Geotechnical & Environmental Consultants</small> | Fig. 2 |

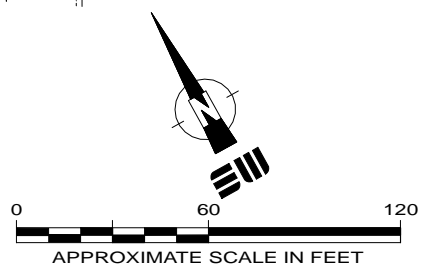
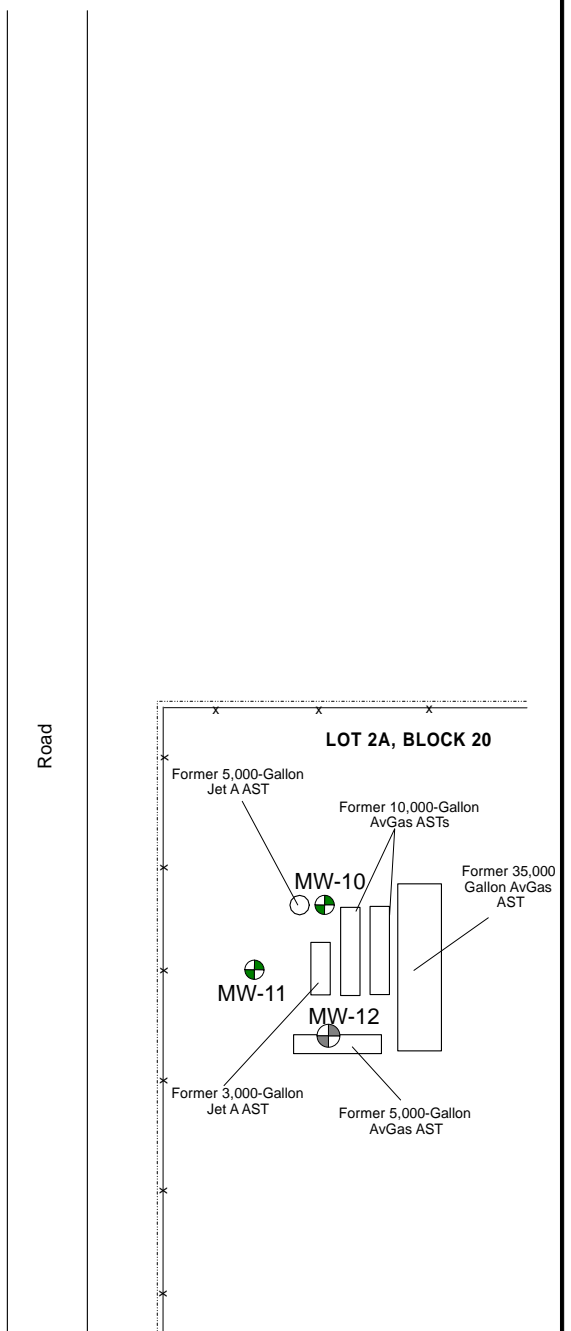
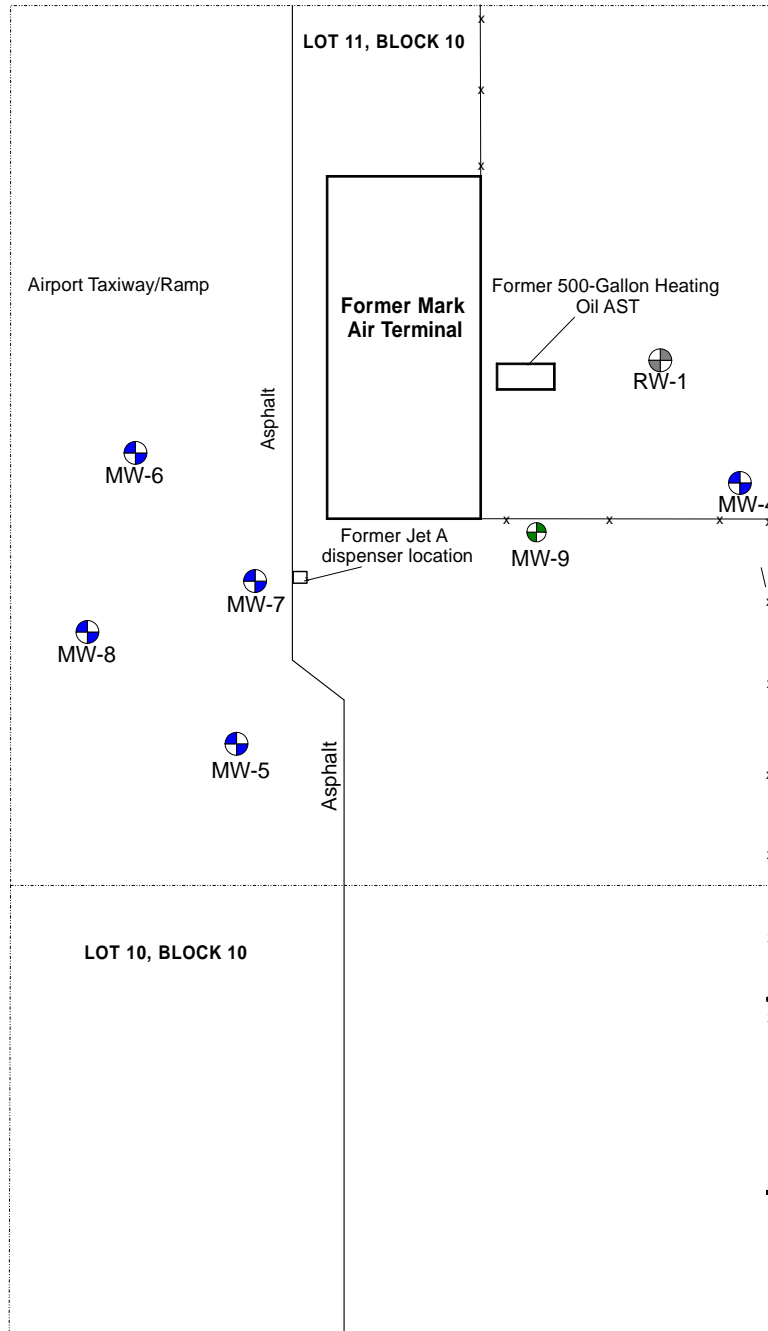


KEY

-  Approximate location of Monitoring Well RA-MW1, sampled as part of the monitoring well sampling program.
-  Approximate location of Monitoring Well RA-MW4, inventoried as part of the monitoring well inventory program.
-  Approximate location of former Monitoring Well RA-MW2
-  DW Approximate location of Runway Apron Drinking Water Well



| | |
|--|----------------|
| ADOT&PFAniak Airport Aniak, Alaska | |
| RUNWAY APRON SITE PLAN | |
| December 2010 | 32-1-17349-103 |
|  SHANNON & WILSON, INC. Geotechnical & Environmental Consultants | Fig. 3 |



- KEY**
- Approximate location of Monitoring Well MW-11, sampled as part of the monitoring well sampling program.
 - MW-5, inventoried as part of the monitoring well inventory program.
 - Approximate location of former Monitoring Well RW-1, that was not found and could not be inventoried and/or sampled

| | |
|--|----------------|
| ADOT&PF Aniak Airport Aniak, Alaska | |
| FORMER MARKAIR SITE PLAN | |
| December 2010 | 32-1-17349-103 |
| SHANNON & WILSON, INC. Geotechnical & Environmental Consultants | Fig. 4 |

AST-MW-7

AST-MW-6
(NS)

AST-MW-3

AST-MW-5

Vegetated Area

Footprints of former
20,000-gallon ASTs

Approximate location of
former aboveground pipeline

AST-MW-4

AST-MW-1

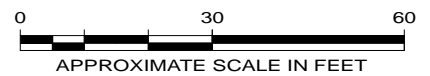
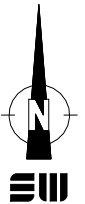
Road

Approximate location of
former 5,000-gallon
gasoline AST

Existing 4,200-gallon
diesel AST

Diesel dispenser shed

Gasoline dispenser shed



KEY

AST-MW-1

Approximate location of Monitoring Well AST-MW-1 to be sampled as part of the monitoring well sampling program.

AST-MW-7

Approximate location of Monitoring Well AST-MW-7 to be inventoried as part of the monitoring well inventory program.

AST-MW-3

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

(NS)

AST-MW-6 not sampled due to obstructed well casing

ADOT&PF Aniak Airport
Aniak, Alaska

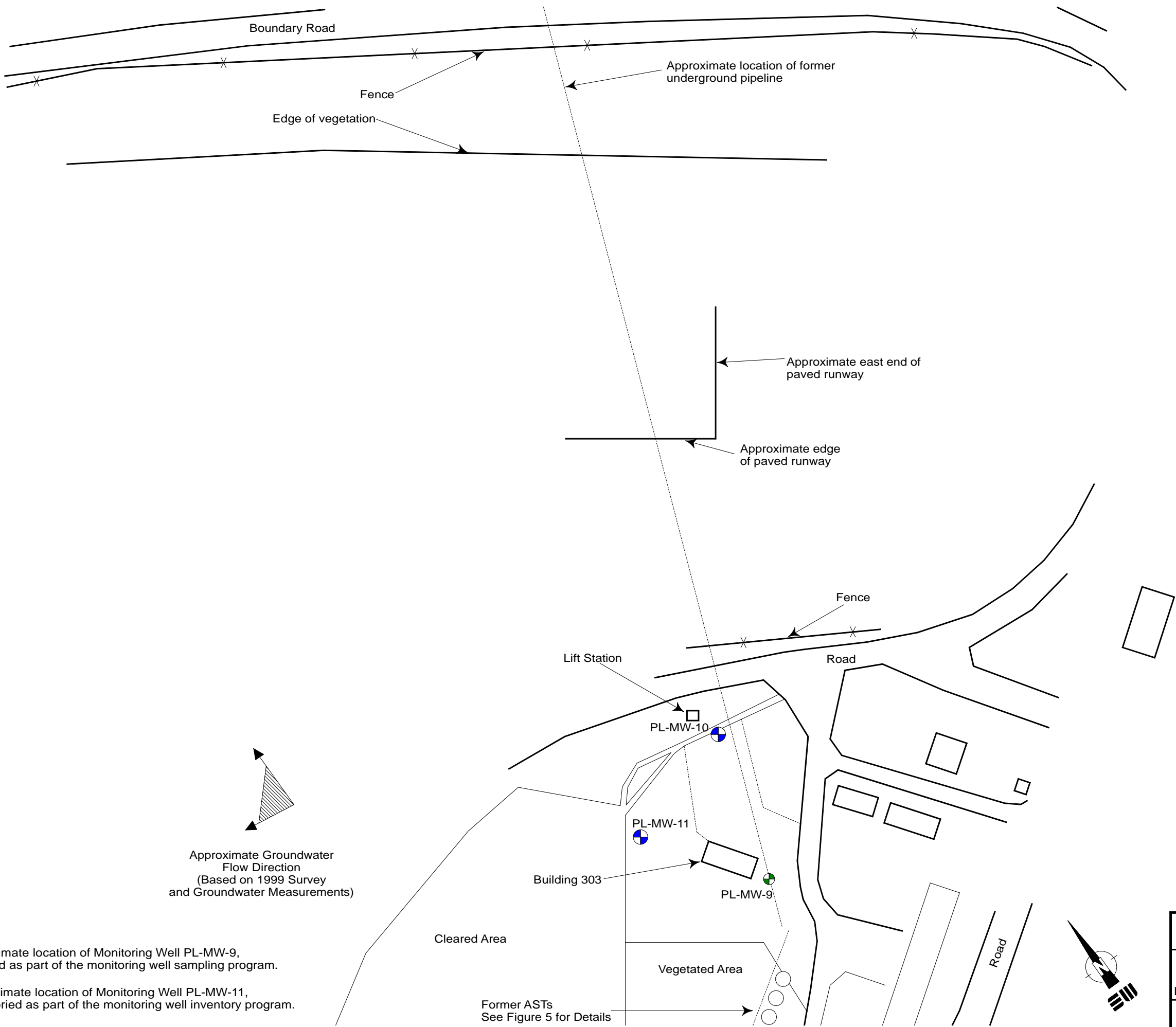
**ADOT&PF MAINTENANCE STATION -
FORMER AST AREA SITE PLAN**

December 2010



32-1-1349-103

SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants


Fig. 5



Approximate Groundwater Flow Direction
(Based on 1999 Survey and Groundwater Measurements)

- KEY**
-  PL-MW9 Approximate location of Monitoring Well PL-MW-9, sampled as part of the monitoring well sampling program.
 -  PL-MW11 Approximate location of Monitoring Well PL-MW-11, inventoried as part of the monitoring well inventory program.

0 100 200
APPROXIMATE SCALE IN FEET

| | |
|--|----------------|
| ADOT&PF Aniak Airport Aniak, Alaska | |
| ADOT&PF MAINTENANCE BUILDING - PIPELINE AREA SITE PLAN | |
| December 2010 | 32-1-17349-103 |
|  SHANNON & WILSON, INC. Geotechnical & Environmental Consultants | Fig. 6 |

Aniak Airport



Vegetated Area



Approximate Location of Leach Field

CS-MW-6

Approximate Location of Septic Tank

CS-MW-2 (NS)

CS-MW-4

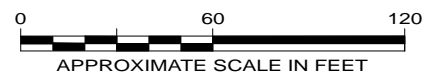
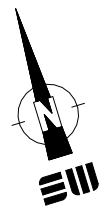
CS-MW-1




CS-MW-7


Sewer Cleanouts

Water Well

Roadway



- KEY**
-  Approximate location of Monitoring Well CS-MW-2. CS-MW-2 Not sampled due to insufficient water column. (NS)
 -  Approximate location of Monitoring Well CS-MW-4, CS-MW-4 inventoried as part of the monitoring well inventory program.
 -  Approximate location of former Monitoring Well CS-MW-7, CS-MW-7 which was not found and could not be inventoried.

| | |
|--|----------------|
| ADOT&PF Aniak Airport Aniak, Alaska | |
| ADOT&PF ANIAK CITY SHOP SITE PLAN | |
| December 2010 | 32-1-17349-103 |
|  SHANNON & WILSON, INC. Geotechnical & Environmental Consultants | Fig. 7 |

APPENDIX A
PHOTO PAGES



Photo 1: Looking northwest, the Runway Apron drinking water well casing was damaged, and did not have a top closure. (5/17/2010)



Photo 2: Looking north, monitoring wells RA-MW-4 (near) and RA-MW-3 (distant) are typical stick-up wells. (5/18/2010)



Photo 3: Wells such as RA-MW-8 were frost-jacked and needed to have their PVC risers cut to close the casing. (5/18/2010)



Photo 4: Looking west, access to Aniak City Shop Monitoring Well CS-MW-2 was limited by debris in the vicinity. (5/18/2010)



Photo 5: Looking northeast, the former MarkAir Monitoring Well MW-7 frost jacking caused the cement embedding to separate from the adjacent asphalt surface. (5/19/2010)



Photo 6: Looking south, the location of the Runway Apron monitoring wells was identified as a potential landfarming location by ADOT&PF. (5/21/2010)

APPENDIX B

FIELD NOTES

Personal Acknowledgement Forms/Pre-Shift Safety Meeting Forms

Individual Field Notes

Water Sampling Logs

Monitoring Well Inventory Form

Drinking Water Well Sampling Form and Site Access Agreements

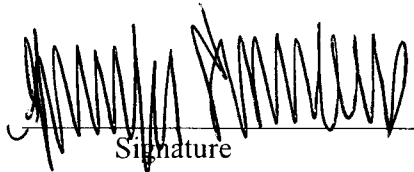
Analytical Sample Collection Log

Photograph Logs

Personal Acknowledgement Forms/Pre-Shift Safety Meeting Forms

PERSONAL ACKNOWLEDGEMENT FORM

As a component of the Safety and Health Program designed to provide personnel safety during the groundwater sampling and survey activities at the Aniak Airport facilities in Aniak, Alaska, you are required to receive training as described in Section 3.0 of the Site Safety and Health Plan prior to work on-site. Additionally, you are required to read and understand the Site Safety and Health Plan. When you have fulfilled these requirements, please sign and date this personnel acknowledgement.


Signature

JENNIFER SIMMONS
Name (printed)

MAY 17, 2010
Date

PERSONAL ACKNOWLEDGEMENT FORM

As a component of the Safety and Health Program designed to provide personnel safety during the groundwater sampling and survey activities at the Aniak Airport facilities in Aniak, Alaska, you are required to receive training as described in Section 3.0 of the Site Safety and Health Plan prior to work on-site. Additionally, you are required to read and understand the Site Safety and Health Plan. When you have fulfilled these requirements, please sign and date this personnel acknowledgement.

Jake Gau
Signature

Jake Gau
Name (printed)

5/17/10
Date

PRE-SHIFT SAFETY MEETING FORM

Date: 5/17/10 Time: 700 Job Number: 32-1-17349-001

Client: ADEC Address: 555 Cordova Street, Anchorage, AK 99501

Site Location: Aniak Airport, Aniak, Alaska

Scope of Work: Groundwater sample collection and monitoring well survey

Protective Clothing/Equipment: Modified Level D, upgrade to Level C as appropriate

Chemical Hazards: GRO, DRO VOCs (including BTEX, PCE, TCE and daughter products) with potential inhalation and skin adsorption exposure pathways. Small volumes of HCL (sample perservative) with potential to burn skin and eyes

Physical Hazards: Bodily injury from equipment; slips, trips, and falls.

Special Equipment: First aid kits available in Shannon and Wilson personell's field kits

Other: _____

Emergency Procedures: Stop work, leave regulated area, call 911 for emergency medical treatment, ambulance, or fire control; possible site evacuation

Hospital: Aniak Clinic Phone: (907) 675-4556 Ambulance Phone: (907)-675-4556 or 911

Hospital Address/Route: Aniak Clinic is the closest medical facility. See Figure A-2
Air lift to Bethel or Anchorage per medical necessity

ATTENDEES

| <u>Print Name</u> |
|--------------------------|
| <u>Jennifer Stummert</u> |
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| <u>Signature</u> |
|--------------------------------|
| <u>[Handwritten Signature]</u> |
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Meeting conducted by: Jahe Gano

[Handwritten Signature]

PRE-SHIFT SAFETY MEETING FORM

Date: 5/18/10 Time: 700 Job Number: 32-1-17349-001

Client: ADEC Address: 555 Cordova Street, Anchorage, AK 99501

Site Location: Aniak Airport, Aniak, Alaska

Scope of Work: Groundwater sample collection and monitoring well survey

Protective Clothing/Equipment: Modified Level D, upgrade to Level C as appropriate

Chemical Hazards: GRO, DRO VOCs (including BTEX, PCE, TCE and daughter products) with potential inhalation and skin adsorption exposure pathways. Small volumes of HCL (sample preservative) with potential to burn skin and eyes

Physical Hazards: Bodily injury from equipment; slips, trips, and falls.

Special Equipment: First aid kits available in Shannon and Wilson personell's field kits

Other: _____

Emergency Procedures: Stop work, leave regulated area, call 911 for emergency medical treatment, ambulance, or fire control; possible site evacuation

Hospital: Aniak Clinic Phone: (907) 675-4556 Ambulance Phone: (907)-675-4556 or 911

Hospital Address/Route: Aniak Clinic is the closest medical facility. See Figure A-2
Air lift to Bethel or Anchorage per medical necessity

ATTENDEES

| <u>Print Name</u> |
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| <u>[Signature]</u> |
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Meeting conducted by: Janke Gunn

[Signature]

PRE-SHIFT SAFETY MEETING FORM

Date: 5/19/10 Time: 700 Job Number: 32-1-17349-001

Client: ADEC Address: 555 Cordova Street, Anchorage, AK 99501

Site Location: Aniak Airport, Aniak, Alaska

Scope of Work: Groundwater sample collection and monitoring well survey

Protective Clothing/Equipment: Modified Level D, upgrade to Level C as appropriate

Chemical Hazards: GRO, DRO VOCs (including BTEX, PCE, TCE and daughter products) with potential inhalation and skin adsorption exposure pathways. Small volumes of HCL (sample preservative) with potential to burn skin and eyes

Physical Hazards: Bodily injury from equipment; slips, trips, and falls.

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Other: _____

Emergency Procedures: Stop work, leave regulated area, call 911 for emergency medical treatment, ambulance, or fire control; possible site evacuation

Hospital: Aniak Clinic Phone: (907) 675-4556 Ambulance Phone: (907)-675-4556 or 911

Hospital Address/Route: Aniak Clinic is the closest medical facility. See Figure A-2
Air lift to Bethel or Anchorage per medical necessity

ATTENDEES

Print Name

SHANNON SIMMONS

Signature

[Handwritten Signature]

Meeting conducted by:

[Handwritten Signature]

[Handwritten Signature]

PRE-SHIFT SAFETY MEETING FORM

Date: 5/20/10 Time: 700 Job Number: 32-1-17349-001

Client: ADEC Address: 555 Cordova Street, Anchorage, AK 99501

Site Location: Aniak Airport, Aniak, Alaska

Scope of Work: Groundwater sample collection and monitoring well survey

Protective Clothing/Equipment: Modified Level D, upgrade to Level C as appropriate

Chemical Hazards: GRO, DRO VOCs (including BTEX, PCE, TCE and daughter products) with potential inhalation and skin adsorption exposure pathways. Small volumes of HCL (sample preservative) with potential to burn skin and eyes

Physical Hazards: Bodily injury from equipment; slips, trips, and falls.

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Other: _____

Emergency Procedures: Stop work, leave regulated area, call 911 for emergency medical treatment, ambulance, or fire control; possible site evacuation

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Hospital Address/Route: Aniak Clinic is the closest medical facility. See Figure A-2
Air lift to Bethel or Anchorage per medical necessity

ATTENDEES

| <u>Print Name</u> |
|------------------------|
| <u>Shirley Simmons</u> |
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| <u>Signature</u> |
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| <u>[Signature]</u> |
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Meeting conducted by: Jahe Guro

[Signature]

PRE-SHIFT SAFETY MEETING FORM

Date: 5/21/10 Time: 700 Job Number: 32-1-17349-001

Client: ADEC Address: 555 Cordova Street, Anchorage, AK 99501

Site Location: Aniak Airport, Aniak, Alaska

Scope of Work: Groundwater sample collection and monitoring well survey

Protective Clothing/Equipment: Modified Level D, upgrade to Level C as appropriate

Chemical Hazards: GRO, DRO VOCs (including BTEX, PCE, TCE and daughter products) with potential inhalation and skin adsorption exposure pathways. Small volumes of HCL (sample preservative) with potential to burn skin and eyes

Physical Hazards: Bodily injury from equipment; slips, trips, and falls.

Special Equipment: First aid kits available in Shannon and Wilson personell's field kits

Other: _____

Emergency Procedures: Stop work, leave regulated area, call 911 for emergency medical treatment, ambulance, or fire control; possible site evacuation

Hospital: Aniak Clinic Phone: (907) 675-4556 Ambulance Phone: (907)-675-4556 or 911

Hospital Address/Route: Aniak Clinic is the closest medical facility. See Figure A-2
Air lift to Bethel or Anchorage per medical necessity

ATTENDEES

Print Name

Signature

Meeting conducted by: Jake Gross

[Signature]

Individual Field Notes

17349-2

5/17/10 Monday

17349 Aniak ADCT GW

①

Weather - periods of sun and rain, 45-55F

750-1200 Jake Gano (JG) and Jennifer Simmons (JS) (StW) mobilize to site. Pick up rental vehicles, ~~two~~^{JG} cargo gear. Unload @ hotel

1200-1230 Lunch, pack up truck.

1240-1510 Decon water from school. Locate Reming Area Drinking water well. Sample well. Collected sample DW1.

1510-1630 Collect drinking water samples from middle school (DW2) and High School (DW3) leave site for 50' dtw meter - 100' does not work in well MW10 at MS.

1650-1730. Remove data loggers at school.

1740. Stop by ERA to confirm they can move a full

55-gallon drum.

1756 off site to Marleys

5/18/10 Tuesday
 650 - JG - attempt to download solinst data - need admin password.

1 DW - Wells w/ previous contamination that require water to be containerized:

Mark Air: MW-9, MW-10. MW11, MW12 < cleanup level

Runway Apron: RA-MW1, RA-MW9

CS: MW-2 < cleanup level

MS: MW-3, MW-5. MW7 no data, PL-MW-9 MW-6 no data, MW-1 no data

Jennifer - calibrate VSI, pack truck

• Eric - ask about computer

• Liz - check on GPS, email cheatsheet

• Jessica - email doc daily summary

-3224 arte

-3220

domain of that computer administrator

830 - Go by school to use computer. Pick up 55-gal drum. Run back by Marley's to get key. Return to Runway Apron for inventory + sampling - see field forms.

1300 - Dump run. Go to hotel to put samples on ice.

1343 Big blue building. Spoke w/ Terry Hoffman (ADOT+PF). Said to stop by and he will show us the wells at Mark Air.

1400 Stop by ADOT building. Terry Hoffman shows us Mark Air wells. Collect sample #11th DW4 from Maintenance building.

Spoke with Steve Marley about Knik Lodge - he says place is uninhabitated and has been for ~ 10 years

1530 At city shop. Speak with Yogi (city of Aniak)

17:00 Leave City Shop

1730 Collect sample DW-6 from Solomon cor. + #13

1747 Check fenced area @ Mark Air. Locked and we don't have the keys

5/19/10 Wednesday

17344 Aniak ADOOT-GW

(8)

Weather: Sunny, 45-65F, wind in the AM.

700-740 Pack trucks calibrate YSI's

740-815 Get swing ties and GPS coordinates from city shop

815 At MarkAir site

815-1106 Sample and inventory wells at the MarkAir site in the vicinity of the runway. Search for wells under gravel pad

1106 Have Terry Hoffman (ADOOT) grants access to fenced MarkAir site

Soil is stockpiled on site relating to contamination found during 2009 sewer line installation. Sample well MW-11. Inventory other wells in vicinity. MW-10 is under a propane trailer. JG-go

to inland aviation and talk to Steve Hill. He agrees to move the trailer this afternoon. Off site.

1300 - Talk w/JEB. Agree to not sample CS-MW-2.

1345-1615 Sample various local drinking water wells. See field forms.

1630-1700 Walk AST area to identify wells.

1700-1750 Propane trailer has been moved. Sample MW-10.

1806-1820 Dump run

1820 - at Markleys. Unload truck, paperwork, etc.

④

Thursday 1844 Arrive ADOT GW

5/20/10

Weather: Period of rain sun, 45-65F

630-800 Prepare daily report. Calibrate instruments

815 Take samples to ERA.

830 Collect sample DW-11 from tracer office

900 Begin inventory of AST area wells.

950 Return to Murphy to get camera card, flashlight. Notes from JEB email.

- Try to sample AC store.

- Try to sample current Frontier/ERA building

- Only worry about Bush if son comes to town

1015-1040 Sample George Givot well.

1040 Return to AST area

5/1/10 Friday

17349 Aniak ADOTGW

(5)

Weather: Sunny, 45-55F

630-830 Prepare field notes, daily summary report.

830. Take load of cargo to airport, dump run.

910 Attempt to call Moffet Construction - no answer, disconnected

Attempt to call City of Aniak - no answer.

Attempt to call Terry Huffman (ADOT+PF) - no answer

910-1100 Gather cargo. Take Jennifer to Airport. Jennifer off-site to Anchorage.

1130-1355 Collect drinking water samples @ Aniak Middle School, Aniak Lodge.

1355 - Meet w/ Terry Huffman (ADOT)

Rich

ADOT has loader that is priority for runway

Moffet has 15-cy truck, 1-2 cts 2 loaders, 1-2 excavators

-5 years ago Mark Air Sol was placed at previous location

1420 - Return to location for photographs.

1450 - Speak w/ Ron Powell (City of Aniak). Says they have 1 loader that is occupied with sewer project and they don't want to rent it out.

1500-1700 Update field notes + forms, clean hotel, pack.

(c)

5/22/10

Saturday

Aniak ADOT GW

600-930 Replace gel ice in samples. Take remaining trash to dump, samples to airport

1100- Settle balance with Manley. Return to airport. Sign manifests to Everts air cargo. JG - return to Anchorage.

1400- 1st attempt to collect samples @ ERA - not there yet.

1645 2nd attempt to collect samples @ ERA - still not there.

Water Sampling Logs



WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 32-1-17349-002 Location: Runway Apron Weather: Sunny
 Well No.: Drinking Well
 Date: 5/19/10 Time Started: 1416 Time Completed: 1510

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1410 Date of Depth Measurement: 5/17/10
 Measuring Point (MP): Top of Steel Protective Casing / Top of PVC Casing / Other: _____
 Diameter of Casing: 6" Product Thickness, if noted: _____
 Total Depth of Well Below MP: 37.50 Well Screen Interval Length: unknown
 Depth-to-Water (DTW) Below MP: 32.60 Depth to Top of Well Screen Below MP: _____
 Water Column in Well: 4.90 (Total Depth of Well Below MP - DTW Below MP)
 Gallons per foot: 0.16
 Gallons in Well: 7.15 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/17/10 Time Started: 1422 Time Completed: 1509
 Gallons Purged: ~4 Depth of Pump Placement: ~35'
 Maximum Drawdown: _____ Pump Rate: 0.25 L/min
 Well Purged Dry: Yes No (If yes, use Well Purged Dry Log)

| Time: | Gallons: | Temp: (°C) | Sp. Cond.: (mS/cm) | DO: AS (mg/L) | pH: (S.U.) | ORP: (mV) | Turb: (ntu) |
|-------|----------|---------------|-----------------------|------------------|---------------|--------------|----------------|
| 1422 | 0.5 | 4.42 | 223 | | 6.71 | | 43.7 |
| 1427 | 0.8 | 4.22 | 223 | | 6.64 | | 43.9 |
| 1432 | 1.1 | 4.23 | 216 | | 6.61 | | 37.4 |
| 1435 | 1.4 | 4.15 | 208 | | 6.54 | | 29.2 |
| 1439 | 1.7 | 4.25 | 205 | | 6.50 | | 25.5 |
| 1444 | 2.0 | 4.25 | 200 | | 6.45 | | 20.0 |
| 1447 | 2.2 | 4.27 | 198 | | 6.41 | | 16.2 |
| 1451 | 2.5 | 4.33 | 197 | | 6.40 | | 14.1 |
| 1454 | 2.8 | 4.30 | 196 | | 6.37 | | 13.2 |

SAMPLING DATA

Odor: None Color: sl. yellow
 Sample Designation: DWA Time / Date: 1510
 Duplicate Sample Designation: _____ Time / Date: _____
 Evacuation Method: Decontaminated Submersible Pump / Other: New pump
 Sampling Method: Decontaminated Submersible Pump / Other: _____
 Remarks: No visible contamination or odor - discharged to ground surface
 Sampling Personnel: Jake Gans/Jennifer Simmons

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.64
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 32-1-17349-002 Location: Aniak Runway Apron Weather: Sunny ~ 55F
Well No.: Drinking Water Well
Date: 5/17/08 Time Started: 1416 Time Completed: 1510

PURGING DATA CONTINUED

| Time: | Gallons: | Temp: (°C) | Sp. Cond.: (mS/cm) | pH: (S.U.) | ORP: (mV) | Turb: (ntu) |
|-------|----------|---------------|-----------------------|---------------|--------------|----------------|
| 1458 | 3.1 | 4.30 | 194 | 6.36 | | 11.2 |
| 1501 | 3.4 | 4.34 | 194 | 6.35 | | 9.52 |
| 1504 | 3.7 | 4.33 | 193 | 6.34 | | 8.48 |
| 1507 | 3.9 | 4.35 | 192 | 6.34 | | 7.68 |
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Remarks: _____

Sampling Personnel: Jake Gano Jennifer Simmons

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.64
ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 32-1-17349-002 Location: Runway Kyrion Weather: Sunny, 45° Clear

Well No.: RA-MW1

Date: 5/18/2010 Time Started: 10:17 Time Completed: 11:12

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 10:20 Date of Depth Measurement: 5/18/2010
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other: TOC
 Diameter of Casing: 2 Product Thickness, if noted: -
 Total Depth of Well Below MP: 27.21 Well Screen Interval Length: Unknown
 Depth-to-Water (DTW) Below MP: 23.36 Depth to Top of Well Screen Below MP: -
 Water Column in Well: 3.85 (Total Depth of Well Below MP - DTW Below MP)
 Gallons per foot: 0.16
 Gallons in Well: 0.616 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/18/10 Time Started: 10:50 Time Completed: 11:07
 Gallons Purged: 1.6 Depth of Pump Placement: 26'
 Maximum Drawdown: 7m Pump Rate: 0.24/min
 Well Purged Dry: Yes No (If yes, use Well Purged Dry Log)

| Time: | Gallons: | Temp: (°C) | Sp. Cond.: (mS/cm) | DQ: (mg/L) | pH: (S.U.) | ORP: (mV) | Turb: (ntu) |
|-------|----------|---------------|-----------------------|---------------|---------------|--------------|----------------|
| 10:52 | 0.5 | 4.10 | 0.521 | | 5.80 | | 8.34 |
| 10:55 | 0.8 | 4.12 | 0.516 | | 5.77 | | 3.87 |
| 10:56 | 1.0 | 4.06 | 0.519 | | 5.77 | | 11.6 |
| 11:01 | 1.2 | 4.19 | 0.522 | | 5.76 | | 8.68 |
| 11:04 | 1.4 | 4.14 | 0.524 | | 5.77 | | 4.17 |
| 11:07 | 1.6 | 4.23 | 0.528 | | 5.77 | | 2.67 |
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SAMPLING DATA

Odor: none Color: clear
 Sample Designation: RA-MW-1 Time / Date: 5/18/2010 11:10
 Duplicate Sample Designation: Time / Date:
 Evacuation Method: Decontaminated Submersible Pump / Other:
 Sampling Method: Decontaminated Submersible Pump Other:
 Remarks: Unable to measure DTW during purging - not enough room in well

Sampling Personnel: Jake Guno and Jennifer Simmons

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.64
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 32-1-17349-002 Location: Runway Apron Weather: Sunny, 60F

Well No.: RA-MW9

Date: 5/18/2010 Time Started: 1203 Time Completed: 1235

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1156 Date of Depth Measurement: 5/18/10
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other: _____
 Diameter of Casing: 2" Product Thickness, if noted: _____
 Total Depth of Well Below MP: 29.76 Well Screen Interval Length: Unknown
 Depth-to-Water (DTW) Below MP: 25.83 Depth to Top of Well Screen Below MP: -
 Water Column in Well: 3.93 (Total Depth of Well Below MP - DTW Below MP)
 Gallons per foot: 0.16
 Gallons in Well: 0.63 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/18/10 Time Started: 1203 Time Completed: 1229
 Gallons Purged: 4 Depth of Pump Placement: ~27
 Maximum Drawdown: TPM Pump Rate: 0.254/min
 Well Purged Dry: Yes No (If yes, use Well Purged Dry Log)

| Time: | Gallons: | Temp: (°C) | Sp. Cond.: (mS/cm) | DO: (mg/L) | pH: (S.U.) | ORP: (mV) | Turb: (ntu) |
|-------|----------|---------------|-----------------------|---------------|---------------|--------------|----------------|
| 12:05 | 0.2 | 5.53 | 0.515 | | 6.03 | | 618 |
| 12:08 | 0.5 | 4.66 | 0.513 | | 6.00 | | 147 |
| 12:11 | 0.8 | 4.78 | 0.511 | | 5.98 | | 54.1 |
| 12:14 | 1.1 | 4.61 | 0.515 | | 5.97 | | 169 |
| 12:17 | 1.4 | 4.73 | 0.516 | | 5.96 | | 84.2 |
| 12:20 | 1.7 | 4.73 | 0.517 | | 5.96 | | 47.2 |
| 12:23 | 2.0 | 4.69 | 0.518 | | 5.95 | | 18.8 |
| 12:26 | 2.3 | 4.65 | 0.519 | | 5.94 | | 13.2 |
| 12:29 | 2.6 | 4.72 | 0.519 | | 5.93 | | 7.29 |

SAMPLING DATA

Odor: None Color: tan, turbid
 Sample Designation: RA-MW9 Time / Date: 12:36 5/18/2010
 Duplicate Sample Designation: _____ Time / Date: _____
 Evacuation Method: Decontaminated Submersible Pump / Other: _____
 Sampling Method: Decontaminated Submersible Pump / Other: _____
 Remarks: _____

Sampling Personnel: Jake Gano Jennifer Simmons

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.64
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



Shannon & Wilson, Inc.

WATER SAMPLING LOG

Job No: 32-1-17349-002 Location: Binnway Apion Weather: Sunny 60 F
 Well No.: RA-MW9
 Date: 5/18/2010 Time Started: 12:03 Time Completed: 12:35

PURGING DATA CONTINUED

| Time: | Gallons: | Temp: (°C) | Sp. Cond.: (mS/cm) | pH: (S.U.) | ORP: (mV) | Turb: (ntu) |
|--------------|------------|-------------|--------------------|-------------|-----------|-------------|
| <u>12:32</u> | <u>2.9</u> | <u>4.71</u> | <u>0.520</u> | <u>5.92</u> | | <u>4.46</u> |
| <u>12:35</u> | <u>3.2</u> | <u>4.68</u> | <u>0.523</u> | <u>5.42</u> | | <u>5.06</u> |
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Remarks: _____

Sampling Personnel: Jake Gano, Jennifer Timmons

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.64
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 32-1-17349-002 Location: Aniak CS Weather: Cloudy, 60F
Well No.: CS-MW-2
Date: 5/18/10 Time Started: 1638 Time Completed: _____

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1603 Date of Depth Measurement: 5/18/10
Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other: _____
Diameter of Casing: 2 Product Thickness, if noted: _____
Total Depth of Well Below MP: 27.41 Well Screen Interval Length: Unknown
Depth-to-Water (DTW) Below MP: 26.65 Depth to Top of Well Screen Below MP: _____
Water Column in Well: 0.76 (Total Depth of Well Below MP - DTW Below MP)
Gallons per foot: 0.16
Gallons in Well: 0.13 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: _____ Time Started: 1638 Time Completed: _____
Gallons Purged: _____ Depth of Pump Placement: 27'
Maximum Drawdown: _____ Pump Rate: _____
Well Purged Dry: Yes No (If yes, use Well Purged Dry Log)

| Time: | Gallons: | Temp: (°C) | Sp. Cond.: (mS/cm) | DO: (mg/L) | pH: (S.U.) | ORP: (mV) | Turb: (ntu) |
|-------|----------|---------------|-----------------------|---------------|---------------|--------------|----------------|
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ |

SAMPLING DATA

Odor: _____ Color: _____
Sample Designation: _____ Time / Date: _____
Duplicate Sample Designation: _____ Time / Date: _____
Evacuation Method: Decontaminated Submersible Pump / Other: _____
Sampling Method: Decontaminated Submersible Pump / Other: _____
Remarks: Attempt to sample - insufficient water
Sampling Personnel: John Gano / Jennifer Simmons

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.64
ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 32-1-17349-002 Location: Aniah Marsh Weather: Windy, 45F
 Well No.: MW-9
 Date: 5/19/10 Time Started: 9:35 Time Completed: 10:26

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 9:35 Date of Depth Measurement: 5/19/10
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other: _____
 Diameter of Casing: 2" Product Thickness, if noted: -
 Total Depth of Well Below MP: 29.43 Well Screen Interval Length: unknown
 Depth-to-Water (DTW) Below MP: 25.42 Depth to Top of Well Screen Below MP: -
 Water Column in Well: 4.01 (Total Depth of Well Below MP - DTW Below MP)
 Gallons per foot: 0.16
 Gallons in Well: 0.64 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/19/10 Time Started: 9:35 Time Completed: 10:03
 Gallons Purged: 9.5 Depth of Pump Placement: 28
 Maximum Drawdown: NM Pump Rate: ~0.1 L/min
 Well Purged Dry: Yes No (If yes, use Well Purged Dry Log)

| Time: | Gallons: | Temp: (°C) | Sp. Cond.: (mS/cm) | DO: (mg/L) | pH: (S.U.) | ORP: (mV) | Turb: (ntu) |
|-------|----------|---------------|-----------------------|---------------|---------------|--------------|----------------|
| 9:38 | 0.2 | 4.01 | 0.757 | | 6.18 | | 59.7 |
| 9:43 | 0.4 | 3.68 | 0.711 | | 6.13 | | 27.1 |
| 9:48 | 0.8 | 3.57 | 0.680 | | 6.12 | | 21.4 |
| 9:53 | 2.0 | 3.42 | 0.658 | | 6.10 | | 3.09 |
| 9:58 | 2.8 | 3.61 | 0.656 | | 6.10 | | 5.85 |
| 10:03 | 4.0 | 3.82 | 0.647 | | 6.11 | | 2.80 |
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SAMPLING DATA

Odor: sewage Color: sl. gray
 Sample Designation: MW-9 Time / Date: 10:08 5/19/10
 Duplicate Sample Designation: MW-13 Time / Date: 10:39 5/19/10
 Evacuation Method: Decontaminated Submersible Pump / Other: _____
 Sampling Method: Decontaminated Submersible Pump / Other: _____
 Remarks: _____

Sampling Personnel: Jake Gano Jennifer Simms

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.64
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 32-1-17349-002 Location: Aniak Marsh Air Weather: Sunny, 65F

Well No.: MW-11

Date: 5/19/10 Time Started: 1212 Time Completed: 1236

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1205 Date of Depth Measurement: 5/19/10
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:
 Diameter of Casing: 2" Product Thickness, if noted: —
 Total Depth of Well Below MP: 24.32 Well Screen Interval Length: unknown
 Depth-to-Water (DTW) Below MP: 23.69 Depth to Top of Well Screen Below MP: —
 Water Column in Well: 5.63 (Total Depth of Well Below MP - DTW Below MP)
 Gallons per foot: 0.16
 Gallons in Well: 0.90 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/19/10 Time Started: 1212 Time Completed: 1236
 Gallons Purged: 3 Depth of Pump Placement: 28
 Maximum Drawdown: NOT ON NM Pump Rate: 0.2 L/min
 Well Purged Dry: Yes No (If yes, use Well Purged Dry Log)

| Time: | Gallons: | Temp: (°C) | Sp. Cond.: (mS/cm) | DO: (mg/L) | pH: (S.U.) | ORP: (mV) | Turb: (ntu) |
|-------|----------|---------------|-----------------------|---------------|---------------|--------------|----------------|
| 1216 | 0.2 | 5.92 | 0.729 | | 5.96 | | 36.9 |
| 1221 | 0.8 | 5.57 | 0.644 | | 5.94 | | 10.5 |
| 1226 | 1.2 | 5.96 | 0.631 | | 5.95 | | 7.91 |
| 1231 | 1.8 | 6.16 | 0.630 | | 5.95 | | 6.37 |
| 1236 | 2.2 | 6.24 | 0.630 | | 5.97 | | 4.64 |
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SAMPLING DATA

Odor: none w/ sewage Color: clear
 Sample Designation: MW-11 Time / Date: 1238 5/19/10
 Duplicate Sample Designation: — Time / Date: —
 Evacuation Method: Decontaminated Submersible Pump / Other:
 Sampling Method: Decontaminated Submersible Pump / Other:
 Remarks: —

Sampling Personnel: John Gano Jennifer Simmons

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.64
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 32-1-17349-002 Location: Aniak Marsh Air Weather: Sunny, 65F
 Well No.: MW-10
 Date: 5/19/10 Time Started: 1720 Time Completed: 1730

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1708 Date of Depth Measurement: 5/19/10
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:
 Diameter of Casing: 2" Product Thickness, if noted: -
 Total Depth of Well Below MP: 29.41 Well Screen Interval Length: unknown
 Depth-to-Water (DTW) Below MP: 23.76 Depth to Top of Well Screen Below MP: -
 Water Column in Well: 5.65 (Total Depth of Well Below MP - DTW Below MP)
 Gallons per foot: 0.14
 Gallons in Well: 0.904 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/19/10 Time Started: 1720 Time Completed: 1738
 Gallons Purged: 3 Depth of Pump Placement: 28'
 Maximum Drawdown: 0.15' Pump Rate: 0.32/min
 Well Purged Dry: Yes No (If yes, use Well Purged Dry Log)

| Time: | Gallons: | Temp: (°C) | Sp. Cond.: (mS/cm) | DO: (mg/L) | pH: (S.U.) | ORP: (mV) | Turb: (ntu) | DTW |
|-------|----------|---------------|-----------------------|---------------|---------------|--------------|----------------|-------|
| 1723 | 0.3 | 4.49 | 0.522 | | 5.72 | | 198 | 23.88 |
| 1728 | 0.7 | 4.19 | 0.516 | | 5.67 | | 13.0 | 23.90 |
| 1731 | 0.9 | 3.72 | 0.516 | | 5.64 | | 7.80 | 23.40 |
| 1734 | 1.2 | 3.36 | 0.518 | | 5.62 | | 7.33 | |
| 1737 | 1.9 | 3.38 | 0.518 | | 5.57 | | 4.59 | 23.91 |
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SAMPLING DATA

Odor: sewage Color: clear
 Sample Designation: MW-10 Time / Date: 1738 5/19/10
 Duplicate Sample Designation: - Time / Date: -
 Evacuation Method: Decontaminated Submersible Pump / Other:
 Sampling Method: Decontaminated Submersible Pump / Other:

Remarks: _____

Sampling Personnel: Julie Gano + Jennifer Simmons

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.64
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 32-1-17349-002 Location: Amak AST Weather: Cloudy, some rain, 45F

Well No.: PL-MW-9

Date: 5/20/10 Time Started: 1109 Time Completed: 1137

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1107 Date of Depth Measurement: 5/20/10
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:
 Diameter of Casing: 2" Product Thickness, if noted: none noted
 Total Depth of Well Below MP: 33.07 Well Screen Interval Length: unknown
 Depth-to-Water (DTW) Below MP: 27.43' Depth to Top of Well Screen Below MP: unknown
 Water Column in Well: 5.64 (Total Depth of Well Below MP - DTW Below MP)
 Gallons per foot: 0.16
 Gallons in Well: 0.90 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/20/10 Time Started: 1109 Time Completed: 1137
 Gallons Purged: ~2' Depth of Pump Placement: ~30
 Maximum Drawdown: 0.19' Pump Rate: 0.25L/min; 0.14min/dur 1114
 Well Purged Dry: Yes No (If yes, use Well Purged Dry Log)

| Time: | Gallons: | Temp: (°C) | Sp. Cond.: (mS/cm) | DO: (mg/L) | pH: (S.U.) | ORP: (mV) | Turb: (ntu) | DTW |
|-------|----------|------------|--------------------|------------|------------|-----------|-------------|-------|
| 1111 | 0.3 | 3.90 | 0.525 | | 6.34 | | 03.7 | 27.64 |
| 1114 | 0.5 | 4.00 | 0.525 | | 6.34 | | 21.0 | 27.59 |
| 1119 | 0.6 | 3.90 | 0.534 | | 6.38 | | 11.1 | 27.55 |
| 1123 | 0.8 | 4.26 | 0.529 | | 6.39 | | 9.83 | |
| 1126 | 1.0 | 3.96 | 0.530 | | 6.43 | | 15.8 | |
| 1129 | 1.1 | 3.75 | 0.531 | | 6.43 | | 7.56 | 27.60 |
| 1132 | 1.3 | 3.56 | 0.528 | | 6.43 | | 8.07 | |
| 1135 | 1.6 | 3.43 | 0.522 | | 6.45 | | 7.49 | |

SAMPLING DATA

Odor: hydrocarbon Color: clear
 Sample Designation: PL-MW-9 Time / Date: 1137
 Duplicate Sample Designation: PL-MW-12 Time / Date: 1150
 Evacuation Method: Decontaminated Submersible Pump / Other:
 Sampling Method: Decontaminated Submersible Pump / Other:
 Remarks: * DTW w/pump in well before purging. Screen in purge water-
 Sampling Personnel: Jake Graw + Jennifer Simon

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.64
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 32-1-17349-002 Location: AST-MW-5 Weather: Cloudy, windy 50F
 Well No.: AST-MW-5
 Date: 5/20/10 Time Started: 1240 Time Completed: 1308

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1239 Date of Depth Measurement: 5/20/10
 Measuring Point (MP) ~~Top of PVC Casing~~ / Top of Steel Protective Casing / Other: _____
 Diameter of Casing: 2" Product Thickness, if noted: none noted
 Total Depth of Well Below MP: ~~29.88~~^{32.47} Well Screen Interval Length: unknown
 Depth-to-Water (DTW) Below MP: ~~29.88~~ Depth to Top of Well Screen Below MP: unknown
 Water Column in Well: ~~32.47~~^{2.59} (Total Depth of Well Below MP - DTW Below MP)
 Gallons per foot: 0.16
 Gallons in Well: 6.41 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/20/10 Time Started: 1240 Time Completed: 13:08
 Gallons Purged: 2.5 Depth of Pump Placement: 30.5'
 Maximum Drawdown: 0.08 Pump Rate: 0.25 L/min
 Well Purged Dry: Yes No (If yes, use Well Purged Dry Log)

| Time: | Gallons: | Temp: (°C) | Sp. Cond.: (mS/cm) | DO: (mg/L) | pH: (S.U.) | ORP: (mV) | Turb: (ntu) | DTW |
|-------|----------|---------------|-----------------------|---------------|---------------|--------------|----------------|-------|
| 1247 | 0.5 | 4.44 | 0.589 | | 6.05 | | 21.0 | 29.86 |
| 1250 | 1.0 | 4.41 | 0.596 | | 6.04 | | 18.8 | 29.80 |
| 1253 | 1.5 | 4.46 | 0.600 | | 6.04 | | 19.6 | ↓ |
| 1256 | 1.8 | 4.40 | 0.604 | | 6.05 | | 15.7 | 29.82 |
| 1259 | 2.0 | 4.45 | 0.606 | | 6.05 | | 13.7 | 29.81 |
| 1302 | 2.2 | 4.47 | 0.607 | | 6.05 | | 11.9 | 29.82 |
| 1305 | 2.4 | 4.42 | 0.604 | | 6.06 | | 11.6 | |
| 1308 | 2.5 | 4.34 | 0.609 | | 6.06 | | 11.3 | 29.84 |

SAMPLING DATA

Odor: slight fuel odor Color: clear
 Sample Designation: AST-MW-5 Time / Date: 13:12 5/20/2010
 Duplicate Sample Designation: _____ Time / Date: _____
 Evacuation Method: ~~Decontaminated Submersible Pump~~ / Other: _____
 Sampling Method: ~~Decontaminated Submersible Pump~~ / Other: _____

Remarks: _____

Sampling Personnel: Jake Grams + Jennifer Simmons

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.64
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 32-1-17349-002 Location: Aniak - AST Weather: cloudy, 50F
 Well No.: AST-MW-1
 Date: 5/20/10 Time Started: 1401 Time Completed: 1415

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1400 Date of Depth Measurement: 5/20/10
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other: _____
 Diameter of Casing: 2" Product Thickness, if noted: none noted
 Total Depth of Well Below MP: 31.13 Well Screen Interval Length: unknown
 Depth-to-Water (DTW) Below MP: 24.60 Depth to Top of Well Screen Below MP: unknown
 Water Column in Well: 6.53 (Total Depth of Well Below MP - DTW Below MP)
 Gallons per foot: 0.16
 Gallons in Well: 1.04 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/20/10 Time Started: 1401 Time Completed: 1415
 Gallons Purged: 30 Depth of Pump Placement: ~29'
 Maximum Drawdown: 0.07 Pump Rate: 0.25 L/min
 Well Purged Dry: Yes No (If yes, use Well Purged Dry Log)

| Time: | Gallons: | Temp: (°C) | Sp. Cond.: (mS/cm) | DO: (mg/L) | pH: (S.U.) | ORP: (mV) | Turb: (ntu) |
|-------------|------------|---------------|-----------------------|---------------|---------------|--------------|--------------------------|
| <u>1406</u> | <u>0.2</u> | <u>3.18</u> | <u>0.413</u> | | <u>6.46</u> | | <u>10.1</u> |
| <u>1409</u> | <u>0.8</u> | <u>2.96</u> | <u>0.417</u> | | <u>6.92</u> | | <u>5.86</u> <u>29.66</u> |
| <u>1412</u> | <u>2.0</u> | <u>2.91</u> | <u>0.421</u> | | <u>6.90</u> | | <u>3.78</u> |
| <u>1415</u> | <u>2.8</u> | <u>2.92</u> | <u>0.422</u> | | <u>6.90</u> | | <u>2.82</u> <u>24.67</u> |
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SAMPLING DATA

Odor: fuel Color: clear
 Sample Designation: AST-MW-1 Time / Date: 1417
 Duplicate Sample Designation: — Time / Date: —
 Evacuation Method: Decontaminated Submersible Pump / Other: _____
 Sampling Method: Decontaminated Submersible Pump / Other: _____
 Remarks: _____

Sampling Personnel: Jake Gann

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.64
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 32-1-17349-002 Location: Aniah AST Weather: Cloudy, 50°F, Windy 10-15 mph
 Well No.: AST-MW-4
 Date: 5/20/10 Time Started: 1445 Time Completed: 1540

INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1440 Date of Depth Measurement: 5/20/10
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:
 Diameter of Casing: 2" Product Thickness, if noted: none noted
 Total Depth of Well Below MP: 31.46 Well Screen Interval Length: unknown
 Depth-to-Water (DTW) Below MP: 26.51 Depth to Top of Well Screen Below MP: unknown
 Water Column in Well: 4.95 (Total Depth of Well Below MP - DTW Below MP)
 Gallons per foot: 0.76
 Gallons in Well: 0.79 (Water Column in Well x Gallons per foot)

PURGING DATA

Date Purged: 5/20 Time Started: 1446 Time Completed: 1520
 Gallons Purged: 4 Depth of Pump Placement: -29
 Maximum Drawdown: 0 Pump Rate: 0.1 L/min
 Well Purged Dry: Yes No (If yes, use Well Purged Dry Log)

| Time: | Gallons: | Temp: (°C) | Sp. Cond.: (mS/cm) | DO: (mg/L) | pH: (S.U.) | ORP: (mV) | Turb: (ntu) |
|-------|----------|---------------|-----------------------|---------------|---------------|--------------|----------------|
| 1448 | 0.1 | 4.60 | 0.470 | | 6.49 | | 24.9 |
| 1451 | 0.2 | 5.98 | 0.459 | | 6.43 | | 23.9 26.52 |
| 1453 | 0.3 | 6.32 | 0.452 | | 6.43 | | 18.4 26.52 |
| 1456 | 0.4 | 6.05 | 0.463 | | 6.44 | | 18.8 26.51 |
| 1459 | 0.5 | 6.98 | 0.464 | | 6.45 | | 15.3 26.52 |
| 1502 | 0.6 | 5.13 | 0.473 | | 6.43 | | 20.9 26.54 |
| 1505 | 0.8 | 5.06 | 0.472 | | 6.42 | | 21.1 26.55 |
| 1508 | 1.1 | 4.88 | 0.473 | | 6.40 | | 16.7 |
| 1511 | 1.4 | 4.87 | 0.472 | | 6.40 | | 10.5 26.55 |

SAMPLING DATA

Odor: fuel Color: clear
 Sample Designation: AST-MW-4 Time / Date: 15:23 5/20/2010
 Duplicate Sample Designation: _____ Time / Date: _____
 Evacuation Method: Decontaminated Submersible Pump / Other: _____
 Sampling Method: Decontaminated Submersible Pump / Other: _____
 Remarks: _____

Sampling Personnel: Jake Gano Jennifer Simmons

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.64
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



Shannon & Wilson, Inc.

WATER SAMPLING LOG

Job No: 32-1-17349-002 Location: Amish AST Weather: cloudy 50°F, 10-15 mph winds
 Well No.: AST-MW-9
 Date: 5/20/2010 Time Started: 1445 Time Completed: 15:40

PURGING DATA CONTINUED

| Time: | Gallons: | Temp: (°C) | Sp. Cond.: (mS/cm) | pH: (S.U.) | ORP: (mV) | Turb: (ntu) |
|-------------|------------|---------------|-----------------------|---------------|--------------|--------------------------|
| <u>1514</u> | <u>1.9</u> | <u>4.67</u> | <u>0.474</u> | <u>6.40</u> | | <u>6.36</u> |
| <u>1517</u> | <u>2.3</u> | <u>4.53</u> | <u>0.476</u> | <u>6.39</u> | | <u>3.99</u> <u>26.55</u> |
| <u>1520</u> | <u>2.8</u> | <u>4.39</u> | <u>0.477</u> | <u>6.39</u> | | <u>3.16</u> <u>26.56</u> |
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Remarks: _____

Sampling Personnel: Jake Gano Jen Simmons

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.64
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23

Monitoring Well Inventory Form

MONITORING WELL INVENTORY FORM

SHANNON & WILSON, INC.

Location Runway Apron
 Well Number MW-3
 Depth-to-water 25.04
 Total Depth 33.46
 Photo #s: 3 MW-4

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date May 19 2010
 Time 10:01
 Logged by JDS

Monitoring Well Condition

| | |
|----------|--|
| Well Cap | <input checked="" type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input checked="" type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input checked="" type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: _____ _____ |

GPS: Truax

Datum:

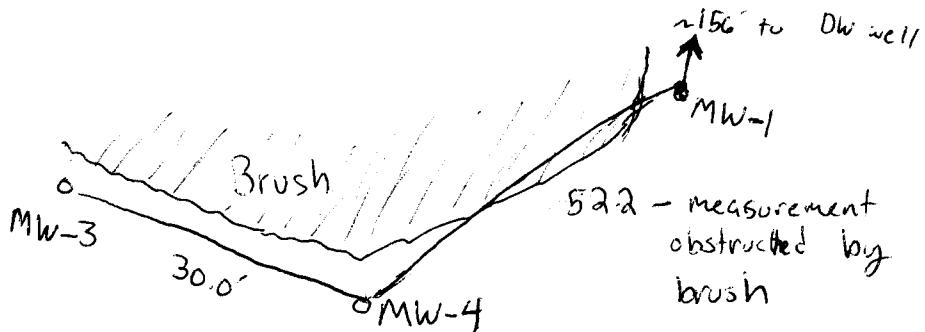
| Waypoint Number | Latitude | Longitude |
|-----------------|---------------|----------------|
| RA-MW3 | 61°34'53.401N | 159°33'02.725W |

Other Notes:

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North):

Match site plan



MONITORING WELL INVENTORY FORM

SHANNON & WILSON, INC.

Location RIMMAY SPRING
 Well Number MW-4
 Depth-to-water 29.01
 Total Depth 29.20
 Photo #s: 5 MW-4

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date MAY 18 2010
 Time 10:06
 Logged by JDS

Monitoring Well Condition

| | |
|----------|--|
| Well Cap | <input checked="" type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input checked="" type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input checked="" type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: _____ _____ |

GPS: Thule Datum:

| Waypoint Number | Latitude | Longitude |
|-----------------|-----------------------|------------------------|
| <u>RA-MW-4</u> | <u>61°34'53.184 N</u> | <u>159°33'07.943 W</u> |

Other Notes: _____

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North):

See note on MW-3

MONITORING WELL INVENTORY FORM

SHANNON & WILSON, INC.

Location Andert Runway Kyrion Project Number 32-1-17349-002
 Well Number MW 1 Project Name Aniak GW Inventory
 Depth-to-water 23.36 Date May 19, 2010
 Total Depth 27.21 Time 10:17
 Photo #s: 7 MW 1 Logged by JDS

Monitoring Well Condition

| | |
|----------|--|
| Well Cap | <input checked="" type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input checked="" type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input checked="" type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: _____ _____ |

GPS: Thales Difi Datum:

| Waypoint Number | Latitude | Longitude |
|-----------------|-----------------------|-------------------------|
| <u>RA-MW-1</u> | <u>61°34'53.20" N</u> | <u>159°33'06.517" W</u> |

Other Notes: NO LOG

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North):

See note on MW-3

MONITORING WELL INVENTORY FORM

SHANNON & WILSON, INC.

Location RAIMWAY AVENUE
 Well Number MW-9
 Depth-to-water 25.83
 Total Depth 29.76
 Photo #s: 12

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date MAY 18, 2010
 Time 11:55
 Logged by JDS

Monitoring Well Condition

| | |
|----------|---|
| Well Cap | <input checked="" type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input type="checkbox"/> No damage <input checked="" type="checkbox"/> Cut Down Length Removed <u>0.21</u> ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input checked="" type="checkbox"/> After WL measurements Notes: <u>most jammed</u> <u>water ^{point} in steel casing</u> |
| Monument | <input checked="" type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: _____ _____ |

GPS: Thule

Datum:

| Waypoint Number | Latitude | Longitude |
|-----------------|---------------------|----------------------|
| <u>RA-MW-9</u> | <u>61°34'56.237</u> | <u>159°33'13.279</u> |

Other Notes: _____

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North):

Distances measured from MW-9 to MW6 and MW6 to MW-8 are similar to what are shown on site plan. Note that thick brush makes getting accurate measurements difficult

Location Runway Apron
 Well Number MW-9
 Depth-to-water 27.51
 Total Depth 33.07
 Photo #s: 8 and 9

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date May 19 2010
 Time 11:41
 Logged by JDS

Monitoring Well Condition

| | |
|----------|---|
| Well Cap | <input checked="" type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input type="checkbox"/> No damage <input checked="" type="checkbox"/> Cut Down Length Removed <u>0.27</u> ft <input type="checkbox"/> Chipped/cracked <input checked="" type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: <u>Frost jacked</u> _____ |
| Monument | <input checked="" type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: <u>COVER lifted due to frost jacked casing</u> <u>bolt on cover broken and needs to be replaced</u> _____ |

GPS: Thales Datum: _____

| Waypoint Number | Latitude | Longitude |
|-----------------|--------------------------|--------------------------|
| | <u>61° 34' 55.152° N</u> | <u>159° 33' 11.505 W</u> |

Other Notes: _____

Previous swing ties checked? No Yes - ok Yes - Revised
 Revised swing ties, if applicable (note North): See note on MW-9

MONITORING WELL INVENTORY FORM

SHANNON & WILSON, INC.

Location Runway Apron
 Well Number NW-6
 Depth-to-water 25.21
 Total Depth 29.98
 Photo #s: 10 and 11

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date May 18
 Time 11:49
 Logged by JDS

Monitoring Well Condition

| | |
|----------|--|
| Well Cap | <input checked="" type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input checked="" type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input checked="" type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: _____ _____ |

GPS: TruLe

Datum:

| Waypoint Number | Latitude | Longitude |
|-----------------|-----------------------|-------------------------|
| | <u>61°34'56.66" N</u> | <u>159°33'11.678" W</u> |

Other Notes: _____

Previous swing ties checked?

No

Yes - ok

Yes - Revised

Revised swing ties, if applicable (note North):

See note on MW-9

MONITORING WELL INVENTORY FORM

SHANNON & WILSON, INC.

Location Aniak City Shop Project Number 32-1-17349-002
 Well Number CS-MW-7 Project Name Aniak GW Inventory
 Depth-to-water NA Date 5/18/10
 Total Depth NR Time 1700
 Photo #s: 18, 19 Logged by Jake Gano

Monitoring Well Condition

| | |
|----------|--|
| Well Cap | <input type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ _____ |
| Casing | <input type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ _____ |
| Monument | <input type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: _____ _____ _____ |

| | | |
|-----------------|----------|-----------|
| GPS: | Datum: | |
| Waypoint Number | Latitude | Longitude |
| | | |

Other Notes: Ca

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North):

*Not found
 Vicinity is obstructed by large equipment.
 New fill and metal debris present -*

Location Aniak City Shop
 Well Number CS-MW-4²
 Depth-to-water 2w. 65
 Total Depth 27.91
 Photo #s: 17

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date 5/18/2010
 Time 16:03
 Logged by JDS

Monitoring Well Condition

| | |
|----------|--|
| Well Cap | <input checked="" type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input checked="" type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input checked="" type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: _____ _____ |

GPS: Thule

Datum:

| Waypoint Number | Latitude | Longitude |
|-----------------|------------------------|-------------------------|
| | <u>61° 34' 24.264N</u> | <u>159° 32' 01.799W</u> |

Other Notes: _____

Previous swing ties checked?

No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North):

See note for CS-MW-4

Location Aniak city shop Project Number 32-1-17349-002
 Well Number CS-MW-4 Project Name Aniak GW Inventory
 Depth-to-water 26.52 Date 5/18/10
 Total Depth 26.67 Time 15:58
 Photo #s: B Logged by Jake Gunn

Monitoring Well Condition

| | |
|----------|--|
| Well Cap | <input checked="" type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input checked="" type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input type="checkbox"/> Cover Intact <input checked="" type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: <u>Lock is rusted shut - broke monument cover bolt trying to remove it.</u> |

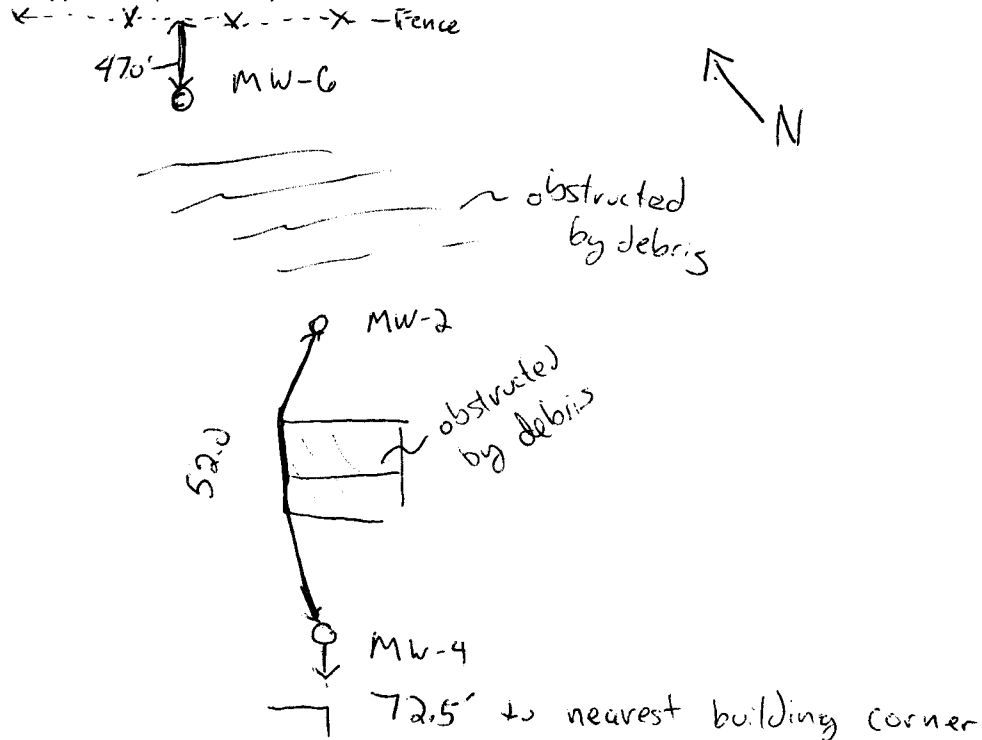
GPS: Trimble Datum: _____

| Waypoint Number | Latitude | Longitude |
|-----------------|-----------------------|-------------------------|
| <u>CS-MW-4</u> | <u>61°34'23.82" N</u> | <u>159°32'02.230" W</u> |

Other Notes: _____

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North):



Location Aniak City Shop Project Number 32-1-17349-002
 Well Number MW-6 Project Name Aniak GW Inventory
 Depth-to-water 25.69 Date 5/18/10
 Total Depth 25.94 Time 1621
 Photo #s: 14,15 Logged by Jake Grant

Monitoring Well Condition

| | |
|----------|--|
| Well Cap | <input checked="" type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input checked="" type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input checked="" type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: <u>Lock very rusted</u> _____ _____ |

GPS: Thale Datum:

| Waypoint Number | Latitude | Longitude |
|-----------------|--------------------------|---------------------------|
| | <u>61° 39' 25.069" N</u> | <u>159° 32' 01.396" W</u> |

Other Notes: _____

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North):

Location Aniak City Shop
 Well Number CS-MU-1
 Depth-to-water -
 Total Depth -
 Photo #s: 14

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date 5/18/10
 Time 1601
 Logged by Jake Gano

Monitoring Well Condition

| | |
|----------|---|
| Well Cap | <input type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: _____ _____ |

GPS:

Datum:

| Waypoint Number | Latitude | Longitude |
|-----------------|----------|-----------|
| | | |

Other Notes: Unable to locate well. Appears to have ~~seen~~ new fill and lots of metal debris. Surface staining present.

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North): NA

Location Aniak Mark Air
 Well Number MW-8
 Depth-to-water Frozen (ice)
 Total Depth 5.52' to ice plug
 Photo #s: 22

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date 5/18/10
 Time 842
 Logged by Jake Grant

Monitoring Well Condition

| | |
|----------|--|
| Well Cap | <input checked="" type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input type="checkbox"/> No damage <input checked="" type="checkbox"/> Cut Down Length Removed <u>0.16</u> ft <input type="checkbox"/> Chipped/cracked <input checked="" type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: <u>Flush mount. Removed dirt from monument</u> _____ |

GPS: Thule

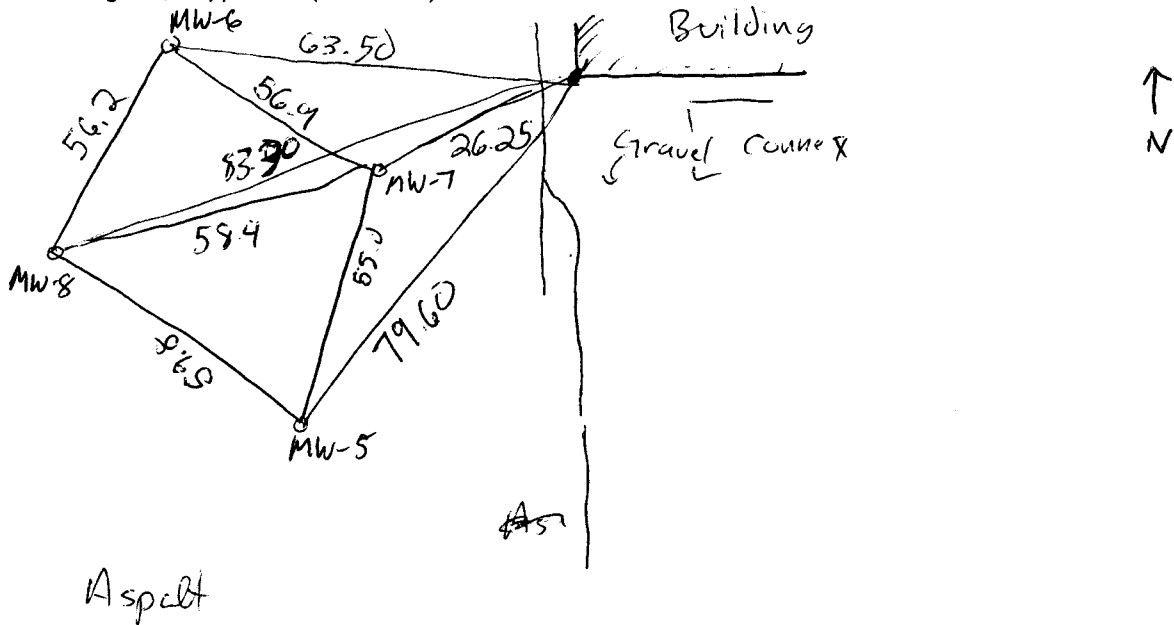
Datum:

| Waypoint Number | Latitude | Longitude |
|-----------------|-------------------------|--------------------------|
| <u>MA-MW-7</u> | <u>61° 34' 30.421 N</u> | <u>159° 32' 05.331 W</u> |

Other Notes:

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North):



MONITORING WELL INVENTORY FORM

SHANNON & WILSON, INC.

Location Aniak Mark Air
 Well Number MW-7
 Depth-to-water 25.94
 Total Depth 27.56
 Photo #s: 23

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date 5/19/10
 Time 953
 Logged by Jake Gano

Monitoring Well Condition

| | |
|----------|---|
| Well Cap | <input checked="" type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input type="checkbox"/> No damage <input checked="" type="checkbox"/> Cut Down Length Removed <u>0.15</u> ft <input type="checkbox"/> Chipped/cracked <input checked="" type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input type="checkbox"/> Cover Intact <input checked="" type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: <u>Cement embedment is jacked from surrounding asphalt</u> <u>Flush mount</u> |

GPS: Thule Datum:

| Waypoint Number | Latitude | Longitude |
|-----------------|-------------------------|--------------------------|
| <u>MW-7</u> | <u>61° 34' 30.367 N</u> | <u>159° 32' 08.200 W</u> |

Other Notes: _____

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North): See MW-8

Location Aniak Mark Air
 Well Number MW12
 Depth-to-water —
 Total Depth —
 Photo #s: 38

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date 5/19/16
 Time 1210
 Logged by Jake Gano

Monitoring Well Condition

| | |
|----------|---|
| Well Cap | <input type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: _____ _____ |

GPS: _____ Datum: _____

| Waypoint Number | Latitude | Longitude |
|-----------------|----------|-----------|
| | | |

Other Notes: Attempted to locate with swing ties and metal detector - appears to be covered with fir

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North):

MONITORING WELL INVENTORY FORM

SHANNON & WILSON, INC.

Location Aniak Marsh Air
 Well Number MW-4
 Depth-to-water 24.20
 Total Depth 24.90
 Photo #s: 27,28

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date 5/19/10
 Time 1150
 Logged by Jake Guind

Monitoring Well Condition

| | |
|----------|--|
| Well Cap | <input checked="" type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input checked="" type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input checked="" type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: _____ <u>Flush mount, 8" monument</u> |

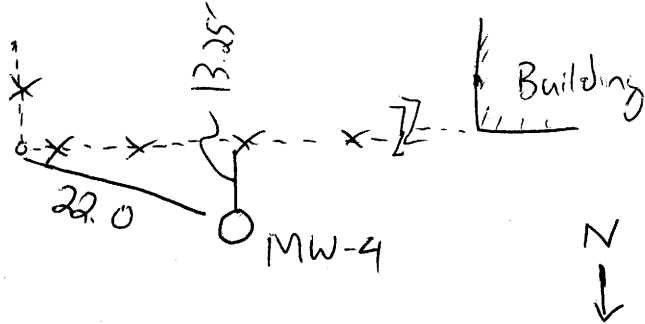
GPS: Thule Datum: _____

| Waypoint Number | Latitude | Longitude |
|-----------------|----------------------|-----------------------|
| | <u>61°34'29.809"</u> | <u>159°32'01.240"</u> |

Other Notes: _____

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North):



MONITORING WELL INVENTORY FORM

SHANNON & WILSON, INC.

Location Aniak Marsh Air
 Well Number RW-1
 Depth-to-water _____
 Total Depth _____
 Photo #s: 29

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date 5/19/16
 Time 1150
 Logged by John Gunn

Monitoring Well Condition

| | |
|----------|---|
| Well Cap | <input type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: _____ _____ |

GPS: _____ Datum: _____

| Waypoint Number | Latitude | Longitude |
|-----------------|----------|-----------|
| | | |

Other Notes: Unable to locate due to new gravel. Thorough sweep w/metal detector doesn't work

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North):

Location Aniak Marsh Air
 Well Number MW10
 Depth-to-water 23.76
 Total Depth 29.41
 Photo #s: 37

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date 5/19/10
 Time 1726
 Logged by Jake Gano

Monitoring Well Condition

| | |
|----------|--|
| Well Cap | <input checked="" type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input checked="" type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input checked="" type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: <u>silica + mud buried well cap</u> _____ _____ |

GPS: Thales

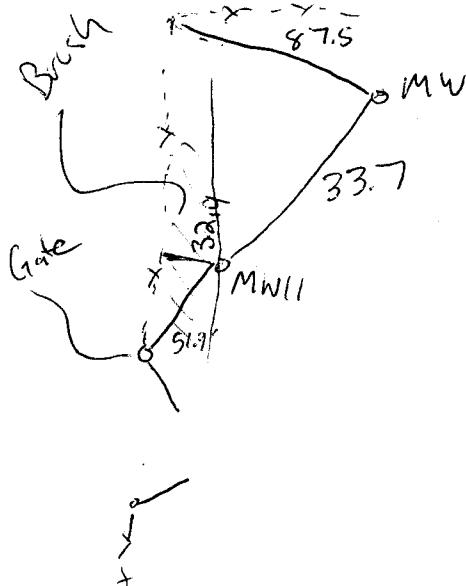
Datum:

| Waypoint Number | Latitude | Longitude |
|-----------------|-----------------------|-------------------------|
| <u>MA-MW-</u> | <u>G10 34' 27.949</u> | <u>159 32' 00.089 W</u> |

Other Notes: _____

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North):



MONITORING WELL INVENTORY FORM

SHANNON & WILSON, INC.

Location Aniak Marsh Air
 Well Number MW11
 Depth-to-water 23.69
 Total Depth 29.32
 Photo #s: 30 31

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date 5/19/10
 Time 1711
 Logged by Jake Gano

Monitoring Well Condition

| | |
|----------|--|
| Well Cap | <input checked="" type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input checked="" type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input checked="" type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: <u>Flushmount</u> _____ _____ |

GPS: Thales

Datum:

| Waypoint Number | Latitude | Longitude |
|-----------------|-------------------------|--------------------------|
| <u>MA-MW-11</u> | <u>61° 34' 27.969 N</u> | <u>159° 32' 00.631 W</u> |

Other Notes: _____

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North):

MONITORING WELL INVENTORY FORM

SHANNON & WILSON, INC.

Location Aniak Mark Air
 Well Number MW-6
 Depth-to-water 25.13
 Total Depth 29.07
 Photo #s: 20,21

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date 5/19/10
 Time 828
 Logged by Jake Gunn

Monitoring Well Condition

| | |
|----------|---|
| Well Cap | <input type="checkbox"/> Intact/ no damage <input checked="" type="checkbox"/> Damaged <input checked="" type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input type="checkbox"/> No damage <input checked="" type="checkbox"/> Cut Down Length Removed <u>0.19</u> ft <input type="checkbox"/> Chipped/cracked <input checked="" type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input type="checkbox"/> Cover Intact <input checked="" type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: _____ _____ |

GPS: Thule

Datum:

| Waypoint Number | Latitude | Longitude |
|-----------------|-------------------------|--------------------------|
| <u>MA-MW-6</u> | <u>61° 34' 39.810 N</u> | <u>159° 32' 04.505 W</u> |

Other Notes: Flush mount

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North): See MW-8

MONITORING WELL INVENTORY FORM

SHANNON & WILSON, INC.

Location Aniak Mark Air
 Well Number MW-9
 Depth-to-water 25.42
 Total Depth 29.43
 Photo #s: 26

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date 5/19/10
 Time 916
 Logged by Jake Gaud

Monitoring Well Condition

| | |
|----------|--|
| Well Cap | <input checked="" type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input checked="" type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input checked="" type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: _____ _____ |

GPS: Thick

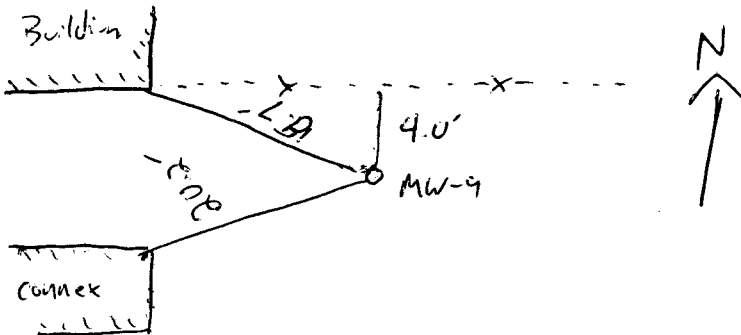
Datum:

| Waypoint Number | Latitude | Longitude |
|-----------------|------------------------|-------------------------|
| <u>MA+MW-9</u> | <u>61°34.30.186' N</u> | <u>159°32'02.703' W</u> |

Other Notes: _____

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North):



MONITORING WELL INVENTORY FORM

SHANNON & WILSON, INC.

Location Aniak MarkAir
 Well Number MW-5
 Depth-to-water ice plus 3.23
 Total Depth -
 Photo #s: 24, 25

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date 5/19/10
 Time 910
 Logged by Jake Gann

Monitoring Well Condition

| | |
|----------|---|
| Well Cap | <input type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input checked="" type="checkbox"/> Replaced Notes: <u>No cap</u> |
| Casing | <input type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input checked="" type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: <u>Cannot cut well - vertical fracture in casing expands with cutoff tool</u> |
| Monument | <input checked="" type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: <u>Monument jacked from adjacent surface</u> |

GPS: hulk Datum:

| Waypoint Number | Latitude | Longitude |
|-----------------|-------------------------|--------------------------|
| <u>MA-MW-5</u> | <u>61° 34' 29.766 N</u> | <u>159° 32' 04.681 W</u> |

Other Notes:

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North): See MW-8

Location Aniak AST
 Well Number AST-MW-4
 Depth-to-water 26.51
 Total Depth 31.46
 Photo #s: 42

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date 5/20/10
 Time 1300
 Logged by Jackie Grant

Monitoring Well Condition

| | |
|----------|--|
| Well Cap | <input checked="" type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input checked="" type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input checked="" type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: _____ _____ |

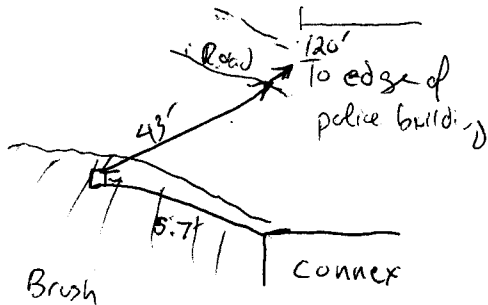
GPS: There Datum: D WGS 1984

| Waypoint Number | Latitude | Longitude |
|-----------------|-------------------------|--------------------------|
| <u>AST-MW-4</u> | <u>G1° 34' 31.492"N</u> | <u>159° 31' 46.454"W</u> |

Other Notes: _____

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North):



MONITORING WELL INVENTORY FORM

SHANNON & WILSON, INC.

Location Aniak AST Area
 Well Number AST-MW-1
 Depth-to-water 24.59
 Total Depth 31.13
 Photo #s: 40, 41

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date 5/20/10
 Time 1303
 Logged by Jake Gunn

Monitoring Well Condition

| | |
|----------|--|
| Well Cap | <input checked="" type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input checked="" type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input checked="" type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: _____ _____ |

GPS: True Datum: D WGS 1984

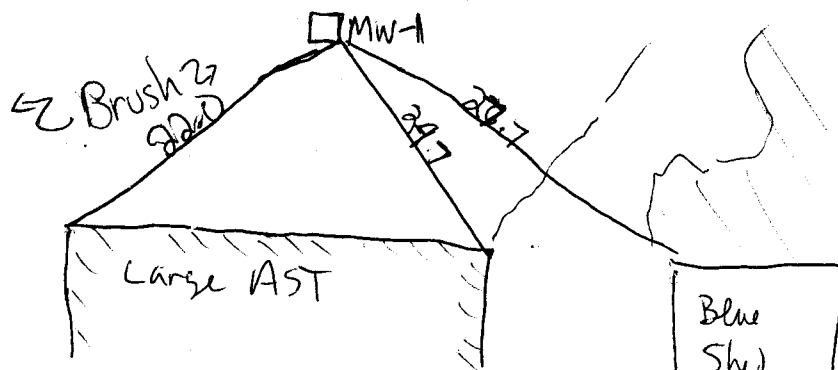
| Waypoint Number | Latitude | Longitude |
|-----------------|-------------------|--------------------|
| AST-MW-1 | 61° 34' 31.867" N | 159° 31' 47.747" W |

Other Notes: _____

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North):

N
↑



MONITORING WELL INVENTORY FORM

SHANNON & WILSON, INC.

Location Aniak AST area
 Well Number AST-MW-7
 Depth-to-water 23.99
 Total Depth 24.67
 Photo #s: 38, 39

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date 5/20/00
 Time 1254
 Logged by Jake Gano

Monitoring Well Condition

| | |
|----------|--|
| Well Cap | <input checked="" type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input checked="" type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input checked="" type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: _____ _____ |

GPS Inch Datum: D WGS 1984

| Waypoint Number | Latitude | Longitude |
|-----------------|--------------------------|---------------------------|
| <u>AST-MW-7</u> | <u>61° 34' 32.677" N</u> | <u>159° 31' 47.811" W</u> |

Other Notes: _____

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North): See AST-MW-6

MONITORING WELL INVENTORY FORM

SHANNON & WILSON, INC.

Location Aniak AET are
 Well Number PL-MW-11
 Depth-to-water 24.28
 Total Depth 30.02
 Photo #s: 37

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date 5/20/10
 Time 1101
 Logged by Jake Gans

Monitoring Well Condition

| | |
|----------|--|
| Well Cap | <input type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input checked="" type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input checked="" type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input checked="" type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: <u>Stick-up</u> _____ _____ |

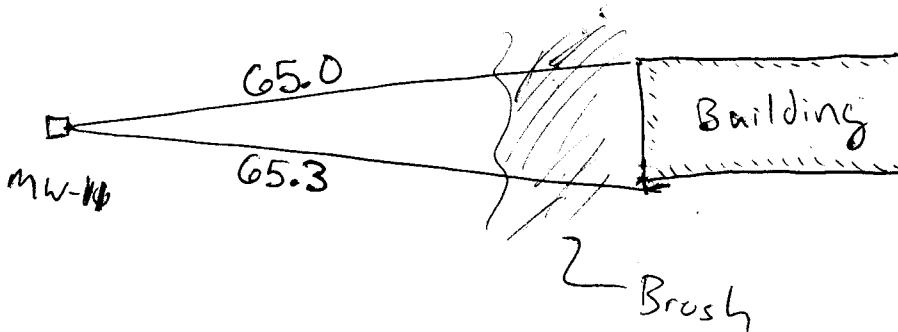
GPS: Thale Datum: D NGS 1984

| Waypoint Number | Latitude | Longitude |
|-----------------|--------------------------|---------------------------|
| <u>PL-MW-11</u> | <u>61° 34' 34.007" N</u> | <u>159° 31' 44.859" W</u> |

Other Notes: _____

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North):



MONITORING WELL INVENTORY FORM

SHANNON & WILSON, INC.

Location Aniak-AST area
 Well Number PL-MW-10
 Depth-to-water 26.52
 Total Depth 29.96
 Photo #s: 36

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date 5/20/10
 Time 1630
 Logged by Jackie Gunn

Monitoring Well Condition

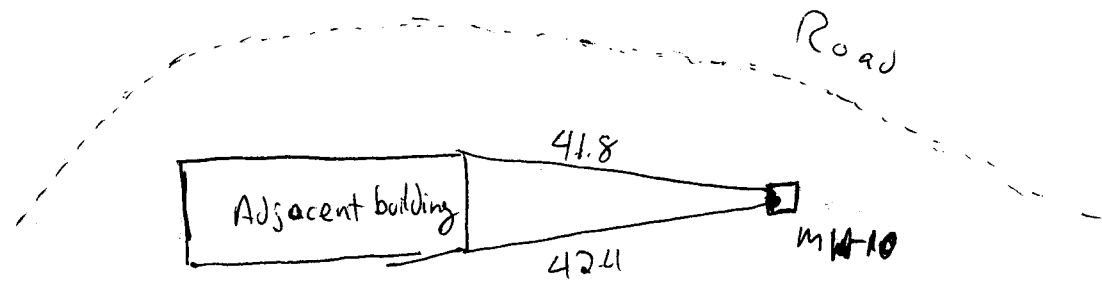
| | |
|----------|--|
| Well Cap | <input checked="" type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input checked="" type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input checked="" type="checkbox"/> Cover Intact <input checked="" type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: <u>Lock stuck</u> <u>Broke bolt on cover trying to open well.</u> |

GPS: Datum: D WGS 1984

| Waypoint Number | Latitude | Longitude |
|-----------------|--------------------------|---------------------------|
| <u>PL-MW-10</u> | <u>61° 34' 34.417" N</u> | <u>159° 31' 42.321" W</u> |

Other Notes: _____

Previous swing ties checked? No Yes - ok Yes - Revised
 Revised swing ties, if applicable (note North): See below



MONITORING WELL INVENTORY FORM

SHANNON & WILSON, INC.

Location Aniak AST
 Well Number AST-MW-5
 Depth-to-water 29.18
 Total Depth 32.47
 Photo #s: 35

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date 5/20/10
 Time 938
 Logged by Vabe Guno

Monitoring Well Condition

| | |
|----------|---|
| Well Cap | <input type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input type="checkbox"/> No damage <input checked="" type="checkbox"/> Cut Down Length Removed <u>0.28</u> ft <input type="checkbox"/> Chipped/cracked <input checked="" type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input type="checkbox"/> Cover Intact <input checked="" type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: <u>Stick-up, monument is loose</u> <u>Lock rusted</u> |

GPS: Trimble Datum: D WGS 1984

| Waypoint Number | Latitude | Longitude |
|-----------------|-------------------------|----------------------|
| <u>AST-MW-5</u> | <u>61° 34' 32.208 N</u> | <u>159 31 44.499</u> |

Other Notes: _____

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North): See ~~as~~ PL-MW9, AST MV-6

Location Aniak-AST
 Well Number AST-MW-6
 Depth-to-water Obstructed
 Total Depth /
 Photo #s: 34

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date 5/20/10
 Time 943
 Logged by Jake Gano

Monitoring Well Condition

| | |
|----------|---|
| Well Cap | <input checked="" type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: <u>Standing water w/ thick sheen inside stickup cover No odor.</u> |

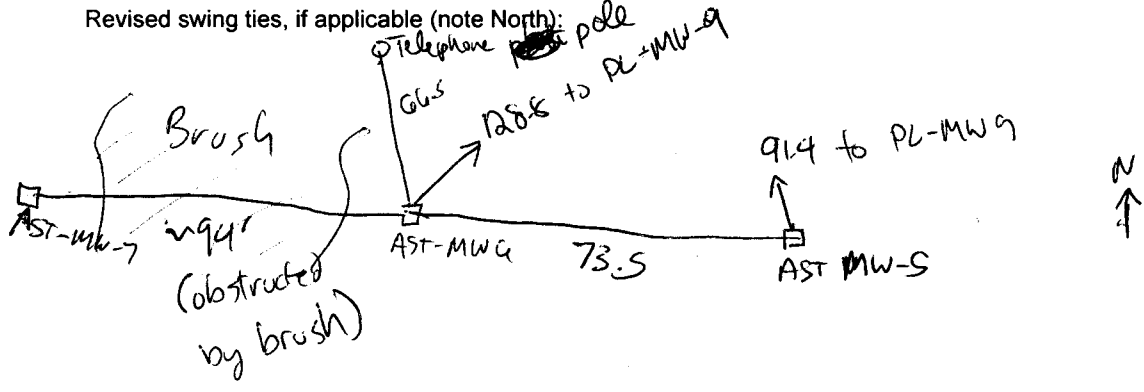
GPS: Thales Datum: DWGS 1984

| Waypoint Number | Latitude | Longitude |
|-----------------|-----------------------|------------------------|
| <u>AST-MW-6</u> | <u>61° 34' 32.458</u> | <u>159° 31' 45.976</u> |

Other Notes: Obstructed @ 2.35' BTOC. Can't tell if its ice or broken casing. Adding DF water does not break it up. Appears to be PVC

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North):



Location Aniak-AST area
 Well Number PL-MW-9
 Depth-to-water 27.28 (1050)
 Total Depth 33.07
 Photo #s: 2304

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date 5/20/10
 Time 931
 Logged by Jake Grand

Monitoring Well Condition

| | |
|----------|--|
| Well Cap | <input checked="" type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input checked="" type="checkbox"/> No damage - <input checked="" type="checkbox"/> Cut Down Length Removed <u>0.5</u> ft <input type="checkbox"/> Chipped/cracked <input checked="" type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input checked="" type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: <u>Stick-up</u> _____ _____ |

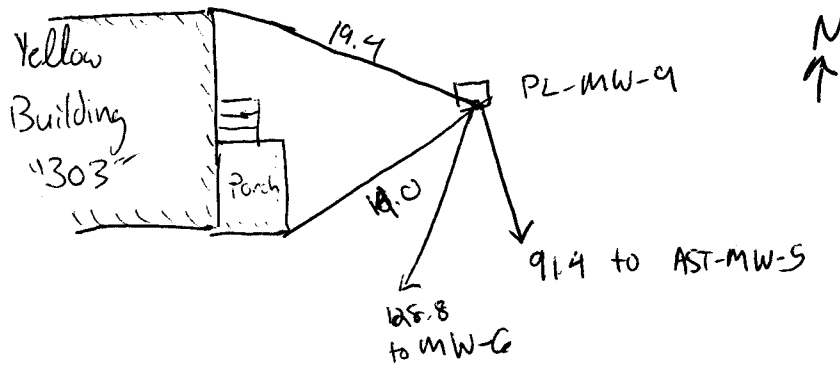
GPS: Thales Datum: _____

| Waypoint Number | Latitude | Longitude |
|-----------------|------------------------|-------------------------|
| <u>PL-MW-9</u> | <u>61° 34' 33.036N</u> | <u>159° 31' 43.569W</u> |

Other Notes: _____

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North):



Location Aniak AST
 Well Number AST-MW-3
 Depth-to-water _____
 Total Depth _____
 Photo #s: _____

Project Number 32-1-17349-002
 Project Name Aniak GW Inventory
 Date 5/21/10
 Time 900
 Logged by Jake Gano

Monitoring Well Condition

| | |
|----------|---|
| Well Cap | <input type="checkbox"/> Intact/ no damage <input type="checkbox"/> Damaged <input type="checkbox"/> Replaced Notes: _____ _____ |
| Casing | <input type="checkbox"/> No damage <input type="checkbox"/> Cut Down Length Removed _____ ft <input type="checkbox"/> Chipped/cracked <input type="checkbox"/> Before <input type="checkbox"/> After WL measurements Notes: _____ _____ |
| Monument | <input type="checkbox"/> Cover Intact <input type="checkbox"/> Cover damaged <input type="checkbox"/> Cover replaced Notes: _____ _____ |

| | | |
|-----------------|----------|-----------|
| GPS: | Datum: | |
| Waypoint Number | Latitude | Longitude |
| | | |

Other Notes: Well not present - no evidence of former well in location shown on site plan

Previous swing ties checked? No Yes - ok Yes - Revised

Revised swing ties, if applicable (note North):

Drinking Water Well Sampling Form and Site Access Agreements

DRINKING WATER WELL SAMPLING FORM

Address Aniak Runway Apron
Owner/Occupant ADOT
Mailing address _____
Telephone _____
Sample Location N/A

Project Number 32-1-17349-002
Project Name Aniak GW
Date 5/17/10
Time 1411-1510
Sampled by JG/JS
 Before After water treatment system
Sampled w/ low flow + new pump

Sample Number DW-1
Duplicate DW- -
Analysis VOCs (EPA 524.2)

Time 1510
Time -
Lab SGS

Purge Time _____
Estimated Flow ~~1.2 L/min~~ JG
Turbidity _____ NTU
Temperature _____ °C
Conductivity _____ μS/cm
pH _____

See separate sampling form

Notes: No cover on casing. Labeled as "2" but location is correct based on swing ties - ~154' from MW1
See photos # 1, #2

April 26, 2010

Alaska Department of Transportation & Public Facilities
Leasing and Property Management
P.O. Box 196900
4111 Aviation Drive
Anchorage, Alaska 99519-6900

Attn: Ms. Tina Schimschat

**RE: REQUEST FOR RIGHT-OF-ENTRY PERMIT, ANIAK ADOT&PF AIRPORT
SITE, ANIAK, ALASKA**

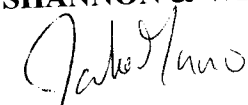
Shannon & Wilson is currently under contract with the Alaska Department of Environmental Conservation (ADEC) to perform groundwater sampling activities at the vicinity of the Aniak Airport in Aniak, Alaska. The purpose of this project is to evaluate contaminant trends in the groundwater at the Aniak Airport and to perform a site reconnaissance for future remedial activities

As part of this project, Shannon & Wilson will be collecting groundwater samples from existing monitoring wells on four ADOT&PF properties, including the Runway Apron, the former MarkAir facility, the Aniak City Shop, and the Maintenance Building. In addition, we will be collecting a drinking water sample from the Maintenance Building drinking water well. The approximate location of these sites is shown on Figure 1. Prior to conducting site activities we will contact Mr. Terry Hoffman, the ADOT&PF Airport Manager.

We are requesting a Right-of-Entry permit open from May 15 through June 1, 2010 to cover these activities. Please contact the undersigned with questions or comments regarding this Right-of-Entry Permit request.

Sincerely,

SHANNON & WILSON, INC.



Jake Gano
Environmental Engineer

Attached: Figure 1

ACCEPTANCE

I grant permission to access the property at the ADOT&PF properties in the vicinity of the Aniak Airport, Aniak, Alaska

By: Tina M. Schimschat
Authorized Signature

Date: May 4, 2010

Printed Name, Title, and Agency: Tina M. Schimschat, Chief
Central Region, Aviation Leasing
DOT & PF



ALASKA
CALIFORNIA
COLORADO
FLORIDA
MISSOURI
OREGON
WASHINGTON

April 27, 2010

Mr. Thomas Grman
Aniak, Alaska 99557

**RE: REQUEST FOR ACCESS TO DRINKING WATER WELLS, ANIAK AIRPORT,
ALASKA**

Shannon & Wilson is under contract with the Alaska Department of Environmental Conservation (ADEC) to perform an area-wide groundwater assessment at the Aniak Airport. The project consists of sampling monitoring wells and drinking water wells in the vicinity of Alaska Department of Transportation & Public Facilities (ADOT&PF) owned land. The purpose of this project is to evaluate trends in the groundwater at the Aniak Airport.

On behalf of the ADEC, we request permission to access your property to collect a drinking water sample. We anticipate being in Aniak from May 15 until June 1, 2010, and would be glad to collect our sample at your convenience. Please review and sign the attached access agreement. If you have any questions or require additional information, please do not hesitate to call Jessica Busey or the undersigned at 907-561-2120 or Grant Lidren of the ADEC at 907-269-8685. Thank you for your cooperation.

Sincerely,

SHANNON & WILSON, INC.

A handwritten signature in black ink, appearing to read 'Jake Gano', is written over the printed name.

Jake Gano
Environmental Engineer

Attached: ADEC Access Agreement

DRINKING WATER WELL SAMPLING FORM

Address Middle School
Owner/Occupant Kuspok school district
Mailing address See HIS form
Telephone _____
Sample Location FANREP

Project Number 32-1-17349-002
Project Name ANIOK GW SAMPLING
Date 5/17/2010
Time 15:45
Sampled by JDS
 Before After water treatment system

Sample Number DW-2
Duplicate DW- —
Analysis VOCs (EPA 524.2)

Time 16:04
Time —
Lab SGS

Purge Time 15 min (15:45)
Estimated Flow 8.57 L/min
Turbidity 0.04 NTU
Temperature 32.54 °C
Conductivity 259 µS/cm
pH 6.68

Notes: _____

DRINKING WATER WELL SAMPLING FORM

Address High School Project Number 32-1-17349-002
 Owner/Occupant Kuspaik School District Project Name ANIRAK GW SAMPLING
 Mailing address PO Box 49 Date 5/17/2010
Aniak Attn: Chadie Thacker Time 16:40
 Telephone _____ Sampled by JDS
 Sample Location PUMP&T Before After water treatment system

Sample Number DW-3 Time 16:57
 Duplicate DW- Time _____
 Analysis VOCs (EPA 524.2) Lab SGS

Purge Time 16:40
 Estimated Flow 5 L/MIN
 Turbidity 0.27 NTU
 Temperature 25.69 °C
 Conductivity 208 µS/cm
 pH 6.62

Notes: 1 L in 12 sec → 5 L/MIN

April 26, 2010

Kuspuk School District
Aniak, Alaska

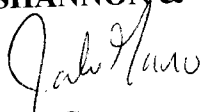
Attn: Mr. Dan Allen or Mr. Charlie Thacker

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, Shannon & Wilson need to access to the Aniak High School and Aniak Middle School in order to collect drinking water samples from each buildings' drinking water supply. We are requesting a Right-of-Entry permit open from May 15 through June 1, 2010 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.



Jake Gano
Environmental Engineer

ACCEPTANCE

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

By: _____ Date: _____
Authorized Signature

Printed Name, Title, and Agency: _____

**FAX COVER SHEET
 KUSPUK SCHOOL DISTRICT
 DEPARTMENT OF FACILITIES &
 OPERATIONS**

P.O. Box 49, Aniak, Alaska 99557

Phone # (907) 675-4721

Fax# 675-4339

Director, Charlie Thacker, 675-4722

cthacker@kuspuk.org

Time and Date: 4/24/10 4:40 PM
JAKE GAND

No.: 907-561-4483

to: CHARLIE

Phone No.: _____

Fax No.: _____

No. of Pages: 1 + COVER

Message: RIGHT-OF-ENTRY



ALASKA
CALIFORNIA
COLORADO
FLORIDA
MISSOURI
OREGON
WASHINGTON

April 26, 2010

Kuspuk School District
Aniak, Alaska

Attn: Mr. Dan Allen or Mr. Charlie Thacker

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, Shannon & Wilson need to access to the Aniak High School and Aniak Middle School in order to collect drinking water samples from each buildings' drinking water supply. We are requesting a Right-of-Entry permit open from May 15 through June 1, 2010 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.

Jake Gano
Environmental Engineer

ACCEPTANCE

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

By: [Signature]
Authorized Signature

Date: 4/26/10

Printed Name, Title, and Agency: CHARLIE THACKER M&O. DIRECTOR
KUSPUK SCH. DIST.

DRINKING WATER WELL SAMPLING FORM

Address ADOT Maintenance Building Project Number 32-1-17349-002
 Owner/Occupant State of AK DOT/DF Project Name Aniak GW
 Mailing address PO Box 73 Date 5/18/10
Aniak, AK 99517 Time 1415
 Telephone 907-675-4345 Sampled by JG/JS
 Sample Location fauces Before After water treatment system N/A
no water treatment system

Sample Number DW-4 Time 1430
 Duplicate DW- - Time -
 Analysis VOCs (EPA 524.2) Lab SGS

Purge Time 15 minutes
 Estimated Flow 5 L/min
 Turbidity 1.82 NTU
 Temperature 21.48 °C
 Conductivity 178 µS/cm
 pH 6.47

Notes: _____



Alaska Department of Environmental Conservation
Aniak Airport Groundwater Study 2010
Property Access Agreement

Dear Property Owner,

The Alaska Department of Environmental Conservation (ADEC) is conducting an Aniak Airport groundwater study. The purpose of the investigation is to evaluate contaminant trends in groundwater at the Aniak Airport. Our contractor, Shannon & Wilson Inc., has determined that your property may be in an area that could have been impacted.

We are requesting access to your property so that we can investigate contamination in groundwater by sampling your drinking water well. 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. Permission to access your property will expire 30 days from the date it is signed unless otherwise amended.

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

I TERRY HOFFMAN (print name here) grant permission to ADEC and their contractor to access my property for the purpose of collecting environmental samples.

Signed Terry Hoff

Date 05/18/10

Contact Information: _____

DRINKING WATER WELL SAMPLING FORM

Address see below
Owner/Occupant Inland air
Mailing address PO Box 244
Aniak, AK 99557
Telephone 675-4624

Project Number 32-1-17349-002
Project Name Aniak GW
Date 5/18/10
Time 1438
Sampled by JG/JS

Sample Location faucet in restroom Before After water treatment system NA
No water treatment system according to owner

Sample Number DW-5
Duplicate DW- —
Analysis VOCs (EPA 524.2)

Time 1453
Time —
Lab SGS

Purge Time 15 min
Estimated Flow 4 L/min
Turbidity 2.92 NTU
Temperature 10.32 °C
Conductivity 155 µS/cm
pH 8.22

Notes: _____



Alaska Department of Environmental Conservation
Aniak Airport Groundwater Study 2010
Property Access Agreement


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We are requesting access to your property so that we can investigate contamination in groundwater by sampling your drinking water well. 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. Permission to access your property will expire 30 days from the date it is signed unless otherwise amended.

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

I Caroline Kvanne (print name here) grant permission to ADEC and their contractor to access my property for the purpose of collecting environmental samples.

Signed 

Date 05-18-10

Contact Information: 907-675-4624

PO Box 244

Aniak, AK 99557

Inland
Aviation
Services, Inc.

Steve Hill

DRINKING WATER WELL SAMPLING FORM

Address Salmon Court #13 Project Number 32-1-17349-002
Owner/Occupant Harvey + Mary Hoffman Project Name Aniak GW
Mailing address PO Box 66 Date 5/18/10
Aniak 99557 Time 1718
Telephone 675-4454 Sampled by _____
Sample Location kitchen faucet Before After water treatment system
No treatment

Sample Number DW-6 Time 1733
Duplicate DW- - Time _____
Analysis VOCs (EPA 524.2) Lab SGS

Purge Time 15 minutes
Estimated Flow 5 L/min
Turbidity 0.19 NTU
Temperature 12.01 °C
Conductivity 199 µS/cm
pH 6.99

Notes: _____



Alaska Department of Environmental Conservation
Aniak Airport Groundwater Study 2010
Property Access Agreement

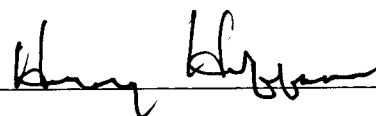
Dear Property Owner,

The Alaska Department of Environmental Conservation (ADEC) is conducting an Aniak Airport groundwater study. The purpose of the investigation is to evaluate contaminant trends in groundwater at the Aniak Airport. Our contractor, Shannon & Wilson Inc., has determined that your property may be in an area that could have been impacted.

We are requesting access to your property so that we can investigate contamination in groundwater by sampling your drinking water well. 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. Permission to access your property will expire 30 days from the date it is signed unless otherwise amended.

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

I Harvey Hoffman (*print name here*) grant permission to ADEC and their contractor to access my property for the purpose of collecting environmental samples.

Signed 

Date 5-6-2010

Contact Information: Mary N. Hoffman

P.O. Box 66 Salmon Court #13

Aniak, AK. 99557

DRINKING WATER WELL SAMPLING FORM

Address Aniak Clinic Project Number 32-1-17349-002
Owner/Occupant Attn: Archie Morris Project Name Aniak GW
Mailing address PO Box 269 Date 5/19/10
Aniak AK 99557 Time 1412
Telephone 675-4556 Sampled by JG JS

Sample Location Water fountain by desk Before After water treatment system

N/A - no treatment system according to occupant.

Sample Number DW- 7 Time 1427

Duplicate DW- — Time —

Analysis VOCs (EPA 524.2) Lab SGS

Purge Time 15 minutes

Estimated Flow 2L/min

Turbidity 1.89 NTU

Temperature 8.78 °C

Conductivity 220 µS/cm

pH 6.73

Notes: _____

clinic



Alaska Department of Environmental Conservation Aniak Airport Groundwater Study 2010 Property Access Agreement

Dear Property Owner,

The Alaska Department of Environmental Conservation (ADEC) is conducting an Aniak Airport groundwater study. The purpose of the investigation is to evaluate contaminant trends in groundwater at the Aniak Airport. Our contractor, Shannon & Wilson Inc., has determined that your property may be in an area that could have been impacted.

We are requesting access to your property so that we can investigate contamination in groundwater by sampling your drinking water well. 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. Permission to access your property will expire 30 days from the date it is signed unless otherwise amended.

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

I Archie Morris (print name here) grant permission to ADEC and their contractor to access my property for the purpose of collecting environmental samples.

Signed Archie Morris

Date 5-19-10

Contact Information: Archie Morris

P.O. Box 269

Aniak, AK 99557

PH# 907-675-4556 EXT 40421

DRINKING WATER WELL SAMPLING FORM

Address Aniak City Office Project Number 32-1-17349-002
 Owner/Occupant Attn: Ron Powell Project Name _____
 Mailing address PO 189 Date 1437
Aniak, AK 99557 Time 5/19/10
 Telephone 675-4481 Sampled by JG+JS
 Sample Location Bathroom Sink Before After water treatment system
 _____ No treatment, according to clerk

Sample Number DW-8 Time 1452
 Duplicate DW - Time —
 Analysis VOCs (EPA 524.2) Lab SGS

Purge Time 15 minutes
 Estimated Flow 2 L/min
 Turbidity 12.3 NTU
 Temperature 17.48 °C
 Conductivity 0 µS/cm
 pH 6.69

Notes: clerk verified that Aniak Lodge is unoccupied
and that Aniak Trading Co. is now AC store.

rotten egg odor

CITY OF ANIAK

FACSIMILE TRANSMITTAL SHEET

| | | | |
|---------------|------------------------|-------------------------------------|------------|
| TO: | Jake Gano | FROM: | Ron Powell |
| COMPANY: | Shannon & Wilson, Inc | DATE: | 05/05/10 |
| FAX NUMBER: | 907-561-4483 | TOTAL NO. OF PAGES INCLUDING COVER: | 2 |
| PHONE NUMBER: | 907-561-2120 | | |
| RE: | Groundwater Study 2010 | | |

URGENT
 FOR REVIEW
 PLEASE COMMENT
 PLEASE REPLY
 PLEASE RECYCLE

NOTES/COMMENTS:

P.O. BOX 189 ANIAK, ALASKA 99557
(907)675-4481 FAX (907)675-4486
EMAIL: ANIAKCITYOF@YAHOO.COM



Alaska Department of Environmental Conservation Aniak Airport Groundwater Study 2010 Property Access Agreement

Dear Property Owner,

The Alaska Department of Environmental Conservation (ADEC) is conducting an Aniak Airport groundwater study. The purpose of the investigation is to evaluate contaminant trends in groundwater at the Aniak Airport. Our contractor, Shannon & Wilson Inc., has determined that your property may be in an area that could have been impacted.

We are requesting access to your property so that we can investigate contamination in groundwater by sampling your drinking water well. 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. Permission to access your property will expire 30 days from the date it is signed unless otherwise amended.

If you have any questions you may contact the ADEC Project Manager, Grant Lidren at 907-269-8685

I Ron Powelle (print name here) grant permission to ADEC and their contractor to access my property for the purpose of collecting environmental samples.

Signed [Signature] Date 5-5-10

Contact Information: ANIAK City OFFICE
907-675-4481

DRINKING WATER WELL SAMPLING FORM

Address See below Block 9, Lot 12 Project Number 32-1-17349-002
 Owner/Occupant David Diehl Project Name Aniak GW
 Mailing address PO Box #192 Date 5/19/08
Aniak, Ak 99557 Time 1515
 Telephone 675-4367 Sampled by Jake Gano
 Sample Location Kitchen Sink Before After water treatment system
No treatment, according to owner

Sample Number DW - 9 Time 1530
 Duplicate DW - Time -
 Analysis VOCs (EPA 524.2) Lab SGS

Purge Time * 15 min
 Estimated Flow 4 L/min
 Turbidity 0.71 NTU
 Temperature 8.72 °C
 Conductivity 222 µS/cm
 pH 6.52

Notes: Stephen Bush just died - son will be in later
this week - maybe for before Friday - will leave
message w/ Marilyn



Alaska Department of Environmental Conservation
Aniak Airport Groundwater Study 2010
Property Access Agreement

Dear Property Owner,

The Alaska Department of Environmental Conservation (ADEC) is conducting an Aniak Airport groundwater study. The purpose of the investigation is to evaluate contaminant trends in groundwater at the Aniak Airport. Our contractor, Shannon & Wilson Inc., has determined that your property may be in an area that could have been impacted.

We are requesting access to your property so that we can investigate contamination in groundwater by sampling your drinking water well. 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. Permission to access your property will expire 30 days from the date it is signed unless otherwise amended.

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

I David G. Diehl (print name here) grant permission to ADEC and their contractor to access my property for the purpose of collecting environmental samples.

Signed D.G. Diehl Date May-19-2010

Contact Information: P.O. Box #192
Aniak - AK.
907 6754367

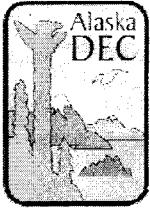
DRINKING WATER WELL SAMPLING FORM

Address Hemig Ct. Lot 25 Project Number 32-1-17349-002
 Owner/Occupant Crim y Phillip Project Name Aniak GW
 Mailing address Box 342 Date 5/19/10
Aniak, Ak 99557 Time 1600
 Telephone 675-4475 Sampled by JG/JS
 Sample Location Kitchen Before After water treatment system
None, according to owner

Sample Number DW- 10 Time 1615
 Duplicate DW- — Time —
 Analysis VOCs (EPA 524.2) Lab SGS

Purge Time 15 min
 Estimated Flow 2^L/min
 Turbidity 0.74 NTU
 Temperature 8.92 °C
 Conductivity 175 μS/cm
 pH 6.60

Notes: Swamp neighbors in Lot 26 is unoccupied



Alaska Department of Environmental Conservation
Aniak Airport Groundwater Study 2010
Property Access Agreement

Dear Property Owner,

The Alaska Department of Environmental Conservation (ADEC) is conducting an Aniak Airport groundwater study. The purpose of the investigation is to evaluate contaminant trends in groundwater at the Aniak Airport. Our contractor, Shannon & Wilson Inc., has determined that your property may be in an area that could have been impacted.

We are requesting access to your property so that we can investigate contamination in groundwater by sampling your drinking water well. 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. Permission to access your property will expire 30 days from the date it is signed unless otherwise amended.

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

I CRIM Y. PHILLIPS (print name here) grant permission to ADEC and their contractor to access my property for the purpose of collecting environmental samples.

Signed Cr Y. Phillips

Date 5-19-2010

Contact Information: Box 342
Aniak AK 99557
675-4475

DRINKING WATER WELL SAMPLING FORM

Address State Trooper Office Project Number 32-1-17349-002
Owner/Occupant Sgt. Zito Project Name Aniak GW
Mailing address PO 167 Date 840
Aniak 99557 Time 5/20/10
Telephone 675-4398 Sampled by Jake Gano
Sample Location Sink in breakroom Before After water treatment system
Softener + filter below building
Sample Number DW- 11 Time 055
Duplicate DW- - Time -
Analysis VOCs (EPA 524.2) Lab SGS

Purge Time 15 minutes
Estimated Flow 3 L/min
Turbidity 0.74 NTU
Temperature 15.23 °C
Conductivity 116 µS/cm
pH 7.43

Notes: _____



001/001
001/001
001/001
001/001
001/001
001/001
001/001

April 27, 2010

Alaska State Troopers
P.O. Box 167
Aniak, Alaska 99557

**RE: REQUEST FOR ACCESS TO DRINKING WATER WELLS, ANIAK AIRPORT,
ALASKA**

Shannon & Wilson is under contract with the Alaska Department of Environmental Conservation (ADEC) to perform an area-wide groundwater assessment at the Aniak Airport. The project consists of sampling monitoring wells and drinking water wells in the vicinity of Alaska Department of Transportation & Public Facilities (ADOT&PF) owned land. The purpose of this project is to evaluate trends in the groundwater at the Aniak Airport.

On behalf of the ADEC, we request permission to access your property to collect a drinking water sample. We anticipate being in Aniak from May 15 until June 1, 2010, and would be glad to collect our sample at your convenience. Please review and sign the attached access agreement. If you have any questions or require additional information, please do not hesitate to call Jessica Busey or the undersigned at 907-561-2120 or Grant Lidren of the ADEC at 907- 269-8685. Thank you for your cooperation.

Sincerely,

SHANNON & WILSON, INC.

Jake Gano
Environmental Engineer

Attached: ADEC Access Agreement

→ NO agreement was attached / included.

Access to property (external only) is granted.

Sgt. Nal Ato
NPED

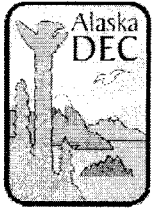
4/29/10 32-1-17349-001

DRINKING WATER WELL SAMPLING FORM

Address Block 9, Lots 14 and 15 Project Number 32-1-17349-002
 Owner/Occupant George Givot Project Name Anich
 Mailing address PO Box 103 Date 5/20/01
Aniak, Ak 99557 Time 1020
 Telephone 907-675-4361 Sampled by Jake G
 Sample Location _____ Before After water treatment system
 _____ Directly from pump at well
 Sample Number DW-12 Time 1023
 Duplicate DW-13 Time 1030
 Analysis VOCs (EPA 524.2) Lab SGS
 Purge Time ~1/minute
 Estimated Flow 3 gallons
 Turbidity 0.01 NTU
 Temperature 10.01 °C
 Conductivity 180 µS/cm
 pH 6.66

Notes: 1543 5/19 - stopped by, no answer
According to owner, water was run for ~10 minutes
prior to our arrival. He did not want us to purge
more. Purged additional ~3 gallons directly from well
pump

39, L14+L15



Alaska Department of Environmental Conservation
Aniak Airport Groundwater Study 2010
Property Access Agreement

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We are requesting access to your property so that we can investigate contamination in groundwater by sampling your drinking water well. 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. Permission to access your property will expire 30 days from the date it is signed unless otherwise amended.

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

I _____ (print name here) grant permission to ADEC and their contractor to access my property for the purpose of collecting environmental samples.

Signed _____
Grant Lidren

Date 5-20-2010

Contact Information: PO. Box 102
ANIAK, AK 99557
907-675-4361

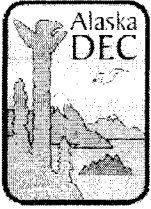
DRINKING WATER WELL SAMPLING FORM

Address † Boundary Ave Project Number 32-1-17349-002
Owner/Occupant Aniak AC store Project Name Aniak GW
Mailing address PO Box 209 Date 5/20/10
Aniak AK 99557 Time 1636
Telephone 675-4327 Sampled by JG/JS
Sample Location Sink in back of Before After water treatment system
building No softener or filters according to occupant
Sample Number DW-14 Time 1651
Duplicate DW- — Time —
Analysis VOCs (EPA 524.2) Lab SGS

Purge Time 15 minutes
Estimated Flow 3L/min
Turbidity 0.14 NTU
Temperature 5.14 °C
Conductivity 123 μS/cm
pH 6.70

Notes: _____

AC Store



Alaska Department of Environmental Conservation
Aniak Airport Groundwater Study 2010
Property Access Agreement

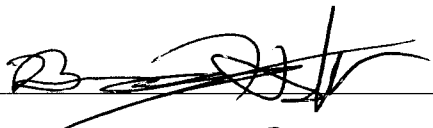
Dear Property Owner,

The Alaska Department of Environmental Conservation (ADEC) is conducting an Aniak Airport groundwater study. The purpose of the investigation is to evaluate contaminant trends in groundwater at the Aniak Airport. Our contractor, Shannon & Wilson Inc., has determined that your property may be in an area that could have been impacted.

We are requesting access to your property so that we can investigate contamination in groundwater by sampling your drinking water well. 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. Permission to access your property will expire 30 days from the date it is signed unless otherwise amended.

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

I Bradley Hoffman (print name here) grant permission to ADEC and their contractor to access my property for the purpose of collecting environmental samples.

Signed 

Date 5-20-10

Contact Information: PO Box 209 / 125 Main Street
Aniak, AK
675-4327/4326 99552

DRINKING WATER WELL SAMPLING FORM

Address Aniah Airport. Project Number 32-1-17349-002
Owner/Occupant ERA/Frontier Project Name _____
Mailing address _____ Date _____
Telephone _____ Time _____
Sample Location Gets water hauled in - Before After water treatment system
not on well water according to occupant
Sample Number DW- NS Time NS
Duplicate DW- NS Time NS
Analysis VOCs (EPA 524.2) Lab SGS

Purge Time _____
Estimated Flow _____
Turbidity _____ NTU
Temperature _____ °C
Conductivity _____ μS/cm
pH _____

Notes: Not on well water

DRINKING WATER WELL SAMPLING FORM

Address Aniak Middle School Project Number 32-1-17349-002
Owner/Occupant KSD, Mr. Charles Thacker Project Name Aniak GW
Mailing address PO Box 49 Date 5/21/10
Aniak, AK 99557 Time 1155
Telephone _____ Sampled by JG
Sample Location Bathroom sink Before After water treatment system

Sample Number DW- 2(2) Time 1210
Duplicate DW- _____ Time _____
Analysis VOCs (EPA 524.2) Lab SGS

Purge Time 15 minutes
Estimated Flow 2 L/min
Turbidity 0.30 NTU
Temperature 12.22 °C
Conductivity 238 µS/cm
pH 7.82

Notes: _____

DRINKING WATER WELL SAMPLING FORM

Address Aniak Lodge Project Number 32-1-17349-002
 Owner/Occupant Bob Olson Project Name Aniak GW
 Mailing address Box 9 Date 5/21/10
Aniak AK 99557 Time 1320
 Telephone 675-4632 Sampled by Jake Gaud
 Sample Location Bathroom sink Before After water treatment system
No system, according to occupant
 Sample Number DW- 15 Time 1335
 Duplicate DW- — Time —
 Analysis VOCs (EPA 524.2) Lab SGS
 Purge Time 15 minutes
 Estimated Flow 8.46
 Turbidity 1.25 NTU
 Temperature 9.46 °C
 Conductivity 197 μS/cm
 pH 9.32

Notes: 5/20/10 - Attempt to collect sample -
no one answers door. Appears unoccupied
Water smells sulfurish

Aniak Lodge



Alaska Department of Environmental Conservation
Aniak Airport Groundwater Study 2010
Property Access Agreement

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We are requesting access to your property so that we can investigate contamination in groundwater by sampling your drinking water well. 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. Permission to access your property will expire 30 days from the date it is signed unless otherwise amended.

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

I G. L. Olson (print name here) grant permission to ADEC and their contractor to access my property for the purpose of collecting environmental samples.

Signed [Signature] Date 9/14/10

Contact Information: Silverson Truck Leasing
PO Box 4
Aniak, Alaska 99552

Analytical Sample Collection Log

ANALYTICAL SAMPLE COLLECTION LOG

| Sample ID | Date | Time | Location | Depth (feet) | Comments (duplicate/replicate sample, composite, etc.) |
|----------------|---------|------|---------------------|--------------|--|
| 32-1-17349-DW1 | 5/17/10 | 1510 | Runway Apron | ~35' | Runway Apron Drinking Water Well |
| ↓ -DW2 | ↓ | 1604 | MS | — | Middle School Drinking Well |
| ↓ -DW3 | ↓ | 1657 | HS | — | High School Drinking Well |
| RA-MW-1 | 5/18/10 | 1110 | Runway Apron | 26' | |
| ↓ RA-MW-9 | ↓ | 1236 | ↓ | 27' | |
| ↓ -DW4 | ↓ | 1430 | ADOT+PF | — | ADOT+PF Maintenance Building |
| ↓ -DWS | ↓ | 1453 | Inland Air | — | Faucet in restroom |
| ↓ -DW6 | ↓ | 1733 | Salmon Ct. #13 | — | Faucet in kitchen |
| -MW9 | 5/19 | 1008 | Mark Air | 28 | |
| -MW13 | ↓ | 1039 | ↓ | 28 | Duplicate of MW9 |
| -MW11 | ↓ | 1238 | ↓ | 28 | |
| -DW7 | ↓ | 1427 | Aniak Clinic | — | Water fountain by desk |
| -DW8 | ↓ | 1452 | Aniak City Office | — | Bathroom Sink |
| -DW9 | ↓ | 1530 | Block 9 Lot 12 | — | Kitchen sink |
| -DW10 | ↓ | 1615 | Hemig Ct. Lot 25 | — | Kitchen sink |
| -MW10 | ↓ | 1738 | Mark Air | 28 | |
| -DW11 | 5/20/10 | 855 | Aniak State Trooper | — | |
| -DW12 | 5/20/10 | 1022 | Block 9, 14+15 | — | |
| -DW13 | 5/20/10 | 1030 | ↓ | — | Duplicate of DW13 |
| -PL-MW-9 | ↓ | 1137 | Aniak AST Aven | 30 | |
| -PL-MW-12 | ↓ | 1150 | ↓ | 30 | Duplicate of PL-MW-9 |
| -AST-MW-5 | ↓ | 1312 | ↓ | 30.5 | |
| AST-MW-1 | ↓ | 1417 | ↓ | 29 | |
| AST-MW-4 | ↓ | 1523 | ↓ | 29 | |

Photograph Logs

PHOTOGRAPH LOG

| Photograph Number | Date | Time | Photograph Description |
|-------------------|---------|-------|---------------------------------------|
| 1 | 5/17/10 | 1401 | Facing NW, runway apron well |
| 2 | 5/17/10 | 1401 | Facing S, runway apron well |
| 3 | 5/18/10 | 10:17 | RUNWAY Apron MW-3, looking |
| 4 | 5/18/10 | 10:17 | RUNWAY Apron MW-3, looking |
| 5 | 5/18/10 | 10:19 | RUNWAY Apron MW-4, looking |
| 6 | 5/18/10 | 10:19 | RUNWAY Apron MW-4, looking |
| 7 | 5/18/10 | 10:32 | RUNWAY Apron MW-1, looking |
| 8 | 5/18/10 | 10:32 | RUNWAY Apron MW-1, looking |
| 9 | 5/18/10 | 11:53 | RUNWAY Apron MW-8, most jacked |
| 10 | 5/18/10 | 12:02 | RUNWAY Apron MW-6 |
| 11 | ↓ | 12:04 | RUNWAY Apron MW-6 |
| 12 | ↓ | 12:09 | RUNWAY Apron MW-9 |
| 13 | ↓ | 3:58 | CS-MW-4 |
| 14 | ↓ | 4:15 | Looking W, vicinity of CS-MW-1 |
| 15 | ↓ | 4:21 | " " CS-MW-6 |
| 16 | ↓ | 4:21 | " " CS-MW-6 vicinity |
| 17 | ↓ | 4:26 | CS-MW-2 |
| 18 | 5/18/10 | 5:14 | CS-MW-7 vicinity |
| 19 | 5/18/10 | 5:15 | looking for CS-MW-7 |
| 20 | 5/19/10 | 839 | Mark Air MW6 |
| 21 | ↓ | 840 | Looking west east, MA MW-6 |
| 22 | ↓ | 856 | " " MA MW-8 |
| 23 | ↓ | 901 | Looking NE, MA MW-7 |
| 24 | ↓ | 911 | MA MW-5 before being cut |

PHOTOGRAPH LOG

| Photograph Number | Date | Time | Photograph Description |
|-------------------|--------------------|------|---|
| 25 | 5/19/10 | 911 | Mark Air MW-5, vicinity Looking N |
| 26 | 5/19/10 | 930 | " MW-9, W |
| 27 | ↓ | 1154 | Mark Air MW-4 vicinity, SE |
| 28 | ↓ | 1154 | , W |
| 29 | ↓ | 1155 | Looking W, freshly graded new gravel near MARW-1 |
| 30 | ↓ | 529 | Looking N, gravel in the anticipated location of Mark Air MW-12 |
| 31 | ↓ | 529 | Looking NE, Mark Air MW-11 and adjacent tanks |
| 32 | ↓ | 531 | Looking SW, Mark Air MW-10 |
| 33 ok | 5/20/10 | | |
| 34 | ↓ | 1109 | Looking W, AST-MW-6 |
| 35 | ↓ | 1110 | Looking E, AST-MW-5 |
| 36 | ↓ | 1112 | Looking SE, PL-MW-10 |
| 37 | ↓ | 1118 | E, PL-MW-11 |
| 38 | ↓ | 1312 | Looking W, AST-MW-7 |
| 39 | ↓ | 1312 | " E " |
| 40 | ↓ | 1320 | AST-MW-1 casing |
| 41 | ↓ | 1320 | AST-MW-1 vicinity |
| 42 | ↓ | 1321 | AST-MW-4 vicinity |
| 43 | 5/21/10 | 1456 | Potential land farming area near Runway Apron Wells |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

APPENDIX C

RESULTS OF ANALYTICAL TESTING

BY SGS ENVIRONMENTAL SERVICES, INC.

OF ANCHORAGE, ALASKA, AND

ADEC LABORATORY DATA REVIEW CHECKLISTS



SGS North America Inc.
Alaska Division
Level II Laboratory Data Report

Project: 32-1-17349 Aniak GW
Client: Shannon & Wilson, Inc.
SGS Work Order: 1102267

Released by:

A handwritten signature in black ink, appearing to read 'Jennifer Serna'.

SGS North America
Alaska Division Project Manager

**Jennifer
Serna**
2010.06.08
17:23:59
-08'00'

Contents (Bookmarked in PDF):

Cover Page
Case Narrative
Sample Results Forms
Quality Control Summary Forms
Chain of Custody/Sample Receipt Forms
Attachments (if applicable)



Case Narrative

Client SHANNOT Shannon & Wilson, Inc.
Workorder 1102267 32-1-17349 Aniak GW

Printed Date/Time 6/7/2010 9:52

Sample ID Client Sample ID

Refer to the sample receipt form for information on sample condition.

- 962798 * MB MB for HBN 310580 [VXX/20687]**
524 - MB recovery for cis-1,2-dichloroethene and tetrachloroethene is greater than the DL but less than the LOQ. These analytes were not detected above the LOQ in the associated samples.
- 962799 * LCS LCS for HBN 310580 [VXX/20687]**
524 - LCS recovery for dichlorodifluoromethane and chloromethane does not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.
- 962800 * LCSD LCSD for HBN 310580 [VXX/20687]**
524 - LCSD recovery for dichlorodifluoromethane, chloromethane and bromomethane does not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.
- 962801 * IB IB for HBN 310680 [VMS/11238]**
524 - IB recovery for cis-1,2-dichloroethene and tetrachloroethene is greater than the DL but less than the LOQ. These analytes were not detected above the LOQ in the associated samples.
- 962802 * CCV CCV for HBN 310680 [VMS/11238]**
524 - ICV recovery for dichlorodifluoromethane, chloromethane and vinyl chloride does not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.
524 - CCV recovery for dichlorodifluoromethane and chloromethane does not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.
- 962803 * CCV CCV for HBN 310680 [VMS/11238]**
524 - CCV recovery for dichlorodifluoromethane and chloromethane does not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.
- 963449 * LCS LCS for HBN 323480 [VXX/20700]**
524 - LCS recovery for chloromethane does not meet QC criteria (biased high). This analyte was not detected above the LOQ in the associated samples.
- 963450 * LCSD LCSD for HBN 323480 [VXX/20700]**
524 - LCSD recovery for chloromethane does not meet QC criteria (biased high). This analyte was not detected above the LOQ in the associated samples.
- 963465 * CCV CCV for HBN 323680 [VMS/11246]**
524 - ICV recovery for dichlorodifluoromethane, chloromethane and vinyl chloride does not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.
524 - CCV recovery for chloromethane does not meet QC criteria (biased high). This analyte was not detected above the LOQ in the associated samples.
- 963466 * CCV CCV for HBN 323680 [VMS/11246]**



Case Narrative

Client SHANNOT Shannon & Wilson, Inc.
Workorder 1102267 32-1-17349 Aniak GW

Printed Date/Time 6/7/2010 9:52

Sample ID **Client Sample ID**

524 - CCV recovery for chloromethane does not meet QC criteria (biased high). This analyte was not detected above the LOQ in the associated samples.

964348 * CCV **CCV for HBN 344180 [VMS/11260]**

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

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

Jessica Busey
Shannon & Wilson Inc.
5430 Fairbanks Street, Suite 3
Anchorage, AK 99518

Work Order: 1102267
32-1-17349 Aniak GW

Client: Shannon & Wilson, Inc.

Report Date: June 07, 2010

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 AK100001 for NELAP (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6010B, 6020, 7470A, 7471B, 8021B, 8081B, 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, the National Environmental Laboratory Accreditation Program and 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
- 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., 2xDL)
- 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.



Detectable Results Summary

Print Date: 6/7/2010 9:52 am

Client Sample ID: **32-1-17349-RA-MW-9**

SGS Ref. #: 1102267005

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|--|---------------|--------------|
| Volatile Gas Chromatography/Mass Spectroscopy | | |
| Trichloroethene | 12.5 | ug/L |

Client Sample ID: **32-1-17349-WTB1**

SGS Ref. #: 1102267017

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|--|---------------|--------------|
| Volatile Gas Chromatography/Mass Spectroscopy | | |
| Methylene chloride | 0.580 | ug/L |



SGS Ref.# 1102267001
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW1
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/17/2010 15:10
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,1,1-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<200) | 05/25/10 | 05/25/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,1,2-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| 1,1-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,1-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<7) | 05/25/10 | 05/25/10 | DSH |
| 1,1-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2,3-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2,3-Trichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2,4-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/25/10 | DSH |
| 1,2,4-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dibromoethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<600) | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| 1,3,5-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,3-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,3-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,4-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<75) | 05/25/10 | 05/25/10 | DSH |
| 2,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 2-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 4-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 4-Isopropyltoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Benzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Bromobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Bromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Bromodichloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |



SGS Ref.# 1102267001
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW1
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/17/2010 15:10
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Bromoform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Bromomethane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Carbon tetrachloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Chlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/25/10 | DSH |
| Chloroethane | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Chloroform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Chloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| cis-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/25/10 | DSH |
| cis-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Dibromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Dibromomethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Dichlorodifluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Ethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<700) | 05/25/10 | 05/25/10 | DSH |
| Hexachlorobutadiene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Isopropylbenzene (Cumene) | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Methylene chloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Methyl-t-butyl ether | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Naphthalene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| n-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| n-Propylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| o-Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| P & M -Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| sec-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Styrene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/25/10 | DSH |
| tert-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Tetrachloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Toluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<1000) | 05/25/10 | 05/25/10 | DSH |
| Total Trihalomethanes | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | (<80) | 05/25/10 | 05/25/10 | DSH |
| trans-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/25/10 | DSH |
| trans-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |



SGS Ref.# 1102267001
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW1
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/17/2010 15:10
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| Trichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Trichlorofluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Vinyl chloride | 0.400 U | 0.400 | ug/L | EPA 524.2 | A | (<2) | 05/25/10 | 05/25/10 | DSH |
| Xylenes (total) | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | (<10000) | 05/25/10 | 05/25/10 | DSH |
| Surrogates | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 103 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/25/10 | DSH |
| 4-Bromofluorobenzene <surr> | 104 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/25/10 | DSH |
| Toluene-d8 <surr> | 98.6 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/25/10 | DSH |



SGS Ref.# 1102267003
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW3
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/17/2010 16:57
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,1,1-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<200) | 05/25/10 | 05/25/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,1,2-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| 1,1-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,1-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<7) | 05/25/10 | 05/25/10 | DSH |
| 1,1-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2,3-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2,3-Trichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2,4-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/25/10 | DSH |
| 1,2,4-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dibromoethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<600) | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| 1,3,5-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,3-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,3-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,4-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<75) | 05/25/10 | 05/25/10 | DSH |
| 2,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 2-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 4-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 4-Isopropyltoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Benzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Bromobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Bromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Bromodichloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |



SGS Ref.# 1102267003
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW3
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/17/2010 16:57
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Bromoform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Bromomethane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Carbon tetrachloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Chlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/25/10 | DSH |
| Chloroethane | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Chloroform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Chloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| cis-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/25/10 | DSH |
| cis-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Dibromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Dibromomethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Dichlorodifluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Ethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<700) | 05/25/10 | 05/25/10 | DSH |
| Hexachlorobutadiene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Isopropylbenzene (Cumene) | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Methylene chloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Methyl-t-butyl ether | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Naphthalene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| n-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| n-Propylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| o-Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| P & M -Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| sec-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Styrene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/25/10 | DSH |
| tert-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Tetrachloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Toluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<1000) | 05/25/10 | 05/25/10 | DSH |
| Total Trihalomethanes | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | (<80) | 05/25/10 | 05/25/10 | DSH |
| trans-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/25/10 | DSH |
| trans-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |



SGS Ref.# 1102267003
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW3
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/17/2010 16:57
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Trichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Trichlorofluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Vinyl chloride | 0.400 U | 0.400 | ug/L | EPA 524.2 | A | (<2) | 05/25/10 | 05/25/10 | DSH |
| Xylenes (total) | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | (<10000) | 05/25/10 | 05/25/10 | DSH |
| Surrogates | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 106 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/25/10 | DSH |
| 4-Bromofluorobenzene <surr> | 106 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/25/10 | DSH |
| Toluene-d8 <surr> | 101 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/25/10 | DSH |



SGS Ref.# 1102267004
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-RA-MW-1
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/18/2010 11:10
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Fuels Department</u> | | | | | | | | | |
| Benzene | 0.500 U | 0.500 | ug/L | SW8021B | A | | 05/25/10 | 05/25/10 | EAB |
| Ethylbenzene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/25/10 | 05/25/10 | EAB |
| Gasoline Range Organics | 0.100 U | 0.100 | mg/L | AK101 | A | | 05/25/10 | 05/25/10 | EAB |
| o-Xylene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/25/10 | 05/25/10 | EAB |
| P & M -Xylene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/25/10 | 05/25/10 | EAB |
| Toluene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/25/10 | 05/25/10 | EAB |
| <u>Surrogates</u> | | | | | | | | | |
| 1,4-Difluorobenzene <surr> | 92.3 | | % | SW8021B | A | 80-120 | 05/25/10 | 05/25/10 | EAB |
| 4-Bromofluorobenzene <surr> | 111 | | % | AK101 | A | 50-150 | 05/25/10 | 05/25/10 | EAB |
| <u>Semivolatile Organic Fuels Department</u> | | | | | | | | | |
| Diesel Range Organics | 0.838 U | 0.838 | mg/L | AK102 | D | | 05/25/10 | 05/25/10 | HM |
| <u>Surrogates</u> | | | | | | | | | |
| 5a Androstane <surr> | 66.8 | | % | AK102 | D | 50-150 | 05/25/10 | 05/25/10 | HM |



SGS Ref.# 1102267005
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-RA-MW-9
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/18/2010 12:36
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Fuels Department</u> | | | | | | | | | |
| Gasoline Range Organics | 0.100 U | 0.100 | mg/L | AK101 | A | | 05/25/10 | 05/25/10 | EAB |
| Surrogates | | | | | | | | | |
| 4-Bromofluorobenzene <surr> | 105 | | % | AK101 | A | 50-150 | 05/25/10 | 05/25/10 | EAB |
| <u>Semivolatile Organic Fuels Department</u> | | | | | | | | | |
| Diesel Range Organics | 0.874 U | 0.874 | mg/L | AK102 | G | | 05/25/10 | 05/25/10 | HM |
| Surrogates | | | | | | | | | |
| 5a Androstane <surr> | 95.4 | | % | AK102 | G | 50-150 | 05/25/10 | 05/25/10 | HM |
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 1,1,1-Trichloroethane | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 1,1,2,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 1,1,2-Trichloroethane | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 1,1-Dichloroethane | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 1,1-Dichloroethene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 1,1-Dichloropropene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 1,2,3-Trichlorobenzene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 1,2,3-Trichloropropane | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 1,2,4-Trichlorobenzene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 1,2,4-Trimethylbenzene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 1,2-Dibromo-3-chloropropane | 2.00 U | 2.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 1,2-Dibromoethane | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 1,2-Dichlorobenzene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |



SGS Ref.# 1102267005
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-RA-MW-9
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/18/2010 12:36
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,2-Dichloroethane | 0.500 U | 0.500 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 1,2-Dichloropropane | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 1,3,5-Trimethylbenzene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 1,3-Dichlorobenzene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 1,3-Dichloropropane | 0.400 U | 0.400 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 1,4-Dichlorobenzene | 0.500 U | 0.500 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 2,2-Dichloropropane | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 2-Butanone (MEK) | 10.0 U | 10.0 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 2-Chlorotoluene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 2-Hexanone | 10.0 U | 10.0 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 4-Chlorotoluene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 4-Isopropyltoluene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| 4-Methyl-2-pentanone (MIBK) | 10.0 U | 10.0 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Benzene | 0.400 U | 0.400 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Bromobenzene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Bromochloromethane | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Bromodichloromethane | 0.500 U | 0.500 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Bromoform | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Bromomethane | 3.00 U | 3.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Carbon disulfide | 2.00 U | 2.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Carbon tetrachloride | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Chlorobenzene | 0.500 U | 0.500 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Chloroethane | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Chloroform | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Chloromethane | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| cis-1,2-Dichloroethene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| cis-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Dibromochloromethane | 0.500 U | 0.500 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Dibromomethane | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Dichlorodifluoromethane | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |



SGS Ref.# 1102267005
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-RA-MW-9
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/18/2010 12:36
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| Ethylbenzene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Hexachlorobutadiene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Isopropylbenzene (Cumene) | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Methylene chloride | 5.00 U | 5.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Methyl-t-butyl ether | 5.00 U | 5.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Naphthalene | 2.00 U | 2.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| n-Butylbenzene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| n-Propylbenzene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| o-Xylene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| P & M -Xylene | 2.00 U | 2.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| sec-Butylbenzene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Styrene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| tert-Butylbenzene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Tetrachloroethene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Toluene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| trans-1,2-Dichloroethene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| trans-1,3-Dichloropropene | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Trichloroethene | 12.5 | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Trichlorofluoromethane | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Vinyl chloride | 1.00 U | 1.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Xylenes (total) | 3.00 U | 3.00 | ug/L | SW8260B | B | | 05/30/10 | 05/31/10 | JPI |
| Surrogates | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 102 | | % | SW8260B | B | 73-120 | 05/30/10 | 05/31/10 | JPI |
| 4-Bromofluorobenzene <surr> | 97.6 | | % | SW8260B | B | 76-120 | 05/30/10 | 05/31/10 | JPI |
| Toluene-d8 <surr> | 105 | | % | SW8260B | B | 80-120 | 05/30/10 | 05/31/10 | JPI |



SGS Ref.# 1102267006
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW4
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/18/2010 14:30
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,1,1-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<200) | 05/25/10 | 05/25/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,1,2-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| 1,1-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,1-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<7) | 05/25/10 | 05/25/10 | DSH |
| 1,1-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2,3-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2,3-Trichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2,4-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/25/10 | DSH |
| 1,2,4-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dibromoethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<600) | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| 1,3,5-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,3-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,3-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,4-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<75) | 05/25/10 | 05/25/10 | DSH |
| 2,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 2-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 4-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 4-Isopropyltoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Benzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Bromobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Bromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Bromodichloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |



SGS Ref.# 1102267006
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW4
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/18/2010 14:30
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Bromoform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Bromomethane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Carbon tetrachloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Chlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/25/10 | DSH |
| Chloroethane | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Chloroform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Chloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| cis-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/25/10 | DSH |
| cis-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Dibromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Dibromomethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Dichlorodifluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Ethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<700) | 05/25/10 | 05/25/10 | DSH |
| Hexachlorobutadiene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Isopropylbenzene (Cumene) | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Methylene chloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Methyl-t-butyl ether | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Naphthalene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| n-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| n-Propylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| o-Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| P & M -Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| sec-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Styrene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/25/10 | DSH |
| tert-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Tetrachloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Toluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<1000) | 05/25/10 | 05/25/10 | DSH |
| Total Trihalomethanes | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | (<80) | 05/25/10 | 05/25/10 | DSH |
| trans-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/25/10 | DSH |
| trans-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |



SGS Ref.# 1102267006
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW4
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/18/2010 14:30
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| Trichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Trichlorofluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Vinyl chloride | 0.400 U | 0.400 | ug/L | EPA 524.2 | A | (<2) | 05/25/10 | 05/25/10 | DSH |
| Xylenes (total) | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | (<10000) | 05/25/10 | 05/25/10 | DSH |
| Surrogates | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 104 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/25/10 | DSH |
| 4-Bromofluorobenzene <surr> | 103 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/25/10 | DSH |
| Toluene-d8 <surr> | 98.9 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/25/10 | DSH |



SGS Ref.# 1102267007
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW5
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/18/2010 14:53
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,1,1-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<200) | 05/25/10 | 05/25/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,1,2-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| 1,1-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,1-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<7) | 05/25/10 | 05/25/10 | DSH |
| 1,1-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2,3-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2,3-Trichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2,4-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/25/10 | DSH |
| 1,2,4-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dibromoethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<600) | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| 1,3,5-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,3-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,3-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,4-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<75) | 05/25/10 | 05/25/10 | DSH |
| 2,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 2-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 4-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 4-Isopropyltoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Benzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Bromobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Bromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Bromodichloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |



SGS Ref.# 1102267007
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW5
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/18/2010 14:53
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Bromoform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Bromomethane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Carbon tetrachloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Chlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/25/10 | DSH |
| Chloroethane | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Chloroform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Chloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| cis-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/25/10 | DSH |
| cis-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Dibromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Dibromomethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Dichlorodifluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Ethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<700) | 05/25/10 | 05/25/10 | DSH |
| Hexachlorobutadiene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Isopropylbenzene (Cumene) | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Methylene chloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Methyl-t-butyl ether | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Naphthalene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| n-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| n-Propylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| o-Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| P & M -Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| sec-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Styrene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/25/10 | DSH |
| tert-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Tetrachloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Toluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<1000) | 05/25/10 | 05/25/10 | DSH |
| Total Trihalomethanes | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | (<80) | 05/25/10 | 05/25/10 | DSH |
| trans-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/25/10 | DSH |
| trans-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |



SGS Ref.# 1102267007
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW5
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/18/2010 14:53
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Trichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Trichlorofluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Vinyl chloride | 0.400 U | 0.400 | ug/L | EPA 524.2 | A | (<2) | 05/25/10 | 05/25/10 | DSH |
| Xylenes (total) | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | (<10000) | 05/25/10 | 05/25/10 | DSH |
| Surrogates | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 105 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/25/10 | DSH |
| 4-Bromofluorobenzene <surr> | 104 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/25/10 | DSH |
| Toluene-d8 <surr> | 99.8 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/25/10 | DSH |



SGS Ref.# 1102267008
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW6
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/18/2010 17:33
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,1,1-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<200) | 05/25/10 | 05/25/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,1,2-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| 1,1-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,1-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<7) | 05/25/10 | 05/25/10 | DSH |
| 1,1-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2,3-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2,3-Trichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2,4-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/25/10 | DSH |
| 1,2,4-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dibromoethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<600) | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| 1,3,5-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,3-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,3-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,4-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<75) | 05/25/10 | 05/25/10 | DSH |
| 2,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 2-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 4-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 4-Isopropyltoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Benzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Bromobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Bromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Bromodichloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |



SGS Ref.# 1102267008
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW6
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/18/2010 17:33
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Bromoform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Bromomethane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Carbon tetrachloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Chlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/25/10 | DSH |
| Chloroethane | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Chloroform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Chloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| cis-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/25/10 | DSH |
| cis-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Dibromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Dibromomethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Dichlorodifluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Ethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<700) | 05/25/10 | 05/25/10 | DSH |
| Hexachlorobutadiene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Isopropylbenzene (Cumene) | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Methylene chloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Methyl-t-butyl ether | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Naphthalene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| n-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| n-Propylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| o-Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| P & M -Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| sec-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Styrene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/25/10 | DSH |
| tert-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Tetrachloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Toluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<1000) | 05/25/10 | 05/25/10 | DSH |
| Total Trihalomethanes | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | (<80) | 05/25/10 | 05/25/10 | DSH |
| trans-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/25/10 | DSH |
| trans-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |



SGS Ref.# 1102267008
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW6
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/18/2010 17:33
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| Trichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Trichlorofluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Vinyl chloride | 0.400 U | 0.400 | ug/L | EPA 524.2 | A | (<2) | 05/25/10 | 05/25/10 | DSH |
| Xylenes (total) | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | (<10000) | 05/25/10 | 05/25/10 | DSH |
| Surrogates | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 107 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/25/10 | DSH |
| 4-Bromofluorobenzene <surr> | 102 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/25/10 | DSH |
| Toluene-d8 <surr> | 98.4 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/25/10 | DSH |



SGS Ref.# 1102267009
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-MW9
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/19/2010 10:08
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Fuels Department</u> | | | | | | | | | |
| Benzene | 0.500 U | 0.500 | ug/L | SW8021B | A | | 05/26/10 | 05/26/10 | EAB |
| Ethylbenzene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/26/10 | 05/26/10 | EAB |
| Gasoline Range Organics | 0.100 U | 0.100 | mg/L | AK101 | A | | 05/26/10 | 05/26/10 | EAB |
| o-Xylene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/26/10 | 05/26/10 | EAB |
| P & M -Xylene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/26/10 | 05/26/10 | EAB |
| Toluene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/26/10 | 05/26/10 | EAB |
| <u>Surrogates</u> | | | | | | | | | |
| 1,4-Difluorobenzene <surr> | 90.4 | | % | SW8021B | A | 80-120 | 05/26/10 | 05/26/10 | EAB |
| 4-Bromofluorobenzene <surr> | 112 | | % | AK101 | A | 50-150 | 05/26/10 | 05/26/10 | EAB |
| <u>Semivolatile Organic Fuels Department</u> | | | | | | | | | |
| Diesel Range Organics | 0.838 U | 0.838 | mg/L | AK102 | D | | 05/25/10 | 05/26/10 | HM |
| <u>Surrogates</u> | | | | | | | | | |
| 5a Androstane <surr> | 95.2 | | % | AK102 | D | 50-150 | 05/25/10 | 05/26/10 | HM |



SGS Ref.# 1102267010
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-MW13
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/19/2010 10:39
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Fuels Department</u> | | | | | | | | | |
| Benzene | 0.500 U | 0.500 | ug/L | SW8021B | A | | 05/26/10 | 05/26/10 | EAB |
| Ethylbenzene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/26/10 | 05/26/10 | EAB |
| Gasoline Range Organics | 0.100 U | 0.100 | mg/L | AK101 | A | | 05/26/10 | 05/26/10 | EAB |
| o-Xylene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/26/10 | 05/26/10 | EAB |
| P & M -Xylene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/26/10 | 05/26/10 | EAB |
| Toluene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/26/10 | 05/26/10 | EAB |
| <u>Surrogates</u> | | | | | | | | | |
| 1,4-Difluorobenzene <surr> | 91.7 | | % | SW8021B | A | 80-120 | 05/26/10 | 05/26/10 | EAB |
| 4-Bromofluorobenzene <surr> | 107 | | % | AK101 | A | 50-150 | 05/26/10 | 05/26/10 | EAB |
| <u>Semivolatile Organic Fuels Department</u> | | | | | | | | | |
| Diesel Range Organics | 0.994 U | 0.994 | mg/L | AK102 | D | | 05/25/10 | 05/26/10 | HM |
| <u>Surrogates</u> | | | | | | | | | |
| 5a Androstane <surr> | 95.8 | | % | AK102 | D | 50-150 | 05/25/10 | 05/26/10 | HM |



SGS Ref.# 1102267011
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-MW11
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/19/2010 12:38
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Fuels Department</u> | | | | | | | | | |
| Benzene | 0.500 U | 0.500 | ug/L | SW8021B | A | | 05/26/10 | 05/26/10 | EAB |
| Ethylbenzene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/26/10 | 05/26/10 | EAB |
| Gasoline Range Organics | 0.100 U | 0.100 | mg/L | AK101 | A | | 05/26/10 | 05/26/10 | EAB |
| o-Xylene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/26/10 | 05/26/10 | EAB |
| P & M -Xylene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/26/10 | 05/26/10 | EAB |
| Toluene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/26/10 | 05/26/10 | EAB |
| <u>Surrogates</u> | | | | | | | | | |
| 1,4-Difluorobenzene <surr> | 91.8 | | % | SW8021B | A | 80-120 | 05/26/10 | 05/26/10 | EAB |
| 4-Bromofluorobenzene <surr> | 115 | | % | AK101 | A | 50-150 | 05/26/10 | 05/26/10 | EAB |
| <u>Semivolatile Organic Fuels Department</u> | | | | | | | | | |
| Diesel Range Organics | 0.842 U | 0.842 | mg/L | AK102 | D | | 05/25/10 | 05/26/10 | HM |
| <u>Surrogates</u> | | | | | | | | | |
| 5a Androstane <surr> | 94.6 | | % | AK102 | D | 50-150 | 05/25/10 | 05/26/10 | HM |



SGS Ref.# 1102267012
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW7
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/19/2010 14:27
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,1,1-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<200) | 05/25/10 | 05/25/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,1,2-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| 1,1-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,1-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<7) | 05/25/10 | 05/25/10 | DSH |
| 1,1-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2,3-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2,3-Trichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2,4-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/25/10 | DSH |
| 1,2,4-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dibromoethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<600) | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| 1,3,5-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,3-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,3-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,4-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<75) | 05/25/10 | 05/25/10 | DSH |
| 2,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 2-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 4-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 4-Isopropyltoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Benzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Bromobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Bromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Bromodichloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |



SGS Ref.# 1102267012
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW7
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/19/2010 14:27
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Bromoform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Bromomethane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Carbon tetrachloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Chlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/25/10 | DSH |
| Chloroethane | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Chloroform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Chloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| cis-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/25/10 | DSH |
| cis-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Dibromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Dibromomethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Dichlorodifluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Ethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<700) | 05/25/10 | 05/25/10 | DSH |
| Hexachlorobutadiene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Isopropylbenzene (Cumene) | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Methylene chloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Methyl-t-butyl ether | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Naphthalene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| n-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| n-Propylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| o-Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| P & M -Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| sec-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Styrene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/25/10 | DSH |
| tert-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Tetrachloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Toluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<1000) | 05/25/10 | 05/25/10 | DSH |
| Total Trihalomethanes | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | (<80) | 05/25/10 | 05/25/10 | DSH |
| trans-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/25/10 | DSH |
| trans-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |



SGS Ref.# 1102267012
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW7
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/19/2010 14:27
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| Trichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Trichlorofluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Vinyl chloride | 0.400 U | 0.400 | ug/L | EPA 524.2 | A | (<2) | 05/25/10 | 05/25/10 | DSH |
| Xylenes (total) | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | (<10000) | 05/25/10 | 05/25/10 | DSH |
| Surrogates | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 108 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/25/10 | DSH |
| 4-Bromofluorobenzene <surr> | 109 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/25/10 | DSH |
| Toluene-d8 <surr> | 98.1 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/25/10 | DSH |



SGS Ref.# 1102267013
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW8
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/19/2010 14:52
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1,1-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<200) | 05/25/10 | 05/26/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1,2-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<7) | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,3-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,3-Trichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,4-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/26/10 | DSH |
| 1,2,4-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dibromoethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<600) | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,3,5-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,3-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,3-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,4-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<75) | 05/25/10 | 05/26/10 | DSH |
| 2,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 2-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 4-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 4-Isopropyltoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Benzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Bromobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromodichloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102267013
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW8
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/19/2010 14:52
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Bromoform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromomethane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Carbon tetrachloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Chlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| Chloroethane | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Chloroform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Chloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| cis-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/26/10 | DSH |
| cis-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dibromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dibromomethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dichlorodifluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Ethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<700) | 05/25/10 | 05/26/10 | DSH |
| Hexachlorobutadiene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Isopropylbenzene (Cumene) | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Methylene chloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Methyl-t-butyl ether | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Naphthalene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| n-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| n-Propylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| o-Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| P & M -Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| sec-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Styrene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| tert-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Tetrachloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Toluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<1000) | 05/25/10 | 05/26/10 | DSH |
| Total Trihalomethanes | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | (<80) | 05/25/10 | 05/26/10 | DSH |
| trans-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| trans-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102267013
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW8
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/19/2010 14:52
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| Trichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Trichlorofluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Vinyl chloride | 0.400 U | 0.400 | ug/L | EPA 524.2 | A | (<2) | 05/25/10 | 05/26/10 | DSH |
| Xylenes (total) | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | (<10000) | 05/25/10 | 05/26/10 | DSH |
| Surrogates | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 108 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |
| 4-Bromofluorobenzene <surr> | 109 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |
| Toluene-d8 <surr> | 99.2 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102267014
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW9
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/19/2010 15:30
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1,1-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<200) | 05/25/10 | 05/26/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1,2-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<7) | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,3-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,3-Trichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,4-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/26/10 | DSH |
| 1,2,4-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dibromoethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<600) | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,3,5-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,3-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,3-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,4-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<75) | 05/25/10 | 05/26/10 | DSH |
| 2,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 2-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 4-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 4-Isopropyltoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Benzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Bromobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromodichloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102267014
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW9
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/19/2010 15:30
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Bromoform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromomethane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Carbon tetrachloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Chlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| Chloroethane | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Chloroform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Chloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| cis-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/26/10 | DSH |
| cis-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dibromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dibromomethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dichlorodifluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Ethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<700) | 05/25/10 | 05/26/10 | DSH |
| Hexachlorobutadiene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Isopropylbenzene (Cumene) | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Methylene chloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Methyl-t-butyl ether | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Naphthalene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| n-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| n-Propylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| o-Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| P & M -Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| sec-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Styrene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| tert-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Tetrachloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Toluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<1000) | 05/25/10 | 05/26/10 | DSH |
| Total Trihalomethanes | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | (<80) | 05/25/10 | 05/26/10 | DSH |
| trans-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| trans-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102267014
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-DW9
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/19/2010 15:30
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| Trichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Trichlorofluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Vinyl chloride | 0.400 U | 0.400 | ug/L | EPA 524.2 | A | (<2) | 05/25/10 | 05/26/10 | DSH |
| Xylenes (total) | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | (<10000) | 05/25/10 | 05/26/10 | DSH |
| Surrogates | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 109 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |
| 4-Bromofluorobenzene <surr> | 106 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |
| Toluene-d8 <surr> | 98.4 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102267015
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-D10
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/19/2010 16:15
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1,1-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<200) | 05/25/10 | 05/26/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1,2-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<7) | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,3-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,3-Trichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,4-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/26/10 | DSH |
| 1,2,4-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dibromoethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<600) | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,3,5-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,3-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,3-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,4-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<75) | 05/25/10 | 05/26/10 | DSH |
| 2,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 2-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 4-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 4-Isopropyltoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Benzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Bromobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromodichloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102267015
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-D10
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/19/2010 16:15
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Bromoform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromomethane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Carbon tetrachloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Chlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| Chloroethane | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Chloroform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Chloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| cis-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/26/10 | DSH |
| cis-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dibromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dibromomethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dichlorodifluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Ethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<700) | 05/25/10 | 05/26/10 | DSH |
| Hexachlorobutadiene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Isopropylbenzene (Cumene) | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Methylene chloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Methyl-t-butyl ether | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Naphthalene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| n-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| n-Propylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| o-Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| P & M -Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| sec-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Styrene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| tert-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Tetrachloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Toluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<1000) | 05/25/10 | 05/26/10 | DSH |
| Total Trihalomethanes | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | (<80) | 05/25/10 | 05/26/10 | DSH |
| trans-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| trans-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102267015
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-D10
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/19/2010 16:15
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| Trichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Trichlorofluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Vinyl chloride | 0.400 U | 0.400 | ug/L | EPA 524.2 | A | (<2) | 05/25/10 | 05/26/10 | DSH |
| Xylenes (total) | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | (<10000) | 05/25/10 | 05/26/10 | DSH |
| Surrogates | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 108 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |
| 4-Bromofluorobenzene <surr> | 104 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |
| Toluene-d8 <surr> | 98.7 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102267016
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-MW-10
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/19/2010 17:38
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Fuels Department</u> | | | | | | | | | |
| Benzene | 0.500 U | 0.500 | ug/L | SW8021B | A | | 05/26/10 | 05/26/10 | EAB |
| Ethylbenzene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/26/10 | 05/26/10 | EAB |
| Gasoline Range Organics | 0.100 U | 0.100 | mg/L | AK101 | A | | 05/26/10 | 05/26/10 | EAB |
| o-Xylene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/26/10 | 05/26/10 | EAB |
| P & M -Xylene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/26/10 | 05/26/10 | EAB |
| Toluene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/26/10 | 05/26/10 | EAB |
| <u>Surrogates</u> | | | | | | | | | |
| 1,4-Difluorobenzene <surr> | 90.9 | | % | SW8021B | A | 80-120 | 05/26/10 | 05/26/10 | EAB |
| 4-Bromofluorobenzene <surr> | 108 | | % | AK101 | A | 50-150 | 05/26/10 | 05/26/10 | EAB |
| <u>Semivolatile Organic Fuels Department</u> | | | | | | | | | |
| Diesel Range Organics | 0.833 U | 0.833 | mg/L | AK102 | D | | 05/25/10 | 05/26/10 | HM |
| <u>Surrogates</u> | | | | | | | | | |
| 5a Androstane <surr> | 75.5 | | % | AK102 | D | 50-150 | 05/25/10 | 05/26/10 | HM |



SGS Ref.# 1102267017
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-WTB1
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/17/2010 12:00
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,1,1-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<200) | 05/25/10 | 05/25/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,1,2-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| 1,1-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,1-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<7) | 05/25/10 | 05/25/10 | DSH |
| 1,1-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2,3-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2,3-Trichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2,4-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/25/10 | DSH |
| 1,2,4-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dibromoethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<600) | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| 1,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| 1,3,5-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,3-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,3-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 1,4-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<75) | 05/25/10 | 05/25/10 | DSH |
| 2,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 2-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 4-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| 4-Isopropyltoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Benzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Bromobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Bromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Bromodichloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |



SGS Ref.# 1102267017
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-WTB1
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/17/2010 12:00
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Bromoform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Bromomethane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Carbon tetrachloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Chlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/25/10 | DSH |
| Chloroethane | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Chloroform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Chloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| cis-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/25/10 | DSH |
| cis-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Dibromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Dibromomethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Dichlorodifluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Ethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<700) | 05/25/10 | 05/25/10 | DSH |
| Hexachlorobutadiene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Isopropylbenzene (Cumene) | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Methylene chloride | 0.580 | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Methyl-t-butyl ether | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Naphthalene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| n-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| n-Propylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| o-Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| P & M -Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| sec-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Styrene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/25/10 | DSH |
| tert-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Tetrachloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Toluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<1000) | 05/25/10 | 05/25/10 | DSH |
| Total Trihalomethanes | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | (<80) | 05/25/10 | 05/25/10 | DSH |
| trans-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/25/10 | DSH |
| trans-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |



SGS Ref.# 1102267017
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID 32-1-17349-WTB1
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/17/2010 12:00
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| Trichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/25/10 | DSH |
| Trichlorofluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/25/10 | DSH |
| Vinyl chloride | 0.400 U | 0.400 | ug/L | EPA 524.2 | A | (<2) | 05/25/10 | 05/25/10 | DSH |
| Xylenes (total) | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | (<10000) | 05/25/10 | 05/25/10 | DSH |
| Surrogates | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 104 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/25/10 | DSH |
| 4-Bromofluorobenzene <surr> | 108 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/25/10 | DSH |
| Toluene-d8 <surr> | 99.3 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/25/10 | DSH |



SGS Ref.# 1102267018
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID TRIP BLANK
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/17/2010 12:00
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Fuels Department</u> | | | | | | | | | |
| Gasoline Range Organics | 0.100 U | 0.100 | mg/L | AK101 | A | | 05/25/10 | 05/25/10 | EAB |
| <u>Surrogates</u> | | | | | | | | | |
| 4-Bromofluorobenzene <surr> | 114 | | % | AK101 | A | 50-150 | 05/25/10 | 05/25/10 | EAB |
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 1,1,1-Trichloroethane | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 1,1,2,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 1,1,2-Trichloroethane | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 1,1-Dichloroethane | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 1,1-Dichloroethene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 1,1-Dichloropropene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 1,2,3-Trichlorobenzene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 1,2,3-Trichloropropane | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 1,2,4-Trichlorobenzene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 1,2,4-Trimethylbenzene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 1,2-Dibromo-3-chloropropane | 2.00 U | 2.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 1,2-Dibromoethane | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 1,2-Dichlorobenzene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 1,2-Dichloroethane | 0.500 U | 0.500 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 1,2-Dichloropropane | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 1,3,5-Trimethylbenzene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 1,3-Dichlorobenzene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 1,3-Dichloropropane | 0.400 U | 0.400 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 1,4-Dichlorobenzene | 0.500 U | 0.500 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 2,2-Dichloropropane | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |



SGS Ref.# 1102267018
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID TRIP BLANK
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/17/2010 12:00
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 2-Butanone (MEK) | 10.0 U | 10.0 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 2-Chlorotoluene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 2-Hexanone | 10.0 U | 10.0 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 4-Chlorotoluene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 4-Isopropyltoluene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| 4-Methyl-2-pentanone (MIBK) | 10.0 U | 10.0 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Benzene | 0.400 U | 0.400 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Bromobenzene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Bromochloromethane | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Bromodichloromethane | 0.500 U | 0.500 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Bromoform | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Bromomethane | 3.00 U | 3.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Carbon disulfide | 2.00 U | 2.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Carbon tetrachloride | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Chlorobenzene | 0.500 U | 0.500 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Chloroethane | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Chloroform | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Chloromethane | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| cis-1,2-Dichloroethene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| cis-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Dibromochloromethane | 0.500 U | 0.500 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Dibromomethane | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Dichlorodifluoromethane | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Ethylbenzene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Hexachlorobutadiene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Isopropylbenzene (Cumene) | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Methylene chloride | 5.00 U | 5.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Methyl-t-butyl ether | 5.00 U | 5.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Naphthalene | 2.00 U | 2.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| n-Butylbenzene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |



SGS Ref.# 1102267018
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Client Sample ID TRIP BLANK
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Collected Date/Time 05/17/2010 12:00
Received Date/Time 05/20/2010 14:50
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|------|-------|---------|--------------|------------------|-----------|---------------|------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| n-Propylbenzene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| o-Xylene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| P & M -Xylene | 2.00 U | 2.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| sec-Butylbenzene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Styrene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| tert-Butylbenzene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Tetrachloroethene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Toluene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| trans-1,2-Dichloroethene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| trans-1,3-Dichloropropene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Trichloroethene | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Trichlorofluoromethane | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Vinyl chloride | 1.00 U | 1.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Xylenes (total) | 3.00 U | 3.00 | ug/L | SW8260B | C | | 05/30/10 | 05/30/10 | JPI |
| Surrogates | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 102 | | % | SW8260B | C | 73-120 | 05/30/10 | 05/30/10 | JPI |
| 4-Bromofluorobenzene <surr> | 102 | | % | SW8260B | C | 76-120 | 05/30/10 | 05/30/10 | JPI |
| Toluene-d8 <surr> | 102 | | % | SW8260B | C | 80-120 | 05/30/10 | 05/30/10 | JPI |



SGS Ref.# 962506 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Prep Batch XXX22665
Method SW3520C
Date 05/25/2010

QC results affect the following production samples:

1102267004, 1102267005, 1102267009, 1102267010, 1102267011, 1102267016

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Semivolatile Organic Fuels Department

| | | | | | |
|-----------------------|---------|-------|-------|------|----------|
| Diesel Range Organics | 0.500 U | 0.800 | 0.250 | mg/L | 05/25/10 |
|-----------------------|---------|-------|-------|------|----------|

Surrogates

| | | | | | |
|----------------------|-----|--------|--|---|----------|
| 5a Androstane <surr> | 104 | 60-120 | | % | 05/25/10 |
|----------------------|-----|--------|--|---|----------|

Batch XFC9196
Method AK102
Instrument HP 7890A FID SV E F



SGS Ref.# 962737 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20685
Method SW5030B
Date 05/25/2010

QC results affect the following production samples:
 1102267004, 1102267005, 1102267018

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Fuels Department

| | | | | | |
|-------------------------|------------|----------|----------|------|----------|
| Benzene | 0.000300 U | 0.000500 | 0.000150 | mg/L | 05/25/10 |
| Ethylbenzene | 0.00124 U | 0.00200 | 0.000620 | mg/L | 05/25/10 |
| Gasoline Range Organics | 0.0620 U | 0.100 | 0.0310 | mg/L | 05/25/10 |
| o-Xylene | 0.00124 U | 0.00200 | 0.000620 | mg/L | 05/25/10 |
| P & M -Xylene | 0.00124 U | 0.00200 | 0.000620 | mg/L | 05/25/10 |
| Toluene | 0.00124 U | 0.00200 | 0.000620 | mg/L | 05/25/10 |

Surrogates

| | | | | | |
|-----------------------------|------|--------|--|---|----------|
| 1,4-Difluorobenzene <surr> | 84.6 | 80-120 | | % | 05/25/10 |
| 4-Bromofluorobenzene <surr> | 114 | 50-150 | | % | 05/25/10 |

Batch VFC9946
Method AK101
Instrument HP 5890 Series II PID+FID VCA

| | | | | | |
|---------------|---------|-------|-------|------|----------|
| Benzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Ethylbenzene | 1.24 U | 2.00 | 0.620 | ug/L | 05/25/10 |
| o-Xylene | 1.24 U | 2.00 | 0.620 | ug/L | 05/25/10 |
| P & M -Xylene | 1.24 U | 2.00 | 0.620 | ug/L | 05/25/10 |
| Toluene | 1.24 U | 2.00 | 0.620 | ug/L | 05/25/10 |

Surrogates

| | | | | | |
|----------------------------|------|--------|--|---|----------|
| 1,4-Difluorobenzene <surr> | 84.6 | 80-120 | | % | 05/25/10 |
|----------------------------|------|--------|--|---|----------|

Batch VFC9946
Method SW8021B
Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 962798 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20687
Method SW5030B
Date 05/25/2010

QC results affect the following production samples:

1102267001, 1102267003, 1102267006, 1102267007, 1102267017

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 962798 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20687
Method SW5030B
Date 05/25/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | |
|-----------------------------|---------|-------|-------|------|----------|
| 1,1,1,2-Tetrachloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,1,1-Trichloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,1,2,2-Tetrachloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,1,2-Trichloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,1-Dichloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,1-Dichloroethene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,1-Dichloropropene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,2,3-Trichlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,2,3-Trichloropropane | 0.360 U | 0.500 | 0.180 | ug/L | 05/25/10 |
| 1,2,4-Trichlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,2,4-Trimethylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,2-Dibromo-3-chloropropane | 1.24 U | 2.00 | 0.620 | ug/L | 05/25/10 |
| 1,2-Dibromoethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,2-Dichlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,2-Dichloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,2-Dichloropropane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,3,5-Trimethylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,3-Dichlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,3-Dichloropropane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,4-Dichlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 2,2-Dichloropropane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 2-Chlorotoluene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 4-Chlorotoluene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 4-Isopropyltoluene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Benzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Bromobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Bromochloromethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Bromodichloromethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Bromoform | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Bromomethane | 1.24 U | 2.00 | 0.620 | ug/L | 05/25/10 |
| Carbon tetrachloride | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Chlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Chloroethane | 0.620 U | 1.00 | 0.310 | ug/L | 05/25/10 |
| Chloroform | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Chloromethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| cis-1,2-Dichloroethene | 0.380J | 0.500 | 0.150 | ug/L | 05/25/10 |
| cis-1,3-Dichloropropene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Dibromochloromethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Dibromomethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |



SGS Ref.# 962798 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20687
Method SW5030B
Date 05/25/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | |
|---------------------------|---------|-------|-------|------|----------|
| Dichlorodifluoromethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Ethylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Hexachlorobutadiene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Isopropylbenzene (Cumene) | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Methylene chloride | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Methyl-t-butyl ether | 1.00 U | 1.00 | 0.500 | ug/L | 05/25/10 |
| Naphthalene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| n-Butylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| n-Propylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| o-Xylene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| P & M -Xylene | 0.360 U | 0.500 | 0.180 | ug/L | 05/25/10 |
| sec-Butylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Styrene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| tert-Butylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Tetrachloroethene | 0.390J | 0.500 | 0.150 | ug/L | 05/25/10 |
| Toluene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| trans-1,2-Dichloroethene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| trans-1,3-Dichloropropene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Trichloroethene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Trichlorofluoromethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Vinyl chloride | 0.240 U | 0.400 | 0.120 | ug/L | 05/25/10 |

Surrogates

| | | | | | |
|------------------------------|-----|--------|--|---|----------|
| 1,2-Dichloroethane-D4 <surr> | 106 | 70-130 | | % | 05/25/10 |
| 4-Bromofluorobenzene <surr> | 107 | 70-130 | | % | 05/25/10 |
| Toluene-d8 <surr> | 100 | 70-130 | | % | 05/25/10 |

Batch VMS11238
Method EPA 524.2
Instrument HP 5890 Series II MS1 VJA



SGS Ref.# 963287 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20696
Method SW5030B
Date 05/26/2010

QC results affect the following production samples:
1102267009, 1102267010, 1102267011, 1102267016

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Fuels Department

Gasoline Range Organics 0.0620 U 0.100 0.0310 mg/L 05/26/10

Surrogates

4-Bromofluorobenzene <surr> 107 50-150 % 05/26/10

Batch VFC9949
Method AK101
Instrument HP 5890 Series II PID+FID VCA

Benzene 0.300 U 0.500 0.150 ug/L 05/26/10
Ethylbenzene 1.24 U 2.00 0.620 ug/L 05/26/10
o-Xylene 1.24 U 2.00 0.620 ug/L 05/26/10
P & M -Xylene 1.24 U 2.00 0.620 ug/L 05/26/10
Toluene 1.24 U 2.00 0.620 ug/L 05/26/10

Surrogates

1,4-Difluorobenzene <surr> 91.3 80-120 % 05/26/10

Batch VFC9949
Method SW8021B
Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 963448 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20700
Method SW5030B
Date 05/25/2010

QC results affect the following production samples:

1102267008, 1102267012, 1102267013, 1102267014, 1102267015

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 963448 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/07/2010 9:52
Prep Batch Method Date VXX20700 SW5030B 05/25/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | |
|-----------------------------|---------|-------|-------|------|----------|
| 1,1,1,2-Tetrachloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,1,1-Trichloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,1,2,2-Tetrachloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,1,2-Trichloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,1-Dichloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,1-Dichloroethene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,1-Dichloropropene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,2,3-Trichlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,2,3-Trichloropropane | 0.360 U | 0.500 | 0.180 | ug/L | 05/25/10 |
| 1,2,4-Trichlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,2,4-Trimethylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,2-Dibromo-3-chloropropane | 1.24 U | 2.00 | 0.620 | ug/L | 05/25/10 |
| 1,2-Dibromoethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,2-Dichlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,2-Dichloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,2-Dichloropropane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,3,5-Trimethylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,3-Dichlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,3-Dichloropropane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,4-Dichlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 2,2-Dichloropropane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 2-Chlorotoluene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 4-Chlorotoluene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 4-Isopropyltoluene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Benzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Bromobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Bromochloromethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Bromodichloromethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Bromoform | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Bromomethane | 1.24 U | 2.00 | 0.620 | ug/L | 05/25/10 |
| Carbon tetrachloride | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Chlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Chloroethane | 0.620 U | 1.00 | 0.310 | ug/L | 05/25/10 |
| Chloroform | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Chloromethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| cis-1,2-Dichloroethene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| cis-1,3-Dichloropropene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Dibromochloromethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Dibromomethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |



SGS Ref.# 963448 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20700
Method SW5030B
Date 05/25/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | |
|---------------------------|---------|-------|-------|------|----------|
| Dichlorodifluoromethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Ethylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Hexachlorobutadiene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Isopropylbenzene (Cumene) | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Methylene chloride | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Methyl-t-butyl ether | 1.00 U | 1.00 | 0.500 | ug/L | 05/25/10 |
| Naphthalene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| n-Butylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| n-Propylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| o-Xylene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| P & M -Xylene | 0.360 U | 0.500 | 0.180 | ug/L | 05/25/10 |
| sec-Butylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Styrene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| tert-Butylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Tetrachloroethene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Toluene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| trans-1,2-Dichloroethene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| trans-1,3-Dichloropropene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Trichloroethene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Trichlorofluoromethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Vinyl chloride | 0.240 U | 0.400 | 0.120 | ug/L | 05/25/10 |

Surrogates

| | | | | | |
|------------------------------|------|--------|--|---|----------|
| 1,2-Dichloroethane-D4 <surr> | 108 | 70-130 | | % | 05/25/10 |
| 4-Bromofluorobenzene <surr> | 106 | 70-130 | | % | 05/25/10 |
| Toluene-d8 <surr> | 97.8 | 70-130 | | % | 05/25/10 |

Batch VMS11246
Method EPA 524.2
Instrument HP 5890 Series II MS1 VJA



SGS Ref.# 964330 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20723
Method SW5030B
Date 05/30/2010

QC results affect the following production samples:

1102267005, 1102267018

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 964330 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Prep Batch Method Date VXX20723 SW5030B 05/30/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | |
|-----------------------------|---------|-------|-------|------|----------|
| 1,1,1,2-Tetrachloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/30/10 |
| 1,1,1-Trichloroethane | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| 1,1,2,2-Tetrachloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/30/10 |
| 1,1,2-Trichloroethane | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| 1,1-Dichloroethane | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| 1,1-Dichloroethene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| 1,1-Dichloropropene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| 1,2,3-Trichlorobenzene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| 1,2,3-Trichloropropane | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| 1,2,4-Trichlorobenzene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| 1,2,4-Trimethylbenzene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| 1,2-Dibromo-3-chloropropane | 1.24 U | 2.00 | 0.620 | ug/L | 05/30/10 |
| 1,2-Dibromoethane | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| 1,2-Dichlorobenzene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| 1,2-Dichloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/30/10 |
| 1,2-Dichloropropane | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| 1,3,5-Trimethylbenzene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| 1,3-Dichlorobenzene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| 1,3-Dichloropropane | 0.240 U | 0.400 | 0.120 | ug/L | 05/30/10 |
| 1,4-Dichlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/30/10 |
| 2,2-Dichloropropane | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| 2-Butanone (MEK) | 6.20 U | 10.0 | 3.10 | ug/L | 05/30/10 |
| 2-Chlorotoluene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| 2-Hexanone | 6.20 U | 10.0 | 3.10 | ug/L | 05/30/10 |
| 4-Chlorotoluene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| 4-Isopropyltoluene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| 4-Methyl-2-pentanone (MIBK) | 6.20 U | 10.0 | 3.10 | ug/L | 05/30/10 |
| Benzene | 0.240 U | 0.400 | 0.120 | ug/L | 05/30/10 |
| Bromobenzene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| Bromochloromethane | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| Bromodichloromethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/30/10 |
| Bromoform | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| Bromomethane | 1.88 U | 3.00 | 0.940 | ug/L | 05/30/10 |
| Carbon disulfide | 1.24 U | 2.00 | 0.620 | ug/L | 05/30/10 |
| Carbon tetrachloride | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| Chlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/30/10 |
| Chloroethane | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| Chloroform | 0.600 U | 1.00 | 0.300 | ug/L | 05/30/10 |
| Chloromethane | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |



SGS Ref.# 964330 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20723
Method SW5030B
Date 05/30/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | |
|---------------------------|---------|-------|-------|------|----------|
| cis-1,2-Dichloroethene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| cis-1,3-Dichloropropene | 0.300 U | 0.500 | 0.150 | ug/L | 05/30/10 |
| Dibromochloromethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/30/10 |
| Dibromomethane | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| Dichlorodifluoromethane | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| Ethylbenzene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| Hexachlorobutadiene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| Isopropylbenzene (Cumene) | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| Methylene chloride | 2.00 U | 5.00 | 1.00 | ug/L | 05/30/10 |
| Methyl-t-butyl ether | 3.00 U | 5.00 | 1.50 | ug/L | 05/30/10 |
| Naphthalene | 1.24 U | 2.00 | 0.620 | ug/L | 05/30/10 |
| n-Butylbenzene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| n-Propylbenzene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| o-Xylene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| P & M -Xylene | 1.24 U | 2.00 | 0.620 | ug/L | 05/30/10 |
| sec-Butylbenzene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| Styrene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| tert-Butylbenzene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| Tetrachloroethene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| Toluene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| trans-1,2-Dichloroethene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| trans-1,3-Dichloropropene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| Trichloroethene | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| Trichlorofluoromethane | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| Vinyl chloride | 0.620 U | 1.00 | 0.310 | ug/L | 05/30/10 |
| Xylenes (total) | 1.88 U | 3.00 | 0.940 | ug/L | 05/30/10 |

Surrogates

| | | | | | |
|------------------------------|-----|--------|--|---|----------|
| 1,2-Dichloroethane-D4 <surr> | 101 | 73-120 | | % | 05/30/10 |
| 4-Bromofluorobenzene <surr> | 103 | 76-120 | | % | 05/30/10 |
| Toluene-d8 <surr> | 101 | 80-120 | | % | 05/30/10 |

Batch VMS11260
Method SW8260B
Instrument HP 5890 Series II MS1 VJA



SGS Ref.# 962507 Lab Control Sample
 962508 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Prep Batch XXX22665
Method SW3520C
Date 05/25/2010

QC results affect the following production samples:

1102267004, 1102267005, 1102267009, 1102267010, 1102267011, 1102267016

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Semivolatile Organic Fuels Department

| | | | | | | | |
|-----------------------|------|------|----|------------|----|---------|-------------------|
| Diesel Range Organics | LCS | 4.38 | 88 | (75-125) | | 5 mg/L | 05/25/2010 |
| | LCSD | 4.94 | 99 | | 12 | (< 20) | 5 mg/L 05/25/2010 |

Surrogates

| | | | | | | | |
|----------------------|------|--|----|------------|----|--|------------|
| 5a Androstane <surr> | LCS | | 82 | (60-120) | | | 05/25/2010 |
| | LCSD | | 92 | | 11 | | 05/25/2010 |

Batch XFC9196
Method AK102
Instrument HP 7890A FID SV E F



SGS Ref.# 962738 Lab Control Sample
 962740 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20685
Method SW5030B
Date 05/25/2010

QC results affect the following production samples:
 1102267004, 1102267005, 1102267018

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Fuels Department</u> | | | | | | | | |
| Benzene | LCS | 0.102 | 102 | (80-120) | | | 0.100 mg/L | 05/25/2010 |
| | LCSD | 0.0999 | 100 | | 2 | (< 20) | 0.100 mg/L | 05/25/2010 |
| Ethylbenzene | LCS | 0.106 | 106 | (87-125) | | | 0.100 mg/L | 05/25/2010 |
| | LCSD | 0.103 | 103 | | 3 | (< 20) | 0.100 mg/L | 05/25/2010 |
| o-Xylene | LCS | 0.100 | 100 | (85-120) | | | 0.100 mg/L | 05/25/2010 |
| | LCSD | 0.0980 | 98 | | 2 | (< 20) | 0.100 mg/L | 05/25/2010 |
| P & M -Xylene | LCS | 0.209 | 104 | (87-125) | | | 0.200 mg/L | 05/25/2010 |
| | LCSD | 0.203 | 101 | | 3 | (< 20) | 0.200 mg/L | 05/25/2010 |
| Toluene | LCS | 0.102 | 102 | (80-120) | | | 0.100 mg/L | 05/25/2010 |
| | LCSD | 0.0994 | 99 | | 3 | (< 20) | 0.100 mg/L | 05/25/2010 |
| Surrogates | | | | | | | | |
| 1,4-Difluorobenzene <surr> | LCS | | 96 | (80-120) | | | | 05/25/2010 |
| | LCSD | | 103 | | 7 | | | 05/25/2010 |

Batch VFC9946
Method AK101
Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 962738 Lab Control Sample
 962740 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20685
Method SW5030B
Date 05/25/2010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------------|-----------|-----------------|------------|------------|---------------|---------------------|
| <u>Volatile Fuels Department</u> | | | | | | | |
| Benzene | LCS | 102 | 102 | (80-120) | | 100 ug/L | 05/25/2010 |
| | LCSD | 99.9 | 100 | | 2 | (< 20) | 100 ug/L 05/25/2010 |
| Ethylbenzene | LCS | 106 | 106 | (87-125) | | 100 ug/L | 05/25/2010 |
| | LCSD | 103 | 103 | | 3 | (< 20) | 100 ug/L 05/25/2010 |
| o-Xylene | LCS | 100 | 100 | (85-120) | | 100 ug/L | 05/25/2010 |
| | LCSD | 98.0 | 98 | | 2 | (< 20) | 100 ug/L 05/25/2010 |
| P & M -Xylene | LCS | 209 | 104 | (87-125) | | 200 ug/L | 05/25/2010 |
| | LCSD | 203 | 101 | | 3 | (< 20) | 200 ug/L 05/25/2010 |
| Toluene | LCS | 102 | 102 | (80-120) | | 100 ug/L | 05/25/2010 |
| | LCSD | 99.4 | 99 | | 3 | (< 20) | 100 ug/L 05/25/2010 |
| Surrogates | | | | | | | |
| 1,4-Difluorobenzene <surr> | LCS | | 96 | (80-120) | | | 05/25/2010 |
| | LCSD | | 103 | | 7 | | 05/25/2010 |

Batch VFC9946
Method SW8021B
Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 962739 Lab Control Sample
962741 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20685
Method SW5030B
Date 05/25/2010

QC results affect the following production samples:
1102267004, 1102267005, 1102267018

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------------|-----------|-----------------|------------|------------|---------------|-----------------------|
| <u>Volatile Fuels Department</u> | | | | | | | |
| Gasoline Range Organics | LCS | 0.230 | 115 | (60-120) | | 0.200 mg/L | 05/25/2010 |
| | LCSD | 0.219 | 109 | | 5 | (< 20) | 0.200 mg/L 05/25/2010 |
| Surrogates | | | | | | | |
| 4-Bromofluorobenzene <surr> | LCS | | 111 | (50-150) | | | 05/25/2010 |
| | LCSD | | 112 | | 1 | | 05/25/2010 |

Batch VFC9946
Method AK101
Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 962799 Lab Control Sample
962800 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20687
Method SW5030B
Date 05/25/2010

QC results affect the following production samples:

1102267001, 1102267003, 1102267006, 1102267007, 1102267017

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



| | | | | | |
|-----------------------|------------------------|------------------------------|--------------------------|------------|------|
| SGS Ref.# | 962799 | Lab Control Sample | Printed Date/Time | 06/07/2010 | 9:52 |
| | 962800 | Lab Control Sample Duplicate | Prep | VXX20687 | |
| Client Name | Shannon & Wilson, Inc. | | Batch | SW5030B | |
| Project Name/# | 32-1-17349 Aniak GW | | Method | 05/25/2010 | |
| Matrix | Drinking Water | | Date | | |

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | LCS | 29.8 | 99 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 31.0 | 103 | | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,1,1-Trichloroethane | LCS | 31.2 | 104 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.6 | 102 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,1,2,2-Tetrachloroethane | LCS | 31.6 | 105 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.4 | 101 | | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,1,2-Trichloroethane | LCS | 30.2 | 101 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.4 | 101 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,1-Dichloroethane | LCS | 31.4 | 105 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.7 | 102 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,1-Dichloroethene | LCS | 30.2 | 101 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.4 | 98 | | 3 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,1-Dichloropropene | LCS | 30.5 | 102 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.0 | 100 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2,3-Trichlorobenzene | LCS | 30.1 | 100 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 31.1 | 104 | | 3 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2,3-Trichloropropane | LCS | 30.2 | 101 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.2 | 97 | | 3 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2,4-Trichlorobenzene | LCS | 28.2 | 94 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.4 | 98 | | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2,4-Trimethylbenzene | LCS | 29.2 | 97 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.0 | 100 | | 3 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2-Dibromo-3-chloropropane | LCS | 32.7 | 109 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 32.0 | 107 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2-Dibromoethane | LCS | 30.1 | 100 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.6 | 99 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2-Dichlorobenzene | LCS | 27.1 | 90 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.1 | 94 | | 4 | (< 30) | 30 ug/L | 05/25/2010 |



| | | | | | |
|-----------------------|------------------------|------------------------------|--------------------------|------------|------|
| SGS Ref.# | 962799 | Lab Control Sample | Printed Date/Time | 06/07/2010 | 9:52 |
| | 962800 | Lab Control Sample Duplicate | Prep | VXX20687 | |
| Client Name | Shannon & Wilson, Inc. | | Batch | SW5030B | |
| Project Name/# | 32-1-17349 Aniak GW | | Method | 05/25/2010 | |
| Matrix | Drinking Water | | Date | | |

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| 1,2-Dichloroethane | LCS | 31.1 | 104 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.6 | 102 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2-Dichloropropane | LCS | 31.0 | 103 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.5 | 102 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,3,5-Trimethylbenzene | LCS | 29.5 | 98 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.9 | 100 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,3-Dichlorobenzene | LCS | 27.1 | 90 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.2 | 94 | | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,3-Dichloropropane | LCS | 29.5 | 98 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.1 | 97 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,4-Dichlorobenzene | LCS | 27.4 | 91 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.4 | 95 | | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| 2,2-Dichloropropane | LCS | 32.5 | 108 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 31.2 | 104 | | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| 2-Chlorotoluene | LCS | 29.2 | 97 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.4 | 98 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| 4-Chlorotoluene | LCS | 29.0 | 97 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.6 | 99 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| 4-Isopropyltoluene | LCS | 28.3 | 94 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.0 | 97 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| Benzene | LCS | 29.9 | 100 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.4 | 98 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| Bromobenzene | LCS | 27.8 | 93 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.0 | 97 | | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| Bromochloromethane | LCS | 29.1 | 97 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.6 | 95 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| Bromodichloromethane | LCS | 32.6 | 109 | (70-130) | | | 30 ug/L | 05/25/2010 |



| | | | | | |
|-----------------------|------------------------|------------------------------|--------------------------|------------|------|
| SGS Ref.# | 962799 | Lab Control Sample | Printed Date/Time | 06/07/2010 | 9:52 |
| | 962800 | Lab Control Sample Duplicate | Prep | VXX20687 | |
| Client Name | Shannon & Wilson, Inc. | | Batch | SW5030B | |
| Project Name/# | 32-1-17349 Aniak GW | | Method | | |
| Matrix | Drinking Water | | Date | 05/25/2010 | |

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| | LCSD | 32.5 | 108 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| Bromoform | LCS | 30.3 | 101 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.8 | 103 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| Bromomethane | LCS | 37.3 | 124 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 41.0 | 137 * | | 10 | (< 30) | 30 ug/L | 05/25/2010 |
| Carbon tetrachloride | LCS | 33.1 | 110 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 33.2 | 111 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| Chlorobenzene | LCS | 28.0 | 93 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.2 | 94 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| Chloroethane | LCS | 36.4 | 121 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 35.2 | 117 | | 3 | (< 30) | 30 ug/L | 05/25/2010 |
| Chloroform | LCS | 30.9 | 103 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.1 | 100 | | 3 | (< 30) | 30 ug/L | 05/25/2010 |
| Chloromethane | LCS | 49.6 | 165 * | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 47.9 | 160 * | | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| cis-1,2-Dichloroethene | LCS | 30.3 | 101 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.8 | 99 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| cis-1,3-Dichloropropene | LCS | 31.2 | 104 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 31.7 | 106 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| Dibromochloromethane | LCS | 27.3 | 91 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.7 | 96 | | 5 | (< 30) | 30 ug/L | 05/25/2010 |
| Dibromomethane | LCS | 29.8 | 99 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.5 | 98 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| Dichlorodifluoromethane | LCS | 47.7 | 159 * | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 45.2 | 151 * | | 5 | (< 30) | 30 ug/L | 05/25/2010 |
| Ethylbenzene | LCS | 28.7 | 96 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.3 | 98 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |



SGS Ref.# 962799 Lab Control Sample
 962800 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20687
Method SW5030B
Date 05/25/2010

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| Hexachlorobutadiene | LCS | 23.6 | 79 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 26.2 | 87 | | 10 | (< 30) | 30 ug/L | 05/25/2010 |
| Isopropylbenzene (Cumene) | LCS | 28.7 | 96 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.3 | 94 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| Methylene chloride | LCS | 32.6 | 109 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 31.6 | 105 | | 3 | (< 30) | 30 ug/L | 05/25/2010 |
| Methyl-t-butyl ether | LCS | 46.5 | 103 | (70-130) | | | 45 ug/L | 05/25/2010 |
| | LCSD | 45.1 | 100 | | 3 | (< 30) | 45 ug/L | 05/25/2010 |
| Naphthalene | LCS | 33.3 | 111 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 33.2 | 111 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| n-Butylbenzene | LCS | 28.4 | 95 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.3 | 98 | | 3 | (< 30) | 30 ug/L | 05/25/2010 |
| n-Propylbenzene | LCS | 29.4 | 98 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.6 | 99 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| o-Xylene | LCS | 28.3 | 95 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.4 | 95 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| P & M -Xylene | LCS | 56.9 | 95 | (70-130) | | | 60 ug/L | 05/25/2010 |
| | LCSD | 56.7 | 95 | | 0 | (< 30) | 60 ug/L | 05/25/2010 |
| sec-Butylbenzene | LCS | 28.5 | 95 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.0 | 97 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| Styrene | LCS | 29.1 | 97 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.4 | 98 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| tert-Butylbenzene | LCS | 28.2 | 94 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.6 | 95 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| Tetrachloroethene | LCS | 26.7 | 89 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 27.3 | 91 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| Toluene | LCS | 28.6 | 95 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.7 | 96 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |



SGS Ref.# 962799 Lab Control Sample
 962800 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20687
Method SW5030B
Date 05/25/2010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | |
|---------------------------|------|------|-----|------------|---|---------|--------------------|
| trans-1,2-Dichloroethene | LCS | 30.5 | 102 | (70-130) | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.9 | 100 | | 2 | (< 30) | 30 ug/L 05/25/2010 |
| trans-1,3-Dichloropropene | LCS | 27.6 | 92 | (70-130) | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.6 | 95 | | 4 | (< 30) | 30 ug/L 05/25/2010 |
| Trichloroethene | LCS | 30.1 | 100 | (70-130) | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.4 | 98 | | 2 | (< 30) | 30 ug/L 05/25/2010 |
| Trichlorofluoromethane | LCS | 33.8 | 113 | (70-130) | | 30 ug/L | 05/25/2010 |
| | LCSD | 32.6 | 109 | | 4 | (< 30) | 30 ug/L 05/25/2010 |
| Vinyl chloride | LCS | 38.9 | 130 | (70-130) | | 30 ug/L | 05/25/2010 |
| | LCSD | 37.4 | 125 | | 4 | (< 30) | 30 ug/L 05/25/2010 |

Surrogates

| | | | | | | | |
|------------------------------|------|--|-----|------------|---|--|------------|
| 1,2-Dichloroethane-D4 <surr> | LCS | | 107 | (70-130) | | | 05/25/2010 |
| | LCSD | | 102 | | 4 | | 05/25/2010 |
| 4-Bromofluorobenzene <surr> | LCS | | 104 | (70-130) | | | 05/25/2010 |
| | LCSD | | 106 | | 2 | | 05/25/2010 |
| Toluene-d8 <surr> | LCS | | 98 | (70-130) | | | 05/25/2010 |
| | LCSD | | 98 | | 0 | | 05/25/2010 |

Batch VMS11238
Method EPA 524.2
Instrument HP 5890 Series II MS1 VJA



SGS Ref.# 963288 Lab Control Sample
 963289 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20696
Method SW5030B
Date 05/26/2010

QC results affect the following production samples:
 1102267009, 1102267010, 1102267011, 1102267016

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------------|-----------|-----------------|------------|------------|---------------|---------------------|
| <u>Volatile Fuels Department</u> | | | | | | | |
| Benzene | LCS | 104 | 104 | (80-120) | | 100 ug/L | 05/26/2010 |
| | LCSD | 103 | 103 | | 0 | (< 20) | 100 ug/L 05/26/2010 |
| Ethylbenzene | LCS | 106 | 106 | (87-125) | | 100 ug/L | 05/26/2010 |
| | LCSD | 106 | 106 | | 0 | (< 20) | 100 ug/L 05/26/2010 |
| o-Xylene | LCS | 101 | 101 | (85-120) | | 100 ug/L | 05/26/2010 |
| | LCSD | 100 | 100 | | 0 | (< 20) | 100 ug/L 05/26/2010 |
| P & M -Xylene | LCS | 209 | 104 | (87-125) | | 200 ug/L | 05/26/2010 |
| | LCSD | 208 | 104 | | 0 | (< 20) | 200 ug/L 05/26/2010 |
| Toluene | LCS | 103 | 103 | (80-120) | | 100 ug/L | 05/26/2010 |
| | LCSD | 102 | 102 | | 0 | (< 20) | 100 ug/L 05/26/2010 |
| Surrogates | | | | | | | |
| 1,4-Difluorobenzene <surr> | LCS | | 103 | (80-120) | | | 05/26/2010 |
| | LCSD | | 103 | | 0 | | 05/26/2010 |

Batch VFC9949
Method SW8021B
Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 963290 Lab Control Sample
 963291 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20696
Method SW5030B
Date 05/26/2010

QC results affect the following production samples:
 1102267009, 1102267010, 1102267011, 1102267016

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Volatile Fuels Department</u> | | | | | | | |
| Gasoline Range Organics | LCS | 0.228 | 114 | (60-120) | | 0.200 mg/L | 05/26/2010 |
| | LCSD | 0.224 | 112 | | 2 (< 20) | 0.200 mg/L | 05/26/2010 |
| Surrogates | | | | | | | |
| 4-Bromofluorobenzene <surr> | LCS | | 109 | (50-150) | | | 05/26/2010 |
| | LCSD | | 109 | | 0 | | 05/26/2010 |

Batch VFC9949
Method AK101
Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 963449 Lab Control Sample
963450 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20700
Method SW5030B
Date 05/25/2010

QC results affect the following production samples:

1102267008, 1102267012, 1102267013, 1102267014, 1102267015

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 963449 Lab Control Sample
 963450 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20700
Method SW5030B
Date 05/25/2010

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | LCS | 31.2 | 104 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.5 | 102 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,1,1-Trichloroethane | LCS | 30.9 | 103 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.8 | 99 | | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,1,2,2-Tetrachloroethane | LCS | 30.5 | 102 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.4 | 101 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,1,2-Trichloroethane | LCS | 30.8 | 103 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.4 | 101 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,1-Dichloroethane | LCS | 30.7 | 102 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.3 | 101 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,1-Dichloroethene | LCS | 30.4 | 101 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.4 | 98 | | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,1-Dichloropropene | LCS | 30.4 | 101 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.4 | 98 | | 3 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2,3-Trichlorobenzene | LCS | 31.3 | 104 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.7 | 99 | | 5 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2,3-Trichloropropane | LCS | 29.7 | 99 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.8 | 96 | | 3 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2,4-Trichlorobenzene | LCS | 29.7 | 99 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.0 | 97 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2,4-Trimethylbenzene | LCS | 29.8 | 99 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.7 | 99 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2-Dibromo-3-chloropropane | LCS | 32.7 | 109 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 32.1 | 107 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2-Dibromoethane | LCS | 30.0 | 100 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.4 | 101 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2-Dichlorobenzene | LCS | 27.9 | 93 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 27.5 | 92 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |



SGS Ref.# 963449 Lab Control Sample
 963450 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20700
Method SW5030B
Date 05/25/2010

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| 1,2-Dichloroethane | LCS | 31.4 | 105 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 31.3 | 104 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2-Dichloropropane | LCS | 30.9 | 103 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.9 | 103 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,3,5-Trimethylbenzene | LCS | 29.7 | 99 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.3 | 101 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,3-Dichlorobenzene | LCS | 28.3 | 94 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 27.6 | 92 | | 3 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,3-Dichloropropane | LCS | 30.1 | 100 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.4 | 101 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,4-Dichlorobenzene | LCS | 28.1 | 94 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 27.9 | 93 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| 2,2-Dichloropropane | LCS | 32.7 | 109 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 32.0 | 107 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| 2-Chlorotoluene | LCS | 29.3 | 98 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.5 | 98 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| 4-Chlorotoluene | LCS | 29.4 | 98 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.9 | 100 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| 4-Isopropyltoluene | LCS | 29.2 | 98 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.2 | 97 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| Benzene | LCS | 29.8 | 99 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.8 | 96 | | 3 | (< 30) | 30 ug/L | 05/25/2010 |
| Bromobenzene | LCS | 28.2 | 94 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 27.8 | 93 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| Bromochloromethane | LCS | 29.1 | 97 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.6 | 95 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| Bromodichloromethane | LCS | 33.1 | 110 | (70-130) | | | 30 ug/L | 05/25/2010 |



| | | | | | |
|----------------|------------------------|------------------------------|-------------------|------------|------|
| SGS Ref.# | 963449 | Lab Control Sample | Printed Date/Time | 06/07/2010 | 9:52 |
| | 963450 | Lab Control Sample Duplicate | Prep | VXX20700 | |
| Client Name | Shannon & Wilson, Inc. | | Batch | SW5030B | |
| Project Name/# | 32-1-17349 Aniak GW | | Method | | |
| Matrix | Drinking Water | | Date | 05/25/2010 | |

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| | LCSD | 31.5 | 105 | | 5 | (< 30) | 30 ug/L | 05/25/2010 |
| Bromoform | LCS | 29.9 | 100 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.0 | 97 | | 3 | (< 30) | 30 ug/L | 05/25/2010 |
| Bromomethane | LCS | 35.2 | 117 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 36.6 | 122 | | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| Carbon tetrachloride | LCS | 33.3 | 111 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 31.4 | 105 | | 6 | (< 30) | 30 ug/L | 05/25/2010 |
| Chlorobenzene | LCS | 28.3 | 95 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.3 | 94 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| Chloroethane | LCS | 33.0 | 110 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 32.6 | 109 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| Chloroform | LCS | 30.4 | 101 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.2 | 101 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| Chloromethane | LCS | 40.2 | 134 * | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 41.0 | 137 * | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| cis-1,2-Dichloroethene | LCS | 29.5 | 99 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.4 | 95 | | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| cis-1,3-Dichloropropene | LCS | 32.4 | 108 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 31.9 | 106 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| Dibromochloromethane | LCS | 28.2 | 94 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 27.3 | 91 | | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| Dibromomethane | LCS | 29.9 | 100 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.8 | 96 | | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| Dichlorodifluoromethane | LCS | 30.2 | 101 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.0 | 97 | | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| Ethylbenzene | LCS | 29.3 | 98 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.7 | 96 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |



SGS Ref.# 963449 Lab Control Sample
 963450 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20700
Method SW5030B
Date 05/25/2010

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| Hexachlorobutadiene | LCS | 26.9 | 90 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 26.3 | 88 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| Isopropylbenzene (Cumene) | LCS | 29.0 | 97 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.8 | 96 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| Methylene chloride | LCS | 31.4 | 105 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 31.3 | 104 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| Methyl-t-butyl ether | LCS | 46.0 | 102 | (70-130) | | | 45 ug/L | 05/25/2010 |
| | LCSD | 45.1 | 100 | | 2 | (< 30) | 45 ug/L | 05/25/2010 |
| Naphthalene | LCS | 32.8 | 109 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 32.7 | 109 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| n-Butylbenzene | LCS | 30.2 | 101 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.3 | 101 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| n-Propylbenzene | LCS | 29.7 | 99 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.9 | 100 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| o-Xylene | LCS | 28.8 | 96 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.4 | 95 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| P & M -Xylene | LCS | 57.4 | 96 | (70-130) | | | 60 ug/L | 05/25/2010 |
| | LCSD | 56.4 | 94 | | 2 | (< 30) | 60 ug/L | 05/25/2010 |
| sec-Butylbenzene | LCS | 29.2 | 97 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.2 | 98 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| Styrene | LCS | 29.9 | 100 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.4 | 98 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| tert-Butylbenzene | LCS | 28.5 | 95 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.2 | 94 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| Tetrachloroethene | LCS | 27.5 | 92 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 26.3 | 88 | | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| Toluene | LCS | 28.4 | 95 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.0 | 93 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |



SGS Ref.# 963449 Lab Control Sample
 963450 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20700
Method SW5030B
Date 05/25/2010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | |
|---------------------------|------|------|-----|------------|---|---------|---------|------------|
| trans-1,2-Dichloroethene | LCS | 30.2 | 101 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.9 | 96 | | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| trans-1,3-Dichloropropene | LCS | 28.6 | 95 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.1 | 97 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| Trichloroethene | LCS | 30.3 | 101 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.7 | 99 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| Trichlorofluoromethane | LCS | 31.3 | 104 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.2 | 101 | | 3 | (< 30) | 30 ug/L | 05/25/2010 |
| Vinyl chloride | LCS | 32.7 | 109 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 32.0 | 107 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |

Surrogates

| | | | | | | | | |
|------------------------------|------|--|-----|------------|---|--|--|------------|
| 1,2-Dichloroethane-D4 <surr> | LCS | | 104 | (70-130) | | | | 05/25/2010 |
| | LCSD | | 102 | | 2 | | | 05/25/2010 |
| 4-Bromofluorobenzene <surr> | LCS | | 103 | (70-130) | | | | 05/25/2010 |
| | LCSD | | 105 | | 2 | | | 05/25/2010 |
| Toluene-d8 <surr> | LCS | | 97 | (70-130) | | | | 05/25/2010 |
| | LCSD | | 96 | | 2 | | | 05/25/2010 |

Batch VMS11246
Method EPA 524.2
Instrument HP 5890 Series II MS1 VJA



SGS Ref.# 964331 Lab Control Sample
964332 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20723
Method SW5030B
Date 05/30/2010

QC results affect the following production samples:

1102267005, 1102267018

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



| | | | |
|-----------------------|-------------------------------------|--------------------------|-----------------|
| SGS Ref.# | 964331 Lab Control Sample | Printed Date/Time | 06/07/2010 9:52 |
| | 964332 Lab Control Sample Duplicate | Prep | VXX20723 |
| Client Name | Shannon & Wilson, Inc. | Batch | SW5030B |
| Project Name/# | 32-1-17349 Aniak GW | Method | 05/30/2010 |
| Matrix | Water (Surface, Eff., Ground) | Date | |

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | LCS | 31.9 | 106 | (80-120) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 30.8 | 103 | | 4 | (< 20) | 30 ug/L | 05/30/2010 |
| 1,1,1-Trichloroethane | LCS | 32.2 | 107 | (80-122) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 31.2 | 104 | | 3 | (< 20) | 30 ug/L | 05/30/2010 |
| 1,1,2,2-Tetrachloroethane | LCS | 29.5 | 98 | (76-123) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 30.6 | 102 | | 4 | (< 20) | 30 ug/L | 05/30/2010 |
| 1,1,2-Trichloroethane | LCS | 31.4 | 105 | (77-120) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 31.3 | 104 | | 0 | (< 20) | 30 ug/L | 05/30/2010 |
| 1,1-Dichloroethane | LCS | 30.7 | 102 | (80-120) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 30.0 | 100 | | 2 | (< 20) | 30 ug/L | 05/30/2010 |
| 1,1-Dichloroethene | LCS | 32.7 | 109 | (76-130) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 32.7 | 109 | | 0 | (< 20) | 30 ug/L | 05/30/2010 |
| 1,1-Dichloropropene | LCS | 32.5 | 108 | (80-122) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 32.0 | 107 | | 2 | (< 20) | 30 ug/L | 05/30/2010 |
| 1,2,3-Trichlorobenzene | LCS | 29.7 | 99 | (77-120) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 31.3 | 104 | | 5 | (< 20) | 30 ug/L | 05/30/2010 |
| 1,2,3-Trichloropropane | LCS | 30.4 | 101 | (80-120) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 31.0 | 103 | | 2 | (< 20) | 30 ug/L | 05/30/2010 |
| 1,2,4-Trichlorobenzene | LCS | 30.3 | 101 | (80-120) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 30.4 | 101 | | 0 | (< 20) | 30 ug/L | 05/30/2010 |
| 1,2,4-Trimethylbenzene | LCS | 30.5 | 102 | (80-125) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 30.1 | 100 | | 1 | (< 20) | 30 ug/L | 05/30/2010 |
| 1,2-Dibromo-3-chloropropane | LCS | 29.6 | 99 | (73-130) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 31.5 | 105 | | 7 | (< 20) | 30 ug/L | 05/30/2010 |
| 1,2-Dibromoethane | LCS | 31.6 | 105 | (80-120) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 31.7 | 106 | | 0 | (< 20) | 30 ug/L | 05/30/2010 |
| 1,2-Dichlorobenzene | LCS | 29.6 | 99 | (80-120) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 29.3 | 98 | | 1 | (< 20) | 30 ug/L | 05/30/2010 |



SGS Ref.# 964331 Lab Control Sample
 964332 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20723
Method SW5030B
Date 05/30/2010

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| 1,2-Dichloroethane | LCS | 31.0 | 103 | (80-129) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 30.8 | 103 | | 1 | (< 20) | 30 ug/L | 05/30/2010 |
| 1,2-Dichloropropane | LCS | 32.2 | 107 | (80-121) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 31.6 | 105 | | 2 | (< 20) | 30 ug/L | 05/30/2010 |
| 1,3,5-Trimethylbenzene | LCS | 30.4 | 101 | (80-128) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 29.7 | 99 | | 2 | (< 20) | 30 ug/L | 05/30/2010 |
| 1,3-Dichlorobenzene | LCS | 30.4 | 101 | (80-120) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 30.1 | 100 | | 1 | (< 20) | 30 ug/L | 05/30/2010 |
| 1,3-Dichloropropane | LCS | 30.3 | 101 | (80-121) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 30.1 | 100 | | 1 | (< 20) | 30 ug/L | 05/30/2010 |
| 1,4-Dichlorobenzene | LCS | 30.0 | 100 | (80-120) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 29.9 | 100 | | 0 | (< 20) | 30 ug/L | 05/30/2010 |
| 2,2-Dichloropropane | LCS | 32.5 | 108 | (80-132) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 32.2 | 107 | | 1 | (< 20) | 30 ug/L | 05/30/2010 |
| 2-Butanone (MEK) | LCS | 87.4 | 97 | (66-136) | | | 90 ug/L | 05/30/2010 |
| | LCSD | 91.7 | 102 | | 5 | (< 20) | 90 ug/L | 05/30/2010 |
| 2-Chlorotoluene | LCS | 29.8 | 99 | (80-125) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 29.4 | 98 | | 1 | (< 20) | 30 ug/L | 05/30/2010 |
| 2-Hexanone | LCS | 91.0 | 101 | (68-130) | | | 90 ug/L | 05/30/2010 |
| | LCSD | 96.0 | 107 | | 5 | (< 20) | 90 ug/L | 05/30/2010 |
| 4-Chlorotoluene | LCS | 30.5 | 102 | (79-128) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 30.5 | 102 | | 0 | (< 20) | 30 ug/L | 05/30/2010 |
| 4-Isopropyltoluene | LCS | 30.7 | 102 | (80-125) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 30.3 | 101 | | 1 | (< 20) | 30 ug/L | 05/30/2010 |
| 4-Methyl-2-pentanone (MIBK) | LCS | 94.5 | 105 | (69-134) | | | 90 ug/L | 05/30/2010 |
| | LCSD | 94.4 | 105 | | 0 | (< 20) | 90 ug/L | 05/30/2010 |
| Benzene | LCS | 31.3 | 104 | (80-120) | | | 30 ug/L | 05/30/2010 |



SGS Ref.# 964331 Lab Control Sample
 964332 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20723
Method SW5030B
Date 05/30/2010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | |
| | LCSD | 30.8 | 103 | 2 | (< 20) | 30 ug/L | 05/30/2010 |
| Bromobenzene | LCS | 30.8 | 103 | (80-120) | | 30 ug/L | 05/30/2010 |
| | LCSD | 30.1 | 100 | 2 | (< 20) | 30 ug/L | 05/30/2010 |
| Bromochloromethane | LCS | 31.7 | 106 | (77-129) | | 30 ug/L | 05/30/2010 |
| | LCSD | 31.9 | 106 | 1 | (< 20) | 30 ug/L | 05/30/2010 |
| Bromodichloromethane | LCS | 32.7 | 109 | (80-120) | | 30 ug/L | 05/30/2010 |
| | LCSD | 33.1 | 110 | 1 | (< 20) | 30 ug/L | 05/30/2010 |
| Bromoform | LCS | 33.4 | 111 | (80-120) | | 30 ug/L | 05/30/2010 |
| | LCSD | 33.8 | 113 | 1 | (< 20) | 30 ug/L | 05/30/2010 |
| Bromomethane | LCS | 38.4 | 128 | (30-140) | | 30 ug/L | 05/30/2010 |
| | LCSD | 39.9 | 133 | 4 | (< 20) | 30 ug/L | 05/30/2010 |
| Carbon disulfide | LCS | 47.3 | 105 | (72-123) | | 45 ug/L | 05/30/2010 |
| | LCSD | 46.4 | 103 | 2 | (< 20) | 45 ug/L | 05/30/2010 |
| Carbon tetrachloride | LCS | 33.9 | 113 | (80-126) | | 30 ug/L | 05/30/2010 |
| | LCSD | 32.8 | 109 | 3 | (< 20) | 30 ug/L | 05/30/2010 |
| Chlorobenzene | LCS | 30.5 | 102 | (80-120) | | 30 ug/L | 05/30/2010 |
| | LCSD | 29.4 | 98 | 4 | (< 20) | 30 ug/L | 05/30/2010 |
| Chloroethane | LCS | 27.4 | 91 | (67-133) | | 30 ug/L | 05/30/2010 |
| | LCSD | 28.5 | 95 | 4 | (< 20) | 30 ug/L | 05/30/2010 |
| Chloroform | LCS | 30.8 | 103 | (80-124) | | 30 ug/L | 05/30/2010 |
| | LCSD | 30.6 | 102 | 1 | (< 20) | 30 ug/L | 05/30/2010 |
| Chloromethane | LCS | 28.6 | 95 | (67-125) | | 30 ug/L | 05/30/2010 |
| | LCSD | 28.0 | 93 | 2 | (< 20) | 30 ug/L | 05/30/2010 |
| cis-1,2-Dichloroethene | LCS | 29.7 | 99 | (80-125) | | 30 ug/L | 05/30/2010 |
| | LCSD | 28.3 | 95 | 5 | (< 20) | 30 ug/L | 05/30/2010 |
| cis-1,3-Dichloropropene | LCS | 32.6 | 109 | (80-120) | | 30 ug/L | 05/30/2010 |
| | LCSD | 32.8 | 109 | 1 | (< 20) | 30 ug/L | 05/30/2010 |



| | | | |
|-----------------------|-------------------------------------|--------------------------|-----------------|
| SGS Ref.# | 964331 Lab Control Sample | Printed Date/Time | 06/07/2010 9:52 |
| | 964332 Lab Control Sample Duplicate | Prep | VXX20723 |
| Client Name | Shannon & Wilson, Inc. | Batch | SW5030B |
| Project Name/# | 32-1-17349 Aniak GW | Method | 05/30/2010 |
| Matrix | Water (Surface, Eff., Ground) | Date | |

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| Dibromochloromethane | LCS | 33.0 | 110 | (80-120) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 32.4 | 108 | | 2 | (< 20) | 30 ug/L | 05/30/2010 |
| Dibromomethane | LCS | 31.0 | 103 | (80-120) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 31.4 | 105 | | 1 | (< 20) | 30 ug/L | 05/30/2010 |
| Dichlorodifluoromethane | LCS | 27.0 | 90 | (62-153) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 27.1 | 90 | | 0 | (< 20) | 30 ug/L | 05/30/2010 |
| Ethylbenzene | LCS | 32.4 | 108 | (80-120) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 31.1 | 104 | | 4 | (< 20) | 30 ug/L | 05/30/2010 |
| Hexachlorobutadiene | LCS | 29.0 | 97 | (77-125) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 29.3 | 98 | | 1 | (< 20) | 30 ug/L | 05/30/2010 |
| Isopropylbenzene (Cumene) | LCS | 30.4 | 101 | (80-121) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 29.3 | 98 | | 4 | (< 20) | 30 ug/L | 05/30/2010 |
| Methylene chloride | LCS | 30.4 | 101 | (63-131) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 29.9 | 100 | | 1 | (< 20) | 30 ug/L | 05/30/2010 |
| Methyl-t-butyl ether | LCS | 46.1 | 102 | (80-120) | | | 45 ug/L | 05/30/2010 |
| | LCSD | 47.0 | 104 | | 2 | (< 20) | 45 ug/L | 05/30/2010 |
| Naphthalene | LCS | 31.0 | 103 | (75-120) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 33.2 | 111 | | 7 | (< 20) | 30 ug/L | 05/30/2010 |
| n-Butylbenzene | LCS | 30.8 | 103 | (80-124) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 30.7 | 102 | | 0 | (< 20) | 30 ug/L | 05/30/2010 |
| n-Propylbenzene | LCS | 30.8 | 103 | (80-129) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 30.6 | 102 | | 1 | (< 20) | 30 ug/L | 05/30/2010 |
| o-Xylene | LCS | 31.0 | 103 | (80-120) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 29.9 | 100 | | 4 | (< 20) | 30 ug/L | 05/30/2010 |
| P & M -Xylene | LCS | 61.2 | 102 | (80-120) | | | 60 ug/L | 05/30/2010 |
| | LCSD | 58.8 | 98 | | 4 | (< 20) | 60 ug/L | 05/30/2010 |
| sec-Butylbenzene | LCS | 29.8 | 99 | (80-120) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 29.5 | 98 | | 1 | (< 20) | 30 ug/L | 05/30/2010 |



SGS Ref.# 964331 Lab Control Sample
 964332 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20723
Method SW5030B
Date 05/30/2010

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| Styrene | LCS | 31.3 | 104 | (80-120) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 30.0 | 100 | | 4 | (< 20) | 30 ug/L | 05/30/2010 |
| tert-Butylbenzene | LCS | 29.9 | 100 | (80-122) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 29.4 | 98 | | 2 | (< 20) | 30 ug/L | 05/30/2010 |
| Tetrachloroethene | LCS | 30.1 | 100 | (79-122) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 29.0 | 97 | | 4 | (< 20) | 30 ug/L | 05/30/2010 |
| Toluene | LCS | 31.1 | 104 | (77-120) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 29.1 | 97 | | 6 | (< 20) | 30 ug/L | 05/30/2010 |
| trans-1,2-Dichloroethene | LCS | 30.9 | 103 | (79-132) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 30.6 | 102 | | 1 | (< 20) | 30 ug/L | 05/30/2010 |
| trans-1,3-Dichloropropene | LCS | 30.6 | 102 | (80-124) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 30.1 | 100 | | 2 | (< 20) | 30 ug/L | 05/30/2010 |
| Trichloroethene | LCS | 31.0 | 103 | (80-125) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 30.9 | 103 | | 0 | (< 20) | 30 ug/L | 05/30/2010 |
| Trichlorofluoromethane | LCS | 28.4 | 95 | (68-145) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 28.5 | 95 | | 0 | (< 20) | 30 ug/L | 05/30/2010 |
| Vinyl chloride | LCS | 28.6 | 95 | (72-145) | | | 30 ug/L | 05/30/2010 |
| | LCSD | 28.1 | 94 | | 2 | (< 20) | 30 ug/L | 05/30/2010 |
| Xylenes (total) | LCS | 92.2 | 102 | (80-120) | | | 90 ug/L | 05/30/2010 |
| | LCSD | 88.7 | 99 | | 4 | (< 20) | 90 ug/L | 05/30/2010 |
| Surrogates | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | LCS | | 99 | (73-120) | | | | 05/30/2010 |
| | LCSD | | 100 | | 1 | | | 05/30/2010 |
| 4-Bromofluorobenzene <surr> | LCS | | 99 | (76-120) | | | | 05/30/2010 |
| | LCSD | | 100 | | 1 | | | 05/30/2010 |
| Toluene-d8 <surr> | LCS | | 100 | (80-120) | | | | 05/30/2010 |
| | LCSD | | 97 | | 3 | | | 05/30/2010 |



SGS Ref.# 964331 Lab Control Sample
964332 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 32-1-17349 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/07/2010 9:52
Prep Batch VXX20723
Method SW5030B
Date 05/30/2010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatiles Gas Chromatography/Mass Spectroscopy

Batch VMS11260
Method SW8260B
Instrument HP 5890 Series II MS1 VJA

1102267



Laboratory SGS
Attn: Jennifer

CHAIN-OF-CUSTODY RECEIPT

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

400 N. 34th Street, Suite 100
Seattle, WA 98103
(206) 632-8020

2355 Hill Road
Fairbanks, AK 99709
(907) 479-0600

1200 17th Street, Suite 1024
Denver, CO 80202
(303) 825-3800

303 Wellspan Way
Richland, WA 99352
(509) 946-6309

5430 Fairbanks Street, Suite 3
Anchorage, AK 99518
(907) 561-2120

Analysis Parameters/Sample Container Description
(include preservative if used)

| Sample Identity | Lab No. | Time | Date Sampled | Total Number of Containers | | | | | | | | | | Remarks/Matrix | |
|------------------|---------|------|--------------|----------------------------|------|-----|-----------|-------|-------|-----|----------|-----|-----------|----------------|-------|
| | | | | Comp. | Grab | VOC | EPH 52412 | AK102 | AK101 | STX | EPH 5621 | VOC | EPH 52412 | | |
| 32-1-17349 - DW1 | ① A-C | 1510 | 5/17/10 | X | X | X | X | X | X | X | X | X | X | X | Water |
| " - DW2 | ② A-C | 1604 | ↓ | X | X | X | X | X | X | X | X | X | X | X | |
| " - DW3 | ③ A-C | 1657 | ↓ | X | X | X | X | X | X | X | X | X | X | X | |
| " - RA-MW-1 | ④ A-E | 1110 | 5/18/10 | X | X | X | X | X | X | X | X | X | X | X | |
| " - RA-MW-9 | ⑤ A-H | 1236 | ↓ | X | X | X | X | X | X | X | X | X | X | X | |
| " - DW4 | ⑥ A-C | 1430 | ↓ | X | X | X | X | X | X | X | X | X | X | X | |
| " - DW5 | ⑦ A-C | 1453 | ↓ | X | X | X | X | X | X | X | X | X | X | X | |
| " - DW6 | ⑧ A-C | 1733 | ↓ | X | X | X | X | X | X | X | X | X | X | X | |
| " - MW9 | ⑨ A-E | 1008 | 5/19/10 | X | X | X | X | X | X | X | X | X | X | X | |
| " - MW13 | ⑩ A-C | 1039 | ↓ | X | X | X | X | X | X | X | X | X | X | X | |

| Relinquished By: 1. | Relinquished By: 2. | Relinquished By: 3. |
|--------------------------------------|---------------------|----------------------------------|
| Signature: <u>Nadwylaw</u> | Signature: _____ | Signature: _____ |
| Printed Name: <u>Jake Gunn</u> | Printed Name: _____ | Printed Name: _____ |
| Company: <u>Shannon & Wilson</u> | Company: _____ | Company: _____ |
| Time: <u>6:50</u> | Time: _____ | Time: _____ |
| Date: <u>5/20/10</u> | Date: _____ | Date: _____ |
| Received By: 1. | Received By: 2. | Received By: 3. |
| Signature: _____ | Signature: _____ | Signature: <u>Amy C. HUSO</u> |
| Printed Name: _____ | Printed Name: _____ | Printed Name: <u>AMY C. HUSO</u> |
| Company: _____ | Company: _____ | Company: <u>SGS</u> |
| Time: _____ | Time: _____ | Time: _____ |
| Date: _____ | Date: _____ | Date: _____ |

| Project Information | Sample Receipt |
|--|--------------------------------|
| Project Number: <u>32-1-17349</u> | Total Number of Containers |
| Project Name: <u>Aniak GW</u> | COC Seals/Intact? Y/N/NA |
| Contact: <u>Jessica Bussey</u> | Received Good Cond./Cold |
| Ongoing Project? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Delivery Method: |
| Sampler: <u>JG</u> | (attach shipping bill, if any) |

Instructions

Requested Turnaround Time: _____

Special Instructions: _____

Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
Yellow - w/shipment - for consignee files
Pink - Shannon & Wilson - Job File

1102267



Laboratory SGS
 Attn: Jennifer

CHAIN-OF-CUSTODY

SHANNON & WILSON, INC.
 Geotechnical and Environmental Consultants

400 N. 34th Street, Suite 100 Seattle, WA 98103 (206) 632-8020
 2043 Westport Center Drive St. Louis, MO 63146-3564 (314) 699-9660

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 | Analysis Parameters/Sample Container Description | | | | | | Remarks/Matrix |
|------------------|--------------------|------|--------------|--|------|-----|------|-------|-------|--------------------|
| | | | | Comp. | Grab | VOC | SVOC | AK102 | AK101 | |
| 32-1-17349-MW11 | ① A-E | 1238 | 5/19/10 | X | X | X | X | X | X | 5 Water |
| 32-1-17349-DW 87 | ② A-E | 1427 | | X | X | X | X | X | X | 5 |
| " - DW 8 | ③ A-C | 1452 | | X | X | X | X | X | X | 3 |
| " - DW 9 | ④ A-C | 1530 | | X | X | X | X | X | X | 3 |
| " - D10 | ⑤ A-C | 1615 | | X | X | X | X | X | X | 3 |
| " - MW-10 | ⑥ A-E | 1738 | | X | X | X | X | X | X | 5 |
| " - WTB1 | ⑦ A-C vbc ⑧ A-C | 1900 | 5/17/10 | X | X | X | X | X | X | 6 Water Trip Blank |

| Project Information | Sample Receipt | Relinquished By: 1. | Relinquished By: 2. | Relinquished By: 3. |
|---|-----------------------------------|--------------------------------------|---------------------|---------------------|
| Project Number: _____ | Total Number of Containers: _____ | Signature: <u>Jake Gano</u> | Signature: _____ | Signature: _____ |
| Project Name: _____ | COC Seals/Intact? Y/N/NA _____ | Printed Name: <u>Jake Gano</u> | Printed Name: _____ | Printed Name: _____ |
| Contact: _____ | Received Good Cond./Cold _____ | Date: <u>5/29/10</u> | Date: _____ | Date: _____ |
| Ongoing Project? Yes <input type="checkbox"/> No <input type="checkbox"/> | Delivery Method: _____ | Company: <u>Shannon & Wilson</u> | Company: _____ | Company: _____ |
| Sampler: _____ | (attach shipping bill, if any) | | | |
| Instructions | | | | |
| Requested Turnaround Time: _____ | | | | |
| Special Instructions: _____ | | | | |
| Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report Yellow - w/shipment - for consignee files Pink - Shannon & Wilson - Job File | | | | |



SAMPLE RECEIPT FORM

| Review Criteria: | Condition: | Comments/Action Taken: |
|---|--|------------------------|
| Were custody seals intact? Note # & location if applicable. COC accompanied samples? | <input checked="" type="radio"/> Yes No N/A | 1 Front & 1 Back |
| Temperature blank compliant (i.e., 0-6°C after correction factor)? Cooler ID: <u>2</u> @ <u>5.9</u> w/ Therm.ID: <u>700</u> Cooler ID: <u>2</u> @ <u>3.8</u> w/ Therm.ID: <u>350</u> Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ <i>Note: If non-compliant, use form FS-0029 to document affected samples/analyses.</i> | <input checked="" type="radio"/> Yes No N/A <input checked="" type="radio"/> Yes No N/A | |
| If samples are received <u>without</u> a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "cooler temp" will be noted to the right. In cases where neither a temp blank nor a cooler temp can be obtained, note "ambient" or "chilled." If temperature(s) <0°C, were all containers ice free? | Yes No <input checked="" type="radio"/> N/A | |
| Delivery method (specify all that apply): <input checked="" type="radio"/> Client USPS Alert Courier Road Runner AK Air Lynden Carlile ERA FedEx UPS NAC PenAir Other: | If applicable, note airbill/tracking# See Attached or <input checked="" type="radio"/> N/A | |

* For samples received with payment, note amount (\$) and cash / check / CC (circle one).
* For samples were received in Fairbanks, Anchorage staff will verify all criteria are reviewed in addition to form F010.

| | | |
|--|---|---------------------------------------|
| Do samples match COC (i.e., sample IDs, dates/times collected)? | <input checked="" type="radio"/> Yes No N/A | |
| Are analyses requested unambiguous? | Yes No <input checked="" type="radio"/> N/A | |
| Were samples in good condition (no leaks/cracks/breakage)? | Yes No N/A | |
| Packing material used (specify all that apply): <input checked="" type="radio"/> Bubble wrap Separate plastic bags Vermiculite Other: | | |
| Were all VOA vials free of headspace (i.e., bubbles ≤6 mm)? | <input checked="" type="radio"/> Yes <input checked="" type="radio"/> No <input checked="" type="radio"/> N/A | Sample 2 (All 3) A-C |
| Were all soil VOAs field extracted with MeOH+BFB? | Yes No <input checked="" type="radio"/> N/A | |
| Were proper container types/mass/volume/preservatives used? | <input checked="" type="radio"/> Yes No N/A | |
| Were the bottles provided by SGS? (Note apparent exceptions.) | <input checked="" type="radio"/> Yes No N/A | |
| Were Trip Blanks (VOAs, LL-Hg) in cooler with samples? | <input checked="" type="radio"/> Yes No N/A | |
| For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was pH verified and compliant? | <input checked="" type="radio"/> Yes No <input checked="" type="radio"/> N/A | |
| If pH was adjusted, were bottles flagged (i.e., stickers)? <i>Refer to attached bottle sheet (form F042 or F066) for documentation.</i> | Yes No <input checked="" type="radio"/> N/A | |
| For RUSH or SHORT HOLD TIME samples, were the COC & this SRF flagged, bottles flagged (e.g., stickers) and lab notified? | Yes No <input checked="" type="radio"/> N/A | |
| For client requested, site-specific QC (e.g., MS/MSD), were bottles flagged (e.g., stickers) and numbered accordingly? | Yes No <input checked="" type="radio"/> N/A | |
| For special handling (e.g., "MI" or foreign soils, lab filtering, limited volume, Ref Lab), were bottles/paperwork flagged (e.g., sticker)? | Yes No <input checked="" type="radio"/> N/A | |
| Was peer review of sample numbering completed (i.e., compare WO# on containers to COC, container ID on containers to COC, each container had a unique container ID)? | <input checked="" type="radio"/> Yes No N/A | SRF Completed by: Bottle Sheet by: |
| Was the WO# recorded in Front Counter/Sample Receiving log? | <input checked="" type="radio"/> Yes No N/A | Peer Reviewed by: |
| For any questions answered "NO," was the PM notified? | Yes No N/A | |

Additional notes (if applicable): 5/11/10 - TRIP BLANK (#15) parameter should be GRO/TKIOL & VOC by 8200
Sx #2 (321-1-17349-DW2) is on hold per client. job 5/11/10
job 5/11/10

| WO# (7 digits) | Sample # | | Container ID | | Matrix | QC | Preservative (CHECKED) | TEST GROUP | PRINT LABELS | Notes: ANOMALIES - e.g., preservative added or SPECIAL HANDLING - e.g., Multi-Incremental (MI), Field Filter (FF), Lab Filter (LF), use "same jar as" (SJA) for QC, 2xMeOH, bubbles, etc. |
|----------------|-----------|------|--------------|---|---------|------------|------------------------|------------|--------------|--|
| | SAMPLE ID | TYPE | CONTAINERS | | | | | | ANALYSIS | Type comments below: |
| 1102267 | 001 | 003 | A | C | 1 Water | | HCl * VOA or LL-Hg * | W_VOA/GRO | | |
| 1102267 | 004 | 004 | A | C | 1 Water | | HCl * VOA or LL-Hg * | W_VOA/GRO | | |
| 1102267 | 004 | 004 | D | E | 1 Water | | HCl (pH <2) | W_DRO_1L | | |
| 1102267 | 005 | 005 | A | C | 1 Water | | HCl * VOA or LL-Hg * | W_VOA/GRO | VOC | |
| 1102267 | 005 | 005 | D | F | 1 Water | | HCl * VOA or LL-Hg * | W_VOA/GRO | GRO | |
| 1102267 | 005 | 005 | G | H | 1 Water | | HCl (pH <2) | W_DRO_1L | | |
| 1102267 | 006 | 008 | A | C | 1 Water | | HCl * VOA or LL-Hg * | W_VOA/GRO | VOC | |
| 1102267 | 009 | 011 | A | C | 1 Water | | HCl * VOA or LL-Hg * | W_VOA/GRO | GRO | |
| 1102267 | 009 | 011 | D | E | 1 Water | | HCl (pH <2) | W_DRO_1L | | |
| 1102267 | 012 | 012 | A | C | 1 Water | | HCl * VOA or LL-Hg * | W_VOA/GRO | VOC | |
| 1102267 | 013 | 015 | A | C | 1 Water | | HCl * VOA or LL-Hg * | W_VOA/GRO | | |
| 1102267 | 016 | 016 | A | C | 1 Water | | HCl * VOA or LL-Hg * | W_VOA/GRO | GRO | |
| 1102267 | 016 | 016 | D | E | 1 Water | | HCl (pH <2) | W_DRO_1L | | |
| 1102267 | 017 | 017 | A | C | 1 Water | Trip Blank | HCl * VOA or LL-Hg * | W_VOA/GRO | VOC | |
| 1102267 | 018 | 018 | A | A | 1 Water | Trip Blank | HCl * VOA or LL-Hg * | W_VOA/GRO | GRO BTEX | |
| 1102267 | 018 | 018 | B | C | 1 Water | Trip Blank | HCl * VOA or LL-Hg * | W_VOA/GRO | VOC | |

LABORATORY DATA REVIEW CHECKLIST

CS Report Name: ADOT Aniak Groundwater Study

Date: December 2010

Laboratory Report Date: 6/8/2010

Consultant Firm: Shannon & Wilson, Inc.

Completed by: Jake Gano

Title: Environmental Engineer

Laboratory Name: SGS Environmental Services, Inc.

Work Order Number: 1102267

1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses? **Yes** / No

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?

NA / Yes / No

Comments:

2. Chain of Custody (COC)

- a. COC information completed, signed, and dated (including released/received by)?

Yes / No

Comments:

- b. Correct analyses requested? Yes **No**

Comments: The analyses requested for the water trip blank was for VOCs by EPA 524.2 and GRO by AK101. In addition to these analyses, the water trip blank was also analyzed for VOCs by EPA 8260b at the recommendation of the lab.

3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ}\text{C}$)?

Yes / No

Comments: Temperatures of coolers were 5.9°C and 3.8°C , respectively.

- b. Sample preservation acceptable - acidified waters, Methanol-preserved VOC soil (GRO, BTEX, VOCs, etc.)? NA / **Yes** / No

Comments:

- c. Sample condition documented - broken, leaking (soil MeOH), zero headspace (VOC vials)? **Yes** / No
Comments:
- d. If there were any discrepancies, were they documented (e.g., incorrect sample containers/preservation, sample temperatures outside range, insufficient sample size, missing samples)? *NA* / **Yes** / No
Comments: Bubbles were observed in all three VOA containers for Sample DW2.
- e. Data quality or usability affected? Explain.
Comments: Sample DW2 was not analyzed. This location was re-sampled and submitted under work order 1102294.

4. Case Narrative

- a. Present and understandable? **Yes** / No
Comments:
- b. Discrepancies, errors or QC failures noted by the lab? *None Noted* / **Yes**
Comments:
LCS/LCSD recoveries for several VOC analytes by EPA 524.2 do not meet QC criteria (biased high). The analytes were not detected above the LOQ in the associated project samples.
CCV recovery for several VOC analytes by EPA 524.2 and EPA 8260B does not meet QC criteria (biased high). The analytes were not detected above the LOQ in the associated project samples.
IB and MB recoveries for *cis*-1,2-dichloroethane and tetrachloroethane are greater than the DL but less than the LOQ. These analytes were not detected above the LOQ in the associated samples.
- c. Were corrective actions documented? *None Noted* / **Yes**
Comments:
- d. What is the affect on data quality/usability, according to the case narrative?
Comments: Case narrative does not comment on data quality or usability.

5. Sample Results

- a. Correct analyses performed/reported as requested on COC? **Yes** / No
Comments:
- b. All applicable holding times met? **Yes** / No
Comments:
- c. All soils reported on a dry-weight basis? *NA* / **Yes** / No
Comments:

- d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project? **Yes** / **No**
Comments: The detection limit for 1,2-dibromoethane exceeds the ADEC cleanup level in Sample RA-MW-9. The trip blank was analyzed for VOCs by EPA Methods 8260B and 524.2. The 1,2-dibromoethane detection limit in the water trip blank was less than the ADEC cleanup level VOC analysis by EPA 524.2 only.
- e. Data quality or usability affected? Explain.
Comments: The presence of EDB at concentrations less than the LQO cannot be determined in Sample RA-MW-9.

6. QC Samples

a. Method Blank

- i. One method blank reported per matrix, analysis, and 20 samples?
Yes / **No**
Comments:
- ii. All method blank results less than PQL? **Yes** / **No**
Comments: *cis*-1,2-DCE and PCE were detected at concentrations above the DL but less than the LOQ.
- iii. If above PQL, what samples are affected? **NA**
Comments:
- iv. Do the affected sample(s) have data flags? **NA** / **Yes** / **No**
Comments:

If so, are the data flags clearly defined? **NA** / **Yes** / **No**
Comments:
- v. Data quality or usability affected? Explain.
Comments: *cis*-1,2-DCE and PCE were not detected in the associated project samples. Therefore, the quality and usability of the data is not affected.

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) **N/A** / **Yes** / **No**
Comments:
- ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples? **N/A** / **Yes** / **No**
Comments:

- 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**

Comments: LCS recovery for dichlorodifluoromethane and chloromethane by EPA 54.2 does not meet QC criteria (biased high)

LCSD recovery for dichlorodifluoromethane, chloromethane and, and bromomethane by EPA 54.2 does not meet QC criteria (biased high)

- iv. 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

Comments:

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

Comments: Dichlorodifluoromethane failure affects Samples DW1, DW3, DW4, DW5, DW7, and WTB1. Bromomethane failure affects Samples DW1, DW3, DW4, DW5, DW7, and WTB1. Chloromethane LCS/LCSD failure affects Samples DW1, DW3, DW4, DW5, DW6, DW7, DW8, DW9, DW10 and WTB1. The analytes with failed LCS/LCSD recoveries were not detected greater than the LOQ in associated samples.

- vi. Do the affected samples(s) have data flags? NA / Yes / **No**

Comments:

If so, are the data flags clearly defined? **NA** / Yes / No

Comments:

- vii. Data quality or usability affected? Explain.

Comments: The analytes with failed LCS/LCSD recoveries were not detected greater than the LOQ in associated samples. Therefore, the quality or usability of the data is not affected.

c. Surrogates - Organics Only

- i. Are surrogate recoveries reported for organic analyses, field, QC and laboratory samples? NA / **Yes** / No

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) NA / **Yes** / No

Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? **NA** / Yes / No

Comments:

If so, are the data flags clearly defined? **NA** / Yes / No

Comments:

iv. Data quality or usability affected? Explain. **NA**

Comments:

d. Trip Blank - Volatile analyses only (GRO, BTEX, VOCs, etc.) [soil and water]

i. One trip blank reported per matrix, analysis and cooler? **NA** / **Yes** / No

Comments: Only one cooler used to transport volatile analysis containers. Second cooler contained only DRO containers. Note that one trip blank was submitted as Sample WTB1 with six VOAs. However, the lab reported the results for EPA 8260/AK 101 and EPA 524.2 separately, as Samples TRIP BLANK and WTB1.

ii. Is the cooler used to transport the trip blank and volatile samples clearly indicated on the COC? **NA** / Yes / **No** (if no explain): This information was inadvertently omitted from the COC.

iii. All results less than PQL? **NA** / Yes / **No**

Comments: Methylene chloride was detected in water trip blank by EPA 524.2.

iv. If above PQL, what samples are affected?

Comments: Methylene chloride was not detected in any associated project samples.

v. Data quality or usability affected? Explain.

Comments: Methylene chloride is a common laboratory contaminant, and was not detected in associated project samples. Therefore, the quality or usability of the data should not be affected.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes / No

Comments:

ii. Were the field duplicates submitted blind to the lab? **NA** / **Yes** / No

Comments:

iii. Precision – All relative percent differences (RPDs) less than specified DQOs? (Recommended: 30% for water, 50% for soil) **NA** / Yes / No
Comments: Unable to calculate RPDs due to non-detect results in both project sample and duplicate. Results are considered acceptable.

iv. Data quality or usability affected? Explain. **NA**
Comments:

f. **Decontamination or Equipment Blank** (if not applicable, a comment stating why must be entered below)

i. All results less than PQL? **NA** / Yes / No
Comments: No decontamination or equipment blank sample included in project scope.

ii. If results are above PQL, 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? **NA** / Yes / No
Comments:



SGS North America Inc.
Alaska Division
Level II Laboratory Data Report

Project: 17349-2 Aniak GW
Client: Shannon & Wilson, Inc.
SGS Work Order: 1102294

Released by:

A handwritten signature in black ink, appearing to read 'Jennifer Serna'. The signature is fluid and cursive.

SGS North America
Alaska Division Project Manager

Jennifer Serna
2010.06.02
14:25:40
-08'00'

Contents (Bookmarked in PDF):

Cover Page
Case Narrative
Sample Results Forms
Quality Control Summary Forms
Chain of Custody/Sample Receipt Forms
Attachments (if applicable)



Case Narrative

Client SHANNOT Shannon & Wilson, Inc.
Workorder 1102294 17349-2 Aniak GW

Printed Date/Time 6/2/2010 13:51

Sample ID Client Sample ID

Refer to the sample receipt form for information on sample condition.

1102294004 PS 32-1-17349-PL-MW-9

AK102 - The pattern is consistent with a weathered middle distillate.
AK101 - BFB (surrogate) recovery does not meet QC criteria (biased high) due to matrix interference.

1102294005 PS 32-1-17349-PL-MW-12

AK102 - The pattern is consistent with a weathered middle distillate.
AK101 - BFB (surrogate) recovery does not meet QC criteria (biased high) due to matrix interference.

1102294006 PS 32-1-17349-AST-MW-5

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

963449 * LCS LCS for HBN 323480 [VXX/20700]

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

963450 * LCSD LCSD for HBN 323480 [VXX/20700]

524 - LCSD recovery for chloromethane does not meet QC criteria (biased high). This analyte was not detected above the LOQ in the associated samples.

963465 * CCV CCV for HBN 323680 [VMS/11246]

524 - ICV recovery for dichlorodifluoromethane, chloromethane and vinyl chloride does not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.
524 - CCV recovery for chloromethane does not meet QC criteria (biased high). This analyte was not detected above the LOQ in the associated samples.

963466 * CCV CCV for HBN 323680 [VMS/11246]

524 - CCV recovery for chloromethane does not meet QC criteria (biased high). This analyte was not detected above the LOQ in the associated samples.

964317 * LCS LCS for HBN 343480 [VXX/20722]

524.2 - LCS recovery for dichlorodifluoromethane and carbon tetrachloride does not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.

964325 * CCV CCV for HBN 343580 [VMS/11259]

524.2 - ICV recovery for dichlorodifluoromethane and bromomethane does not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.
524.2 - CCV recovery for dichlorodifluoromethane and carbon tetrachloride does not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.

964326 * CCV CCV for HBN 343580 [VMS/11259]



Case Narrative

Client SHANNOT Shannon & Wilson, Inc.
Workorder 1102294 17349-2 Aniak GW

Printed Date/Time 6/2/2010 13:51

Sample ID **Client Sample ID**

524.2 - CCV recovery for dichlorodifluoromethane does not meet QC criteria (biased high). This analyte was not detected above the LOQ in the associated samples.

Jessica Busey
Shannon & Wilson Inc.
5430 Fairbanks Street, Suite 3
Anchorage, AK 99518

Work Order: 1102294
17349-2 Aniak GW

Client: Shannon & Wilson, Inc.

Report Date: June 02, 2010

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 AK100001 for NELAP (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6010B, 6020, 7470A, 7471B, 8021B, 8081B, 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, the National Environmental Laboratory Accreditation Program and 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
- 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., 2xDL)
- 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.



Detectable Results Summary

Print Date: 6/2/2010 1:51 pm

Client Sample ID: **32-1-17349-PL-MW-9**

SGS Ref. #: 1102294004

Volatile Fuels Department

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|-------------------------|---------------|--------------|
| Gasoline Range Organics | 0.229 | mg/L |
| Ethylbenzene | 3.27 | ug/L |
| o-Xylene | 7.06 | ug/L |
| P & M -Xylene | 7.62 | ug/L |

Semivolatile Organic Fuels Department

| | | |
|-----------------------|------|------|
| Diesel Range Organics | 2.43 | mg/L |
|-----------------------|------|------|

Client Sample ID: **32-1-17349-PL-MW-12**

SGS Ref. #: 1102294005

Volatile Fuels Department

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|-------------------------|---------------|--------------|
| Gasoline Range Organics | 0.243 | mg/L |
| Ethylbenzene | 3.41 | ug/L |
| o-Xylene | 7.43 | ug/L |
| P & M -Xylene | 7.96 | ug/L |

Semivolatile Organic Fuels Department

| | | |
|-----------------------|------|------|
| Diesel Range Organics | 2.91 | mg/L |
|-----------------------|------|------|

Client Sample ID: **32-1-17349-AST-MW-5**

SGS Ref. #: 1102294006

Semivolatile Organic Fuels Department

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|-----------------------|---------------|--------------|
| Diesel Range Organics | 5.32 | mg/L |

Client Sample ID: **32-1-17349-WTB2**

SGS Ref. #: 1102294012

Volatile Gas Chromatography/Mass Spectroscopy

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|--------------------|---------------|--------------|
| Methylene chloride | 0.550 | ug/L |



SGS Ref.# 1102294001
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-DW11
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/20/2010 0:00
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1,1-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<200) | 05/25/10 | 05/26/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1,2-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<7) | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,3-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,3-Trichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,4-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/26/10 | DSH |
| 1,2,4-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dibromoethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<600) | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,3,5-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,3-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,3-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,4-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<75) | 05/25/10 | 05/26/10 | DSH |
| 2,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 2-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 4-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 4-Isopropyltoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Benzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Bromobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromodichloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102294001
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-DW11
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/20/2010 0:00
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| Bromoform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromomethane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Carbon tetrachloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Chlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| Chloroethane | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Chloroform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Chloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| cis-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/26/10 | DSH |
| cis-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dibromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dibromomethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dichlorodifluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Ethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<700) | 05/25/10 | 05/26/10 | DSH |
| Hexachlorobutadiene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Isopropylbenzene (Cumene) | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Methylene chloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Methyl-t-butyl ether | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Naphthalene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| n-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| n-Propylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| o-Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| P & M -Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| sec-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Styrene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| tert-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Tetrachloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Toluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<1000) | 05/25/10 | 05/26/10 | DSH |
| Total Trihalomethanes | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | (<80) | 05/25/10 | 05/26/10 | DSH |
| trans-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| trans-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102294001
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-DW11
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/20/2010 0:00
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Trichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Trichlorofluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Vinyl chloride | 0.400 U | 0.400 | ug/L | EPA 524.2 | A | (<2) | 05/25/10 | 05/26/10 | DSH |
| Xylenes (total) | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | (<10000) | 05/25/10 | 05/26/10 | DSH |
| <u>Surrogates</u> | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 107 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |
| 4-Bromofluorobenzene <surr> | 104 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |
| Toluene-d8 <surr> | 98 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102294002
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-DW12
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/20/2010 0:00
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1,1-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<200) | 05/25/10 | 05/26/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1,2-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<7) | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,3-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,3-Trichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,4-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/26/10 | DSH |
| 1,2,4-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dibromoethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<600) | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,3,5-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,3-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,3-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,4-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<75) | 05/25/10 | 05/26/10 | DSH |
| 2,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 2-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 4-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 4-Isopropyltoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Benzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Bromobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromodichloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102294002
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-DW12
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/20/2010 0:00
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Bromoform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromomethane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Carbon tetrachloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Chlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| Chloroethane | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Chloroform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Chloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| cis-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/26/10 | DSH |
| cis-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dibromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dibromomethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dichlorodifluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Ethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<700) | 05/25/10 | 05/26/10 | DSH |
| Hexachlorobutadiene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Isopropylbenzene (Cumene) | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Methylene chloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Methyl-t-butyl ether | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Naphthalene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| n-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| n-Propylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| o-Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| P & M -Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| sec-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Styrene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| tert-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Tetrachloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Toluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<1000) | 05/25/10 | 05/26/10 | DSH |
| Total Trihalomethanes | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | (<80) | 05/25/10 | 05/26/10 | DSH |
| trans-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| trans-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102294002
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-DW12
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/20/2010 0:00
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Trichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Trichlorofluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Vinyl chloride | 0.400 U | 0.400 | ug/L | EPA 524.2 | A | (<2) | 05/25/10 | 05/26/10 | DSH |
| Xylenes (total) | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | (<10000) | 05/25/10 | 05/26/10 | DSH |
| Surrogates | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 110 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |
| 4-Bromofluorobenzene <surr> | 104 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |
| Toluene-d8 <surr> | 98.1 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102294003
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-DW13
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/20/2010 0:00
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1,1-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<200) | 05/25/10 | 05/26/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1,2-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<7) | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,3-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,3-Trichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,4-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/26/10 | DSH |
| 1,2,4-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dibromoethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<600) | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,3,5-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,3-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,3-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,4-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<75) | 05/25/10 | 05/26/10 | DSH |
| 2,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 2-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 4-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 4-Isopropyltoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Benzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Bromobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromodichloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102294003
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-DW13
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/20/2010 0:00
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Bromoform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromomethane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Carbon tetrachloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Chlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| Chloroethane | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Chloroform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Chloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| cis-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/26/10 | DSH |
| cis-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dibromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dibromomethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dichlorodifluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Ethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<700) | 05/25/10 | 05/26/10 | DSH |
| Hexachlorobutadiene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Isopropylbenzene (Cumene) | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Methylene chloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Methyl-t-butyl ether | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Naphthalene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| n-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| n-Propylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| o-Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| P & M -Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| sec-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Styrene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| tert-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Tetrachloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Toluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<1000) | 05/25/10 | 05/26/10 | DSH |
| Total Trihalomethanes | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | (<80) | 05/25/10 | 05/26/10 | DSH |
| trans-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| trans-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102294003
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-DW13
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/20/2010 0:00
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Trichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Trichlorofluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Vinyl chloride | 0.400 U | 0.400 | ug/L | EPA 524.2 | A | (<2) | 05/25/10 | 05/26/10 | DSH |
| Xylenes (total) | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | (<10000) | 05/25/10 | 05/26/10 | DSH |
| Surrogates | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 107 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |
| 4-Bromofluorobenzene <surr> | 106 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |
| Toluene-d8 <surr> | 99.1 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102294004
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-PL-MW-9
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/20/2010 0:00
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

Sample Remarks:

AK102 - The pattern is consistent with a weathered middle distillate.
 AK101 - BFB (surrogate) recovery does not meet QC criteria (biased high) due to matrix interference.

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Fuels Department</u> | | | | | | | | | |
| Benzene | 0.500 U | 0.500 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| Ethylbenzene | 3.27 | 2.00 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| Gasoline Range Organics | 0.229 | 0.100 | mg/L | AK101 | A | | 05/28/10 | 05/28/10 | EAB |
| o-Xylene | 7.06 | 2.00 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| P & M -Xylene | 7.62 | 2.00 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| Toluene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| <u>Surrogates</u> | | | | | | | | | |
| 1,4-Difluorobenzene <surr> | 86.1 | | % | SW8021B | A | 80-120 | 05/28/10 | 05/28/10 | EAB |
| 4-Bromofluorobenzene <surr> | 156 | ! | % | AK101 | A | 50-150 | 05/28/10 | 05/28/10 | EAB |
| <u>Semivolatile Organic Fuels Department</u> | | | | | | | | | |
| Diesel Range Organics | 2.43 | 0.865 | mg/L | AK102 | D | | 05/25/10 | 05/26/10 | HM |
| <u>Surrogates</u> | | | | | | | | | |
| 5a Androstane <surr> | 84.4 | | % | AK102 | D | 50-150 | 05/25/10 | 05/26/10 | HM |



SGS Ref.# 1102294005
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-PL-MW-12
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/20/2010 0:00
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

Sample Remarks:

AK102 - The pattern is consistent with a weathered middle distillate.
 AK101 - BFB (surrogate) recovery does not meet QC criteria (biased high) due to matrix interference.

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Fuels Department</u> | | | | | | | | | |
| Benzene | 0.500 U | 0.500 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| Ethylbenzene | 3.41 | 2.00 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| Gasoline Range Organics | 0.243 | 0.100 | mg/L | AK101 | A | | 05/28/10 | 05/28/10 | EAB |
| o-Xylene | 7.43 | 2.00 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| P & M -Xylene | 7.96 | 2.00 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| Toluene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| <u>Surrogates</u> | | | | | | | | | |
| 1,4-Difluorobenzene <surr> | 85.1 | | % | SW8021B | A | 80-120 | 05/28/10 | 05/28/10 | EAB |
| 4-Bromofluorobenzene <surr> | 163 | ! | % | AK101 | A | 50-150 | 05/28/10 | 05/28/10 | EAB |
| <u>Semivolatile Organic Fuels Department</u> | | | | | | | | | |
| Diesel Range Organics | 2.91 | 0.860 | mg/L | AK102 | D | | 05/25/10 | 05/26/10 | HM |
| <u>Surrogates</u> | | | | | | | | | |
| 5a Androstane <surr> | 93.4 | | % | AK102 | D | 50-150 | 05/25/10 | 05/26/10 | HM |



SGS Ref.# 1102294006
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-AST-MW-5
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/20/2010 0:00
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

Sample Remarks:

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

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Fuels Department</u> | | | | | | | | | |
| Benzene | 0.500 U | 0.500 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| Ethylbenzene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| Gasoline Range Organics | 0.100 U | 0.100 | mg/L | AK101 | A | | 05/28/10 | 05/28/10 | EAB |
| o-Xylene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| P & M -Xylene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| Toluene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| <u>Surrogates</u> | | | | | | | | | |
| 1,4-Difluorobenzene <surr> | 88.7 | | % | SW8021B | A | 80-120 | 05/28/10 | 05/28/10 | EAB |
| 4-Bromofluorobenzene <surr> | 125 | | % | AK101 | A | 50-150 | 05/28/10 | 05/28/10 | EAB |
| <u>Semivolatile Organic Fuels Department</u> | | | | | | | | | |
| Diesel Range Organics | 5.32 | 0.884 | mg/L | AK102 | D | | 05/25/10 | 05/26/10 | HM |
| <u>Surrogates</u> | | | | | | | | | |
| 5a Androstane <surr> | 84.9 | | % | AK102 | D | 50-150 | 05/25/10 | 05/26/10 | HM |



SGS Ref.# 1102294007
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-AST-MW-1
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/20/2010 0:00
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Fuels Department</u> | | | | | | | | | |
| Benzene | 0.500 U | 0.500 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| Ethylbenzene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| Gasoline Range Organics | 0.100 U | 0.100 | mg/L | AK101 | A | | 05/28/10 | 05/28/10 | EAB |
| o-Xylene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| P & M -Xylene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| Toluene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| <u>Surrogates</u> | | | | | | | | | |
| 1,4-Difluorobenzene <surr> | 88.5 | | % | SW8021B | A | 80-120 | 05/28/10 | 05/28/10 | EAB |
| 4-Bromofluorobenzene <surr> | 114 | | % | AK101 | A | 50-150 | 05/28/10 | 05/28/10 | EAB |
| <u>Semivolatile Organic Fuels Department</u> | | | | | | | | | |
| Diesel Range Organics | 0.865 U | 0.865 | mg/L | AK102 | D | | 05/25/10 | 05/26/10 | HM |
| <u>Surrogates</u> | | | | | | | | | |
| 5a Androstane <surr> | 102 | | % | AK102 | D | 50-150 | 05/25/10 | 05/26/10 | HM |



SGS Ref.# 1102294008
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-AST-MW-4
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/20/2010 0:00
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|---------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Fuels Department</u> | | | | | | | | | |
| Benzene | 0.500 U | 0.500 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| Ethylbenzene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| Gasoline Range Organics | 0.100 U | 0.100 | mg/L | AK101 | A | | 05/28/10 | 05/28/10 | EAB |
| o-Xylene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| P & M -Xylene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| Toluene | 2.00 U | 2.00 | ug/L | SW8021B | A | | 05/28/10 | 05/28/10 | EAB |
| <u>Surrogates</u> | | | | | | | | | |
| 1,4-Difluorobenzene <surr> | 88.7 | | % | SW8021B | A | 80-120 | 05/28/10 | 05/28/10 | EAB |
| 4-Bromofluorobenzene <surr> | 114 | | % | AK101 | A | 50-150 | 05/28/10 | 05/28/10 | EAB |
| <u>Semivolatile Organic Fuels Department</u> | | | | | | | | | |
| Diesel Range Organics | 0.870 U | 0.870 | mg/L | AK102 | D | | 05/25/10 | 05/26/10 | HM |
| <u>Surrogates</u> | | | | | | | | | |
| 5a Androstane <surr> | 102 | | % | AK102 | D | 50-150 | 05/25/10 | 05/26/10 | HM |



SGS Ref.# 1102294009
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-DW14
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/20/2010 0:00
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1,1-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<200) | 05/25/10 | 05/26/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1,2-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<7) | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,3-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,3-Trichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,4-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/26/10 | DSH |
| 1,2,4-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dibromoethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<600) | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,3,5-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,3-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,3-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,4-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<75) | 05/25/10 | 05/26/10 | DSH |
| 2,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 2-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 4-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 4-Isopropyltoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Benzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Bromobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromodichloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102294009
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-DW14
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/20/2010 0:00
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| Bromoform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromomethane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Carbon tetrachloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Chlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| Chloroethane | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Chloroform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Chloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| cis-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/26/10 | DSH |
| cis-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dibromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dibromomethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dichlorodifluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Ethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<700) | 05/25/10 | 05/26/10 | DSH |
| Hexachlorobutadiene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Isopropylbenzene (Cumene) | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Methylene chloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Methyl-t-butyl ether | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Naphthalene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| n-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| n-Propylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| o-Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| P & M -Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| sec-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Styrene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| tert-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Tetrachloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Toluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<1000) | 05/25/10 | 05/26/10 | DSH |
| Total Trihalomethanes | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | (<80) | 05/25/10 | 05/26/10 | DSH |
| trans-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| trans-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102294009
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-DW14
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/20/2010 0:00
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|--|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| Volatile Gas Chromatography/Mass Spectroscopy | | | | | | | | | |
| Trichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Trichlorofluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Vinyl chloride | 0.400 U | 0.400 | ug/L | EPA 524.2 | A | (<2) | 05/25/10 | 05/26/10 | DSH |
| Xylenes (total) | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | (<10000) | 05/25/10 | 05/26/10 | DSH |
| Surrogates | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 107 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |
| 4-Bromofluorobenzene <surr> | 108 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |
| Toluene-d8 <surr> | 98.5 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102294010
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-DW2(2)
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/21/2010 12:10
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1,1-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<200) | 05/25/10 | 05/26/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1,2-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<7) | 05/25/10 | 05/26/10 | DSH |
| 1,1-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,3-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,3-Trichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2,4-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/26/10 | DSH |
| 1,2,4-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dibromoethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<600) | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| 1,3,5-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,3-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,3-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 1,4-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<75) | 05/25/10 | 05/26/10 | DSH |
| 2,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 2-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 4-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| 4-Isopropyltoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Benzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Bromobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromodichloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102294010
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-DW2(2)
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/21/2010 12:10
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Bromoform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Bromomethane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Carbon tetrachloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Chlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| Chloroethane | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Chloroform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Chloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| cis-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 05/25/10 | 05/26/10 | DSH |
| cis-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dibromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dibromomethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Dichlorodifluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Ethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<700) | 05/25/10 | 05/26/10 | DSH |
| Hexachlorobutadiene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Isopropylbenzene (Cumene) | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Methylene chloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Methyl-t-butyl ether | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Naphthalene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| n-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| n-Propylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| o-Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| P & M -Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| sec-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Styrene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| tert-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Tetrachloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Toluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<1000) | 05/25/10 | 05/26/10 | DSH |
| Total Trihalomethanes | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | (<80) | 05/25/10 | 05/26/10 | DSH |
| trans-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 05/25/10 | 05/26/10 | DSH |
| trans-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102294010
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-DW2(2)
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/21/2010 12:10
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Trichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 05/25/10 | 05/26/10 | DSH |
| Trichlorofluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 05/25/10 | 05/26/10 | DSH |
| Vinyl chloride | 0.400 U | 0.400 | ug/L | EPA 524.2 | A | (<2) | 05/25/10 | 05/26/10 | DSH |
| Xylenes (total) | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | (<10000) | 05/25/10 | 05/26/10 | DSH |
| Surrogates | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 110 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |
| 4-Bromofluorobenzene <surr> | 107 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |
| Toluene-d8 <surr> | 98.8 | | % | EPA 524.2 | A | 70-130 | 05/25/10 | 05/26/10 | DSH |



SGS Ref.# 1102294011
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-DW15
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/21/2010 13:35
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,1,1-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<200) | 06/01/10 | 06/01/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,1,2-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 06/01/10 | 06/01/10 | DSH |
| 1,1-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,1-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<7) | 06/01/10 | 06/01/10 | DSH |
| 1,1-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,2,3-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,2,3-Trichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,2,4-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 06/01/10 | 06/01/10 | DSH |
| 1,2,4-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,2-Dibromoethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,2-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<600) | 06/01/10 | 06/01/10 | DSH |
| 1,2-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 06/01/10 | 06/01/10 | DSH |
| 1,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 06/01/10 | 06/01/10 | DSH |
| 1,3,5-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,3-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,3-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,4-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<75) | 06/01/10 | 06/01/10 | DSH |
| 2,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 2-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 4-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 4-Isopropyltoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Benzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 06/01/10 | 06/01/10 | DSH |
| Bromobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Bromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Bromodichloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |



SGS Ref.# 1102294011
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-DW15
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/21/2010 13:35
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Bromoform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Bromomethane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Carbon tetrachloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 06/01/10 | 06/01/10 | DSH |
| Chlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 06/01/10 | 06/01/10 | DSH |
| Chloroethane | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Chloroform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Chloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| cis-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 06/01/10 | 06/01/10 | DSH |
| cis-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Dibromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Dibromomethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Dichlorodifluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Ethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<700) | 06/01/10 | 06/01/10 | DSH |
| Hexachlorobutadiene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Isopropylbenzene (Cumene) | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Methylene chloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 06/01/10 | 06/01/10 | DSH |
| Methyl-t-butyl ether | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Naphthalene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| n-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| n-Propylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| o-Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| P & M -Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| sec-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Styrene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 06/01/10 | 06/01/10 | DSH |
| tert-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Tetrachloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 06/01/10 | 06/01/10 | DSH |
| Toluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<1000) | 06/01/10 | 06/01/10 | DSH |
| Total Trihalomethanes | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | (<80) | 06/01/10 | 06/01/10 | DSH |
| trans-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 06/01/10 | 06/01/10 | DSH |
| trans-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |



SGS Ref.# 1102294011
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-DW15
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/21/2010 13:35
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Trichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 06/01/10 | 06/01/10 | DSH |
| Trichlorofluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Vinyl chloride | 0.400 U | 0.400 | ug/L | EPA 524.2 | A | (<2) | 06/01/10 | 06/01/10 | DSH |
| Xylenes (total) | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | (<10000) | 06/01/10 | 06/01/10 | DSH |
| Surrogates | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 105 | | % | EPA 524.2 | A | 70-130 | 06/01/10 | 06/01/10 | DSH |
| 4-Bromofluorobenzene <surr> | 97.2 | | % | EPA 524.2 | A | 70-130 | 06/01/10 | 06/01/10 | DSH |
| Toluene-d8 <surr> | 100 | | % | EPA 524.2 | A | 70-130 | 06/01/10 | 06/01/10 | DSH |



SGS Ref.# 1102294012
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-WTB2
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/21/2010 10:07
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,1,1-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<200) | 06/01/10 | 06/01/10 | DSH |
| 1,1,2,2-Tetrachloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,1,2-Trichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 06/01/10 | 06/01/10 | DSH |
| 1,1-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,1-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<7) | 06/01/10 | 06/01/10 | DSH |
| 1,1-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,2,3-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,2,3-Trichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,2,4-Trichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 06/01/10 | 06/01/10 | DSH |
| 1,2,4-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,2-Dibromo-3-chloropropane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,2-Dibromoethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,2-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<600) | 06/01/10 | 06/01/10 | DSH |
| 1,2-Dichloroethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 06/01/10 | 06/01/10 | DSH |
| 1,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 06/01/10 | 06/01/10 | DSH |
| 1,3,5-Trimethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,3-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,3-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 1,4-Dichlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<75) | 06/01/10 | 06/01/10 | DSH |
| 2,2-Dichloropropane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 2-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 4-Chlorotoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| 4-Isopropyltoluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Benzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 06/01/10 | 06/01/10 | DSH |
| Bromobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Bromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Bromodichloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |



SGS Ref.# 1102294012
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-WTB2
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/21/2010 10:07
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Bromoform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Bromomethane | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Carbon tetrachloride | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 06/01/10 | 06/01/10 | DSH |
| Chlorobenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 06/01/10 | 06/01/10 | DSH |
| Chloroethane | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Chloroform | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Chloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| cis-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<70) | 06/01/10 | 06/01/10 | DSH |
| cis-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Dibromochloromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Dibromomethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Dichlorodifluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Ethylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<700) | 06/01/10 | 06/01/10 | DSH |
| Hexachlorobutadiene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Isopropylbenzene (Cumene) | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Methylene chloride | 0.550 | 0.500 | ug/L | EPA 524.2 | A | (<5) | 06/01/10 | 06/01/10 | DSH |
| Methyl-t-butyl ether | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Naphthalene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| n-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| n-Propylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| o-Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| P & M -Xylene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| sec-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Styrene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 06/01/10 | 06/01/10 | DSH |
| tert-Butylbenzene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Tetrachloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 06/01/10 | 06/01/10 | DSH |
| Toluene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<1000) | 06/01/10 | 06/01/10 | DSH |
| Total Trihalomethanes | 2.00 U | 2.00 | ug/L | EPA 524.2 | A | (<80) | 06/01/10 | 06/01/10 | DSH |
| trans-1,2-Dichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<100) | 06/01/10 | 06/01/10 | DSH |
| trans-1,3-Dichloropropene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |



SGS Ref.# 1102294012
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17349-WTB2
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/21/2010 10:07
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|-----------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | | |
| Trichloroethene | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | (<5) | 06/01/10 | 06/01/10 | DSH |
| Trichlorofluoromethane | 0.500 U | 0.500 | ug/L | EPA 524.2 | A | | 06/01/10 | 06/01/10 | DSH |
| Vinyl chloride | 0.400 U | 0.400 | ug/L | EPA 524.2 | A | (<2) | 06/01/10 | 06/01/10 | DSH |
| Xylenes (total) | 1.00 U | 1.00 | ug/L | EPA 524.2 | A | (<10000) | 06/01/10 | 06/01/10 | DSH |
| <u>Surrogates</u> | | | | | | | | | |
| 1,2-Dichloroethane-D4 <surr> | 103 | | % | EPA 524.2 | A | 70-130 | 06/01/10 | 06/01/10 | DSH |
| 4-Bromofluorobenzene <surr> | 94.1 | | % | EPA 524.2 | A | 70-130 | 06/01/10 | 06/01/10 | DSH |
| Toluene-d8 <surr> | 92.2 | | % | EPA 524.2 | A | 70-130 | 06/01/10 | 06/01/10 | DSH |



SGS Ref.# 1102294013
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Client Sample ID 32-1-17399-WTB2
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Collected Date/Time 05/21/2010 10:07
Received Date/Time 05/24/2010 8:43
Technical Director Stephen C. Ede

Sample Remarks:

| Parameter | Results | LOQ | Units | Method | Container ID | Allowable Limits | Prep Date | Analysis Date | Init |
|---|---------|-------|-------|--------|--------------|------------------|-----------|---------------|------|
| <u>Volatile Fuels Department</u> | | | | | | | | | |
| Gasoline Range Organics | 0.100 U | 0.100 | mg/L | AK101 | A | | 05/28/10 | 05/28/10 | EAB |
| Surrogates | | | | | | | | | |
| 4-Bromofluorobenzene <surr> | 118 | | % | AK101 | A | 50-150 | 05/28/10 | 05/28/10 | EAB |



SGS Ref.# 962506 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Prep Batch XXX22665
Method SW3520C
Date 05/25/2010

QC results affect the following production samples:

1102294004, 1102294005, 1102294006, 1102294007, 1102294008

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Semivolatile Organic Fuels Department

| | | | | | |
|-----------------------|---------|-------|-------|------|----------|
| Diesel Range Organics | 0.500 U | 0.800 | 0.250 | mg/L | 05/25/10 |
|-----------------------|---------|-------|-------|------|----------|

Surrogates

| | | | | | |
|----------------------|-----|--------|--|---|----------|
| 5a Androstane <surr> | 104 | 60-120 | | % | 05/25/10 |
|----------------------|-----|--------|--|---|----------|

Batch XFC9196

Method AK102

Instrument HP 7890A FID SV E F



SGS Ref.# 963448 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/02/2010 13:51
Prep Batch VXX20700
Method SW5030B
Date 05/25/2010

QC results affect the following production samples:

1102294001, 1102294002, 1102294003, 1102294009, 1102294010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 963448 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/02/2010 13:51
Prep Batch VXX20700
Method SW5030B
Date 05/25/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | |
|-----------------------------|---------|-------|-------|------|----------|
| 1,1,1,2-Tetrachloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,1,1-Trichloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,1,2,2-Tetrachloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,1,2-Trichloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,1-Dichloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,1-Dichloroethene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,1-Dichloropropene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,2,3-Trichlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,2,3-Trichloropropane | 0.360 U | 0.500 | 0.180 | ug/L | 05/25/10 |
| 1,2,4-Trichlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,2,4-Trimethylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,2-Dibromo-3-chloropropane | 1.24 U | 2.00 | 0.620 | ug/L | 05/25/10 |
| 1,2-Dibromoethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,2-Dichlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,2-Dichloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,2-Dichloropropane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,3,5-Trimethylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,3-Dichlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,3-Dichloropropane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 1,4-Dichlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 2,2-Dichloropropane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 2-Chlorotoluene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 4-Chlorotoluene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| 4-Isopropyltoluene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Benzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Bromobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Bromochloromethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Bromodichloromethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Bromoform | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Bromomethane | 1.24 U | 2.00 | 0.620 | ug/L | 05/25/10 |
| Carbon tetrachloride | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Chlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Chloroethane | 0.620 U | 1.00 | 0.310 | ug/L | 05/25/10 |
| Chloroform | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Chloromethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| cis-1,2-Dichloroethene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| cis-1,3-Dichloropropene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Dibromochloromethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Dibromomethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |



SGS Ref.# 963448 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/02/2010 13:51
Prep Batch VXX20700
Method SW5030B
Date 05/25/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | |
|---------------------------|---------|-------|-------|------|----------|
| Dichlorodifluoromethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Ethylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Hexachlorobutadiene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Isopropylbenzene (Cumene) | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Methylene chloride | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Methyl-t-butyl ether | 1.00 U | 1.00 | 0.500 | ug/L | 05/25/10 |
| Naphthalene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| n-Butylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| n-Propylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| o-Xylene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| P & M -Xylene | 0.360 U | 0.500 | 0.180 | ug/L | 05/25/10 |
| sec-Butylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Styrene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| tert-Butylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Tetrachloroethene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Toluene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| trans-1,2-Dichloroethene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| trans-1,3-Dichloropropene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Trichloroethene | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Trichlorofluoromethane | 0.300 U | 0.500 | 0.150 | ug/L | 05/25/10 |
| Vinyl chloride | 0.240 U | 0.400 | 0.120 | ug/L | 05/25/10 |

Surrogates

| | | | | | |
|------------------------------|------|--------|--|---|----------|
| 1,2-Dichloroethane-D4 <surr> | 108 | 70-130 | | % | 05/25/10 |
| 4-Bromofluorobenzene <surr> | 106 | 70-130 | | % | 05/25/10 |
| Toluene-d8 <surr> | 97.8 | 70-130 | | % | 05/25/10 |

Batch VMS11246
Method EPA 524.2
Instrument HP 5890 Series II MS1 VJA



SGS Ref.# 963923 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Prep Batch VXX20709
Method SW5030B
Date 05/28/2010

QC results affect the following production samples:

1102294004, 1102294005, 1102294006, 1102294007, 1102294008, 1102294013

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Fuels Department

| | | | | | |
|-------------------------|------------|----------|----------|------|----------|
| Benzene | 0.000300 U | 0.000500 | 0.000150 | mg/L | 05/28/10 |
| Ethylbenzene | 0.00124 U | 0.00200 | 0.000620 | mg/L | 05/28/10 |
| Gasoline Range Organics | 0.0620 U | 0.100 | 0.0310 | mg/L | 05/28/10 |
| o-Xylene | 0.00124 U | 0.00200 | 0.000620 | mg/L | 05/28/10 |
| P & M -Xylene | 0.00124 U | 0.00200 | 0.000620 | mg/L | 05/28/10 |
| Toluene | 0.00124 U | 0.00200 | 0.000620 | mg/L | 05/28/10 |

Surrogates

| | | | | | |
|-----------------------------|------|--------|--|---|----------|
| 1,4-Difluorobenzene <surr> | 89.7 | 80-120 | | % | 05/28/10 |
| 4-Bromofluorobenzene <surr> | 115 | 50-150 | | % | 05/28/10 |

Batch VFC9954
Method AK101
Instrument HP 5890 Series II PID+FID VCA

| | | | | | |
|---------------|---------|-------|-------|------|----------|
| Benzene | 0.300 U | 0.500 | 0.150 | ug/L | 05/28/10 |
| Ethylbenzene | 1.24 U | 2.00 | 0.620 | ug/L | 05/28/10 |
| o-Xylene | 1.24 U | 2.00 | 0.620 | ug/L | 05/28/10 |
| P & M -Xylene | 1.24 U | 2.00 | 0.620 | ug/L | 05/28/10 |
| Toluene | 1.24 U | 2.00 | 0.620 | ug/L | 05/28/10 |

Surrogates

| | | | | | |
|----------------------------|------|--------|--|---|----------|
| 1,4-Difluorobenzene <surr> | 89.7 | 80-120 | | % | 05/28/10 |
|----------------------------|------|--------|--|---|----------|

Batch VFC9954
Method SW8021B
Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 964316 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/02/2010 13:51
Prep Batch VXX20722
Method SW5030B
Date 06/01/2010

QC results affect the following production samples:
1102294011, 1102294012

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 964316 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/02/2010 13:51
Prep Batch VXX20722
Method SW5030B
Date 06/01/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|---|---------|--------|-------|-------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | |
| 1,1,1,2-Tetrachloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| 1,1,1-Trichloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| 1,1,2,2-Tetrachloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| 1,1,2-Trichloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| 1,1-Dichloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| 1,1-Dichloroethene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| 1,1-Dichloropropene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| 1,2,3-Trichlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| 1,2,3-Trichloropropane | 0.360 U | 0.500 | 0.180 | ug/L | 06/01/10 |
| 1,2,4-Trichlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| 1,2,4-Trimethylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| 1,2-Dibromo-3-chloropropane | 1.24 U | 2.00 | 0.620 | ug/L | 06/01/10 |
| 1,2-Dibromoethane | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| 1,2-Dichlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| 1,2-Dichloroethane | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| 1,2-Dichloropropane | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| 1,3,5-Trimethylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| 1,3-Dichlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| 1,3-Dichloropropane | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| 1,4-Dichlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| 2,2-Dichloropropane | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| 2-Chlorotoluene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| 4-Chlorotoluene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| 4-Isopropyltoluene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Benzene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Bromobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Bromochloromethane | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Bromodichloromethane | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Bromoform | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Bromomethane | 1.24 U | 2.00 | 0.620 | ug/L | 06/01/10 |
| Carbon tetrachloride | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Chlorobenzene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Chloroethane | 0.620 U | 1.00 | 0.310 | ug/L | 06/01/10 |
| Chloroform | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Chloromethane | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| cis-1,2-Dichloroethene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| cis-1,3-Dichloropropene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Dibromochloromethane | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Dibromomethane | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |



SGS Ref.# 964316 Method Blank
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/02/2010 13:51
Prep Batch VXX20722
Method SW5030B
Date 06/01/2010

| Parameter | Results | LOQ/CL | DL | Units | Analysis Date |
|-----------|---------|--------|----|-------|---------------|
|-----------|---------|--------|----|-------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | |
|---------------------------|---------|-------|-------|------|----------|
| Dichlorodifluoromethane | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Ethylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Hexachlorobutadiene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Isopropylbenzene (Cumene) | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Methylene chloride | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Methyl-t-butyl ether | 1.00 U | 1.00 | 0.500 | ug/L | 06/01/10 |
| Naphthalene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| n-Butylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| n-Propylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| o-Xylene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| P & M -Xylene | 0.360 U | 0.500 | 0.180 | ug/L | 06/01/10 |
| sec-Butylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Styrene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| tert-Butylbenzene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Tetrachloroethene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Toluene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| trans-1,2-Dichloroethene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| trans-1,3-Dichloropropene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Trichloroethene | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Trichlorofluoromethane | 0.300 U | 0.500 | 0.150 | ug/L | 06/01/10 |
| Vinyl chloride | 0.240 U | 0.400 | 0.120 | ug/L | 06/01/10 |

Surrogates

| | | | | | |
|------------------------------|------|--------|--|---|----------|
| 1,2-Dichloroethane-D4 <surr> | 105 | 70-130 | | % | 06/01/10 |
| 4-Bromofluorobenzene <surr> | 98.2 | 70-130 | | % | 06/01/10 |
| Toluene-d8 <surr> | 96.8 | 70-130 | | % | 06/01/10 |

Batch VMS11259
Method EPA 524.2
Instrument HP 5890 Series II MS1 VJA



SGS Ref.# 962507 Lab Control Sample
 962508 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Prep Batch XXX22665
Method SW3520C
Date 05/25/2010

QC results affect the following production samples:

1102294004, 1102294005, 1102294006, 1102294007, 1102294008

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Semivolatile Organic Fuels Department

| | | | | | | | |
|-----------------------|------|------|----|------------|----|---------|-------------------|
| Diesel Range Organics | LCS | 4.38 | 88 | (75-125) | | 5 mg/L | 05/25/2010 |
| | LCSD | 4.94 | 99 | | 12 | (< 20) | 5 mg/L 05/25/2010 |

Surrogates

| | | | | | | | |
|----------------------|------|--|----|------------|----|--|------------|
| 5a Androstane <surr> | LCS | | 82 | (60-120) | | | 05/25/2010 |
| | LCSD | | 92 | | 11 | | 05/25/2010 |

Batch XFC9196
Method AK102
Instrument HP 7890A FID SV E F



SGS Ref.# 963449 Lab Control Sample
963450 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/02/2010 13:51
Prep Batch VXX20700
Method SW5030B
Date 05/25/2010

QC results affect the following production samples:

1102294001, 1102294002, 1102294003, 1102294009, 1102294010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 963449 Lab Control Sample
 963450 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/02/2010 13:51
Prep Batch VXX20700
Method SW5030B
Date 05/25/2010

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | LCS | 31.2 | 104 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.5 | 102 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,1,1-Trichloroethane | LCS | 30.9 | 103 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.8 | 99 | | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,1,2,2-Tetrachloroethane | LCS | 30.5 | 102 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.4 | 101 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,1,2-Trichloroethane | LCS | 30.8 | 103 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.4 | 101 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,1-Dichloroethane | LCS | 30.7 | 102 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.3 | 101 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,1-Dichloroethene | LCS | 30.4 | 101 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.4 | 98 | | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,1-Dichloropropene | LCS | 30.4 | 101 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.4 | 98 | | 3 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2,3-Trichlorobenzene | LCS | 31.3 | 104 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.7 | 99 | | 5 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2,3-Trichloropropane | LCS | 29.7 | 99 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.8 | 96 | | 3 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2,4-Trichlorobenzene | LCS | 29.7 | 99 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.0 | 97 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2,4-Trimethylbenzene | LCS | 29.8 | 99 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.7 | 99 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2-Dibromo-3-chloropropane | LCS | 32.7 | 109 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 32.1 | 107 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2-Dibromoethane | LCS | 30.0 | 100 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.4 | 101 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2-Dichlorobenzene | LCS | 27.9 | 93 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 27.5 | 92 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |



SGS Ref.# 963449 Lab Control Sample
 963450 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/02/2010 13:51
Prep Batch VXX20700
Method SW5030B
Date 05/25/2010

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| 1,2-Dichloroethane | LCS | 31.4 | 105 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 31.3 | 104 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,2-Dichloropropane | LCS | 30.9 | 103 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.9 | 103 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,3,5-Trimethylbenzene | LCS | 29.7 | 99 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.3 | 101 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,3-Dichlorobenzene | LCS | 28.3 | 94 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 27.6 | 92 | | 3 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,3-Dichloropropane | LCS | 30.1 | 100 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.4 | 101 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| 1,4-Dichlorobenzene | LCS | 28.1 | 94 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 27.9 | 93 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| 2,2-Dichloropropane | LCS | 32.7 | 109 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 32.0 | 107 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| 2-Chlorotoluene | LCS | 29.3 | 98 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.5 | 98 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| 4-Chlorotoluene | LCS | 29.4 | 98 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.9 | 100 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| 4-Isopropyltoluene | LCS | 29.2 | 98 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.2 | 97 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| Benzene | LCS | 29.8 | 99 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.8 | 96 | | 3 | (< 30) | 30 ug/L | 05/25/2010 |
| Bromobenzene | LCS | 28.2 | 94 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 27.8 | 93 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| Bromochloromethane | LCS | 29.1 | 97 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.6 | 95 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| Bromodichloromethane | LCS | 33.1 | 110 | (70-130) | | | 30 ug/L | 05/25/2010 |



SGS Ref.# 963449 Lab Control Sample
 963450 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/02/2010 13:51
Prep Batch VXX20700
Method SW5030B
Date 05/25/2010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | |
| | LCSD | 31.5 | 105 | 5 | (< 30) | 30 ug/L | 05/25/2010 |
| Bromoform | LCS | 29.9 | 100 | (70-130) | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.0 | 97 | 3 | (< 30) | 30 ug/L | 05/25/2010 |
| Bromomethane | LCS | 35.2 | 117 | (70-130) | | 30 ug/L | 05/25/2010 |
| | LCSD | 36.6 | 122 | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| Carbon tetrachloride | LCS | 33.3 | 111 | (70-130) | | 30 ug/L | 05/25/2010 |
| | LCSD | 31.4 | 105 | 6 | (< 30) | 30 ug/L | 05/25/2010 |
| Chlorobenzene | LCS | 28.3 | 95 | (70-130) | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.3 | 94 | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| Chloroethane | LCS | 33.0 | 110 | (70-130) | | 30 ug/L | 05/25/2010 |
| | LCSD | 32.6 | 109 | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| Chloroform | LCS | 30.4 | 101 | (70-130) | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.2 | 101 | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| Chloromethane | LCS | 40.2 | 134 * | (70-130) | | 30 ug/L | 05/25/2010 |
| | LCSD | 41.0 | 137 * | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| cis-1,2-Dichloroethene | LCS | 29.5 | 99 | (70-130) | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.4 | 95 | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| cis-1,3-Dichloropropene | LCS | 32.4 | 108 | (70-130) | | 30 ug/L | 05/25/2010 |
| | LCSD | 31.9 | 106 | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| Dibromochloromethane | LCS | 28.2 | 94 | (70-130) | | 30 ug/L | 05/25/2010 |
| | LCSD | 27.3 | 91 | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| Dibromomethane | LCS | 29.9 | 100 | (70-130) | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.8 | 96 | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| Dichlorodifluoromethane | LCS | 30.2 | 101 | (70-130) | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.0 | 97 | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| Ethylbenzene | LCS | 29.3 | 98 | (70-130) | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.7 | 96 | 2 | (< 30) | 30 ug/L | 05/25/2010 |



SGS Ref.# 963449 Lab Control Sample
 963450 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/02/2010 13:51
Prep Batch VXX20700
Method SW5030B
Date 05/25/2010

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| Hexachlorobutadiene | LCS | 26.9 | 90 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 26.3 | 88 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| Isopropylbenzene (Cumene) | LCS | 29.0 | 97 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.8 | 96 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| Methylene chloride | LCS | 31.4 | 105 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 31.3 | 104 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| Methyl-t-butyl ether | LCS | 46.0 | 102 | (70-130) | | | 45 ug/L | 05/25/2010 |
| | LCSD | 45.1 | 100 | | 2 | (< 30) | 45 ug/L | 05/25/2010 |
| Naphthalene | LCS | 32.8 | 109 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 32.7 | 109 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| n-Butylbenzene | LCS | 30.2 | 101 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.3 | 101 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| n-Propylbenzene | LCS | 29.7 | 99 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.9 | 100 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| o-Xylene | LCS | 28.8 | 96 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.4 | 95 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| P & M -Xylene | LCS | 57.4 | 96 | (70-130) | | | 60 ug/L | 05/25/2010 |
| | LCSD | 56.4 | 94 | | 2 | (< 30) | 60 ug/L | 05/25/2010 |
| sec-Butylbenzene | LCS | 29.2 | 97 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.2 | 98 | | 0 | (< 30) | 30 ug/L | 05/25/2010 |
| Styrene | LCS | 29.9 | 100 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.4 | 98 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| tert-Butylbenzene | LCS | 28.5 | 95 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.2 | 94 | | 1 | (< 30) | 30 ug/L | 05/25/2010 |
| Tetrachloroethene | LCS | 27.5 | 92 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 26.3 | 88 | | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| Toluene | LCS | 28.4 | 95 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.0 | 93 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |



SGS Ref.# 963449 Lab Control Sample
 963450 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/02/2010 13:51
Prep Batch VXX20700
Method SW5030B
Date 05/25/2010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | |
|---------------------------|------|------|-----|------------|---|---------|---------|------------|
| trans-1,2-Dichloroethene | LCS | 30.2 | 101 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 28.9 | 96 | | 4 | (< 30) | 30 ug/L | 05/25/2010 |
| trans-1,3-Dichloropropene | LCS | 28.6 | 95 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.1 | 97 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| Trichloroethene | LCS | 30.3 | 101 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 29.7 | 99 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |
| Trichlorofluoromethane | LCS | 31.3 | 104 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 30.2 | 101 | | 3 | (< 30) | 30 ug/L | 05/25/2010 |
| Vinyl chloride | LCS | 32.7 | 109 | (70-130) | | | 30 ug/L | 05/25/2010 |
| | LCSD | 32.0 | 107 | | 2 | (< 30) | 30 ug/L | 05/25/2010 |

Surrogates

| | | | | | | | | |
|------------------------------|------|--|-----|------------|---|--|--|------------|
| 1,2-Dichloroethane-D4 <surr> | LCS | | 104 | (70-130) | | | | 05/25/2010 |
| | LCSD | | 102 | | 2 | | | 05/25/2010 |
| 4-Bromofluorobenzene <surr> | LCS | | 103 | (70-130) | | | | 05/25/2010 |
| | LCSD | | 105 | | 2 | | | 05/25/2010 |
| Toluene-d8 <surr> | LCS | | 97 | (70-130) | | | | 05/25/2010 |
| | LCSD | | 96 | | 2 | | | 05/25/2010 |

Batch VMS11246
Method EPA 524.2
Instrument HP 5890 Series II MS1 VJA



SGS Ref.# 963924 Lab Control Sample
 963925 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Prep Batch VXX20709
Method SW5030B
Date 05/28/2010

QC results affect the following production samples:

1102294004, 1102294005, 1102294006, 1102294007, 1102294008, 1102294013

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Fuels Department</u> | | | | | | | | |
| Benzene | LCS | 0.102 | 102 | (80-120) | | | 0.100 mg/L | 05/28/2010 |
| | LCSD | 0.104 | 104 | | 2 | (< 20) | 0.100 mg/L | 05/28/2010 |
| Ethylbenzene | LCS | 0.105 | 105 | (87-125) | | | 0.100 mg/L | 05/28/2010 |
| | LCSD | 0.107 | 107 | | 2 | (< 20) | 0.100 mg/L | 05/28/2010 |
| o-Xylene | LCS | 0.0990 | 99 | (85-120) | | | 0.100 mg/L | 05/28/2010 |
| | LCSD | 0.100 | 100 | | 1 | (< 20) | 0.100 mg/L | 05/28/2010 |
| P & M -Xylene | LCS | 0.205 | 103 | (87-125) | | | 0.200 mg/L | 05/28/2010 |
| | LCSD | 0.208 | 104 | | 1 | (< 20) | 0.200 mg/L | 05/28/2010 |
| Toluene | LCS | 0.101 | 101 | (80-120) | | | 0.100 mg/L | 05/28/2010 |
| | LCSD | 0.102 | 102 | | 2 | (< 20) | 0.100 mg/L | 05/28/2010 |
| Surrogates | | | | | | | | |
| 1,4-Difluorobenzene <surr> | LCS | | 101 | (80-120) | | | | 05/28/2010 |
| | LCSD | | 100 | | 1 | | | 05/28/2010 |

Batch VFC9954
Method AK101
Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 963924 Lab Control Sample
 963925 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Prep Batch VXX20709
Method SW5030B
Date 05/28/2010

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Fuels Department</u> | | | | | | | | |
| Benzene | LCS | 102 | 102 | (80-120) | | | 100 ug/L | 05/28/2010 |
| | LCSD | 104 | 104 | | 2 | (< 20) | 100 ug/L | 05/28/2010 |
| Ethylbenzene | LCS | 105 | 105 | (87-125) | | | 100 ug/L | 05/28/2010 |
| | LCSD | 107 | 107 | | 2 | (< 20) | 100 ug/L | 05/28/2010 |
| o-Xylene | LCS | 99.0 | 99 | (85-120) | | | 100 ug/L | 05/28/2010 |
| | LCSD | 100 | 100 | | 1 | (< 20) | 100 ug/L | 05/28/2010 |
| P & M -Xylene | LCS | 205 | 103 | (87-125) | | | 200 ug/L | 05/28/2010 |
| | LCSD | 208 | 104 | | 1 | (< 20) | 200 ug/L | 05/28/2010 |
| Toluene | LCS | 101 | 101 | (80-120) | | | 100 ug/L | 05/28/2010 |
| | LCSD | 102 | 102 | | 2 | (< 20) | 100 ug/L | 05/28/2010 |
| Surrogates | | | | | | | | |
| 1,4-Difluorobenzene <surr> | LCS | | 101 | (80-120) | | | | 05/28/2010 |
| | LCSD | | 100 | | 1 | | | 05/28/2010 |

Batch VFC9954
Method SW8021B
Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 963926 Lab Control Sample
 963927 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 06/02/2010 13:51
Prep Batch VXX20709
Method SW5030B
Date 05/28/2010

QC results affect the following production samples:

1102294004, 1102294005, 1102294006, 1102294007, 1102294008, 1102294013

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Fuels Department

| | | | | | | | |
|-------------------------|------|-------|-----|------------|---|------------|-----------------------|
| Gasoline Range Organics | LCS | 0.230 | 115 | (60-120) | | 0.200 mg/L | 05/28/2010 |
| | LCSD | 0.226 | 113 | | 2 | (< 20) | 0.200 mg/L 05/28/2010 |

Surrogates

| | | | | | | | |
|-----------------------------|------|--|-----|------------|---|--|------------|
| 4-Bromofluorobenzene <surr> | LCS | | 114 | (50-150) | | | 05/28/2010 |
| | LCSD | | 115 | | 0 | | 05/28/2010 |

Batch VFC9954
Method AK101
Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 964317 Lab Control Sample
964318 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/02/2010 13:51
Prep Batch VXX20722
Method SW5030B
Date 06/01/2010

QC results affect the following production samples:
1102294011, 1102294012

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy



SGS Ref.# 964317 Lab Control Sample
 964318 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/02/2010 13:51
Prep Batch VXX20722
Method SW5030B
Date 06/01/2010

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | LCS | 34.6 | 115 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 31.8 | 106 | | 8 | (< 30) | 30 ug/L | 06/01/2010 |
| 1,1,1-Trichloroethane | LCS | 37.5 | 125 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 34.6 | 115 | | 8 | (< 30) | 30 ug/L | 06/01/2010 |
| 1,1,2,2-Tetrachloroethane | LCS | 28.8 | 96 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 30.9 | 103 | | 7 | (< 30) | 30 ug/L | 06/01/2010 |
| 1,1,2-Trichloroethane | LCS | 32.1 | 107 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 32.6 | 109 | | 2 | (< 30) | 30 ug/L | 06/01/2010 |
| 1,1-Dichloroethane | LCS | 36.1 | 120 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 33.9 | 113 | | 6 | (< 30) | 30 ug/L | 06/01/2010 |
| 1,1-Dichloroethene | LCS | 38.9 | 130 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 35.6 | 119 | | 9 | (< 30) | 30 ug/L | 06/01/2010 |
| 1,1-Dichloropropene | LCS | 37.6 | 125 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 35.1 | 117 | | 7 | (< 30) | 30 ug/L | 06/01/2010 |
| 1,2,3-Trichlorobenzene | LCS | 30.4 | 101 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 29.8 | 99 | | 2 | (< 30) | 30 ug/L | 06/01/2010 |
| 1,2,3-Trichloropropane | LCS | 30.7 | 102 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 30.4 | 101 | | 1 | (< 30) | 30 ug/L | 06/01/2010 |
| 1,2,4-Trichlorobenzene | LCS | 30.7 | 102 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 29.5 | 98 | | 4 | (< 30) | 30 ug/L | 06/01/2010 |
| 1,2,4-Trimethylbenzene | LCS | 29.2 | 97 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 30.3 | 101 | | 4 | (< 30) | 30 ug/L | 06/01/2010 |
| 1,2-Dibromo-3-chloropropane | LCS | 29.6 | 99 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 32.8 | 109 | | 11 | (< 30) | 30 ug/L | 06/01/2010 |
| 1,2-Dibromoethane | LCS | 33.9 | 113 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 32.2 | 107 | | 5 | (< 30) | 30 ug/L | 06/01/2010 |
| 1,2-Dichlorobenzene | LCS | 29.4 | 98 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 29.2 | 97 | | 1 | (< 30) | 30 ug/L | 06/01/2010 |



SGS Ref.# 964317 Lab Control Sample
 964318 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/02/2010 13:51
Prep Batch VXX20722
Method SW5030B
Date 06/01/2010

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| 1,2-Dichloroethane | LCS | 34.7 | 116 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 34.1 | 114 | | 2 | (< 30) | 30 ug/L | 06/01/2010 |
| 1,2-Dichloropropane | LCS | 33.5 | 112 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 34.3 | 114 | | 2 | (< 30) | 30 ug/L | 06/01/2010 |
| 1,3,5-Trimethylbenzene | LCS | 30.0 | 100 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 29.8 | 100 | | 1 | (< 30) | 30 ug/L | 06/01/2010 |
| 1,3-Dichlorobenzene | LCS | 30.1 | 100 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 30.0 | 100 | | 1 | (< 30) | 30 ug/L | 06/01/2010 |
| 1,3-Dichloropropane | LCS | 30.9 | 103 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 31.4 | 105 | | 2 | (< 30) | 30 ug/L | 06/01/2010 |
| 1,4-Dichlorobenzene | LCS | 30.4 | 101 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 29.7 | 99 | | 2 | (< 30) | 30 ug/L | 06/01/2010 |
| 2,2-Dichloropropane | LCS | 37.1 | 124 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 34.4 | 115 | | 8 | (< 30) | 30 ug/L | 06/01/2010 |
| 2-Chlorotoluene | LCS | 28.4 | 95 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 29.3 | 98 | | 3 | (< 30) | 30 ug/L | 06/01/2010 |
| 4-Chlorotoluene | LCS | 29.4 | 98 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 30.1 | 100 | | 3 | (< 30) | 30 ug/L | 06/01/2010 |
| 4-Isopropyltoluene | LCS | 30.3 | 101 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 30.4 | 101 | | 0 | (< 30) | 30 ug/L | 06/01/2010 |
| Benzene | LCS | 35.5 | 118 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 33.0 | 110 | | 7 | (< 30) | 30 ug/L | 06/01/2010 |
| Bromobenzene | LCS | 30.0 | 100 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 29.3 | 98 | | 2 | (< 30) | 30 ug/L | 06/01/2010 |
| Bromochloromethane | LCS | 37.2 | 124 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 33.4 | 111 | | 11 | (< 30) | 30 ug/L | 06/01/2010 |
| Bromodichloromethane | LCS | 35.3 | 118 | (70-130) | | | 30 ug/L | 06/01/2010 |



SGS Ref.# 964317 Lab Control Sample
 964318 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/02/2010 13:51
Prep
Batch VXX20722
Method SW5030B
Date 06/01/2010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------------|-----------|-----------------|------------|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | |
| | LCSD | 34.7 | 116 | 2 | (< 30) | 30 ug/L | 06/01/2010 |
| Bromoform | LCS | 35.1 | 117 | (70-130) | | 30 ug/L | 06/01/2010 |
| | LCSD | 32.5 | 108 | 8 | (< 30) | 30 ug/L | 06/01/2010 |
| Bromomethane | LCS | 32.8 | 109 | (70-130) | | 30 ug/L | 06/01/2010 |
| | LCSD | 37.1 | 124 | 12 | (< 30) | 30 ug/L | 06/01/2010 |
| Carbon tetrachloride | LCS | 40.0 | 133 * | (70-130) | | 30 ug/L | 06/01/2010 |
| | LCSD | 36.3 | 121 | 10 | (< 30) | 30 ug/L | 06/01/2010 |
| Chlorobenzene | LCS | 31.8 | 106 | (70-130) | | 30 ug/L | 06/01/2010 |
| | LCSD | 30.0 | 100 | 6 | (< 30) | 30 ug/L | 06/01/2010 |
| Chloroethane | LCS | 33.7 | 112 | (70-130) | | 30 ug/L | 06/01/2010 |
| | LCSD | 33.1 | 110 | 2 | (< 30) | 30 ug/L | 06/01/2010 |
| Chloroform | LCS | 35.6 | 119 | (70-130) | | 30 ug/L | 06/01/2010 |
| | LCSD | 33.1 | 110 | 7 | (< 30) | 30 ug/L | 06/01/2010 |
| Chloromethane | LCS | 35.6 | 119 | (70-130) | | 30 ug/L | 06/01/2010 |
| | LCSD | 35.5 | 118 | 0 | (< 30) | 30 ug/L | 06/01/2010 |
| cis-1,2-Dichloroethene | LCS | 33.4 | 111 | (70-130) | | 30 ug/L | 06/01/2010 |
| | LCSD | 31.0 | 103 | 8 | (< 30) | 30 ug/L | 06/01/2010 |
| cis-1,3-Dichloropropene | LCS | 34.6 | 115 | (70-130) | | 30 ug/L | 06/01/2010 |
| | LCSD | 33.6 | 112 | 3 | (< 30) | 30 ug/L | 06/01/2010 |
| Dibromochloromethane | LCS | 35.2 | 117 | (70-130) | | 30 ug/L | 06/01/2010 |
| | LCSD | 33.5 | 112 | 5 | (< 30) | 30 ug/L | 06/01/2010 |
| Dibromomethane | LCS | 32.9 | 110 | (70-130) | | 30 ug/L | 06/01/2010 |
| | LCSD | 33.4 | 111 | 2 | (< 30) | 30 ug/L | 06/01/2010 |
| Dichlorodifluoromethane | LCS | 41.9 | 140 * | (70-130) | | 30 ug/L | 06/01/2010 |
| | LCSD | 38.7 | 129 | 8 | (< 30) | 30 ug/L | 06/01/2010 |
| Ethylbenzene | LCS | 34.0 | 113 | (70-130) | | 30 ug/L | 06/01/2010 |
| | LCSD | 31.8 | 106 | 7 | (< 30) | 30 ug/L | 06/01/2010 |



SGS Ref.# 964317 Lab Control Sample
 964318 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/02/2010 13:51
Prep Batch VXX20722
Method SW5030B
Date 06/01/2010

| Parameter | | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|---|------|------------|-----------|-----------------|-----|------------|---------------|---------------|
| <u>Volatile Gas Chromatography/Mass Spectroscopy</u> | | | | | | | | |
| Hexachlorobutadiene | LCS | 29.9 | 100 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 28.3 | 95 | | 5 | (< 30) | 30 ug/L | 06/01/2010 |
| Isopropylbenzene (Cumene) | LCS | 33.2 | 111 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 30.1 | 100 | | 10 | (< 30) | 30 ug/L | 06/01/2010 |
| Methylene chloride | LCS | 37.4 | 125 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 34.6 | 115 | | 8 | (< 30) | 30 ug/L | 06/01/2010 |
| Methyl-t-butyl ether | LCS | 54.4 | 121 | (70-130) | | | 45 ug/L | 06/01/2010 |
| | LCSD | 51.4 | 114 | | 6 | (< 30) | 45 ug/L | 06/01/2010 |
| Naphthalene | LCS | 31.4 | 105 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 32.2 | 107 | | 3 | (< 30) | 30 ug/L | 06/01/2010 |
| n-Butylbenzene | LCS | 29.6 | 99 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 31.3 | 104 | | 5 | (< 30) | 30 ug/L | 06/01/2010 |
| n-Propylbenzene | LCS | 29.4 | 98 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 30.9 | 103 | | 5 | (< 30) | 30 ug/L | 06/01/2010 |
| o-Xylene | LCS | 33.0 | 110 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 30.1 | 100 | | 9 | (< 30) | 30 ug/L | 06/01/2010 |
| P & M -Xylene | LCS | 66.0 | 110 | (70-130) | | | 60 ug/L | 06/01/2010 |
| | LCSD | 60.1 | 100 | | 9 | (< 30) | 60 ug/L | 06/01/2010 |
| sec-Butylbenzene | LCS | 29.3 | 98 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 29.6 | 99 | | 1 | (< 30) | 30 ug/L | 06/01/2010 |
| Styrene | LCS | 33.2 | 111 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 30.5 | 102 | | 9 | (< 30) | 30 ug/L | 06/01/2010 |
| tert-Butylbenzene | LCS | 29.1 | 97 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 29.4 | 98 | | 1 | (< 30) | 30 ug/L | 06/01/2010 |
| Tetrachloroethene | LCS | 32.3 | 108 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 29.5 | 98 | | 9 | (< 30) | 30 ug/L | 06/01/2010 |
| Toluene | LCS | 31.9 | 106 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 30.3 | 101 | | 5 | (< 30) | 30 ug/L | 06/01/2010 |



SGS Ref.# 964317 Lab Control Sample
 964318 Lab Control Sample Duplicate
Client Name Shannon & Wilson, Inc.
Project Name/# 17349-2 Aniak GW
Matrix Drinking Water

Printed Date/Time 06/02/2010 13:51
Prep Batch VXX20722
Method SW5030B
Date 06/01/2010

| Parameter | QC Results | Pct Recov | LCS/LCSD Limits | RPD | RPD Limits | Spiked Amount | Analysis Date |
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|
|-----------|------------|-----------|-----------------|-----|------------|---------------|---------------|

Volatile Gas Chromatography/Mass Spectroscopy

| | | | | | | | | |
|---------------------------|------|------|-----|------------|---|---------|---------|------------|
| trans-1,2-Dichloroethene | LCS | 36.6 | 122 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 33.9 | 113 | | 8 | (< 30) | 30 ug/L | 06/01/2010 |
| trans-1,3-Dichloropropene | LCS | 29.2 | 98 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 29.6 | 99 | | 1 | (< 30) | 30 ug/L | 06/01/2010 |
| Trichloroethene | LCS | 34.0 | 113 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 32.6 | 109 | | 4 | (< 30) | 30 ug/L | 06/01/2010 |
| Trichlorofluoromethane | LCS | 35.6 | 119 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 33.1 | 110 | | 7 | (< 30) | 30 ug/L | 06/01/2010 |
| Vinyl chloride | LCS | 34.6 | 115 | (70-130) | | | 30 ug/L | 06/01/2010 |
| | LCSD | 33.6 | 112 | | 3 | (< 30) | 30 ug/L | 06/01/2010 |

Surrogates

| | | | | | | | | |
|------------------------------|------|--|-----|------------|---|--|--|------------|
| 1,2-Dichloroethane-D4 <surr> | LCS | | 102 | (70-130) | | | | 06/01/2010 |
| | LCSD | | 102 | | 1 | | | 06/01/2010 |
| 4-Bromofluorobenzene <surr> | LCS | | 94 | (70-130) | | | | 06/01/2010 |
| | LCSD | | 100 | | 7 | | | 06/01/2010 |
| Toluene-d8 <surr> | LCS | | 97 | (70-130) | | | | 06/01/2010 |
| | LCSD | | 95 | | 2 | | | 06/01/2010 |

Batch VMS11259
Method EPA 524.2
Instrument HP 5890 Series II MS1 VJA

1102294



CHAIN-OF-CUSTODY

SHANNON & WILSON, INC.
 Geotechnical and Environmental Consultants
 400 N. 34th Street, Suite 100
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 (206) 632-8020
 2355 Hill Road
 Fairbanks, AK 99709
 (907) 479-0600
 1200 17th Street, Suite 1024
 Portland, OR 97201-2498
 (503) 223-6147

303 Weilsian Way
 Richland, WA 99352
 (509) 946-6309

Page 1 of 2
 Laboratory SGS
 Attn: Jeanette Serna

Analysis Parameters/Sample Container Description

(include preservative if used)

| Sample Identity | Lab No. | Time | Date Sampled | Total Number of Containers | | | | | | Remarks/Matrix |
|-----------------|-------------|------|--------------|----------------------------|-------------|-------|--------|-----|-------|------------------|
| | | | | Comp. | VOC EPA 524 | AK101 | EM 561 | DIC | AK102 | |
| 32-1-F349-DW11 | ① A-C | | 5/29/10 | X | X | | | | | Water |
| " -DW12 | ② ↓ | | | X | X | | | | | |
| " -DW13 | ③ ↓ | | | X | X | | | | | |
| " -PL-MW-9 | ④ A-E | | | X | X | X | X | X | | |
| " -PL-MW-12 | ⑤ ↓ | | | X | X | X | X | X | | |
| " -AST-MW-5 | ⑥ ↓ | | | X | X | X | X | X | | |
| " -AST-MW-1 | ⑦ ↓ | | | X | X | X | X | X | | |
| " -AST-MW-4 | ⑧ ↓ | | | X | X | X | X | X | | |
| -DW14 | ⑨ A-C | | | X | X | | | | | |
| -WTB2 | ⑩ WA-E 1007 | | 5/21/10 | X | X | | | | | Water trip blank |

| Project Information | Sample Receipt | Relinquished By: 1. | Relinquished By: 2. | Relinquished By: 3. |
|--|--------------------------------|--------------------------------------|----------------------------------|--|
| Project Number: 17349-2 | Total Number of Containers | Signature: <u>Jeanette Serna</u> | Signature: _____ | Signature: _____ |
| Project Name: <u>Aniak GW</u> | COC Seals/Intact? Y/N/NA | Printed Name: <u>Jeanette Serna</u> | Printed Name: _____ | Printed Name: _____ |
| Contact: <u>JEB</u> | Received Good Cond./Cold | Date: <u>5/22/10</u> | Date: _____ | Date: _____ |
| Ongoing Project? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Delivery Method: | Company: <u>Shannon & Wilson</u> | Company: _____ | Company: _____ |
| Sampler: <u>JG</u> | (attach shipping bill, if any) | Received By: 1. Signature: _____ | Received By: 2. Signature: _____ | Received By: 3. Signature: <u>Jeanette Serna</u> |
| Requested Turnaround Time: | | Printed Name: _____ | Printed Name: _____ | Printed Name: <u>AMY ARNO</u> |
| Special Instructions: <u>LII deliverables</u> | | Company: _____ | Company: _____ | Company: <u>SGS</u> |

Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
 Yellow - w/shipment - for consignee files
 Pink - Shannon & Wilson - Job File

| WO# (7 digits) | Sample # | Sample # | Container ID | Container ID | Matrix | QC | Preservative (CHECKED) | TEST GROUP | PRINT LABELS | Notes: ANOMALIES - e.g., preservative added or SPECIAL HANDLING - e.g., Multi-Incremental (MI), Field Filter (FF), Lab Filter (LF), use "same jar as" (SJA) for QC, 2xMeOH, bubbles, etc. |
|----------------|----------|----------|--------------|--------------|------------|------------|------------------------|------------|--------------|--|
| | | | | | | | | | | Type comments below: |
| SAMPLE ID | | | TYPE | | CONTAINERS | | ANALYSIS | | | |
| 1102294 | 001 | 003 | A | C | 1 Water | | HCl * VOA or LL-Hg * | W_VOA/GRO | | |
| 1102294 | 004 | 008 | A | C | 1 Water | | HCl * VOA or LL-Hg * | W_VOA/GRO | | |
| 1102294 | 004 | 008 | D | E | 1 Water | | HCl (pH <2) | W_DRO_1L | | |
| 1102294 | 009 | 011 | A | C | 1 Water | | HCl * VOA or LL-Hg * | W_VOA/GRO | | |
| 1102294 | 012 | 012 | A | C | 1 Water | Trip Blank | HCl * VOA or LL-Hg * | W_VOA/GRO | | |
| 1102294 | 013 | 013 | A | C | 1 Water | Trip Blank | HCl * VOA or LL-Hg * | W_VOA/GRO | | GRO |

LABORATORY DATA REVIEW CHECKLIST

CS Report Name: ADOT Aniak Groundwater Study

Date: December 2010

Laboratory Report Date: 6/2/2010

Consultant Firm: Shannon & Wilson, Inc.

Completed by: Jake Gano

Title: Environmental Engineer

Laboratory Name: SGS Environmental Services, Inc.

Work Order Number: 1102294

1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses? **Yes** / No

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?

NA / Yes / No

Comments:

2. Chain of Custody (COC)

- a. COC information completed, signed, and dated (including released/received by)?

Yes / No

Comments:

- b. Correct analyses requested? **Yes** / No

Comments:

3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ}\text{C}$)?

Yes / No

Comments:

- b. Sample preservation acceptable - acidified waters, Methanol-preserved VOC soil (GRO, BTEX, VOCs, etc.)? NA / **Yes** / No

Comments:

- c. Sample condition documented - broken, leaking (soil MeOH), zero headspace (VOC vials)? **Yes** / No

Comments:

- d. If there were any discrepancies, were they documented (e.g., incorrect sample containers/preservation, sample temperatures outside range, insufficient sample size, missing samples)? *NA* / **Yes** / No

Comments: One from sample jar (AST-MW-1) was empty. The water trip blank had bubbles in the headspace.

- e. Data quality or usability affected? Explain.

Comments: There were still enough containers to analyze sample AST-MW-1. Air in the water trip blanks could potentially bias any results low.

4. Case Narrative

- a. Present and understandable? **Yes** / No

Comments:

- b. Discrepancies, errors or QC failures noted by the lab? *None Noted* / **Yes**

Comments:

Surrogate failures were noted in two project samples for AK 101 due to matrix interference (biased high)

LCS recovery for dichlorodifluoromethane, carbon tetrachloride, and chloromethane by EPA 54.2 does not meet QC criteria (biased high)

LCSD recovery for chloromethane by EPA 54.2 does not meet QC criteria (biased high)

CCV recovery for several VOC analytes by EPA 524.2 and EPA 8260B does not meet QC criteria (biased high). The analytes were not detected above the LOQ in the associated project samples.

- c. Were corrective actions documented? *None Noted* / **Yes**

Comments:

- d. What is the affect on data quality/usability, according to the case narrative?

Comments: Case narrative does not comment on data quality or usability.

5. Sample Results

- a. Correct analyses performed/reported as requested on COC? **Yes** / No

Comments:

- b. All applicable holding times met? **Yes** / No

Comments:

- c. All soils reported on a dry-weight basis? *NA* / Yes / No

Comments:

- d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project? **Yes** **No**
Comments: The limits of quantitation (LQOs) for 1,2-dibromoethane (EDB) exceeds the ADEC Table C cleanup criteria in all of the water samples and associated trip blanks. However, the detection limits are below the ADEC cleanup level.
- e. Data quality or usability affected? Explain. **NA**
Comments:

6. QC Samples

a. Method Blank

- i. One method blank reported per matrix, analysis, and 20 samples?
Yes / No
Comments:
- ii. All method blank results less than PQL? **Yes** / No
Comments:
- iii. If above PQL, what samples are affected? **NA**
Comments:
- iv. Do the affected sample(s) have data flags? **NA** / Yes / No
Comments:
- If so, are the data flags clearly defined? **NA** / Yes / No
Comments:
- v. Data quality or usability affected? Explain.
Comments:

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) **N/A** / **Yes** / No
Comments:
- ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples? **N/A** / Yes / No
Comments:

- 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**

Comments: LCS recovery for dichlorodifluoromethane, carbon tetrachloride, and chloromethane by EPA 54.2 does not meet QC criteria (biased high)
LCSD recovery for chloromethane by EPA 54.2 does not meet QC criteria (biased high)

- iv. 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

Comments:

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

Comments:

LCS/LCSD failure for chloromethane affects Samples DW11, DW12, DW13, DW14, and DW2(2)

LCS failure for dichlorodifluoromethane and carbon tetrachloride affects Samples DW15 and WTB2.

- vi. Do the affected samples(s) have data flags? NA / Yes **No**

Comments:

If so, are the data flags clearly defined? **NA** / Yes / No

Comments:

- vii. Data quality or usability affected? Explain.

Comments: The analytes with failed LCS/LCSD recoveries were not detected greater than the LOQ in associated samples. Therefore, the quality or usability of the data is not affected.

c. Surrogates - Organics Only

- i. Are surrogate recoveries reported for organic analyses, field, QC and laboratory samples? NA / **Yes** / No

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) NA / Yes **No**

Comments: Surrogate recovery for BFB for AK101 for PL-MW-9 and PL-MW-12 were biased high due to matrix interference.

- iii. Do the sample results with failed surrogate recoveries have data flags? *NA* / **Yes** / **No**
Comments: Results are not flagged in lab report, but is flagged in Shannon & Wilson's report tables.

If so, are the data flags clearly defined? **NA** / **Yes** / **No**
Comments:

- iv. Data quality or usability affected? Explain.
Comments: Results are flagged as estimates in report tables.

d. Trip Blank - Volatile analyses only (GRO, BTEX, VOCs, etc.) [soil and water]

- i. One trip blank reported per matrix, analysis and cooler? *NA* / **Yes** / **No**
Comments:

- ii. Is the cooler used to transport the trip blank and volatile samples clearly indicated on the COC? **NA** / **Yes** / **No** (if no explain): Only one cooler used to transport project samples

- iii. All results less than PQL? *NA* / **Yes** / **No**
Comments:

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

- v. Data quality or usability affected? Explain.
Comments: Air bubbles were noted in the water trip blank. Therefore, the results of the water trip blank may be biased low. However, the associated project sample results were either non-detect or less than the ADEC cleanup level for the corresponding volatile organic compounds, indicating that cross contamination has not affected the samples. Therefore the results of the corresponding project samples are considered usable.

e. **Field Duplicate**

- i. One field duplicate submitted per matrix, analysis and 10 project samples?
Yes / **No**
Comments:

- ii. Were the field duplicates submitted blind to the lab? *NA* / **Yes** / **No**
Comments:

iii. Precision – All relative percent differences (RPDs) less than specified DQOs?
(Recommended: 30% for water, 50% for soil) *NA* / **Yes** / **No**
Comments: For detected analytes, RPDs ranged from 4.2 percent (ethylbenzene) to 18 percent (DRO).

iv. Data quality or usability affected? Explain. *NA*
Comments:

f. **Decontamination or Equipment Blank** (if not applicable, a comment stating why must be entered below)

i. All results less than PQL? *NA* / **Yes** / **No**
Comments: No decontamination or equipment blank sample collected due to limited scope of sampling.

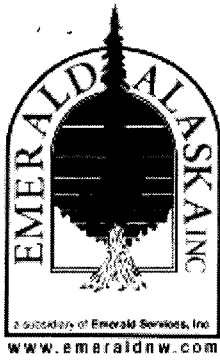
ii. If results are above PQL, what samples are affected? *NA*
Comments:

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? *NA* / **Yes** / **No**
Comments:

APPENDIX D
COPY OF IDW DISPOSAL RECEIPT
FROM EMERALD ALASKA INC.



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 #: 11687
DATE OF DISPOSAL/RECYCLE: 06/03/2010

| <u>LINE</u> | <u>WASTE DESCRIPTION</u> | <u>CONTAINERS</u> | <u>TYPE</u> | <u>QUANTITY</u> | <u>UOM</u> |
|-------------|--------------------------|-------------------|-------------|-----------------|------------|
| 1 | GROUNDWATER / IDW WATER | 1 | DM55 | 225 | 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: OTHO STICE

SIGNATURE: _____

DATE: 6/4/2010

Your Local Partner for Recycling Environmental Services

425 Outer Springer Loop Road - Palmer, AK 99645 - (907) 258-1558 - Fax (907) 746-3651 - Toll Free (877) 375-504

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. 1 1 6 8 7 | 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 555 CORDOVA STREET (G. LIDREN) ANCHORAGE, AK 99501 | | GROUNDWATER | |
| 4. Generator's Phone ((907) 561-2120) | | 6. US EPA ID Number A K R 0 0 0 2 0 0 2 9 5 | | A. State Transporter's ID | |
| 5. Transporter 1 Company Name ACE AIR CARGO | | 8. US EPA ID Number W A D 0 5 8 3 6 4 6 4 7 | | B. Transporter 1 Phone (907) 334-5100 | |
| 7. Transporter 2 Company Name EMERALD SERVICES, INC. | | 10. US EPA ID Number A K R 0 0 0 0 0 4 1 8 4 | | C. State Transporter's ID | |
| 9. Designated Facility Name and Site Address EMERALD ALASKA, INC. 2020 VIKING DRIVE ANCHORAGE, AK 99501 | | | | D. Transporter 2 Phone (206) 832-3000 | |
| | | | | E. State Facility's ID | |
| | | | | F. Facility's Phone (907) 258-1558 | |
| 11. WASTE DESCRIPTION | | | 12. Containers | 13. Total Quantity | 14. Unit Wt./Vol. |
| a. MATERIAL NOT REGULATED BY D.O.T. | | | No. 1 | Type DM | 225 |
| b. | | | | | P |
| c. | | | | | |
| d. | | | | | |
| G. Additional Descriptions of Materials Listed Above 1) AK02906 GROUNDWATER / IDW WATER | | | H. Handling Codes for Wastes Listed Above | | |
| 15. Special Handling Instructions and Additional Information | | | | | |
| 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 X | | | Signature X | | Date Month Day Year X |
| 17. Transporter 1 Acknowledgement of Receipt of Materials | | | Signature | | Date |
| Printed/Typed Name | | | Signature | | Month Day Year |
| 18. Transporter 2 Acknowledgement of Receipt of Materials | | | Signature | | Date |
| Printed/Typed Name Thomas Irinski | | | Signature <i>[Signature]</i> | | Month Day Year 6 2 10 |
| 19. Discrepancy Indication Space Generator signature on attached copy of #1 Transporter signature on attached copy of #1 | | | | | |
| 20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. | | | Signature <i>[Signature]</i> | | Date |
| Printed/Typed Name Otho R Stice | | | Signature | | Month Day Year 06 04 10 |

NON-HAZARDOUS WASTE

GENERATOR

TRANSPORTER

FACILITY

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. CESQG | Manifest Document No. 11687 | 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 | | |
| 4. Generator's Phone (907) 561-2120 | | 6. US EPA ID Number AKR000200295 | A. State Transporter's ID | |
| 5. Transporter 1 Company Name ACE AIR CARGO | | 8. US EPA ID Number WAD058364647 | B. Transporter 1 Phone (907) 334-5100 | |
| 7. Transporter 2 Company Name EMERALD SERVICES, INC | | 10. US EPA ID Number AKR000004184 | C. State Transporter's ID | |
| 9. Designated Facility Name and Site Address EMERALD ALASKA, INC. 2020 VIKING DRIVE ANCHORAGE, AK 99501 | | D. Transporter 2 Phone (206) 832-3000 | | |
| | | E. State Facility's ID | | |
| | | F. Facility's Phone (907) 258-1558 | | |
| 11. WASTE DESCRIPTION | | Containers No. | Type | 13. Total Quantity |
| a. MATERIAL NOT REGULATED BY D.O.T. | | 1 | DM | 225 |
| b. | | | | |
| c. | | | | |
| d. | | | | |
| G. Additional Descriptions for Materials Listed Above AK02906 GROUNDWATER / IDW WATER | | H. Handling Codes for Wastes Listed Above | | |
| 15. Special Handling Instructions and Additional Information | | | | |
| 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 William O'Connell | | Signature <i>[Signature]</i> | | Date Month Day Year 5 21 10 |
| 17. Transporter 1 Acknowledgement of Receipt of Materials | | | | |
| Printed/Typed Name Jon L. Ward | | Signature <i>[Signature]</i> | | Date Month Day Year 5 22 10 |
| 18. Transporter 2 Acknowledgement of Receipt of Materials | | | | |
| Printed/Typed Name | | Signature | | Date Month Day Year |
| 19. Discrepancy Indication Space | | | | |
| 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 |

NON-HAZARDOUS WASTE GENERATOR

TRANSPORTER

FACILITY

APPENDIX E

HUMAN HEALTH CONCEPTUAL SITE MODEL

GRAPHIC AND SCOPING FORMS

Runway Apron Wells
Former MarkAir Site
Aniak City Shop
ADOT&PF Aniak Maintenance Station

Runway Apron Wells

HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Site: ADOT&PF Aniak Runway Apron
ADEC File No. 2404.38.006

Completed By: Jake Gano

Date Completed: November 23, 2010

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.

| Media | Transport Mechanisms |
|---|---|
| <input checked="" type="checkbox"/> Surface | <input checked="" type="checkbox"/> Direct release to surface soil <input type="checkbox"/> check soil <input checked="" type="checkbox"/> Migration to subsurface <input type="checkbox"/> check soil <input checked="" type="checkbox"/> Migration to groundwater <input type="checkbox"/> check groundwater <input checked="" type="checkbox"/> Volatilization <input type="checkbox"/> check air <input checked="" type="checkbox"/> Runoff or erosion <input type="checkbox"/> check surface water <input checked="" type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____ |
| <input checked="" type="checkbox"/> Soil (0-2 ft bgs) | <input checked="" type="checkbox"/> Direct release to subsurface soil <input type="checkbox"/> check soil <input checked="" type="checkbox"/> Migration to groundwater <input type="checkbox"/> check groundwater <input checked="" type="checkbox"/> Volatilization <input type="checkbox"/> check air <input checked="" type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____ |
| <input checked="" type="checkbox"/> Groundwater | <input type="checkbox"/> Direct release to groundwater <input type="checkbox"/> check groundwater <input checked="" type="checkbox"/> Volatilization <input type="checkbox"/> check air <input type="checkbox"/> Flow to surface water body <input type="checkbox"/> check surface water <input type="checkbox"/> Flow to sediment <input type="checkbox"/> check sediment <input type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____ |
| <input type="checkbox"/> Surface Water | <input type="checkbox"/> Direct release to surface water <input type="checkbox"/> check surface water <input type="checkbox"/> Volatilization <input type="checkbox"/> check air <input type="checkbox"/> Sedimentation <input type="checkbox"/> check sediment <input type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____ |
| <input type="checkbox"/> Sediment | <input type="checkbox"/> Direct release to sediment <input type="checkbox"/> check sediment <input type="checkbox"/> Resuspension, runoff, or erosion <input type="checkbox"/> check surface water <input type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____ |

(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

| Exposure Media | Exposure Pathway/Route | Residents (adults or children) | Commercial or Industrial workers | Site visitors, trespassers, or recreational users | Construction workers | Farmers or substance harvesters | Subsistence consumers | Other |
|---|--|--------------------------------|----------------------------------|---|----------------------|---------------------------------|-----------------------|-------|
| <input checked="" type="checkbox"/> soil | <input checked="" type="checkbox"/> Incidental Soil Ingestion | F | C/F | C/F | F | | | |
| | <input type="checkbox"/> Dermal Absorption of Contaminants from Soil | | | | | | | |
| | <input checked="" type="checkbox"/> Inhalation of Fugitive Dust | F | C/F | C/F | F | | | |
| <input checked="" type="checkbox"/> groundwater | <input checked="" type="checkbox"/> Ingestion of Groundwater | F | F | F | F | | | |
| | <input checked="" type="checkbox"/> Dermal Absorption of Contaminants in Groundwater | F | F | F | F | | | |
| | <input checked="" type="checkbox"/> Inhalation of Volatile Compounds in Tap Water | F | F | F | F | | | |
| <input checked="" type="checkbox"/> air | <input checked="" type="checkbox"/> Inhalation of Outdoor Air | F | C/F | C/F | F | | | |
| | <input checked="" type="checkbox"/> Inhalation of Indoor Air | F | F | F | F | | | |
| | <input checked="" type="checkbox"/> Inhalation of Fugitive Dust | F | C/F | C/F | F | | | |
| <input checked="" type="checkbox"/> surface water | <input type="checkbox"/> Ingestion of Surface Water | | | | | | | |
| | <input type="checkbox"/> Dermal Absorption of Contaminants in Surface Water | | | | | | | |
| | <input type="checkbox"/> Inhalation of Volatile Compounds in Tap Water | | | | | | | |
| <input type="checkbox"/> sediment | <input type="checkbox"/> Direct Contact with Sediment | | | | | | | |
| <input checked="" type="checkbox"/> biota | <input type="checkbox"/> Ingestion of Wild or Farmed Foods | | | | | | | |

Human Health Conceptual Site Model Scoping Form

Site Name:

File Number:

Completed by:

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)*

- | | |
|--|--|
| <input type="checkbox"/> USTs | <input checked="" type="checkbox"/> Vehicles |
| <input checked="" type="checkbox"/> ASTs | <input type="checkbox"/> Landfills |
| <input type="checkbox"/> Dispensers/fuel loading racks | <input checked="" type="checkbox"/> Transformers |
| <input checked="" type="checkbox"/> Drums | <input checked="" type="checkbox"/> Other: <input type="text" value="Dump/disposal area"/> |

Release Mechanisms *(check potential release mechanisms at the site)*

- | | |
|--|--|
| <input checked="" type="checkbox"/> Spills | <input checked="" type="checkbox"/> Direct discharge |
| <input checked="" type="checkbox"/> Leaks | <input type="checkbox"/> Burning |
| | <input type="checkbox"/> Other: <input type="text"/> |

Impacted Media *(check potentially-impacted media at the site)*

- | | |
|---|--|
| <input checked="" type="checkbox"/> Surface soil (0-2 feet bgs*) | <input checked="" type="checkbox"/> Groundwater |
| <input checked="" type="checkbox"/> Subsurface soil (>2 feet bgs) | <input type="checkbox"/> Surface water |
| <input checked="" type="checkbox"/> Air | <input checked="" type="checkbox"/> Biota |
| <input type="checkbox"/> Sediment | <input type="checkbox"/> Other: <input type="text"/> |

Receptors *(check receptors that could be affected by contamination at the site)*

- | | |
|--|---|
| <input checked="" type="checkbox"/> Residents (adult or child) | <input checked="" type="checkbox"/> Site visitor |
| <input checked="" type="checkbox"/> Commercial or industrial worker | <input checked="" type="checkbox"/> Trespasser |
| <input checked="" type="checkbox"/> Construction worker | <input type="checkbox"/> Recreational user |
| <input type="checkbox"/> Subsistence harvester (i.e. gathers wild foods) | <input type="checkbox"/> Farmer |
| <input type="checkbox"/> Subsistence consumer (i.e. eats wild foods) | <input type="checkbox"/> Other: <input type="text" value="Future residents or construction workers"/> |

* 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:

In 1998, one soil sample collected from 0.5 feet bgs contained 14,600 mg/kg DRO. 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:

Incomplete

Comments:

DRO, RRO, BTEX, and TCE have been detected 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 groundwater 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:

A drinking water well is present on site, but is reportedly not in use.

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:

Of the known contaminants at the site (DRO, RRO, BTEX, and TCE), none are listed in Appendix C. Because this site is located within the fenced runway apron, access is restricted to both wild game and hunters. However, future land use is uncertain.

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 contaminated 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 - PM₁₀). 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:

Contaminated soil has been identified in surface soils at the site. In 1998, one soil sample collected from 0.5 feet bgs contained 14,600 mg/kg DRO. Further evaluation of this pathway is needed.

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.)*

Former MarkAir Site

HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Site: ADOT&PF Aniak Former MarkAir Site
ADEC File No. 2404.38.010

Completed By: Jake Gano

Date Completed: November 29, 2010

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.

| Media | Transport Mechanisms |
|--|---|
| <input checked="" type="checkbox"/> Surface <input checked="" type="checkbox"/> Soil (0-2 ft bgs) | <input checked="" type="checkbox"/> Direct release to surface soil <i>check soil</i> <input checked="" type="checkbox"/> Migration to subsurface <i>check soil</i> <input checked="" type="checkbox"/> Migration to groundwater <i>check groundwater</i> <input checked="" type="checkbox"/> Volatilization <i>check air</i> <input checked="" type="checkbox"/> Runoff or erosion <i>check surface water</i> <input checked="" type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list): _____ |
| <input checked="" type="checkbox"/> Subsurface Soil (2-15 ft bgs) | <input checked="" type="checkbox"/> Direct release to subsurface soil <i>check soil</i> <input checked="" type="checkbox"/> Migration to groundwater <i>check groundwater</i> <input checked="" type="checkbox"/> Volatilization <i>check air</i> <input checked="" type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list): _____ |
| <input checked="" type="checkbox"/> Groundwater | <input type="checkbox"/> Direct release to groundwater <i>check groundwater</i> <input checked="" type="checkbox"/> Volatilization <i>check air</i> <input type="checkbox"/> Flow to surface water body <i>check surface water</i> <input type="checkbox"/> Flow to sediment <i>check sediment</i> <input type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list): _____ |
| <input type="checkbox"/> Surface Water | <input type="checkbox"/> Direct release to surface water <i>check surface water</i> <input type="checkbox"/> Volatilization <i>check air</i> <input type="checkbox"/> Sedimentation <i>check sediment</i> <input type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list): _____ |
| <input type="checkbox"/> Sediment | <input type="checkbox"/> Direct release to sediment <i>check sediment</i> <input type="checkbox"/> Resuspension, runoff, or erosion <i>check surface water</i> <input type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list): _____ |

(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

| Exposure Media | Exposure Pathway/Route | Residents (adults or children) | Commercial or Industrial workers | Site visitors, trespassers, or recreational users | Construction workers | Farmers or substance harvesters | Subsistence consumers | Other |
|---|--|--------------------------------|----------------------------------|---|----------------------|---------------------------------|-----------------------|-------|
| <input checked="" type="checkbox"/> soil | <input checked="" type="checkbox"/> Incidental Soil Ingestion | F | C/F | C/F | F | | | |
| | <input type="checkbox"/> Dermal Absorption of Contaminants from Soil | | | | | | | |
| | <input checked="" type="checkbox"/> Inhalation of Fugitive Dust | F | C/F | C/F | F | | | |
| <input checked="" type="checkbox"/> groundwater | <input checked="" type="checkbox"/> Ingestion of Groundwater | F | F | F | F | | | |
| | <input checked="" type="checkbox"/> Dermal Absorption of Contaminants in Groundwater | F | F | F | F | | | |
| | <input checked="" type="checkbox"/> Inhalation of Volatile Compounds in Tap Water | F | F | F | F | | | |
| <input checked="" type="checkbox"/> air | <input checked="" type="checkbox"/> Inhalation of Outdoor Air | F | C/F | C/F | F | | | |
| | <input checked="" type="checkbox"/> Inhalation of Indoor Air | F | C/F | C/F | F | | | |
| | <input checked="" type="checkbox"/> Inhalation of Fugitive Dust | F | C/F | C/F | F | | | |
| <input checked="" type="checkbox"/> surface water | <input type="checkbox"/> Ingestion of Surface Water | | | | | | | |
| | <input type="checkbox"/> Dermal Absorption of Contaminants in Surface Water | | | | | | | |
| | <input type="checkbox"/> Inhalation of Volatile Compounds in Tap Water | | | | | | | |
| <input type="checkbox"/> sediment | <input type="checkbox"/> Direct Contact with Sediment | | | | | | | |
| <input checked="" type="checkbox"/> biota | <input type="checkbox"/> Ingestion of Wild or Farmed Foods | | | | | | | |

Human Health Conceptual Site Model Scoping Form

Site Name: ADOT&PF Aniak Former MarkAir Site

File Number: 2404.38.010

Completed by: Jake Gano, Environmental Engineer, 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, and BTEX contaminated soil has been encountered at the site. Soil samples collected from the excavation base during the 2001 removal action contained up to 16,700 mg/kg DRO, 4,310 mg/kg GRO, 1.29 mg/kg benzene, and 9.04 mg/kg toluene.

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:

Incomplete

Comments:

GRO, DRO, RRO, and BTEX are not included 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 groundwater 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, 2010 groundwater samples were non-detect for GRO, DRO and BTEX. Drinking water wells are not present at the site, but one well is located on an adjacent property. Drinking water sample collected from that well 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:

The known contaminants at the site (GRO, DRO, and BTEX) are not listed in Appendix C, and the property is located at the airport.

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 contaminated 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. GRO, DRO and BTEX contaminated soil samples were collected from within 30 feet of the building in 2002. 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:

Considered a potentially complete pathway; further evaluation of this pathway may be need if land use changes.

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. There is not drinking water well on-site. A sample from the drinking water well at the adjacent building was non-detect for VOCs in 2010. This pathway is considered potentially complete; changes in land use may require additional evaluation.

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 - PM₁₀). 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:

Respirable particles may be present at this site. DRO contamination has been identified in near-surface soil samples collected in 2002.

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.)*

Aniak City Shop

HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Site: ADOT&PF Aniak City Shop
ADEC File No. 2404.38.004

Completed By: Jake Gano

Date Completed: November 24, 2010

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.

| Media | Transport Mechanisms |
|--|---|
| <input checked="" type="checkbox"/> Surface <input checked="" type="checkbox"/> Soil (0-2 ft bgs) | <input checked="" type="checkbox"/> Direct release to surface soil <i>check soil</i> <input checked="" type="checkbox"/> Migration to subsurface <i>check soil</i> <input checked="" type="checkbox"/> Migration to groundwater <i>check groundwater</i> <input checked="" type="checkbox"/> Volatilization <i>check air</i> <input checked="" type="checkbox"/> Runoff or erosion <i>check surface water</i> <input checked="" type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list): _____ |
| <input checked="" type="checkbox"/> Subsurface Soil (2-15 ft bgs) | <input checked="" type="checkbox"/> Direct release to subsurface soil <i>check soil</i> <input checked="" type="checkbox"/> Migration to groundwater <i>check groundwater</i> <input checked="" type="checkbox"/> Volatilization <i>check air</i> <input checked="" type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list): _____ |
| <input checked="" type="checkbox"/> Ground-water | <input type="checkbox"/> Direct release to groundwater <i>check groundwater</i> <input checked="" type="checkbox"/> Volatilization <i>check air</i> <input type="checkbox"/> Flow to surface water body <i>check surface water</i> <input type="checkbox"/> Flow to sediment <i>check sediment</i> <input type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list): _____ |
| <input type="checkbox"/> Surface Water | <input type="checkbox"/> Direct release to surface water <i>check surface water</i> <input type="checkbox"/> Volatilization <i>check air</i> <input type="checkbox"/> Sedimentation <i>check sediment</i> <input type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list): _____ |
| <input type="checkbox"/> Sediment | <input type="checkbox"/> Direct release to sediment <i>check sediment</i> <input type="checkbox"/> Resuspension, runoff, or erosion <i>check surface water</i> <input type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list): _____ |

(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

| Exposure Media | Exposure Pathway/Route | Residents (adults or children) | Commercial or Industrial workers | Site visitors, trespassers, or recreational users | Construction workers | Farmers or substance harvesters | Subsistence consumers | Other |
|---|--|--------------------------------|----------------------------------|---|----------------------|---------------------------------|-----------------------|-------|
| <input checked="" type="checkbox"/> soil | <input checked="" type="checkbox"/> Incidental Soil Ingestion | F | C/F | C/F | F | | | |
| | <input type="checkbox"/> Dermal Absorption of Contaminants from Soil | | | | | | | |
| | <input checked="" type="checkbox"/> Inhalation of Fugitive Dust | F | C/F | C/F | F | | | |
| <input checked="" type="checkbox"/> groundwater | <input checked="" type="checkbox"/> Ingestion of Groundwater | F | C/F | C/F | F | | | |
| | <input checked="" type="checkbox"/> Dermal Absorption of Contaminants in Groundwater | F | C/F | C/F | F | | | |
| | <input checked="" type="checkbox"/> Inhalation of Volatile Compounds in Tap Water | F | C/F | C/F | F | | | |
| <input checked="" type="checkbox"/> air | <input checked="" type="checkbox"/> Inhalation of Outdoor Air | F | C/F | C/F | F | | | |
| | <input checked="" type="checkbox"/> Inhalation of Indoor Air | F | F | F | F | | | |
| | <input checked="" type="checkbox"/> Inhalation of Fugitive Dust | F | C/F | C/F | F | | | |
| <input checked="" type="checkbox"/> surface water | <input type="checkbox"/> Ingestion of Surface Water | | | | | | | |
| | <input type="checkbox"/> Dermal Absorption of Contaminants in Surface Water | | | | | | | |
| | <input type="checkbox"/> Inhalation of Volatile Compounds in Tap Water | | | | | | | |
| <input type="checkbox"/> sediment | <input type="checkbox"/> Direct Contact with Sediment | | | | | | | |
| | <input type="checkbox"/> Ingestion of Wild or Farmed Foods | | | | | | | |

Human Health Conceptual Site Model Scoping Form

Site Name:

File Number:

Completed by:

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)*

- | | |
|---|---|
| <input type="checkbox"/> USTs | <input checked="" type="checkbox"/> Vehicles |
| <input checked="" type="checkbox"/> ASTs | <input type="checkbox"/> Landfills |
| <input checked="" type="checkbox"/> Dispensers/fuel loading racks | <input type="checkbox"/> Transformers |
| <input checked="" type="checkbox"/> Drums | <input checked="" type="checkbox"/> Other: <input type="text" value="Batteries"/> |

Release Mechanisms *(check potential release mechanisms at the site)*

- | | |
|--|--|
| <input checked="" type="checkbox"/> Spills | <input type="checkbox"/> Direct discharge |
| <input checked="" type="checkbox"/> Leaks | <input type="checkbox"/> Burning |
| | <input type="checkbox"/> Other: <input type="text"/> |

Impacted Media *(check potentially-impacted media at the site)*

- | | |
|---|--|
| <input checked="" type="checkbox"/> Surface soil (0-2 feet bgs*) | <input checked="" type="checkbox"/> Groundwater |
| <input checked="" type="checkbox"/> Subsurface soil (>2 feet bgs) | <input type="checkbox"/> Surface water |
| <input checked="" type="checkbox"/> Air | <input checked="" type="checkbox"/> Biota |
| <input type="checkbox"/> Sediment | <input type="checkbox"/> Other: <input type="text"/> |

Receptors *(check receptors that could be affected by contamination at the site)*

- | | |
|--|--|
| <input type="checkbox"/> Residents (adult or child) | <input checked="" type="checkbox"/> Site visitor |
| <input checked="" type="checkbox"/> Commercial or industrial worker | <input checked="" type="checkbox"/> Trespasser |
| <input checked="" type="checkbox"/> Construction worker | <input type="checkbox"/> Recreational user |
| <input type="checkbox"/> Subsistence harvester (i.e. gathers wild foods) | <input type="checkbox"/> Farmer |
| <input type="checkbox"/> Subsistence consumer (i.e. eats wild foods) | <input type="checkbox"/> Other: <input type="text"/> |

* 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:

DRO and RRO contamination was encountered in surface soil samples collected in 2003. One soil sample collected from 0.5 feet bgs contained 7,410 mg/kg DRO and 23,500 mg/kg RRO.

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:

Incomplete

Comments:

DRO and RRO included 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 groundwater 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:

Contamination has not been detected in previous water samples. The conditional closure ROD stipulates that additional groundwater sampling will be conducted at the site in accordance with an "ADEC monitor plan." However, no specific plan is described. Because there is a possibility of surface contamination migrating to groundwater, this may be a future complete pathway.

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 known contaminants at the site (DRO and RRO) are not listed in Appendix C.

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 and RRO have been detected in surface soil samples collected in 2003.

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 contaminated 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 pathway is complete by the above-mentioned criteria. In 2003, two soil samples collected within 30 feet of the Aniak City Shop building contained 1,300 mg/kg and 946 mg/kg DRO concentrations. Note that ADEC "...will generally not require further evaluation of the vapor intrusion pathway if the only chemicals of concern at the site are GRO, DRO, and RRO..." This pathway is considered potentially complete for the future.

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 current land use is for the City Shop; however, a drinking water well is present on site that could potentially be used for household purposes.

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 complete by the above-mentioned criteria. A drinking water well on site has reportedly been sampled twice. VOCs were not detected in either sample. The conditional closure ROD stipulates that additional groundwater sampling will be conducted at the site in accordance with an "ADEC monitor plan." However, no specific plan is described.

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 - PM₁₀). 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:

DRO and RRO contamination was encountered in surface soil samples collected in 2003.

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.)*

ADEC has granted conditional closure for this site. According to the 2/27/2010 entry on the contaminated sites database, only the migration to groundwater exposure pathway is complete.

ADOT&PF Aniak Maintenance Station

HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Site: ADOT&PF Aniak Maintenance Station
ADEC File No. 2404.38.005

Completed By: Jake Gano

Date Completed: December 9, 2010

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.

| Media | Transport Mechanisms |
|---|--|
| <input checked="" type="checkbox"/> Surface | <input checked="" type="checkbox"/> Direct release to surface soil check soil <input checked="" type="checkbox"/> Migration to subsurface check soil <input checked="" type="checkbox"/> Migration to groundwater check groundwater <input checked="" type="checkbox"/> Volatilization check air <input type="checkbox"/> Runoff or erosion check surface water <input checked="" type="checkbox"/> Uptake by plants or animals check biota <input type="checkbox"/> Other (list): _____ |
| <input checked="" type="checkbox"/> Subsurface Soil (2-15 ft bgs) | <input checked="" type="checkbox"/> Direct release to subsurface soil check soil <input checked="" type="checkbox"/> Migration to groundwater check groundwater <input checked="" type="checkbox"/> Volatilization check air <input checked="" type="checkbox"/> Uptake by plants or animals check biota <input type="checkbox"/> Other (list): _____ |
| <input checked="" type="checkbox"/> Groundwater | <input type="checkbox"/> Direct release to groundwater check groundwater <input checked="" type="checkbox"/> Volatilization check air <input type="checkbox"/> Flow to surface water body check surface water <input type="checkbox"/> Flow to sediment check sediment <input checked="" type="checkbox"/> Uptake by plants or animals check biota <input type="checkbox"/> Other (list): _____ |
| <input type="checkbox"/> Surface Water | <input type="checkbox"/> Direct release to surface water check surface water <input type="checkbox"/> Volatilization check air <input type="checkbox"/> Sedimentation check sediment <input type="checkbox"/> Uptake by plants or animals check biota <input type="checkbox"/> Other (list): _____ |
| <input type="checkbox"/> Sediment | <input type="checkbox"/> Direct release to sediment check sediment <input type="checkbox"/> Resuspension, runoff, or erosion check surface water <input type="checkbox"/> Uptake by plants or animals check biota <input type="checkbox"/> Other (list): _____ |

(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

| Exposure Media | Exposure Pathway/Route | Residents (adults or children) | Commercial or Industrial workers | Site visitors, trespassers, or recreational users | Construction workers | Farmers or substance harvesters | Substance consumers | Other |
|---|---|--------------------------------|----------------------------------|---|----------------------|---------------------------------|---------------------|-------|
| <input checked="" type="checkbox"/> soil | <input checked="" type="checkbox"/> Incidental Soil Ingestion <input type="checkbox"/> Dermal Absorption of Contaminants from Soil <input checked="" type="checkbox"/> Inhalation of Fugitive Dust | F | C/F | C/F | F | | | C/F |
| <input checked="" type="checkbox"/> groundwater | <input checked="" type="checkbox"/> Ingestion of Groundwater <input checked="" type="checkbox"/> Dermal Absorption of Contaminants in Groundwater <input checked="" type="checkbox"/> Inhalation of Volatile Compounds in Tap Water | F | C/F | C/F | F | | | C/F |
| <input checked="" type="checkbox"/> air | <input checked="" type="checkbox"/> Inhalation of Outdoor Air <input checked="" type="checkbox"/> Inhalation of Indoor Air <input checked="" type="checkbox"/> Inhalation of Fugitive Dust | F | C/F | C/F | F | | | C/F |
| <input checked="" type="checkbox"/> surface water | <input type="checkbox"/> Ingestion of Surface Water <input type="checkbox"/> Dermal Absorption of Contaminants in Surface Water <input type="checkbox"/> Inhalation of Volatile Compounds in Tap Water | | | | | | | |
| <input type="checkbox"/> sediment | <input type="checkbox"/> Direct Contact with Sediment | | | | | | | |
| <input checked="" type="checkbox"/> biota | <input type="checkbox"/> Ingestion of Wild or Farmed Foods | | | | | | | |

Human Health Conceptual Site Model Scoping Form

Site Name:

File Number:

Completed by:

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)*

- | | |
|--|--|
| <input type="checkbox"/> USTs | <input type="checkbox"/> Vehicles |
| <input checked="" type="checkbox"/> ASTs | <input type="checkbox"/> Landfills |
| <input type="checkbox"/> Dispensers/fuel loading racks | <input type="checkbox"/> Transformers |
| <input checked="" type="checkbox"/> Drums | <input checked="" type="checkbox"/> Other: <input type="text" value="Pipelines, former floor drains"/> |

Release Mechanisms *(check potential release mechanisms at the site)*

- | | |
|--|--|
| <input checked="" type="checkbox"/> Spills | <input checked="" type="checkbox"/> Direct discharge |
| <input checked="" type="checkbox"/> Leaks | <input type="checkbox"/> Burning |
| | <input type="checkbox"/> Other: <input type="text"/> |

Impacted Media *(check potentially-impacted media at the site)*

- | | |
|---|--|
| <input checked="" type="checkbox"/> Surface soil (0-2 feet bgs*) | <input checked="" type="checkbox"/> Groundwater |
| <input checked="" type="checkbox"/> Subsurface soil (>2 feet bgs) | <input type="checkbox"/> Surface water |
| <input checked="" type="checkbox"/> Air | <input checked="" type="checkbox"/> Biota |
| <input type="checkbox"/> Sediment | <input type="checkbox"/> Other: <input type="text"/> |

Receptors *(check receptors that could be affected by contamination at the site)*

- | | |
|--|--|
| <input type="checkbox"/> Residents (adult or child) | <input checked="" type="checkbox"/> Site visitor |
| <input checked="" type="checkbox"/> Commercial or industrial worker | <input checked="" type="checkbox"/> Trespasser |
| <input type="checkbox"/> Construction worker | <input type="checkbox"/> Recreational user |
| <input type="checkbox"/> Subsistence harvester (i.e. gathers wild foods) | <input type="checkbox"/> Farmer |
| <input type="checkbox"/> Subsistence consumer (i.e. eats wild foods) | <input checked="" type="checkbox"/> Other: <input type="text" value="Off-site residents"/> |

* 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:

During a 1999 evaluation, soil samples collected contained up to 29,400 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:

Incomplete

Comments:

DRO has been detected at the site, but is not included 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 groundwater 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:

DRO is not listed in Appendix C.

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 was detected in shallow test pits at the site and is listed in Appendix D.

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 contaminated 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 near Well PL-MW-9, the remaining wells are located greater than 30 feet from the wells that contain DRO concentrations greater than the applicable cleanup level. However, 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:

Drinking water wells exist at the site, and groundwater is used for household purposes. Note that the drinking water sample collected in 2010 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. Samples collected from the facility drinking water well were non-detect for VOCs.

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 - PM₁₀). 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 vertical extent of contaminated soil is not known. Contaminated respirable particles may be present.

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 F

IMPORTANT INFORMATION ABOUT YOUR

GEOTECHNICAL/ENVIRONMENTAL REPORT



Date: December 2010
To: ADEC, Attn: Mr. Grant Lidren
Re: Aniak Groundwater Study Report

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