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SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

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June 28, 2013

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JUL 01 2013
ADEC SPAR - RFA
Contract Management Section

Alaska Department of Environmental Conservation
555 Cordova Street
Anchorage, Alaska 99501

Attn: Mr. Grant Lidren

RE: ADDITIONAL ENVIRONMENTAL SERVICES AT ADOT&PF ANIAK AREA-WIDE SITES, ANIAK, ALASKA

This letter report documents Shannon & Wilson's additional environmental services at Alaska Department of Transportation and Public Facilities (ADOT&PF) sites located in Aniak, Alaska. A vicinity map showing the ADOT&PF sites is included as Figure 1.

The purpose of this project was to re-spread previously land spread material to enhance natural attenuation. In addition, nine groundwater monitoring wells, which the Alaska Department of Environmental Conservation (ADEC) has deemed unnecessary were decommissioned. The work was conducted in general accordance with our May 31, 2013 work plan, as approved by the ADEC on June 3, 2013.

BACKGROUND

As documented in our April 2012 *Final Excavation and Land Spreading Report, ADOT&PF Aniak Area-Wide, Aniak, Alaska* report, approximately 3,100 cubic yards of soil was land spread in four areas, designated LS1 through LS4, south of the Aniak Runway in 2011. As stated in the September 2011 project work plan, the material placed in the land farm was not to exceed 1 foot thick. Subsequently it was determined that portions of land spread areas LS1 and LS2 were a maximum of 4 feet thick (Photos 1 through 4 in Attachment 1). The land spread areas are shown on Figure 2.

FIELD ACTIVITIES

The project consisted of soil land spreading, soil sampling, and well decommissioning.

Task 1 - Soil Land Spreading

The ADOT&PF provided the equipment, including a grader, dump truck, and front end loader, to conduct the soil land spreading. B.C. Excavating LLC (BCX), under subcontract to Shannon & Wilson provided the personnel to operate the equipment.

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On June 17 through 19, 2013, the material located within land spread areas LS1 (Figure 3) and LS2 (Figure 4) was leveled in the vicinity of the existing land spread areas (Photos 5 and 6). The material was leveled such that the material is approximately 1 foot thick (Photos 7 and 8). Liner material and tree debris was observed within land spread areas LS1 and LS2 and was removed and transported to the Aniak Landfill for disposal (Photos 9 through 11).

The perimeter of the land spread areas were documented using Global Positioning System (GPS) coordinates which are included in Table 1 and shown on Figure 2.

Task 2 – Soil Sampling

Following leveling of the material in land spread areas LS1 and LS2, performance soil screening and analytical samples were collected from each of the land spread areas (Photo 12) on June 18 and 19, 2013. In accordance with our work plan, a total of 63 field screening samples (one per 50 cubic yards) and 16 analytical samples (one per 200 cubic yards) were collected from the land spread material. Field screening results are shown in Table 2. Prior to sampling, the land spread area was divided into approximately equal sections based on volume. The sections were demarcated with wood stakes (Photo 13).

One screening sample was collected from each section. The samples were collected from about 0.5 foot below ground surface using hand tools (shovels and spoons). The soil samples were "screened" for volatile organic compounds using a photoionization detector (PID). The PID was calibrated each day before screening activities with isobutylene standard gas. Headspace samples were collected in re-sealable plastic bags by filling them with freshly exposed soil to one-half of their volumes and then sealing the top. The headspace samples were allowed to warm to approximately 60 degrees Fahrenheit prior to field headspace screening. Screening was accomplished by inserting the PID sampling probe into the air space above the soil in the bag. The field PID readings were obtained within one hour of the time of sample collection.

The analytical samples were collected from the locations with the highest PID readings within each land spread area. For spatial representation, seven analytical samples were collected from land spread area LS1, one from LS2, five from LS3 (Figure 5), and three from LS4 (Figure 6).

Plus dup ↑ ↑ plus dup

The analytical soil samples tested for volatile constituents were collected using methanol preservation. In accordance with the method, at least 25 grams of soil was quickly placed into a laboratory supplied 4 ounce jar that had been pre-weighed. Afterward, 25 milliliters of reagent grade methanol was added to submerge the soil. The methanol extracts the hydrocarbons from the soil at the time of sampling, thereby reducing the possible loss of volatile constituents prior to sample analysis. The samples were transferred to the appropriate laboratory supplied jars using decontaminated stainless steel spoons, and transferred to the laboratory in coolers with ice

packs using chain-of-custody procedures. Analytical sample locations were documented with GPS coordinates which are included in Table 1.

The analytical samples were analyzed for gasoline range organics (GRO) by Alaska Method (AK) 101 and diesel range organics (DRO) by AK 102. In addition, the samples collected from Land Spread Areas LS1, LS2, and LS3 were analyzed for aromatic volatile organics (BTEX) by Environmental Protection Agency (EPA) Method 8021B. The samples collected from Land Spread Area LS4 were also analyzed for volatile organic compounds (VOCs) by EPA Method 8260B. The two samples with the two highest PID readings were also analyzed for polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8310. For quality control purposes, one trip blank, per cooler, and two duplicate samples were submitted. Each duplicate sample was analyzed for GRO and DRO. One duplicate sample was also analyzed for BTEX, VOCs, and/or PAHs. The analytical results will be provided directly to the ADEC under separate cover.

Task 3 – Well Decommissioning

Discovery Drilling of Anchorage, Alaska provided the equipment and personnel to decommissioning nine groundwater monitoring wells previously installed at four ADOT&PF Aniak sites. The groundwater monitoring wells were decommissioned on June 18, 2013 in accordance with the ADEC's *Monitoring Well Guidance*, dated November 2011. Discovery Drilling removed the well monuments (Photo 14) before backfilling each well with hydrated bentonite chips until approximately 1 foot below ground surface. Next, the top 5 to 10 feet of well casing was unscrewed from the well and removed from the ground (Photo 15). For flush-mounted wells a jack was used raise the well a few feet out of the ground to facilitate unscrewing the top portion of the well casing (Photo 16). Native soil material or asphalt, as applicable, was used to cover the well locations at the ground surface (Photo 17). The well monuments and casings were transported to the Aniak Landfill for disposal. Details regarding the four sites and deviations from the above protocols are discussed below.

ADOT&PF Aniak City Shop

Monitoring Wells CS-MW-2, CS-MW-4, and CS-MW-6 were decommissioned. The project work plan also stated that Wells CS-MW-1 and CS-MW-7 would be decommissioned if located. Wells CS-MW-1 and CS-MW-7 could not be located during a well inventory survey conducted in 2010. Swing tie measurements from the well installation activities and a magnetometer were utilized in an attempt to locate these wells. The wells could not be located and are presumed destroyed by grading activities at the ADOT&PF Aniak City Shop. The approximate locations of the wells are shown on Figure 7.

ADOT&PF Former AST Area

Previous sampling efforts have noted that Monitoring Well MW-6 was apparently damaged. Monitoring Well MW-6 was evaluated for damage using a water level indicator. The water level indicator was stopped by an obstruction at approximately 2.5 feet below top of casing. The well was considered unusable and was decommissioned. The damaged portion of the well is shown in Photo 18. The approximate location of decommissioned Monitoring Well MW-6 is shown on Figure 8.

ADOT&PF Aniak Runway Apron

Monitoring Well RA-MW-3 was decommissioned. The well casing was cut down approximately one foot below ground surface because the upper portion of the well could not be unscrewed and removed from the ground. The approximate location of decommissioned Monitoring Well RA-MW-3 is shown on Figure 9.

Former MarkAir Facility

Monitoring Wells MW-5, MW-6, MW-7, and MW-8 were decommissioned. The upper portion of Monitoring Well MW-5 could not be unscrewed and removed from the ground. Therefore, the well was cut down about one foot below ground surface. During our site visit, it was noted that Monitoring Well MW-4 was frost-jacked. Monitoring Well MW-4 was repaired by cutting off the top 0.53 feet of the well casing to allow the well monument lid to be placed flush with the ground surface. The approximate locations of the wells are shown on Figure 10.

CLOSURE/LIMITATIONS

This report was prepared for the exclusive use of our client and their representatives in the study of this site. The findings we have presented within this report are based on the limited research, sampling, and analyses that Shannon & Wilson conducted at this site. They should not be construed as definite conclusions regarding the site's environmental conditions. As a result, the analysis and sampling performed can only provide you with our professional judgment as to the environmental characteristics of this site, and in no way guarantees that an agency or its staff will reach the same conclusions as Shannon & Wilson, Inc. The data presented in this report should be considered representative of the time of our site assessment. Changes in site conditions can occur over time, due to natural forces or human activity. In addition, changes in government codes, regulations, or laws may occur. Because of such changes beyond our control, our observations and interpretations may need to be revised. Shannon & Wilson has prepared the attachment in Attachment 2 "Important Information About Your Geotechnical/Environmental Report" to assist you and others in understanding the use and limitations of our report.

If you have any questions or comments about this report, please contact Stafford Glashan, P.E. or the undersigned at (907) 561-2120. We appreciate the opportunity to be of service to you.

Sincerely,

SHANNON & WILSON, INC.

Prepared by:

Jake Tracy, E.I.T.
Environmental Engineer II

Reviewed by:

Dan McMahon
Sr. Principal Environmental Scientist

Encl: Tables 1 and 2, Figures 1 through 10, and Attachments 1 and 2

TABLE 1 - SUMMARY OF GPS POINTS

Land Spread Area Perimeter	Latitude*	Longitude*
Land Spread Area LS1		
WP-1	61.58200	159.55115
WP-2	61.58206	159.55139
WP-3	61.58218	159.55174
WP-4	61.58217	159.55200
WP-5	61.58223	159.55240
WP-6	61.58205	159.55209
WP-7	61.58195	159.55200
WP-8	61.58170	159.55214
WP-9	61.58155	159.55222
WP-10	61.58146	159.55214
WP-11	61.58138	159.55205
WP-12	61.58138	159.55193
WP-13	61.58145	159.55154
WP-14	61.58158	159.55151
WP-15	61.58177	159.55151
Land Spread Area LS2		
WP-16	61.58173	159.55113
WP-17	61.58163	159.55074
WP-18	61.58178	159.55057
WP-19	61.58187	159.55096
Land Spread Area LS3		
WP-20	61.58151	159.54735
WP-21	61.58171	159.54700
WP-22	61.58200	159.54768
WP-23	61.58171	159.54800
Land Spread Area LS4		
WP-24	61.58161	159.54781
WP-25	61.58163	159.54782
WP-26	61.58167	159.54803
WP-27	61.58164	159.54803

Analytical Sample Locations	Latitude*	Longitude*
Land Spread Area LS1		
LS1SS1	61.58218	159.55234
LS1SS10	61.58192	159.55197
LS1SS13	61.58206	159.55151
LS1SS23	61.58188	159.55150
LS1SS25	61.58172	159.55168
LS1SS32	61.58183	159.55136
LS1SS34	61.58168	159.55154
Land Spread Area LS2		
LS2SS3	61.58178	159.55064
Land Spread Area LS3		
LS3SS3	61.58163	159.54755
LS3SS4	61.58160	159.54742
LS3SS5	61.58182	159.54776
LS3SS10	61.58186	159.54750
LS3SS16	61.58183	159.54712
Land Spread Area LS4		
LS4SS1	61.58163	159.54790
LS4SS2	61.58163	159.54796
LS4SS3	61.58164	159.54796

Notes:

* = Datum is World Geodetic System of 1984 (WGS1984)

See Figure 2 for GPS points collected at the extents of the land spread areas

TABLE 2 - SOIL SAMPLE LOCATIONS AND DESCRIPTIONS

Sample Number	Date	Sample Location (See Figures 3 through 6)	Depth (feet)	Headspace (ppm) ^	Sample Classification
Land Spread Area LS1					
* LS1SS1	6/19/2013	Land Spread LS1, Soil Sample 1	0.5	190	Brown, slightly silty, gravelly SAND; moist; hydrocarbon odor
LS1SS2	6/19/2013	Land Spread LS1, Soil Sample 2	0.5	2.9	Brown, slightly silty, gravelly SAND; moist
LS1SS3	6/19/2013	Land Spread LS1, Soil Sample 3	0.5	4.2	Brown, slightly silty, gravelly SAND; moist
LS1SS4	6/19/2013	Land Spread LS1, Soil Sample 4	0.5	2.5	Brown, slightly silty, gravelly SAND; moist
LS1SS5	6/19/2013	Land Spread LS1, Soil Sample 5	0.5	2.1	Brown, slightly silty, gravelly SAND; moist
LS1SS6	6/19/2013	Land Spread LS1, Soil Sample 6	0.5	1.5	Brown, slightly silty, gravelly SAND; moist
LS1SS7	6/19/2013	Land Spread LS1, Soil Sample 7	0.5	4.5	Brown, slightly silty, gravelly SAND; moist
LS1SS8	6/19/2013	Land Spread LS1, Soil Sample 8	0.5	4.1	Brown, slightly silty, gravelly SAND; moist
LS1SS9	6/19/2013	Land Spread LS1, Soil Sample 9	0.5	6.0	Brown, slightly silty, gravelly SAND; moist
* LS1SS10	6/19/2013	Land Spread LS1, Soil Sample 10	0.5	290	Brown, slightly silty, gravelly SAND; moist; hydrocarbon odor
LS1SS11	6/19/2013	Land Spread LS1, Soil Sample 11	0.5	8.2	Brown, slightly silty, gravelly SAND; moist
LS1SS12	6/19/2013	Land Spread LS1, Soil Sample 12	0.5	7.2	Brown, slightly silty, gravelly SAND; moist
* LS1SS13	6/19/2013	Land Spread LS1, Soil Sample 13	0.5	140	Brown, slightly silty, gravelly SAND; moist
LS1SS14	6/19/2013	Land Spread LS1, Soil Sample 14	0.5	2.9	Brown, slightly silty, gravelly SAND; moist
LS1SS15	6/19/2013	Land Spread LS1, Soil Sample 15	0.5	2.5	Brown, slightly silty, gravelly SAND; moist
LS1SS16	6/19/2013	Land Spread LS1, Soil Sample 16	0.5	60	Brown, slightly silty, gravelly SAND; moist
LS1SS17	6/19/2013	Land Spread LS1, Soil Sample 17	0.5	26	Brown, slightly silty, gravelly SAND; moist
LS1SS18	6/19/2013	Land Spread LS1, Soil Sample 18	0.5	16	Brown, slightly silty, gravelly SAND; moist
LS1SS19	6/19/2013	Land Spread LS1, Soil Sample 19	0.5	12	Brown, slightly silty, gravelly SAND; moist
LS1SS20	6/19/2013	Land Spread LS1, Soil Sample 20	0.5	10	Brown, slightly silty, gravelly SAND; moist
LS1SS21	6/19/2013	Land Spread LS1, Soil Sample 21	0.5	5.8	Brown, slightly silty, gravelly SAND; moist
LS1SS22	6/19/2013	Land Spread LS1, Soil Sample 22	0.5	50	Brown, slightly silty, gravelly SAND; moist
* LS1SS23	6/19/2013	Land Spread LS1, Soil Sample 23	0.5	470	Brown, slightly silty, gravelly SAND; moist; hydrocarbon odor
* LS1SS43	6/19/2013	Duplicate of LS1SS23	0.5	470	Brown, slightly silty, gravelly SAND; moist; hydrocarbon odor
LS1SS24	6/19/2013	Land Spread Area LS1, Soil Sample 24	0.5	12	Brown, slightly silty, gravelly SAND; moist
* LS1SS25	6/19/2013	Land Spread Area LS1, Soil Sample 25	0.5	120	Brown, slightly silty, gravelly SAND; moist
LS1SS26	6/19/2013	Land Spread Area LS1, Soil Sample 26	0.5	17	Brown, slightly silty, gravelly SAND; moist
LS1SS27	6/19/2013	Land Spread Area LS1, Soil Sample 27	0.5	6.0	Brown, slightly silty, gravelly SAND; moist
LS1SS28	6/19/2013	Land Spread Area LS1, Soil Sample 28	0.5	14	Brown, slightly silty, gravelly SAND; moist

Notes:

* = Sample analyzed by the project laboratory

^ = Field screening instrument was a TEI OVM 580B photoionization detector (PID).

\- = Measurement not recorded or not applicable

ppm = parts per million

TABLE 2 - SOIL SAMPLE LOCATIONS AND DESCRIPTIONS

Sample Number	Date	Sample Location (See Figures 3 through 6)	Depth (feet)	Headspace (ppm) ^	Sample Classification
Land Spread Area LS1 cont.					
LS1SS29	6/19/2013	Land spread Area LS1, Soil Sample 29	0.5	29	Brown, slightly silty, gravelly SAND; moist
LS1SS30	6/19/2013	Land spread Area LS1, Soil Sample 30	0.5	8.0	Brown, slightly silty, gravelly SAND; moist
LS1SS31	6/19/2013	Land spread Area LS1, Soil Sample 31	0.5	81	Brown, slightly silty, gravelly SAND; moist
* LS1SS32	6/19/2013	Land spread Area LS1, Soil Sample 32	0.5	410	Brown, slightly silty, gravelly SAND; moist
LS1SS33	6/19/2013	Land spread Area LS1, Soil Sample 33	0.5	28	Brown, slightly silty, gravelly SAND; moist
* LS1SS34	6/19/2013	Land spread Area LS1, Soil Sample 34	0.5	120	Brown, slightly silty, gravelly SAND; moist
LS1SS35	6/19/2013	Land spread Area LS1, Soil Sample 35	0.5	100	Brown, slightly silty, gravelly SAND; moist
LS1SS36	6/19/2013	Land spread Area LS1, Soil Sample 36	0.5	60	Brown, slightly silty, gravelly SAND; moist
LS1SS37	6/19/2013	Land spread Area LS1, Soil Sample 37	0.5	44	Brown, slightly silty, gravelly SAND; moist
LS1SS38	6/19/2013	Land spread Area LS1, Soil Sample 38	0.5	32	Brown, slightly silty, gravelly SAND; moist
LS1SS39	6/19/2013	Land spread Area LS1, Soil Sample 39	0.5	56	Brown, slightly silty, gravelly SAND; moist
LS1SS40	6/19/2013	Land spread Area LS1, Soil Sample 40	0.5	74	Brown, slightly silty, gravelly SAND; moist
Land Spread Area LS2					
LS2SS1	6/18/2013	Land Spread Area LS2, Soil Sample 1	0.5	87	Brown, slightly silty, gravelly SAND; moist
LS2SS2	6/18/2013	Land Spread Area LS2, Soil Sample 2	0.5	17	Brown, slightly silty, gravelly SAND; moist
* LS2SS3	6/18/2013	Land Spread Area LS2, Soil Sample 3	0.5	130	Brown, slightly silty, gravelly SAND; moist
LS2SS4	6/18/2013	Land Spread Area LS2, Soil Sample 4	0.5	110	Brown, slightly silty, gravelly SAND; moist
Land Spread Area LS3					
LS3SS1	6/18/2013	Land Spread Area LS3, Soil Sample 1	0.5	170	Brown, slightly silty, gravelly SAND; moist
LS3SS2	6/18/2013	Land Spread Area LS3, Soil Sample 2	0.5	230	Brown, slightly silty, gravelly SAND; moist
* LS3SS3	6/18/2013	Land Spread Area LS3, Soil Sample 3	0.5	290	Brown, slightly silty, gravelly SAND; moist
* LS3SS4	6/18/2013	Land Spread Area LS3, Soil Sample 4	0.5	350	Brown, slightly silty, gravelly SAND; moist
* LS3SS5	6/18/2013	Land Spread Area LS3, Soil Sample 5	0.5	270	Brown, slightly silty, gravelly SAND; moist
LS3SS6	6/18/2013	Land Spread Area LS3, Soil Sample 6	0.5	12	Brown, slightly silty, gravelly SAND; moist
LS3SS7	6/18/2013	Land Spread Area LS3, Soil Sample 7	0.5	180	Brown, slightly silty, gravelly SAND; moist
LS3SS8	6/18/2013	Land Spread Area LS3, Soil Sample 8	0.5	190	Brown, slightly silty, gravelly SAND; moist
LS3SS9	6/18/2013	Land Spread Area LS3, Soil Sample 9	0.5	160	Brown, slightly silty, gravelly SAND; moist

Notes:

* = Sample analyzed by the project laboratory

^ = Field screening instrument was a TEI OVM 580B photoionization detector (PID).

\- = Measurement not recorded or not applicable

ppm = parts per million

TABLE 2 - SOIL SAMPLE LOCATIONS AND DESCRIPTIONS

Sample Number	Date	Sample Location (See Figures 3 through 6)	Depth (feet)	Headspace (ppm) ^	Sample Classification
Land Spread Area LS3 cont.					
* LS3SS10	6/18/2013	Land Spread Area LS3, Soil Sample 10	0.5	270	Brown, slightly silty, gravelly SAND; moist
LS3SS11	6/18/2013	Land Spread Area LS3, Soil Sample 11	0.5	38	Brown, slightly silty, gravelly SAND; moist
LS3SS12	6/18/2013	Land Spread Area LS3, Soil Sample 12	0.5	120	Brown, slightly silty, gravelly SAND; moist
LS3SS13	6/18/2013	Land Spread Area LS3, Soil Sample 13	0.5	5.2	Brown, slightly silty, gravelly SAND; moist
LS3SS14	6/18/2013	Land Spread Area LS3, Soil Sample 14	0.5	4.8	Brown, slightly silty, gravelly SAND; moist
LS3SS15	6/18/2013	Land Spread Area LS3, Soil Sample 15	0.5	26	Brown, slightly silty, gravelly SAND; moist
* LS3SS16	6/18/2013	Land Spread Area LS3, Soil Sample 16	0.5	220	Brown, slightly silty, gravelly SAND; moist
Land Spread Area LS4					
* LS4SS1	6/19/2013	Land Spread Area LS4, Soil Sample 1	0.5	0.5	Brown, slightly silty, gravelly SAND; moist
* LS4SS2	6/19/2013	Land Spread Area LS4, Soil Sample 2	0.5	0.3	Brown, slightly silty, gravelly SAND; moist
* LS4SS3	6/19/2013	Land Spread Area LS4, Soil Sample 3	0.5	3.1	Brown, slightly silty, gravelly SAND; moist
* LS4SS23	6/19/2013	Duplicate of LS4SS3	0.5	3.1	Brown, slightly silty, gravelly SAND; moist
Quality Control Samples					
* TB1	6/18/2013	Soil trip blank	-	-	Ottawa sand with methanol added in the laboratory
* TB2	6/18/2013	Soil trip blank	-	-	Ottawa sand with methanol added in the laboratory

Notes:

* = Sample analyzed by the project laboratory

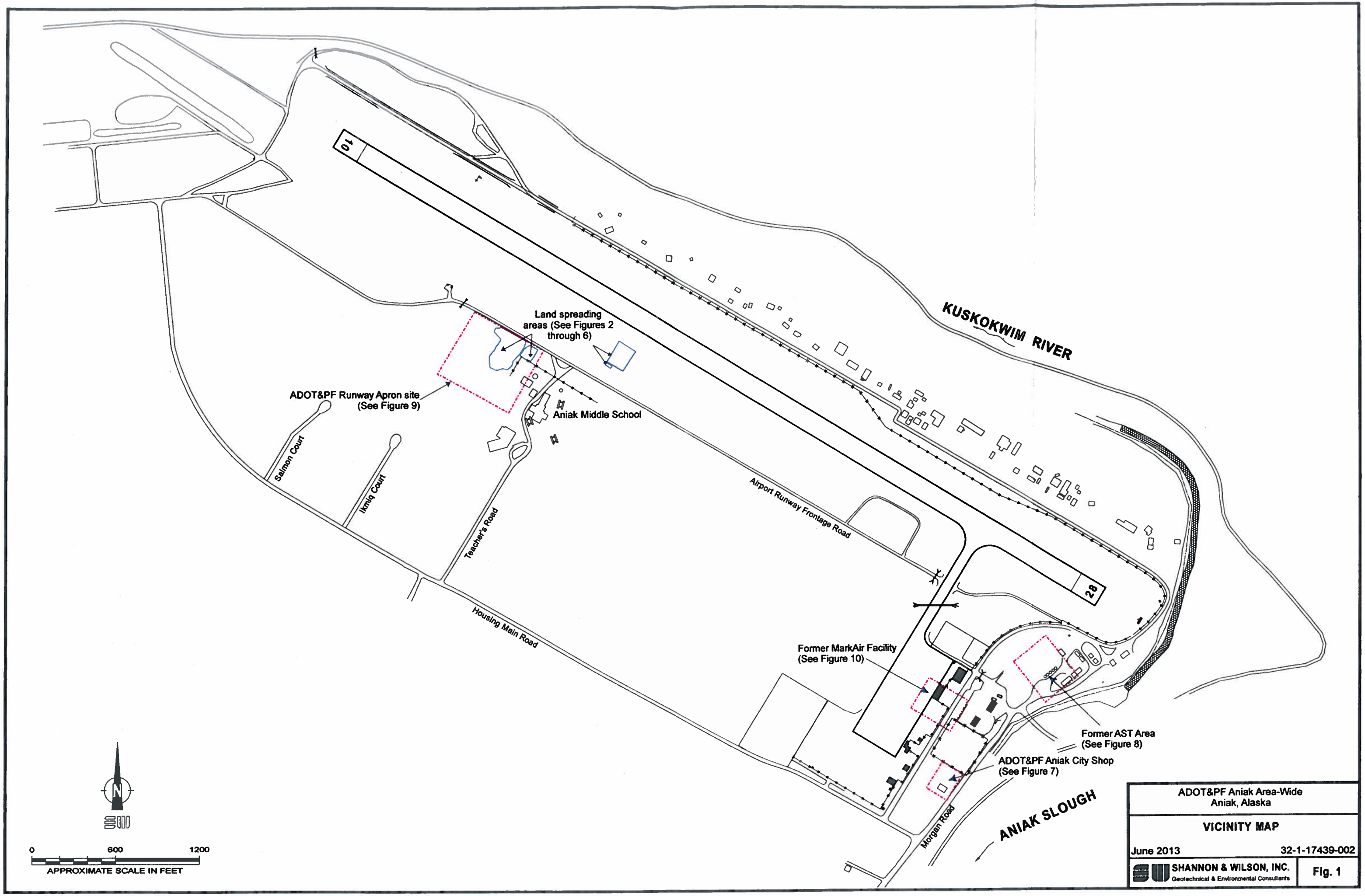
^ = Field screening instrument was a TEI OVM 580B photoionization detector (PID).

\- = Measurement not recorded or not applicable

ppm = parts per million

	DRO	GRO	Benzene	ethylb.	xylenes	toluene	Phenanthrene	1-Methylnap.	2-Methylnap.	Napth.
LS3SS4	4,630	41.4	ND	0.0495	0.553	0.0194	na	na	na	na
LS3SS3	2,390	8.5	ND	ND	0.1198	0.0277	na	na	na	na
LS3SS5	13,200	120	0.0109 J	0.161	3.182	ND	na	na	na	na
LS3SS10	3,970	13.7	ND	ND	0.1537 J	ND	na	na	na	na
LS3SS16	1,530	8.29	ND	ND	0.0704 J	0.0152 J	na	na	na	na
LS2SS3	890	43	0.0128 J	0.0194 J	0.522	ND	na	na	na	na
LS1SS1	1,500	32.4	ND	0.0382	0.533	0.0232 J	na	na	na	na
LS1SS10	167	4.89	0.0087 J	ND	0.0715 J	0.0175 J	na	na	na	na
LS1SS13	177	2.86 J	ND	ND	0.0602 J	0.0203 J	na	na	na	na
*LS1SS23	1,790	57.2	0.0073 J	ND	0.775	ND	na	na	na	na
LS1S43	1,840	73.7	0.009 J	ND	1.021	ND	0.009 J	ND	ND	ND
LS1SS25	20.8 J	3.99	ND	ND	0.0272 J	ND	ND	ND	ND	ND
LS1SS32	1,320	109	0.0087 J	0.0376	3.725	ND	0.0093 J	0.192	0.476	ND
LS1SS34	125	6.86	0.0055 J	0.0158 J	0.0957 J	ND	ND	ND	ND	ND
LS4SS2	20.9 J	2.34 J	0.0069 J	ND	0.0426 J	0.0221 J	ND	ND	ND	0.025 J
LS4SS1	115	3.58 J	0	ND	0.0521 J	0.0143 J	ND	ND	ND	0.0238 J
LS4SS3	238	1.71 J	ND	ND	0.0221	ND	ND	ND	ND	0.0232
*LS4SS23	226	1.49 J	ND	ND	0.0226 J	ND	ND	ND	ND	0.0219 J
TB-1	ND	0.922 J	ND	ND	ND	ND	ND	ND	ND	ND
TB-2	ND	1.22 J	ND	ND	ND	ND	ND	ND	ND	ND

*LS1SS23 is dup of LS1SS23
*LS4SS23 is dup of LS4SS3
all results in mg/kg
Yellow highlight above CL



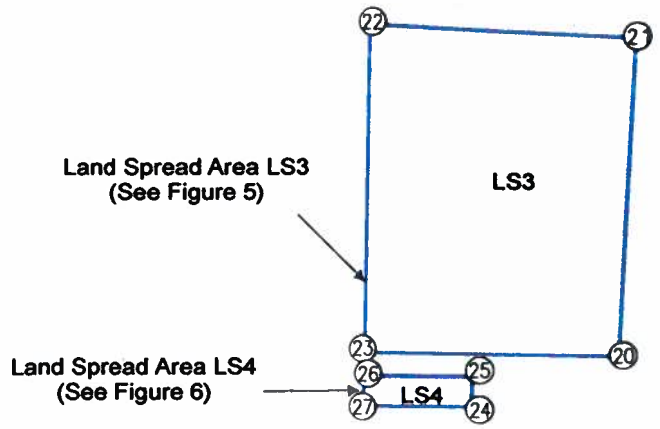
ADOT&PF Aniak Area-Wide
Aniak, Alaska

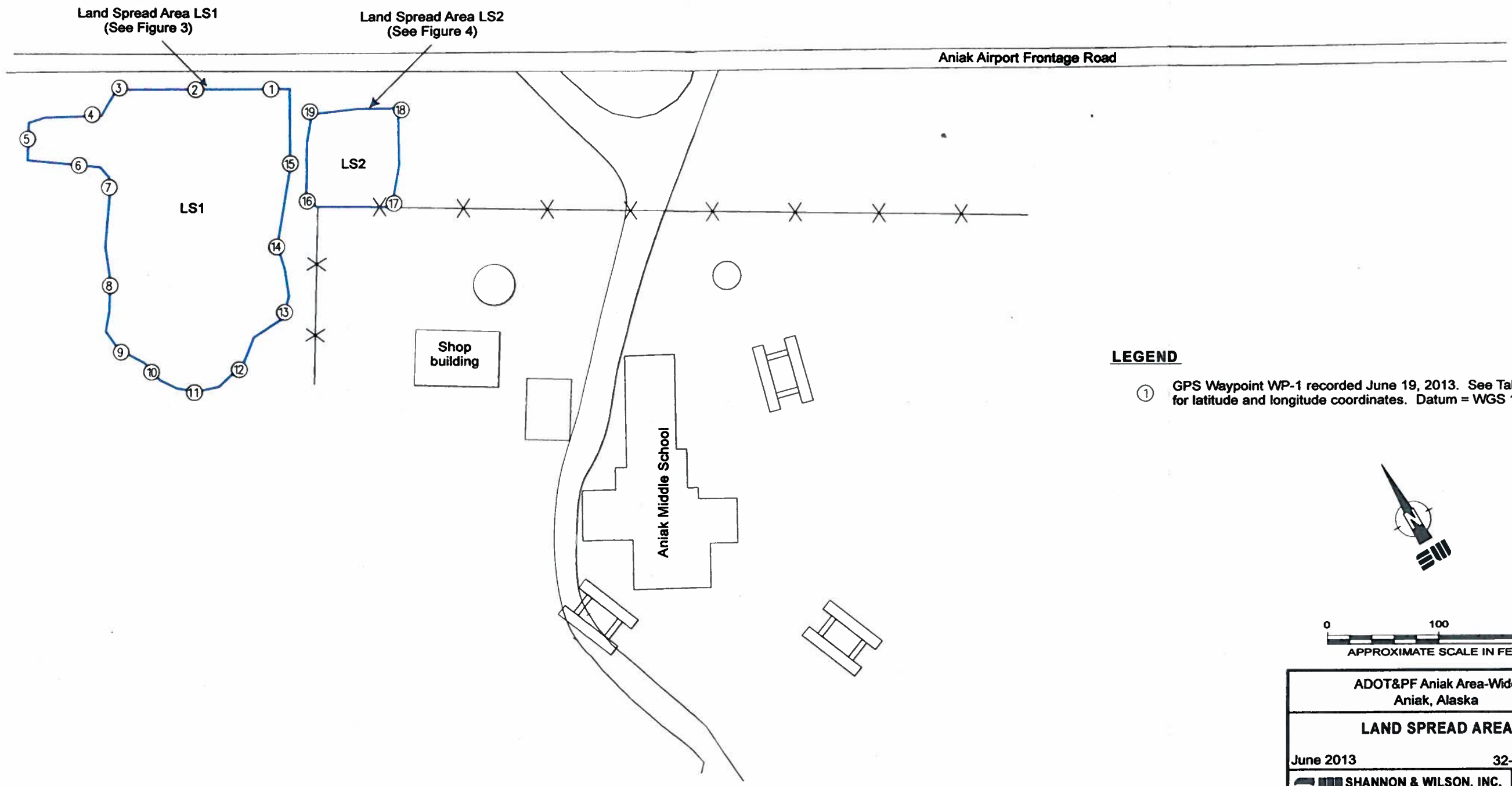
VICINITY MAP

June 2013 | 32-1-17439-002

SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

Fig. 1





LEGEND

① GPS Waypoint WP-1 recorded June 19, 2013. See Table 1 for latitude and longitude coordinates. Datum = WGS 1984.

0 100 200

APPROXIMATE SCALE IN FEET

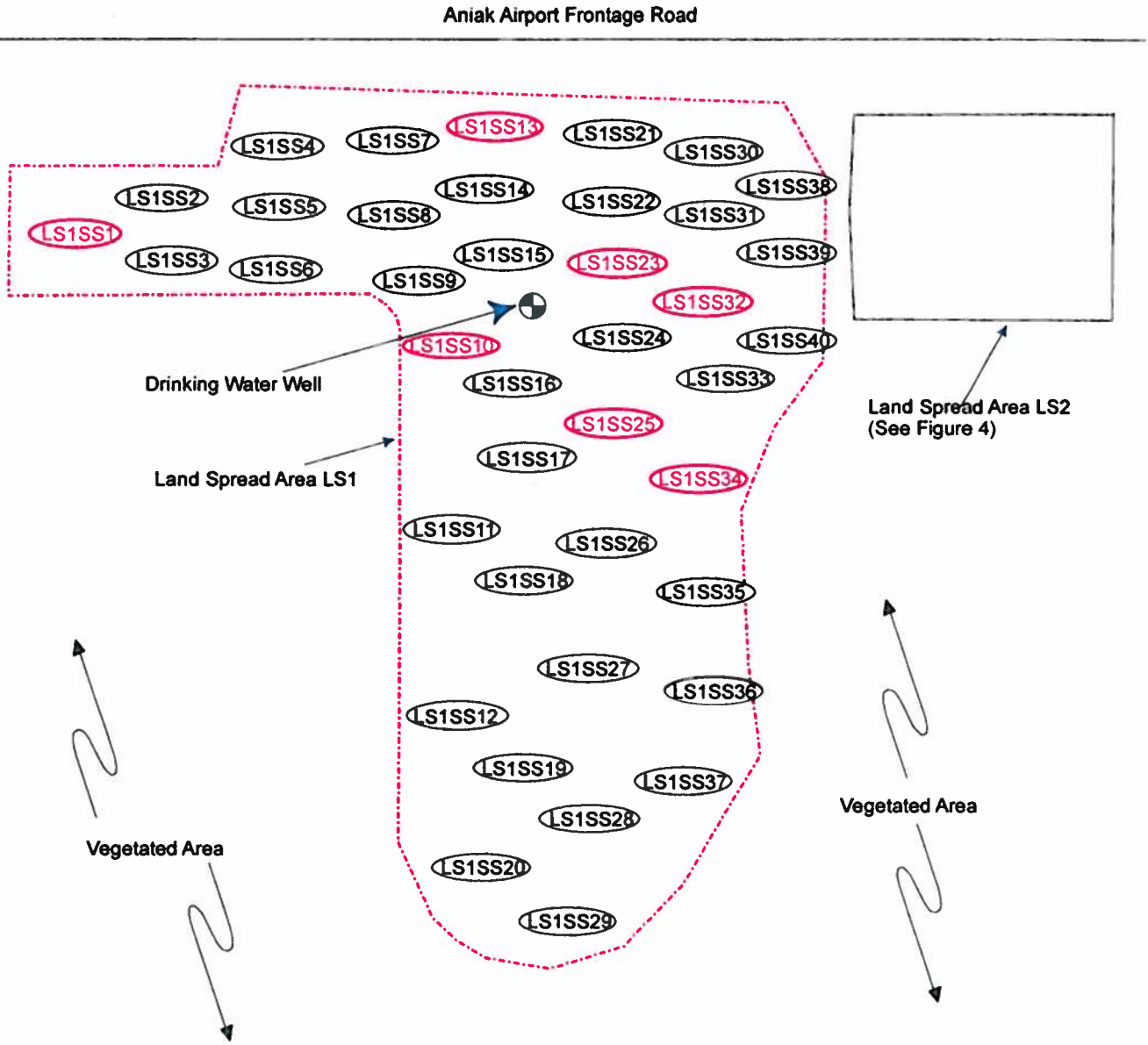
ADOT&PF Aniak Area-Wide
Aniak, Alaska

LAND SPREAD AREA

June 2013 32-1-17439-002

SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

Fig. 2



LEGEND

LS1SS2 — Approximate location of headspace screening Sample LS1SS2, collected by Shannon & Wilson, Inc., June 2013.

LS1SS1 — Approximate location of Sample LS1SS1, collected by Shannon & Wilson, Inc., June 2013, and submitted for laboratory analysis.

0 50 100

APPROXIMATE SCALE IN FEET

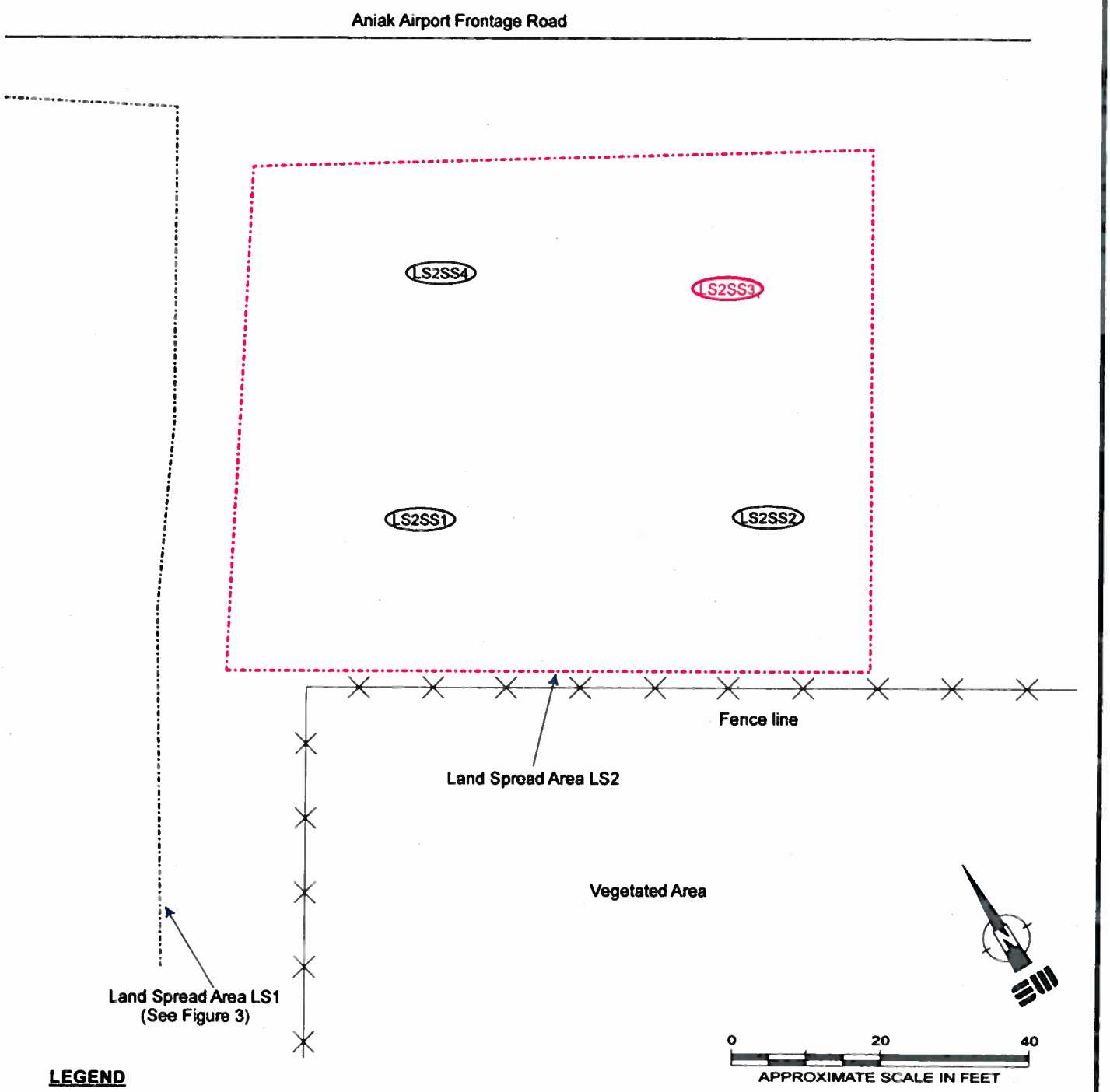
ADOT&PF Aniak Area-Wide
Aniak, Alaska

LAND SPREAD AREA LS1 SAMPLE LOCATIONS

June 2013 32-1-17439-002

SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

Fig. 3



LEGEND

LS2SS1 — Approximate location of headspace screening Sample LS2SS1, collected by Shannon & Wilson, Inc., June 2013.

LS2SS3 — Approximate location of Sample LS2SS3, collected by Shannon & Wilson, Inc., June 2013, and submitted for laboratory analysis.

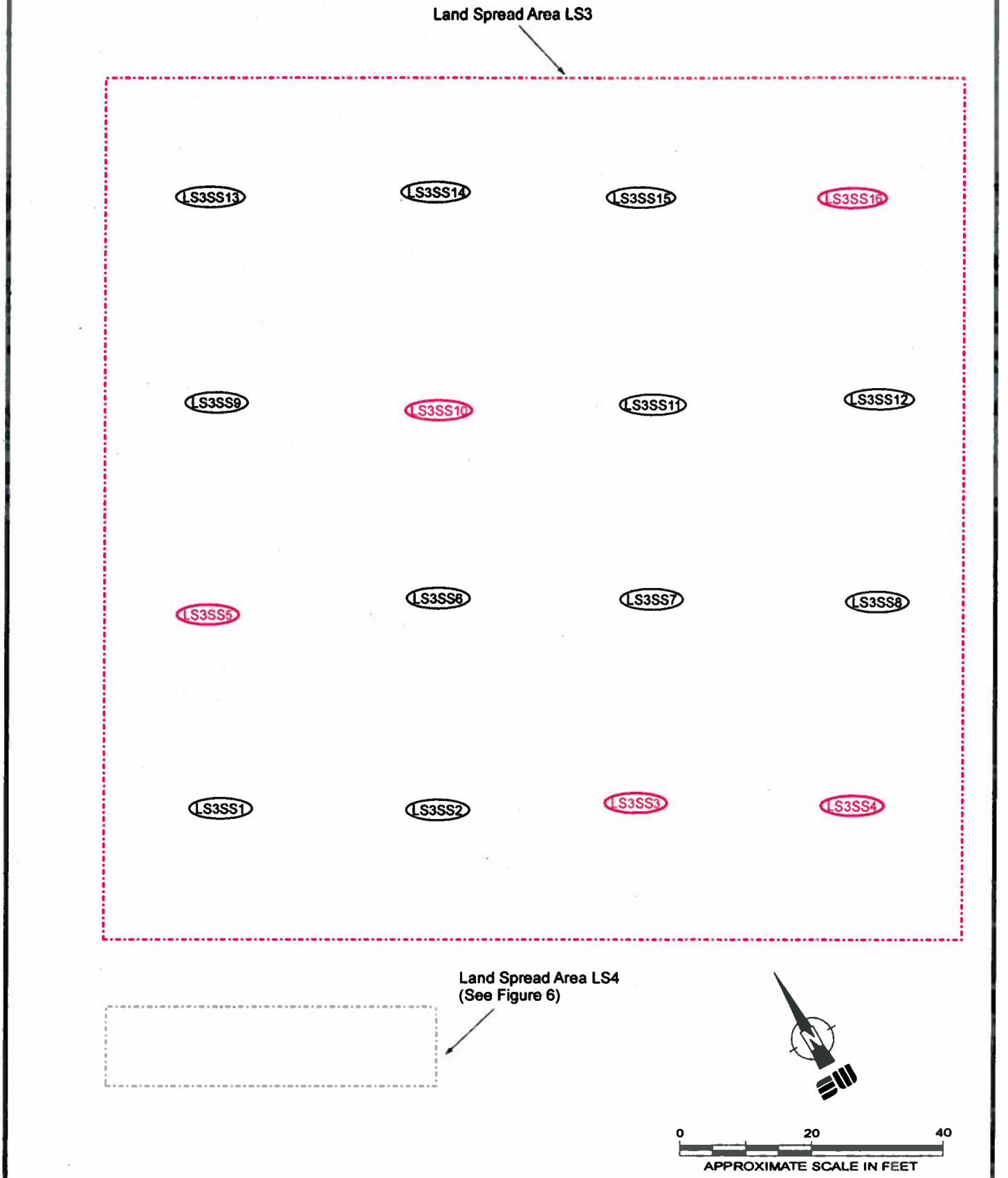
ADOT&PF Aniak Area-Wide
Aniak, Alaska

LAND SPREAD AREA LS2
SAMPLE LOCATIONS

June 2013 32-1-17439-002

SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

Fig. 4



LEGEND

LS3SS1 — Approximate location of headspace screening Sample LS3SS1, collected by Shannon & Wilson, Inc., June 2013.

LS3SS3 — Approximate location of Sample LS3SS3, collected by Shannon & Wilson, Inc., June 2013, and submitted for laboratory analysis.

ADOT&PF Aniak Area-Wide
Aniak, Alaska

LAND SPREAD AREA LS3
SAMPLE LOCATIONS

June 2013 32-1-17439-002

SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

Fig. 5

LEGEND

LS4SS1 Approximate location of Sample LS4SS1, collected by Shannon & Wilson Inc., June 2013 and submitted for laboratory analysis

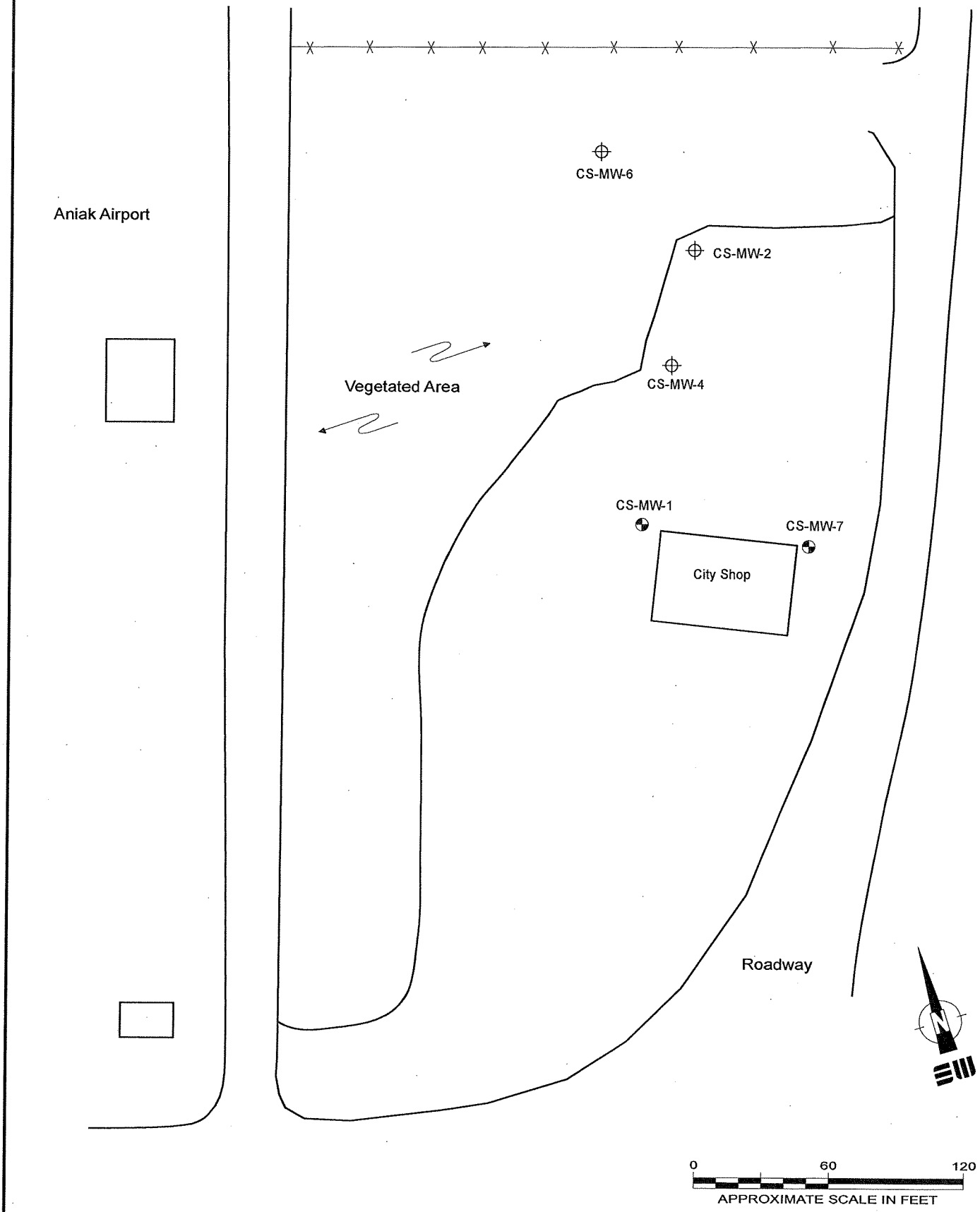
ADOT&PF Aniak Area-Wide
Aniak, Alaska

LAND SPREAD AREA LS4
SAMPLE LOCATIONS

June 2013 32-1-17439-002

SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

Fig. 6



KEY

CS-MW-2 — Approximate location of Monitoring Well CS-MW-2 which was decommissioned on June 18, 2013.

CS-MW-7 — Approximate location of Monitoring Well CS-MW-7 which could not be located.

ADOT&PF Aniak Area-Wide
Aniak, Alaska

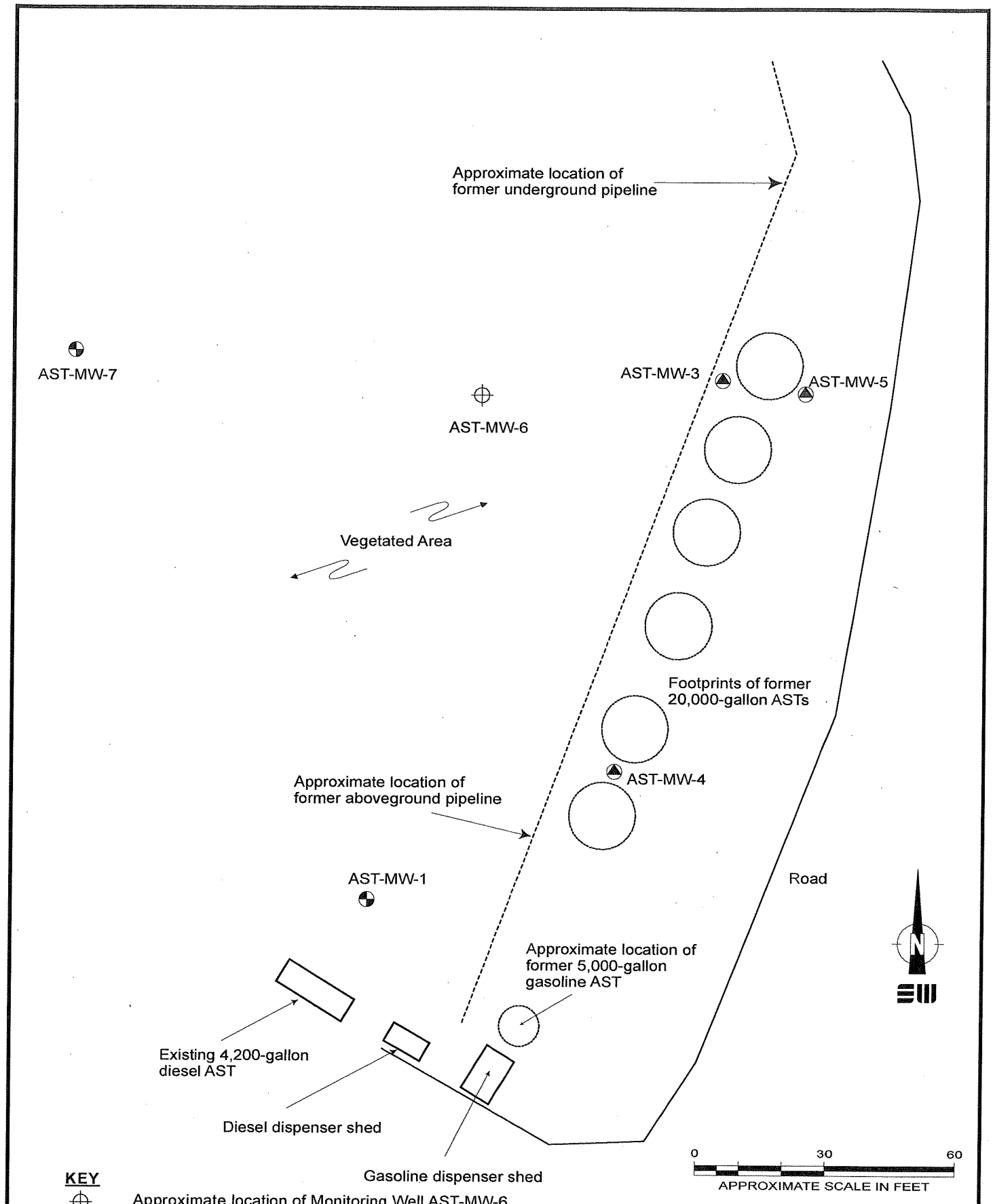
ADOT&PF ANIAK CITY SHOP SITE PLAN

June 2013

32-1-17439-002

SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

Fig. 7



KEY

AST-MW-6 — Approximate location of Monitoring Well AST-MW-6 which was decommissioned on June 18, 2013.

AST-MW-7 — Approximate location of Monitoring Well AST-MW-7.

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

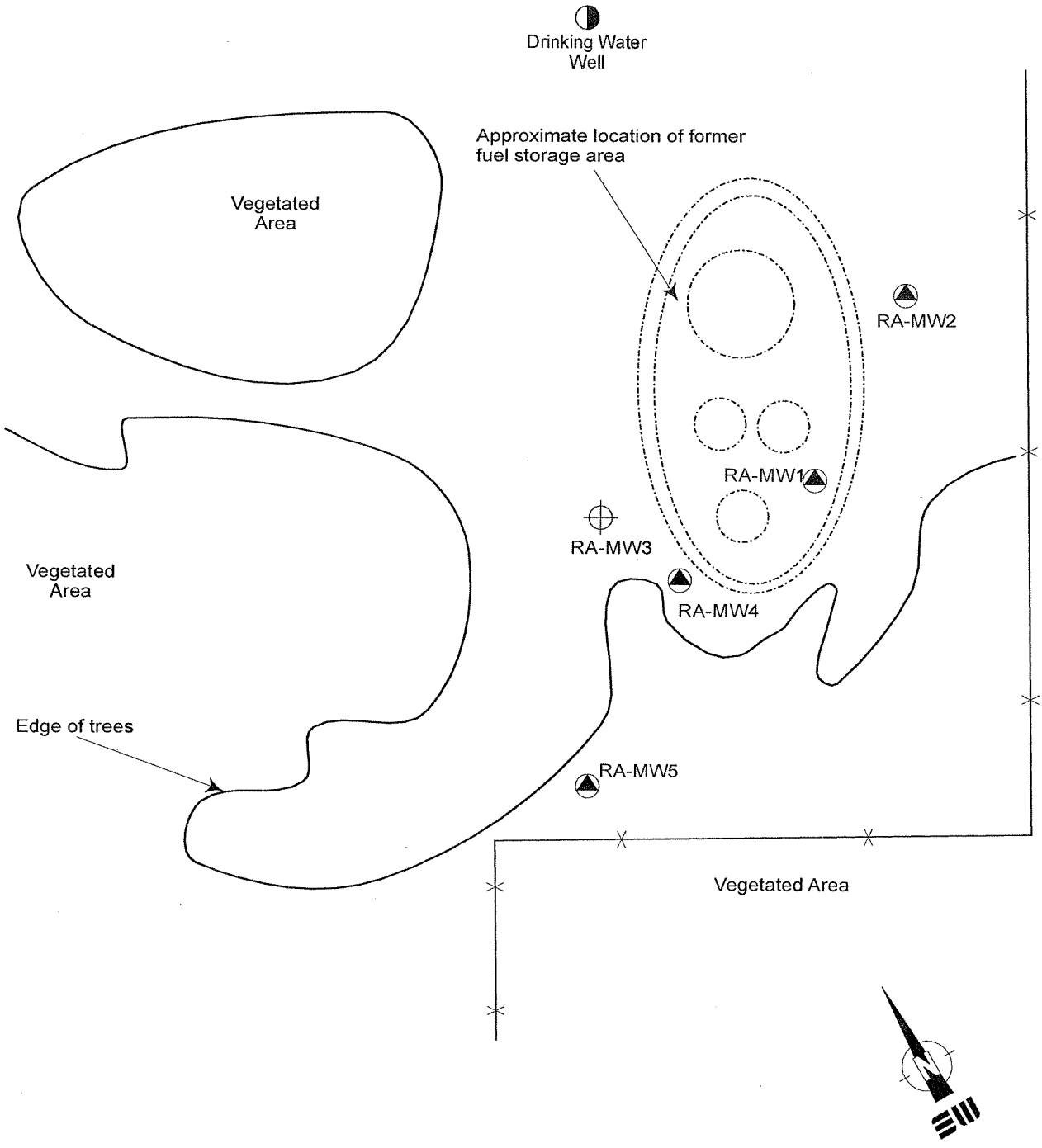
ADOT&PF Aniak Area-Wide
Aniak, Alaska

ADOT&PF MAINTENANCE STATION - FORMER AST AREA SITE PLAN

June 2013 32-1-17439-002

SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

Fig. 8



0 50 100

APPROXIMATE SCALE IN FEET

KEY

RA-MW1 — Approximate location of former Monitoring Well RA-MW1.

RA-MW3 — Approximate location of Monitoring Well RA-MW3 which was decommissioned on June 18, 2013.

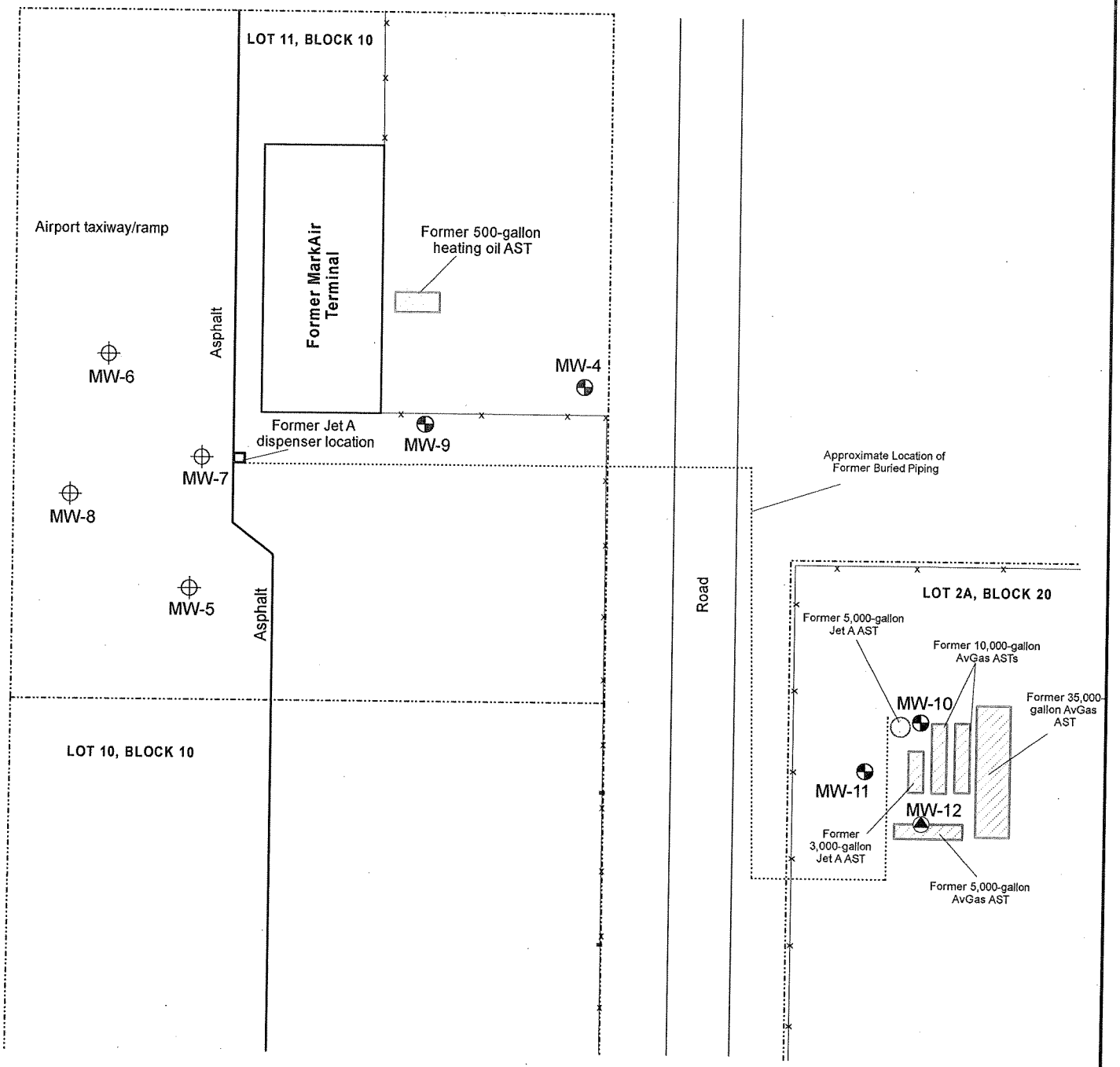
ADOT&PF Aniak Area-Wide
Aniak, Alaska

ADOT&PF RUNWAY APRON SITE PLAN

June 2013 32-1-17439-002

SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

Fig. 9



KEY

MW-4 — Approximate location of Monitoring Well MW-4.

MW-5 — Approximate location of Monitoring Well MW-5 which was decommissioned on June 18 or 19, 2013.

MW-12 — Approximate location of former Monitoring Well MW-12.

0 60 120

APPROXIMATE SCALE IN FEET

ADOT&PF Aniak Area-Wide
Aniak, Alaska

FORMER MARKAIR FACILITY
SITE PLAN

June 2013 32-1-17439-002

SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

Fig. 10

ATTACHMENT 1

PROJECT PHOTOGRAPHS

Photo 1: Looking east at Land Spread Area LS1 following the 2011 land spreading activities. (10/18/2012)

Photo 2: Looking north at Land Spread Area LS1 following the 2011 land spreading activities. (10/18/2012)

ADOT&PF Aniak Area-Wide Aniak, Alaska	
PHOTOS 1 AND 2	
June 2013	32-1-17439-002
SHANNON & WILSON, INC. Geotechnical & Environmental Consultants	1-1

Photo 3: Looking east at Land Spread Area LS2 following the 2011 land spreading activities. (10/18/2012).

Photo 4: Looking south at the east edge of Land Spread Area LS2 following the 2011 land spreading activities. (10/18/2012)

ADOT&PF Aniak Area-Wide Aniak, Alaska	
PHOTOS 3 AND 4	
June 2013	32-1-17439-002
SHANNON & WILSON, INC. Geotechnical & Environmental Consultants	1-2

Photo 5: Looking west at Land Spread Area LS1during re-spreading. (6/17/2013)

Photo 6: Looking south at Land Spread Area LS2 during re-spreading. (6/18/2013)

ADOT&PF Aniak Area-Wide Aniak, Alaska	
PHOTOS 5 AND 6	
June 2013	32-1-17439-002
SHANNON & WILSON, INC. Geotechnical & Environmental Consultants	1-3

Photo 7: Looking west at Land Spread Area LS1 after re-spreading the material. (6/18/2013)

Photo 8: Looking east at Land Spread Area LS2 after re-spreading the material. (6/19/2013)

ADOT&PF Aniak Area-Wide Aniak, Alaska	
PHOTOS 7 AND 8	
June 2013	32-1-17439-002
SHANNON & WILSON, INC. Geotechnical & Environmental Consultants	1-4

Photo 9: Removing liner material from Land Spread Area LS1. (6/18/2013)

Photo 10: Liner material removed from Land Spread Area LS1. The liner was transported to the Aniak Landfill for disposal. (6/18/2013)

ADOT&PF Aniak Area-Wide Aniak, Alaska	
PHOTOS 9 AND 10	
June 2013	32-1-17439-002
SHANNON & WILSON, INC. Geotechnical & Environmental Consultants	1-5

Photo 11: Collecting tree debris from Land Spread Area LS1. (6/18/2013)

Photo 12: Looking north at Land Spread Area LS3 during soil sampling activities. (6/18/2013)

ADOT&PF Aniak Area-Wide Aniak, Alaska	
PHOTOS 11 AND 12	
June 2013	32-1-17439-002
SHANNON & WILSON, INC. Geotechnical & Environmental Consultants	1-6

Photo 13: Land Spread Area LS1 after re-spreading. Stakes were used to set up a grid for sampling. (6/19/2013)

Photo 14: Removing the monument from Monitoring Well CS-MW-4. (6/18/2013)

Photo 15: The top 10 feet of well casing from Monitoring Well CS-MW-2 pulled from the ground. (6/18/2013).

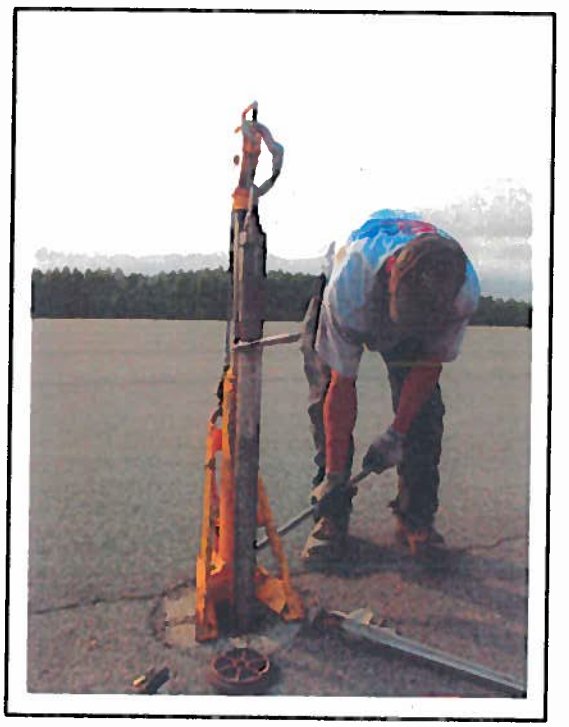


Photo 16: Well MW-8 being removed from the ground using a jack. (6/18/2013)

ADOT&PF Aniak Area-Wide Aniak, Alaska	
PHOTOS 15 AND 16	
June 2013	32-1-17439-002
SHANNON & WILSON, INC. Geotechnical & Environmental Consultants	1-8

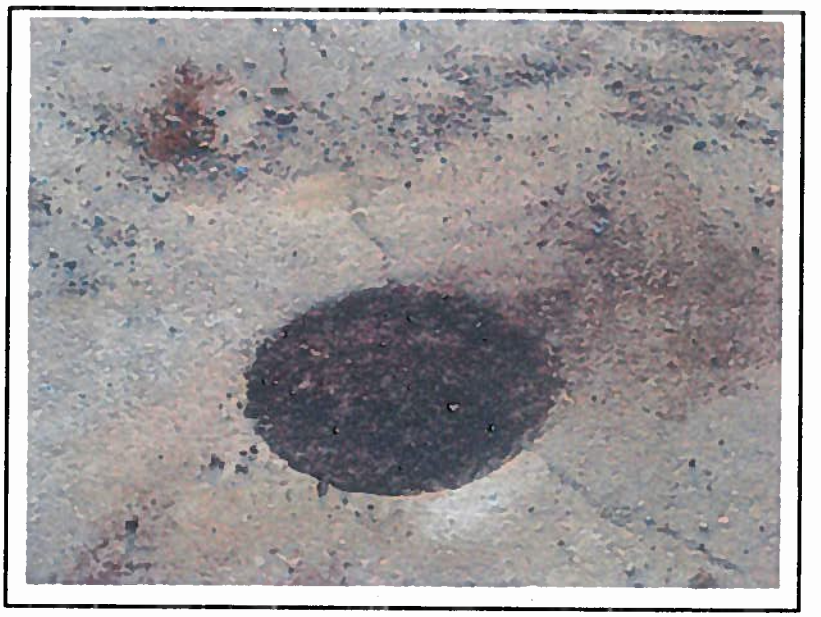


Photo 17: An asphalt patch over Monitoring Well MW-5 at the former MarkAir facility. (6/19/2013)

Photo 18: The damaged section of Monitoring Well AST-MW-6. (6/18/2013)

ADOT&PF Aniak Area-Wide Aniak, Alaska	
PHOTOS 17 AND 18	
June 2013	32-1-17439-002
SHANNON & WILSON, INC. Geotechnical & Environmental Consultants	1-9

ATTACHMENT 2

IMPORTANT INFORMATION ABOUT

YOUR GEOTECHNICAL/ENVIRONMENTAL REPORT

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

Attachment to and part of Report 31-1-17439

Date: June 2013
To: Alaska Department of Environmental Conservation
Re: ADOT&PF Aniak Area-Wide Aniak, Alaska

Important Information About Your Geotechnical/Environmental Report

CONSULTING SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.

Consultants prepare reports to meet the specific needs of specific individuals. A report prepared for a civil engineer may not be adequate for a construction contractor or even another civil engineer. Unless indicated otherwise, your consultant prepared your report expressly for you and expressly for the purposes you indicated. No one other than you should apply this report for its intended purpose without first conferring with the consultant. No party should apply this report for any purpose other than that originally contemplated without first conferring with the consultant.

THE CONSULTANT'S REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

A geotechnical/environmental report is based on a subsurface exploration plan designed to consider a unique set of project-specific factors. Depending on the project, these may include: the general nature of the structure and property involved; its size and configuration; its historical use and practice; the location of the structure on the site and its orientation; other improvements such as access roads, parking lots, and underground utilities; and the additional risk created by scope-of-service limitations imposed by the client. To help avoid costly problems, ask the consultant to evaluate how any factors that change subsequent to the date of the report may affect the recommendations. Unless your consultant indicates otherwise, your report should not be used: (1) when the nature of the proposed project is changed (for example, if an office building will be erected instead of a parking garage, or if a refrigerated warehouse will be built instead of an unrefrigerated one, or chemicals are discovered on or near the site); (2) when the size, elevation, or configuration of the proposed project is altered; (3) when the location or orientation of the proposed project is modified; (4) when there is a change of ownership; or (5) for application to an adjacent site. Consultants cannot accept responsibility for problems that may occur if they are not consulted after factors, which were considered in the development of the report, have changed.

SUBSURFACE CONDITIONS CAN CHANGE.

Subsurface conditions may be affected as a result of natural processes or human activity. Because a geotechnical/environmental report is based on conditions that existed at the time of subsurface exploration, construction decisions should not be based on a report whose adequacy may have been affected by time. Ask the consultant to advise if additional tests are desirable before construction starts; for example, groundwater conditions commonly vary seasonally.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes, or groundwater fluctuations may also affect subsurface conditions and, thus, the continuing adequacy of a geotechnical/environmental report. The consultant should be kept apprised of any such events, and should be consulted to determine if additional tests are necessary

MOST RECOMMENDATIONS ARE PROFESSIONAL JUDGMENTS.

Site exploration and testing identifies actual surface and subsurface conditions only at those points where samples are taken. The data were extrapolated by your consultant, who then applied judgment to render an opinion about overall subsurface conditions. The actual interface between materials may be far more gradual or abrupt than your report indicates. Actual conditions in areas not sampled may differ from those predicted in your report. While nothing can be done to prevent such situations, you and your consultant can work together to help reduce their impacts. Retaining your consultant to observe subsurface construction operations can be particularly beneficial in this respect.

A REPORT'S CONCLUSIONS ARE PRELIMINARY.

The conclusions contained in your consultant's report are preliminary because they must be based on the assumption that conditions revealed through selective exploratory sampling are indicative of actual conditions throughout a site. Actual subsurface conditions can be discerned only during earthwork; therefore, you should retain your consultant to observe actual conditions and to provide conclusions. Only the consultant who prepared the report is fully familiar with the background information needed to determine whether or not the report's recommendations based on those conclusions are valid and whether or not the contractor is abiding by applicable recommendations. The consultant who developed your report cannot assume responsibility or liability for the adequacy of the report's recommendations if another party is retained to observe construction.

THE CONSULTANT'S REPORT IS SUBJECT TO MISINTERPRETATION.

Costly problems can occur when other design professionals develop their plans based on misinterpretation of a geotechnical/environmental report. To help avoid these problems, the consultant should be retained to work with other project design professionals to explain relevant geotechnical, geological, hydrogeological, and environmental findings, and to review the adequacy of their plans and specifications relative to these issues.

BORING LOGS AND/OR MONITORING WELL DATA SHOULD NOT BE SEPARATED FROM THE REPORT.

Final boring logs developed by the consultant are based upon interpretation of field logs (assembled by site personnel), field test results, and laboratory and/or office evaluation of field samples and data. Only final boring logs and data are customarily included in geotechnical/environmental reports. These final logs should not, under any circumstances, be redrawn for inclusion in architectural or other design drawings, because drafters may commit errors or omissions in the transfer process.

To reduce the likelihood of boring log or monitoring well misinterpretation, contractors should be given ready access to the complete geotechnical engineering/environmental report prepared or authorized for their use. If access is provided only to the report prepared for you, you should advise contractors of the report's limitations, assuming that a contractor was not one of the specific persons for whom the report was prepared, and that developing construction cost estimates was not one of the specific purposes for which it was prepared. While a contractor may gain important knowledge from a report prepared for another party, the contractor should discuss the report with your consultant and perform the additional or alternative work believed necessary to obtain the data specifically appropriate for construction cost estimating purposes. Some clients hold the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing the best available information to contractors helps prevent costly construction problems and the adversarial attitudes that aggravate them to a disproportionate scale.

READ RESPONSIBILITY CLAUSES CLOSELY.

Because geotechnical/environmental engineering is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, consultants have developed a number of clauses for use in their contracts, reports and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where the consultant's responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

The preceding paragraphs are based on information provided by the
ASFE/Association of Engineering Firms Practicing in the Geosciences, Silver Spring, Maryland

2408.38.006

SGS

Laboratory Report of Analysis

To: Shannon & Wilson, Inc.
5430 Fairbanks Street, Suite 3
Anchorage, AK 99518
(907)561-2120

Report Number: **1132524**

Client Project: **32-1-17439-002 Aniak**

Dear Dan McMahon, II,

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

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

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

Sincerely,
SGS North America Inc.

Steven R. Crupi
SGS North America
Environmental Services – Alaska Division
Project Manager

Steven Crupi
2013.07.08
12:38:32 -08'00'

Steve Crupi — Date
Project Manager
steven.crupi@sgs.com

Print Date: 07/05/2013 4:26:47PM

Case Narrative

Customer: SHANNOT **Shannon & Wilson, Inc.**

Project: 1132524 **32-1-17439-002 Aniak**

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

1132524001 PS **17439-LS3SS4**

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.

1132524002 PS **17439-LS3SS3**

AK102 - 5a-Androstane (surrogate) recovery is outside QC criteria due to sample dilution.

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

1132524003 PS **17439-LS3SS5**

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.

1132524004 PS **17439-LS3SS10**

AK102 - 5a-Androstane (surrogate) recovery is outside QC criteria (biased high) due to hydrocarbon interference.

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

1132524005 PS **17439-LS3SS16**

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

1132524006 PS **17439-LS2SS3**

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.

1132524007 PS **17439-LS1SS1**

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

AK102 - 5a-Androstane (surrogate) recovery is outside QC criteria due to sample matrix.

AK101 - BFB (surrogate) recovery does not meet QC criteria (biased high) due to matrix interference.

1132524008 PS **17439-LS1SS10**

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

1132524009 PS **17439-LS1SS13**

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

1132524010 PS **17439-LS1SS23**

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.

8270D SIM- LOQs are elevated due to sample dilution. Sample analyzed at a dilution due to matrix interference with internal standards.

1132524011 PS **17439-LS1SS43**

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.

8270D SIM- LOQs are elevated due to sample dilution. Sample analyzed at a dilution due to matrix interference with internal standards.

1132524012 PS **17439-LS1SS25**

AK101 - BFB (surrogate) recovery does not meet QC criteria (biased high) due to matrix interference.

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

Case Narrative

Customer: SHANNOT **Shannon & Wilson, Inc.**

Project: 1132524 **32-1-17439-002 Aniak**

1132524013 PS **17439-LS1SS32**

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

8270D SIM- LOQs are elevated due to sample dilution. Sample analyzed at a dilution due to matrix interference with internal standards.

1132524014 PS **17439-LS1SS34**

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

1132524017 PS **17439-LS4SS1**

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

1132524018 PS **17439-LS4SS3**

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

1132524019 PS **17439-LS4SS23**

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

1155844 MS **1132534010MS**

8270D SIM - MS/MSD recoveries for multiple analytes are outside of QC criteria. Refer to LCS for accuracy.

8270D SIM- LOQs are elevated due to sample dilution. Sample analyzed at a dilution due to matrix interference with internal standards.

1155845 MSD **1132534010MSD**

8270D SIM - MS/MSD recoveries for multiple analytes are outside of QC criteria. Refer to LCS for accuracy.

8270D SIM- LOQs are elevated due to sample dilution. Sample analyzed at a dilution due to matrix interference with internal standards.

1156420 MS **1132524001MS**

8021B - MS recovery for o-Xylene does not meet QC criteria due to matrix interference. Refer to LCS/LSCD for accuracy.

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

SGS

Report of Manual Integrations

Laboratory ID	Client Sample ID	Analytical Batch	Analyte	Reason
8270D SIMS (PAH)				
1132524013	17439-LS1SS32	XMS7404	Benzo[b]Fluoranthene	SP

Manual Integration Reason Code Descriptions

Code	Description
O	Original Chromatogram
M	Modified Chromatogram
SS	Skimmed surrogate
BLG	Closed baseline gap
RP	Reassign peak name
PIR	Pattern integration required
IT	Included tail
SP	Split peak
RSP	Removed split peak
FPS	Forced peak start/stop
BLC	Baseline correction
PNF	Peak not found by software

All DRO/RRO analysis are integrated per SOP.

Laboratory Qualifiers

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

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

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

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV	Continuing Calibration Verification
CL	Control Limit
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LOD	Limit of Detection (i.e., 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.

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

Member of SGS Group

Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
17439-LS3SS4	1132524001	06/18/2013	06/20/2013	Soil/Solid (dry weight)
17439-LS3SS3	1132524002	06/18/2013	06/20/2013	Soil/Solid (dry weight)
17439-LS3SS5	1132524003	06/18/2013	06/20/2013	Soil/Solid (dry weight)
17439-LS3SS10	1132524004	06/18/2013	06/20/2013	Soil/Solid (dry weight)
17439-LS3SS16	1132524005	06/18/2013	06/20/2013	Soil/Solid (dry weight)
17439-LS2SS3	1132524006	06/18/2013	06/20/2013	Soil/Solid (dry weight)
17439-LS1SS1	1132524007	06/19/2013	06/20/2013	Soil/Solid (dry weight)
17439-LS1SS10	1132524008	06/19/2013	06/20/2013	Soil/Solid (dry weight)
17439-LS1SS13	1132524009	06/19/2013	06/20/2013	Soil/Solid (dry weight)
17439-LS1SS23	1132524010	06/19/2013	06/20/2013	Soil/Solid (dry weight)
17439-LS1SS43	1132524011	06/19/2013	06/20/2013	Soil/Solid (dry weight)
17439-LS1SS25	1132524012	06/19/2013	06/20/2013	Soil/Solid (dry weight)
17439-LS1SS32	1132524013	06/19/2013	06/20/2013	Soil/Solid (dry weight)
17439-LS1SS34	1132524014	06/19/2013	06/20/2013	Soil/Solid (dry weight)
17439-TB1	1132524015	06/18/2013	06/20/2013	Soil/Solid (dry weight)
17439-LS4SS2	1132524016	06/19/2013	06/20/2013	Soil/Solid (dry weight)
17439-LS4SS1	1132524017	06/19/2013	06/20/2013	Soil/Solid (dry weight)
17439-LS4SS3	1132524018	06/19/2013	06/20/2013	Soil/Solid (dry weight)
17439-LS4SS23	1132524019	06/19/2013	06/20/2013	Soil/Solid (dry weight)
17439-TB2	1132524020	06/18/2013	06/20/2013	Soil/Solid (dry weight)

Method	Method Description
8270D SIMS (PAH)	8270 PAH SIM Semi-Volatiles GC/MS
AK101	AK101/8021 Combo. (S)
SW8021B	AK101/8021 Combo. (S)
AK102	Diesel Range Organics (S)
AK101	Gasoline Range Organics (S)
SM21 2540G	Percent Solids SM2540G
SW8260B	VOC 8260 (S) Field Extracted

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Detectable Results Summary

Client Sample ID: **17439-LS3SS4**
Lab Sample ID: 1132524001
Semivolatile Organic Fuels
Volatile Fuels

Parameter	Result	Units
Diesel Range Organics	4630	mg/Kg
Ethylbenzene	49.5	ug/Kg
Gasoline Range Organics	41.4	mg/Kg
o-Xylene	300	ug/Kg
P & M -Xylene	253	ug/Kg
Toluene	19.4J	ug/Kg

Client Sample ID: **17439-LS3SS3**
Lab Sample ID: 1132524002
Semivolatile Organic Fuels
Volatile Fuels

Parameter	Result	Units
Diesel Range Organics	2390	mg/Kg
Gasoline Range Organics	8.50	mg/Kg
o-Xylene	91.2	ug/Kg
P & M -Xylene	28.6J	ug/Kg
Toluene	27.7J	ug/Kg

Client Sample ID: **17439-LS3SS5**
Lab Sample ID: 1132524003
Semivolatile Organic Fuels
Volatile Fuels

Parameter	Result	Units
Diesel Range Organics	13200	mg/Kg
Benzene	10.9J	ug/Kg
Ethylbenzene	161	ug/Kg
Gasoline Range Organics	120	mg/Kg
o-Xylene	2480	ug/Kg
P & M -Xylene	702	ug/Kg

Client Sample ID: **17439-LS3SS10**
Lab Sample ID: 1132524004
Semivolatile Organic Fuels
Volatile Fuels

Parameter	Result	Units
Diesel Range Organics	3970	mg/Kg
Gasoline Range Organics	13.7	mg/Kg
o-Xylene	116	ug/Kg
P & M -Xylene	37.7J	ug/Kg

Client Sample ID: **17439-LS3SS16**
Lab Sample ID: 1132524005
Semivolatile Organic Fuels
Volatile Fuels

Parameter	Result	Units
Diesel Range Organics	1530	mg/Kg
Gasoline Range Organics	8.29	mg/Kg
o-Xylene	47.6	ug/Kg
P & M -Xylene	22.8J	ug/Kg
Toluene	15.2J	ug/Kg

Client Sample ID: **17439-LS2SS3**
Lab Sample ID: 1132524006
Semivolatile Organic Fuels
Volatile Fuels

Parameter	Result	Units
Diesel Range Organics	890	mg/Kg
Benzene	12.8J	ug/Kg
Ethylbenzene	19.4J	ug/Kg
Gasoline Range Organics	43.0	mg/Kg
o-Xylene	320	ug/Kg
P & M -Xylene	202	ug/Kg

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Detectable Results Summary

Client Sample ID: **17439-LS1SS1**
Lab Sample ID: 1132524007
Semivolatile Organic Fuels
Volatile Fuels

Parameter	Result	Units
Diesel Range Organics	1500	mg/Kg
Ethylbenzene	38.2	ug/Kg
Gasoline Range Organics	32.4	mg/Kg
o-Xylene	225	ug/Kg
P & M -Xylene	308	ug/Kg
Toluene	23.2J	ug/Kg

Client Sample ID: **17439-LS1SS10**
Lab Sample ID: 1132524008
Semivolatile Organic Fuels
Volatile Fuels

Parameter	Result	Units
Diesel Range Organics	167	mg/Kg
Benzene	8.73J	ug/Kg
Gasoline Range Organics	4.89	mg/Kg
o-Xylene	28.4	ug/Kg
P & M -Xylene	43.1J	ug/Kg
Toluene	17.5J	ug/Kg

Client Sample ID: **17439-LS1SS13**
Lab Sample ID: 1132524009
Semivolatile Organic Fuels
Volatile Fuels

Parameter	Result	Units
Diesel Range Organics	177	mg/Kg
Gasoline Range Organics	2.86J	mg/Kg
o-Xylene	21.5J	ug/Kg
P & M -Xylene	38.7J	ug/Kg
Toluene	20.3J	ug/Kg

Client Sample ID: **17439-LS1SS23**
Lab Sample ID: 1132524010
Semivolatile Organic Fuels
Volatile Fuels

Parameter	Result	Units
Diesel Range Organics	1790	mg/Kg
Benzene	7.34J	ug/Kg
Gasoline Range Organics	57.2	mg/Kg
o-Xylene	423	ug/Kg
P & M -Xylene	352	ug/Kg

Client Sample ID: **17439-LS1SS43**
Lab Sample ID: 1132524011
Polynuclear Aromatics GC/MS
Semivolatile Organic Fuels
Volatile Fuels

Parameter	Result	Units
Phenanthrene	9.13J	ug/Kg
Diesel Range Organics	1840	mg/Kg
Benzene	9.04J	ug/Kg
Gasoline Range Organics	73.7	mg/Kg
o-Xylene	569	ug/Kg
P & M -Xylene	452	ug/Kg

Client Sample ID: **17439-LS1SS25**
Lab Sample ID: 1132524012
Semivolatile Organic Fuels
Volatile Fuels

Parameter	Result	Units
Diesel Range Organics	20.8J	mg/Kg
Gasoline Range Organics	3.99	mg/Kg
o-Xylene	27.2J	ug/Kg

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Detectable Results Summary

Client Sample ID: **17439-LS1SS32**
Lab Sample ID: 1132524013

	Parameter	Result	Units
Polynuclear Aromatics GC/MS	1-Methylnaphthalene	192	ug/Kg
	2-Methylnaphthalene	47.6	ug/Kg
	Phenanthrene	9.32J	ug/Kg
Semivolatile Organic Fuels	Diesel Range Organics	1320	mg/Kg
Volatile Fuels	Benzene	8.67J	ug/Kg
	Ethylbenzene	37.6	ug/Kg
	Gasoline Range Organics	109	mg/Kg
	o-Xylene	2860	ug/Kg
	P & M -Xylene	865	ug/Kg

Client Sample ID: **17439-LS1SS34**
Lab Sample ID: 1132524014

	Parameter	Result	Units
Semivolatile Organic Fuels	Diesel Range Organics	125	mg/Kg
Volatile Fuels	Benzene	5.48J	ug/Kg
	Ethylbenzene	15.8J	ug/Kg
	Gasoline Range Organics	6.86	mg/Kg
	o-Xylene	39.3	ug/Kg
	P & M -Xylene	56.4J	ug/Kg

Client Sample ID: **17439-TB1**
Lab Sample ID: 1132524015

	Parameter	Result	Units
Volatile Fuels	Gasoline Range Organics	0.992J	mg/Kg

Client Sample ID: **17439-LS4SS2**
Lab Sample ID: 1132524016

	Parameter	Result	Units
Semivolatile Organic Fuels	Diesel Range Organics	20.9J	mg/Kg
Volatile Fuels	Gasoline Range Organics	2.34J	mg/Kg
Volatile GC/MS	Benzene	6.93J	ug/Kg
	Naphthalene	25.1J	ug/Kg
	o-Xylene	12.9J	ug/Kg
	P & M -Xylene	29.7J	ug/Kg
	Toluene	22.1J	ug/Kg
	Xylenes (total)	42.6J	ug/Kg

Client Sample ID: **17439-LS4SS1**
Lab Sample ID: 1132524017

	Parameter	Result	Units
Semivolatile Organic Fuels	Diesel Range Organics	115	mg/Kg
Volatile Fuels	Gasoline Range Organics	3.58J	mg/Kg
Volatile GC/MS	Naphthalene	23.8J	ug/Kg
	o-Xylene	15.5J	ug/Kg
	P & M -Xylene	36.6J	ug/Kg
	Toluene	14.3J	ug/Kg
	Xylenes (total)	52.1J	ug/Kg

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Detectable Results Summary

Client Sample ID: **17439-LS4SS3**
Lab Sample ID: 1132524018

	Parameter	Result	Units
Semivolatile Organic Fuels	Diesel Range Organics	238	mg/Kg
Volatile Fuels	Gasoline Range Organics	1.71J	mg/Kg
Volatile GC/MS	Naphthalene	23.2J	ug/Kg
	P & M -Xylene	22.1J	ug/Kg

Client Sample ID: **17439-LS4SS23**
Lab Sample ID: 1132524019

	Parameter	Result	Units
Semivolatile Organic Fuels	Diesel Range Organics	226	mg/Kg
Volatile Fuels	Gasoline Range Organics	1.49J	mg/Kg
Volatile GC/MS	Naphthalene	21.9J	ug/Kg
	P & M -Xylene	22.6J	ug/Kg

Client Sample ID: **17439-TB2**
Lab Sample ID: 1132524020

	Parameter	Result	Units
Volatile Fuels	Gasoline Range Organics	1.22J	mg/Kg

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Results of **17439-LS3SS4**

Client Sample ID: **17439-LS3SS4**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524001
Lab Project ID: 1132524

Collection Date: 06/18/13 11:20
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 82.2

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Diesel Range Organics	4630		241	74.8	mg/Kg	10	06/24/13 16:34
Surrogates							
5a Androstane	89		50-150		%	10	06/24/13 16:34

Batch Information

Analytical Batch: XFC10938
Analytical Method: AK102
Analyst: MCM
Analytical Date/Time: 06/24/13 16:34
Container ID: 1132524001-B

Prep Batch: XXX29225
Prep Method: SW3550C
Prep Date/Time: 06/21/13 11:30
Prep Initial Wt./Vol.: 30.233 g
Prep Extract Vol: 1 mL

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Results of **17439-LS3SS4**

Client Sample ID: **17439-LS3SS4**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524001
Lab Project ID: 1132524

Collection Date: 06/18/13 11:20
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 82.2

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Gasoline Range Organics	41.4		4.63	1.39	mg/Kg	1	06/29/13 01:36
Surrogates							
4-Bromofluorobenzene	169	*	50-150		%	1	06/29/13 01:36

Batch Information

Analytical Batch: VFC11484
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/29/13 01:36
Container ID: 1132524001-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/18/13 11:20
Prep Initial Wt./Vol.: 42.853 g
Prep Extract Vol: 32.6146 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Benzene	14.8	U	23.1	7.40	ug/Kg	1	06/29/13 01:36
Ethylbenzene	49.5		46.3	14.4	ug/Kg	1	06/29/13 01:36
o-Xylene	300		46.3	14.4	ug/Kg	1	06/29/13 01:36
P & M -Xylene	253		92.6	27.8	ug/Kg	1	06/29/13 01:36
Toluene	19.4	J	46.3	14.4	ug/Kg	1	06/29/13 01:36
Surrogates							
1,4-Difluorobenzene	98.5		72-119		%	1	06/29/13 01:36

Batch Information

Analytical Batch: VFC11484
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 06/29/13 01:36
Container ID: 1132524001-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/18/13 11:20
Prep Initial Wt./Vol.: 42.853 g
Prep Extract Vol: 32.6146 mL

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Results of **17439-LS3SS3**

Client Sample ID: **17439-LS3SS3**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524002
Lab Project ID: 1132524

Collection Date: 06/18/13 11:30
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 84.1

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Diesel Range Organics	2390		237	73.5	mg/Kg	10	06/24/13 16:43
Surrogates							
5a Androstane	43.1	*	50-150		%	10	06/24/13 16:43

Batch Information

Analytical Batch: XFC10938
Analytical Method: AK102
Analyst: MCM
Analytical Date/Time: 06/24/13 16:43
Container ID: 1132524002-B

Prep Batch: XXX29225
Prep Method: SW3550C
Prep Date/Time: 06/21/13 11:30
Prep Initial Wt./Vol.: 30.101 g
Prep Extract Vol: 1 mL

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Results of **17439-LS3SS3**

Client Sample ID: **17439-LS3SS3**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524002
Lab Project ID: 1132524

Collection Date: 06/18/13 11:30
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 84.1

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Gasoline Range Organics	8.50		4.20	1.26	mg/Kg	1	06/29/13 03:26
Surrogates							
4-Bromofluorobenzene	99.4		50-150		%	1	06/29/13 03:26

Batch Information

Analytical Batch: VFC11484
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/29/13 03:26
Container ID: 1132524002-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/18/13 11:30
Prep Initial Wt./Vol.: 45.721 g
Prep Extract Vol: 32.2882 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Benzene	13.4	U	21.0	6.72	ug/Kg	1	06/29/13 03:26
Ethylbenzene	26.2	U	42.0	13.1	ug/Kg	1	06/29/13 03:26
o-Xylene	91.2		42.0	13.1	ug/Kg	1	06/29/13 03:26
P & M -Xylene	28.6	J	84.0	25.2	ug/Kg	1	06/29/13 03:26
Toluene	27.7	J	42.0	13.1	ug/Kg	1	06/29/13 03:26
Surrogates							
1,4-Difluorobenzene	95.6		72-119		%	1	06/29/13 03:26

Batch Information

Analytical Batch: VFC11484
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 06/29/13 03:26
Container ID: 1132524002-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/18/13 11:30
Prep Initial Wt./Vol.: 45.721 g
Prep Extract Vol: 32.2882 mL

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Results of **17439-LS3SS5**

Client Sample ID: **17439-LS3SS5**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524003
Lab Project ID: 1132524

Collection Date: 06/18/13 11:35
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 82.6

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Diesel Range Organics	13200		1190	370	mg/Kg	50	06/24/13 16:53
Surrogates							
5a Androstane	107		50-150		%	50	06/24/13 16:53

Batch Information

Analytical Batch: XFC10938
Analytical Method: AK102
Analyst: MCM
Analytical Date/Time: 06/24/13 16:53
Container ID: 1132524003-B

Prep Batch: XXX29225
Prep Method: SW3550C
Prep Date/Time: 06/21/13 11:30
Prep Initial Wt./Vol.: 30.411 g
Prep Extract Vol: 1 mL

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Results of **17439-LS3SS5**

Client Sample ID: **17439-LS3SS5**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524003
Lab Project ID: 1132524

Collection Date: 06/18/13 11:35
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 82.6

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Gasoline Range Organics	120		4.96	1.49	mg/Kg	1	06/29/13 03:45
Surrogates							
4-Bromofluorobenzene	227	*	50-150		%	1	06/29/13 03:45

Batch Information

Analytical Batch: VFC11484
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/29/13 03:45
Container ID: 1132524003-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/18/13 11:35
Prep Initial Wt./Vol.: 38.721 g
Prep Extract Vol: 31.7474 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Benzene	10.9	J	24.8	7.94	ug/Kg	1	06/29/13 03:45
Ethylbenzene	161		49.6	15.5	ug/Kg	1	06/29/13 03:45
o-Xylene	2480		49.6	15.5	ug/Kg	1	06/29/13 03:45
P & M -Xylene	702		99.3	29.8	ug/Kg	1	06/29/13 03:45
Toluene	31.0	U	49.6	15.5	ug/Kg	1	06/29/13 03:45
Surrogates							
1,4-Difluorobenzene	102		72-119		%	1	06/29/13 03:45

Batch Information

Analytical Batch: VFC11484
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 06/29/13 03:45
Container ID: 1132524003-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/18/13 11:35
Prep Initial Wt./Vol.: 38.721 g
Prep Extract Vol: 31.7474 mL

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Results of **17439-LS3SS10**

Client Sample ID: **17439-LS3SS10**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524004
Lab Project ID: 1132524

Collection Date: 06/18/13 11:40
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 89.4

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Diesel Range Organics	3970		221	68.5	mg/Kg	10	06/24/13 17:03
Surrogates							
5a Androstane	400	*	50-150		%	10	06/24/13 17:03

Batch Information

Analytical Batch: XFC10938
Analytical Method: AK102
Analyst: MCM
Analytical Date/Time: 06/24/13 17:03
Container ID: 1132524004-B

Prep Batch: XXX29225
Prep Method: SW3550C
Prep Date/Time: 06/21/13 11:30
Prep Initial Wt./Vol.: 30.402 g
Prep Extract Vol: 1 mL

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Results of **17439-LS3SS10**

Client Sample ID: **17439-LS3SS10**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524004
Lab Project ID: 1132524

Collection Date: 06/18/13 11:40
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 89.4

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Gasoline Range Organics	13.7		3.59	1.08	mg/Kg	1	06/29/13 04:03
Surrogates							
4-Bromofluorobenzene	115		50-150		%	1	06/29/13 04:03

Batch Information

Analytical Batch: VFC11484
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/29/13 04:03
Container ID: 1132524004-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/18/13 11:40
Prep Initial Wt./Vol.: 46.717 g
Prep Extract Vol: 29.9635 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Benzene	11.5	U	17.9	5.74	ug/Kg	1	06/29/13 04:03
Ethylbenzene	22.4	U	35.9	11.2	ug/Kg	1	06/29/13 04:03
o-Xylene	116		35.9	11.2	ug/Kg	1	06/29/13 04:03
P & M -Xylene	37.7	J	71.8	21.5	ug/Kg	1	06/29/13 04:03
Toluene	22.4	U	35.9	11.2	ug/Kg	1	06/29/13 04:03
Surrogates							
1,4-Difluorobenzene	97		72-119		%	1	06/29/13 04:03

Batch Information

Analytical Batch: VFC11484
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 06/29/13 04:03
Container ID: 1132524004-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/18/13 11:40
Prep Initial Wt./Vol.: 46.717 g
Prep Extract Vol: 29.9635 mL

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Results of **17439-LS3SS16**

Client Sample ID: **17439-LS3SS16**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524005
Lab Project ID: 1132524

Collection Date: 06/18/13 11:45
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 86.7

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Diesel Range Organics	1530		115	35.7	mg/Kg	5	06/26/13 11:04
Surrogates							
5a Androstane	93.7		50-150		%	5	06/26/13 11:04

Batch Information

Analytical Batch: XFC10940
Analytical Method: AK102
Analyst: MCM
Analytical Date/Time: 06/26/13 11:04
Container ID: 1132524005-B

Prep Batch: XXX29241
Prep Method: SW3550C
Prep Date/Time: 06/25/13 06:45
Prep Initial Wt./Vol.: 30.015 g
Prep Extract Vol: 1 mL

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Results of **17439-LS3SS16**

Client Sample ID: **17439-LS3SS16**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524005
Lab Project ID: 1132524

Collection Date: 06/18/13 11:45
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 86.7

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Gasoline Range Organics	8.29		3.81	1.14	mg/Kg	1	06/29/13 04:21
Surrogates							
4-Bromofluorobenzene	109		50-150		%	1	06/29/13 04:21

Batch Information

Analytical Batch: VFC11484
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/29/13 04:21
Container ID: 1132524005-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/18/13 11:45
Prep Initial Wt./Vol.: 47.473 g
Prep Extract Vol: 31.3251 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Benzene	12.2	U	19.0	6.09	ug/Kg	1	06/29/13 04:21
Ethylbenzene	23.8	U	38.1	11.9	ug/Kg	1	06/29/13 04:21
o-Xylene	47.6		38.1	11.9	ug/Kg	1	06/29/13 04:21
P & M -Xylene	22.8	J	76.1	22.8	ug/Kg	1	06/29/13 04:21
Toluene	15.2	J	38.1	11.9	ug/Kg	1	06/29/13 04:21
Surrogates							
1,4-Difluorobenzene	94		72-119		%	1	06/29/13 04:21

Batch Information

Analytical Batch: VFC11484
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 06/29/13 04:21
Container ID: 1132524005-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/18/13 11:45
Prep Initial Wt./Vol.: 47.473 g
Prep Extract Vol: 31.3251 mL

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Results of **17439-LS2SS3**

Client Sample ID: **17439-LS2SS3**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524006
Lab Project ID: 1132524

Collection Date: 06/18/13 18:50
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 85.9

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Diesel Range Organics	890		92.8	28.8	mg/Kg	4	06/24/13 17:12
Surrogates							
5a Androstane	77.5		50-150		%	4	06/24/13 17:12

Batch Information

Analytical Batch: XFC10938
Analytical Method: AK102
Analyst: MCM
Analytical Date/Time: 06/24/13 17:12
Container ID: 1132524006-B

Prep Batch: XXX29225
Prep Method: SW3550C
Prep Date/Time: 06/21/13 11:30
Prep Initial Wt./Vol.: 30.11 g
Prep Extract Vol: 1 mL

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Results of **17439-LS2SS3**

Client Sample ID: **17439-LS2SS3**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524006
Lab Project ID: 1132524

Collection Date: 06/18/13 18:50
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 85.9

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Gasoline Range Organics	43.0		4.14	1.24	mg/Kg	1	06/29/13 04:40
Surrogates							
4-Bromofluorobenzene	196	*	50-150		%	1	06/29/13 04:40

Batch Information

Analytical Batch: VFC11484
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/29/13 04:40
Container ID: 1132524006-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/18/13 18:50
Prep initial Wt./Vol.: 43.879 g
Prep Extract Vol: 31.1883 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Benzene	12.8	J	20.7	6.62	ug/Kg	1	06/29/13 04:40
Ethylbenzene	19.4	J	41.4	12.9	ug/Kg	1	06/29/13 04:40
o-Xylene	320		41.4	12.9	ug/Kg	1	06/29/13 04:40
P & M -Xylene	202		82.7	24.8	ug/Kg	1	06/29/13 04:40
Toluene	25.8	U	41.4	12.9	ug/Kg	1	06/29/13 04:40
Surrogates							
1,4-Difluorobenzene	98.4		72-119		%	1	06/29/13 04:40

Batch Information

Analytical Batch: VFC11484
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 06/29/13 04:40
Container ID: 1132524006-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/18/13 18:50
Prep initial Wt./Vol.: 43.879 g
Prep Extract Vol: 31.1883 mL

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Results of **17439-LS1SS1**

Client Sample ID: **17439-LS1SS1**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524007
Lab Project ID: 1132524

Collection Date: 06/19/13 16:40
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 88.2

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Diesel Range Organics	1500		89.5	27.7	mg/Kg	4	06/22/13 15:47
Surrogates							
5a Androstane	261	*	50-150		%	4	06/22/13 15:47

Batch Information

Analytical Batch: XFC10936
Analytical Method: AK102
Analyst: HM
Analytical Date/Time: 06/22/13 15:47
Container ID: 1132524007-B

Prep Batch: XXX29225
Prep Method: SW3550C
Prep Date/Time: 06/21/13 11:30
Prep Initial Wt./Vol.: 30.416 g
Prep Extract Vol: 1 mL

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Results of **17439-LS1SS1**

Client Sample ID: **17439-LS1SS1**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524007
Lab Project ID: 1132524

Collection Date: 06/19/13 16:40
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 88.2

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Gasoline Range Organics	32.4		3.32	0.996	mg/Kg	1	06/29/13 04:58
Surrogates							
4-Bromofluorobenzene	233	*	50-150		%	1	06/29/13 04:58

Batch Information

Analytical Batch: VFC11484
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/29/13 04:58
Container ID: 1132524007-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/19/13 16:40
Prep Initial Wt./Vol.: 53.557 g
Prep Extract Vol: 31.343 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Benzene	10.6	U	16.6	5.31	ug/Kg	1	06/29/13 04:58
Ethylbenzene	38.2		33.2	10.4	ug/Kg	1	06/29/13 04:58
o-Xylene	225		33.2	10.4	ug/Kg	1	06/29/13 04:58
P & M -Xylene	308		66.4	19.9	ug/Kg	1	06/29/13 04:58
Toluene	23.2	J	33.2	10.4	ug/Kg	1	06/29/13 04:58
Surrogates							
1,4-Difluorobenzene	94		72-119		%	1	06/29/13 04:58

Batch Information

Analytical Batch: VFC11484
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 06/29/13 04:58
Container ID: 1132524007-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/19/13 16:40
Prep Initial Wt./Vol.: 53.557 g
Prep Extract Vol: 31.343 mL

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Results of **17439-LS1SS10**

Client Sample ID: **17439-LS1SS10**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524008
Lab Project ID: 1132524

Collection Date: 06/19/13 16:45
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 92.5

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Diesel Range Organics	167		21.6	6.69	mg/Kg	1	06/24/13 17:22
Surrogates							
5a Androstane	85.1		50-150		%	1	06/24/13 17:22

Batch Information

Analytical Batch: XFC10938
Analytical Method: AK102
Analyst: MCM
Analytical Date/Time: 06/24/13 17:22
Container ID: 1132524008-B

Prep Batch: XXX29225
Prep Method: SW3550C
Prep Date/Time: 06/21/13 11:30
Prep Initial Wt./Vol.: 30.072 g
Prep Extract Vol: 1 mL

Print Date: 07/05/2013 4:26:50PM

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Results of **17439-LS1SS10**

Client Sample ID: **17439-LS1SS10**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524008
Lab Project ID: 1132524

Collection Date: 06/19/13 16:45
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 92.5

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Gasoline Range Organics	4.89		2.73	0.819	mg/Kg	1	06/29/13 05:17
Surrogates							
4-Bromofluorobenzene	109		50-150		%	1	06/29/13 05:17

Batch Information

Analytical Batch: VFC11484
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/29/13 05:17
Container ID: 1132524008-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/19/13 16:45
Prep Initial Wt./Vol.: 58.149 g
Prep Extract Vol: 29.3545 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Benzene	8.73	J	13.6	4.37	ug/Kg	1	06/29/13 05:17
Ethylbenzene	17.0	U	27.3	8.51	ug/Kg	1	06/29/13 05:17
o-Xylene	28.4		27.3	8.51	ug/Kg	1	06/29/13 05:17
P & M -Xylene	43.1	J	54.6	16.4	ug/Kg	1	06/29/13 05:17
Toluene	17.5	J	27.3	8.51	ug/Kg	1	06/29/13 05:17
Surrogates							
1,4-Difluorobenzene	96.8		72-119		%	1	06/29/13 05:17

Batch Information

Analytical Batch: VFC11484
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 06/29/13 05:17
Container ID: 1132524008-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/19/13 16:45
Prep Initial Wt./Vol.: 58.149 g
Prep Extract Vol: 29.3545 mL

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Results of **17439-LS1SS13**

Client Sample ID: **17439-LS1SS13**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524009
Lab Project ID: 1132524

Collection Date: 06/19/13 16:52
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 86.6

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Diesel Range Organics	177		22.9	7.10	mg/Kg	1	06/25/13 17:25
Surrogates							
5a Androstane	104		50-150		%	1	06/25/13 17:25

Batch Information

Analytical Batch: XFC10939
Analytical Method: AK102
Analyst: MCM
Analytical Date/Time: 06/25/13 17:25
Container ID: 1132524009-B

Prep Batch: XXX29238
Prep Method: SW3550C
Prep Date/Time: 06/24/13 16:30
Prep Initial Wt./Vol.: 30.252 g
Prep Extract Vol: 1 mL

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Results of **17439-LS1SS13**

Client Sample ID: **17439-LS1SS13**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524009
Lab Project ID: 1132524

Collection Date: 06/19/13 16:52
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 86.6

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Gasoline Range Organics	2.86	J	3.91	1.17	mg/Kg	1	06/29/13 06:31
Surrogates							
4-Bromofluorobenzene	89.5		50-150		%	1	06/29/13 06:31

Batch Information

Analytical Batch: VFC11484
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/29/13 06:31
Container ID: 1132524009-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/19/13 16:52
Prep Initial Wt./Vol.: 46.01 g
Prep Extract Vol: 31.1636 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Benzene	12.5	U	19.6	6.26	ug/Kg	1	06/29/13 06:31
Ethylbenzene	24.4	U	39.1	12.2	ug/Kg	1	06/29/13 06:31
o-Xylene	21.5	J	39.1	12.2	ug/Kg	1	06/29/13 06:31
P & M -Xylene	38.7	J	78.2	23.5	ug/Kg	1	06/29/13 06:31
Toluene	20.3	J	39.1	12.2	ug/Kg	1	06/29/13 06:31
Surrogates							
1,4-Difluorobenzene	93.9		72-119		%	1	06/29/13 06:31

Batch Information

Analytical Batch: VFC11484
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 06/29/13 06:31
Container ID: 1132524009-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/19/13 16:52
Prep Initial Wt./Vol.: 46.01 g
Prep Extract Vol: 31.1636 mL

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Results of **17439-LS1SS23**

Client Sample ID: **17439-LS1SS23**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524010
Lab Project ID: 1132524

Collection Date: 06/19/13 17:05
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 90.5

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
1-Methylnaphthalene	16.4	U	27.3	8.19	ug/Kg	5	07/01/13 19:39
2-Methylnaphthalene	16.4	U	27.3	8.19	ug/Kg	5	07/01/13 19:39
Acenaphthene	16.4	U	27.3	8.19	ug/Kg	5	07/01/13 19:39
Acenaphthylene	16.4	U	27.3	8.19	ug/Kg	5	07/01/13 19:39
Anthracene	16.4	U	27.3	8.19	ug/Kg	5	07/01/13 19:39
Benzo(a)Anthracene	16.4	U	27.3	8.19	ug/Kg	5	07/01/13 19:39
Benzo[a]pyrene	16.4	U	27.3	8.19	ug/Kg	5	07/01/13 19:39
Benzo[b]Fluoranthene	16.4	U	27.3	8.19	ug/Kg	5	07/01/13 19:39
Benzo[g,h,i]perylene	16.4	U	27.3	8.19	ug/Kg	5	07/01/13 19:39
Benzo[k]fluoranthene	16.4	U	27.3	8.19	ug/Kg	5	07/01/13 19:39
Chrysene	16.4	U	27.3	8.19	ug/Kg	5	07/01/13 19:39
Dibenzo[a,h]anthracene	16.4	U	27.3	8.19	ug/Kg	5	07/01/13 19:39
Fluoranthene	16.4	U	27.3	8.19	ug/Kg	5	07/01/13 19:39
Fluorene	16.4	U	27.3	8.19	ug/Kg	5	07/01/13 19:39
Indeno[1,2,3-c,d] pyrene	16.4	U	27.3	8.19	ug/Kg	5	07/01/13 19:39
Naphthalene	16.4	U	27.3	8.19	ug/Kg	5	07/01/13 19:39
Phenanthrene	16.4	U	27.3	8.19	ug/Kg	5	07/01/13 19:39
Pyrene	16.4	U	27.3	8.19	ug/Kg	5	07/01/13 19:39
Surrogates							
2-Fluorobiphenyl	101		45-105		%	5	07/01/13 19:39
Terphenyl-d14	92.7		30-125		%	5	07/01/13 19:39

Batch Information

Analytical Batch: XMS7404
Analytical Method: 8270D SIMS (PAH)
Analyst: RTS
Analytical Date/Time: 07/01/13 19:39
Container ID: 1132524010-B

Prep Batch: XXX29277
Prep Method: SW3550C
Prep Date/Time: 06/27/13 17:40
Prep Initial Wt./Vol.: 22.777 g
Prep Extract Vol: 1 mL

Print Date: 07/05/2013 4:26:50PM

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Results of **17439-LS1SS23**

Client Sample ID: **17439-LS1SS23**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524010
Lab Project ID: 1132524

Collection Date: 06/19/13 17:05
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 90.5

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Diesel Range Organics	1790		110	34.0	mg/Kg	5	06/26/13 10:36
Surrogates							
5a Androstane	85.2		50-150		%	5	06/26/13 10:36

Batch Information

Analytical Batch: XFC10940
Analytical Method: AK102
Analyst: MCM
Analytical Date/Time: 06/26/13 10:36
Container ID: 1132524010-B

Prep Batch: XXX29238
Prep Method: SW3550C
Prep Date/Time: 06/24/13 16:30
Prep Initial Wt./Vol.: 30.201 g
Prep Extract Vol: 1 mL

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Results of **17439-LS1SS23**

Client Sample ID: **17439-LS1SS23**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524010
Lab Project ID: 1132524

Collection Date: 06/19/13 17:05
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 90.5

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Gasoline Range Organics	57.2		3.19	0.957	mg/Kg	1	06/29/13 06:50
Surrogates							
4-Bromofluorobenzene	235	*	50-150		%	1	06/29/13 06:50

Batch Information

Analytical Batch: VFC11484
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/29/13 06:50
Container ID: 1132524010-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/19/13 17:05
Prep Initial Wt./Vol.: 51.798 g
Prep Extract Vol: 29.9196 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Benzene	7.34	J	16.0	5.11	ug/Kg	1	06/29/13 06:50
Ethylbenzene	19.9	U	31.9	9.96	ug/Kg	1	06/29/13 06:50
o-Xylene	423		31.9	9.96	ug/Kg	1	06/29/13 06:50
P & M -Xylene	352		63.8	19.1	ug/Kg	1	06/29/13 06:50
Toluene	19.9	U	31.9	9.96	ug/Kg	1	06/29/13 06:50
Surrogates							
1,4-Difluorobenzene	99.3		72-119		%	1	06/29/13 06:50

Batch Information

Analytical Batch: VFC11484
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 06/29/13 06:50
Container ID: 1132524010-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/19/13 17:05
Prep Initial Wt./Vol.: 51.798 g
Prep Extract Vol: 29.9196 mL

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Results of **17439-LS1SS43**

Client Sample ID: **17439-LS1SS43**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524011
Lab Project ID: 1132524

Collection Date: 06/19/13 17:10
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 85.6

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
1-Methylnaphthalene	17.2	U	28.7	8.60	ug/Kg	5	07/01/13 19:55
2-Methylnaphthalene	17.2	U	28.7	8.60	ug/Kg	5	07/01/13 19:55
Acenaphthene	17.2	U	28.7	8.60	ug/Kg	5	07/01/13 19:55
Acenaphthylene	17.2	U	28.7	8.60	ug/Kg	5	07/01/13 19:55
Anthracene	17.2	U	28.7	8.60	ug/Kg	5	07/01/13 19:55
Benzo(a)Anthracene	17.2	U	28.7	8.60	ug/Kg	5	07/01/13 19:55
Benzo[a]pyrene	17.2	U	28.7	8.60	ug/Kg	5	07/01/13 19:55
Benzo[b]Fluoranthene	17.2	U	28.7	8.60	ug/Kg	5	07/01/13 19:55
Benzo[g,h,i]perylene	17.2	U	28.7	8.60	ug/Kg	5	07/01/13 19:55
Benzo[k]fluoranthene	17.2	U	28.7	8.60	ug/Kg	5	07/01/13 19:55
Chrysene	17.2	U	28.7	8.60	ug/Kg	5	07/01/13 19:55
Dibenzo[a,h]anthracene	17.2	U	28.7	8.60	ug/Kg	5	07/01/13 19:55
Fluoranthene	17.2	U	28.7	8.60	ug/Kg	5	07/01/13 19:55
Fluorene	17.2	U	28.7	8.60	ug/Kg	5	07/01/13 19:55
Indeno[1,2,3-c,d] pyrene	17.2	U	28.7	8.60	ug/Kg	5	07/01/13 19:55
Naphthalene	17.2	U	28.7	8.60	ug/Kg	5	07/01/13 19:55
Phenanthrene	9.13	J	28.7	8.60	ug/Kg	5	07/01/13 19:55
Pyrene	17.2	U	28.7	8.60	ug/Kg	5	07/01/13 19:55
Surrogates							
2-Fluorobiphenyl	97.1		45-105		%	5	07/01/13 19:55
Terphenyl-d14	89.1		30-125		%	5	07/01/13 19:55

Batch Information

Analytical Batch: XMS7404
Analytical Method: 8270D SIMS (PAH)
Analyst: RTS
Analytical Date/Time: 07/01/13 19:55
Container ID: 1132524011-C

Prep Batch: XXX29277
Prep Method: SW3550C
Prep Date/Time: 06/27/13 17:40
Prep Initial Wt./Vol.: 22.912 g
Prep Extract Vol: 1 mL

Print Date: 07/05/2013 4:26:50PM

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Results of **17439-LS1SS43**

Client Sample ID: **17439-LS1SS43**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524011
Lab Project ID: 1132524

Collection Date: 06/19/13 17:10
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 85.6

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Diesel Range Organics	1840		116	36.1	mg/Kg	5	06/26/13 10:45
Surrogates							
5a Androstane	91.4		50-150		%	5	06/26/13 10:45

Batch Information

Analytical Batch: XFC10940
Analytical Method: AK102
Analyst: MCM
Analytical Date/Time: 06/26/13 10:45
Container ID: 1132524011-B

Prep Batch: XXX29238
Prep Method: SW3550C
Prep Date/Time: 06/24/13 16:30
Prep Initial Wt./Vol.: 30.081 g
Prep Extract Vol: 1 mL

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Results of **17439-LS1SS43**

Client Sample ID: **17439-LS1SS43**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524011
Lab Project ID: 1132524

Collection Date: 06/19/13 17:10
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 85.6

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Gasoline Range Organics	73.7		3.62	1.08	mg/Kg	1	06/29/13 07:08
Surrogates							
4-Bromofluorobenzene	290	*	50-150		%	1	06/29/13 07:08

Batch Information

Analytical Batch: VFC11484
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/29/13 07:08
Container ID: 1132524011-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/19/13 17:10
Prep Initial Wt./Vol.: 52.617 g
Prep Extract Vol: 32.573 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Benzene	9.04	J	18.1	5.79	ug/Kg	1	06/29/13 07:08
Ethylbenzene	22.6	U	36.2	11.3	ug/Kg	1	06/29/13 07:08
o-Xylene	569		36.2	11.3	ug/Kg	1	06/29/13 07:08
P & M -Xylene	452		72.3	21.7	ug/Kg	1	06/29/13 07:08
Toluene	22.6	U	36.2	11.3	ug/Kg	1	06/29/13 07:08
Surrogates							
1,4-Difluorobenzene	95.5		72-119		%	1	06/29/13 07:08

Batch Information

Analytical Batch: VFC11484
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 06/29/13 07:08
Container ID: 1132524011-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/19/13 17:10
Prep Initial Wt./Vol.: 52.617 g
Prep Extract Vol: 32.573 mL

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Results of **17439-LS1SS25**

Client Sample ID: **17439-LS1SS25**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524012
Lab Project ID: 1132524

Collection Date: 06/19/13 17:12
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 90.5

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Diesel Range Organics	20.8	J	22.0	6.81	mg/Kg	1	06/25/13 17:53
Surrogates							
5a Androstane	82.6		50-150		%	1	06/25/13 17:53

Batch Information

Analytical Batch: XFC10939
Analytical Method: AK102
Analyst: MCM
Analytical Date/Time: 06/25/13 17:53
Container ID: 1132524012-B

Prep Batch: XXX29238
Prep Method: SW3550C
Prep Date/Time: 06/24/13 16:30
Prep Initial Wt./Vol.: 30.173 g
Prep Extract Vol: 1 mL

Print Date: 07/05/2013 4:26:50PM

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Results of **17439-LS1SS25**

Client Sample ID: **17439-LS1SS25**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524012
Lab Project ID: 1132524

Collection Date: 06/19/13 17:12
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 90.5

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Gasoline Range Organics	3.99		3.12	0.937	mg/Kg	1	06/29/13 07:26
Surrogates							
4-Bromofluorobenzene	112		50-150		%	1	06/29/13 07:26

Batch Information

Analytical Batch: VFC11484
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/29/13 07:26
Container ID: 1132524012-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/19/13 17:12
Prep Initial Wt./Vol.: 53.129 g
Prep Extract Vol: 30.0453 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Benzene	10.0	U	15.6	5.00	ug/Kg	1	06/29/13 07:26
Ethylbenzene	19.5	U	31.2	9.75	ug/Kg	1	06/29/13 07:26
o-Xylene	27.2	J	31.2	9.75	ug/Kg	1	06/29/13 07:26
P & M -Xylene	37.4	U	62.5	18.7	ug/Kg	1	06/29/13 07:26
Toluene	19.5	U	31.2	9.75	ug/Kg	1	06/29/13 07:26
Surrogates							
1,4-Difluorobenzene	99.2		72-119		%	1	06/29/13 07:26

Batch Information

Analytical Batch: VFC11484
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 06/29/13 07:26
Container ID: 1132524012-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/19/13 17:12
Prep Initial Wt./Vol.: 53.129 g
Prep Extract Vol: 30.0453 mL

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Results of **17439-LS1SS32**

Client Sample ID: **17439-LS1SS32**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524013
Lab Project ID: 1132524

Collection Date: 06/19/13 17:18
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 89.1

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
1-Methylnaphthalene	192		27.8	8.35	ug/Kg	5	07/01/13 20:10
2-Methylnaphthalene	47.6		27.8	8.35	ug/Kg	5	07/01/13 20:10
Acenaphthene	16.7	U	27.8	8.35	ug/Kg	5	07/01/13 20:10
Acenaphthylene	16.7	U	27.8	8.35	ug/Kg	5	07/01/13 20:10
Anthracene	16.7	U	27.8	8.35	ug/Kg	5	07/01/13 20:10
Benzo(a)Anthracene	16.7	U	27.8	8.35	ug/Kg	5	07/01/13 20:10
Benzo[a]pyrene	16.7	U	27.8	8.35	ug/Kg	5	07/01/13 20:10
Benzo[b]Fluoranthene	16.7	U	27.8	8.35	ug/Kg	5	07/01/13 20:10
Benzo[g,h,i]perylene	16.7	U	27.8	8.35	ug/Kg	5	07/01/13 20:10
Benzo[k]fluoranthene	16.7	U	27.8	8.35	ug/Kg	5	07/01/13 20:10
Chrysene	16.7	U	27.8	8.35	ug/Kg	5	07/01/13 20:10
Dibenzo[a,h]anthracene	16.7	U	27.8	8.35	ug/Kg	5	07/01/13 20:10
Fluoranthene	16.7	U	27.8	8.35	ug/Kg	5	07/01/13 20:10
Fluorene	16.7	U	27.8	8.35	ug/Kg	5	07/01/13 20:10
Indeno[1,2,3-c,d] pyrene	16.7	U	27.8	8.35	ug/Kg	5	07/01/13 20:10
Naphthalene	16.7	U	27.8	8.35	ug/Kg	5	07/01/13 20:10
Phenanthrene	9.32	J	27.8	8.35	ug/Kg	5	07/01/13 20:10
Pyrene	16.7	U	27.8	8.35	ug/Kg	5	07/01/13 20:10
Surrogates							
2-Fluorobiphenyl	76.6		45-105		%	5	07/01/13 20:10
Terphenyl-d14	98.8		30-125		%	5	07/01/13 20:10

Batch Information

Analytical Batch: XMS7404
Analytical Method: 8270D SIMS (PAH)
Analyst: RTS
Analytical Date/Time: 07/01/13 20:10
Container ID: 1132524013-B

Prep Batch: XXX29277
Prep Method: SW3550C
Prep Date/Time: 06/27/13 17:40
Prep Initial Wt./Vol.: 22.698 g
Prep Extract Vol: 1 mL

Print Date: 07/05/2013 4:26:50PM

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Results of **17439-LS1SS32**

Client Sample ID: **17439-LS1SS32**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524013
Lab Project ID: 1132524

Collection Date: 06/19/13 17:18
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 89.1

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Diesel Range Organics	1320		111	34.3	mg/Kg	5	06/26/13 10:55
Surrogates							
5a Androstane	88.1		50-150		%	5	06/26/13 10:55

Batch Information

Analytical Batch: XFC10940
Analytical Method: AK102
Analyst: MCM
Analytical Date/Time: 06/26/13 10:55
Container ID: 1132524013-B

Prep Batch: XXX29238
Prep Method: SW3550C
Prep Date/Time: 06/24/13 16:30
Prep Initial Wt./Vol.: 30.439 g
Prep Extract Vol: 1 mL

Print Date: 07/05/2013 4:26:50PM

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Results of **17439-LS1SS32**

Client Sample ID: **17439-LS1SS32**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524013
Lab Project ID: 1132524

Collection Date: 06/19/13 17:18
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 89.1

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Gasoline Range Organics	109		3.61	1.08	mg/Kg	1	06/29/13 07:45
Surrogates							
4-Bromofluorobenzene	362	*	50-150		%	1	06/29/13 07:45

Batch Information

Analytical Batch: VFC11484
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/29/13 07:45
Container ID: 1132524013-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/19/13 17:18
Prep Initial Wt./Vol.: 46.791 g
Prep Extract Vol: 30.1208 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Benzene	8.67	J	18.1	5.78	ug/Kg	1	06/29/13 07:45
Ethylbenzene	37.6		36.1	11.3	ug/Kg	1	06/29/13 07:45
o-Xylene	2860		36.1	11.3	ug/Kg	1	06/29/13 07:45
P & M -Xylene	865		72.3	21.7	ug/Kg	1	06/29/13 07:45
Toluene	22.6	U	36.1	11.3	ug/Kg	1	06/29/13 07:45
Surrogates							
1,4-Difluorobenzene	97.2		72-119		%	1	06/29/13 07:45

Batch Information

Analytical Batch: VFC11484
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 06/29/13 07:45
Container ID: 1132524013-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/19/13 17:18
Prep Initial Wt./Vol.: 46.791 g
Prep Extract Vol: 30.1208 mL

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Results of **17439-LS1SS34**

Client Sample ID: **17439-LS1SS34**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524014
Lab Project ID: 1132524

Collection Date: 06/19/13 17:19
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 93.0

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Diesel Range Organics	125		21.3	6.60	mg/Kg	1	06/25/13 18:12
Surrogates							
5a Androstane	88.3		50-150		%	1	06/25/13 18:12

Batch Information

Analytical Batch: XFC10939
Analytical Method: AK102
Analyst: MCM
Analytical Date/Time: 06/25/13 18:12
Container ID: 1132524014-B

Prep Batch: XXX29238
Prep Method: SW3550C
Prep Date/Time: 06/24/13 16:30
Prep Initial Wt./Vol.: 30.305 g
Prep Extract Vol: 1 mL

Print Date: 07/05/2013 4:26:50PM

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Results of **17439-LS1SS34**

Client Sample ID: **17439-LS1SS34**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524014
Lab Project ID: 1132524

Collection Date: 06/19/13 17:19
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 93.0

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Gasoline Range Organics	6.86		3.22	0.967	mg/Kg	1	06/29/13 08:03
Surrogates							
4-Bromofluorobenzene	113		50-150		%	1	06/29/13 08:03

Batch Information

Analytical Batch: VFC11484
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/29/13 08:03
Container ID: 1132524014-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/19/13 17:19
Prep Initial Wt./Vol.: 47.277 g
Prep Extract Vol: 28.326 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Benzene	5.48	J	16.1	5.16	ug/Kg	1	06/29/13 08:03
Ethylbenzene	15.8	J	32.2	10.1	ug/Kg	1	06/29/13 08:03
o-Xylene	39.3		32.2	10.1	ug/Kg	1	06/29/13 08:03
P & M -Xylene	56.4	J	64.4	19.3	ug/Kg	1	06/29/13 08:03
Toluene	20.2	U	32.2	10.1	ug/Kg	1	06/29/13 08:03
Surrogates							
1,4-Difluorobenzene	96.5		72-119		%	1	06/29/13 08:03

Batch Information

Analytical Batch: VFC11484
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 06/29/13 08:03
Container ID: 1132524014-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/19/13 17:19
Prep Initial Wt./Vol.: 47.277 g
Prep Extract Vol: 28.326 mL

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Results of **17439-TB1**

Client Sample ID: **17439-TB1**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524015
Lab Project ID: 1132524

Collection Date: 06/18/13 08:00
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%):

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Gasoline Range Organics	0.992	J	2.52	0.756	mg/Kg	1	06/29/13 02:49
Surrogates							
4-Bromofluorobenzene	97.5		50-150		%	1	06/29/13 02:49

Batch Information

Analytical Batch: VFC11484
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/29/13 02:49
Container ID: 1132524015-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/18/13 08:00
Prep Initial Wt./Vol.: 49.597 g
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Benzene	8.06	U	12.6	4.03	ug/Kg	1	06/29/13 02:49
Ethylbenzene	15.7	U	25.2	7.86	ug/Kg	1	06/29/13 02:49
o-Xylene	15.7	U	25.2	7.86	ug/Kg	1	06/29/13 02:49
P & M -Xylene	30.2	U	50.4	15.1	ug/Kg	1	06/29/13 02:49
Toluene	15.7	U	25.2	7.86	ug/Kg	1	06/29/13 02:49
Surrogates							
1,4-Difluorobenzene	96.3		72-119		%	1	06/29/13 02:49

Batch Information

Analytical Batch: VFC11484
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 06/29/13 02:49
Container ID: 1132524015-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/18/13 08:00
Prep Initial Wt./Vol.: 49.597 g
Prep Extract Vol: 25 mL

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Results of **17439-LS4SS2**

Client Sample ID: **17439-LS4SS2**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524016
Lab Project ID: 1132524

Collection Date: 06/19/13 12:00
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 92.7

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Diesel Range Organics	20.9	J	21.4	6.62	mg/Kg	1	06/25/13 18:22
Surrogates							
5a Androstane	78.7		50-150		%	1	06/25/13 18:22

Batch Information

Analytical Batch: XFC10939
Analytical Method: AK102
Analyst: MCM
Analytical Date/Time: 06/25/13 18:22
Container ID: 1132524016-C

Prep Batch: XXX29238
Prep Method: SW3550C
Prep Date/Time: 06/24/13 16:30
Prep Initial Wt./Vol.: 30.292 g
Prep Extract Vol: 1 mL

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Results of **17439-LS4SS2**

Client Sample ID: **17439-LS4SS2**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524016
Lab Project ID: 1132524

Collection Date: 06/19/13 12:00
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 92.7

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Gasoline Range Organics	2.34	J	3.30	0.990	mg/Kg	1	06/29/13 08:22
Surrogates							
4-Bromofluorobenzene	105		50-150		%	1	06/29/13 08:22

Batch Information

Analytical Batch: VFC11484
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/29/13 08:22
Container ID: 1132524016-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/19/13 12:00
Prep Initial Wt./Vol.: 46.341 g
Prep Extract Vol: 28.3694 mL

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Results of **17439-LS4SS2**

Client Sample ID: **17439-LS4SS2**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524016
Lab Project ID: 1132524

Collection Date: 06/19/13 12:00
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 92.7

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
1,1,1-Trichloroethane	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
1,1,2,2-Tetrachloroethane	39.6	U	66.0	19.8	ug/Kg	1	06/28/13 00:47
1,1,2-Trichloroethane	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
1,1-Dichloroethane	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
1,1-Dichloroethene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
1,1-Dichloropropene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
1,2,3-Trichlorobenzene	39.6	U	66.0	19.8	ug/Kg	1	06/28/13 00:47
1,2,3-Trichloropropane	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
1,2,4-Trichlorobenzene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
1,2,4-Trimethylbenzene	39.6	U	66.0	19.8	ug/Kg	1	06/28/13 00:47
1,2-Dibromo-3-chloropropane	81.8	U	132	40.9	ug/Kg	1	06/28/13 00:47
1,2-Dibromoethane	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
1,2-Dichlorobenzene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
1,2-Dichloroethane	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
1,2-Dichloropropane	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
1,3,5-Trimethylbenzene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
1,3-Dichlorobenzene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
1,3-Dichloropropane	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
1,4-Dichlorobenzene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
2,2-Dichloropropane	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
2-Butanone (MEK)	206	U	330	103	ug/Kg	1	06/28/13 00:47
2-Chlorotoluene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
2-Hexanone	206	U	330	103	ug/Kg	1	06/28/13 00:47
4-Chlorotoluene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
4-Isopropyltoluene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
4-Methyl-2-pentanone (MIBK)	206	U	330	103	ug/Kg	1	06/28/13 00:47
Benzene	6.93	J	16.5	5.15	ug/Kg	1	06/28/13 00:47
Bromobenzene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
Bromochloromethane	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
Bromodichloromethane	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
Bromoform	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
Bromomethane	164	U	264	81.9	ug/Kg	1	06/28/13 00:47
Carbon disulfide	81.8	U	132	40.9	ug/Kg	1	06/28/13 00:47
Carbon tetrachloride	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
Chlorobenzene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
Chloroethane	164	U	264	81.9	ug/Kg	1	06/28/13 00:47
Chloroform	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
Chloromethane	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
cis-1,2-Dichloroethene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
cis-1,3-Dichloropropene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
Dibromochloromethane	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
Dibromomethane	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
Dichlorodifluoromethane	39.6	U	66.0	19.8	ug/Kg	1	06/28/13 00:47

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Results of **17439-LS4SS2**

Client Sample ID: **17439-LS4SS2**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524016
Lab Project ID: 1132524

Collection Date: 06/19/13 12:00
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 92.7

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Ethylbenzene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
Hexachlorobutadiene	39.6	U	66.0	19.8	ug/Kg	1	06/28/13 00:47
Isopropylbenzene (Cumene)	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
Methyl-t-butyl ether	81.8	U	132	40.9	ug/Kg	1	06/28/13 00:47
Methylene chloride	81.8	U	132	40.9	ug/Kg	1	06/28/13 00:47
n-Butylbenzene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
n-Propylbenzene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
Naphthalene	25.1	J	66.0	19.8	ug/Kg	1	06/28/13 00:47
o-Xylene	12.9	J	33.0	10.3	ug/Kg	1	06/28/13 00:47
P & M -Xylene	29.7	J	66.0	19.8	ug/Kg	1	06/28/13 00:47
sec-Butylbenzene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
Styrene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
tert-Butylbenzene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
Tetrachloroethene	10.3	U	16.5	5.15	ug/Kg	1	06/28/13 00:47
Toluene	22.1	J	33.0	10.3	ug/Kg	1	06/28/13 00:47
trans-1,2-Dichloroethene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
trans-1,3-Dichloropropene	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
Trichloroethene	10.3	U	16.5	5.15	ug/Kg	1	06/28/13 00:47
Trichlorofluoromethane	39.6	U	66.0	19.8	ug/Kg	1	06/28/13 00:47
Vinyl chloride	20.6	U	33.0	10.3	ug/Kg	1	06/28/13 00:47
Xylenes (total)	42.6	J	132	40.9	ug/Kg	1	06/28/13 00:47
Surrogates							
1,2-Dichloroethane-D4	100		79-118		%	1	06/28/13 00:47
4-Bromofluorobenzene	102		67-138		%	1	06/28/13 00:47
Toluene-d8	101		85-115		%	1	06/28/13 00:47

Batch Information

Analytical Batch: VMS13585
Analytical Method: SW8260B
Analyst: HM
Analytical Date/Time: 06/28/13 00:47
Container ID: 1132524016-A

Prep Batch: VXX24865
Prep Method: SW5035A
Prep Date/Time: 06/19/13 12:00
Prep Initial Wt./Vol.: 46.341 g
Prep Extract Vol: 28.3694 mL

Print Date: 07/05/2013 4:26:50PM

SGS

Results of **17439-LS4SS1**

Client Sample ID: **17439-LS4SS1**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524017
Lab Project ID: 1132524

Collection Date: 06/19/13 12:05
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 89.8

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Diesel Range Organics	115		22.2	6.87	mg/Kg	1	06/25/13 18:31
Surrogates							
5a Androstane	84.5		50-150		%	1	06/25/13 18:31

Batch Information

Analytical Batch: XFC10939
Analytical Method: AK102
Analyst: MCM
Analytical Date/Time: 06/25/13 18:31
Container ID: 1132524017-C

Prep Batch: XXX29238
Prep Method: SW3550C
Prep Date/Time: 06/24/13 16:30
Prep Initial Wt./Vol.: 30.158 g
Prep Extract Vol: 1 mL

Print Date: 07/05/2013 4:26:50PM

SGS

Results of **17439-LS4SS1**

Client Sample ID: **17439-LS4SS1**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524017
Lab Project ID: 1132524

Collection Date: 06/19/13 12:05
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 89.8

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Gasoline Range Organics	3.58	J	3.78	1.13	mg/Kg	1	06/29/13 08:40
Surrogates							
4-Bromofluorobenzene	98		50-150		%	1	06/29/13 08:40

Batch Information

Analytical Batch: VFC11484
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/29/13 08:40
Container ID: 1132524017-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/19/13 12:05
Prep Initial Wt./Vol.: 43.383 g
Prep Extract Vol: 29.4194 mL

Print Date: 07/05/2013 4:26:50PM

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Results of **17439-LS4SS1**

Client Sample ID: **17439-LS4SS1**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524017
Lab Project ID: 1132524

Collection Date: 06/19/13 12:05
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 89.8

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
1,1,1-Trichloroethane	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
1,1,2,2-Tetrachloroethane	45.4	U	75.5	22.7	ug/Kg	1	06/28/13 01:04
1,1,2-Trichloroethane	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
1,1-Dichloroethane	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
1,1-Dichloroethene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
1,1-Dichloropropene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
1,2,3-Trichlorobenzene	45.4	U	75.5	22.7	ug/Kg	1	06/28/13 01:04
1,2,3-Trichloropropane	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
1,2,4-Trichlorobenzene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
1,2,4-Trimethylbenzene	45.4	U	75.5	22.7	ug/Kg	1	06/28/13 01:04
1,2-Dibromo-3-chloropropane	93.6	U	151	46.8	ug/Kg	1	06/28/13 01:04
1,2-Dibromoethane	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
1,2-Dichlorobenzene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
1,2-Dichloroethane	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
1,2-Dichloropropane	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
1,3,5-Trimethylbenzene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
1,3-Dichlorobenzene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
1,3-Dichloropropane	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
1,4-Dichlorobenzene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
2,2-Dichloropropane	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
2-Butanone (MEK)	236	U	378	118	ug/Kg	1	06/28/13 01:04
2-Chlorotoluene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
2-Hexanone	236	U	378	118	ug/Kg	1	06/28/13 01:04
4-Chlorotoluene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
4-Isopropyltoluene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
4-Methyl-2-pentanone (MIBK)	236	U	378	118	ug/Kg	1	06/28/13 01:04
Benzene	11.8	U	18.9	5.89	ug/Kg	1	06/28/13 01:04
Bromobenzene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
Bromochloromethane	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
Bromodichloromethane	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
Bromoform	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
Bromomethane	187	U	302	93.6	ug/Kg	1	06/28/13 01:04
Carbon disulfide	93.6	U	151	46.8	ug/Kg	1	06/28/13 01:04
Carbon tetrachloride	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
Chlorobenzene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
Chloroethane	187	U	302	93.6	ug/Kg	1	06/28/13 01:04
Chloroform	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
Chloromethane	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
cis-1,2-Dichloroethene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
cis-1,3-Dichloropropene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
Dibromochloromethane	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
Dibromomethane	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
Dichlorodifluoromethane	45.4	U	75.5	22.7	ug/Kg	1	06/28/13 01:04

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Results of **17439-LS4SS1**

Client Sample ID: **17439-LS4SS1**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524017
Lab Project ID: 1132524

Collection Date: 06/19/13 12:05
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 89.8

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Ethylbenzene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
Hexachlorobutadiene	45.4	U	75.5	22.7	ug/Kg	1	06/28/13 01:04
Isopropylbenzene (Cumene)	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
Methyl-t-butyl ether	93.6	U	151	46.8	ug/Kg	1	06/28/13 01:04
Methylene chloride	93.6	U	151	46.8	ug/Kg	1	06/28/13 01:04
n-Butylbenzene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
n-Propylbenzene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
Naphthalene	23.8	J	75.5	22.7	ug/Kg	1	06/28/13 01:04
o-Xylene	15.5	J	37.8	11.8	ug/Kg	1	06/28/13 01:04
P & M -Xylene	36.6	J	75.5	22.7	ug/Kg	1	06/28/13 01:04
sec-Butylbenzene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
Styrene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
tert-Butylbenzene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
Tetrachloroethene	11.8	U	18.9	5.89	ug/Kg	1	06/28/13 01:04
Toluene	14.3	J	37.8	11.8	ug/Kg	1	06/28/13 01:04
trans-1,2-Dichloroethene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
trans-1,3-Dichloropropene	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
Trichloroethene	11.8	U	18.9	5.89	ug/Kg	1	06/28/13 01:04
Trichlorofluoromethane	45.4	U	75.5	22.7	ug/Kg	1	06/28/13 01:04
Vinyl chloride	23.6	U	37.8	11.8	ug/Kg	1	06/28/13 01:04
Xylenes (total)	52.1	J	151	46.8	ug/Kg	1	06/28/13 01:04
Surrogates							
1,2-Dichloroethane-D4	103		79-118		%	1	06/28/13 01:04
4-Bromofluorobenzene	99.6		67-138		%	1	06/28/13 01:04
Toluene-d8	92.3		85-115		%	1	06/28/13 01:04

Batch Information

Analytical Batch: VMS13585
Analytical Method: SW8260B
Analyst: HM
Analytical Date/Time: 06/28/13 01:04
Container ID: 1132524017-A

Prep Batch: VXX24865
Prep Method: SW5035A
Prep Date/Time: 06/19/13 12:05
Prep Initial Wt./Vol.: 43.383 g
Prep Extract Vol: 29.4194 mL

Print Date: 07/05/2013 4:26:50PM

SGS

Results of **17439-LS4SS3**

Client Sample ID: **17439-LS4SS3**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524018
Lab Project ID: 1132524

Collection Date: 06/19/13 15:50
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 91.8

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Diesel Range Organics	238		21.5	6.66	mg/Kg	1	06/25/13 13:55
Surrogates							
5a Androstane	97.7		50-150		%	1	06/25/13 13:55

Batch Information

Analytical Batch: XFC10939
Analytical Method: AK102
Analyst: MCM
Analytical Date/Time: 06/25/13 13:55
Container ID: 1132524018-C

Prep Batch: XXX29230
Prep Method: SW3550C
Prep Date/Time: 06/24/13 07:30
Prep Initial Wt./Vol.: 30.437 g
Prep Extract Vol: 1 mL

Print Date: 07/05/2013 4:26:50PM

SGS

Results of **17439-LS4SS3**

Client Sample ID: **17439-LS4SS3**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524018
Lab Project ID: 1132524

Collection Date: 06/19/13 15:50
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 91.8

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Gasoline Range Organics	1.71	J	3.62	1.09	mg/Kg	1	06/29/13 08:58
Surrogates							
4-Bromofluorobenzene	96.7		50-150		%	1	06/29/13 08:58

Batch Information

Analytical Batch: VFC11484
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/29/13 08:58
Container ID: 1132524018-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/19/13 15:50
Prep Initial Wt./Vol.: 42.95 g
Prep Extract Vol: 28.5408 mL

Print Date: 07/05/2013 4:26:50PM

SGS

Results of **17439-LS4SS3**

Client Sample ID: **17439-LS4SS3**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524018
Lab Project ID: 1132524

Collection Date: 06/19/13 15:50
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 91.8

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
1,1,1-Trichloroethane	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
1,1,2,2-Tetrachloroethane	43.4	U	72.4	21.7	ug/Kg	1	06/28/13 21:31
1,1,2-Trichloroethane	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
1,1-Dichloroethane	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
1,1-Dichloroethene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
1,1-Dichloropropene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
1,2,3-Trichlorobenzene	43.4	U	72.4	21.7	ug/Kg	1	06/28/13 21:31
1,2,3-Trichloropropane	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
1,2,4-Trichlorobenzene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
1,2,4-Trimethylbenzene	43.4	U	72.4	21.7	ug/Kg	1	06/28/13 21:31
1,2-Dibromo-3-chloropropane	89.8	U	145	44.9	ug/Kg	1	06/28/13 21:31
1,2-Dibromoethane	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
1,2-Dichlorobenzene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
1,2-Dichloroethane	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
1,2-Dichloropropane	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
1,3,5-Trimethylbenzene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
1,3-Dichlorobenzene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
1,3-Dichloropropane	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
1,4-Dichlorobenzene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
2,2-Dichloropropane	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
2-Butanone (MEK)	226	U	362	113	ug/Kg	1	06/28/13 21:31
2-Chlorotoluene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
2-Hexanone	226	U	362	113	ug/Kg	1	06/28/13 21:31
4-Chlorotoluene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
4-Isopropyltoluene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
4-Methyl-2-pentanone (MIBK)	226	U	362	113	ug/Kg	1	06/28/13 21:31
Benzene	11.3	U	18.1	5.65	ug/Kg	1	06/28/13 21:31
Bromobenzene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
Bromochloromethane	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
Bromodichloromethane	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
Bromoform	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
Bromomethane	180	U	290	89.8	ug/Kg	1	06/28/13 21:31
Carbon disulfide	89.8	U	145	44.9	ug/Kg	1	06/28/13 21:31
Carbon tetrachloride	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
Chlorobenzene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
Chloroethane	180	U	290	89.8	ug/Kg	1	06/28/13 21:31
Chloroform	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
Chloromethane	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
cis-1,2-Dichloroethene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
cis-1,3-Dichloropropene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
Dibromochloromethane	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
Dibromomethane	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
Dichlorodifluoromethane	43.4	U	72.4	21.7	ug/Kg	1	06/28/13 21:31

SGS

Results of **17439-LS4SS3**

Client Sample ID: **17439-LS4SS3**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524018
Lab Project ID: 1132524

Collection Date: 06/19/13 15:50
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 91.8

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Ethylbenzene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
Hexachlorobutadiene	43.4	U	72.4	21.7	ug/Kg	1	06/28/13 21:31
Isopropylbenzene (Cumene)	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
Methyl-t-butyl ether	89.8	U	145	44.9	ug/Kg	1	06/28/13 21:31
Methylene chloride	89.8	U	145	44.9	ug/Kg	1	06/28/13 21:31
n-Butylbenzene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
n-Propylbenzene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
Naphthalene	23.2	J	72.4	21.7	ug/Kg	1	06/28/13 21:31
o-Xylene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
P & M -Xylene	22.1	J	72.4	21.7	ug/Kg	1	06/28/13 21:31
sec-Butylbenzene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
Styrene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
tert-Butylbenzene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
Tetrachloroethene	11.3	U	18.1	5.65	ug/Kg	1	06/28/13 21:31
Toluene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
trans-1,2-Dichloroethene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
trans-1,3-Dichloropropene	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
Trichloroethene	11.3	U	18.1	5.65	ug/Kg	1	06/28/13 21:31
Trichlorofluoromethane	43.4	U	72.4	21.7	ug/Kg	1	06/28/13 21:31
Vinyl chloride	22.6	U	36.2	11.3	ug/Kg	1	06/28/13 21:31
Xylenes (total)	89.8	U	145	44.9	ug/Kg	1	06/28/13 21:31
Surrogates							
1,2-Dichloroethane-D4	89.2		79-118		%	1	06/28/13 21:31
4-Bromofluorobenzene	85.2		67-138		%	1	06/28/13 21:31
Toluene-d8	90.9		85-115		%	1	06/28/13 21:31

Batch Information

Analytical Batch: VMS13593
Analytical Method: SW8260B
Analyst: HM
Analytical Date/Time: 06/28/13 21:31
Container ID: 1132524018-B

Prep Batch: VXX24870
Prep Method: SW5035A
Prep Date/Time: 06/19/13 15:50
Prep Initial Wt./Vol.: 42.95 g
Prep Extract Vol: 28.5408 mL

Print Date: 07/05/2013 4:26:50PM

SGS

Results of **17439-LS4SS23**

Client Sample ID: **17439-LS4SS23**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524019
Lab Project ID: 1132524

Collection Date: 06/19/13 16:00
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 91.3

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Diesel Range Organics	226		21.6	6.71	mg/Kg	1	06/25/13 14:05
Surrogates							
5a Androstane	86.6		50-150		%	1	06/25/13 14:05

Batch Information

Analytical Batch: XFC10939
Analytical Method: AK102
Analyst: MCM
Analytical Date/Time: 06/25/13 14:05
Container ID: 1132524019-C

Prep Batch: XXX29230
Prep Method: SW3550C
Prep Date/Time: 06/24/13 07:30
Prep Initial Wt./Vol.: 30.373 g
Prep Extract Vol: 1 mL

Print Date: 07/05/2013 4:26:50PM

SGS

Results of **17439-LS4SS23**

Client Sample ID: **17439-LS4SS23**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524019
Lab Project ID: 1132524

Collection Date: 06/19/13 16:00
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 91.3

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Gasoline Range Organics	1.49	J	3.59	1.08	mg/Kg	1	06/29/13 09:17
Surrogates							
4-Bromofluorobenzene	98.1		50-150		%	1	06/29/13 09:17

Batch Information

Analytical Batch: VFC11484
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/29/13 09:17
Container ID: 1132524019-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/19/13 16:00
Prep Initial Wt./Vol.: 43.961 g
Prep Extract Vol: 28.811 mL

Print Date: 07/05/2013 4:26:50PM

Results of **17439-LS4SS23**

Client Sample ID: **17439-LS4SS23**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524019
Lab Project ID: 1132524

Collection Date: 06/19/13 16:00
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 91.3

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
1,1,1-Trichloroethane	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
1,1,2,2-Tetrachloroethane	43.0	U	71.8	21.5	ug/Kg	1	06/28/13 21:48
1,1,2-Trichloroethane	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
1,1-Dichloroethane	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
1,1-Dichloroethene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
1,1-Dichloropropene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
1,2,3-Trichlorobenzene	43.0	U	71.8	21.5	ug/Kg	1	06/28/13 21:48
1,2,3-Trichloropropane	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
1,2,4-Trichlorobenzene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
1,2,4-Trimethylbenzene	43.0	U	71.8	21.5	ug/Kg	1	06/28/13 21:48
1,2-Dibromo-3-chloropropane	89.0	U	144	44.5	ug/Kg	1	06/28/13 21:48
1,2-Dibromoethane	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
1,2-Dichlorobenzene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
1,2-Dichloroethane	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
1,2-Dichloropropane	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
1,3,5-Trimethylbenzene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
1,3-Dichlorobenzene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
1,3-Dichloropropane	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
1,4-Dichlorobenzene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
2,2-Dichloropropane	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
2-Butanone (MEK)	224	U	359	112	ug/Kg	1	06/28/13 21:48
2-Chlorotoluene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
2-Hexanone	224	U	359	112	ug/Kg	1	06/28/13 21:48
4-Chlorotoluene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
4-Isopropyltoluene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
4-Methyl-2-pentanone (MIBK)	224	U	359	112	ug/Kg	1	06/28/13 21:48
Benzene	11.2	U	17.9	5.60	ug/Kg	1	06/28/13 21:48
Bromobenzene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
Bromochloromethane	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
Bromodichloromethane	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
Bromoform	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
Bromomethane	178	U	287	89.0	ug/Kg	1	06/28/13 21:48
Carbon disulfide	89.0	U	144	44.5	ug/Kg	1	06/28/13 21:48
Carbon tetrachloride	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
Chlorobenzene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
Chloroethane	178	U	287	89.0	ug/Kg	1	06/28/13 21:48
Chloroform	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
Chloromethane	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
cis-1,2-Dichloroethene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
cis-1,3-Dichloropropene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
Dibromochloromethane	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
Dibromomethane	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
Dichlorodifluoromethane	43.0	U	71.8	21.5	ug/Kg	1	06/28/13 21:48

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Results of **17439-LS4SS23**

Client Sample ID: **17439-LS4SS23**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524019
Lab Project ID: 1132524

Collection Date: 06/19/13 16:00
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%): 91.3

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Ethylbenzene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
Hexachlorobutadiene	43.0	U	71.8	21.5	ug/Kg	1	06/28/13 21:48
Isopropylbenzene (Cumene)	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
Methyl-t-butyl ether	89.0	U	144	44.5	ug/Kg	1	06/28/13 21:48
Methylene chloride	89.0	U	144	44.5	ug/Kg	1	06/28/13 21:48
n-Butylbenzene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
n-Propylbenzene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
Naphthalene	21.9	J	71.8	21.5	ug/Kg	1	06/28/13 21:48
o-Xylene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
P & M -Xylene	22.6	J	71.8	21.5	ug/Kg	1	06/28/13 21:48
sec-Butylbenzene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
Styrene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
tert-Butylbenzene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
Tetrachloroethene	11.2	U	17.9	5.60	ug/Kg	1	06/28/13 21:48
Toluene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
trans-1,2-Dichloroethene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
trans-1,3-Dichloropropene	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
Trichloroethene	11.2	U	17.9	5.60	ug/Kg	1	06/28/13 21:48
Trichlorofluoromethane	43.0	U	71.8	21.5	ug/Kg	1	06/28/13 21:48
Vinyl chloride	22.4	U	35.9	11.2	ug/Kg	1	06/28/13 21:48
Xylenes (total)	89.0	U	144	44.5	ug/Kg	1	06/28/13 21:48
Surrogates							
1,2-Dichloroethane-D4	99.8		79-118		%	1	06/28/13 21:48
4-Bromofluorobenzene	96.6		67-138		%	1	06/28/13 21:48
Toluene-d8	102		85-115		%	1	06/28/13 21:48

Batch Information

Analytical Batch: VMS13593
Analytical Method: SW8260B
Analyst: HM
Analytical Date/Time: 06/28/13 21:48
Container ID: 1132524019-B

Prep Batch: VXX24870
Prep Method: SW5035A
Prep Date/Time: 06/19/13 16:00
Prep Initial Wt./Vol.: 43.961 g
Prep Extract Vol: 28.811 mL

Print Date: 07/05/2013 4:26:50PM

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Results of **17439-TB2**

Client Sample ID: **17439-TB2**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524020
Lab Project ID: 1132524

Collection Date: 06/18/13 09:00
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%):

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Gasoline Range Organics	1.22	J	2.60	0.779	mg/Kg	1	06/29/13 03:08
Surrogates							
4-Bromofluorobenzene	95		50-150		%	1	06/29/13 03:08

Batch Information

Analytical Batch: VFC11484
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/29/13 03:08
Container ID: 1132524020-A

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 06/18/13 09:00
Prep Initial Wt./Vol.: 48.113 g
Prep Extract Vol: 25 mL

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Results of **17439-TB2**

Client Sample ID: **17439-TB2**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524020
Lab Project ID: 1132524

Collection Date: 06/18/13 09:00
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%):

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
1,1,1,2-Tetrachloroethane	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
1,1,1-Trichloroethane	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
1,1,2,2-Tetrachloroethane	31.2	U	52.0	15.6	ug/Kg	1	06/27/13 19:12
1,1,2-Trichloroethane	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
1,1-Dichloroethane	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
1,1-Dichloroethene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
1,1-Dichloropropene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
1,2,3-Trichlorobenzene	31.2	U	52.0	15.6	ug/Kg	1	06/27/13 19:12
1,2,3-Trichloropropane	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
1,2,4-Trichlorobenzene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
1,2,4-Trimethylbenzene	31.2	U	52.0	15.6	ug/Kg	1	06/27/13 19:12
1,2-Dibromo-3-chloropropane	64.4	U	104	32.2	ug/Kg	1	06/27/13 19:12
1,2-Dibromoethane	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
1,2-Dichlorobenzene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
1,2-Dichloroethane	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
1,2-Dichloropropane	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
1,3,5-Trimethylbenzene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
1,3-Dichlorobenzene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
1,3-Dichloropropane	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
1,4-Dichlorobenzene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
2,2-Dichloropropane	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
2-Butanone (MEK)	162	U	260	81.1	ug/Kg	1	06/27/13 19:12
2-Chlorotoluene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
2-Hexanone	162	U	260	81.1	ug/Kg	1	06/27/13 19:12
4-Chlorotoluene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
4-Isopropyltoluene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
4-Methyl-2-pentanone (MIBK)	162	U	260	81.1	ug/Kg	1	06/27/13 19:12
Benzene	8.10	U	13.0	4.05	ug/Kg	1	06/27/13 19:12
Bromobenzene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
Bromochloromethane	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
Bromodichloromethane	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
Bromoform	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
Bromomethane	129	U	208	64.4	ug/Kg	1	06/27/13 19:12
Carbon disulfide	64.4	U	104	32.2	ug/Kg	1	06/27/13 19:12
Carbon tetrachloride	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
Chlorobenzene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
Chloroethane	129	U	208	64.4	ug/Kg	1	06/27/13 19:12
Chloroform	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
Chloromethane	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
cis-1,2-Dichloroethene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
cis-1,3-Dichloropropene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
Dibromochloromethane	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
Dibromomethane	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
Dichlorodifluoromethane	31.2	U	52.0	15.6	ug/Kg	1	06/27/13 19:12

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Results of **17439-TB2**

Client Sample ID: **17439-TB2**
Client Project ID: **32-1-17439-002 Aniak**
Lab Sample ID: 1132524020
Lab Project ID: 1132524

Collection Date: 06/18/13 09:00
Received Date: 06/20/13 14:47
Matrix: Soil/Solid (dry weight)
Solids (%):

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Date Analyzed
Ethylbenzene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
Hexachlorobutadiene	31.2	U	52.0	15.6	ug/Kg	1	06/27/13 19:12
Isopropylbenzene (Cumene)	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
Methyl-t-butyl ether	64.4	U	104	32.2	ug/Kg	1	06/27/13 19:12
Methylene chloride	64.4	U	104	32.2	ug/Kg	1	06/27/13 19:12
n-Butylbenzene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
n-Propylbenzene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
Naphthalene	31.2	U	52.0	15.6	ug/Kg	1	06/27/13 19:12
o-Xylene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
P & M -Xylene	31.2	U	52.0	15.6	ug/Kg	1	06/27/13 19:12
sec-Butylbenzene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
Styrene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
tert-Butylbenzene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
Tetrachloroethene	8.10	U	13.0	4.05	ug/Kg	1	06/27/13 19:12
Toluene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
trans-1,2-Dichloroethene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
trans-1,3-Dichloropropene	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
Trichloroethene	8.10	U	13.0	4.05	ug/Kg	1	06/27/13 19:12
Trichlorofluoromethane	31.2	U	52.0	15.6	ug/Kg	1	06/27/13 19:12
Vinyl chloride	16.2	U	26.0	8.11	ug/Kg	1	06/27/13 19:12
Xylenes (total)	64.4	U	104	32.2	ug/Kg	1	06/27/13 19:12
Surrogates							
1,2-Dichloroethane-D4	93.2		79-118		%	1	06/27/13 19:12
4-Bromofluorobenzene	90.6		67-138		%	1	06/27/13 19:12
Toluene-d8	92.1		85-115		%	1	06/27/13 19:12

Batch Information

Analytical Batch: VMS13585
Analytical Method: SW8260B
Analyst: HM
Analytical Date/Time: 06/27/13 19:12
Container ID: 1132524020-A

Prep Batch: VXX24865
Prep Method: SW5035A
Prep Date/Time: 06/18/13 09:00
Prep Initial Wt./Vol.: 48.113 g
Prep Extract Vol: 25 mL

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Method Blank

Blank ID: MB for HBN 1456570 [SPT/9054]
Blank Lab ID: 1154590

Matrix: Soil/Solid (dry weight)

QC for Samples:
1132524001, 1132524002, 1132524003, 1132524004, 1132524005, 1132524006, 1132524007, 1132524008, 1132524009, 1132524010, 1132524011, 1132524012, 1132524013, 1132524014, 1132524016, 1132524017, 1132524018, 1132524019

Results by **SM21 2540G**

Parameter	Results	LOQ/CL	DL	Units
Total Solids	100			%

Batch Information

Analytical Batch: SPT9054
Analytical Method: SM21 2540G
Instrument:
Analyst: KRL
Analytical Date/Time: 6/21/2013 6:05:00PM

Print Date: 07/05/2013 4:26:54PM

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Duplicate Sample Summary

Original Sample ID: 1132524005
Duplicate Sample ID: 1154591

Analysis Date: 06/21/2013 18:05
Matrix: Soil/Solid (dry weight)

QC for Samples:

1132524001, 1132524002, 1132524003, 1132524004, 1132524005, 1132524006, 1132524007, 1132524008, 1132524009, 1132524010, 1132524011, 1132524012, 1132524013, 1132524014, 1132524016, 1132524017, 1132524018, 1132524019

Results by **SM21 2540G**

NAME	Original (15.00)	Duplicate (15.00)	RPD (%)	RPD CL
Total Solids	86.7	87.2	0.63	15.00

Batch Information

Analytical Batch: SPT9054
Analytical Method: SM21 2540G
Instrument:
Analyst: KRL

Print Date: 07/05/2013 4:26:54PM

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Method Blank

Blank ID: MB for HBN 1457687 [VXX/24865]
Blank Lab ID: 1155987

Matrix: Soil/Solid (dry weight)

QC for Samples:
1132524016, 1132524017, 1132524020

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	15.6U	25.0	7.80	ug/Kg
1,1,1-Trichloroethane	15.6U	25.0	7.80	ug/Kg
1,1,2,2-Tetrachloroethane	30.0U	50.0	15.0	ug/Kg
1,1,2-Trichloroethane	15.6U	25.0	7.80	ug/Kg
1,1-Dichloroethane	15.6U	25.0	7.80	ug/Kg
1,1-Dichloroethene	15.6U	25.0	7.80	ug/Kg
1,1-Dichloropropene	15.6U	25.0	7.80	ug/Kg
1,2,3-Trichlorobenzene	30.0U	50.0	15.0	ug/Kg
1,2,3-Trichloropropane	15.6U	25.0	7.80	ug/Kg
1,2,4-Trichlorobenzene	15.6U	25.0	7.80	ug/Kg
1,2,4-Trimethylbenzene	30.0U	50.0	15.0	ug/Kg
1,2-Dibromo-3-chloropropane	62.0U	100	31.0	ug/Kg
1,2-Dibromoethane	15.6U	25.0	7.80	ug/Kg
1,2-Dichlorobenzene	15.6U	25.0	7.80	ug/Kg
1,2-Dichloroethane	15.6U	25.0	7.80	ug/Kg
1,2-Dichloropropane	15.6U	25.0	7.80	ug/Kg
1,3,5-Trimethylbenzene	15.6U	25.0	7.80	ug/Kg
1,3-Dichlorobenzene	15.6U	25.0	7.80	ug/Kg
1,3-Dichloropropane	15.6U	25.0	7.80	ug/Kg
1,4-Dichlorobenzene	15.6U	25.0	7.80	ug/Kg
2,2-Dichloropropane	15.6U	25.0	7.80	ug/Kg
2-Butanone (MEK)	156U	250	78.0	ug/Kg
2-Chlorotoluene	15.6U	25.0	7.80	ug/Kg
2-Hexanone	156U	250	78.0	ug/Kg
4-Chlorotoluene	15.6U	25.0	7.80	ug/Kg
4-Isopropyltoluene	15.6U	25.0	7.80	ug/Kg
4-Methyl-2-pentanone (MIBK)	156U	250	78.0	ug/Kg
Benzene	7.80U	12.5	3.90	ug/Kg
Bromobenzene	15.6U	25.0	7.80	ug/Kg
Bromochloromethane	15.6U	25.0	7.80	ug/Kg
Bromodichloromethane	15.6U	25.0	7.80	ug/Kg
Bromoform	15.6U	25.0	7.80	ug/Kg
Bromomethane	124U	200	62.0	ug/Kg
Carbon disulfide	62.0U	100	31.0	ug/Kg
Carbon tetrachloride	15.6U	25.0	7.80	ug/Kg
Chlorobenzene	15.6U	25.0	7.80	ug/Kg
Chloroethane	124U	200	62.0	ug/Kg
Chloroform	15.6U	25.0	7.80	ug/Kg

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Method Blank

Blank ID: MB for HBN 1457687 [VXX/24865]
Blank Lab ID: 1155987

Matrix: Soil/Solid (dry weight)

QC for Samples:
1132524016, 1132524017, 1132524020

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
Chloromethane	15.6U	25.0	7.80	ug/Kg
cis-1,2-Dichloroethene	15.6U	25.0	7.80	ug/Kg
cis-1,3-Dichloropropene	15.6U	25.0	7.80	ug/Kg
Dibromochloromethane	15.6U	25.0	7.80	ug/Kg
Dibromomethane	15.6U	25.0	7.80	ug/Kg
Dichlorodifluoromethane	30.0U	50.0	15.0	ug/Kg
Ethylbenzene	15.6U	25.0	7.80	ug/Kg
Hexachlorobutadiene	30.0U	50.0	15.0	ug/Kg
Isopropylbenzene (Cumene)	15.6U	25.0	7.80	ug/Kg
Methylene chloride	62.0U	100	31.0	ug/Kg
Methyl-t-butyl ether	62.0U	100	31.0	ug/Kg
Naphthalene	30.0U	50.0	15.0	ug/Kg
n-Butylbenzene	15.6U	25.0	7.80	ug/Kg
n-Propylbenzene	15.6U	25.0	7.80	ug/Kg
o-Xylene	15.6U	25.0	7.80	ug/Kg
P & M -Xylene	30.0U	50.0	15.0	ug/Kg
sec-Butylbenzene	15.6U	25.0	7.80	ug/Kg
Styrene	15.6U	25.0	7.80	ug/Kg
tert-Butylbenzene	15.6U	25.0	7.80	ug/Kg
Tetrachloroethene	7.80U	12.5	3.90	ug/Kg
Toluene	15.6U	25.0	7.80	ug/Kg
trans-1,2-Dichloroethene	15.6U	25.0	7.80	ug/Kg
trans-1,3-Dichloropropene	15.6U	25.0	7.80	ug/Kg
Trichloroethene	7.80U	12.5	3.90	ug/Kg
Trichlorofluoromethane	30.0U	50.0	15.0	ug/Kg
Vinyl chloride	15.6U	25.0	7.80	ug/Kg
Xylenes (total)	62.0U	100	31.0	ug/Kg
Surrogates				
1,2-Dichloroethane-D4	102	79-118		%
4-Bromofluorobenzene	100	67-138		%
Toluene-d8	105	85-115		%

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Method Blank

Blank ID: MB for HBN 1457687 [VXX/24865]
Blank Lab ID: 1155987

Matrix: Soil/Solid (dry weight)

QC for Samples:
1132524016, 1132524017, 1132524020

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units

Batch Information

Analytical Batch: VMS13585
Analytical Method: SW8260B
Instrument: Agilent 7890-75MS
Analyst: HM
Analytical Date/Time: 6/27/2013 4:59:01PM

Prep Batch: VXX24865
Prep Method: SW5035A
Prep Date/Time: 6/27/2013 8:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 07/05/2013 4:26:56PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1132524 [VXX24865]
Blank Spike Lab ID: 1155988
Date Analyzed: 06/27/2013 17:23

Matrix: Soil/Solid (dry weight)

QC for Samples: 1132524016, 1132524017, 1132524020

Results by **SW8260B**

	Blank Spike (ug/Kg)			
Parameter	Spike	Result	Rec (%)	CL
1,1,1,2-Tetrachloroethane	750	706	94	(75-125)
1,1,1-Trichloroethane	750	705	94	(70-135)
1,1,2,2-Tetrachloroethane	750	766	102	(55-130)
1,1,2-Trichloroethane	750	777	104	(60-125)
1,1-Dichloroethane	750	779	104	(75-125)
1,1-Dichloroethene	750	699	93	(65-135)
1,1-Dichloropropene	750	700	93	(70-135)
1,2,3-Trichlorobenzene	750	838	112	(60-135)
1,2,3-Trichloropropane	750	752	100	(65-130)
1,2,4-Trichlorobenzene	750	797	106	(65-130)
1,2,4-Trimethylbenzene	750	706	94	(65-135)
1,2-Dibromo-3-chloropropane	750	744	99	(40-135)
1,2-Dibromoethane	750	784	105	(70-125)
1,2-Dichlorobenzene	750	755	101	(75-120)
1,2-Dichloroethane	750	768	102	(70-135)
1,2-Dichloropropane	750	775	103	(70-120)
1,3,5-Trimethylbenzene	750	699	93	(65-135)
1,3-Dichlorobenzene	750	753	100	(70-125)
1,3-Dichloropropane	750	775	103	(75-125)
1,4-Dichlorobenzene	750	757	101	(70-125)
2,2-Dichloropropane	750	667	89	(65-135)
2-Butanone (MEK)	2250	2350	104	(30-160)
2-Chlorotoluene	750	751	100	(70-130)
2-Hexanone	2250	2460	110	(45-145)
4-Chlorotoluene	750	736	98	(75-125)
4-Isopropyltoluene	750	696	93	(75-135)
4-Methyl-2-pentanone (MIBK)	2250	2470	110	(45-145)
Benzene	750	717	96	(75-125)
Bromobenzene	750	748	100	(65-120)
Bromochloromethane	750	774	103	(70-125)
Bromodichloromethane	750	794	106	(70-130)
Bromoform	750	690	92	(55-135)
Bromomethane	750	721	96	(30-160)

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1132524 [VXX24865]
Blank Spike Lab ID: 1155988
Date Analyzed: 06/27/2013 17:23

Matrix: Soil/Solid (dry weight)

QC for Samples: 1132524016, 1132524017, 1132524020

Results by **SW8260B**

	Blank Spike (ug/Kg)			
Parameter	Spike	Result	Rec (%)	CL
Carbon disulfide	1130	1130	100	(45-160)
Carbon tetrachloride	750	688	92	(65-135)
Chlorobenzene	750	763	102	(75-125)
Chloroethane	750	702	94	(40-155)
Chloroform	750	712	95	(70-125)
Chloromethane	750	674	90	(50-130)
cis-1,2-Dichloroethene	750	768	102	(65-125)
cis-1,3-Dichloropropene	750	705	94	(70-125)
Dibromochloromethane	750	708	94	(65-130)
Dibromomethane	750	776	103	(75-130)
Dichlorodifluoromethane	750	671	89	(35-135)
Ethylbenzene	750	712	95	(75-125)
Hexachlorobutadiene	750	714	95	(55-140)
Isopropylbenzene (Cumene)	750	705	94	(75-130)
Methyl-t-butyl ether	1130	1170	104	(63-149)
Methylene chloride	750	680	91	(55-140)
n-Butylbenzene	750	696	93	(65-140)
n-Propylbenzene	750	694	93	(65-135)
Naphthalene	750	742	99	(40-125)
o-Xylene	750	713	95	(75-125)
P & M -Xylene	1500	1400	93	(80-125)
sec-Butylbenzene	750	693	92	(65-130)
Styrene	750	701	94	(75-125)
tert-Butylbenzene	750	694	93	(65-130)
Tetrachloroethene	750	764	102	(65-140)
Toluene	750	759	101	(70-125)
trans-1,2-Dichloroethene	750	760	101	(65-135)
trans-1,3-Dichloropropene	750	699	93	(65-125)
Trichloroethene	750	749	100	(75-125)
Trichlorofluoromethane	750	699	93	(25-185)
Vinyl chloride	750	692	92	(60-125)
Xylenes (total)	2250	2110	94	(80-125)

Surrogates

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1132524 [VXX24865]
Blank Spike Lab ID: 1155988
Date Analyzed: 06/27/2013 17:23

Matrix: Soil/Solid (dry weight)

QC for Samples: 1132524016, 1132524017, 1132524020

Results by **SW8260B**

	Blank Spike (%)			
Parameter	Spike	Result	Rec (%)	CL
1,2-Dichloroethane-D4	750	111	111	(79-118)
4-Bromofluorobenzene	750	104	104	(67-138)
Toluene-d8	750	112	112	(85-115)

Batch Information

Analytical Batch: **VMS13585**
Analytical Method: **SW8260B**
Instrument: **Agilent 7890-75MS**
Analyst: **HM**

Prep Batch: **VXX24865**
Prep Method: **SW5035A**
Prep Date/Time: **06/27/2013 08:00**
Spike Init Wt./Vol.: 750 ug/Kg Extract Vol: 25 mL
Dupe Init Wt./Vol.: Extract Vol:

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Matrix Spike Summary

Original Sample ID: 1155989
MS Sample ID: 1155990 MS
MSD Sample ID: 1155991 MSD

Analysis Date: 06/27/2013 20:36
Analysis Date: 06/27/2013 17:48
Analysis Date: 06/27/2013 18:05
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1132524016, 1132524017, 1132524020

Results by **SW8260B**

		Matrix Spike (ug/Kg)			Spike Duplicate (ug/Kg)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	17.1U	820	774	94	820	757	92	75-125	2.30	(< 20)
1,1,1-Trichloroethane	17.1U	820	773	94	820	749	91	70-135	3.20	(< 20)
1,1,2,2-Tetrachloroethane	32.8U	820	842	103	820	821	100	55-130	2.60	(< 20)
1,1,2-Trichloroethane	17.1U	820	835	102	820	833	102	60-125	0.20	(< 20)
1,1-Dichloroethane	17.1U	820	837	102	820	818	100	75-125	2.30	(< 20)
1,1-Dichloroethene	17.1U	820	777	95	820	747	91	65-135	3.90	(< 20)
1,1-Dichloropropene	17.1U	820	777	95	820	742	91	70-135	4.50	(< 20)
1,2,3-Trichlorobenzene	32.8U	820	858	105	820	769	94	60-135	11.00	(< 20)
1,2,3-Trichloropropane	17.1U	820	826	101	820	805	98	65-130	2.60	(< 20)
1,2,4-Trichlorobenzene	17.1U	820	827	101	820	755	92	65-130	9.20	(< 20)
1,2,4-Trimethylbenzene	32.8U	820	767	94	820	741	90	65-135	3.50	(< 20)
1,2-Dibromo-3-chloropropane	67.8U	820	822	100	820	762	93	40-135	7.60	(< 20)
1,2-Dibromoethane	17.1U	820	862	105	820	857	104	70-125	0.57	(< 20)
1,2-Dichlorobenzene	17.1U	820	796	97	820	781	95	75-120	1.90	(< 20)
1,2-Dichloroethane	17.1U	820	818	100	820	807	98	70-135	1.40	(< 20)
1,2-Dichloropropane	17.1U	820	831	101	820	819	100	70-120	1.40	(< 20)
1,3,5-Trimethylbenzene	17.1U	820	763	93	820	735	90	65-135	3.60	(< 20)
1,3-Dichlorobenzene	17.1U	820	813	99	820	777	95	70-125	4.50	(< 20)
1,3-Dichloropropane	17.1U	820	845	103	820	838	102	75-125	0.81	(< 20)
1,4-Dichlorobenzene	17.1U	820	814	99	820	787	96	70-125	3.30	(< 20)
2,2-Dichloropropane	17.1U	820	770	94	820	755	92	65-135	2.00	(< 20)
2-Butanone (MEK)	171U	2460	2530	103	2460	2320	94	30-160	8.70	(< 20)
2-Chlorotoluene	17.1U	820	801	98	820	779	95	70-130	2.80	(< 20)
2-Hexanone	171U	2460	2720	110	2460	2560	104	45-145	5.80	(< 20)
4-Chlorotoluene	17.1U	820	829	101	820	805	98	75-125	2.80	(< 20)
4-Isopropyltoluene	17.1U	820	764	93	820	723	88	75-135	5.50	(< 20)
4-Methyl-2-pentanone (MIBK)	171U	2460	2650	108	2460	2570	104	45-145	3.20	(< 20)
Benzene	8.52U	820	771	94	820	748	91	75-125	3.00	(< 20)
Bromobenzene	17.1U	820	817	100	820	806	98	65-120	1.40	(< 20)
Bromochloromethane	17.1U	820	830	101	820	818	100	70-125	1.40	(< 20)
Bromodichloromethane	17.1U	820	848	103	820	832	102	70-130	1.90	(< 20)
Bromoform	17.1U	820	749	91	820	741	90	55-135	1.00	(< 20)
Bromomethane	136U	820	763	93	820	729	89	30-160	4.50	(< 20)
Carbon disulfide	67.8U	1230	1270	103	1230	1210	98	45-160	4.70	(< 20)
Carbon tetrachloride	17.1U	820	766	93	820	731	89	65-135	4.60	(< 20)
Chlorobenzene	17.1U	820	835	102	820	823	100	75-125	1.50	(< 20)
Chloroethane	136U	820	761	93	820	728	89	40-155	4.50	(< 20)

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Matrix Spike Summary

Original Sample ID: 1155989
MS Sample ID: 1155990 MS
MSD Sample ID: 1155991 MSD

Analysis Date: 06/27/2013 20:36
Analysis Date: 06/27/2013 17:48
Analysis Date: 06/27/2013 18:05
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1132524016, 1132524017, 1132524020

Results by **SW8260B**

		Matrix Spike (ug/Kg)			Spike Duplicate (ug/Kg)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Chloroform	17.1U	820	770	94	820	758	92	70-125	1.70	(< 20)
Chloromethane	17.1U	820	732	89	820	707	86	50-130	3.60	(< 20)
cis-1,2-Dichloroethene	17.1U	820	849	104	820	820	100	65-125	3.50	(< 20)
cis-1,3-Dichloropropene	17.1U	820	762	93	820	744	91	70-125	2.30	(< 20)
Dibromochloromethane	17.1U	820	769	94	820	755	92	65-130	1.90	(< 20)
Dibromomethane	17.1U	820	830	101	820	826	101	75-130	0.53	(< 20)
Dichlorodifluoromethane	32.8U	820	755	92	820	718	88	35-135	5.00	(< 20)
Ethylbenzene	17.1U	820	772	94	820	759	93	75-125	1.70	(< 20)
Hexachlorobutadiene	32.8U	820	724	88	820	673	82	55-140	7.40	(< 20)
Isopropylbenzene (Cumene)	17.1U	820	772	94	820	754	92	75-130	2.40	(< 20)
Methyl-t-butyl ether	67.8U	1230	1270	103	1230	1260	102	63-149	0.87	(< 20)
Methylene chloride	67.8U	820	736	90	820	737	90	55-140	0.11	(< 20)
n-Butylbenzene	17.1U	820	747	91	820	698	85	65-140	6.80	(< 20)
n-Propylbenzene	17.1U	820	765	93	820	734	90	65-135	4.10	(< 20)
Naphthalene	19.4J	820	813	97	820	747	89	40-125	8.60	(< 20)
o-Xylene	17.1U	820	765	93	820	756	92	75-125	1.30	(< 20)
P & M -Xylene	32.8U	1640	1550	95	1640	1510	92	80-125	2.40	(< 20)
sec-Butylbenzene	17.1U	820	761	93	820	718	88	65-130	5.80	(< 20)
Styrene	17.1U	820	747	91	820	735	90	75-125	1.60	(< 20)
tert-Butylbenzene	17.1U	820	758	92	820	726	89	65-130	4.30	(< 20)
Tetrachloroethene	8.52U	820	853	104	820	805	98	65-140	5.70	(< 20)
Toluene	17.1U	820	832	102	820	817	100	70-125	1.80	(< 20)
trans-1,2-Dichloroethene	17.1U	820	849	104	820	805	98	65-135	5.30	(< 20)
trans-1,3-Dichloropropene	17.1U	820	761	93	820	757	92	65-125	0.54	(< 20)
Trichloroethene	8.52U	820	825	101	820	791	97	75-125	4.10	(< 20)
Trichlorofluoromethane	32.8U	820	777	95	820	759	93	25-185	2.40	(< 20)
Vinyl chloride	17.1U	820	775	95	820	734	90	60-125	5.40	(< 20)
Xylenes (total)	67.8U	2460	2320	94	2460	2270	92	80-125	2.10	(< 20)
Surrogates										
1,2-Dichloroethane-D4		820	746	91	820	737	90	79-118	1.20	
4-Bromofluorobenzene		2190	1840	84	2190	1820	83	67-138	1.10	
Toluene-d8		820	781	95	820	762	93	85-115	2.40	

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Matrix Spike Summary

Original Sample ID: 1155989
MS Sample ID: 1155990 MS
MSD Sample ID: 1155991 MSD

Analysis Date:
Analysis Date: 06/27/2013 17:48
Analysis Date: 06/27/2013 18:05
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1132524016, 1132524017, 1132524020

Results by **SW8260B**

		Matrix Spike (%)			Spike Duplicate (%)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL

Batch Information

Analytical Batch: VMS13585
Analytical Method: SW8260B
Instrument: Agilent 7890-75MS
Analyst: HM
Analytical Date/Time: 6/27/2013 5:48:00PM

Prep Batch: VXX24865
Prep Method: Vol. Extraction SW8260 Field Extracted L
Prep Date/Time: 6/27/2013 8:00:00AM
Prep Initial Wt./Vol.: 45.72g
Prep Extract Vol: 25.00mL

Print Date: 07/05/2013 4:26:57PM

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Method Blank

Blank ID: MB for HBN 1457760 [VXX/24870]
Blank Lab ID: 1156208

Matrix: Soil/Solid (dry weight)

QC for Samples:
1132524018, 1132524019

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	15.6U	25.0	7.80	ug/Kg
1,1,1-Trichloroethane	15.6U	25.0	7.80	ug/Kg
1,1,2,2-Tetrachloroethane	30.0U	50.0	15.0	ug/Kg
1,1,2-Trichloroethane	15.6U	25.0	7.80	ug/Kg
1,1-Dichloroethane	15.6U	25.0	7.80	ug/Kg
1,1-Dichloroethene	15.6U	25.0	7.80	ug/Kg
1,1-Dichloropropene	15.6U	25.0	7.80	ug/Kg
1,2,3-Trichlorobenzene	30.0U	50.0	15.0	ug/Kg
1,2,3-Trichloropropane	15.6U	25.0	7.80	ug/Kg
1,2,4-Trichlorobenzene	15.6U	25.0	7.80	ug/Kg
1,2,4-Trimethylbenzene	30.0U	50.0	15.0	ug/Kg
1,2-Dibromo-3-chloropropane	62.0U	100	31.0	ug/Kg
1,2-Dibromoethane	15.6U	25.0	7.80	ug/Kg
1,2-Dichlorobenzene	15.6U	25.0	7.80	ug/Kg
1,2-Dichloroethane	15.6U	25.0	7.80	ug/Kg
1,2-Dichloropropane	15.6U	25.0	7.80	ug/Kg
1,3,5-Trimethylbenzene	15.6U	25.0	7.80	ug/Kg
1,3-Dichlorobenzene	15.6U	25.0	7.80	ug/Kg
1,3-Dichloropropane	15.6U	25.0	7.80	ug/Kg
1,4-Dichlorobenzene	15.6U	25.0	7.80	ug/Kg
2,2-Dichloropropane	15.6U	25.0	7.80	ug/Kg
2-Butanone (MEK)	156U	250	78.0	ug/Kg
2-Chlorotoluene	15.6U	25.0	7.80	ug/Kg
2-Hexanone	156U	250	78.0	ug/Kg
4-Chlorotoluene	15.6U	25.0	7.80	ug/Kg
4-Isopropyltoluene	15.6U	25.0	7.80	ug/Kg
4-Methyl-2-pentanone (MIBK)	156U	250	78.0	ug/Kg
Benzene	7.80U	12.5	3.90	ug/Kg
Bromobenzene	15.6U	25.0	7.80	ug/Kg
Bromochloromethane	15.6U	25.0	7.80	ug/Kg
Bromodichloromethane	15.6U	25.0	7.80	ug/Kg
Bromoform	15.6U	25.0	7.80	ug/Kg
Bromomethane	124U	200	62.0	ug/Kg
Carbon disulfide	62.0U	100	31.0	ug/Kg
Carbon tetrachloride	15.6U	25.0	7.80	ug/Kg
Chlorobenzene	15.6U	25.0	7.80	ug/Kg
Chloroethane	124U	200	62.0	ug/Kg
Chloroform	15.6U	25.0	7.80	ug/Kg

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Method Blank

Blank ID: MB for HBN 1457760 [VXX/24870]
Blank Lab ID: 1156208

Matrix: Soil/Solid (dry weight)

QC for Samples:
1132524018, 1132524019

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
Chloromethane	15.6U	25.0	7.80	ug/Kg
cis-1,2-Dichloroethene	15.6U	25.0	7.80	ug/Kg
cis-1,3-Dichloropropene	15.6U	25.0	7.80	ug/Kg
Dibromochloromethane	15.6U	25.0	7.80	ug/Kg
Dibromomethane	15.6U	25.0	7.80	ug/Kg
Dichlorodifluoromethane	30.0U	50.0	15.0	ug/Kg
Ethylbenzene	15.6U	25.0	7.80	ug/Kg
Hexachlorobutadiene	30.0U	50.0	15.0	ug/Kg
Isopropylbenzene (Cumene)	15.6U	25.0	7.80	ug/Kg
Methylene chloride	62.0U	100	31.0	ug/Kg
Methyl-t-butyl ether	62.0U	100	31.0	ug/Kg
Naphthalene	30.0U	50.0	15.0	ug/Kg
n-Butylbenzene	15.6U	25.0	7.80	ug/Kg
n-Propylbenzene	15.6U	25.0	7.80	ug/Kg
o-Xylene	15.6U	25.0	7.80	ug/Kg
P & M -Xylene	30.0U	50.0	15.0	ug/Kg
sec-Butylbenzene	15.6U	25.0	7.80	ug/Kg
Styrene	15.6U	25.0	7.80	ug/Kg
tert-Butylbenzene	15.6U	25.0	7.80	ug/Kg
Tetrachloroethene	7.80U	12.5	3.90	ug/Kg
Toluene	15.6U	25.0	7.80	ug/Kg
trans-1,2-Dichloroethene	15.6U	25.0	7.80	ug/Kg
trans-1,3-Dichloropropene	15.6U	25.0	7.80	ug/Kg
Trichloroethene	7.80U	12.5	3.90	ug/Kg
Trichlorofluoromethane	30.0U	50.0	15.0	ug/Kg
Vinyl chloride	15.6U	25.0	7.80	ug/Kg
Xylenes (total)	62.0U	100	31.0	ug/Kg
Surrogates				
1,2-Dichloroethane-D4	101	79-118		%
4-Bromofluorobenzene	98.8	67-138		%
Toluene-d8	101	85-115		%

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Method Blank

Blank ID: MB for HBN 1457760 [VXX/24870]
Blank Lab ID: 1156208

Matrix: Soil/Solid (dry weight)

QC for Samples:
1132524018, 1132524019

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units

Batch Information

Analytical Batch: VMS13593
Analytical Method: SW8260B
Instrument: Agilent 7890-75MS
Analyst: HM
Analytical Date/Time: 6/28/2013 1:21:01PM

Prep Batch: VXX24870
Prep Method: SW5035A
Prep Date/Time: 6/28/2013 8:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 07/05/2013 4:26:57PM

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1132524 [VXX24870]
Blank Spike Lab ID: 1156209
Date Analyzed: 06/28/2013 13:51

Matrix: Soil/Solid (dry weight)

QC for Samples: 1132524018, 1132524019

Results by **SW8260B**

	Blank Spike (ug/Kg)			
Parameter	Spike	Result	Rec (%)	CL
1,1,1,2-Tetrachloroethane	750	739	99	(75-125)
1,1,1-Trichloroethane	750	741	99	(70-135)
1,1,2,2-Tetrachloroethane	750	793	106	(55-130)
1,1,2-Trichloroethane	750	781	104	(60-125)
1,1-Dichloroethane	750	797	106	(75-125)
1,1-Dichloroethene	750	714	95	(65-135)
1,1-Dichloropropene	750	737	98	(70-135)
1,2,3-Trichlorobenzene	750	815	109	(60-135)
1,2,3-Trichloropropane	750	775	103	(65-130)
1,2,4-Trichlorobenzene	750	804	107	(65-130)
1,2,4-Trimethylbenzene	750	727	97	(65-135)
1,2-Dibromo-3-chloropropane	750	787	105	(40-135)
1,2-Dibromoethane	750	811	108	(70-125)
1,2-Dichlorobenzene	750	765	102	(75-120)
1,2-Dichloroethane	750	769	103	(70-135)
1,2-Dichloropropane	750	786	105	(70-120)
1,3,5-Trimethylbenzene	750	725	97	(65-135)
1,3-Dichlorobenzene	750	777	104	(70-125)
1,3-Dichloropropane	750	780	104	(75-125)
1,4-Dichlorobenzene	750	775	103	(70-125)
2,2-Dichloropropane	750	784	105	(65-135)
2-Butanone (MEK)	2250	2270	101	(30-160)
2-Chlorotoluene	750	768	102	(70-130)
2-Hexanone	2250	2490	111	(45-145)
4-Chlorotoluene	750	788	105	(75-125)
4-Isopropyltoluene	750	716	95	(75-135)
4-Methyl-2-pentanone (MIBK)	2250	2480	110	(45-145)
Benzene	750	726	97	(75-125)
Bromobenzene	750	771	103	(65-120)
Bromochloromethane	750	793	106	(70-125)
Bromodichloromethane	750	815	109	(70-130)
Bromoform	750	719	96	(55-135)
Bromomethane	750	726	97	(30-160)

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1132524 [VXX24870]
Blank Spike Lab ID: 1156209
Date Analyzed: 06/28/2013 13:51

Matrix: Soil/Solid (dry weight)

QC for Samples: 1132524018, 1132524019

Results by **SW8260B**

Blank Spike (ug/Kg)

Parameter	Spike	Result	Rec (%)	CL
Carbon disulfide	1130	1150	102	(45-160)
Carbon tetrachloride	750	747	100	(65-135)
Chlorobenzene	750	787	105	(75-125)
Chloroethane	750	624	83	(40-155)
Chloroform	750	731	98	(70-125)
Chloromethane	750	761	101	(50-130)
cis-1,2-Dichloroethene	750	783	104	(65-125)
cis-1,3-Dichloropropene	750	726	97	(70-125)
Dibromochloromethane	750	736	98	(65-130)
Dibromomethane	750	786	105	(75-130)
Dichlorodifluoromethane	750	838	112	(35-135)
Ethylbenzene	750	735	98	(75-125)
Hexachlorobutadiene	750	787	105	(55-140)
Isopropylbenzene (Cumene)	750	720	96	(75-130)
Methyl-t-butyl ether	1130	1180	105	(63-149)
Methylene chloride	750	675	90	(55-140)
n-Butylbenzene	750	727	97	(65-140)
n-Propylbenzene	750	725	97	(65-135)
Naphthalene	750	744	99	(40-125)
o-Xylene	750	717	96	(75-125)
P & M -Xylene	1500	1440	96	(80-125)
sec-Butylbenzene	750	719	96	(65-130)
Styrene	750	709	95	(75-125)
tert-Butylbenzene	750	724	97	(65-130)
Tetrachloroethene	750	817	109	(65-140)
Toluene	750	782	104	(70-125)
trans-1,2-Dichloroethene	750	785	105	(65-135)
trans-1,3-Dichloropropene	750	723	96	(65-125)
Trichloroethene	750	775	103	(75-125)
Trichlorofluoromethane	750	728	97	(25-185)
Vinyl chloride	750	805	107	(60-125)
Xylenes (total)	2250	2150	96	(80-125)

Surrogates

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1132524 [VXX24870]
Blank Spike Lab ID: 1156209
Date Analyzed: 06/28/2013 13:51

Matrix: Soil/Solid (dry weight)

QC for Samples: 1132524018, 1132524019

Results by **SW8260B**

		Blank Spike (%)		
Parameter	Spike	Result	Rec (%)	CL
1,2-Dichloroethane-D4	750	97.2	97	(79-118)
4-Bromofluorobenzene	750	95.6	96	(67-138)
Toluene-d8	750	99.8	100	(85-115)

Batch Information

Analytical Batch: **VMS13593**
Analytical Method: **SW8260B**
Instrument: **Agilent 7890-75MS**
Analyst: **HM**

Prep Batch: **VXX24870**
Prep Method: **SW5035A**
Prep Date/Time: **06/28/2013 08:00**
Spike Init Wt./Vol.: 750 ug/Kg Extract Vol: 25 mL
Dupe Init Wt./Vol.: Extract Vol:

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Matrix Spike Summary

Original Sample ID: 1156210
MS Sample ID: 1156211 MS
MSD Sample ID: 1156212 MSD

Analysis Date: 06/28/2013 17:53
Analysis Date: 06/28/2013 15:16
Analysis Date: 06/28/2013 14:42
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1132524018, 1132524019

Results by **SW8260B**

		Matrix Spike (ug/Kg)			Spike Duplicate (ug/Kg)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	27.6U	1330	1360	103	1330	1340	101	75-125	2.10	(< 20)
1,1,1-Trichloroethane	27.6U	1330	1370	103	1330	1360	103	70-135	0.39	(< 20)
1,1,2,2-Tetrachloroethane	53.0U	1330	1480	111	1330	1460	110	55-130	1.20	(< 20)
1,1,2-Trichloroethane	27.6U	1330	1470	111	1330	1420	107	60-125	3.60	(< 20)
1,1-Dichloroethane	27.6U	1330	1480	111	1330	1470	111	75-125	0.48	(< 20)
1,1-Dichloroethene	27.6U	1330	1350	102	1330	1380	104	65-135	1.90	(< 20)
1,1-Dichloropropene	27.6U	1330	1370	104	1330	1360	103	70-135	0.97	(< 20)
1,2,3-Trichlorobenzene	53.0U	1330	1560	118	1330	1630	123	60-135	4.30	(< 20)
1,2,3-Trichloropropane	27.6U	1330	1490	112	1330	1460	110	65-130	2.40	(< 20)
1,2,4-Trichlorobenzene	27.6U	1330	1530	115	1330	1570	119	65-130	2.90	(< 20)
1,2,4-Trimethylbenzene	53.0U	1330	1360	102	1330	1370	103	65-135	0.75	(< 20)
1,2-Dibromo-3-chloropropane	110U	1330	1480	112	1330	1480	111	40-135	0.45	(< 20)
1,2-Dibromoethane	27.6U	1330	1490	112	1330	1490	113	70-125	0.42	(< 20)
1,2-Dichlorobenzene	27.6U	1330	1410	107	1330	1410	106	75-120	0.53	(< 20)
1,2-Dichloroethane	27.6U	1330	1440	108	1330	1420	107	70-135	1.40	(< 20)
1,2-Dichloropropane	27.6U	1330	1460	110	1330	1460	110	70-120	0.58	(< 20)
1,3,5-Trimethylbenzene	27.6U	1330	1350	102	1330	1340	101	65-135	0.98	(< 20)
1,3-Dichlorobenzene	27.6U	1330	1430	108	1330	1430	108	70-125	0.03	(< 20)
1,3-Dichloropropane	27.6U	1330	1470	111	1330	1460	110	75-125	1.10	(< 20)
1,4-Dichlorobenzene	27.6U	1330	1450	110	1330	1420	107	70-125	2.60	(< 20)
2,2-Dichloropropane	27.6U	1330	1420	107	1330	1460	110	65-135	2.20	(< 20)
2-Butanone (MEK)	276U	3980	4790	120	3980	4570	115	30-160	4.70	(< 20)
2-Chlorotoluene	27.6U	1330	1440	108	1330	1400	106	70-130	2.40	(< 20)
2-Hexanone	276U	3980	4950	124	3980	4840	122	45-145	2.20	(< 20)
4-Chlorotoluene	27.6U	1330	1470	111	1330	1450	109	75-125	1.50	(< 20)
4-Isopropyltoluene	27.6U	1330	1380	104	1330	1380	104	75-135	0.29	(< 20)
4-Methyl-2-pentanone (MIBK)	276U	3980	4850	122	3980	4770	120	45-145	1.60	(< 20)
Benzene	13.8U	1330	1330	100	1330	1350	102	75-125	1.50	(< 20)
Bromobenzene	27.6U	1330	1440	109	1330	1440	108	65-120	0.43	(< 20)
Bromochloromethane	27.6U	1330	1470	111	1330	1460	110	70-125	0.63	(< 20)
Bromodichloromethane	27.6U	1330	1510	114	1330	1480	112	70-130	1.50	(< 20)
Bromoform	27.6U	1330	1320	99	1330	1300	98	55-135	1.70	(< 20)
Bromomethane	220U	1330	1300	98	1330	1190	89	30-160	9.50	(< 20)
Carbon disulfide	110U	1990	2160	109	1990	2240	112	45-160	3.40	(< 20)
Carbon tetrachloride	27.6U	1330	1370	103	1330	1350	102	65-135	1.10	(< 20)
Chlorobenzene	27.6U	1330	1480	112	1330	1450	109	75-125	2.20	(< 20)
Chloroethane	220U	1330	1240	93	1330	1320	99	40-155	6.30	(< 20)

Print Date: 07/05/2013 4:26:59PM

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Matrix Spike Summary

Original Sample ID: 1156210
MS Sample ID: 1156211 MS
MSD Sample ID: 1156212 MSD

Analysis Date: 06/28/2013 17:53
Analysis Date: 06/28/2013 15:16
Analysis Date: 06/28/2013 14:42
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1132524018, 1132524019

Results by **SW8260B**

		Matrix Spike (ug/Kg)			Spike Duplicate (ug/Kg)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Chloroform	27.6U	1330	1370	103	1330	1350	102	70-125	1.30	(< 20)
Chloromethane	27.6U	1330	1350	102	1330	1290	97	50-130	4.80	(< 20)
cis-1,2-Dichloroethene	27.6U	1330	1470	111	1330	1470	111	65-125	0.03	(< 20)
cis-1,3-Dichloropropene	27.6U	1330	1350	102	1330	1340	101	70-125	0.56	(< 20)
Dibromochloromethane	27.6U	1330	1330	100	1330	1320	100	65-130	0.77	(< 20)
Dibromomethane	27.6U	1330	1480	112	1330	1460	110	75-130	1.20	(< 20)
Dichlorodifluoromethane	53.0U	1330	1470	111	1330	1420	107	35-135	3.30	(< 20)
Ethylbenzene	27.6U	1330	1380	104	1330	1360	103	75-125	1.20	(< 20)
Hexachlorobutadiene	53.0U	1330	1850	139	1330	1850	139	55-140	0.05	(< 20)
Isopropylbenzene (Cumene)	27.6U	1330	1370	103	1330	1350	101	75-130	1.60	(< 20)
Methyl-t-butyl ether	110U	1990	2220	112	1990	2220	112	63-149	0.06	(< 20)
Methylene chloride	110U	1330	1340	101	1330	1330	101	55-140	0.46	(< 20)
n-Butylbenzene	27.6U	1330	1410	106	1330	1410	106	65-140	0.13	(< 20)
n-Propylbenzene	27.6U	1330	1360	103	1330	1350	102	65-135	1.10	(< 20)
Naphthalene	53.0U	1330	1430	108	1330	1530	115	40-125	6.10	(< 20)
o-Xylene	27.6U	1330	1370	103	1330	1350	102	75-125	1.40	(< 20)
P & M -Xylene	53.0U	2650	2740	103	2650	2670	101	80-125	2.70	(< 20)
sec-Butylbenzene	27.6U	1330	1370	103	1330	1370	103	65-130	0.13	(< 20)
Styrene	27.6U	1330	1340	101	1330	1320	100	75-125	1.30	(< 20)
tert-Butylbenzene	27.6U	1330	1360	103	1330	1360	102	65-130	0.13	(< 20)
Tetrachloroethene	13.8U	1330	1520	114	1330	1500	113	65-140	1.20	(< 20)
Toluene	27.6U	1330	1450	110	1330	1450	109	70-125	0.46	(< 20)
trans-1,2-Dichloroethene	27.6U	1330	1460	110	1330	1490	112	65-135	1.90	(< 20)
trans-1,3-Dichloropropene	27.6U	1330	1340	101	1330	1330	100	65-125	0.60	(< 20)
Trichloroethene	13.8U	1330	1450	110	1330	1440	109	75-125	0.55	(< 20)
Trichlorofluoromethane	53.0U	1330	1350	102	1330	1400	105	25-185	3.60	(< 20)
Vinyl chloride	27.6U	1330	1450	109	1330	1380	104	60-125	4.80	(< 20)
Xylenes (total)	110U	3980	4110	103	3980	4020	101	80-125	2.30	(< 20)
Surrogates										
1,2-Dichloroethane-D4		1330	1340	101	1330	1280	96	79-118	4.60	
4-Bromofluorobenzene		3540	3380	96	3540	3280	93	67-138	2.90	
Toluene-d8		1330	1390	105	1330	1330	100	85-115	4.30	

Print Date: 07/05/2013 4:26:59PM

Matrix Spike Summary

Original Sample ID: 1156210
MS Sample ID: 1156211 MS
MSD Sample ID: 1156212 MSD

QC for Samples: 1132524018, 1132524019

Analysis Date:
Analysis Date: 06/28/2013 15:16
Analysis Date: 06/28/2013 14:42
Matrix: Solid/Soil (Wet Weight)

Results by **SW8260B**

		Matrix Spike (%)			Spike Duplicate (%)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL

Batch Information

Analytical Batch: VMS13593
Analytical Method: SW8260B
Instrument: Agilent 7890-75MS
Analyst: HM
Analytical Date/Time: 6/28/2013 3:16:00PM

Prep Batch: VXX24870
Prep Method: Vol. Extraction SW8260 Field Extracted L
Prep Date/Time: 6/28/2013 8:00:00AM
Prep Initial Wt./Vol.: 28.27g
Prep Extract Vol: 25.00mL

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Method Blank

Blank ID: MB for HBN 1458170 [VXX/24874] Matrix: Soil/Solid (dry weight)
Blank Lab ID: 1156415

QC for Samples:
1132524001, 1132524002, 1132524003, 1132524004, 1132524005, 1132524006, 1132524007, 1132524008, 1132524009, 1132524010, 1132524011, 1132524012, 1132524013, 1132524014, 1132524015, 1132524016, 1132524017, 1132524018, 1132524019, 1132524020

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Benzene	0.00800U	0.0125	0.00400	mg/Kg
Ethylbenzene	0.0156U	0.0250	0.00780	mg/Kg
Gasoline Range Organics	1.50U	2.50	0.750	mg/Kg
o-Xylene	0.0156U	0.0250	0.00780	mg/Kg
P & M -Xylene	0.0300U	0.0500	0.0150	mg/Kg
Toluene	0.0156U	0.0250	0.00780	mg/Kg
Surrogates				
1,4-Difluorobenzene	95.9	72-119		%
4-Bromofluorobenzene	97.2	50-150		%

Batch Information

Analytical Batch: VFC11484
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 6/28/2013 11:45:00PM

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 6/28/2013 8:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 07/05/2013 4:26:59PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1132524 [VXX24874]
Blank Spike Lab ID: 1156416
Date Analyzed: 06/29/2013 00:03

Spike Duplicate ID: LCSD for HBN 1132524 [VXX24874]
Spike Duplicate Lab ID: 1156417
Matrix: Soil/Solid (dry weight)

QC for Samples: 1132524001, 1132524002, 1132524003, 1132524004, 1132524005, 1132524006, 1132524007, 1132524008, 1132524009, 1132524010, 1132524011, 1132524012, 1132524013, 1132524014, 1132524015, 1132524016, 1132524017, 1132524018, 1132524019, 1132524020

Results by **AK101**

	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Benzene	1.25	1.29	103	1.25	1.25	100	(75-125)	3.40	(< 20)
Ethylbenzene	1.25	1.35	108	1.25	1.35	108	(75-125)	0.04	(< 20)
o-Xylene	1.25	1.34	107	1.25	1.34	107	(75-125)	0.11	(< 20)
P & M -Xylene	2.50	2.74	109	2.50	2.73	109	(80-125)	0.15	(< 20)
Toluene	1.25	1.34	107	1.25	1.34	107	(70-125)	0.02	(< 20)
Surrogates									
1,4-Difluorobenzene	1.25	99.2	99	1.25	96.8	97	(72-119)	2.50	

Batch Information

Analytical Batch: **VFC11484**
Analytical Method: **AK101**
Instrument: **Agilent 7890A PID/FID**
Analyst: **ST**

Prep Batch: **VXX24874**
Prep Method: **SW5035A**
Prep Date/Time: **06/28/2013 08:00**
Spike Init Wt./Vol.: 1.25 mg/Kg Extract Vol: 25 mL
Dupe Init Wt./Vol.: 1.25 mg/Kg Extract Vol: 25 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1132524 [VXX24874]
Blank Spike Lab ID: 1156418
Date Analyzed: 06/29/2013 00:40

Spike Duplicate ID: LCSD for HBN 1132524 [VXX24874]
Spike Duplicate Lab ID: 1156419
Matrix: Soil/Solid (dry weight)

QC for Samples: 1132524001, 1132524002, 1132524003, 1132524004, 1132524005, 1132524006, 1132524007, 1132524008, 1132524009, 1132524010, 1132524011, 1132524012, 1132524013, 1132524014, 1132524015, 1132524016, 1132524017, 1132524018, 1132524019, 1132524020

Results by **AK101**

	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics	10.0	10.2	102	10.0	10.3	103	(60-120)	0.81	(< 20)
Surrogates									
4-Bromofluorobenzene	1.25	99.1	99	1.25	98.9	99	(50-150)	0.22	

Batch Information

Analytical Batch: **VFC11484**
Analytical Method: **AK101**
Instrument: **Agilent 7890A PID/FID**
Analyst: **ST**

Prep Batch: **VXX24874**
Prep Method: **SW5035A**
Prep Date/Time: **06/28/2013 08:00**
Spike Init Wt./Vol.: 10.0 mg/Kg Extract Vol: 25 mL
Dupe Init Wt./Vol.: 10.0 mg/Kg Extract Vol: 25 mL

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Method Blank

Blank ID: MB for HBN 1458170 [VXX/24874] Matrix: Soil/Solid (dry weight)
Blank Lab ID: 1156415

QC for Samples:
1132524001, 1132524002, 1132524003, 1132524004, 1132524005, 1132524006, 1132524007, 1132524008, 1132524009, 1132524010, 1132524011, 1132524012, 1132524013, 1132524014, 1132524015, 1132524016, 1132524017, 1132524018, 1132524019, 1132524020

Results by **SW8021B**

Parameter	Results	LOQ/CL	DL	Units
Benzene	8.00U	12.5	4.00	ug/Kg
Ethylbenzene	15.6U	25.0	7.80	ug/Kg
o-Xylene	15.6U	25.0	7.80	ug/Kg
P & M -Xylene	30.0U	50.0	15.0	ug/Kg
Toluene	15.6U	25.0	7.80	ug/Kg
Surrogates				
1,4-Difluorobenzene	95.9	72-119		%

Batch Information

Analytical Batch: VFC11484
Analytical Method: SW8021B
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 6/28/2013 11:45:00PM

Prep Batch: VXX24874
Prep Method: SW5035A
Prep Date/Time: 6/28/2013 8:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1132524 [VXX24874]
Blank Spike Lab ID: 1156416
Date Analyzed: 06/29/2013 00:03

Spike Duplicate ID: LCSD for HBN 1132524 [VXX24874]
Spike Duplicate Lab ID: 1156417
Matrix: Soil/Solid (dry weight)

QC for Samples: 1132524001, 1132524002, 1132524003, 1132524004, 1132524005, 1132524006, 1132524007, 1132524008, 1132524009, 1132524010, 1132524011, 1132524012, 1132524013, 1132524014, 1132524015, 1132524016, 1132524017, 1132524018, 1132524019, 1132524020

Results by **SW8021B**

	Blank Spike (ug/Kg)			Spike Duplicate (ug/Kg)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Benzene	1250	1290	103	1250	1250	100	(75-125)	3.40	(< 20)
Ethylbenzene	1250	1350	108	1250	1350	108	(75-125)	0.04	(< 20)
o-Xylene	1250	1340	107	1250	1340	107	(75-125)	0.11	(< 20)
P & M -Xylene	2500	2740	109	2500	2730	109	(80-125)	0.15	(< 20)
Toluene	1250	1340	107	1250	1340	107	(70-125)	0.02	(< 20)
Surrogates									
1,4-Difluorobenzene	1250	99.2	99	1250	96.8	97	(72-119)	2.50	

Batch Information

Analytical Batch: **VFC11484**
Analytical Method: **SW8021B**
Instrument: **Agilent 7890A PID/FID**
Analyst: **ST**

Prep Batch: **VXX24874**
Prep Method: **SW5035A**
Prep Date/Time: **06/28/2013 08:00**
Spike Init Wt./Vol.: 1250 ug/Kg Extract Vol: 25 mL
Dupe Init Wt./Vol.: 1250 ug/Kg Extract Vol: 25 mL

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Matrix Spike Summary

Original Sample ID: 1132524001
MS Sample ID: 1156420 MS
MSD Sample ID: 1156421 MSD

Analysis Date: 06/29/2013 1:36
Analysis Date: 06/29/2013 1:54
Analysis Date: 06/29/2013 2:12
Matrix: Soil/Solid (dry weight)

QC for Samples: 1132524001, 1132524002, 1132524003, 1132524004, 1132524005, 1132524006, 1132524007, 1132524008, 1132524009, 1132524010, 1132524011, 1132524012, 1132524013, 1132524014, 1132524015, 1132524016, 1132524017, 1132524018, 1132524019, 1132524020

Results by **SW8021B**

		Matrix Spike (ug/Kg)				Spike Duplicate (ug/Kg)					
Parameter	Sample	Spike	Result	Rec (%)		Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Benzene	14.8U	1776	1873	106		1776	1594	90	75-125	16.70	(< 20)
Ethylbenzene	49.5	1776	1934	106		1776	1861	102	75-125	3.80	(< 20)
o-Xylene	300	1776	2640	132	*	1776	2433	120	75-125	8.20	(< 20)
P & M -Xylene	253	3552	4075	108		3552	3929	103	80-125	3.90	(< 20)
Toluene	19.4J	1776	1910	106		1776	1861	104	70-125	2.60	(< 20)
Surrogates											
1,4-Difluorobenzene		1776	1776	100		1776	1740	98	72-119	1.90	

Batch Information

Analytical Batch: VFC11484
Analytical Method: SW8021B
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 6/29/2013 1:54:00AM

Prep Batch: VXX24874
Prep Method: AK101 Extraction (S)
Prep Date/Time: 6/28/2013 8:00:00AM
Prep Initial Wt./Vol.: 42.85g
Prep Extract Vol: 25.00mL

Print Date: 07/05/2013 4:27:02PM

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Method Blank

Blank ID: MB for HBN 1455995 [XXX/29225]
Blank Lab ID: 1154289

Matrix: Soil/Solid (dry weight)

QC for Samples:
1132524001, 1132524002, 1132524003, 1132524004, 1132524006, 1132524007, 1132524008

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	12.4U	20.0	6.20	mg/Kg
Surrogates				
5a Androstane	79.9	60-120		%

Batch Information

Analytical Batch: XFC10936
Analytical Method: AK102
Instrument: HP 6890 Series II FID SV D R
Analyst: HM
Analytical Date/Time: 6/22/2013 12:09:00PM

Prep Batch: XXX29225
Prep Method: SW3550C
Prep Date/Time: 6/21/2013 11:30:00AM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 1 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1132524 [XXX29225]
Blank Spike Lab ID: 1154290
Date Analyzed: 06/22/2013 12:18

Spike Duplicate ID: LCSD for HBN 1132524 [XXX29225]
Spike Duplicate Lab ID: 1154291
Matrix: Soil/Solid (dry weight)

QC for Samples: 1132524001, 1132524002, 1132524003, 1132524004, 1132524006, 1132524007, 1132524008

Results by **AK102**

	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Diesel Range Organics	167	145	87	167	141	84	(75-125)	3.30	(< 20)
Surrogates									
5a Androstane	3.33	110	110	3.33	91	91	(60-120)	19.30	

Batch Information

Analytical Batch: **XFC10936**
Analytical Method: **AK102**
Instrument: **HP 6890 Series II FID SV D R**
Analyst: **HM**

Prep Batch: **XXX29225**
Prep Method: **SW3550C**
Prep Date/Time: **06/21/2013 11:30**
Spike Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL
Dupe Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL

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Method Blank

Blank ID: MB for HBN 1456564 [XXX/29230]
Blank Lab ID: 1154557

Matrix: Soil/Solid (dry weight)

QC for Samples:
1132524018, 1132524019

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	12.2U	19.7	6.10	mg/Kg
Surrogates				
5a Androstane	66.3	60-120		%

Batch Information

Analytical Batch: XFC10939
Analytical Method: AK102
Instrument: HP 6890 Series II FID SV D R
Analyst: MCM
Analytical Date/Time: 6/25/2013 1:08:00PM

Prep Batch: XXX29230
Prep Method: SW3550C
Prep Date/Time: 6/24/2013 7:30:00AM
Prep Initial Wt./Vol.: 30.5 g
Prep Extract Vol: 1 mL

Print Date: 07/05/2013 4:27:04PM

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1132524 [XXX29230]
Blank Spike Lab ID: 1154558
Date Analyzed: 06/25/2013 13:18

Spike Duplicate ID: LCSD for HBN 1132524 [XXX29230]
Spike Duplicate Lab ID: 1154559
Matrix: Soil/Solid (dry weight)

QC for Samples: 1132524018, 1132524019

Results by **AK102**

	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Diesel Range Organics	164	144	88	164	134	82	(75-125)	7.40	(< 20)
Surrogates									
5a Androstane	3.28	94.2	94	3.28	88.8	89	(60-120)	5.90	

Batch Information

Analytical Batch: **XFC10939**
Analytical Method: **AK102**
Instrument: **HP 6890 Series II FID SV D R**
Analyst: **MCM**

Prep Batch: **XXX29230**
Prep Method: **SW3550C**
Prep Date/Time: **06/24/2013 07:30**
Spike Init Wt./Vol.: 164 mg/Kg Extract Vol: 1 mL
Dupe Init Wt./Vol.: 164 mg/Kg Extract Vol: 1 mL

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Method Blank

Blank ID: MB for HBN 1456616 [XXX/29238] Matrix: Soil/Solid (dry weight)
Blank Lab ID: 1154801

QC for Samples:
1132524009, 1132524010, 1132524011, 1132524012, 1132524013, 1132524014, 1132524016, 1132524017

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	12.4U	20.0	6.20	mg/Kg
Surrogates				
5a Androstane	77.4	60-120		%

Batch Information

Analytical Batch: XFC10939
Analytical Method: AK102
Instrument: HP 6890 Series II FID SV D R
Analyst: MCM
Analytical Date/Time: 6/25/2013 4:56:00PM

Prep Batch: XXX29238
Prep Method: SW3550C
Prep Date/Time: 6/24/2013 4:30:00PM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 1 mL

Print Date: 07/05/2013 4:27:05PM

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1132524 [XXX29238]
Blank Spike Lab ID: 1154802
Date Analyzed: 06/25/2013 17:06

Spike Duplicate ID: LCSD for HBN 1132524 [XXX29238]
Spike Duplicate Lab ID: 1154803
Matrix: Soil/Solid (dry weight)

QC for Samples: 1132524009, 1132524010, 1132524011, 1132524012, 1132524013, 1132524014, 1132524016, 1132524017

Results by **AK102**

	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Diesel Range Organics	167	129	77	167	129	77	(75-125)	0.01	(< 20)
Surrogates									
5a Androstane	3.33	82.3	82	3.33	80	80	(60-120)	2.80	

Batch Information

Analytical Batch: **XFC10939**
Analytical Method: **AK102**
Instrument: **HP 6890 Series II FID SV D R**
Analyst: **MCM**

Prep Batch: **XXX29238**
Prep Method: **SW3550C**
Prep Date/Time: **06/24/2013 16:30**
Spike Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL
Dupe Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL

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Method Blank

Blank ID: MB for HBN 1456665 [XXX/29241]
Blank Lab ID: 1154863

Matrix: Soil/Solid (dry weight)

QC for Samples:
1132524005

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	12.4U	20.0	6.20	mg/Kg
Surrogates				
5a Androstane	78.2	60-120		%

Batch Information

Analytical Batch: XFC10939
Analytical Method: AK102
Instrument: HP 6890 Series II FID SV D R
Analyst: MCM
Analytical Date/Time: 6/25/2013 8:26:00PM

Prep Batch: XXX29241
Prep Method: SW3550C
Prep Date/Time: 6/25/2013 6:45:00AM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 1 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1132524 [XXX29241]
Blank Spike Lab ID: 1154864
Date Analyzed: 06/25/2013 20:35

Spike Duplicate ID: LCSD for HBN 1132524 [XXX29241]
Spike Duplicate Lab ID: 1154865
Matrix: Soil/Solid (dry weight)

QC for Samples: 1132524005

Results by **AK102**

	Blank Spike (mg/Kg)				Spike Duplicate (mg/Kg)					
Parameter	Spike	Result	Rec (%)		Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Diesel Range Organics	167	125	75	*	167	139	83	(75-125)	10.80	(< 20)
Surrogates										
5a Androstane	3.33	78.8	79		3.33	91.6	92	(60-120)	15.10	

Batch Information

Analytical Batch: **XFC10939**
Analytical Method: **AK102**
Instrument: **HP 6890 Series II FID SV D R**
Analyst: **MCM**

Prep Batch: **XXX29241**
Prep Method: **SW3550C**
Prep Date/Time: **06/25/2013 06:45**
Spike Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL
Dupe Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL

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Method Blank

Blank ID: MB for HBN 1457460 [XXX/29277]
Blank Lab ID: 1155842

Matrix: Soil/Solid (dry weight)

QC for Samples:
1132524010, 1132524011, 1132524013

Results by **8270D SIMS (PAH)**

Parameter	Results	LOQ/CL	DL	Units
1-Methylnaphthalene	3.00U	5.00	1.50	ug/Kg
2-Methylnaphthalene	3.00U	5.00	1.50	ug/Kg
Acenaphthene	3.00U	5.00	1.50	ug/Kg
Acenaphthylene	3.00U	5.00	1.50	ug/Kg
Anthracene	3.00U	5.00	1.50	ug/Kg
Benzo(a)Anthracene	3.00U	5.00	1.50	ug/Kg
Benzo[a]pyrene	3.00U	5.00	1.50	ug/Kg
Benzo[b]Fluoranthene	3.00U	5.00	1.50	ug/Kg
Benzo[g,h,i]perylene	3.00U	5.00	1.50	ug/Kg
Benzo[k]fluoranthene	3.00U	5.00	1.50	ug/Kg
Chrysene	3.00U	5.00	1.50	ug/Kg
Dibenzo[a,h]anthracene	3.00U	5.00	1.50	ug/Kg
Fluoranthene	3.00U	5.00	1.50	ug/Kg
Fluorene	3.00U	5.00	1.50	ug/Kg
Indeno[1,2,3-c,d] pyrene	3.00U	5.00	1.50	ug/Kg
Naphthalene	3.00U	5.00	1.50	ug/Kg
Phenanthrene	3.00U	5.00	1.50	ug/Kg
Pyrene	3.00U	5.00	1.50	ug/Kg
Surrogates				
2-Fluorobiphenyl	77.4	45-105		%
Terphenyl-d14	97.6	30-125		%

Batch Information

Analytical Batch: XMS7404
Analytical Method: 8270D SIMS (PAH)
Instrument: HP 6890/5973 MS SVQA
Analyst: RTS
Analytical Date/Time: 7/1/2013 5:51:00PM

Prep Batch: XXX29277
Prep Method: SW3550C
Prep Date/Time: 6/27/2013 5:40:00PM
Prep Initial Wt./Vol.: 22.5 g
Prep Extract Vol: 1 mL

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200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1132524 [XXX29277]
Blank Spike Lab ID: 1155843
Date Analyzed: 07/01/2013 18:37

Matrix: Soil/Solid (dry weight)

QC for Samples: 1132524010, 1132524011, 1132524013

Results by **8270D SIMS (PAH)**

	Blank Spike (ug/Kg)			
Parameter	Spike	Result	Rec (%)	CL
1-Methylnaphthalene	22.2	15.0	68	(44-107)
2-Methylnaphthalene	22.2	14.3	64	(45-105)
Acenaphthene	22.2	15.6	70	(45-110)
Acenaphthylene	22.2	16.0	72	(45-105)
Anthracene	22.2	17.7	80	(55-105)
Benzo(a)Anthracene	22.2	19.6	88	(50-110)
Benzo[a]pyrene	22.2	14.8	67	(50-110)
Benzo[b]Fluoranthene	22.2	20.3	91	(45-115)
Benzo[g,h,i]perylene	22.2	18.9	85	(40-125)
Benzo[k]fluoranthene	22.2	19.8	89	(45-125)
Chrysene	22.2	20.5	92	(55-110)
Dibenzo[a,h]anthracene	22.2	19.0	86	(40-125)
Fluoranthene	22.2	20.3	91	(55-115)
Fluorene	22.2	16.7	75	(50-110)
Indeno[1,2,3-c,d] pyrene	22.2	19.0	86	(40-120)
Naphthalene	22.2	14.8	66	(40-105)
Phenanthrene	22.2	17.6	79	(50-110)
Pyrene	22.2	19.6	88	(45-125)
Surrogates				
2-Fluorobiphenyl	22.2	72.9	73	(45-105)
Terphenyl-d14	22.2	92	92	(30-125)

Batch Information

Analytical Batch: **XMS7404**
Analytical Method: **8270D SIMS (PAH)**
Instrument: **HP 6890/5973 MS SVQA**
Analyst: **RTS**

Prep Batch: **XXX29277**
Prep Method: **SW3550C**
Prep Date/Time: **06/27/2013 17:40**
Spike Init Wt./Vol.: 22.2 ug/Kg Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

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Matrix Spike Summary

Original Sample ID: 1132534010
MS Sample ID: 1155844 MS
MSD Sample ID: 1155845 MSD

Analysis Date: 07/01/2013 21:12
Analysis Date: 07/01/2013 21:28
Analysis Date: 07/01/2013 21:43
Matrix: Soil/Solid (dry weight)

QC for Samples: 1132524010, 1132524011, 1132524013

Results by **8270D SIMS (PAH)**

		Matrix Spike (ug/Kg)				Spike Duplicate (ug/Kg)					
Parameter	Sample	Spike	Result	Rec (%)		Spike	Result	Rec (%)		CL	RPD (%)	RPD CL
1-Methylnaphthalene	33.4U	24.8	33.4U	0	*	24.8	33.4U	0	*	44-107	0.00	(< 30)
2-Methylnaphthalene	33.4U	24.8	33.4U	0	*	24.8	33.4U	0	*	45-105	0.00	(< 30)
Acenaphthene	33.4U	24.8	33.4U	0	*	24.8	33.4U	0	*	45-110	0.00	(< 30)
Acenaphthylene	33.4U	24.8	33.4U	0	*	24.8	33.4U	0	*	45-105	0.00	(< 30)
Anthracene	33.4U	24.8	33.4U	0	*	24.8	33.4U	0	*	55-105	0.00	(< 30)
Benzo(a)Anthracene	33.4U	24.8	20.0	81		24.8	22.9	92		50-110	14.00	(< 30)
Benzo[a]pyrene	33.4U	24.8	20.6	84		24.8	18.8	76		50-110	9.40	(< 30)
Benzo[b]Fluoranthene	33.4U	24.8	20.1	81		24.8	21.0	84		45-115	4.20	(< 30)
Benzo[g,h,i]perylene	33.4U	24.8	20.4	83		24.8	21.3	86		40-125	4.50	(< 30)
Benzo[k]fluoranthene	33.4U	24.8	20.0	80		24.8	21.0	84		45-125	5.10	(< 30)
Chrysene	33.4U	24.8	33.4U	0	*	24.8	17.9	72		55-110	0.00	(< 30)
Dibenzo[a,h]anthracene	33.4U	24.8	19.2	78		24.8	19.4	78		40-125	1.20	(< 30)
Fluoranthene	33.4U	24.8	21.9	89		24.8	21.0	85		55-115	4.20	(< 30)
Fluorene	33.4U	24.8	33.4U	0	*	24.8	33.4U	0	*	50-110	0.00	(< 30)
Indeno[1,2,3-c,d] pyrene	33.4U	24.8	18.3	74		24.8	18.5	74		40-120	1.20	(< 30)
Naphthalene	33.4U	24.8	33.4U	0	*	24.8	33.4U	0	*	40-105	0.00	(< 30)
Phenanthrene	33.4U	24.8	33.4U	0	*	24.8	33.4U	0	*	50-110	0.00	(< 30)
Pyrene	33.4U	24.8	27.4	110		24.8	29.8	120		45-125	8.60	(< 30)
Surrogates												
2-Fluorobiphenyl		24.8	18.9	77		24.8	22.5	91		45-105	17.20	
Terphenyl-d14		24.8	21.3	86		24.8	22.8	92		30-125	6.80	

Batch Information

Analytical Batch: XMS7404
Analytical Method: 8270D SIMS (PAH)
Instrument: HP 6890/5973 MS SVQA
Analyst: RTS
Analytical Date/Time: 7/1/2013 9:28:00PM

Prep Batch: XXX29277
Prep Method: Sonication Extraction Soil 8270 PAH SIM
Prep Date/Time: 6/27/2013 5:40:00PM
Prep Initial Wt./Vol.: 22.78g
Prep Extract Vol: 1.00mL

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Member of SGS Group

1132524

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

CHAIN-OF-CUSTODY RECORD

Laboratory SGS
Attn: Steve Crupi

400 N. 34th Street, Suite 100
Seattle, WA 98103
(206) 632-8020

2355 Hill Road
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(907) 479-0600

2255 S.W. Canyon Road
Portland, OR 97201-2498
(503) 223-6147

2043 Westport Center Drive
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(314) 699-9660

5430 Fairbanks Street, Suite 3
Anchorage, AK 99518
(907) 561-2120

1200 17th Street, Suite 1024
Denver, Co 80202
(303) 825-3800

303 Wellsian Way
Richland, WA 99352
(509) 946-6309

Analysis Parameters/Sample Container Description
(Include preservative if used)

Sample Identity	Lab No.	Time	Date Sampled	Comp.	Grab	GRO / BTEX AK101 / EPA 8021B	DRO AK102	PAH EPA 8310				Total Number of Containers	Remarks/Matrix
17439-LS355	(1) A-B	1120	6/18/13		X	X	X					2	Soil
LS355 3	(2) A-B	1130			X	X	X					2	
LS355 5	(3) A-B	1135			X	X	X					2	
LS355 10	(4) A-B	1140			X	X	X					2	
LS355 16	(5) A-B	1145			X	X	X					2	
LS2553	(6) A-B	1850			X	X	X					2	
LS155 1	(7) A-B	1640	6/19/13		X	X	X					2	
LS155 10	(8) A-B	1645			X	X	X					2	
LS155 13	(9) A-B	1652			X	X	X					2	
LS155 23	(10) A-C	1705			X	X	X	X				3	

Project Information	Sample Receipt
Project Number: 32-1-17439-002	Total Number of Containers
Project Name: Aniak	COC Seals/Intact? Y/N/NA
Contact: Dan McMahon	Received Good Cond./Cold
Ongoing Project? Yes ☒ No ☐	Delivery Method:
Sampler: JCT & DSP	(attach shipping bill, if any)

Instructions
Requested Turnaround Time: Standard
Special Instructions: Level II deliverables Cooler 1

Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Signature: Time: 1425	Signature: Time:	Signature: Time:
Printed Name: Jake Tracy Date: 6/20/13	Printed Name: Date:	Printed Name: Date:
Company: Shannon & Wilson	Company:	Company:

Received By: 1.	Received By: 2.	Received By: 3.
Signature: Time:	Signature: Time:	Signature: Time: 14:47
Printed Name: Date:	Printed Name: Date:	Printed Name: Date: 06/20/13
Company:	Company:	Company: SGS

Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
Yellow - w/shipment - for consignee files
Pink - Shannon & Wilson - Job File

F-19-91/UR

5.9 / #239

No. 30107

1132524

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303 Wellsian Way
Richland, WA 99352
(509) 946-6309

CHAIN-OF-CUSTODY RECORD

Laboratory SGS
Attn: Steve Crupi

Analysis Parameters/Sample Container Description
(include preservative if used)

Sample Identity	Lab No.	Time	Date Sampled	Comp.	Grab	GRO / BTEX / MTBE / EPA 8021B	DRO AK 102	PAH EPA 8310				Total Number of Containers	Remarks/Matrix
17439-LS15543	(11) A-C	1710	6/19/13		X	X	X	X				3	Soil
LS15525	(12) A-B	1712	6/19/13		X	X	X					2	↓
LS15532	(13) A-C	1718	6/19/13		X	X	X	X				3	
LS15534	(14) A-B	1719	6/19/13		X	X	X					2	
TB1	(15) A	800	6/18/13			X						1	Trip Blank

Project Information		Sample Receipt	
Project Number:	321-17439-002	Total Number of Containers	
Project Name:	Amiak	COC Seals/Intact? Y/N/NA	
Contact:	Dan McMahon	Received Good Cond./Cold	
Ongoing Project?	Yes ☒ No ☐	Delivery Method:	
Sampler:	JCT & DSP	(attach shipping bill, if any)	

Instructions	
Requested Turnaround Time:	Standard
Special Instructions:	Level II deliverables Cooler 1

Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
Yellow - w/shipment - for consignee files
Pink - Shannon & Wilson - Job File

Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Signature: Jake Tracy	Signature:	Signature:
Time: 1426	Time:	Time:
Printed Name: Jake Tracy	Printed Name:	Printed Name:
Date: 06/20/13	Date:	Date:
Company: Shannon & Wilson	Company:	Company:

Received By: 1.	Received By: 2.	Received By: 3.
Signature:	Signature:	Signature:
Time:	Time:	Time: 1447
Printed Name:	Printed Name:	Printed Name: MARIE DE ZETTEN
Date:	Date:	Date: 06/20/13
Company:	Company:	Company: SGS

F-19-91/UR

5.9 / #239

No. 30109

1132524

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

CHAIN-OF-CUSTODY RECORD

Laboratory SGS
Attn: Steve Crupi

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Portland, OR 97201-2498
(503) 223-6147

1200 17th Street, Suite 1024
Denver, Co 80202
(303) 825-3800

Analysis Parameters/Sample Container Description
(include preservative if used)

Sample Identity	Lab No.	Time	Date Sampled	Comp.	Grab	GRO AK101	VOC EPA 8260B	DRO AK102				Total Number of Containers	Remarks/Matrix
17439-LS4552	(16) A-C	1200	6/19/13		X	X	X	X				3	Soil
LS4551	(17) A-C	1205			X	X	X	X				3	
LS4553	(18) A-C	1550			X	X	X	X				3	
LS45523	(19) A-C	1600			X	X	X	X				3	
TB2	(20) A	900	6/18/13			X	X					1	GRO/ VOC Trip Blank

Project Information		Sample Receipt	
Project Number:	52-1-17439-002	Total Number of Containers	
Project Name:	Aniak	COC Seals/Intact? Y/N/NA	
Contact:	Dan McMahon	Received Good Cond./Cold	
Ongoing Project?	Yes ☒ No ☐	Delivery Method:	
Sampler:	JCT	(attach shipping bill, if any)	

Instructions

Requested Turnaround Time: Standard

Special Instructions: Level II deliverables
Cooler 2

Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Signature: Time: 1426	Signature: Time:	Signature: Time:
Printed Name: Jake Tracy Date: 6/20/13	Printed Name: Date:	Printed Name: Date:
Company: Shannon & Wilson	Company:	Company:

Received By: 1.	Received By: 2.	Received By: 3.
Signature: Time:	Signature: Time:	Signature: Time: 14:47
Printed Name: Date:	Printed Name: Date:	Printed Name: MARIE DE ZETTER Date: 6/20/13
Company:	Company:	Company: SGS

Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
Yellow - w/shipment - for consignee files
Pink - Shannon & Wilson - Job File

F-19-91/UR

4.5/#239

No: 301108

SGS

SAMPLE RECEIPT FORM

SGS WO# 1132524

Review Criteria:	Condition:	Comments/Action Taken:
Were **custody seals** intact? Note # & location, if applicable. COC accompanied samples?	Yes No (N/A) (Yes) No N/A	ob lenA
Temperature blank compliant* (i.e., 0-6°C after CF)? ** Note: Exemption permitted for chilled samples collected less than 8 hours ago.* Cooler ID: 1 @ 5.9 w/ Therm.ID: 239 Cooler ID: 2 @ 4.5 w/ Therm.ID: 239 Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ *Note: If non-compliant, use form FS-0029 to document affected samples/analyses.* If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP**" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled." **If temperature(s) <0°C, were all sample containers ice free?**	(Yes) No N/A Yes No (N/A)	
Delivery method (specify all that apply): (Client) USPS Alert Courier C&D Delivery AK Air Lynden Carlile ERA PenAir FedEx UPS NAC Other: → *For WO# with airbills, was the WO# & airbill info recorded in the Front Counter eLog?*	Note ABN/ tracking # See Attached or (N/A) Yes No (N/A)	
→ For samples received with payment, note amount ($) and cash / check / CC **(circle one)** or note: (N/A) → For samples **received in FBKS**, ANCH staff will verify all criteria are reviewed.		SRF Initiated by: HLG N/A
Were samples received within hold time? *Note: Refer to form F-083 "Sample Guide" for hold time information.* Do samples **match COC*** (i.e., sample IDs, dates/times collected)? ** Note: Exemption permitted if times differ <1hr; in that case, use times on COC.* Were analyses requested unambiguous?	(Yes) No N/A (Yes) No N/A (Yes) No N/A	
Were samples in **good condition** (no leaks/cracks/breakage)? Packing material used (specify all that apply): (Bubble Wrap) Separate plastic bags Vermiculite Other: boxes	(Yes) No N/A	
Were all VOA vials **free of headspace** (i.e., bubbles ≤6 mm)? Were all soil VOAs **field extracted** with MeOH+BFB?	Yes No (N/A) (Yes) No N/A	
Were **proper containers** (type/mass/volume/preservative*) used? ** Note: Exemption permitted for waters to be analyzed for metals.* Were **Trip Blanks** (i.e., VOAs, LL-Hg) in cooler with samples?	(Yes) No N/A (Yes) No N/A	
For **special handling** (e.g., "MI" or foreign soils, lab filter, limited volume, Ref Lab), were bottles/paperwork flagged (e.g., sticker)?	Yes No (N/A)	
For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was **pH verified and compliant**? If pH was adjusted, were bottles flagged (i.e., stickers)?	Yes No (N/A) Yes No (N/A)	
For **RUSH/SHORT Hold Time**, were COC/Bottles flagged accordingly? Was Rush/Short HT email sent, if applicable?	Yes No (N/A)	
For **SITE-SPECIFIC QC, e.g. BMS/BMSD/BDUP**, were containers / paperwork flagged accordingly?	Yes No (N/A)	
For any question answered "No," has the PM been notified and the problem resolved (or paperwork put in their bin)?	Yes No (N/A)	SRF Completed by: HLG PM = (N/A)
Was **PEER REVIEW** of ***sample numbering/labeling completed?***	Yes No (N/A)	Peer Reviewed by: (N/A)
Additional notes (if applicable):		

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

Returned Bottles Inventory

Name of individual returning bottles: Jake Tracy

Date Received: 6/20/13

Client Name: Shannon + Wilson

Received by: HLG

Project Name: Amiak

SGS PM: SRC

Preservative:	unpres.	H2SO4	HCl	HNO3	NaOH	other	vials of MeOH
HDPE/Nalgene:							
1-L							
500-ml							
250-ml							
125-ml							
other							
Amber Glass:							
1-L BR							
500-ml BR							
250-ml BR							
125-ml BR							
8-oz SS							
4-oz SS	3						
4-oz w/ septa							
40-ml VOA vial							
other							
Subtotal:	3						

~~~ The bottom of this form should be completed by the Project Manager, who will determine how apply charges. ~~~

Note: Returned bottles (regardless of size/pres.) are billed back at $4/bottle ***unless otherwise quoted.***
These prices are only for bottles returned to the lab for disposal.
Unused/unreturned bottles are billed separately. Please see Accounting for current price list.

Amount to Invoice Client: $ _____ **WO#:** 1932524

Laboratory Data Review Checklist

Completed by:	Grant Lidren
Title:	SPAR CS Environmental Program Specialist
Date:	12/28/11
CS Report Name:	ADOT&PF Aniak Area-Wide Sites
Report Date:	06/28/2013
Consultant Firm:	S&W
Laboratory Name:	SGS
Laboratory Report Number:	1132524
ADEC File Number:	2408.38.006
ADEC RecKey Number:	19942501272O1

1. Laboratory

   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

   [X] 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?

   [ ] Yes [X] No Comments:

   Samples were not transferred

2. Chain of Custody (COC)

   a. COC information completed, signed, and dated (including released/received by)?

   [X] Yes [ ] No Comments:

   b. Correct analyses requested?

   [X] Yes [ ] No Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?

X Yes ○ No Comments:

5.9°C ; 4.5°C

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

X Yes ○ No Comments:

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

X Yes ○ No Comments:

no discrepancies

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

○ Yes X No Comments:

N/A

e. Data quality or usability affected? Explain.

Comments:

N/A

4. Case Narrative

a. Present and understandable?

X Yes ○ No Comments:

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

X Yes ○ No Comments:

c. Were all corrective actions documented?

X Yes ○ No Comments:

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

Comments:

matrix interference causing bias high results in samples ; surrogates; therefore useable

5. Samples Results

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

X Yes ○ No Comments:

b. All applicable holding times met?

X Yes ○ No Comments:

c. All soils reported on a dry weight basis?

X Yes ○ No Comments:

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

X Yes ○ No Comments:

e. Data quality or usability affected?

Comments:

NO

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

X Yes ○ No Comments:

ii. All method blank results less than PQL?

X Yes ○ No Comments:

iii. If above PQL, what samples are affected?

Comments:

N/A

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

○ Yes ✓ No Comments:

N/A

v. Data quality or usability affected? Explain.

Comments:

N/A

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

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

✓ Yes ○ No Comments:

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

○ Yes ✓ No Comments:

N/A – metals not analyzed

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:

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

✓ Yes ○ No Comments:

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

Comments:

N/A

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

○ Yes ✓ No Comments:

N/A

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

yes

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?
✓ 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)
○ Yes ✓ No Comments:

some surrogates are elevated due to matrix interference

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?
✓ Yes ○ No Comments:

Clearly defined

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

No, biased high samples are acceptable

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

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (if not, enter explanation below.)
✓ Yes ○ No Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)
✓ Yes ○ No Comments:

iii. All results less than PQL?
✓ Yes ✓ No Comments:

GRO estimated in TB-1 & TB-2, 0.922 mg/kg & 1.22 mg/kg (respectively)

iv. If above PQL, what samples are affected?

Comments:

~~N/A~~ all GRO Samples

v. Data quality or usability affected? Explain.

Comments:

~~N/A~~ No, all GRO Samples are ↓ CL

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

☒ Yes ○ No Comments:

ii. Submitted blind to lab?

☒ Yes ○ No Comments:

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

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

Where R_1 = Sample Concentration
R_2 = Field Duplicate Concentration

$\frac{(1790-1840)}{((1790+1840)/2)} \times 100$ $-50 = 1815$

$\frac{(226-238)}{((226+238)/2)} \times 100$ $12 \quad 232$

$\boxed{\%5.17}$

$\boxed{\%2.75}$

DUP ○ Yes ☒ No Comments: DUP

LS1SS43 ; 23 ; LS4SS23 ; 3 ;
2.75% 5.17%

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

Comments:

NO

f. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below.)

○ Yes ✓ No ○ Not Applicable

i. All results less than PQL?

○ Yes ○ No Comments:

N/A

ii. If above PQL, what samples are affected?

Comments:

N/A

iii. Data quality or usability affected? Explain.

Comments:

N/A

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

a. Defined and appropriate?

○ Yes ○ No Comments:

N/A

reviewed 7/12/13