SHANNON & WILSON
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

January 26, 2021

Mr. Richard Bailey, P.E.
Stephl Engineering
3900 Arctic Blvd.
Anchorage, Alaska 99503

RE: SOIL SAMPLING, 6TH AVENUE AND M STREET, AWWU PROJECT NUMBER WW.00031, ANCHORAGE, ALASKA

Dear Mr. Bailey,

This letter presents the results of Shannon & Wilson's soil and water sampling activities conducted at 6th Avenue and M Street, Anchorage, Alaska. A vicinity map and site plan are included as Figures 1 and 2, respectively.

On behalf of Anchorage Water & Wastewater Utility (AWWU), Frawner Corporation (Frawner) conducted sewer and stormwater upgrades. On August 18, 2020, Frawner identified potential petroleum-impacted soil within the excavation during the construction activities. There was no known source of the contamination. At your request, Shannon & Wilson mobilized a Qualified Environmental Professional (QEP) to the site to collect field screening readings and analytical samples, notified the Alaska Department of Environmental Conservation (ADEC), and assisted in the characterization and disposal of the impacted soil and water.

PROJECT ACTIVITIES

The project consisted of collecting field screening and analytical soil and water samples and coordinating the treatment of impacted soil and containerized water. SGS North America Inc. (SGS) provided the analytical testing for the soil and water samples. Under subcontract to AWWU, Frawner provided the equipment and personnel to excavate and transport the potentially impacted soil to Alaska Regional Landfill (ARL) for disposal and discharge the containerized water into the sanitary sewer. Field notes are included in Attachment 1.

Excavation Activities

The overall project purpose was to replace a sanitary sewer manhole and install 132 linear feet (LF) of new polyvinyl chloride (PVC) sewer pipe. While excavating, Frawner field personnel observed potentially contaminated soil starting 29 feet north of manhole 1229-

5430 Fairbanks Street ■ Suite 3 ■ Anchorage, Alaska 99518-1263 ■ 907 561-2120 ■ Fax 206 695-6777
■ www.shannonwilson.com ■

005A at approximate Station 31+75 at about 5 feet below ground surface (bgs) on August 18, 2020. To characterize the potentially contaminated soil, a Shannon & Wilson QEP collected an analytical soil sample from the excavation sidewall at approximately 8 feet bgs. In addition, a water analytical sample was also collected from the excavation dewatering holding tank to support the AWWU discharge permit. As part of the project a total of two analytical soil samples were collected from the excavation, two analytical soil samples from stockpiles designated for reuse, and one water sample from the dewatering holding tank.

Based on consultation with Mr. Grant Lindren of the ADEC, project activities, including field screening, sample collection, and soil handling; were conducted in accordance with the ADEC's September 2019 *Technical Memorandum* titled *Managing Petroleum-Contaminated Soil, Water, or Free Product during Public Utility and Right-of-Way Construction and Maintenance Projects*. Approximately 300 to 350 cubic yards (cy) of potentially contaminated soil were excavated as part of this project between August 27 and 29, 2020. Photographs of the excavation and stockpile are included in Figure 3.

Soil Screening

Excavated soil was "screened" for volatile organic compounds (VOCs) using a photoionization detector (PID). The PID was calibrated daily with 100 parts per million (ppm) of isobutylene standard gas. Excavated soil was field screened at a frequency of one screening sample per 5 to 10 cy of excavated soil.

Field screening samples were collected directly from the excavator bucket or from the stockpiled soil adjacent to the excavation. The screening samples were screened using an ADEC-approved headspace screening method. Headspace screening was performed by placing soil in a re-sealable plastic bag to approximately one-half of its capacity using a clean stainless-steel spoon, warmed to at least 40 degrees Fahrenheit, and tested within 60 minutes of collection. To screen, the sample was agitated for about 15 seconds, the seal of the bag was opened slightly, the instrument probe was inserted into the air space above the soil, and the bag held closed around the probe.

Throughout the excavation, staining, hydrocarbon odors, and/or elevated PID readings (greater than 20 ppm) were documented at depths between 5 to 10 feet bgs. Observations of contamination were consistent throughout the excavation and were encountered in layers of saturated sand and silt with clay. The highest field screening results were observed in the sand lenses. The source of the contamination was not identified.

Soil Segregation and Excavation Backfilling

Excavated soil was segregated based on suitability for reuse as backfill. The soil that was deemed to be geotechnically suitable for reuse was placed in a short-term stockpile on pavement adjacent to the excavation then used for backfill. The soil that was unsuitable for reuse was either direct hauled to ARL or temporarily stockpiled on site then hauled to ARL for disposal. The remainder of the excavation was backfilled with imported fill material.

Sampling Methods

Each analytical soil sample was visually described and "screened" for VOCs using a PID and ADEC-approved headspace screening techniques. Two analytical soil samples were collected from the excavation sidewalls to characterize the excavation or to spatially represent the soil remaining in the excavation. Then two additional analytical samples were collected from stockpile material designated for reuse as backfill. The samples collected from the stockpile and from the excavation sidewall were selected from locations with the highest PID readings.

The excavation and stockpile samples were collected in laboratory-supplied jars in decreasing order of volatility. For each volatile sample, at least 25 grams of soil, but no more than what can be completely submerged with 25-milliliters of methanol, were placed into a pre-weighted, 4-ounce jar with a septa lid. A 25-milliliter aliquot of methanol containing laboratory-added surrogates was added to the sample jar to submerge the soil sample. For each non-volatile sample, the laboratory supplied jar was completely filled with soil taking care to avoid gravel and debris. Sample jars were filled using decontaminated stainless-steel spoons, placed in coolers with ice packs, and transferred to the laboratory using chain-of-custody procedures.

In addition to the four analytical soil samples, one analytical water sample was collected from the dewatering holding tank using a disposable bailer. The sample was collected in laboratory-supplied jars and filled in decreasing order of volatility.

LABORATORY ANALYSIS

A total of one water and four soil samples were submitted to SGS in chilled coolers using chain-of- custody procedures. The water sample was analyzed for VOCs by Environmental Protection Agency (EPA) method 602/604, biochemical oxygen demand (BOD) by SM21-5210B, diesel range organics (DRO) by Alaska method (AK) 102, residual range organics (RRO) by AK 103, gasoline range organics (GRO) by AK 101, total metals by EPA method

200.8/245.1, oil & grease HEM by EPA method 1664B, total cyanide by SM21 4500- CN C,E, and total suspended solids by SM21 2540D. The soil samples taken from the excavation and stockpile were analyzed for DRO by AK 102, RRO by AK 103, GRO by AK 101, and VOCs by EPA Method 8260D.

DISCUSSION OF ANALYTICAL RESULTS

One analytical water and four analytical soil samples were submitted for laboratory analysis during two sampling events. The soil sample results were compared to the ADEC cleanup levels presented in the November 2020, 18 AAC 75 regulations. The applicable soil criteria consist of the most stringent ADEC Method Two cleanup levels listed in Tables B1 and B2 of 18 AAC 75.341, for the "under 40-inch (precipitation) zone." The water results were compared to the AWWU discharge limits shown in Anchorage Municipal Code (AMC) 26.50.060. The analytical soil and water sample results are summarized in Tables 2 and 3, respectively. The SGS laboratory reports and completed ADEC Laboratory Data Review Checklists are provided in Attachment 2.

Project Samples

Water

Sample 100378-W1 was collected from the holding tank. Detected concentrations of analytes in Sample 100378-W1 did not exceed the AWWU discharge limits, as summarized in Table 3.

Soil

Samples 100378-ExS1 and 100478-S3 collected from the excavation sidewalls contained concentrations of chloroform [maximum of 0.0196 milligram per kilogram (mg/kg)] that exceed the ADEC cleanup level of 0.0071 mg/kg. Sample ExS1 also contained concentrations of GRO, DRO, and RRO less than the ADEC cleanup levels. The remaining analytes were reported as non-detect.

Samples 100478-SP1 and 100478-SP2 were collected from the soil stockpile. Sample 100478-SP1 contained a concentration of chloroform (0.0259 mg/kg) that exceeds the ADEC cleanup level of 0.0071 mg/kg. Samples SP1 and SP2 also contained concentrations of DRO, RRO, and/or chloroform at concentrations less than the ADEC cleanup levels. The remaining analytes were reported as non-detect.

Quality Assurance

The project laboratory follows on-going quality assurance/quality control procedures to evaluate conformance to applicable ADEC data quality objectives (DQOs). Internal laboratory controls to assess data quality for this project include surrogates, method blanks, matrix spike/matrix spike duplicates (MS/MSD), and laboratory control sample/laboratory control sample duplicates (LCS/LCSD) to assess precision, accuracy, and matrix bias. If a DQO was not met, the project laboratory provides a brief narrative concerning the problem in the case narrative of their laboratory reports (See Attachment 2).

Chloroform was detected in the method blank for Sample ExS1. When the reported concentrations are within 10 times the reported blank concentration, the project samples are flagged "B". Chloroform was detected in Sample ExS1 at a level greater than 10 times the blank concentration; therefore, the sample concentration is reported at the detected concentration in Table 2.

Shannon & Wilson conducted a limited data assessment to review the laboratory's compliance with precision, accuracy, sensitivity, and completeness to the DQO. Shannon & Wilson reviewed the SGS data deliverables and completed the ADEC's Laboratory Data Review Checklist for each data package, which are included in Attachment 2. No non-conformances that would adversely affect the quality or usability of the data were noted.

Material Disposal

The ADEC approved the transport of excavated non-reusable soil to ARL on August 24, 2020. The approximately 350 cy was transported to ARL by Frawner between August 27 and 29, 2020.

According to the ARL disposal receipt, 487.48 tons of soil were received by ARL for disposal. The completed ADEC Transport, Treatment, Disposal Approval Forms for Contaminated Media and ARL disposal receipts are included in Attachment 3. The containerized water was discharged to the sanitary sewer in accordance with an approved AWWU industrial discharge permit.

SUMMARY

Contamination was encountered 29 feet north of manhole 1229-005A at approximately Station 31+75. Contamination persisted within the excavation north to approximately 33+00 and was then no longer detected. This contaminated soil was primarily encountered

between sand and gravel extending 4 to 5 ft bgs, and an impermeable clay layer beginning at approximately 10 to 12 feet bgs. Between 5 to 10 feet bgs, the contaminated soil consisted of layers of saturated sand and silt with clay. The highest field screening results were observed in the sand lenses. The source of the contaminated soil is unknown. Over the duration of the project approximately 350 cy of excavated material weighing 487.48 tons were transported to, and received by ARL for disposal. The remaining excavated soil was returned to the excavation upon completion of the project.

CLOSURE/LIMITATIONS

This report is prepared for the exclusive use of our client and their representatives in the study of this site. The findings presented within this report are based on the limited research, sampling, and analyses that were conducted. They should not be construed as definite conclusions regarding the site's soil and water quality. As a result, the sampling, analyses, and data interpretations can provide you with only our professional judgment as to the environmental characteristics of this site, and in no way guarantee 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.

You are advised that various state and federal agencies (ADEC, EPA, etc.) may require the reporting of this information. Shannon & Wilson does not assume the responsibility for reporting these findings and therefore has not, and will not, disclose the results of this study unless specifically requested and authorized by you, or as required by law. Shannon & Wilson has prepared the information in Attachment 4, "Important Information About Your Geotechnical/Environmental Report," to assist you and others in understanding the use and limitations of our report.

We appreciate this opportunity to be of service and your continued confidence in our firm. If you have questions or comments concerning this submittal, please contact Stafford Glashan at (907) 433-3214.

Sincerely,

SHANNON & WILSON

Zachary J Thon

Digitally signed by Zachary J Thon
Date: 2021.01.26 09:51:48 -09'00'

Zach Thon
Environmental Staff

Encl: Attachments 1 through 4, Figures 1 through 3, Tables 1 through 3

TABLE 1
SAMPLE LOCATIONS AND DESCRIPTIONS

Sample Number	Date	Depth (feet bgs)	Headspace (ppm)^	Sample Description
Stockpile Samples				
*100478-SP1	8/27/2020	-	114	*Brown to gray, Well Graded Sand with Silt (SW-SM); moist*
*100478-SP2	8/27/2020	-	150	*Brown to gray, Well Graded Sand with Silt and Gravel (SW-SM); moist*
Excavation Samples				
*100378-ExS1	8/18/2020	8	43	*Gray, Poorly Graded Sand (SP); moist; petroleum sheen present*
*100478-S3	8/28/2020	7-7.5	85	*Brown to gray, Poorly Graded Sand with Silt and Gravel (SP-SM); moist to wet*
Water Sample				
*100378-W1	8/18/2020	-	-	*Sample collected from excavation dewatering holding tank*

Notes:

* = sample analyzed by the project laboratory (See Attachment 2)

^ = field screening instrument was a Thermo Environmental Instruments 580 photoionization detector (PID)

- = measurement not recorded or not applicable

ppm = parts per million

bgs = below ground surface

TABLE 2
SUMMARY OF SOIL SAMPLE RESULTS

Parameter Tested	Method*	Cleanup Level (mg/kg)**	Sample Source, Sample ID Number, and Collection Depth in Feet bgs (See Table 1, Figure 2, and Attachment 2)			
			Excavation Samples		Stockpile Samples	
			100378-ExS1	100478-S3	100478-SP1	100478-SP2
			8	7-7.5	5-10	5-10
PID Headspace Reading - ppm	580B PID	-	-	85	114	150
Gasoline Range Organics (GRO) - mg/kg	AK 101	300	**1.28 J+**	<1.58	<1.32	**1.15 J**
Diesel Range Organics (DRO) - mg/kg	AK 102	250	**239**	<12.9	**232**	**47.3**
Residual Range Organics (RRO) - mg/kg	AK 103	11,000	**159**	<64.5	**80.7 J**	**146**
Volatile Organic Compounds (VOCs)						
Benzene - mg/kg	EPA 8260D	0.022	<0.00680	<0.00790	<0.0066	<0.00484
Toluene - mg/kg	EPA 8260D	6.7	<0.0137	<0.0158	<0.0132	<0.00970
Ethylbenzene - mg/kg	EPA 8260D	0.13	<0.0137	<0.0158	<0.0132	<0.00970
Xylenes (total) - mg/kg	EPA 8260D	1.5	<0.0410	<0.0475	<0.0396	0.0291
Chloroform - mg/kg	EPA 8260D	0.0071	**0.0196**	**0.0110**	**0.0259**	**0.00259 J**
Other VOCs - mg/kg	EPA 8260D	various	ND	ND	ND	ND

Notes:

*	= See laboratory report in Attachment 2 for compounds tested, methods, and laboratory reporting limits.
**	= Soil cleanup levels are listed as the ADEC Method Two levels in Table B1 or B2, 18 AAC 75 (November 2020), for the "under 40 inches (precipitation) zone."
mg/kg	= Milligrams per kilogram
bgs	= Below ground surface
ppm	= Parts per million
<0.00790	= Analyte not detected; laboratory limit of detection of 0.00790 mg/kg
232	= Analyte detected at a concentration less than the applicable ADEC cleanup level
0.0110	= Analyte concentration exceeds applicable ADEC cleanup level
J	= Estimated concentration less than the limit of quantitation. See Attachment 2 for details.
J+	= Sample result potentially affected by surrogate failure and biased high. See Attachment 2 for details.
ND	= Analyte not detected
-	= Not applicable or sample not tested for this analyte
PID	= Photoionization detector

TABLE 3
SUMMARY OF WATER ANALYTICAL RESULTS

Parameter Tested	Method*	AWWU Discharge Limitation**	Sample Number
			100378-W1
Gasoline Range Organics (GRO) - mg/L	AK 101	-	**0.196**
Diesel Range Organics (DRO) - mg/L	AK 102	-	**67.9**
Residual Range Organics (RRO) - mg/L	AK 103	-	**2.28 J**
Oil & Grease HEM - mg/L	EPA 1664B	250	**11.2**
Biochemical Oxygen Demand - mg/L	SM21 5210B	-	**208**
Total Suspended Solids - mg/L	SM21 2540D	-	**55,800**
Cyanide - mg/L	SM21 4500-CN C,E	1.7	**0.0026 J**
Volatile Organic Compounds (VOCs)			
Benzene - mg/L	EPA 602/624	-	<0.000200
Toluene - mg/L	EPA 602/625	-	**0.00349**
Ethylbenzene - mg/L	EPA 602/626	-	**0.0271**
o-Xylene - mg/L	EPA 602/627	-	**0.0286**
P & M-Xylene - mg/L	EPA 602/628	-	**0.103**
Total Aromatic Hydrocarbons - mg/L	EPA 602/628	5.0	**0.162**
Total Metals			
Arsenic - mg/L	EPA 200.8	3.7	**0.0119**
Beryllium - mg/L	EPA 200.8	14.5	**0.0172**
Cadmium - mg/L	EPA 200.8	0.69	**0.0153**
Chromium - mg/L	EPA 200.8	2.77	**0.0545**
Copper - mg/L	EPA 200.8	3.38	**0.629**
Lead - mg/L	EPA 200.8	0.69	**0.067**
Mercury - mg/L	EPA 245.1	0.2	-
Nickel - mg/L	EPA 200.8	3.88	**1.36**
Silver - mg/L	EPA 200.8	2.5	<0.000500
Zinc - mg/L	EPA 200.8	5.62	**1.16**

Notes:

*	= See Attachment 2 for compounds tested, methods, and laboratory reporting limits
**	= AWWU Discharge Limitations listed in AMC 26.50.060
<0.000200	= Analyte concentration not detected; laboratory reporting limit of 0.000200 mg/L
0.196	= Analyte detected
J	= Concentration is an estimate less than the laboratory limit of quantitation (LOQ). See the SGS laboratory report in Attachment 2.
mg/L	= Milligrams per liter

Map adapted from files provided by the Alaska Department of Natural Resources

N

0 1.5 3

Miles

West 6th Ave & M Street
Sewer Rehabilitation, Project
ID: WW.00031 Anchorage, Alaska

VICINITY MAP

January 2021 100478-200.208

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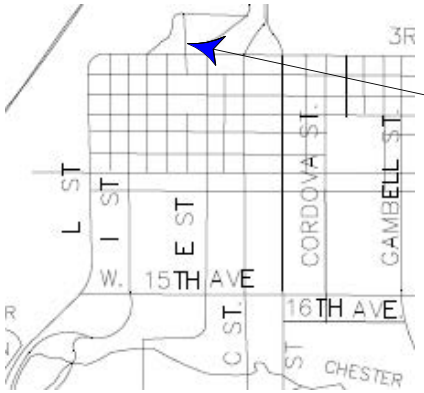
FIG. 1



Project Location

Approximate Excavation Limit of Impacted Soil

Station 33+00

Station 31+75

S3

ExS1

Sewer

Sanitary Sewer Manhole
(SSMH 1229-005)

Sewer Abandoned in Place

Sanitary Sewer Manhole
(SSMH 1229-005A)

M Street

NOTES

ExS1 — Approximate location of analytical Sample ExS1 collected by Shannon & Wilson in August 2020.

0 15 30

APPROXIMATE SCALE IN FEET

West 6th Avenue and M Street
Sewer Rehabilitation, Project ID: WW.0031
Anchorage, Alaska

SITE PLAN

January 2021 100478-200.208

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Fig. 2

Photo 1: View looking north into excavation where contamination was first discovered. (August 27, 2020)

Photo 2: View looking west at the stockpiles of reusable material south of the excavation. In the background can be seen the dewatering storage tank on the corner of 6th Avenue and M Street.

6th Ave & M Street
Anchorage, Alaska

PHOTOS 1 AND 2

January 2021 100478-200.208

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Fig. 3

ATTACHMENT 1

Field Notes

8/14/20
1100
SB
Rm 60°F

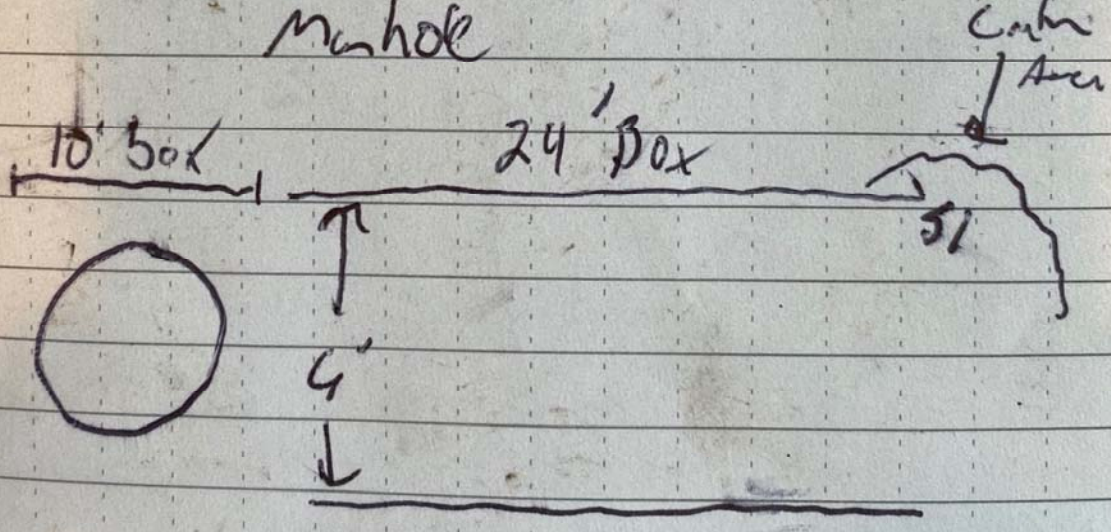
@ 6th & in street ~ ½ way north of 6th

2 trucks Contracted

~24' past manhole on west side of truck

Gray layer above screen on north end

Ex runs ~30' North of Manhole



S1 ~ 6' BGS medium gray Sand w/ sheen 43 ppm

Ambient in truck 20 ppm

Scale: 1 square = 1/2

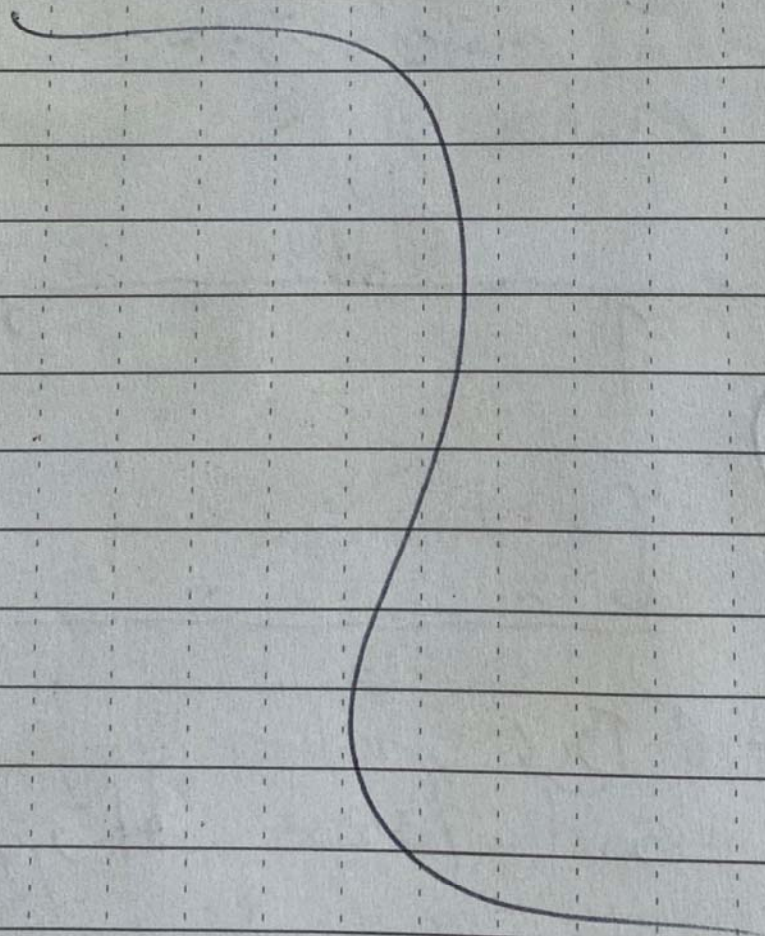
Rite in the Rain

Contamination seems to be in and stages

Sheen on H_2O when dissimilar in touch

No sheen on water with

Collect sample from tank using bike.



Scale: 1 square = 2/2

(100478)

8/27/20 West 6th Ave & M St. wx. 50° sun

7:30- Anc office

7:45 - Leave office

8:00 - On site

8:04 - Calibrate PID #6

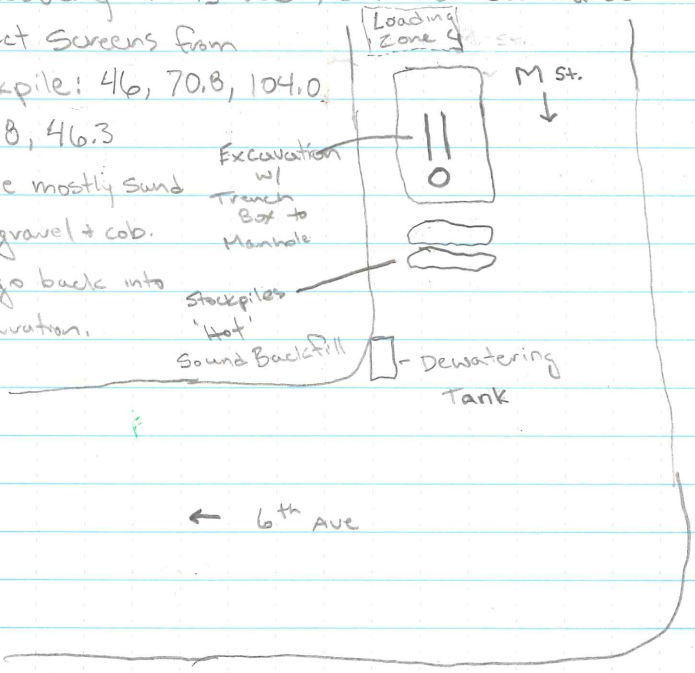
8:15 - Crew is staging equipment

8:30 - Operator begins clearing material that was dumped into trench box. 1/2 dump truck load of material deposited by ex. [Screened ~ 136.0 ppm] w/ Bag

This material came from initial contaminant discovery. It is wet, but not saturated

Direct Screens from Stockpile: 46, 70.8, 104.0, 57.8, 46.3

~Note mostly sand w/ gravel + cob. Will go back into excavation.



Scale: 1 square = _____

Rite in the Rain

(100478)

8/27/20 West 6th Ave & M St. wx. 52° ptly cloudy

9:00 - Two more dump truck loads of previously known impacted material.
~ Slightly more wet w/ increased depth, but still not saturated. Clay + Silt mostly
Screening shows concentrations b/t 30-40 ppm
~ Hauled off-site *

10:00 - Two more trucks. Material from base of excavation is silty + saturated. Clearly visible contaminant sheen. From trench box.
~ Screened w/ bag. 19.0 ppm (#3)
~ Screened w/ bag 12.0 ppm (#4) *

10:30 - Operator begins backfilling/lining the excavation w/ rip-rap + type 6 gravel to stabilize the base + walls. Crew compacts material at base.

10:40 - Installing first stick

10:55 - Begin ex'ing north away from manhole
Ground water encountered approx. 4-5' bgs.
Top 5' material is sand w/ gravel. ~ Sound and reusable. *
Screened: 10-40 ppm

Scale: 1 square = _____

(100478)

8/27/20 West 6th Ave & M St. wx 55° mostly su

Note- Ex'd material going north is hauled around and dumped to the south of the excavation to stockpiles for backfill

~ Water infiltration above shallow clay seam w/in sand lenses approx. 4-6'

11:20- 3 dump truck loads to stockpiles south of ex. *

11:25- 3rd load to SP is near saturated. S w/ G

Direct Screening 40-80 ppm w/ spikes >100 ppm

Max Screen 114.0 ppm.

Sample Taken from SP: 100478-SP1

8/27/20 - 11:30 AM

11:58- Operator begins backfilling around manhole at south end of excavation w/ SP material

12:22 - Begin loading trucks again. Saturated material below water. Silt + clay. w/in trench box. *

12:30- Backfilling w/ import: Type 6 + Class E over drain rock prepping for Second stick. Compacting rock base.

Scale: 1 square = _____

Rite in the Rain

(100478)

8/27/20 West 6th Ave & M St. Wx 57° mostly Sun

13:18 - Continue exing North, loading dry S+G to be transported to SP South of excavation
Direct Screen: 150-200 ppm Spike at 211.0 ppm
Material is moist, 4-7' bgs, Approx. Location 32+50 - 33+00
Sample Taken: 100478-SP2
8/27/20 - 13:35

14:00 - Excavation N beyond 33+00 - 33+50 approx; Material is moist - Dry through S+G to Clay and silt layer. Reusable but still 'Hot'
Direct Screening 50-100+ ppm *

- Note base of excavation approx 33+50 - 34:00 transitions to hard pack clay. Deposit Class E atop clay - No Drain Rock or Type 6

14:20 - Dropping in the ~~third~~ stick of the day.
14:50 - Doing Backfill work, Complete manhole at South end of excavation.
15:15 - Done moving dirt, just backfill + plugging an abandoned pipe that's saturating the excavation
- Leave site. 15:30
16:00 - Arc office

Scale: 1 square = _____

(100478)

8/28/20 West 6th Ave & M St. WX 44° sunny

07:30 - Arc office, grab gear

8:00 - On site, calibrate PID #6

8:20 - Crew cleaning up excavation sluffing + clearing base for third stick. ~3rd stick didn't get laid yesterday due to blow-out from abandoned pipe * Trucking Material

10:15 - Continued effort to dewater the excavation. Required a new, larger trailer pump. Clearing trench box of unstable material.

10:30 - Take a sample from Excavation pitwall approximate location 33+50. Sample is saturated sand from lense where ground water is infiltrating the excavation from the east

Sample ID: 100478-S3 ; 8/28/20 10:30

10:47 - Dump Truck load of drain rock / rip-rap Depositing into excavation base. *

11:15 - Third stick in the ground.

11:40 - Continue Ex'ing North *

Scale: 1 square = _____

Rite in the Rain

(100478)

8/28/20 West 6th Ave & M St. wx. 55° sunny

11:55 - Dry S+G from excavation proceeding North hauled to stockpiles south of Excavation. *
Direct Screens of material ~ 5.0 - 30.0 ppm w/in upper 4-6' of dry sandy material.
Below 6' - Direct Screens < 5.0 ppm.
- Only remaining spikes are in saturated sand lenses ~ possible mixing / drag out of Hot zone
~ Appear to be moving out of contaminated zone. Decision to continue hauling to ARL is made conservatively. *

12:50 - Trench box is moved N, prepping base w/ drain rock & class E.

13:15 - 4th stick in the ground; covering & compacting w/ liner.

14:15 - Excavation continues north, material is hauled to SP south of excavation. *
Direct screens of material: 0.0 - 1.5 ppm
- Material is predominantly sand w/ silt, clay (pack) encountered at ~8.0' bgs.
Excavation is dry ~ material is moist to dry.

15:30 - Leave Site.
~ Approx 12 truck loads offsite

Scale: 1 square = _____

(100478)

8/29/20 West 6th Ave & M St. Wx. 45° Sunny

7:15 - Arc office

7:30 - leave office

7:45 - On Site, calibrate PID #3

8:00 - Crew exing to expose service to white river complex east of excavation. Plan to tie service into the main. *

8:45 - Connecting Service to the main.

9:15 - Continue exing north, moving trench box. Material ~ predominantly sand w/ silt is transported to SP south of excavation. *

Direct Screened ~ 0.0 ppm concentrations

10:30 - Excavation northward & clearing of trench box. Material is clean 0.0 ppm *

11:30 - Drop stick into excavation.

12:00 - Crew lunch

12:30 - Excavation to the end of site plan. *

13:00 - Prepping Final stick

13:30 - Dropping in Final stick

14:15 - Completing Final manhole installation at the north end of the excavation

15:10 - Backfilling Ex S->N w/ SP material

15:58 - Ex'ing a clearance for the Final Service * running NE off the main at the North most manhole. Note: Approx 5 trips x 3 trucks to ARL

16:15 - Last truck load of Dirt. Leave Site

Scale: 1 square = _____

Rite in the Rain

ATTACHMENT 2

RESULTS OF ANALYTICAL TESTING BY

SGS NORTH AMERICA INC. OF ANCHORAGE, ALASKA

AND

ADEC LABORATORY DATA REVIEW CHECKLIST

Laboratory Report of Analysis

To: Shannon & Wilson, Inc.
5430 Fairbanks St., Ste 3
Anchorage, AK 99518
(907)433-3214

Report Number: **1204322**

Client Project: **100478 AWWU M St**

Dear Stafford Glashan,

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 ten 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 Justin 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.

Justin Nelson
2020.08.20
17:01:05 -08'00'

Justin Nelson Date
Project Manager
Justin.Nelson@sgs.com

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

Case Narrative

SGS Client: **Shannon & Wilson, Inc.**
SGS Project: **1204322**
Project Name/Site: **100478 AWWU M St**
Project Contact: **Stafford Glashan**

Refer to sample receipt form for information on sample condition.

100378-ExS1 (1204322001) PS

AK101 - Surrogate recovery for 4-bromofluorobenzene does not meet QC criteria. The analyte was not detected above the LOQ in the associated sample.

LCS for HBN 1810587 [VXX/36166 (1575971) LCS

8260D - LCS recovery for trichlorofluoromethane does not meet QC criteria. This analyte was not detected above the LOQ in the associated samples.

LCSD for HBN 1810463 [XXX/4367 (1575470) LCSD

AK102/103 - Surrogate recovery in the LCSD for 5a androstane does not meet QC criteria; however, the surrogate recoveries in the samples are within criteria.

1204289002(1575972MS) (1575973) MS

8260D - MS recovery for trichlorofluoromethane does not meet QC criteria. This analyte was not detected above the LOQ in the parent sample.

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

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Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indenmification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

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) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. 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/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
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.

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Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
100378-ExS1	1204322001	08/18/2020	08/18/2020	Soil/Solid (dry weight)

Method	Method Description
AK102	Diesel/Residual Range Organics
AK103	Diesel/Residual Range Organics
AK101	Gasoline Range Organics (S)
SM21 2540G	Percent Solids SM2540G
SW8260D	VOC 8260 (S) Field Extracted

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Detectable Results Summary

Client Sample ID: **100378-ExS1**
Lab Sample ID: 1204322001

	Parameter	Result	Units
Semivolatile Organic Fuels	Diesel Range Organics	239	mg/Kg
	Residual Range Organics	159	mg/Kg
Volatile Fuels	Gasoline Range Organics	1.28J	mg/Kg
Volatile GC/MS	Chloroform	19.6	ug/Kg

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Results of **100378-ExS1**

Client Sample ID: **100378-ExS1**
Client Project ID: **100478 AWWU M St**
Lab Sample ID: 1204322001
Lab Project ID: 1204322

Collection Date: 08/18/20 11:40
Received Date: 08/18/20 12:39
Matrix: Soil/Solid (dry weight)
Solids (%):80.1
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	239		24.8	7.70	mg/Kg	1		08/19/20 19:38
Surrogates								
5a Androstane (surr)	108		50-150		%	1		08/19/20 19:38

Batch Information

Analytical Batch: XFC15694
Analytical Method: AK102
Analyst: CDM
Analytical Date/Time: 08/19/20 19:38
Container ID: 1204322001-A

Prep Batch: XXX43679
Prep Method: SW3550C
Prep Date/Time: 08/18/20 16:33
Prep Initial Wt./Vol.: 30.157 g
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	159		124	53.4	mg/Kg	1		08/19/20 19:38
Surrogates								
n-Triacontane-d62 (surr)	86.6		50-150		%	1		08/19/20 19:38

Batch Information

Analytical Batch: XFC15694
Analytical Method: AK103
Analyst: CDM
Analytical Date/Time: 08/19/20 19:38
Container ID: 1204322001-A

Prep Batch: XXX43679
Prep Method: SW3550C
Prep Date/Time: 08/18/20 16:33
Prep Initial Wt./Vol.: 30.157 g
Prep Extract Vol: 5 mL

Print Date: 08/20/2020 4:55:54PM

J flagging is activated

Results of **100378-ExS1**

Client Sample ID: **100378-ExS1**
Client Project ID: **100478 AWWU M St**
Lab Sample ID: 1204322001
Lab Project ID: 1204322

Collection Date: 08/18/20 11:40
Received Date: 08/18/20 12:39
Matrix: Soil/Solid (dry weight)
Solids (%):80.1
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	1.28 J		2.73	0.819	mg/Kg	1		08/19/20 21:47
Surrogates								
4-Bromofluorobenzene (surr)	158	*	50-150		%	1		08/19/20 21:47

Batch Information

Analytical Batch: VFC15295
Analytical Method: AK101
Analyst: ALJ
Analytical Date/Time: 08/19/20 21:47
Container ID: 1204322001-B

Prep Batch: VXX36168
Prep Method: SW5035A
Prep Date/Time: 08/18/20 11:40
Prep Initial Wt./Vol.: 104.732 g
Prep Extract Vol: 45.817 mL

Print Date: 08/20/2020 4:55:54PM

J flagging is activated

Results of **100378-ExS1**

Client Sample ID: **100378-ExS1**
Client Project ID: **100478 AWWU M St**
Lab Sample ID: 1204322001
Lab Project ID: 1204322

Collection Date: 08/18/20 11:40
Received Date: 08/18/20 12:39
Matrix: Soil/Solid (dry weight)
Solids (%):80.1
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	10.9	U	21.8	6.77	ug/Kg	1		08/20/20 11:44
1,1,1-Trichloroethane	13.7	U	27.3	8.52	ug/Kg	1		08/20/20 11:44
1,1,2,2-Tetrachloroethane	1.09	U	2.18	0.677	ug/Kg	1		08/20/20 11:44
1,1,2-Trichloroethane	0.437	U	0.874	0.273	ug/Kg	1		08/20/20 11:44
1,1-Dichloroethane	13.7	U	27.3	8.52	ug/Kg	1		08/20/20 11:44
1,1-Dichloroethene	13.7	U	27.3	8.52	ug/Kg	1		08/20/20 11:44
1,1-Dichloropropene	13.7	U	27.3	8.52	ug/Kg	1		08/20/20 11:44
1,2,3-Trichlorobenzene	27.3	U	54.6	16.4	ug/Kg	1		08/20/20 11:44
1,2,3-Trichloropropane	1.09	U	2.18	0.677	ug/Kg	1		08/20/20 11:44
1,2,4-Trichlorobenzene	13.7	U	27.3	8.52	ug/Kg	1		08/20/20 11:44
1,2,4-Trimethylbenzene	27.3	U	54.6	16.4	ug/Kg	1		08/20/20 11:44
1,2-Dibromo-3-chloropropane	54.5	U	109	33.9	ug/Kg	1		08/20/20 11:44
1,2-Dibromoethane	0.545	U	1.09	0.437	ug/Kg	1		08/20/20 11:44
1,2-Dichlorobenzene	13.7	U	27.3	8.52	ug/Kg	1		08/20/20 11:44
1,2-Dichloroethane	1.09	U	2.18	0.764	ug/Kg	1		08/20/20 11:44
1,2-Dichloropropane	5.45	U	10.9	3.39	ug/Kg	1		08/20/20 11:44
1,3,5-Trimethylbenzene	13.7	U	27.3	8.52	ug/Kg	1		08/20/20 11:44
1,3-Dichlorobenzene	13.7	U	27.3	8.52	ug/Kg	1		08/20/20 11:44
1,3-Dichloropropane	5.45	U	10.9	3.39	ug/Kg	1		08/20/20 11:44
1,4-Dichlorobenzene	13.7	U	27.3	8.52	ug/Kg	1		08/20/20 11:44
2,2-Dichloropropane	13.7	U	27.3	8.52	ug/Kg	1		08/20/20 11:44
2-Butanone (MEK)	137	U	273	85.2	ug/Kg	1		08/20/20 11:44
2-Chlorotoluene	13.7	U	27.3	8.52	ug/Kg	1		08/20/20 11:44
2-Hexanone	54.5	U	109	33.9	ug/Kg	1		08/20/20 11:44
4-Chlorotoluene	13.7	U	27.3	8.52	ug/Kg	1		08/20/20 11:44
4-Isopropyltoluene	54.5	U	109	27.3	ug/Kg	1		08/20/20 11:44
4-Methyl-2-pentanone (MIBK)	137	U	273	85.2	ug/Kg	1		08/20/20 11:44
Acetone	137	U	273	85.2	ug/Kg	1		08/20/20 11:44
Benzene	6.80	U	13.6	4.26	ug/Kg	1		08/20/20 11:44
Bromobenzene	13.7	U	27.3	8.52	ug/Kg	1		08/20/20 11:44
Bromochloromethane	13.7	U	27.3	8.52	ug/Kg	1		08/20/20 11:44
Bromodichloromethane	1.09	U	2.18	0.677	ug/Kg	1		08/20/20 11:44
Bromoform	13.7	U	27.3	8.52	ug/Kg	1		08/20/20 11:44
Bromomethane	10.9	U	21.8	6.77	ug/Kg	1		08/20/20 11:44
Carbon disulfide	54.5	U	109	33.9	ug/Kg	1		08/20/20 11:44
Carbon tetrachloride	6.80	U	13.6	4.26	ug/Kg	1		08/20/20 11:44
Chlorobenzene	13.7	U	27.3	8.52	ug/Kg	1		08/20/20 11:44

Results of **100378-ExS1**

Client Sample ID: **100378-ExS1**
Client Project ID: **100478 AWWU M St**
Lab Sample ID: 1204322001
Lab Project ID: 1204322

Collection Date: 08/18/20 11:40
Received Date: 08/18/20 12:39
Matrix: Soil/Solid (dry weight)
Solids (%):80.1
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	109 U		218	67.7	ug/Kg	1		08/20/20 11:44
Chloroform	19.6		4.37	1.09	ug/Kg	1		08/20/20 11:44
Chloromethane	13.7 U		27.3	8.52	ug/Kg	1		08/20/20 11:44
cis-1,2-Dichloroethene	13.7 U		27.3	8.52	ug/Kg	1		08/20/20 11:44
cis-1,3-Dichloropropene	6.80 U		13.6	4.26	ug/Kg	1		08/20/20 11:44
Dibromochloromethane	2.73 U		5.46	1.64	ug/Kg	1		08/20/20 11:44
Dibromomethane	13.7 U		27.3	8.52	ug/Kg	1		08/20/20 11:44
Dichlorodifluoromethane	27.3 U		54.6	16.4	ug/Kg	1		08/20/20 11:44
Ethylbenzene	13.7 U		27.3	8.52	ug/Kg	1		08/20/20 11:44
Freon-113	54.5 U		109	33.9	ug/Kg	1		08/20/20 11:44
Hexachlorobutadiene	10.9 U		21.8	6.77	ug/Kg	1		08/20/20 11:44
Isopropylbenzene (Cumene)	13.7 U		27.3	8.52	ug/Kg	1		08/20/20 11:44
Methylene chloride	54.5 U		109	33.9	ug/Kg	1		08/20/20 11:44
Methyl-t-butyl ether	54.5 U		109	33.9	ug/Kg	1		08/20/20 11:44
Naphthalene	13.7 U		27.3	8.52	ug/Kg	1		08/20/20 11:44
n-Butylbenzene	13.7 U		27.3	8.52	ug/Kg	1		08/20/20 11:44
n-Propylbenzene	13.7 U		27.3	8.52	ug/Kg	1		08/20/20 11:44
o-Xylene	13.7 U		27.3	8.52	ug/Kg	1		08/20/20 11:44
P & M -Xylene	27.3 U		54.6	16.4	ug/Kg	1		08/20/20 11:44
sec-Butylbenzene	13.7 U		27.3	8.52	ug/Kg	1		08/20/20 11:44
Styrene	13.7 U		27.3	8.52	ug/Kg	1		08/20/20 11:44
tert-Butylbenzene	13.7 U		27.3	8.52	ug/Kg	1		08/20/20 11:44
Tetrachloroethene	6.80 U		13.6	4.26	ug/Kg	1		08/20/20 11:44
Toluene	13.7 U		27.3	8.52	ug/Kg	1		08/20/20 11:44
trans-1,2-Dichloroethene	13.7 U		27.3	8.52	ug/Kg	1		08/20/20 11:44
trans-1,3-Dichloropropene	6.80 U		13.6	4.26	ug/Kg	1		08/20/20 11:44
Trichloroethene	2.73 U		5.46	1.64	ug/Kg	1		08/20/20 11:44
Trichlorofluoromethane	27.3 U		54.6	16.4	ug/Kg	1		08/20/20 11:44
Vinyl acetate	54.5 U		109	33.9	ug/Kg	1		08/20/20 11:44
Vinyl chloride	0.437 U		0.874	0.273	ug/Kg	1		08/20/20 11:44
Xylenes (total)	41.0 U		81.9	24.9	ug/Kg	1		08/20/20 11:44
Surrogates								
1,2-Dichloroethane-D4 (surr)	104		71-136		%	1		08/20/20 11:44
4-Bromofluorobenzene (surr)	106		55-151		%	1		08/20/20 11:44
Toluene-d8 (surr)	101		85-116		%	1		08/20/20 11:44

Print Date: 08/20/2020 4:55:54PM

J flagging is activated

Results of **100378-ExS1**

Client Sample ID: **100378-ExS1**
Client Project ID: **100478 AWWU M St**
Lab Sample ID: 1204322001
Lab Project ID: 1204322

Collection Date: 08/18/20 11:40
Received Date: 08/18/20 12:39
Matrix: Soil/Solid (dry weight)
Solids (%):80.1
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS20220
Analytical Method: SW8260D
Analyst: KAJ
Analytical Date/Time: 08/20/20 11:44
Container ID: 1204322001-B

Prep Batch: VXX36166
Prep Method: SW5035A
Prep Date/Time: 08/18/20 11:40
Prep Initial Wt./Vol.: 104.732 g
Prep Extract Vol: 45.817 mL

Print Date: 08/20/2020 4:55:54PM

J flagging is activated

Method Blank

Blank ID: MB for HBN 1810481 [SPT/11107]
Blank Lab ID: 1575537

Matrix: Soil/Solid (dry weight)

QC for Samples:
1204322001

Results by **SM21 2540G**

Parameter	Results	LOQ/CL	DL	Units
Total Solids	100			%

Batch Information

Analytical Batch: SPT11107
Analytical Method: SM21 2540G
Instrument:
Analyst: EBH
Analytical Date/Time: 8/18/2020 6:00:00PM

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Duplicate Sample Summary

Original Sample ID: 1204181013
Duplicate Sample ID: 1575540
QC for Samples:

Analysis Date: 08/18/2020 18:00
Matrix: Soil/Solid (dry weight)

Results by **SM21 2540G**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Solids	81.5	81.5	%	0.09	(< 15)

Batch Information

Analytical Batch: SPT11107
Analytical Method: SM21 2540G
Instrument:
Analyst: EBH

Print Date: 08/20/2020 4:55:57PM

Duplicate Sample Summary

Original Sample ID: 1204181025
Duplicate Sample ID: 1575541
QC for Samples:
1204322001

Analysis Date: 08/18/2020 18:00
Matrix: Soil/Solid (dry weight)

Results by **SM21 2540G**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Solids	85.7	85.1	%	0.74	(< 15)

Batch Information

Analytical Batch: SPT11107
Analytical Method: SM21 2540G
Instrument:
Analyst: EBH

Print Date: 08/20/2020 4:55:57PM

Duplicate Sample Summary

Original Sample ID: 1209556001
Duplicate Sample ID: 1575542
QC for Samples:
1204322001

Analysis Date: 08/18/2020 18:00
Matrix: Soil/Solid (dry weight)

Results by **SM21 2540G**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Solids	91.7	91.0	%	0.79	(< 15)

Batch Information

Analytical Batch: SPT11107
Analytical Method: SM21 2540G
Instrument:
Analyst: EBH

Print Date: 08/20/2020 4:55:57PM

Method Blank

Blank ID: MB for HBN 1810587 [VXX/36166]
Blank Lab ID: 1575970

Matrix: Soil/Solid (dry weight)

QC for Samples:
1204322001

Results by **SW8260D**

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	10.0U	20.0	6.20	ug/Kg
1,1,1-Trichloroethane	12.5U	25.0	7.80	ug/Kg
1,1,2,2-Tetrachloroethane	1.00U	2.00	0.620	ug/Kg
1,1,2-Trichloroethane	0.400U	0.800	0.250	ug/Kg
1,1-Dichloroethane	12.5U	25.0	7.80	ug/Kg
1,1-Dichloroethene	12.5U	25.0	7.80	ug/Kg
1,1-Dichloropropene	12.5U	25.0	7.80	ug/Kg
1,2,3-Trichlorobenzene	25.0U	50.0	15.0	ug/Kg
1,2,3-Trichloropropane	1.00U	2.00	0.620	ug/Kg
1,2,4-Trichlorobenzene	12.5U	25.0	7.80	ug/Kg
1,2,4-Trimethylbenzene	25.0U	50.0	15.0	ug/Kg
1,2-Dibromo-3-chloropropane	50.0U	100	31.0	ug/Kg
1,2-Dibromoethane	0.500U	1.00	0.400	ug/Kg
1,2-Dichlorobenzene	12.5U	25.0	7.80	ug/Kg
1,2-Dichloroethane	1.00U	2.00	0.700	ug/Kg
1,2-Dichloropropane	5.00U	10.0	3.10	ug/Kg
1,3,5-Trimethylbenzene	12.5U	25.0	7.80	ug/Kg
1,3-Dichlorobenzene	12.5U	25.0	7.80	ug/Kg
1,3-Dichloropropane	5.00U	10.0	3.10	ug/Kg
1,4-Dichlorobenzene	12.5U	25.0	7.80	ug/Kg
2,2-Dichloropropane	12.5U	25.0	7.80	ug/Kg
2-Butanone (MEK)	125U	250	78.0	ug/Kg
2-Chlorotoluene	12.5U	25.0	7.80	ug/Kg
2-Hexanone	50.0U	100	31.0	ug/Kg
4-Chlorotoluene	12.5U	25.0	7.80	ug/Kg
4-Isopropyltoluene	50.0U	100	25.0	ug/Kg
4-Methyl-2-pentanone (MIBK)	125U	250	78.0	ug/Kg
Acetone	125U	250	78.0	ug/Kg
Benzene	6.25U	12.5	3.90	ug/Kg
Bromobenzene	12.5U	25.0	7.80	ug/Kg
Bromochloromethane	12.5U	25.0	7.80	ug/Kg
Bromodichloromethane	1.00U	2.00	0.620	ug/Kg
Bromoform	12.5U	25.0	7.80	ug/Kg
Bromomethane	10.0U	20.0	6.20	ug/Kg
Carbon disulfide	50.0U	100	31.0	ug/Kg
Carbon tetrachloride	6.25U	12.5	3.90	ug/Kg
Chlorobenzene	12.5U	25.0	7.80	ug/Kg
Chloroethane	100U	200	62.0	ug/Kg

Method Blank

Blank ID: MB for HBN 1810587 [VXX/36166]
Blank Lab ID: 1575970

Matrix: Soil/Solid (dry weight)

QC for Samples:
1204322001

Results by **SW8260D**

Parameter	Results	LOQ/CL	DL	Units
Chloroform	1.42J	4.00	1.00	ug/Kg
Chloromethane	12.5U	25.0	7.80	ug/Kg
cis-1,2-Dichloroethene	12.5U	25.0	7.80	ug/Kg
cis-1,3-Dichloropropene	6.25U	12.5	3.90	ug/Kg
Dibromochloromethane	2.50U	5.00	1.50	ug/Kg
Dibromomethane	12.5U	25.0	7.80	ug/Kg
Dichlorodifluoromethane	25.0U	50.0	15.0	ug/Kg
Ethylbenzene	12.5U	25.0	7.80	ug/Kg
Freon-113	50.0U	100	31.0	ug/Kg
Hexachlorobutadiene	10.0U	20.0	6.20	ug/Kg
Isopropylbenzene (Cumene)	12.5U	25.0	7.80	ug/Kg
Methylene chloride	50.0U	100	31.0	ug/Kg
Methyl-t-butyl ether	50.0U	100	31.0	ug/Kg
Naphthalene	12.5U	25.0	7.80	ug/Kg
n-Butylbenzene	12.5U	25.0	7.80	ug/Kg
n-Propylbenzene	12.5U	25.0	7.80	ug/Kg
o-Xylene	12.5U	25.0	7.80	ug/Kg
P & M -Xylene	25.0U	50.0	15.0	ug/Kg
sec-Butylbenzene	12.5U	25.0	7.80	ug/Kg
Styrene	12.5U	25.0	7.80	ug/Kg
tert-Butylbenzene	12.5U	25.0	7.80	ug/Kg
Tetrachloroethene	6.25U	12.5	3.90	ug/Kg
Toluene	12.5U	25.0	7.80	ug/Kg
trans-1,2-Dichloroethene	12.5U	25.0	7.80	ug/Kg
trans-1,3-Dichloropropene	6.25U	12.5	3.90	ug/Kg
Trichloroethene	2.50U	5.00	1.50	ug/Kg
Trichlorofluoromethane	25.0U	50.0	15.0	ug/Kg
Vinyl acetate	50.0U	100	31.0	ug/Kg
Vinyl chloride	0.400U	0.800	0.250	ug/Kg
Xylenes (total)	37.5U	75.0	22.8	ug/Kg
Surrogates				
1,2-Dichloroethane-D4 (surr)	104	71-136		%
4-Bromofluorobenzene (surr)	93.3	55-151		%
Toluene-d8 (surr)	98.8	85-116		%

Method Blank

Blank ID: MB for HBN 1810587 [VXX/36166]
Blank Lab ID: 1575970

Matrix: Soil/Solid (dry weight)

QC for Samples:
1204322001

Results by **SW8260D**

Parameter	Results	LOQ/CL	DL	Units

Batch Information

Analytical Batch: VMS20220
Analytical Method: SW8260D
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: KAJ
Analytical Date/Time: 8/20/2020 7:46:00AM

Prep Batch: VXX36166
Prep Method: SW5035A
Prep Date/Time: 8/20/2020 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1204322 [VXX36166]
Blank Spike Lab ID: 1575971
Date Analyzed: 08/20/2020 08:01

Matrix: Soil/Solid (dry weight)

QC for Samples: 1204322001

Results by **SW8260D**

	Blank Spike (ug/Kg)			
Parameter	Spike	Result	Rec (%)	CL
1,1,1,2-Tetrachloroethane	750	787	105	(78-125)
1,1,1-Trichloroethane	750	808	108	(73-130)
1,1,2,2-Tetrachloroethane	750	759	101	(70-124)
1,1,2-Trichloroethane	750	761	101	(78-121)
1,1-Dichloroethane	750	766	102	(76-125)
1,1-Dichloroethene	750	833	111	(70-131)
1,1-Dichloropropene	750	804	107	(76-125)
1,2,3-Trichlorobenzene	750	615	82	(66-130)
1,2,3-Trichloropropane	750	771	103	(73-125)
1,2,4-Trichlorobenzene	750	676	90	(67-129)
1,2,4-Trimethylbenzene	750	777	104	(75-123)
1,2-Dibromo-3-chloropropane	750	705	94	(61-132)
1,2-Dibromoethane	750	789	105	(78-122)
1,2-Dichlorobenzene	750	763	102	(78-121)
1,2-Dichloroethane	750	767	102	(73-128)
1,2-Dichloropropane	750	773	103	(76-123)
1,3,5-Trimethylbenzene	750	780	104	(73-124)
1,3-Dichlorobenzene	750	787	105	(77-121)
1,3-Dichloropropane	750	765	102	(77-121)
1,4-Dichlorobenzene	750	785	105	(75-120)
2,2-Dichloropropane	750	846	113	(67-133)
2-Butanone (MEK)	2250	2290	102	(51-148)
2-Chlorotoluene	750	789	105	(75-122)
2-Hexanone	2250	2270	101	(53-145)
4-Chlorotoluene	750	790	105	(72-124)
4-Isopropyltoluene	750	768	102	(73-127)
4-Methyl-2-pentanone (MIBK)	2250	2320	103	(65-135)
Acetone	2250	2300	102	(36-164)
Benzene	750	781	104	(77-121)
Bromobenzene	750	823	110	(78-121)
Bromochloromethane	750	780	104	(78-125)
Bromodichloromethane	750	790	105	(75-127)
Bromoform	750	740	99	(67-132)
Bromomethane	750	802	107	(53-143)

Print Date: 08/20/2020 4:56:02PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1204322 [VXX36166]
Blank Spike Lab ID: 1575971
Date Analyzed: 08/20/2020 08:01

Matrix: Soil/Solid (dry weight)

QC for Samples: 1204322001

Results by **SW8260D**

Blank Spike (ug/Kg)

Parameter	Spike	Result	Rec (%)		CL
Carbon disulfide	1130	1210	108		(63-132)
Carbon tetrachloride	750	793	106		(70-135)
Chlorobenzene	750	777	104		(79-120)
Chloroethane	750	884	118		(59-139)
Chloroform	750	764	102		(78-123)
Chloromethane	750	716	95		(50-136)
cis-1,2-Dichloroethene	750	780	104		(77-123)
cis-1,3-Dichloropropene	750	803	107		(74-126)
Dibromochloromethane	750	786	105		(74-126)
Dibromomethane	750	787	105		(78-125)
Dichlorodifluoromethane	750	790	105		(29-149)
Ethylbenzene	750	795	106		(76-122)
Freon-113	1130	1300	115		(66-136)
Hexachlorobutadiene	750	636	85		(61-135)
Isopropylbenzene (Cumene)	750	798	106		(68-134)
Methylene chloride	750	799	107		(70-128)
Methyl-t-butyl ether	1130	1140	101		(73-125)
Naphthalene	750	692	92		(62-129)
n-Butylbenzene	750	765	102		(70-128)
n-Propylbenzene	750	801	107		(73-125)
o-Xylene	750	784	105		(77-123)
P & M -Xylene	1500	1580	106		(77-124)
sec-Butylbenzene	750	773	103		(73-126)
Styrene	750	800	107		(76-124)
tert-Butylbenzene	750	789	105		(73-125)
Tetrachloroethene	750	805	107		(73-128)
Toluene	750	774	103		(77-121)
trans-1,2-Dichloroethene	750	798	106		(74-125)
trans-1,3-Dichloropropene	750	794	106		(71-130)
Trichloroethene	750	813	108		(77-123)
Trichlorofluoromethane	750	1090	145	*	(62-140)
Vinyl acetate	750	812	108		(50-151)
Vinyl chloride	750	871	116		(56-135)
Xylenes (total)	2250	2370	105		(78-124)

Print Date: 08/20/2020 4:56:02PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1204322 [VXX36166]
Blank Spike Lab ID: 1575971
Date Analyzed: 08/20/2020 08:01

Matrix: Soil/Solid (dry weight)

QC for Samples: 1204322001

Results by **SW8260D**

	Blank Spike (ug/Kg)			
Parameter	Spike	Result	Rec (%)	CL
Surrogates				
1,2-Dichloroethane-D4 (surr)	750	102	102	(71-136)
4-Bromofluorobenzene (surr)	750	92.5	93	(55-151)
Toluene-d8 (surr)	750	100	100	(85-116)

Batch Information

Analytical Batch: **VMS20220**
Analytical Method: **SW8260D**
Instrument: **VRA Agilent GC/MS 7890B/5977A**
Analyst: **KAJ**

Prep Batch: **VXX36166**
Prep Method: **SW5035A**
Prep Date/Time: **08/20/2020 06:00**
Spike Init Wt./Vol.: 750 ug/Kg Extract Vol: 25 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 08/20/2020 4:56:02PM

Matrix Spike Summary

Original Sample ID: 1575972
MS Sample ID: 1575973 MS
MSD Sample ID: 1575974 MSD

Analysis Date: 08/20/2020 11:29
Analysis Date: 08/20/2020 8:54
Analysis Date: 08/20/2020 9:09
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1204322001

Results by **SW8260D**

		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	9.70U	728	739	102	728	741	102	78-125	0.23	(< 20)
1,1,1-Trichloroethane	12.2U	728	786	108	728	773	106	73-130	1.70	(< 20)
1,1,2,2-Tetrachloroethane	0.970U	728	727	100	728	740	102	70-124	1.70	(< 20)
1,1,2-Trichloroethane	0.389U	728	719	99	728	730	100	78-121	1.40	(< 20)
1,1-Dichloroethane	12.2U	728	728	100	728	728	100	76-125	0.05	(< 20)
1,1-Dichloroethene	12.2U	728	808	111	728	767	105	70-131	5.20	(< 20)
1,1-Dichloropropene	12.2U	728	781	107	728	764	105	76-125	2.20	(< 20)
1,2,3-Trichlorobenzene	24.3U	728	500	69	728	607	83	66-130	19.30	(< 20)
1,2,3-Trichloropropane	0.970U	728	732	101	728	748	103	73-125	2.10	(< 20)
1,2,4-Trichlorobenzene	12.2U	728	589	81	728	653	90	67-129	10.40	(< 20)
1,2,4-Trimethylbenzene	24.3U	728	741	102	728	738	101	75-123	0.51	(< 20)
1,2-Dibromo-3-chloropropane	48.5U	728	645	89	728	704	97	61-132	8.80	(< 20)
1,2-Dibromoethane	0.485U	728	742	102	728	755	104	78-122	1.70	(< 20)
1,2-Dichlorobenzene	12.2U	728	715	98	728	712	98	78-121	0.39	(< 20)
1,2-Dichloroethane	0.970U	728	728	100	728	733	101	73-128	0.62	(< 20)
1,2-Dichloropropane	4.86U	728	731	100	728	727	100	76-123	0.48	(< 20)
1,3,5-Trimethylbenzene	12.2U	728	730	100	728	740	102	73-124	1.30	(< 20)
1,3-Dichlorobenzene	12.2U	728	732	100	728	735	101	77-121	0.42	(< 20)
1,3-Dichloropropane	4.86U	728	714	98	728	726	100	77-121	1.60	(< 20)
1,4-Dichlorobenzene	12.2U	728	744	102	728	737	101	75-120	1.00	(< 20)
2,2-Dichloropropane	12.2U	728	833	114	728	817	112	67-133	1.90	(< 20)
2-Butanone (MEK)	122U	2180	2130	98	2180	2230	102	51-148	4.30	(< 20)
2-Chlorotoluene	12.2U	728	748	103	728	746	102	75-122	0.21	(< 20)
2-Hexanone	48.5U	2180	2090	96	2180	2220	102	53-145	5.90	(< 20)
4-Chlorotoluene	12.2U	728	755	104	728	747	103	72-124	1.10	(< 20)
4-Isopropyltoluene	48.5U	728	725	100	728	738	101	73-127	1.80	(< 20)
4-Methyl-2-pentanone (MIBK)	122U	2180	2150	99	2180	2250	103	65-135	4.40	(< 20)
Acetone	122U	2180	2110	97	2180	2180	100	36-164	3.00	(< 20)
Benzene	6.05U	728	738	101	728	737	101	77-121	0.13	(< 20)
Bromobenzene	12.2U	728	781	107	728	770	106	78-121	1.40	(< 20)
Bromochloromethane	12.2U	728	745	102	728	740	102	78-125	0.69	(< 20)
Bromodichloromethane	0.970U	728	761	105	728	758	104	75-127	0.42	(< 20)
Bromoform	12.2U	728	701	96	728	716	98	67-132	2.10	(< 20)
Bromomethane	9.70U	728	794	109	728	733	101	53-143	7.90	(< 20)
Carbon disulfide	48.5U	1090	1210	111	1090	1110	101	63-132	8.80	(< 20)
Carbon tetrachloride	6.05U	728	772	106	728	765	105	70-135	0.93	(< 20)
Chlorobenzene	12.2U	728	723	99	728	727	100	79-120	0.57	(< 20)

Print Date: 08/20/2020 4:56:04PM

Matrix Spike Summary

Original Sample ID: 1575972
MS Sample ID: 1575973 MS
MSD Sample ID: 1575974 MSD

Analysis Date: 08/20/2020 11:29
Analysis Date: 08/20/2020 8:54
Analysis Date: 08/20/2020 9:09
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1204322001

Results by **SW8260D**

		Matrix Spike (ug/Kg)			Spike Duplicate (ug/Kg)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Chloroethane	97.0U	728	859	118	728	787	108	59-139	8.80	(< 20)
Chloroform	2.73J	728	727	100	728	730	100	78-123	0.35	(< 20)
Chloromethane	12.2U	728	653	90	728	671	92	50-136	2.60	(< 20)
cis-1,2-Dichloroethene	12.2U	728	743	102	728	738	101	77-123	0.73	(< 20)
cis-1,3-Dichloropropene	6.05U	728	770	106	728	767	105	74-126	0.45	(< 20)
Dibromochloromethane	2.42U	728	747	103	728	757	104	74-126	1.30	(< 20)
Dibromomethane	12.2U	728	750	103	728	749	103	78-125	0.19	(< 20)
Dichlorodifluoromethane	24.3U	728	661	91	728	647	89	29-149	2.20	(< 20)
Ethylbenzene	12.2U	728	738	101	728	749	103	76-122	1.50	(< 20)
Freon-113	48.5U	1090	1240	113	1090	1190	109	66-136	3.50	(< 20)
Hexachlorobutadiene	9.70U	728	839	115	728	809	111	61-135	3.70	(< 20)
Isopropylbenzene (Cumene)	12.2U	728	716	98	728	747	103	68-134	4.30	(< 20)
Methylene chloride	48.5U	728	763	105	728	749	103	70-128	1.90	(< 20)
Methyl-t-butyl ether	48.5U	1090	1070	98	1090	1090	100	73-125	2.40	(< 20)
Naphthalene	12.2U	728	595	82	728	701	96	62-129	16.30	(< 20)
n-Butylbenzene	12.2U	728	721	99	728	732	101	70-128	1.50	(< 20)
n-Propylbenzene	12.2U	728	750	103	728	751	103	73-125	0.13	(< 20)
o-Xylene	12.2U	728	734	101	728	737	101	77-123	0.44	(< 20)
P & M -Xylene	24.3U	1460	1460	100	1460	1490	102	77-124	1.60	(< 20)
sec-Butylbenzene	12.2U	728	708	97	728	722	99	73-126	2.00	(< 20)
Styrene	12.2U	728	741	102	728	750	103	76-124	1.20	(< 20)
tert-Butylbenzene	12.2U	728	735	101	728	728	100	73-125	0.94	(< 20)
Tetrachloroethene	6.05U	728	769	106	728	778	107	73-128	1.20	(< 20)
Toluene	12.2U	728	732	101	728	734	101	77-121	0.29	(< 20)
trans-1,2-Dichloroethene	12.2U	728	790	109	728	756	104	74-125	4.50	(< 20)
trans-1,3-Dichloropropene	6.05U	728	758	104	728	771	106	71-130	1.60	(< 20)
Trichloroethene	2.42U	728	779	107	728	765	105	77-123	1.90	(< 20)
Trichlorofluoromethane	24.3U	728	1110	152 *	728	991	136	62-140	11.20	(< 20)
Vinyl acetate	48.5U	728	771	106	728	789	108	50-151	2.30	(< 20)
Vinyl chloride	0.389U	728	756	104	728	670	92	56-135	12.00	(< 20)
Xylenes (total)	36.4U	2180	2200	101	2180	2220	102	78-124	1.20	(< 20)
Surrogates										
1,2-Dichloroethane-D4 (surr)		728	751	103	728	764	105	71-136	1.70	
4-Bromofluorobenzene (surr)		1210	1060	88	1210	1040	86	55-151	2.00	
Toluene-d8 (surr)		728	729	100	728	727	100	85-116	0.26	

Print Date: 08/20/2020 4:56:04PM

Matrix Spike Summary

Original Sample ID: 1575972
MS Sample ID: 1575973 MS
MSD Sample ID: 1575974 MSD

QC for Samples: 1204322001

Analysis Date:
Analysis Date: 08/20/2020 8:54
Analysis Date: 08/20/2020 9:09
Matrix: Solid/Soil (Wet Weight)

Results by **SW8260D**

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

Batch Information

Analytical Batch: VMS20220
Analytical Method: SW8260D
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: KAJ
Analytical Date/Time: 8/20/2020 8:54:00AM

Prep Batch: VXX36166
Prep Method: Vol. Extraction SW8260 Field Extracted L
Prep Date/Time: 8/20/2020 6:00:00AM
Prep Initial Wt./Vol.: 51.50g
Prep Extract Vol: 25.00mL

Print Date: 08/20/2020 4:56:04PM

Method Blank

Blank ID: MB for HBN 1810608 [VXX/36168]
Blank Lab ID: 1576025

Matrix: Soil/Solid (dry weight)

QC for Samples:
1204322001

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Gasoline Range Organics	1.25U	2.50	0.750	mg/Kg
Surrogates				
4-Bromofluorobenzene (surr)	102	50-150		%

Batch Information

Analytical Batch: VFC15295
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: ALJ
Analytical Date/Time: 8/19/2020 8:01:00PM

Prep Batch: VXX36168
Prep Method: SW5035A
Prep Date/Time: 8/19/2020 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1204322 [VXX36168]
Blank Spike Lab ID: 1576026
Date Analyzed: 08/19/2020 18:50

Spike Duplicate ID: LCSD for HBN 1204322 [VXX36168]
Spike Duplicate Lab ID: 1576027
Matrix: Soil/Solid (dry weight)

QC for Samples: 1204322001

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	12.5	14.1	113	12.5	14.0	112	(60-120)	0.99	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	1.25	106	106	1.25	108	108	(50-150)	2.10	

Batch Information

Analytical Batch: **VFC15295**
Analytical Method: **AK101**
Instrument: **Agilent 7890A PID/FID**
Analyst: **ALJ**

Prep Batch: **VXX36168**
Prep Method: **SW5035A**
Prep Date/Time: **08/19/2020 06:00**
Spike Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL
Dupe Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL

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

Method Blank

Blank ID: MB for HBN 1810463 [XXX/43679]
Blank Lab ID: 1575468

Matrix: Soil/Solid (dry weight)

QC for Samples:
1204322001

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	10.0U	20.0	6.20	mg/Kg
Surrogates				
5a Androstane (surr)	110	60-120		%

Batch Information

Analytical Batch: XFC15694
Analytical Method: AK102
Instrument: Agilent 7890B F
Analyst: CDM
Analytical Date/Time: 8/19/2020 3:39:00PM

Prep Batch: XXX43679
Prep Method: SW3550C
Prep Date/Time: 8/18/2020 4:33:29PM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 5 mL

Print Date: 08/20/2020 4:56:09PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1204322 [XXX43679]
Blank Spike Lab ID: 1575469
Date Analyzed: 08/19/2020 15:49

Spike Duplicate ID: LCSD for HBN 1204322 [XXX43679]
Spike Duplicate Lab ID: 1575470
Matrix: Soil/Solid (dry weight)

QC for Samples: 1204322001

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	833	761	91	833	776	93	(75-125)	2.00	(< 20)
Surrogates									
5a Androstane (surr)	16.7	119	119	16.7	122	122	* (60-120)	2.20	

Batch Information

Analytical Batch: **XFC15694**
Analytical Method: **AK102**
Instrument: **Agilent 7890B F**
Analyst: **CDM**

Prep Batch: **XXX43679**
Prep Method: **SW3550C**
Prep Date/Time: **08/18/2020 16:33**
Spike Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL
Dupe Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL

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200 West Potter Drive Anchorage, AK 95518
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Method Blank

Blank ID: MB for HBN 1810463 [XXX/43679]
Blank Lab ID: 1575468

Matrix: Soil/Solid (dry weight)

QC for Samples:
1204322001

Results by **AK103**

Parameter	Results	LOQ/CL	DL	Units
Residual Range Organics	50.0U	100	43.0	mg/Kg
Surrogates				
n-Triacontane-d62 (surr)	89.8	60-120		%

Batch Information

Analytical Batch: XFC15694
Analytical Method: AK103
Instrument: Agilent 7890B F
Analyst: CDM
Analytical Date/Time: 8/19/2020 3:39:00PM

Prep Batch: XXX43679
Prep Method: SW3550C
Prep Date/Time: 8/18/2020 4:33:29PM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 5 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1204322 [XXX43679]
Blank Spike Lab ID: 1575469
Date Analyzed: 08/19/2020 15:49

Spike Duplicate ID: LCSD for HBN 1204322 [XXX43679]
Spike Duplicate Lab ID: 1575470
Matrix: Soil/Solid (dry weight)

QC for Samples: 1204322001

Results by **AK103**

	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Residual Range Organics	833	754	91	833	768	92	(60-120)	1.80	(< 20)
Surrogates									
n-Triacontane-d62 (surr)	16.7	92.4	92	16.7	88.6	89	(60-120)	4.30	

Batch Information

Analytical Batch: **XFC15694**
Analytical Method: **AK103**
Instrument: **Agilent 7890B F**
Analyst: **CDM**

Prep Batch: **XXX43679**
Prep Method: **SW3550C**
Prep Date/Time: **08/18/2020 16:33**
Spike Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL
Dupe Init Wt./Vol.: 833 mg/Kg Extract Vol: 5 mL

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

Nelson, Justin (Anchorage)

From: Stafford Glashan <SJG@shanwil.com>
Sent: Wednesday, August 19, 2020 1:57 PM
To: Nelson, Justin (Anchorage)
Subject: RE: [EXTERNAL] 1204322

*** WARNING: this message is from an EXTERNAL SENDER. Please be cautious, particularly with links and attachments. ***

Also, the S&W job number on those samples is incorrect. It should be 100478. If you can change it now it will make it easier to get paid quickly.

From: Nelson, Justin (Anchorage) <Justin.Nelson@sgs.com>
Sent: Wednesday, August 19, 2020 10:21 AM
To: Stafford Glashan <SJG@shanwil.com>
Cc: Dan McMahon <DXM@shanwil.com>; Richard Bailey (rbailey@stephleng.com) <rbailey@stephleng.com>; Homestead, Charles (Anchorage) <Charles.Homestead@sgs.com>
Subject: RE: [EXTERNAL] 1204322

You're set up to receive notifications for this project, and Dan gets everything already so we should be all set.

Let me know if you need anything else, thanks!

Justin A. Nelson
Environmental, Health & Safety
Client Service Manager, Alaska

Phone: + 01 907 562 2343
Direct: + 01 907 550 3205

From: Stafford Glashan <SJG@shanwil.com>
Sent: Tuesday, August 18, 2020 5:01 PM
To: Nelson, Justin (Anchorage) <Justin.Nelson@sgs.com>
Cc: Dan McMahon <DXM@shanwil.com>; Richard Bailey (rbailey@stephleng.com) <rbailey@stephleng.com>; Homestead, Charles (Anchorage) <Charles.Homestead@sgs.com>
Subject: [EXTERNAL] 1204322

*** WARNING: this message is from an EXTERNAL SENDER. Please be cautious, particularly with links and attachments. ***

Justin

Please copy Dan on these rush results. Depending when they come in I might not see them. It would be awesome if they snuck in Wednesday evening so we can work all day Thursday! Just sayin…

Stafford

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Stafford Glashan, P.E. | **Senior Engineer**
247 South Alaska Street
Palmer, Alaska
www.shannonwilson.com
Main: (907) 561-2120 Direct Anchorage: (907) 433-3214
Direct Valley: (907) 357-2174
sjg@shanwil.com

Value. Innovation. Service. Excellence.
We Help Our Clients Achieve Their Goals.

1204322

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

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

2355 Hill Road
Fairbanks, AK 99709
(907) 479-0600

3990 Collins Way, Suite 100
Lake Oswego, OR 97035
(503) 223-6147

2043 Westport Center Drive
St. Louis, MO 63146-3564
(314) 699-9660

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

1321 Bannock Street, Suite 200
Denver, CO 80204
(303) 825-3800

2705 Saint Andrews Loop, Suite A
Pasco, WA 99301-3378
(509) 946-6309

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Laboratory SGS

Attn:

Profile #36595

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

Sample Identity	Lab No.	Time	Date Sampled	Comp.	Grab	GRO AK101	DRO/RRO AK102/103	VOC 8260				Total Number of Containers	Remarks/Matrix
100378-EX51	(1AB)	1140	8/18/20		X	X	X	X				2	RUSH.

Project Information		Sample Receipt	
Project Number:	100378	Total Number of Containers	
Project Name:	Anvil M St	COC Seals/Intact? Y/N/NA	
Contact:	S. Glasm	Received Good Cond./Cold	
Ongoing Project?	Yes ☒ ~~No~~ ☐	Delivery Method:	
Sampler:	SSC	(attach shipping bill, if any)	

Instructions	
Requested Turnaround Time:	
Special Instructions:	RUSH

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: Time: 1240	Signature: Time:	Signature: Time:
Printed Name: Stafford Glasm Date: 8/18/20	Printed Name: Date:	Printed Name: Date:
Company: SSC	Company:	Company:

Received By: 1.	Received By: 2.	Received By: 3.
Signature: Time:	Signature: Time:	Signature: Time: 1239
Printed Name: Date:	Printed Name: Date:	Printed Name: Date: 8/18/20
Company:	Company:	Company: SGS Anchorage HD

F-19-91/UR

No. 32 35062

e-Sample Receipt Form

SGS Workorder #: **1204322**

1 2 0 4 3 2 2

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
Chain of Custody / Temperature Requirements		Yes — Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	N/A	Absent
COC accompanied samples?	Yes	
DOD: Were samples received in COC corresponding coolers?	N/A	
	Yes	**Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required
Temperature blank compliant* (i.e., 0-6 °C after CF)?	No	Cooler ID: N/A @ Ambient °C Therm. ID: N/A
If samples received without a temperature blank, the "cooler temperature" will be documented instead & "COOLER TEMP" will be noted to the right. "ambient" or "chilled" will be noted if neither is available.		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago?	Yes	
If <0°C, were sample containers ice free?	N/A	
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.		
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.
Were samples received within holding time?	Yes	
Do samples **match COC**** (i.e.,sample IDs,dates/times collected)?	Yes	
**Note: If times differ <1hr, record details & login per COC.		
***Note: If sample information on containers differs from COC, SGS will default to COC information		
Were analytical requests clear? (i.e., method is specified for analyses with multiple option for analysis (Ex: BTEX, Metals)	Yes	
	N/A	***Exemption permitted for metals (e.g,200.8/6020A).
Were proper containers (type/mass/volume/preservative***)used?	Yes	
Volatile / LL-Hg Requirements		
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	No	No trip blank received with samples.Proceeded.
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with MeOH+BFB?	Yes	

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

Additional notes (if applicable):

Sample Containers and Preservatives

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition
1204322001-A	No Preservative Required	OK			
1204322001-B	Methanol field pres. 4 C	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.
BU - The container was received with headspace greater than 6mm.
DM - The container was received damaged.
FR - The container was received frozen and not usable for Bacteria or BOD analyses.
IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.
NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.
PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.
PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.
QN - Insufficient sample quantity provided.

LABORATORY DATA REVIEW CHECKLIST

Completed by: Zach Thon
Title: Geologist
Date: 11/20/2020

Consultant Firm: Shannon & Wilson, Inc.

Laboratory Name: SGS North America Inc.
Laboratory Report Number: 1204322
Laboratory Report Date: 8/20/2020

Contaminated Site Name: NA
ADEC File Number: NA
Hazard Identification Number: NA

(**NOTE**: ***NA*** = not applicable; Text in *italics* added by Shannon & Wilson, Inc.)

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses? **Yes / No / NA**
Comments:

b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?
Yes / No / NA
Comments: *The samples were not transferred to another "network" laboratory or sub-contracted to an alternate laboratory.*

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?
Yes / No / NA
Comments**:**

b. Correct analyses requested? **Yes / No / NA**
Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?
Yes / No / NA
Comments: *The cooler temperature blank was ambient. Samples were collected and delivered to the lab within an 8-hour time frame.*

b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, VOCs, etc.)? **Yes / No / NA**
Comments:

c. Sample condition documented - broken, leaking (MeOH), zero headspace (VOC vials)? **Yes / No / NA**
Comments:

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.? **Yes / No / NA**
Comments: *No discrepancies were noted.*

e. Data quality or usability affected?
Comments: *Data quality/usability considered unaffected; see above.*

4. Case Narrative

a. Present and understandable? **Yes / No / NA**
Comments:

b. Discrepancies, errors or QC failures noted by the lab? **Yes / No / NA**
Comments: *The case narrative noted the following:*

- *Sample ExS1 - AK101 - Surrogate recovery for 4-bromofluorobenzene does not meet QC criteria. The analyte was not detected above the LOQ in the associated sample.*
- *LCS—8260D recovery for trichlorofluoromethane does not meet QC criteria. This analyte was not detected above the LOQ in the associated samples.*
- *LCSD – AK102/103 -- Surrogate recovery in the LCSD for 5a androstane does not meet QC criteria; however, the surrogate recoveries in the samples are within criteria.*
- *MS – 8260D --recovery for trichlorofluoromethane does not meet QC criteria. This analyte was not detected above the LOQ in the parent sample.*

c. Were all corrective actions documented? **Yes / No / NA**
Comments:

d. What is the effect on data quality/usability, according to the case narrative?
Comments: *See above.*

5. Sample Results

a. Correct analyses performed/reported as requested on COC? **Yes / No / NA**
Comments:

b. All applicable holding times met? **Yes / No / NA**
Comments:

c. All soils reported on a dry weight basis? **Yes / No / NA**
Comments:

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project? **Yes / No / NA**
Comments*: The LOQs for 1,2,3 -trichloropropane, 1,2-dibromoethane, and dibromochloromethane were above ADEC Method Two cleanup levels.*

e. Data quality or usability affected?
Comments: *There is a potential that the target analytes are present at concentrations greater than the ADEC cleanup levels, but less than the LOQs; however, the analytes were not detected at estimated concentrations in the project samples.*

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis, and 20 samples?
Yes / No / NA
Comments:

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?
Yes / No / NA
Comments: *Chloroform was detected in a method blank at an estimated concentration less than the LOQ.*

iii. If above LOQ or project specified objectives, what samples are affected?
Comments: *Sample ExS1*.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes / No / NA
Comments: *When the reported concentrations are within 10 times the reported blank concentration, the project samples are flagged "B". Chloroform was detected in Sample ExS1 at a level greater than 10x the blank concentration; therefore, the sample concentration is reported at the detected concentration.*

v. Data quality or usability affected?
Comments: *See above.*

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

i. Organics - One LCS/LCSD reported per matrix, analysis, and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846) **Yes / No / NA**
Comments:

ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples? **Yes / No / NA**
Comments:

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable. (AK petroleum methods: AK 101 60%-120%, AK 102 75%-125%, AK 103 60%-120%; all other analyses see the laboratory QC pages) **Yes / No / NA**
Comments: *The case narrative noted the following:*

- *LCSD – 8260D- Recovery for trichlorofluoromethane does not meet QC criteria.*
- *LCSD – AK102/103- Recovery for 5a androstane does not meet QC criteria*

iv. Precision – All relative percent differences (RPDs) reported and less than method or laboratory limits and project specified objectives, if applicable. RPD reported from LCS/LCSD, and/or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages) **Yes / No / NA**
Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?
Comments: *Sample ExS1*.

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined? **Yes / No / NA**
Comments: *Trichlorofluoromethane was not detected above the LOQ in the project samples, therefore flagging is not required. In addition, surrogate recoveries for 5a androstane in project samples are within criteria, therefore flagging is not required.*

vii. Data quality or usability affected?
Comments*: No, see above.*

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)
Note: Leave blank if not required for project

i. Organics - One MS/MSD reported per matrix, analysis, and 20 samples? **Yes / No / NA**
Comments:

ii. Metals/Inorganics - One MS and one MSD reported per matrix, analysis and 20 samples? **Yes / No / NA**
Comments:

iii. Accuracy – All percent recoveries (%R) reported and *w*ithin method or laboratory limits and project specified objectives, if applicable. (AK petroleum methods: AK 101 60%-120%, AK 102 75%-125%, AK 103 60%-120%; all other analyses see the laboratory QC pages) **Yes / No / NA**
Comments: *The MS recovery for trichlorofluoromethane (152%) does not meet QC criteria; this analyte was not detected above the LOQ in the parent sample.*

iv. Precision – All relative percent differences (RPDs) reported and less than method or laboratory limits and project specified objectives, if applicable. RPD reported from MS/MSD, and/or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages) **Yes / No / NA**
Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?
Comments: *Sample ExS1*.

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined? **Yes / No / NA**
Comments: *Trichlorofluoromethane was not detected in the project samples. Therefore, flagging is not required.*

vii. Data quality or usability affected?
Comments*: No, see above.*

d. Surrogates - Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses - field, QC, and laboratory samples? **Yes / No / NA**
Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages) **Yes / No / NA**
Comments: *Surrogate recovery for 4-bromofluorobenzene does not meet QC criteria; however, the analyte was not detected above the LOQ in the associated sample.*

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined? **Yes / No / NA**
Comments: *See above.*

iv. Data quality or usability affected?
Comments: *No, see above.*

e. Trip Blank - Volatile analyses only (GRO, BTEX, VOCs, etc.)

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? **Yes / No / NA**
Comments: *A trip blank was not submitted with the samples.*

ii. Is the cooler used to transport the trip blank and volatile samples clearly indicated on the COC? **Yes / No / NA**
Comments:

iii. All results less than LOQ and project specified objectives? **Yes / No / NA**
Comments*:*

iv. If above LOQ or project specified DQOs, what samples are affected?
Comments:

v. Data quality or usability affected?
Comments:

f. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?
Yes / No / NA
Comments: *A field duplicate was not submitted to the lab.*

ii. Were the field duplicates submitted blind to the lab? **Yes / No / NA**
Comments*:*

iii. Precision – All relative percent differences (RPDs) less than specified project objectives? (Recommended: 30% for water, 50% for soil) **Yes / No / NA**
Comments:

iv. Data quality or usability affected?
Comments:

g. Decontamination or Equipment Blank (if not applicable, a comment stating why must be entered below)**.**

Yes / No / NA
Comments: *A decontamination blank was not included in our ADEC-approved workplan.*

i. All results less than LOQ and project specified objectives?
Yes / No / NA
Comments:

ii. If above LOQ or project specified objectives, what samples are affected?
Comments:

iii. Data quality or usability affected?
Comments:

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

a. Defined and appropriate? **Yes / No / NA**
Comments: *A key is provided on Page 3 of the SGS Laboratory Report.*

Laboratory Report of Analysis

To: Shannon & Wilson, Inc.
5430 Fairbanks St., Suite 3
Anchorage, AK 99518

Report Number: **1204629**

Client Project: **100478 G St. and M St.**

Dear Zach Thon,

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 ten 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 Justin 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.

Justin Nelson
2020.09.17
17:54:32 -08'00'

Justin Nelson Date
Project Manager
Justin.Nelson@sgs.com

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

Case Narrative

SGS Client: **Shannon & Wilson, Inc.**
SGS Project: **1204629**
Project Name/Site: **100478 G St. and M St.**
Project Contact: **Zach Thon**

Refer to sample receipt form for information on sample condition.

1204615015MS (1579002) MS

8260D - MS recoveries for chloroethane and hexachlorobutadiene do not meet QC criteria. Refer to LCS for accuracy requirements.

1204615015MSD (1579003) MSD

8260D - MSD recovery for hexachlorobutadiene does not meet QC criteria. Refer to LCS for accuracy requirements.
8260D - MS/MSD RPD for chloroethane and 1,2,3-trichlorobenzene do not meet QC criteria. These analytes were not detected above the LOQ in the parent sample.

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

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

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indenmification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

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) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. 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/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

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

Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
100478-SP1	1204629001	08/27/2020	08/31/2020	Soil/Solid (dry weight)
100478-SP2	1204629002	08/27/2020	08/31/2020	Soil/Solid (dry weight)
100478-S3	1204629003	08/28/2020	08/31/2020	Soil/Solid (dry weight)

Method	Method Description
AK102	Diesel/Residual Range Organics
AK103	Diesel/Residual Range Organics
AK101	Gasoline Range Organics (S)
SM21 2540G	Percent Solids SM2540G
SW8260D	VOC 8260 (S) Field Extracted

SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
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Detectable Results Summary

Client Sample ID: **100478-SP1**
Lab Sample ID: 1204629001

Parameter	Result	Units
Semivolatile Organic Fuels		
Diesel Range Organics	232	mg/kg
Residual Range Organics	80.7J	mg/kg
Volatile GC/MS		
Chloroform	25.9	ug/kg

Client Sample ID: **100478-SP2**
Lab Sample ID: 1204629002

Parameter	Result	Units
Semivolatile Organic Fuels		
Diesel Range Organics	47.3	mg/kg
Residual Range Organics	146	mg/kg
Volatile Fuels		
Gasoline Range Organics	1.15J	mg/Kg
Volatile GC/MS		
Chloroform	2.59J	ug/kg

Client Sample ID: **100478-S3**
Lab Sample ID: 1204629003

Parameter	Result	Units
Volatile GC/MS		
Chloroform	11.0	ug/kg

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

Results of **100478-SP1**

Client Sample ID: **100478-SP1**
Client Project ID: **100478 G St. and M St.**
Lab Sample ID: 1204629001
Lab Project ID: 1204629

Collection Date: 08/27/20 11:30
Received Date: 08/31/20 16:01
Matrix: Soil/Solid (dry weight)
Solids (%):81.7
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	232		24.4	7.56	mg/kg	1		09/10/20 10:45
Surrogates								
5a Androstane (surr)	97.6		50-150		%	1		09/10/20 10:45

Batch Information

Analytical Batch: XFC15735
Analytical Method: AK102
Analyst: CDM
Analytical Date/Time: 09/10/20 10:45
Container ID: 1204629001-A

Prep Batch: XXX43820
Prep Method: SW3550C
Prep Date/Time: 09/09/20 09:16
Prep Initial Wt./Vol.: 30.091 g
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	80.7	J	122	52.5	mg/kg	1		09/10/20 10:45
Surrogates								
n-Triacontane-d62 (surr)	95.1		50-150		%	1		09/10/20 10:45

Batch Information

Analytical Batch: XFC15735
Analytical Method: AK103
Analyst: CDM
Analytical Date/Time: 09/10/20 10:45
Container ID: 1204629001-A

Prep Batch: XXX43820
Prep Method: SW3550C
Prep Date/Time: 09/09/20 09:16
Prep Initial Wt./Vol.: 30.091 g
Prep Extract Vol: 5 mL

Print Date: 09/17/2020 4:43:34PM

J flagging is activated

Results of **100478-SP1**

Client Sample ID: **100478-SP1**
Client Project ID: **100478 G St. and M St.**
Lab Sample ID: 1204629001
Lab Project ID: 1204629

Collection Date: 08/27/20 11:30
Received Date: 08/31/20 16:01
Matrix: Soil/Solid (dry weight)
Solids (%):81.7
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	1.32	U	2.64	0.793	mg/Kg	1		09/15/20 11:38
Surrogates								
4-Bromofluorobenzene (surr)	76.9		50-150		%	1		09/15/20 11:38

Batch Information

Analytical Batch: VFC15344
Analytical Method: AK101
Analyst: ALJ
Analytical Date/Time: 09/15/20 11:38
Container ID: 1204629001-B

Prep Batch: VXX36350
Prep Method: SW5035A
Prep Date/Time: 08/27/20 11:30
Prep Initial Wt./Vol.: 100.211 g
Prep Extract Vol: 43.3045 mL

Results of **100478-SP1**

Client Sample ID: **100478-SP1**
Client Project ID: **100478 G St. and M St.**
Lab Sample ID: 1204629001
Lab Project ID: 1204629

Collection Date: 08/27/20 11:30
Received Date: 08/31/20 16:01
Matrix: Soil/Solid (dry weight)
Solids (%):81.7
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	10.6	U	21.1	6.56	ug/kg	1		09/02/20 15:36
1,1,1-Trichloroethane	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
1,1,2,2-Tetrachloroethane	1.05	U	2.11	0.656	ug/kg	1		09/02/20 15:36
1,1,2-Trichloroethane	0.423	U	0.846	0.264	ug/kg	1		09/02/20 15:36
1,1-Dichloroethane	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
1,1-Dichloroethene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
1,1-Dichloropropene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
1,2,3-Trichlorobenzene	26.4	U	52.9	15.9	ug/kg	1		09/02/20 15:36
1,2,3-Trichloropropane	1.05	U	2.11	0.656	ug/kg	1		09/02/20 15:36
1,2,4-Trichlorobenzene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
1,2,4-Trimethylbenzene	26.4	U	52.9	15.9	ug/kg	1		09/02/20 15:36
1,2-Dibromo-3-chloropropane	53.0	U	106	32.8	ug/kg	1		09/02/20 15:36
1,2-Dibromoethane	0.530	U	1.06	0.423	ug/kg	1		09/02/20 15:36
1,2-Dichlorobenzene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
1,2-Dichloroethane	1.05	U	2.11	0.740	ug/kg	1		09/02/20 15:36
1,2-Dichloropropane	5.30	U	10.6	3.28	ug/kg	1		09/02/20 15:36
1,3,5-Trimethylbenzene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
1,3-Dichlorobenzene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
1,3-Dichloropropane	5.30	U	10.6	3.28	ug/kg	1		09/02/20 15:36
1,4-Dichlorobenzene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
2,2-Dichloropropane	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
2-Butanone (MEK)	132	U	264	82.5	ug/kg	1		09/02/20 15:36
2-Chlorotoluene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
2-Hexanone	53.0	U	106	32.8	ug/kg	1		09/02/20 15:36
4-Chlorotoluene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
4-Isopropyltoluene	53.0	U	106	26.4	ug/kg	1		09/02/20 15:36
4-Methyl-2-pentanone (MIBK)	132	U	264	82.5	ug/kg	1		09/02/20 15:36
Acetone	132	U	264	82.5	ug/kg	1		09/02/20 15:36
Benzene	6.60	U	13.2	4.12	ug/kg	1		09/02/20 15:36
Bromobenzene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
Bromochloromethane	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
Bromodichloromethane	1.05	U	2.11	0.656	ug/kg	1		09/02/20 15:36
Bromoform	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
Bromomethane	10.6	U	21.1	6.56	ug/kg	1		09/02/20 15:36
Carbon disulfide	53.0	U	106	32.8	ug/kg	1		09/02/20 15:36
Carbon tetrachloride	6.60	U	13.2	4.12	ug/kg	1		09/02/20 15:36
Chlorobenzene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36

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J flagging is activated

Results of **100478-SP1**

Client Sample ID: **100478-SP1**
Client Project ID: **100478 G St. and M St.**
Lab Sample ID: 1204629001
Lab Project ID: 1204629

Collection Date: 08/27/20 11:30
Received Date: 08/31/20 16:01
Matrix: Soil/Solid (dry weight)
Solids (%):81.7
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	106	U	211	65.6	ug/kg	1		09/02/20 15:36
Chloroform	25.9		4.23	1.06	ug/kg	1		09/02/20 15:36
Chloromethane	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
cis-1,2-Dichloroethene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
cis-1,3-Dichloropropene	6.60	U	13.2	4.12	ug/kg	1		09/02/20 15:36
Dibromochloromethane	2.65	U	5.29	1.59	ug/kg	1		09/02/20 15:36
Dibromomethane	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
Dichlorodifluoromethane	26.4	U	52.9	15.9	ug/kg	1		09/02/20 15:36
Ethylbenzene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
Freon-113	53.0	U	106	32.8	ug/kg	1		09/02/20 15:36
Hexachlorobutadiene	10.6	U	21.1	6.56	ug/kg	1		09/02/20 15:36
Isopropylbenzene (Cumene)	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
Methylene chloride	53.0	U	106	32.8	ug/kg	1		09/02/20 15:36
Methyl-t-butyl ether	53.0	U	106	32.8	ug/kg	1		09/02/20 15:36
Naphthalene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
n-Butylbenzene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
n-Propylbenzene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
o-Xylene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
P & M -Xylene	26.4	U	52.9	15.9	ug/kg	1		09/02/20 15:36
sec-Butylbenzene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
Styrene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
tert-Butylbenzene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
Tetrachloroethene	6.60	U	13.2	4.12	ug/kg	1		09/02/20 15:36
Toluene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
trans-1,2-Dichloroethene	13.2	U	26.4	8.25	ug/kg	1		09/02/20 15:36
trans-1,3-Dichloropropene	6.60	U	13.2	4.12	ug/kg	1		09/02/20 15:36
Trichloroethene	2.65	U	5.29	1.59	ug/kg	1		09/02/20 15:36
Trichlorofluoromethane	26.4	U	52.9	15.9	ug/kg	1		09/02/20 15:36
Vinyl acetate	53.0	U	106	32.8	ug/kg	1		09/02/20 15:36
Vinyl chloride	0.423	U	0.846	0.264	ug/kg	1		09/02/20 15:36
Xylenes (total)	39.6	U	79.3	24.1	ug/kg	1		09/02/20 15:36
Surrogates								
1,2-Dichloroethane-D4 (surr)	104		71-136		%	1		09/02/20 15:36
4-Bromofluorobenzene (surr)	85		55-151		%	1		09/02/20 15:36
Toluene-d8 (surr)	101		85-116		%	1		09/02/20 15:36

Print Date: 09/17/2020 4:43:34PM

J flagging is activated

Results of **100478-SP1**

Client Sample ID: **100478-SP1**
Client Project ID: **100478 G St. and M St.**
Lab Sample ID: 1204629001
Lab Project ID: 1204629

Collection Date: 08/27/20 11:30
Received Date: 08/31/20 16:01
Matrix: Soil/Solid (dry weight)
Solids (%):81.7
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS20281
Analytical Method: SW8260D
Analyst: KAJ
Analytical Date/Time: 09/02/20 15:36
Container ID: 1204629001-B

Prep Batch: VXX36271
Prep Method: SW5035A
Prep Date/Time: 08/27/20 11:30
Prep Initial Wt./Vol.: 100.211 g
Prep Extract Vol: 43.3045 mL

Results of **100478-SP2**

Client Sample ID: **100478-SP2**
Client Project ID: **100478 G St. and M St.**
Lab Sample ID: 1204629002
Lab Project ID: 1204629

Collection Date: 08/27/20 13:35
Received Date: 08/31/20 16:01
Matrix: Soil/Solid (dry weight)
Solids (%):87.2
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	47.3		22.8	7.08	mg/kg	1		09/10/20 10:55
Surrogates								
5a Androstane (surr)	86.8		50-150		%	1		09/10/20 10:55

Batch Information

Analytical Batch: XFC15735
Analytical Method: AK102
Analyst: CDM
Analytical Date/Time: 09/10/20 10:55
Container ID: 1204629002-A

Prep Batch: XXX43820
Prep Method: SW3550C
Prep Date/Time: 09/09/20 09:16
Prep Initial Wt./Vol.: 30.149 g
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	146		114	49.1	mg/kg	1		09/10/20 10:55
Surrogates								
n-Triacontane-d62 (surr)	83.6		50-150		%	1		09/10/20 10:55

Batch Information

Analytical Batch: XFC15735
Analytical Method: AK103
Analyst: CDM
Analytical Date/Time: 09/10/20 10:55
Container ID: 1204629002-A

Prep Batch: XXX43820
Prep Method: SW3550C
Prep Date/Time: 09/09/20 09:16
Prep Initial Wt./Vol.: 30.149 g
Prep Extract Vol: 5 mL

Print Date: 09/17/2020 4:43:34PM

J flagging is activated

Results of **100478-SP2**

Client Sample ID: **100478-SP2**
Client Project ID: **100478 G St. and M St.**
Lab Sample ID: 1204629002
Lab Project ID: 1204629

Collection Date: 08/27/20 13:35
Received Date: 08/31/20 16:01
Matrix: Soil/Solid (dry weight)
Solids (%):87.2
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	1.15	J	1.94	0.582	mg/Kg	1		09/15/20 12:15
Surrogates								
4-Bromofluorobenzene (surr)	130		50-150		%	1		09/15/20 12:15

Batch Information

Analytical Batch: VFC15344
Analytical Method: AK101
Analyst: ALJ
Analytical Date/Time: 09/15/20 12:15
Container ID: 1204629002-B

Prep Batch: VXX36350
Prep Method: SW5035A
Prep Date/Time: 08/27/20 13:35
Prep Initial Wt./Vol.: 119.22 g
Prep Extract Vol: 40.294 mL

Print Date: 09/17/2020 4:43:34PM

J flagging is activated

Results of **100478-SP2**

Client Sample ID: **100478-SP2**
Client Project ID: **100478 G St. and M St.**
Lab Sample ID: 1204629002
Lab Project ID: 1204629

Collection Date: 08/27/20 13:35
Received Date: 08/31/20 16:01
Matrix: Soil/Solid (dry weight)
Solids (%):87.2
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	7.75	U	15.5	4.81	ug/kg	1		09/02/20 15:52
1,1,1-Trichloroethane	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
1,1,2,2-Tetrachloroethane	0.775	U	1.55	0.481	ug/kg	1		09/02/20 15:52
1,1,2-Trichloroethane	0.310	U	0.620	0.194	ug/kg	1		09/02/20 15:52
1,1-Dichloroethane	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
1,1-Dichloroethene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
1,1-Dichloropropene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
1,2,3-Trichlorobenzene	19.4	U	38.8	11.6	ug/kg	1		09/02/20 15:52
1,2,3-Trichloropropane	0.775	U	1.55	0.481	ug/kg	1		09/02/20 15:52
1,2,4-Trichlorobenzene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
1,2,4-Trimethylbenzene	19.4	U	38.8	11.6	ug/kg	1		09/02/20 15:52
1,2-Dibromo-3-chloropropane	38.8	U	77.5	24.0	ug/kg	1		09/02/20 15:52
1,2-Dibromoethane	0.388	U	0.775	0.310	ug/kg	1		09/02/20 15:52
1,2-Dichlorobenzene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
1,2-Dichloroethane	0.775	U	1.55	0.543	ug/kg	1		09/02/20 15:52
1,2-Dichloropropane	3.88	U	7.75	2.40	ug/kg	1		09/02/20 15:52
1,3,5-Trimethylbenzene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
1,3-Dichlorobenzene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
1,3-Dichloropropane	3.88	U	7.75	2.40	ug/kg	1		09/02/20 15:52
1,4-Dichlorobenzene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
2,2-Dichloropropane	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
2-Butanone (MEK)	97.0	U	194	60.5	ug/kg	1		09/02/20 15:52
2-Chlorotoluene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
2-Hexanone	38.8	U	77.5	24.0	ug/kg	1		09/02/20 15:52
4-Chlorotoluene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
4-Isopropyltoluene	38.8	U	77.5	19.4	ug/kg	1		09/02/20 15:52
4-Methyl-2-pentanone (MIBK)	97.0	U	194	60.5	ug/kg	1		09/02/20 15:52
Acetone	97.0	U	194	60.5	ug/kg	1		09/02/20 15:52
Benzene	4.84	U	9.69	3.02	ug/kg	1		09/02/20 15:52
Bromobenzene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
Bromochloromethane	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
Bromodichloromethane	0.775	U	1.55	0.481	ug/kg	1		09/02/20 15:52
Bromoform	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
Bromomethane	7.75	U	15.5	4.81	ug/kg	1		09/02/20 15:52
Carbon disulfide	38.8	U	77.5	24.0	ug/kg	1		09/02/20 15:52
Carbon tetrachloride	4.84	U	9.69	3.02	ug/kg	1		09/02/20 15:52
Chlorobenzene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52

Results of **100478-SP2**

Client Sample ID: **100478-SP2**
Client Project ID: **100478 G St. and M St.**
Lab Sample ID: 1204629002
Lab Project ID: 1204629

Collection Date: 08/27/20 13:35
Received Date: 08/31/20 16:01
Matrix: Soil/Solid (dry weight)
Solids (%):87.2
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	77.5	U	155	48.1	ug/kg	1		09/02/20 15:52
Chloroform	2.59	J	3.10	0.775	ug/kg	1		09/02/20 15:52
Chloromethane	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
cis-1,2-Dichloroethene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
cis-1,3-Dichloropropene	4.84	U	9.69	3.02	ug/kg	1		09/02/20 15:52
Dibromochloromethane	1.94	U	3.88	1.16	ug/kg	1		09/02/20 15:52
Dibromomethane	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
Dichlorodifluoromethane	19.4	U	38.8	11.6	ug/kg	1		09/02/20 15:52
Ethylbenzene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
Freon-113	38.8	U	77.5	24.0	ug/kg	1		09/02/20 15:52
Hexachlorobutadiene	7.75	U	15.5	4.81	ug/kg	1		09/02/20 15:52
Isopropylbenzene (Cumene)	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
Methylene chloride	38.8	U	77.5	24.0	ug/kg	1		09/02/20 15:52
Methyl-t-butyl ether	38.8	U	77.5	24.0	ug/kg	1		09/02/20 15:52
Naphthalene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
n-Butylbenzene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
n-Propylbenzene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
o-Xylene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
P & M -Xylene	19.4	U	38.8	11.6	ug/kg	1		09/02/20 15:52
sec-Butylbenzene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
Styrene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
tert-Butylbenzene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
Tetrachloroethene	4.84	U	9.69	3.02	ug/kg	1		09/02/20 15:52
Toluene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
trans-1,2-Dichloroethene	9.70	U	19.4	6.05	ug/kg	1		09/02/20 15:52
trans-1,3-Dichloropropene	4.84	U	9.69	3.02	ug/kg	1		09/02/20 15:52
Trichloroethene	1.94	U	3.88	1.16	ug/kg	1		09/02/20 15:52
Trichlorofluoromethane	19.4	U	38.8	11.6	ug/kg	1		09/02/20 15:52
Vinyl acetate	38.8	U	77.5	24.0	ug/kg	1		09/02/20 15:52
Vinyl chloride	0.310	U	0.620	0.194	ug/kg	1		09/02/20 15:52
Xylenes (total)	29.1	U	58.2	17.7	ug/kg	1		09/02/20 15:52
Surrogates								
1,2-Dichloroethane-D4 (surr)	106		71-136		%	1		09/02/20 15:52
4-Bromofluorobenzene (surr)	113		55-151		%	1		09/02/20 15:52
Toluene-d8 (surr)	99.7		85-116		%	1		09/02/20 15:52

Print Date: 09/17/2020 4:43:34PM

J flagging is activated

Results of **100478-SP2**

Client Sample ID: **100478-SP2**
Client Project ID: **100478 G St. and M St.**
Lab Sample ID: 1204629002
Lab Project ID: 1204629

Collection Date: 08/27/20 13:35
Received Date: 08/31/20 16:01
Matrix: Soil/Solid (dry weight)
Solids (%):87.2
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS20281
Analytical Method: SW8260D
Analyst: KAJ
Analytical Date/Time: 09/02/20 15:52
Container ID: 1204629002-B

Prep Batch: VXX36271
Prep Method: SW5035A
Prep Date/Time: 08/27/20 13:35
Prep Initial Wt./Vol.: 119.22 g
Prep Extract Vol: 40.294 mL

Results of **100478-S3**

Client Sample ID: **100478-S3**
Client Project ID: **100478 G St. and M St.**
Lab Sample ID: 1204629003
Lab Project ID: 1204629

Collection Date: 08/28/20 10:30
Received Date: 08/31/20 16:01
Matrix: Soil/Solid (dry weight)
Solids (%):77.1
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	12.9	U	25.7	7.98	mg/kg	1		09/10/20 11:05
Surrogates								
5a Androstane (surr)	95.4		50-150		%	1		09/10/20 11:05

Batch Information

Analytical Batch: XFC15735
Analytical Method: AK102
Analyst: CDM
Analytical Date/Time: 09/10/20 11:05
Container ID: 1204629003-A

Prep Batch: XXX43820
Prep Method: SW3550C
Prep Date/Time: 09/09/20 09:16
Prep Initial Wt./Vol.: 30.235 g
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	64.5	U	129	55.3	mg/kg	1		09/10/20 11:05
Surrogates								
n-Triacontane-d62 (surr)	93.6		50-150		%	1		09/10/20 11:05

Batch Information

Analytical Batch: XFC15735
Analytical Method: AK103
Analyst: CDM
Analytical Date/Time: 09/10/20 11:05
Container ID: 1204629003-A

Prep Batch: XXX43820
Prep Method: SW3550C
Prep Date/Time: 09/09/20 09:16
Prep Initial Wt./Vol.: 30.235 g
Prep Extract Vol: 5 mL

Results of **100478-S3**

Client Sample ID: **100478-S3**
Client Project ID: **100478 G St. and M St.**
Lab Sample ID: 1204629003
Lab Project ID: 1204629

Collection Date: 08/28/20 10:30
Received Date: 08/31/20 16:01
Matrix: Soil/Solid (dry weight)
Solids (%):77.1
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	1.58	U	3.16	0.949	mg/Kg	1		09/16/20 06:27
Surrogates								
4-Bromofluorobenzene (surr)	114		50-150		%	1		09/16/20 06:27

Batch Information

Analytical Batch: VFC15346
Analytical Method: AK101
Analyst: ALJ
Analytical Date/Time: 09/16/20 06:27
Container ID: 1204629003-B

Prep Batch: VXX36354
Prep Method: SW5035A
Prep Date/Time: 08/28/20 10:30
Prep Initial Wt./Vol.: 96.456 g
Prep Extract Vol: 47.0792 mL

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Results of **100478-S3**

Client Sample ID: **100478-S3**
Client Project ID: **100478 G St. and M St.**
Lab Sample ID: 1204629003
Lab Project ID: 1204629

Collection Date: 08/28/20 10:30
Received Date: 08/31/20 16:01
Matrix: Soil/Solid (dry weight)
Solids (%):77.1
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	12.7	U	25.3	7.85	ug/kg	1		09/02/20 16:07
1,1,1-Trichloroethane	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
1,1,2,2-Tetrachloroethane	1.26	U	2.53	0.785	ug/kg	1		09/02/20 16:07
1,1,2-Trichloroethane	0.505	U	1.01	0.316	ug/kg	1		09/02/20 16:07
1,1-Dichloroethane	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
1,1-Dichloroethene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
1,1-Dichloropropene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
1,2,3-Trichlorobenzene	31.6	U	63.3	19.0	ug/kg	1		09/02/20 16:07
1,2,3-Trichloropropane	1.26	U	2.53	0.785	ug/kg	1		09/02/20 16:07
1,2,4-Trichlorobenzene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
1,2,4-Trimethylbenzene	31.6	U	63.3	19.0	ug/kg	1		09/02/20 16:07
1,2-Dibromo-3-chloropropane	63.5	U	127	39.2	ug/kg	1		09/02/20 16:07
1,2-Dibromoethane	0.635	U	1.27	0.506	ug/kg	1		09/02/20 16:07
1,2-Dichlorobenzene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
1,2-Dichloroethane	1.26	U	2.53	0.886	ug/kg	1		09/02/20 16:07
1,2-Dichloropropane	6.35	U	12.7	3.92	ug/kg	1		09/02/20 16:07
1,3,5-Trimethylbenzene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
1,3-Dichlorobenzene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
1,3-Dichloropropane	6.35	U	12.7	3.92	ug/kg	1		09/02/20 16:07
1,4-Dichlorobenzene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
2,2-Dichloropropane	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
2-Butanone (MEK)	158	U	316	98.7	ug/kg	1		09/02/20 16:07
2-Chlorotoluene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
2-Hexanone	63.5	U	127	39.2	ug/kg	1		09/02/20 16:07
4-Chlorotoluene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
4-Isopropyltoluene	63.5	U	127	31.6	ug/kg	1		09/02/20 16:07
4-Methyl-2-pentanone (MIBK)	158	U	316	98.7	ug/kg	1		09/02/20 16:07
Acetone	158	U	316	98.7	ug/kg	1		09/02/20 16:07
Benzene	7.90	U	15.8	4.94	ug/kg	1		09/02/20 16:07
Bromobenzene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
Bromochloromethane	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
Bromodichloromethane	1.26	U	2.53	0.785	ug/kg	1		09/02/20 16:07
Bromoform	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
Bromomethane	12.7	U	25.3	7.85	ug/kg	1		09/02/20 16:07
Carbon disulfide	63.5	U	127	39.2	ug/kg	1		09/02/20 16:07
Carbon tetrachloride	7.90	U	15.8	4.94	ug/kg	1		09/02/20 16:07
Chlorobenzene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07

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Results of **100478-S3**

Client Sample ID: **100478-S3**
Client Project ID: **100478 G St. and M St.**
Lab Sample ID: 1204629003
Lab Project ID: 1204629

Collection Date: 08/28/20 10:30
Received Date: 08/31/20 16:01
Matrix: Soil/Solid (dry weight)
Solids (%):77.1
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	127	U	253	78.5	ug/kg	1		09/02/20 16:07
Chloroform	11.0		5.06	1.27	ug/kg	1		09/02/20 16:07
Chloromethane	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
cis-1,2-Dichloroethene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
cis-1,3-Dichloropropene	7.90	U	15.8	4.94	ug/kg	1		09/02/20 16:07
Dibromochloromethane	3.17	U	6.33	1.90	ug/kg	1		09/02/20 16:07
Dibromomethane	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
Dichlorodifluoromethane	31.6	U	63.3	19.0	ug/kg	1		09/02/20 16:07
Ethylbenzene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
Freon-113	63.5	U	127	39.2	ug/kg	1		09/02/20 16:07
Hexachlorobutadiene	12.7	U	25.3	7.85	ug/kg	1		09/02/20 16:07
Isopropylbenzene (Cumene)	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
Methylene chloride	63.5	U	127	39.2	ug/kg	1		09/02/20 16:07
Methyl-t-butyl ether	63.5	U	127	39.2	ug/kg	1		09/02/20 16:07
Naphthalene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
n-Butylbenzene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
n-Propylbenzene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
o-Xylene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
P & M -Xylene	31.6	U	63.3	19.0	ug/kg	1		09/02/20 16:07
sec-Butylbenzene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
Styrene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
tert-Butylbenzene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
Tetrachloroethene	7.90	U	15.8	4.94	ug/kg	1		09/02/20 16:07
Toluene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
trans-1,2-Dichloroethene	15.8	U	31.6	9.87	ug/kg	1		09/02/20 16:07
trans-1,3-Dichloropropene	7.90	U	15.8	4.94	ug/kg	1		09/02/20 16:07
Trichloroethene	3.17	U	6.33	1.90	ug/kg	1		09/02/20 16:07
Trichlorofluoromethane	31.6	U	63.3	19.0	ug/kg	1		09/02/20 16:07
Vinyl acetate	63.5	U	127	39.2	ug/kg	1		09/02/20 16:07
Vinyl chloride	0.505	U	1.01	0.316	ug/kg	1		09/02/20 16:07
Xylenes (total)	47.5	U	94.9	28.9	ug/kg	1		09/02/20 16:07
Surrogates								
1,2-Dichloroethane-D4 (surr)	104		71-136		%	1		09/02/20 16:07
4-Bromofluorobenzene (surr)	114		55-151		%	1		09/02/20 16:07
Toluene-d8 (surr)	99.2		85-116		%	1		09/02/20 16:07

Print Date: 09/17/2020 4:43:34PM

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Results of **100478-S3**

Client Sample ID: **100478-S3**
Client Project ID: **100478 G St. and M St.**
Lab Sample ID: 1204629003
Lab Project ID: 1204629

Collection Date: 08/28/20 10:30
Received Date: 08/31/20 16:01
Matrix: Soil/Solid (dry weight)
Solids (%):77.1
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS20281
Analytical Method: SW8260D
Analyst: KAJ
Analytical Date/Time: 09/02/20 16:07
Container ID: 1204629003-B

Prep Batch: VXX36271
Prep Method: SW5035A
Prep Date/Time: 08/28/20 10:30
Prep Initial Wt./Vol.: 96.456 g
Prep Extract Vol: 47.0792 mL

Method Blank

Blank ID: MB for HBN 1811353 [SPT/11121]
Blank Lab ID: 1579628

Matrix: Soil/Solid (dry weight)

QC for Samples:
1204629001, 1204629002

Results by **SM21 2540G**

Parameter	Results	LOQ/CL	DL	Units
Total Solids	100			%

Batch Information

Analytical Batch: SPT11121
Analytical Method: SM21 2540G
Instrument:
Analyst: H.M
Analytical Date/Time: 9/4/2020 5:15:00PM

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Duplicate Sample Summary

Original Sample ID: 1204629001
Duplicate Sample ID: 1579629
QC for Samples:
1204629001, 1204629002

Analysis Date: 09/04/2020 17:15
Matrix: Soil/Solid (dry weight)

Results by **SM21 2540G**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Solids	81.7	82.2	%	0.57	(< 15)

Batch Information

Analytical Batch: SPT11121
Analytical Method: SM21 2540G
Instrument:
Analyst: H.M

Print Date: 09/17/2020 4:43:38PM

Duplicate Sample Summary

Original Sample ID: 1204705006
Duplicate Sample ID: 1579630
QC for Samples:
1204629002

Analysis Date: 09/04/2020 17:15
Matrix: Soil/Solid (dry weight)

Results by **SM21 2540G**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Solids	85.8	86.5	%	0.83	(< 15)

Batch Information

Analytical Batch: SPT11121
Analytical Method: SM21 2540G
Instrument:
Analyst: H.M

Print Date: 09/17/2020 4:43:38PM

Method Blank

Blank ID: MB for HBN 1811406 [SPT/11124]
Blank Lab ID: 1579863

Matrix: Soil/Solid (dry weight)

QC for Samples:
1204629003

Results by **SM21 2540G**

Parameter	Results	LOQ/CL	DL	Units
Total Solids	100			%

Batch Information

Analytical Batch: SPT11124
Analytical Method: SM21 2540G
Instrument:
Analyst: EBH
Analytical Date/Time: 9/8/2020 7:00:00PM

Duplicate Sample Summary

Original Sample ID: 1204749010
Duplicate Sample ID: 1579864
QC for Samples:
1204629003

Analysis Date: 09/08/2020 19:00
Matrix: Soil/Solid (dry weight)

Results by **SM21 2540G**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Solids	81.0	80.8	%	0.25	(< 15)

Batch Information

Analytical Batch: SPT11124
Analytical Method: SM21 2540G
Instrument:
Analyst: EBH

Print Date: 09/17/2020 4:43:43PM

Method Blank

Blank ID: MB for HBN 1811242 [VXX/36271]
Blank Lab ID: 1579000

Matrix: Soil/Solid (dry weight)

QC for Samples:
1204629001, 1204629002, 1204629003

Results by **SW8260D**

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	10.0U	20.0	6.20	ug/kg
1,1,1-Trichloroethane	12.5U	25.0	7.80	ug/kg
1,1,2,2-Tetrachloroethane	1.00U	2.00	0.620	ug/kg
1,1,2-Trichloroethane	0.400U	0.800	0.250	ug/kg
1,1-Dichloroethane	12.5U	25.0	7.80	ug/kg
1,1-Dichloroethene	12.5U	25.0	7.80	ug/kg
1,1-Dichloropropene	12.5U	25.0	7.80	ug/kg
1,2,3-Trichlorobenzene	25.0U	50.0	15.0	ug/kg
1,2,3-Trichloropropane	1.00U	2.00	0.620	ug/kg
1,2,4-Trichlorobenzene	12.5U	25.0	7.80	ug/kg
1,2,4-Trimethylbenzene	25.0U	50.0	15.0	ug/kg
1,2-Dibromo-3-chloropropane	50.0U	100	31.0	ug/kg
1,2-Dibromoethane	0.500U	1.00	0.400	ug/kg
1,2-Dichlorobenzene	12.5U	25.0	7.80	ug/kg
1,2-Dichloroethane	1.00U	2.00	0.700	ug/kg
1,2-Dichloropropane	5.00U	10.0	3.10	ug/kg
1,3,5-Trimethylbenzene	12.5U	25.0	7.80	ug/kg
1,3-Dichlorobenzene	12.5U	25.0	7.80	ug/kg
1,3-Dichloropropane	5.00U	10.0	3.10	ug/kg
1,4-Dichlorobenzene	12.5U	25.0	7.80	ug/kg
2,2-Dichloropropane	12.5U	25.0	7.80	ug/kg
2-Butanone (MEK)	125U	250	78.0	ug/kg
2-Chlorotoluene	12.5U	25.0	7.80	ug/kg
2-Hexanone	50.0U	100	31.0	ug/kg
4-Chlorotoluene	12.5U	25.0	7.80	ug/kg
4-Isopropyltoluene	50.0U	100	25.0	ug/kg
4-Methyl-2-pentanone (MIBK)	125U	250	78.0	ug/kg
Acetone	125U	250	78.0	ug/kg
Benzene	6.25U	12.5	3.90	ug/kg
Bromobenzene	12.5U	25.0	7.80	ug/kg
Bromochloromethane	12.5U	25.0	7.80	ug/kg
Bromodichloromethane	1.00U	2.00	0.620	ug/kg
Bromoform	12.5U	25.0	7.80	ug/kg
Bromomethane	10.0U	20.0	6.20	ug/kg
Carbon disulfide	50.0U	100	31.0	ug/kg
Carbon tetrachloride	6.25U	12.5	3.90	ug/kg
Chlorobenzene	12.5U	25.0	7.80	ug/kg
Chloroethane	100U	200	62.0	ug/kg

Method Blank

Blank ID: MB for HBN 1811242 [VXX/36271]
Blank Lab ID: 1579000

Matrix: Soil/Solid (dry weight)

QC for Samples:
1204629001, 1204629002, 1204629003

Results by **SW8260D**

Parameter	Results	LOQ/CL	DL	Units
Chloroform	2.00U	4.00	1.00	ug/kg
Chloromethane	12.5U	25.0	7.80	ug/kg
cis-1,2-Dichloroethene	12.5U	25.0	7.80	ug/kg
cis-1,3-Dichloropropene	6.25U	12.5	3.90	ug/kg
Dibromochloromethane	2.50U	5.00	1.50	ug/kg
Dibromomethane	12.5U	25.0	7.80	ug/kg
Dichlorodifluoromethane	25.0U	50.0	15.0	ug/kg
Ethylbenzene	12.5U	25.0	7.80	ug/kg
Freon-113	50.0U	100	31.0	ug/kg
Hexachlorobutadiene	10.0U	20.0	6.20	ug/kg
Isopropylbenzene (Cumene)	12.5U	25.0	7.80	ug/kg
Methylene chloride	50.0U	100	31.0	ug/kg
Methyl-t-butyl ether	50.0U	100	31.0	ug/kg
Naphthalene	12.5U	25.0	7.80	ug/kg
n-Butylbenzene	12.5U	25.0	7.80	ug/kg
n-Propylbenzene	12.5U	25.0	7.80	ug/kg
o-Xylene	12.5U	25.0	7.80	ug/kg
P & M -Xylene	25.0U	50.0	15.0	ug/kg
sec-Butylbenzene	12.5U	25.0	7.80	ug/kg
Styrene	12.5U	25.0	7.80	ug/kg
tert-Butylbenzene	12.5U	25.0	7.80	ug/kg
Tetrachloroethene	6.25U	12.5	3.90	ug/kg
Toluene	12.5U	25.0	7.80	ug/kg
trans-1,2-Dichloroethene	12.5U	25.0	7.80	ug/kg
trans-1,3-Dichloropropene	6.25U	12.5	3.90	ug/kg
Trichloroethene	2.50U	5.00	1.50	ug/kg
Trichlorofluoromethane	25.0U	50.0	15.0	ug/kg
Vinyl acetate	50.0U	100	31.0	ug/kg
Vinyl chloride	0.400U	0.800	0.250	ug/kg
Xylenes (total)	37.5U	75.0	22.8	ug/kg
Surrogates				
1,2-Dichloroethane-D4 (surr)	103	71-136		%
4-Bromofluorobenzene (surr)	103	55-151		%
Toluene-d8 (surr)	99.5	85-116		%

Method Blank

Blank ID: MB for HBN 1811242 [VXX/36271]
Blank Lab ID: 1579000

Matrix: Soil/Solid (dry weight)

QC for Samples:
1204629001, 1204629002, 1204629003

Results by **SW8260D**

Parameter	Results	LOQ/CL	DL	Units

Batch Information

Analytical Batch: VMS20281
Analytical Method: SW8260D
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: KAJ
Analytical Date/Time: 9/2/2020 11:39:00AM

Prep Batch: VXX36271
Prep Method: SW5035A
Prep Date/Time: 9/2/2020 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1204629 [VXX36271]
Blank Spike Lab ID: 1579001
Date Analyzed: 09/02/2020 11:54

Matrix: Soil/Solid (dry weight)

QC for Samples: 1204629001, 1204629002, 1204629003

Results by **SW8260D**

Blank Spike (ug/kg)

Parameter	Spike	Result	Rec (%)	CL
1,1,1,2-Tetrachloroethane	750	841	112	(78-125)
1,1,1-Trichloroethane	750	771	103	(73-130)
1,1,2,2-Tetrachloroethane	750	802	107	(70-124)
1,1,2-Trichloroethane	750	731	98	(78-121)
1,1-Dichloroethane	750	716	95	(76-125)
1,1-Dichloroethene	750	655	87	(70-131)
1,1-Dichloropropene	750	741	99	(76-125)
1,2,3-Trichlorobenzene	750	739	99	(66-130)
1,2,3-Trichloropropane	750	775	103	(73-125)
1,2,4-Trichlorobenzene	750	790	105	(67-129)
1,2,4-Trimethylbenzene	750	806	108	(75-123)
1,2-Dibromo-3-chloropropane	750	758	101	(61-132)
1,2-Dibromoethane	750	823	110	(78-122)
1,2-Dichlorobenzene	750	781	104	(78-121)
1,2-Dichloroethane	750	739	99	(73-128)
1,2-Dichloropropane	750	772	103	(76-123)
1,3,5-Trimethylbenzene	750	800	107	(73-124)
1,3-Dichlorobenzene	750	819	109	(77-121)
1,3-Dichloropropane	750	780	104	(77-121)
1,4-Dichlorobenzene	750	805	107	(75-120)
2,2-Dichloropropane	750	822	110	(67-133)
2-Butanone (MEK)	2250	2630	117	(51-148)
2-Chlorotoluene	750	782	104	(75-122)
2-Hexanone	2250	2620	116	(53-145)
4-Chlorotoluene	750	796	106	(72-124)
4-Isopropyltoluene	750	784	104	(73-127)
4-Methyl-2-pentanone (MIBK)	2250	2580	114	(65-135)
Acetone	2250	2100	93	(36-164)
Benzene	750	740	99	(77-121)
Bromobenzene	750	817	109	(78-121)
Bromochloromethane	750	738	99	(78-125)
Bromodichloromethane	750	770	103	(75-127)
Bromoform	750	813	108	(67-132)
Bromomethane	750	737	98	(53-143)

Blank Spike Summary

Blank Spike ID: LCS for HBN 1204629 [VXX36271]
Blank Spike Lab ID: 1579001
Date Analyzed: 09/02/2020 11:54

Matrix: Soil/Solid (dry weight)

QC for Samples: 1204629001, 1204629002, 1204629003

Results by **SW8260D**

Blank Spike (ug/kg)

Parameter	Spike	Result	Rec (%)	CL
Carbon disulfide	1130	1170	104	(63-132)
Carbon tetrachloride	750	800	107	(70-135)
Chlorobenzene	750	772	103	(79-120)
Chloroethane	750	734	98	(59-139)
Chloroform	750	721	96	(78-123)
Chloromethane	750	792	106	(50-136)
cis-1,2-Dichloroethene	750	712	95	(77-123)
cis-1,3-Dichloropropene	750	776	103	(74-126)
Dibromochloromethane	750	794	106	(74-126)
Dibromomethane	750	787	105	(78-125)
Dichlorodifluoromethane	750	878	117	(29-149)
Ethylbenzene	750	786	105	(76-122)
Freon-113	1130	1090	97	(66-136)
Hexachlorobutadiene	750	753	100	(61-135)
Isopropylbenzene (Cumene)	750	785	105	(68-134)
Methylene chloride	750	697	93	(70-128)
Methyl-t-butyl ether	1130	1150	102	(73-125)
Naphthalene	750	808	108	(62-129)
n-Butylbenzene	750	764	102	(70-128)
n-Propylbenzene	750	790	105	(73-125)
o-Xylene	750	781	104	(77-123)
P & M -Xylene	1500	1570	105	(77-124)
sec-Butylbenzene	750	767	102	(73-126)
Styrene	750	819	109	(76-124)
tert-Butylbenzene	750	793	106	(73-125)
Tetrachloroethene	750	785	105	(73-128)
Toluene	750	749	100	(77-121)
trans-1,2-Dichloroethene	750	705	94	(74-125)
trans-1,3-Dichloropropene	750	773	103	(71-130)
Trichloroethene	750	778	104	(77-123)
Trichlorofluoromethane	750	799	107	(62-140)
Vinyl acetate	750	856	114	(50-151)
Vinyl chloride	750	765	102	(56-135)
Xylenes (total)	2250	2350	104	(78-124)

Blank Spike Summary

Blank Spike ID: LCS for HBN 1204629 [VXX36271]
Blank Spike Lab ID: 1579001
Date Analyzed: 09/02/2020 11:54

Matrix: Soil/Solid (dry weight)

QC for Samples: 1204629001, 1204629002, 1204629003

Results by **SW8260D**

Blank Spike (ug/kg)

Parameter	Spike	Result	Rec (%)	CL
Surrogates				
1,2-Dichloroethane-D4 (surr)	750	102	102	(71-136)
4-Bromofluorobenzene (surr)	750	94.8	95	(55-151)
Toluene-d8 (surr)	750	99.3	99	(85-116)

Batch Information

Analytical Batch: **VMS20281**
Analytical Method: **SW8260D**
Instrument: **VRA Agilent GC/MS 7890B/5977A**
Analyst: **KAJ**

Prep Batch: **VXX36271**
Prep Method: **SW5035A**
Prep Date/Time: **09/02/2020 06:00**
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: 1204615015
MS Sample ID: 1579002 MS
MSD Sample ID: 1579003 MSD

Analysis Date: 09/02/2020 15:05
Analysis Date: 09/02/2020 12:46
Analysis Date: 09/02/2020 13:02
Matrix: Soil/Solid (dry weight)

QC for Samples: 1204629001, 1204629002, 1204629003

Results by **SW8260D**

		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	20.6U	1036	1146	111	1036	1146	111	78-125	0.06	(< 20)
1,1,1-Trichloroethane	25.9U	1036	1083	105	1036	1068	103	73-130	1.40	(< 20)
1,1,2,2-Tetrachloroethane	2.06U	1036	1097	106	1036	1070	103	70-124	2.60	(< 20)
1,1,2-Trichloroethane	0.825U	1036	968	93	1036	1001	97	78-121	3.50	(< 20)
1,1-Dichloroethane	25.9U	1036	983	95	1036	984	95	76-125	0.14	(< 20)
1,1-Dichloroethene	25.9U	1036	950	92	1036	894	86	70-131	6.10	(< 20)
1,1-Dichloropropene	25.9U	1036	1042	101	1036	1024	99	76-125	1.70	(< 20)
1,2,3-Trichlorobenzene	51.5U	1036	862	83	1036	1062	102	66-130	20.80 *	(< 20)
1,2,3-Trichloropropane	2.06U	1036	1056	102	1036	1027	99	73-125	2.90	(< 20)
1,2,4-Trichlorobenzene	25.9U	1036	1007	97	1036	1102	106	67-129	9.10	(< 20)
1,2,4-Trimethylbenzene	51.5U	1036	1060	102	1036	1017	98	75-123	4.20	(< 20)
1,2-Dibromo-3-chloropropane	104U	1036	1046	101	1036	1046	101	61-132	0.06	(< 20)
1,2-Dibromoethane	1.03U	1036	1094	106	1036	1133	109	78-122	3.50	(< 20)
1,2-Dichlorobenzene	25.9U	1036	1031	100	1036	1027	99	78-121	0.42	(< 20)
1,2-Dichloroethane	2.06U	1036	1004	97	1036	1001	97	73-128	0.23	(< 20)
1,2-Dichloropropane	10.4U	1036	1044	101	1036	1054	102	76-123	0.87	(< 20)
1,3,5-Trimethylbenzene	25.9U	1036	1042	101	1036	1003	97	73-124	3.90	(< 20)
1,3-Dichlorobenzene	25.9U	1036	1063	103	1036	1011	98	77-121	5.10	(< 20)
1,3-Dichloropropane	10.4U	1036	1028	99	1036	1055	102	77-121	2.50	(< 20)
1,4-Dichlorobenzene	25.9U	1036	1062	103	1036	1021	99	75-120	4.00	(< 20)
2,2-Dichloropropane	25.9U	1036	1161	112	1036	1142	110	67-133	1.60	(< 20)
2-Butanone (MEK)	259U	3114	3342	107	3114	3517	113	51-148	5.20	(< 20)
2-Chlorotoluene	25.9U	1036	1036	100	1036	985	95	75-122	5.10	(< 20)
2-Hexanone	104U	3114	3436	111	3114	3570	115	53-145	3.60	(< 20)
4-Chlorotoluene	25.9U	1036	1048	101	1036	997	96	72-124	5.00	(< 20)
4-Isopropyltoluene	52.8J	1036	1051	96	1036	1017	93	73-127	3.20	(< 20)
4-Methyl-2-pentanone (MIBK)	259U	3114	3289	106	3114	3436	111	65-135	4.30	(< 20)
Acetone	259U	3114	2617	84	3114	2658	86	36-164	1.50	(< 20)
Benzene	12.9U	1036	1015	98	1036	1021	99	77-121	0.56	(< 20)
Bromobenzene	25.9U	1036	1099	106	1036	1026	99	78-121	6.90	(< 20)
Bromochloromethane	25.9U	1036	1015	98	1036	1021	99	78-125	0.63	(< 20)
Bromodichloromethane	2.06U	1036	1060	102	1036	1048	101	75-127	1.10	(< 20)
Bromoform	25.9U	1036	1101	106	1036	1130	109	67-132	2.60	(< 20)
Bromomethane	20.6U	1036	1179	114	1036	1068	103	53-143	9.80	(< 20)
Carbon disulfide	104U	1557	1772	114	1557	1611	104	63-132	9.50	(< 20)
Carbon tetrachloride	12.9U	1036	1141	110	1036	1129	109	70-135	1.00	(< 20)
Chlorobenzene	25.9U	1036	1066	103	1036	1054	102	79-120	1.20	(< 20)

Print Date: 09/17/2020 4:43:49PM

Matrix Spike Summary

Original Sample ID: 1204615015
MS Sample ID: 1579002 MS
MSD Sample ID: 1579003 MSD

Analysis Date: 09/02/2020 15:05
Analysis Date: 09/02/2020 12:46
Analysis Date: 09/02/2020 13:02
Matrix: Soil/Solid (dry weight)

QC for Samples: 1204629001, 1204629002, 1204629003

Results by **SW8260D**

		Matrix Spike (ug/kg)			Spike Duplicate (ug/kg)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Chloroethane	207U	1036	1517	147 *	1036	1174	113	59-139	25.80 *	(< 20)
Chloroform	4.13U	1036	988	95	1036	983	95	78-123	0.53	(< 20)
Chloromethane	25.9U	1036	1144	110	1036	1146	111	50-136	0.15	(< 20)
cis-1,2-Dichloroethene	25.9U	1036	981	95	1036	999	96	77-123	1.70	(< 20)
cis-1,3-Dichloropropene	12.9U	1036	1068	103	1036	1062	102	74-126	0.68	(< 20)
Dibromochloromethane	5.15U	1036	1064	103	1036	1086	105	74-126	2.00	(< 20)
Dibromomethane	25.9U	1036	1074	104	1036	1067	103	78-125	0.66	(< 20)
Dichlorodifluoromethane	51.5U	1036	1193	115	1036	1103	107	29-149	7.70	(< 20)
Ethylbenzene	25.9U	1036	1050	101	1036	1063	103	76-122	1.30	(< 20)
Freon-113	104U	1557	1557	100	1557	1490	96	66-136	4.50	(< 20)
Hexachlorobutadiene	20.6U	1036	1772	171 *	1036	1651	159 *	61-135	7.10	(< 20)
Isopropylbenzene (Cumene)	25.9U	1036	1028	99	1036	1047	101	68-134	1.80	(< 20)
Methylene chloride	104U	1036	961	93	1036	942	91	70-128	1.90	(< 20)
Methyl-t-butyl ether	104U	1557	1544	99	1557	1570	101	73-125	2.00	(< 20)
Naphthalene	25.9U	1036	1050	101	1036	1213	117	62-129	14.40	(< 20)
n-Butylbenzene	25.9U	1036	1078	104	1036	1060	102	70-128	1.60	(< 20)
n-Propylbenzene	25.9U	1036	1015	98	1036	987	95	73-125	2.80	(< 20)
o-Xylene	25.9U	1036	1072	104	1036	1077	104	77-123	0.40	(< 20)
P & M -Xylene	51.5U	2067	2121	103	2067	2148	104	77-124	1.20	(< 20)
sec-Butylbenzene	25.9U	1036	985	95	1036	979	95	73-126	0.62	(< 20)
Styrene	25.9U	1036	1106	107	1036	1119	108	76-124	1.30	(< 20)
tert-Butylbenzene	25.9U	1036	1007	97	1036	976	94	73-125	3.20	(< 20)
Tetrachloroethene	12.9U	1036	1011	98	1036	1060	102	73-128	4.80	(< 20)
Toluene	25.9U	1036	996	96	1036	1026	99	77-121	3.00	(< 20)
trans-1,2-Dichloroethene	25.9U	1036	1015	98	1036	979	94	74-125	3.70	(< 20)
trans-1,3-Dichloropropene	12.9U	1036	1031	100	1036	1044	101	71-130	1.30	(< 20)
Trichloroethene	5.15U	1036	1071	103	1036	1064	103	77-123	0.59	(< 20)
Trichlorofluoromethane	51.5U	1036	1251	121	1036	1157	112	62-140	7.70	(< 20)
Vinyl acetate	104U	1036	1164	112	1036	1195	115	50-151	2.60	(< 20)
Vinyl chloride	0.825U	1036	1247	120	1036	1169	113	56-135	6.50	(< 20)
Xylenes (total)	77.5U	3114	3195	103	3114	3221	104	78-124	0.90	(< 20)
Surrogates										
1,2-Dichloroethane-D4 (surr)		1036	1044	101	1036	1040	100	71-136	0.31	
4-Bromofluorobenzene (surr)		1732	1168	68	1732	1099	64	55-151	6.10	
Toluene-d8 (surr)		1036	1004	97	1036	1030	99	85-116	2.50	

Print Date: 09/17/2020 4:43:49PM

Matrix Spike Summary

Original Sample ID: 1204615015
MS Sample ID: 1579002 MS
MSD Sample ID: 1579003 MSD

Analysis Date:
Analysis Date: 09/02/2020 12:46
Analysis Date: 09/02/2020 13:02
Matrix: Soil/Solid (dry weight)

QC for Samples: 1204629001, 1204629002, 1204629003

Results by **SW8260D**

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

Batch Information

Analytical Batch: VMS20281
Analytical Method: SW8260D
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: KAJ
Analytical Date/Time: 9/2/2020 12:46:00PM

Prep Batch: VXX36271
Prep Method: Vol. Extraction SW8260 Field Extracted L
Prep Date/Time: 9/2/2020 6:00:00AM
Prep Initial Wt./Vol.: 48.59g
Prep Extract Vol: 25.00mL

Print Date: 09/17/2020 4:43:49PM

Method Blank

Blank ID: MB for HBN 1811709 [VXX/36350]
Blank Lab ID: 1581292

Matrix: Soil/Solid (dry weight)

QC for Samples:
1204629001, 1204629002

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Gasoline Range Organics	1.25U	2.50	0.750	mg/Kg
Surrogates				
4-Bromofluorobenzene (surr)	81.1	50-150		%

Batch Information

Analytical Batch: VFC15344
Analytical Method: AK101
Instrument: Agilent 7890 PID/FID
Analyst: ALJ
Analytical Date/Time: 9/15/2020 5:18:00AM

Prep Batch: VXX36350
Prep Method: SW5035A
Prep Date/Time: 9/14/2020 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1204629 [VXX36350]
Blank Spike Lab ID: 1581293
Date Analyzed: 09/15/2020 04:42

Spike Duplicate ID: LCSD for HBN 1204629 [VXX36350]
Spike Duplicate Lab ID: 1581294
Matrix: Soil/Solid (dry weight)

QC for Samples: 1204629001, 1204629002

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	12.5	11.0	88	12.5	11.1	89	(60-120)	0.93	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	1.25	84.7	85	1.25	93.9	94	(50-150)	10.30	

Batch Information

Analytical Batch: **VFC15344**
Analytical Method: **AK101**
Instrument: **Agilent 7890 PID/FID**
Analyst: **ALJ**

Prep Batch: **VXX36350**
Prep Method: **SW5035A**
Prep Date/Time: **09/14/2020 06:00**
Spike Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL
Dupe Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL

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Method Blank

Blank ID: MB for HBN 1811744 [VXX/36354]
Blank Lab ID: 1581450

Matrix: Soil/Solid (dry weight)

QC for Samples:
1204629003

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Gasoline Range Organics	0.831J	2.50	0.750	mg/Kg
Surrogates				
4-Bromofluorobenzene (surr)	73.6	50-150		%

Batch Information

Analytical Batch: VFC15346
Analytical Method: AK101
Instrument: Agilent 7890 PID/FID
Analyst: ALJ
Analytical Date/Time: 9/16/2020 2:15:00AM

Prep Batch: VXX36354
Prep Method: SW5035A
Prep Date/Time: 9/15/2020 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1204629 [VXX36354]
Blank Spike Lab ID: 1581451
Date Analyzed: 09/16/2020 01:39

Spike Duplicate ID: LCSD for HBN 1204629 [VXX36354]
Spike Duplicate Lab ID: 1581452
Matrix: Soil/Solid (dry weight)

QC for Samples: 1204629003

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	12.5	12.3	98	12.5	11.8	95	(60-120)	3.70	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	1.25	90.4	90	1.25	86.5	87	(50-150)	4.40	

Batch Information

Analytical Batch: **VFC15346**
Analytical Method: **AK101**
Instrument: **Agilent 7890 PID/FID**
Analyst: **ALJ**

Prep Batch: **VXX36354**
Prep Method: **SW5035A**
Prep Date/Time: **09/15/2020 06:00**
Spike Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL
Dupe Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL

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Method Blank

Blank ID: MB for HBN 1811412 [XXX/43820]
Blank Lab ID: 1579897

Matrix: Soil/Solid (dry weight)

QC for Samples:
1204629001, 1204629002, 1204629003

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	10.0U	20.0	6.20	mg/kg
Surrogates				
5a Androstane (surr)	97.8	60-120		%

Batch Information

Analytical Batch: XFC15735
Analytical Method: AK102
Instrument: Agilent 7890B F
Analyst: CDM
Analytical Date/Time: 9/10/2020 10:05:00AM

Prep Batch: XXX43820
Prep Method: SW3550C
Prep Date/Time: 9/9/2020 9:16:50AM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 5 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1204629 [XXX43820]
Blank Spike Lab ID: 1579898
Date Analyzed: 09/10/2020 10:15

Spike Duplicate ID: LCSD for HBN 1204629 [XXX43820]
Spike Duplicate Lab ID: 1579899
Matrix: Soil/Solid (dry weight)

QC for Samples: 1204629001, 1204629002, 1204629003

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	833	695	83	833	687	82	(75-125)	1.10	(< 20)
Surrogates									
5a Androstane (surr)	16.7	105	105	16.7	104	104	(60-120)	0.84	

Batch Information

Analytical Batch: **XFC15735**
Analytical Method: **AK102**
Instrument: **Agilent 7890B F**
Analyst: **CDM**

Prep Batch: **XXX43820**
Prep Method: **SW3550C**
Prep Date/Time: **09/09/2020 09:16**
Spike Init Wt./Vol.: 833 mg/kg Extract Vol: 5 mL
Dupe Init Wt./Vol.: 833 mg/kg Extract Vol: 5 mL

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Method Blank

Blank ID: MB for HBN 1811412 [XXX/43820]
Blank Lab ID: 1579897

Matrix: Soil/Solid (dry weight)

QC for Samples:
1204629001, 1204629002, 1204629003

Results by **AK103**

Parameter	Results	LOQ/CL	DL	Units
Residual Range Organics	50.0U	100	43.0	mg/kg
Surrogates				
n-Triacontane-d62 (surr)	97.6	60-120		%

Batch Information

Analytical Batch: XFC15735
Analytical Method: AK103
Instrument: Agilent 7890B F
Analyst: CDM
Analytical Date/Time: 9/10/2020 10:05:00AM

Prep Batch: XXX43820
Prep Method: SW3550C
Prep Date/Time: 9/9/2020 9:16:50AM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 5 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1204629 [XXX43820]
Blank Spike Lab ID: 1579898
Date Analyzed: 09/10/2020 10:15

Spike Duplicate ID: LCSD for HBN 1204629 [XXX43820]
Spike Duplicate Lab ID: 1579899
Matrix: Soil/Solid (dry weight)

QC for Samples: 1204629001, 1204629002, 1204629003

Results by **AK103**

	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Residual Range Organics	833	640	77	833	636	76	(60-120)	0.70	(< 20)
Surrogates									
n-Triacontane-d62 (surr)	16.7	95.6	96	16.7	96.9	97	(60-120)	1.40	

Batch Information

Analytical Batch: **XFC15735**
Analytical Method: **AK103**
Instrument: **Agilent 7890B F**
Analyst: **CDM**

Prep Batch: **XXX43820**
Prep Method: **SW3550C**
Prep Date/Time: **09/09/2020 09:16**
Spike Init Wt./Vol.: 833 mg/kg Extract Vol: 5 mL
Dupe Init Wt./Vol.: 833 mg/kg Extract Vol: 5 mL

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

1204629

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

CHAIN-OF-CUSTODY RECORD

Laboratory SGS Anchorage
Attn: Justin

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

2355 Hill Road
Fairbanks, AK 99709
(907) 479-0600

3990 Collins Way, Suite 100
Lake Oswego, OR 97035
(503) 223-6147

2043 Westport Center Drive
St. Louis, MO 63146-3564
(314) 699-9660

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

1321 Bannock Street, Suite 200
Denver, CO 80204
(303) 825-3800

2705 Saint Andrews Loop, Suite A
Pasco, WA 99301-3378
(509) 946-6309

PM 365753 >10

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

Sample Identity	Lab No.	Time	Date Sampled	Comp.	Grab	GRO AK101	DRO AK102	RRO AK103	VOC's 8260D			Total Number of Containers	Remarks/Matrix
100478-SP1	1AB	11:30	8/27/20			X	X	X	X			2	Soil
100478-SP2	2AB	13:35	8/27/20			X	X	X	X			2	"
100478-S3	3AB	10:30	8/28/20			X	X	X	X			2	"

Project Information		Sample Receipt	
Project Number:	100478	Total Number of Containers	
Project Name:	6th & M St.	COC Seals/Intact? Y/N/NA	
Contact:	Zach Thon	Received Good Cond./Cold	
Ongoing Project?	Yes ☒ No ☐	Delivery Method:	
Sampler:	ZJT	(attach shipping bill, if any)	

Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Signature: Time: 16:00	Signature: Time:	Signature: Time:
Printed Name: Date: 8/31/20	Printed Name: Date:	Printed Name: Date:
Company:	Company:	Company:

Received By: 1.	Received By: 2.	Received By: 3.
Signature: Time:	Signature: Time:	Signature: Time: 1601
Printed Name: Date:	Printed Name: Date:	Printed Name: Date: 08/31/20
Company:	Company:	Company: SGS Absent 5.0C 045

Instructions	
Requested Turnaround Time:	Normal
Special Instructions:	Stw Shaded Route

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

F-19-91/UR

No. 43 of 45 35082

e-Sample Receipt Form

SGS Workorder #: **1204629**

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
Chain of Custody / Temperature Requirements		Yes — Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	N/A	absent
COC accompanied samples?	Yes	
DOD: Were samples received in COC corresponding coolers?	N/A	
N/A **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required		
Temperature blank compliant* (i.e., 0-6 °C after CF)?	Yes	Cooler ID: 1 @ 5.0 °C Therm. ID: D45
If samples received without a temperature blank, the "cooler temperature" will be documented instead & "COOLER TEMP" will be noted to the right. "ambient" or "chilled" will be noted if neither is available.		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago?	N/A	
If <0°C, were sample containers ice free?	N/A	
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.		
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.
Were samples received within holding time?	Yes	
Do samples **match COC**** (i.e.,sample IDs,dates/times collected)?	Yes	
**Note: If times differ <1hr, record details & login per COC.		
***Note: If sample information on containers differs from COC, SGS will default to COC information		
Were analytical requests clear? (i.e., method is specified for analyses with multiple option for analysis (Ex: BTEX, Metals)	Yes	
	N/A	***Exemption permitted for metals (e.g,200.8/6020A).
Were proper containers (type/mass/volume/preservative***)used?	Yes	
Volatile / LL-Hg Requirements		
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	No	No trip blanks received with samples.
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with MeOH+BFB?	Yes	

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

Additional notes (if applicable):

Sample Containers and Preservatives

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition
1204629001-A	No Preservative Required	OK			
1204629001-B	Methanol field pres. 4 C	OK			
1204629002-A	No Preservative Required	OK			
1204629002-B	Methanol field pres. 4 C	OK			
1204629003-A	No Preservative Required	OK			
1204629003-B	Methanol field pres. 4 C	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.
BU - The container was received with headspace greater than 6mm.
DM - The container was received damaged.
FR - The container was received frozen and not usable for Bacteria or BOD analyses.
IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.
NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.
PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.
PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.
QN - Insufficient sample quantity provided.

LABORATORY DATA REVIEW CHECKLIST

Completed by: Zach Thon
Title: Geologist
Date: 11/25/2020

Consultant Firm: Shannon & Wilson, Inc.

Laboratory Name: SGS North America Inc.
Laboratory Report Number: 1204629
Laboratory Report Date: 9/17/2020

Contaminated Site Name: NA
ADEC File Number: NA
Hazard Identification Number: NA

(**NOTE**: ***NA*** = not applicable; Text in *italics* added by Shannon & Wilson, Inc.)

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses? **Yes / No / NA**
Comments:

b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?
Yes / No / NA
Comments: *The samples were not transferred to another "network" laboratory or sub-contracted to an alternate laboratory.*

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?
Yes / No / NA
Comments**:**

b. Correct analyses requested? **Yes / No / NA**
Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?
Yes / No / NA
Comments: *The cooler temperature blank was 5° Celsius.*

b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, VOCs, etc.)? **Yes / No / NA**
Comments:

c. Sample condition documented - broken, leaking (MeOH), zero headspace (VOC vials)? **Yes / No / NA**
Comments:

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.? **Yes / No / NA**
Comments: *The laboratory noted that no trip blanks were received with the samples.*

e. Data quality or usability affected?
Comments: *Data quality/usability considered unaffected; see above.*

4. Case Narrative

a. Present and understandable? **Yes / No / NA**
Comments:

b. Discrepancies, errors or QC failures noted by the lab? **Yes / No / NA**
Comments: *The case narrative noted the following:*

- *MS - 8260D - Recovery for chloroethane does not meet QC criteria. Refer to LCS for accuracy requirements.*
- *MS/MSD - 8260D - Recovery for hexachlorobutadiene does not meet QC criteria. Refer to LCS for accuracy requirements.*
- *MS/MSD – 8260D RPD for chloroethane and 1,2,3-trichlorobenzene do not meet QC criteria: however, these analytes were not detected above the LOQ in the parent sample.*

c. Were all corrective actions documented? **Yes / No / NA**
Comments:

d. What is the effect on data quality/usability, according to the case narrative?
Comments: *See above.*

5. Sample Results

a. Correct analyses performed/reported as requested on COC? **Yes / No / NA**
Comments:

b. All applicable holding times met? **Yes / No / NA**
Comments:

c. All soils reported on a dry weight basis? **Yes / No / NA**
Comments:

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project? **Yes / No / NA**
Comments*: The LOQs for 1,2,3 -trichloropropane, 1,2-dibromoethane, and dibromochloromethane were above ADEC Method Two cleanup levels.*

e. Data quality or usability affected?
Comments: *There is a potential that the target analytes are present at concentrations greater than the ADEC cleanup levels, but less than the LOQs; however, the analytes were not detected at estimated concentrations in the project samples.*

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis, and 20 samples?
Yes / No / NA
Comments:

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?
Yes / No / NA
Comments: *GRO (0.831 J mg/kg) was detected in a method blank at an estimated concentration less than the LOQ.*

iii. If above LOQ or project specified objectives, what samples are affected?
Comments: *Sample 100478-S3.*

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes / No / NA
Comments: *GRO was not detected in the project sample, therefore flagging is not necessary.*

v. Data quality or usability affected?
Comments: *See above.*

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

i. Organics - One LCS/LCSD reported per matrix, analysis, and 20 samples?
(LCS/LCSD required per AK methods, LCS required per SW846) **Yes / No / NA**
Comments:

ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples? **Yes / No / NA**
Comments:

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable. (AK petroleum methods: AK 101 60%-120%, AK 102 75%-125%, AK 103 60%-120%; all other analyses see the laboratory QC pages) **Yes / No / NA**
Comments:

iv. Precision – All relative percent differences (RPDs) reported and less than method or laboratory limits and project specified objectives, if applicable. RPD reported from LCS/LCSD, and/or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages) **Yes / No / NA**
Comments:

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

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined? **Yes / No / NA**
Comments:

vii. Data quality or usability affected?
Comments*: No, see above.*

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)
Note: Leave blank if not required for project

i. Organics - One MS/MSD reported per matrix, analysis, and 20 samples?
Yes / No / NA
Comments:

ii. Metals/Inorganics - One MS and one MSD reported per matrix, analysis and 20 samples? **Yes / No / NA**
Comments:

iii. Accuracy – All percent recoveries (%R) reported and *w*ithin method or laboratory limits and project specified objectives, if applicable. (AK petroleum methods: AK 101 60%-120%, AK 102 75%-125%, AK 103 60%-120%; all other analyses see the laboratory QC pages) **Yes / No / NA**
Comments: *MS recovery for chloroethane and MS/MSD recovery for hexachlorobutadiene does not meet QC criteria.*

iv. Precision – All relative percent differences (RPDs) reported and less than method or laboratory limits and project specified objectives, if applicable. RPD reported from MS/MSD, and/or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages) **Yes / No / NA**
Comments: *MS/MSD RPD for chloroethane and 1,2,3-trichlorobenzene do not meet QC criteria.*

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

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined? **Yes / No / NA**
Comments: *The analytes were not detected in the project samples. Therefore, flagging is not required.*

vii. Data quality or usability affected?
Comments*: No, see above.*

d. Surrogates - Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses - field, QC, and laboratory samples? **Yes / No / NA**
Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages) **Yes / No / NA**
Comments:

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

iv. Data quality or usability affected?
Comments: *No, see above.*

e. Trip Blank - Volatile analyses only (GRO, BTEX, VOCs, etc.)

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? **Yes / No / NA**
Comments: *A trip blank was not submitted with the samples.*

ii. Is the cooler used to transport the trip blank and volatile samples clearly indicated on the COC? **Yes / No / NA**
Comments:

iii. All results less than LOQ and project specified objectives? **Yes / No / NA**
Comments:

iv. If above LOQ or project specified DQOs, what samples are affected?
Comments:

v. Data quality or usability affected?
Comments:

f. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?
Yes / No / NA
Comments: *A field duplicate was not submitted to the lab.*

ii. Were the field duplicates submitted blind to the lab? **Yes / No / NA**
Comments:

iii. Precision – All relative percent differences (RPDs) less than specified project objectives? (Recommended: 30% for water, 50% for soil) **Yes / No / NA**
Comments:

iv. Data quality or usability affected?
Comments:

g. Decontamination or Equipment Blank (if not applicable, a comment stating why must be entered below)**.**
Yes / No / NA
Comments: *A decontamination blank was not included in our ADEC-approved workplan.*

i. All results less than LOQ and project specified objectives?
Yes / No / NA
Comments:

ii. If above LOQ or project specified objectives, what samples are affected?
Comments:

iii. Data quality or usability affected?
Comments:

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

a. Defined and appropriate? **Yes / No / NA**
Comments: *A key is provided on Page 3 of the SGS Laboratory Report.*

Laboratory Report of Analysis

To: Shannon & Wilson, Inc.
5430 Fairbanks St., Ste 3
Anchorage, AK 99518
(907)433-3214

Report Number: **1204329**

Client Project: **100378 AWWU M St**

Dear Stafford Glashan,

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 ten 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 Justin 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.

Justin Nelson
2020.08.31
12:02:19 -08'00'

Justin Nelson Date
Project Manager
Justin.Nelson@sgs.com

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

Case Narrative

SGS Client: **Shannon & Wilson, Inc.**
SGS Project: **1204329**
Project Name/Site: **100378 AWWU M St**
Project Contact: **Stafford Glashan**

Refer to sample receipt form for information on sample condition.

100378-W1 (1204329001) PS

EPA 245.1-Total Hg was analyzed by SGS of Orlando, FL.

LCS for HBN 1810621 [XXX/43703 (1576150) LCS

AK102/103 - Surrogate recoveries in the LCS for 5a androstane and n triacontane do not meet QC criteria; however, the surrogate recoveries in the samples are within criteria.

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

SGS North America Inc.
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Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indenmification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

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) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. 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/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
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
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Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
100378-W1	1204329001	08/18/2020	08/18/2020	Water (Surface, Eff., Ground)
Trip Blank	1204329002	08/18/2020	08/18/2020	Water (Surface, Eff., Ground)
Trip Blank	1204329003	08/18/2020	08/18/2020	Water (Surface, Eff., Ground)

Method	Method Description
EPA 602/624	602 Aromatics by 624 (W)
SM21 5210B	Biochemical Oxygen Demand SM21 5210B
AK102	Diesel/Residual Range Organics Water
AK103	Diesel/Residual Range Organics Water
AK101	Gasoline Range Organics (W)
EP200.8	Metals in Water by 200.8 ICP-MS
EPA 1664B	Oil & Grease HEM by EPA 1664
SM21 4500-CN C,E	Total Cyanide SM4500 (W)
SM21 2540D	Total Suspended Solids SM20 2540D

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Detectable Results Summary

Client Sample ID: **100378-W1**
Lab Sample ID: 1204329001

	Parameter	Result	Units
Metals by ICP/MS	Aluminum	149000	ug/L
	Antimony	1.21	ug/L
	Arsenic	11.9	ug/L
	Barium	7220	ug/L
	Beryllium	17.2	ug/L
	Cadmium	15.3	ug/L
	Calcium	773000	ug/L
	Chromium	54.5	ug/L
	Cobalt	970	ug/L
	Copper	629	ug/L
	Iron	21000	ug/L
	Lead	67.0	ug/L
	Magnesium	77000	ug/L
	Manganese	77100	ug/L
	Nickel	1360	ug/L
	Phosphorus	1600	ug/L
	Potassium	14500	ug/L
	Silicon	175000	ug/L
	Sodium	28400	ug/L
	Thallium	0.446J	ug/L
	Tin	0.429J	ug/L
	Titanium	496	ug/L
	Vanadium	67.2	ug/L
	Zinc	1160	ug/L
Microbiology Laboratory	Biochemical Oxygen Demand	208	mg/L
Semivolatile Organic Fuels	Diesel Range Organics	67.9	mg/L
	Residual Range Organics	2.28J	mg/L
Volatile Fuels	Gasoline Range Organics	0.196	mg/L
Volatile GC/MS	Ethylbenzene	27.1	ug/L
	o-Xylene	28.6	ug/L
	P & M -Xylene	103	ug/L
	Toluene	3.49	ug/L
Waters Department	Cyanide	0.0026J	mg/L
	Oil & Grease HEM	11.2	mg/L
	Total Suspended Solids	55800	mg/L

SGS North America Inc.
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Results of **100378-W1**

Client Sample ID: **100378-W1**
Client Project ID: **100378 AWWU M St**
Lab Sample ID: 1204329001
Lab Project ID: 1204329

Collection Date: 08/18/20 13:00
Received Date: 08/18/20 14:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	149000		5000	1550	ug/L	250		08/27/20 14:04
Antimony	1.21		1.00	0.310	ug/L	1		08/22/20 18:15
Arsenic	11.9		5.00	1.50	ug/L	1		08/22/20 18:15
Barium	7220		30.0	9.40	ug/L	10		08/22/20 18:18
Beryllium	17.2		0.400	0.130	ug/L	1		08/22/20 18:15
Cadmium	15.3		0.500	0.150	ug/L	1		08/22/20 18:15
Calcium	773000		5000	1500	ug/L	10		08/22/20 18:18
Chromium	54.5		2.00	0.800	ug/L	1		08/27/20 13:52
Cobalt	970		4.00	1.20	ug/L	1		08/22/20 18:15
Copper	629		1.00	0.310	ug/L	1		08/22/20 18:15
Iron	21000		250	78.0	ug/L	1		08/22/20 18:15
Lead	67.0		0.200	0.0700	ug/L	1		08/22/20 18:15
Magnesium	77000		50.0	15.0	ug/L	1		08/22/20 18:15
Manganese	77100		50.0	17.5	ug/L	50		08/22/20 18:21
Molybdenum	1.00	U	2.00	0.620	ug/L	1		08/27/20 13:52
Nickel	1360		2.00	0.620	ug/L	1		08/22/20 18:15
Phosphorus	1600		200	62.0	ug/L	1		08/22/20 18:15
Potassium	14500		500	150	ug/L	1		08/22/20 18:15
Selenium	2.50	U	5.00	1.50	ug/L	1		08/22/20 18:15
Silicon	175000		10000	3100	ug/L	10		08/22/20 18:18
Silver	0.500	U	1.00	0.310	ug/L	1		08/22/20 18:15
Sodium	28400		500	150	ug/L	1		08/22/20 18:15
Thallium	0.446	J	1.00	0.310	ug/L	1		08/22/20 18:15
Tin	0.429	J	1.00	0.310	ug/L	1		08/22/20 18:15
Titanium	496		25.0	7.75	ug/L	1		08/22/20 18:15
Vanadium	67.2		20.0	6.20	ug/L	1		08/27/20 13:52
Zinc	1160		10.0	3.10	ug/L	1		08/22/20 18:15

Print Date: 08/31/2020 8:53:31AM

J flagging is activated

Results of **100378-W1**

Client Sample ID: **100378-W1**
Client Project ID: **100378 AWWU M St**
Lab Sample ID: 1204329001
Lab Project ID: 1204329

Collection Date: 08/18/20 13:00
Received Date: 08/18/20 14:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Batch Information

Analytical Batch: MMS10864
Analytical Method: EP200.8
Analyst: DMM
Analytical Date/Time: 08/27/20 13:52
Container ID: 1204329001-A

Prep Batch: MXX33554
Prep Method: E200.2
Prep Date/Time: 08/21/20 17:39
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS10864
Analytical Method: EP200.8
Analyst: DMM
Analytical Date/Time: 08/27/20 14:04
Container ID: 1204329001-A

Prep Batch: MXX33554
Prep Method: E200.2
Prep Date/Time: 08/21/20 17:39
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS10861
Analytical Method: EP200.8
Analyst: ACF
Analytical Date/Time: 08/22/20 18:15
Container ID: 1204329001-A

Prep Batch: MXX33554
Prep Method: E200.2
Prep Date/Time: 08/21/20 17:39
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS10861
Analytical Method: EP200.8
Analyst: ACF
Analytical Date/Time: 08/22/20 18:18
Container ID: 1204329001-A

Prep Batch: MXX33554
Prep Method: E200.2
Prep Date/Time: 08/21/20 17:39
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS10861
Analytical Method: EP200.8
Analyst: ACF
Analytical Date/Time: 08/22/20 18:21
Container ID: 1204329001-A

Prep Batch: MXX33554
Prep Method: E200.2
Prep Date/Time: 08/21/20 17:39
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Results of **100378-W1**

Client Sample ID: **100378-W1**
Client Project ID: **100378 AWWU M St**
Lab Sample ID: 1204329001
Lab Project ID: 1204329

Collection Date: 08/18/20 13:00
Received Date: 08/18/20 14:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Biochemical Oxygen Demand	208		2.00	2.00	mg/L	1		08/19/20 17:52

Batch Information

Analytical Batch: BOD6692
Analytical Method: SM21 5210B
Analyst: A.L
Analytical Date/Time: 08/19/20 17:52
Container ID: 1204329001-C

Print Date: 08/31/2020 8:53:31AM

J flagging is activated

Results of **100378-W1**

Client Sample ID: **100378-W1**
Client Project ID: **100378 AWWU M St**
Lab Sample ID: 1204329001
Lab Project ID: 1204329

Collection Date: 08/18/20 13:00
Received Date: 08/18/20 14:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	67.9		3.95	1.18	mg/L	5		08/28/20 16:26
Surrogates								
5a Androstane (surr)	135		50-150		%	5		08/28/20 16:26

Batch Information

Analytical Batch: XFC15708
Analytical Method: AK102
Analyst: CDM
Analytical Date/Time: 08/28/20 16:26
Container ID: 1204329001-G

Prep Batch: XXX43703
Prep Method: SW3520C
Prep Date/Time: 08/20/20 18:36
Prep Initial Wt./Vol.: 760 mL
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	2.28	J	3.29	0.987	mg/L	5		08/28/20 16:26
Surrogates								
n-Triacontane-d62 (surr)	100		50-150		%	5		08/28/20 16:26

Batch Information

Analytical Batch: XFC15708
Analytical Method: AK103
Analyst: CDM
Analytical Date/Time: 08/28/20 16:26
Container ID: 1204329001-G

Prep Batch: XXX43703
Prep Method: SW3520C
Prep Date/Time: 08/20/20 18:36
Prep Initial Wt./Vol.: 760 mL
Prep Extract Vol: 1 mL

Print Date: 08/31/2020 8:53:31AM

J flagging is activated

Results of **100378-W1**

Client Sample ID: **100378-W1**
Client Project ID: **100378 AWWU M St**
Lab Sample ID: 1204329001
Lab Project ID: 1204329

Collection Date: 08/18/20 13:00
Received Date: 08/18/20 14:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.196		0.100	0.0310	mg/L	1		08/20/20 16:20
Surrogates								
4-Bromofluorobenzene (surr)	88		50-150		%	1		08/20/20 16:20

Batch Information

Analytical Batch: VFC15298
Analytical Method: AK101
Analyst: ALJ
Analytical Date/Time: 08/20/20 16:20
Container ID: 1204329001-L

Prep Batch: VXX36174
Prep Method: SW5030B
Prep Date/Time: 08/20/20 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 08/31/2020 8:53:31AM

J flagging is activated

Results of **100378-W1**

Client Sample ID: **100378-W1**
Client Project ID: **100378 AWWU M St**
Lab Sample ID: 1204329001
Lab Project ID: 1204329

Collection Date: 08/18/20 13:00
Received Date: 08/18/20 14:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.200	U	0.400	0.120	ug/L	1		08/25/20 02:37
Ethylbenzene	27.1		1.00	0.310	ug/L	1		08/25/20 02:37
o-Xylene	28.6		1.00	0.310	ug/L	1		08/25/20 02:37
P & M -Xylene	103		2.00	0.620	ug/L	1		08/25/20 02:37
Toluene	3.49		1.00	0.310	ug/L	1		08/25/20 02:37
Surrogates								
1,2-Dichloroethane-D4 (surr)	102		81-118		%	1		08/25/20 02:37
4-Bromofluorobenzene (surr)	107		85-114		%	1		08/25/20 02:37
Toluene-d8 (surr)	103		89-112		%	1		08/25/20 02:37

Batch Information

Analytical Batch: VMS20239
Analytical Method: EPA 602/624
Analyst: NRB
Analytical Date/Time: 08/25/20 02:37
Container ID: 1204329001-J

Prep Batch: VXX36201
Prep Method: SW5030B
Prep Date/Time: 08/24/20 15:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **100378-W1**

Client Sample ID: **100378-W1**
Client Project ID: **100378 AWWU M St**
Lab Sample ID: 1204329001
Lab Project ID: 1204329

Collection Date: 08/18/20 13:00
Received Date: 08/18/20 14:02
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Oil & Grease HEM	11.2		5.48	1.37	mg/L	1		08/20/20 09:23

Batch Information

Analytical Batch: THOG1362
Analytical Method: EPA 1664B
Analyst: EWW
Analytical Date/Time: 08/20/20 09:23
Container ID: 1204329001-E

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	55800		1000	310	mg/L	1		08/21/20 14:38

Batch Information

Analytical Batch: STS6775
Analytical Method: SM21 2540D
Analyst: S.S
Analytical Date/Time: 08/21/20 14:38
Container ID: 1204329001-D

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Cyanide	0.0026 J		0.0050	0.0020	mg/L	1		08/19/20 17:55

Batch Information

Analytical Batch: WDA4838
Analytical Method: SM21 4500-CN C,E
Analyst: EWW
Analytical Date/Time: 08/19/20 17:55
Container ID: 1204329001-B

Prep Batch: WXX13409
Prep Method: METHOD
Prep Date/Time: 08/19/20 12:51
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Print Date: 08/31/2020 8:53:31AM

J flagging is activated

Method Blank

Blank ID: MB for HBN 1810544 [BOD/6692]
Blank Lab ID: 1575775

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1204329001

Results by **SM21 5210B**

Parameter	Results	LOQ/CL	DL	Units
Biochemical Oxygen Demand	2.00U	2.00	2.00	mg/L

Batch Information

Analytical Batch: BOD6692
Analytical Method: SM21 5210B
Instrument:
Analyst: A.L
Analytical Date/Time: 8/19/2020 5:52:03PM

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1204329 [BOD6692]
Blank Spike Lab ID: 1575776
Date Analyzed: 08/19/2020 17:52

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1204329001

Results by **SM21 5210B**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Biochemical Oxygen Demand	198	190	96	(84.6-115.4

Batch Information

Analytical Batch: **BOD6692**
Analytical Method: **SM21 5210B**
Instrument:
Analyst: **A.L**

Print Date: 08/31/2020 8:53:37AM

Method Blank

Blank ID: MB for HBN 1810670 [MXX/33554]
Blank Lab ID: 1576321

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1204329001

Results by **EP200.8**

Parameter	Results	LOQ/CL	DL	Units
Aluminum	10.0U	20.0	6.20	ug/L
Antimony	0.500U	1.00	0.310	ug/L
Arsenic	2.50U	5.00	1.50	ug/L
Barium	1.50U	3.00	0.940	ug/L
Beryllium	0.200U	0.400	0.130	ug/L
Cadmium	0.250U	0.500	0.150	ug/L
Calcium	250U	500	150	ug/L
Chromium	1.00U	2.00	0.800	ug/L
Cobalt	2.00U	4.00	1.20	ug/L
Copper	0.500U	1.00	0.310	ug/L
Iron	125U	250	78.0	ug/L
Lead	0.100U	0.200	0.0700	ug/L
Magnesium	25.0U	50.0	15.0	ug/L
Manganese	0.414J	1.00	0.350	ug/L
Molybdenum	1.00U	2.00	0.620	ug/L
Nickel	1.00U	2.00	0.620	ug/L
Phosphorus	100U	200	62.0	ug/L
Potassium	250U	500	150	ug/L
Selenium	2.50U	5.00	1.50	ug/L
Silicon	500U	1000	310	ug/L
Silver	0.500U	1.00	0.310	ug/L
Sodium	250U	500	150	ug/L
Thallium	0.500U	1.00	0.310	ug/L
Tin	0.500U	1.00	0.310	ug/L
Titanium	12.5U	25.0	7.75	ug/L
Vanadium	10.0U	20.0	6.20	ug/L
Zinc	5.00U	10.0	3.10	ug/L

Method Blank

Blank ID: MB for HBN 1810670 [MXX/33554]
Blank Lab ID: 1576321

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1204329001

Results by **EP200.8**

Parameter	Results	LOQ/CL	DL	Units

Batch Information

Analytical Batch: MMS10861
Analytical Method: EP200.8
Instrument: Perkin Elmer Nexlon P5
Analyst: ACF
Analytical Date/Time: 8/22/2020 6:40:25PM

Prep Batch: MXX33554
Prep Method: E200.2
Prep Date/Time: 8/21/2020 5:39:07PM
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS10864
Analytical Method: EP200.8
Instrument: Perkin Elmer Nexlon P5
Analyst: DMM
Analytical Date/Time: 8/27/2020 1:40:46PM

Prep Batch: MXX33554
Prep Method: E200.2
Prep Date/Time: 8/21/2020 5:39:07PM
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1204329 [MXX33554]
Blank Spike Lab ID: 1576322
Date Analyzed: 08/22/2020 18:43

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1204329001

Results by **EP200.8**

Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
Antimony	1000	1050	105	(85-115)
Arsenic	1000	993	99	(85-115)
Barium	1000	1050	105	(85-115)
Beryllium	100	111	111	(85-115)
Cadmium	100	104	104	(85-115)
Calcium	10000	11200	112	(85-115)
Cobalt	500	507	101	(85-115)
Copper	1000	990	99	(85-115)
Iron	5000	4940	99	(85-115)
Lead	1000	1100	110	(85-115)
Magnesium	10000	11200	112	(85-115)
Manganese	500	479	96	(85-115)
Nickel	1000	982	98	(85-115)
Phosphorus	500	567	113	(85-115)
Potassium	10000	10900	109	(85-115)
Selenium	1000	992	99	(85-115)
Silicon	10000	11300	113	(85-115)
Silver	100	99.0	99	(85-115)
Sodium	10000	10900	109	(85-115)
Thallium	10	10.6	106	(85-115)
Tin	100	95.4	95	(85-115)
Titanium	100	104	104	(85-115)
Zinc	1000	969	97	(85-115)
Aluminum	1000	1030	103	(85-115)
Chromium	400	435	109	(85-115)
Molybdenum	400	411	103	(85-115)
Vanadium	200	205	102	(85-115)

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1204329 [MXX33554]
Blank Spike Lab ID: 1576322
Date Analyzed: 08/27/2020 13:43

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1204329001

Results by **EP200.8**

	Blank Spike (ug/L)			
Parameter	Spike	Result	Rec (%)	CL

Batch Information

Analytical Batch: **MMS10861**
Analytical Method: **EP200.8**
Instrument: **Perkin Elmer Nexion P5**
Analyst: **ACF**

Prep Batch: **MXX33554**
Prep Method: **E200.2**
Prep Date/Time: **08/21/2020 17:39**
Spike Init Wt./Vol.: 1000 ug/L Extract Vol: 50 mL
Dupe Init Wt./Vol.: Extract Vol:

Analytical Batch: **MMS10864**
Analytical Method: **EP200.8**
Instrument: **Perkin Elmer Nexion P5**
Analyst: **DMM**

Prep Batch: **MXX33554**
Prep Method: **E200.2**
Prep Date/Time: **08/21/2020 17:39**
Spike Init Wt./Vol.: 1000 ug/L Extract Vol: 50 mL
Dupe Init Wt./Vol.: Extract Vol:

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Matrix Spike Summary

Original Sample ID: 1576326
MS Sample ID: 1576327 MS
MSD Sample ID:

QC for Samples: 1204329001

Analysis Date: 08/22/2020 18:52
Analysis Date: 08/22/2020 18:55
Analysis Date:
Matrix: Water (Surface, Eff., Ground)

Results by **EP200.8**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Aluminum	8.47J	1000	984	98				70-130		
Antimony	0.500U	1000	1030	103				70-130		
Arsenic	2.50U	1000	997	100				70-130		
Barium	9.55	1000	1070	106				70-130		
Beryllium	0.200U	100	105	105				70-130		
Cadmium	0.250U	100	102	102				70-130		
Calcium	4020	10000	14700	106				70-130		
Chromium	1.00U	400	382	96				70-130		
Cobalt	2.00U	500	499	100				70-130		
Copper	38.2	1000	1020	99				70-130		
Iron	125U	5000	5120	102				70-130		
Lead	0.404	1000	1040	104				70-130		
Magnesium	312	10000	10800	105				70-130		
Manganese	3.52	500	494	98				70-130		
Molybdenum	1.00U	400	396	99				70-130		
Nickel	0.715J	1000	976	98				70-130		
Phosphorus	100U	500	530	106				70-130		
Potassium	419J	10000	11000	106				70-130		
Selenium	2.50U	1000	991	99				70-130		
Silicon	602J	10000	11100	105				70-130		
Silver	0.500U	100	97.7	98				70-130		
Sodium	4880	10000	15100	102				70-130		
Thallium	0.500U	10.0	10	100				70-130		
Tin	0.500U	100	93.4	93				70-130		
Titanium	12.5U	100	102	102				70-130		
Vanadium	10.0U	200	217	109				70-130		
Zinc	5.81J	1000	972	97				70-130		

Batch Information

Analytical Batch: MMS10861
Analytical Method: EP200.8
Instrument: Perkin Elmer Nexlon P5
Analyst: ACF
Analytical Date/Time: 8/22/2020 6:55:21PM

Prep Batch: MXX33554
Prep Method: DW Digest for Metals on ICP-MS
Prep Date/Time: 8/21/2020 5:39:07PM
Prep Initial Wt./Vol.: 20.00mL
Prep Extract Vol: 50.00mL

Print Date: 08/31/2020 8:53:45AM

Method Blank

Blank ID: MB for HBN 1810645 [STS/6775]
Blank Lab ID: 1576241

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1204329001

Results by **SM21 2540D**

Parameter	Results	LOQ/CL	DL	Units
Total Suspended Solids	0.500U	1.00	0.310	mg/L

Batch Information

Analytical Batch: STS6775
Analytical Method: SM21 2540D
Instrument:
Analyst: S.S
Analytical Date/Time: 8/21/2020 2:38:38PM

Print Date: 08/31/2020 8:53:46AM

Duplicate Sample Summary

Original Sample ID: 1204328001
Duplicate Sample ID: 1576244
QC for Samples:
1204329001

Analysis Date: 08/21/2020 14:38
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	24.0	25.0	mg/L	4.10	(< 5)

Batch Information

Analytical Batch: STS6775
Analytical Method: SM21 2540D
Instrument:
Analyst: S.S

Print Date: 08/31/2020 8:53:48AM

Duplicate Sample Summary

Original Sample ID: 1204415002
Duplicate Sample ID: 1576245
QC for Samples:
1204329001

Analysis Date: 08/21/2020 14:38
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	44.0	42.0	mg/L	4.70	(< 5)

Batch Information

Analytical Batch: STS6775
Analytical Method: SM21 2540D
Instrument:
Analyst: S.S

Print Date: 08/31/2020 8:53:48AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1204329 [STS6775]
Blank Spike Lab ID: 1576242
Date Analyzed: 08/21/2020 14:38

Spike Duplicate ID: LCSD for HBN 1204329 [STS6775]
Spike Duplicate Lab ID: 1576243
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1204329001

Results by **SM21 2540D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Suspended Solids	25	24.2	97	25	24.7	99	(75-125)	2.00	(< 5)

Batch Information

Analytical Batch: **STS6775**
Analytical Method: **SM21 2540D**
Instrument:
Analyst: **S.S**

Print Date: 08/31/2020 8:53:50AM

Method Blank

Blank ID: MB for HBN 1810571 [THOG/1362]
Blank Lab ID: 1575916

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1204329001

Results by **EPA 1664B**

Parameter	Results	LOQ/CL	DL	Units
Oil & Grease HEM	2.00U	4.00	1.00	mg/L

Batch Information

Analytical Batch: THOG1362
Analytical Method: EPA 1664B
Instrument:
Analyst: EWW
Analytical Date/Time: 8/20/2020 9:23:14AM

Print Date: 08/31/2020 8:53:53AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1204329 [THOG1362]
Blank Spike Lab ID: 1575917
Date Analyzed: 08/20/2020 09:23

Spike Duplicate ID: LCSD for HBN 1204329 [THOG1362]
Spike Duplicate Lab ID: 1575918
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1204329001

Results by **EPA 1664B**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Oil & Grease HEM	40	34.4	86	40	33.2	83	(78-114)	3.60	(< 18)

Batch Information

Analytical Batch: **THOG1362**
Analytical Method: **EPA 1664B**
Instrument:
Analyst: **EWW**

Print Date: 08/31/2020 8:53:56AM

Matrix Spike Summary

Original Sample ID: 1204343004
MS Sample ID: 1575919 MS
MSD Sample ID:

QC for Samples: 1204329001

Analysis Date: 08/20/2020 9:23
Analysis Date: 08/20/2020 9:23
Analysis Date:
Matrix: Water (Surface, Eff., Ground)

Results by **EPA 1664B**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Oil & Grease HEM	6.13	43.0	46.7	94				78-114		

Batch Information

Analytical Batch: THOG1362
Analytical Method: EPA 1664B
Instrument:
Analyst: EWW
Analytical Date/Time: 8/20/2020 9:23:14AM

Print Date: 08/31/2020 8:53:58AM

Method Blank

Blank ID: MB for HBN 1810644 [VXX/36174]
Blank Lab ID: 1576236

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1204329001

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L
Surrogates				
4-Bromofluorobenzene (surr)	78.7	50-150		%

Batch Information

Analytical Batch: VFC15298
Analytical Method: AK101
Instrument: Agilent 7890 PID/FID
Analyst: ALJ
Analytical Date/Time: 8/20/2020 12:30:00PM

Prep Batch: VXX36174
Prep Method: SW5030B
Prep Date/Time: 8/20/2020 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1204329 [VXX36174]
Blank Spike Lab ID: 1576239
Date Analyzed: 08/20/2020 13:24

Spike Duplicate ID: LCSD for HBN 1204329 [VXX36174]
Spike Duplicate Lab ID: 1576240
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1204329001

Results by **AK101**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics	1.00	0.939	94	1.00	1.05	105	(60-120)	11.20	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	0.0500	85.5	86	0.0500	93.7	94	(50-150)	9.20	

Batch Information

Analytical Batch: **VFC15298**
Analytical Method: **AK101**
Instrument: **Agilent 7890 PID/FID**
Analyst: **ALJ**

Prep Batch: **VXX36174**
Prep Method: **SW5030B**
Prep Date/Time: **08/20/2020 06:00**
Spike Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL

Print Date: 08/31/2020 8:54:03AM

Method Blank

Blank ID: MB for HBN 1810787 [VXX/36201]
Blank Lab ID: 1576935

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1204329001

Results by **EPA 602/624**

Parameter	Results	LOQ/CL	DL	Units
Benzene	0.200U	0.400	0.120	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
o-Xylene	0.500U	1.00	0.310	ug/L
P & M -Xylene	1.00U	2.00	0.620	ug/L
Toluene	0.500U	1.00	0.310	ug/L
Surrogates				
1,2-Dichloroethane-D4 (surr)	102	81-118		%
4-Bromofluorobenzene (surr)	108	85-114		%
Toluene-d8 (surr)	103	89-112		%

Batch Information

Analytical Batch: VMS20239
Analytical Method: EPA 602/624
Instrument: Agilent 7890-75MS
Analyst: NRB
Analytical Date/Time: 8/24/2020 6:04:00PM

Prep Batch: VXX36201
Prep Method: SW5030B
Prep Date/Time: 8/24/2020 3:00:00PM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Blank Spike Summary

Blank Spike ID: LCS for HBN 1204329 [VXX36201]
Blank Spike Lab ID: 1576936
Date Analyzed: 08/24/2020 16:51

Spike Duplicate ID: LCSD for HBN 1204329 [VXX36201]
Spike Duplicate Lab ID: 1576937
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1204329001

Results by **EPA 602/624**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Benzene	30	30.8	103	30	30.7	102	(79-120)	0.22	(< 20)
Ethylbenzene	30	32.9	110	30	31.8	106	(79-121)	3.30	(< 20)
o-Xylene	30	32.6	109	30	31.8	106	(78-122)	2.40	(< 20)
P & M -Xylene	60	65.3	109	60	63.2	105	(80-121)	3.30	(< 20)
Toluene	30	30.2	101	30	29.7	99	(80-121)	1.60	(< 20)
Surrogates									
1,2-Dichloroethane-D4 (surr)	30	97.9	98	30	96.8	97	(81-118)	1.10	
4-Bromofluorobenzene (surr)	30	104	104	30	105	105	(85-114)	0.27	
Toluene-d8 (surr)	30	99.4	99	30	100	100	(89-112)	0.86	

Batch Information

Analytical Batch: **VMS20239**
Analytical Method: **EPA 602/624**
Instrument: **Agilent 7890-75MS**
Analyst: **NRB**

Prep Batch: **VXX36201**
Prep Method: **SW5030B**
Prep Date/Time: **08/24/2020 15:00**
Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Print Date: 08/31/2020 8:54:10AM

Method Blank

Blank ID: MB for HBN 1810551 [WXX/13409]
Blank Lab ID: 1575811

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1204329001

Results by **SM21 4500-CN C,E**

Parameter	Results	LOQ/CL	DL	Units
Cyanide	0.00250U	0.0050	0.0020	mg/L

Batch Information

Analytical Batch: WDA4838
Analytical Method: SM21 4500-CN C,E
Instrument: Discrete Analyzer 3
Analyst: EWW
Analytical Date/Time: 8/19/2020 5:27:44PM

Prep Batch: WXX13409
Prep Method: METHOD
Prep Date/Time: 8/19/2020 12:51:00PM
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

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

Method Blank

Blank ID: MB for HBN 1810551 [WXX/13409]
Blank Lab ID: 1575816

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1204329001

Results by **SM21 4500-CN C,E**

Parameter	Results	LOQ/CL	DL	Units
Cyanide	0.00250U	0.0050	0.0020	mg/L

Batch Information

Analytical Batch: WDA4838
Analytical Method: SM21 4500-CN C,E
Instrument: Discrete Analyzer 3
Analyst: EWW
Analytical Date/Time: 8/19/2020 6:35:41PM

Prep Batch: WXX13409
Prep Method: METHOD
Prep Date/Time: 8/19/2020 12:51:00PM
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1204329 [WXX13409]
Blank Spike Lab ID: 1575812
Date Analyzed: 08/19/2020 17:30

Spike Duplicate ID: LCSD for HBN 1204329 [WXX13409]
Spike Duplicate Lab ID: 1575813
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1204329001

Results by **SM21 4500-CN C,E**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Cyanide	0.05	0.052	104	0.05	0.048	96	(75-125)	8.40	(< 25)

Batch Information

Analytical Batch: **WDA4838**
Analytical Method: **SM21 4500-CN C,E**
Instrument: **Discrete Analyzer 3**
Analyst: **EWW**

Prep Batch: **WXX13409**
Prep Method: **METHOD**
Prep Date/Time: **08/19/2020 12:51**
Spike Init Wt./Vol.: 0.05 mg/L Extract Vol: 6 mL
Dupe Init Wt./Vol.: 0.05 mg/L Extract Vol: 6 mL

Print Date: 08/31/2020 8:54:16AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1204329 [WXX13409]
Blank Spike Lab ID: 1575817
Date Analyzed: 08/19/2020 19:33

Spike Duplicate ID: LCSD for HBN 1204329 [WXX13409]
Spike Duplicate Lab ID: 1575818
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1204329001

Results by **SM21 4500-CN C,E**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Cyanide	0.05	0.053	105	0.05	0.053	105	(75-125)	0.00	(< 25)

Batch Information

Analytical Batch: **WDA4838**
Analytical Method: **SM21 4500-CN C,E**
Instrument: **Discrete Analyzer 3**
Analyst: **EWW**

Prep Batch: **WXX13409**
Prep Method: **METHOD**
Prep Date/Time: **08/19/2020 12:51**
Spike Init Wt./Vol.: 0.05 mg/L Extract Vol: 6 mL
Dupe Init Wt./Vol.: 0.05 mg/L Extract Vol: 6 mL

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Matrix Spike Summary

Original Sample ID: 1204114001
MS Sample ID: 1575814 MS
MSD Sample ID: 1575815 MSD

QC for Samples: 1204329001

Analysis Date: 08/19/2020 17:34
Analysis Date: 08/19/2020 17:37
Analysis Date: 08/19/2020 17:39
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 4500-CN C,E**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Cyanide	0.0050U	0.050	.048	96	0.050	0.053	105	75-125	9.80	(< 25)

Batch Information

Analytical Batch: WDA4838
Analytical Method: SM21 4500-CN C,E
Instrument: Discrete Analyzer 3
Analyst: EWW
Analytical Date/Time: 8/19/2020 5:37:05PM

Prep Batch: WXX13409
Prep Method: Cyanide Distillation
Prep Date/Time: 8/19/2020 12:51:00PM
Prep Initial Wt./Vol.: 6.00mL
Prep Extract Vol: 6.00mL

Matrix Spike Summary

Original Sample ID: 1209569005
MS Sample ID: 1575820 MS
MSD Sample ID: 1575821 MSD

QC for Samples: 1204329001

Analysis Date: 08/19/2020 18:58
Analysis Date: 08/19/2020 19:00
Analysis Date: 08/19/2020 19:02
Matrix: Drinking Water

Results by **SM21 4500-CN C,E**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Cyanide	0.0050U	0.050	.056	112	0.050	0.051	101	75-125	10.30	(< 25)

Batch Information

Analytical Batch: WDA4838
Analytical Method: SM21 4500-CN C,E
Instrument: Discrete Analyzer 3
Analyst: EWW
Analytical Date/Time: 8/19/2020 7:00:47PM

Prep Batch: WXX13409
Prep Method: Cyanide Distillation
Prep Date/Time: 8/19/2020 12:51:00PM
Prep Initial Wt./Vol.: 6.00mL
Prep Extract Vol: 6.00mL

Print Date: 08/31/2020 8:54:18AM

Method Blank

Blank ID: MB for HBN 1810621 [XXX/43703]
Blank Lab ID: 1576149

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1204329001

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	0.300U	0.600	0.180	mg/L
Surrogates				
5a Androstane (surr)	107	60-120		%

Batch Information

Analytical Batch: XFC15708
Analytical Method: AK102
Instrument: Agilent 7890B R
Analyst: CDM
Analytical Date/Time: 8/28/2020 4:06:00PM

Prep Batch: XXX43703
Prep Method: SW3520C
Prep Date/Time: 8/20/2020 6:36:30PM
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1204329 [XXX43703]
Blank Spike Lab ID: 1576150
Date Analyzed: 08/28/2020 15:56

Spike Duplicate ID: LCSD for HBN 1204329 [XXX43703]
Spike Duplicate Lab ID: 1576151
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1204329001

Results by **AK102**

	Blank Spike (mg/L)				Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)		Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Diesel Range Organics	5	5.90	118		5	5.16	103	(75-125)	13.40	(< 20)
Surrogates										
5a Androstane (surr)	0.1	133	133	*	0.1	113	113	(60-120)	16.20	

Batch Information

Analytical Batch: **XFC15708**
Analytical Method: **AK102**
Instrument: **Agilent 7890B R**
Analyst: **CDM**

Prep Batch: **XXX43703**
Prep Method: **SW3520C**
Prep Date/Time: **08/20/2020 18:36**
Spike Init Wt./Vol.: 5 mg/L Extract Vol: 1 mL
Dupe Init Wt./Vol.: 5 mg/L Extract Vol: 1 mL

Print Date: 08/31/2020 8:54:22AM

Method Blank

Blank ID: MB for HBN 1810621 [XXX/43703]
Blank Lab ID: 1576149

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1204329001

Results by **AK103**

Parameter	Results	LOQ/CL	DL	Units
Residual Range Organics	0.250U	0.500	0.150	mg/L
Surrogates				
n-Triacontane-d62 (surr)	116	60-120		%

Batch Information

Analytical Batch: XFC15708
Analytical Method: AK103
Instrument: Agilent 7890B R
Analyst: CDM
Analytical Date/Time: 8/28/2020 4:06:00PM

Prep Batch: XXX43703
Prep Method: SW3520C
Prep Date/Time: 8/20/2020 6:36:30PM
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1204329 [XXX43703]
Blank Spike Lab ID: 1576150
Date Analyzed: 08/28/2020 15:56

Spike Duplicate ID: LCSD for HBN 1204329 [XXX43703]
Spike Duplicate Lab ID: 1576151
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1204329001

Results by **AK103**

	Blank Spike (mg/L)				Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)		Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Residual Range Organics	5	6.01	120		5	5.17	103	(60-120)	15.20	(< 20)
Surrogates										
n-Triacontane-d62 (surr)	0.1	137	137	*	0.1	118	118	(60-120)	15.10	

Batch Information

Analytical Batch: **XFC15708**
Analytical Method: **AK103**
Instrument: **Agilent 7890B R**
Analyst: **CDM**

Prep Batch: **XXX43703**
Prep Method: **SW3520C**
Prep Date/Time: **08/20/2020 18:36**
Spike Init Wt./Vol.: 5 mg/L Extract Vol: 1 mL
Dupe Init Wt./Vol.: 5 mg/L Extract Vol: 1 mL

Print Date: 08/31/2020 8:54:28AM

1204329

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

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

2043 Westport Center Drive
St. Louis, MO 63146-3564
(314) 699-9660

2705 Saint Andrews Loop, Suite A
Pasco, WA 99301-3378
(509) 946-6309

2355 Hill Road
Fairbanks, AK 99709
(907) 479-0600

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

3990 Collins Way, Suite 100
Lake Oswego, OR 97035
(503) 223-6147

1321 Bannock Street, Suite 200
Denver, CO 80204
(303) 825-3800

Profile #365950
9K

CHAIN OF CUSTODY RECORD

Laboratory SGS Page 1 of 1
Attn:

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

Sample Identity	Lab No.	Time	Date Sampled	Comp.	Grab	Metals 6010C 8/7470A/7471A	Cyanide	Oil & Grease	TAH GRO 8015MOD	BTEX 8260C	TSS	Total Number of Containers	Remarks/Matrix
100378-MW1	(1AN) (2AC) (3AC)	1300	8/18/20		X							15	7 day TAT

Project Information		Sample Receipt	
Project Number:	100378	Total Number of Containers	
Project Name:	Anvil Mt	COC Seals/Intact? Y/N/NA	
Contact:	S. Glish	Received Good Cond./Cold	
Ongoing Project?	Yes ☒ No ☐	Delivery Method:	
Sampler:	JSC	(attach shipping bill, if any)	

Instructions	
Requested Turnaround Time:	7 day
Special Instructions:	Do NOT analyze trip blanks

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: Time: 1356	Signature: Time:	Signature: Time:
Printed Name: Stafford Glish Date: 8/18/20	Printed Name: Date:	Printed Name: Date:
Company: S&W	Company:	Company:

Received By: 1.	Received By: 2.	Received By: 3.
Signature: Time:	Signature: Time:	Signature: Time: 14:02
Printed Name: Date:	Printed Name: Date:	Printed Name: Kyan Conlon Date: 8/18/20
Company:	Company:	Company: SGS Absent HD

F-19-91/UR

Ambient No. 41 35063

*SHANNON

WILSON AWWU 20200818*

SGS North America Inc.
200 W. Potter Dr., Anchorage, AK 99518 (ph) 907-562-2343, (fax) 907-561-5301
3180 Peger Rd. Ste. 190, Fairbanks, AK 99709 (ph) 907-474-8656

Sample Kit Request

☑ **Client pickup Date:** 8/18/2020 **Time:** 12:30

Be sure to ask if client will ship by ground (DOT) or air carrier (IATA)

Does a Profile exist in LIMS? **If not, please send a request for new profile build.**

Client Name: Shannon & Wilson
Ordered By: Stafford Glashan **Phone #:**
Email: SJG@shanwil.com
Project Name: AWWU **Project/Permit#:**
Quote #: **Profile #:**
Delivery Address:

☐ **Deliver to client:**
☐ **Ship by/Air Carrier:**
Airbill Number:
Date to ship by:
Notes:
Kit request taken by: CGH **Date:** August 18, 2020
Kit prepared by: EBH **Date:** 8-18-20
Kit *(including lid tightness for pres'd bottles)* checked by: H.M **Date:** 8-18-20
Kit packed & shipped by: EBH **Date:** 8-18-20

Filename: SKIT_Shannon & Wilson_AWWU_2020-08-18 *Required Items

No. Samples	Matrix	Analysis	Container Size & Type		Pres.	Bottle Lot #	Preservative Lot #	Hold Time	# QC Bottles	Total Bottles
1	W	Metals by EPA 200.8/245.1	1 x 250-mL	HDPE	HNO3 ✓			28/180 days		1
1	W	Cyanide	1 x 125-mL	amber HDPE	NaOH ✓			14 days		1
1	W	O&G	2 x 1-L	amber glass	HCl ✓			28 days		2
1	W	TAH	3 x 40-mL	VOA vials	HCl ✓			14 days		3
1	W	BOD	1 x 1-L	HDPE	✓			48 hours		1
1	W	TSS	1 x 1-L	HDPE	✓			7 days		1
1	W	GRO	3 x 40-mL	VOA vials	HCl ✓			14 days		3
1	W	DRO/RRO	2 x 1-L	amber glass	HCl ✓			14 days		2

☐ Pack for Shipping via ***ground*** (DOT)
☐ Pack for Shipping via ***air carrier*** (IATA)
☑ Temperature Blank (***circle one:*** 120-ml OR 500-ml)
☐ Soil VOA Trip Blank - Lot#:
☐ Water VOA Trip Blank - Lot#:
☐ 524 VOA Trip Blank - Lot#:
☐ Low Level Mercury Trip Blank- Lot#:
☑ Coolers
☑ Gel Ice
☑ Bubble Wrap
☑ Labels
☑ Custody Seals
☑ SGS COCs - ***Circle req'd forma*** ☑ Blank COC ☐ DW COC ☐ COC initiated by PM (attached)
☐ Send additional instructions/documents ***(Note to PM:*** *Be sure to attach copy of requested form.)*

☐ Total # includes bottles for % Solids
☐ Track all Lot#? (Required for DOD)
☐ Foreign Soil

Other Notes/Reminders for Kit Prep:

Attention Client/Sampler:

1. Do not rinse container; be aware of any acid preservative in container.
2. Fill container, but do not overfill (except volatile waters).
3. Label the container with your sample ID as well as the date/time of collection.
4. Fill out the Chain of Custody.
5. Add frozen gel packs or ice to your cooler & pack to prevent breakage.

Charges may be invoiced for bottles which are unused or improperly used.
If you have any questions concerning this sample kit, please contact your Project Manager for assistance. ***Thank you.***

***This will email a copy of this form for confirmation to the client email and save the form to the network. This should not be used outside of SGS.**

e-Sample Receipt Form

SGS Workorder #: 1204329

1 2 0 4 3 2 9

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
Chain of Custody / Temperature Requirements	Yes	Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	N/A	Absent
COC accompanied samples?	Yes	
DOD: Were samples received in COC corresponding coolers?	N/A	
Yes **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required		
Temperature blank compliant* (i.e., 0-6 °C after CF)?	No	Cooler ID: 1 @ Ambient °C Therm. ID: N/A
If samples received without a temperature blank, the "cooler temperature" will be documented instead & "COOLER TEMP" will be noted to the right. "ambient" or "chilled" will be noted if neither is available.		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago?	Yes	
If <0°C, were sample containers ice free?	N/A	
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.		
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.
Were samples received within holding time?	Yes	
Do samples **match COC**** (i.e.,sample IDs,dates/times collected)?	Yes	
**Note: If times differ <1hr, record details & login per COC.		
***Note: If sample information on containers differs from COC, SGS will default to COC information		
Were analytical requests clear? (i.e., method is specified for analyses with multiple option for analysis (Ex: BTEX, Metals)	Yes	
	Yes	***Exemption permitted for metals (e.g,200.8/6020A).
Were proper containers (type/mass/volume/preservative***)used?	No	sample 1A metals is under preserved. Proceeded to add 4mL HNO3 from LW19-0463-16-14.
Volatile / LL-Hg Requirements		
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	Yes	Trip blanks not to be analyzed per client.
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	Yes	
Were all soil VOAs field extracted with MeOH+BFB?	N/A	

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

Additional notes (if applicable):

Sample Containers and Preservatives

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition
1204329001-A	HNO3 to pH < 2	PA			
1204329001-B	NaOH to pH > 10	OK			
1204329001-C	No Preservative Required	OK			
1204329001-D	No Preservative Required	OK			
1204329001-E	HCL to pH < 2	OK			
1204329001-F	HCL to pH < 2	OK			
1204329001-G	HCL to pH < 2	OK			
1204329001-H	HCL to pH < 2	OK			
1204329001-I	HCL to pH < 2	OK			
1204329001-J	HCL to pH < 2	OK			
1204329001-K	HCL to pH < 2	OK			
1204329001-L	HCL to pH < 2	OK			
1204329001-M	HCL to pH < 2	OK			
1204329001-N	HCL to pH < 2	OK			
1204329002-A	HCL to pH < 2	OK			
1204329002-B	HCL to pH < 2	OK			
1204329002-C	HCL to pH < 2	OK			
1204329003-A	HCL to pH < 2	OK			
1204329003-B	HCL to pH < 2	OK			
1204329003-C	HCL to pH < 2	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.
BU - The container was received with headspace greater than 6mm.
DM - The container was received damaged.
FR - The container was received frozen and not usable for Bacteria or BOD analyses.
IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.
NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.
PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.
PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.
QN - Insufficient sample quantity provided.

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

SGS North America, Inc

1204329

SGS Job Number: FA78006

Sampling Date: 08/18/20

Report to:

SGS North America, Inc
200 W Potter Dr
Anchorage, AK 99518
julie.shumway@sgs.com

ATTN: Julie Shumway

Total number of pages in report: **16**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Andrea Colby 407-425-6700

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001) DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177), AK, AR, IA, KY, MA, MS, ND, NH, NV, OK, OR, UT, WA, WV

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Sample Summary

SGS North America, Inc

1204329

Job No: FA78006

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA78006-1	08/18/20	13:00		08/20/20	AQ	Water	100378-W1

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: SGS North America, Inc **Job No:** FA78006

Site: 1204329 **Report Date** 8/28/2020 2:43:34

1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 08/18/2020 and were received at SGS North America Inc - Orlando on 08/20/2020 properly preserved, at 4.4 Deg. C and intact. These Samples received an SGS Orlando job number of FA78006. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section. Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Metals Analysis By Method EPA 245.1

Matrix: AQ **Batch ID:** MP37714

All samples were digested within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) TD58771-1DUP, TD58771-1MS, TD58771-1MSD, TD58771-1SDL were used as the QC samples for metals.

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____

Ariel Hartney, Client Services *(Signature on File)*

Summary of Hits

Job Number: FA78006
Account: SGS North America, Inc
Project: 1204329
Collected: 08/18/20

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA78006-1	**100378-W1**					
Mercury		16.6	5.0	1.0	ug/l	EPA 245.1

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	100378-W1		
Lab Sample ID:	FA78006-1	**Date Sampled:**	08/18/20
Matrix:	AQ - Water	**Date Received:**	08/20/20
		Percent Solids:	n/a
Project:	1204329		

Total Metals Analysis

Analyte	Result	LOQ	LOD	DL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Mercury	16.6	5.0	1.0	0.30	ug/l	1	08/24/20	08/24/20	JC	EPA 245.1 [1]	EPA 245.1 [2]

(1) Instrument QC Batch: MA16997
(2) Prep QC Batch: MP37714

LOQ = Limit of Quantitation DL = Detection Limit U = Indicates a result < LOD
LOD = Limit of Detection B = Analyte found in associated blank J = Indicates a result > = DL (MDL) but < LOQ

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

FA78006

SGS North America Inc.
CHAIN OF CUSTODY RECORD

Locations Nationwide
Alaska Florida
New Jersey Colorado
Texas North Carolina
Virginia Louisiana
www.us.sgs.com

CLIENT:	SGS North America Inc. - Alaska Division	SGS Reference:	SGS ORLANDO FL
CONTACT:	Julie Shumway	PHONE NO: (907) 562-2343	Additional Comments: All soils report out in dry weight unless
PROJECT NAME:	1204329	PWSID#: / NPDL#:	
REPORTS TO:	Julie Shumway	E-MAIL: Julie.Shumway@sgs.com; Env.Alaska.RefLabTeam@sgs.com	
INVOICE TO:	SGS - Alaska	QUOTE #: / P.O. #: 1204329	

Page 1 of 1

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HHMM	MATRIX/ MATRIX CODE	# CONTAINERS	Preservative Used: TYPE C = COMP G = GRAB MI = Multi Incremental Soils	Trizma	EPA 245.1 - Total Hg			MS	MSD	SGS lab #	Location ID
(1)	100378-W1	8/18/2020	13:00	W	1	G =		X					1204329-001	

INITIAL ASSESSMENT DO
LABEL VERIFICATION DO

Relinquished By: (1)	Date 8/19/20	Time 0935T	Received By: FX	DOD Project?	YES JS NO
Relinquished By: (2) FX	Date	Time	Received By: 08/20/20 9:45	Report to DL (J Flags)? If J- Report as DL/LOD/LOQ.	YES
Relinquished By: (3)	Date	Time	Received By:	Cooler ID:	
Relinquished By: (4)	Date	Time	Received For Laboratory By:	Temp Blank °C: 4.4 or Ambient [ ]	

Data Deliverable Requirements: LEVEL 2 w/ Excel EDD

Requested Turnaround Time and-or Special Instructions:
Rush Due 8/27/2020

Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT

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

http://www.sgs.com/terms_and_conditions.htm

F088_COC_REF_LAB_20190411

FA78006: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: FA78006 **Client:** SGSAKA **Project:** 1204329

Date / Time Received: 8/20/2020 9:45:00 AM **Delivery Method:** FEDEX **Airbill #'s:** 148348008733

Therm ID: IR 1; **Therm CF:** -0.2; **# of Coolers:** 1

Cooler Temps (Raw Measured) °C: Cooler 1: (4.6);

Cooler Temps (Corrected) °C: Cooler 1: (4.4);

Cooler Information	Y	or	N
1. Custody Seals Present	☑		☐
2. Custody Seals Intact	☑		☐
3. Temp criteria achieved	☑		☐
4. Cooler temp verification	IR Gun		
5. Cooler media	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler	☐		☐	☑
2. Trip Blank listed on COC	☐		☐	☑

	W	or	S	N/A
3. Type Of TB Received	☐		☐	☑

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles	☑		☐	
2. Samples preserved properly	☑		☐	
3. Sufficient volume/containers recvd for analysis:	☑		☐	
4. Condition of sample	Intact			
5. Sample recvd within HT	☑		☐	
6. Dates/Times/IDs on COC match Sample Label	☑		☐	
7. VOCs have headspace	☐		☐	☑
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☑
11. % Solids Jar received?	☐		☐	☑
12. Residual Chlorine Present?	☐		☐	☑

Misc. Information

Number of Encores: 25-Gram _____ 5-Gram _____ Number of 5035 Field Kits: _____ Number of Lab Filtered Metals: _____

Test Strip Lot #s: pH 0-3 230315 pH 10-12 219813A Other: (Specify) _____ _____

Residual Chlorine Test Strip Lot #: _____

Comments

SM001
Rev. Date 05/24/17

Technician: JENNAK Date: 8/20/2020 9:45:00 AM Reviewer: _____ Date: _____

5.1

5

FA78006: Chain of Custody
Page 2 of 2

Metals Analysis

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: FA78006
Account: SGSAKA - SGS North America, Inc
Project: 1204329

QC Batch ID: MP37714 Methods: EPA 245.1
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 08/24/20

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.50	.03	.03	0.017	<0.50

Associated samples MP37714: FA78006-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA78006
Account: SGSAKA - SGS North America, Inc
Project: 1204329

QC Batch ID: MP37714
Matrix Type: AQUEOUS

Methods: EPA 245.1
Units: ug/l

Prep Date: 08/24/20 08/24/20

Metal	TD58771-1 Original	DUP	RPD	QC Limits	TD58771-1 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.0	NC	0-10	0.0	2.9	3	96.7	70-130

Associated samples MP37714: FA78006-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: FA78006
Account: SGSAKA - SGS North America, Inc
Project: 1204329

QC Batch ID: MP37714 Methods: EPA 245.1
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 08/24/20

Metal	TD58771-1 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	2.9	3	96.7	0.0	

Associated samples MP37714: FA78006-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: FA78006
Account: SGSAKA - SGS North America, Inc
Project: 1204329

QC Batch ID: MP37714 Methods: EPA 245.1
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 08/24/20

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	85-115

Associated samples MP37714: FA78006-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: FA78006
Account: SGSAKA - SGS North America, Inc
Project: 1204329

QC Batch ID: MP37714 Methods: EPA 245.1
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 08/24/20

Metal	TD58771-1 Original	SDL 1:5	%DIF	QC Limits
Mercury	0.00	0.00	NC	0-10

Associated samples MP37714: FA78006-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

LABORATORY DATA REVIEW CHECKLIST

Completed by: Zach Thon
Title: Geologist
Date: 11/25/2020

Consultant Firm: Shannon & Wilson, Inc.

Laboratory Name: SGS North America Inc.
Laboratory Report Number: 1204329
Laboratory Report Date: 8/31/2020

Contaminated Site Name: NA
ADEC File Number: NA
Hazard Identification Number: NA

(**NOTE**: ***NA*** = not applicable; Text in *italics* added by Shannon & Wilson, Inc.)

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses? **Yes / No / NA**
Comments:

b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?
Yes / No / NA
Comments: *One sample container was transferred to another "network" laboratory (SGS North America, Inc., Orlando, Florida).*

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?
Yes / No / NA
Comments**:**

b. Correct analyses requested? **Yes / No / NA**
Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?
Yes / No / NA
Comments: *The cooler temperature blank was ambient. Samples were collected and delivered to the lab within an 8-hour time frame.*

b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, VOCs, etc.)? **Yes / No / NA**
Comments: *Sample receipt stated that sample 1A metals was under preserved. Proceeded to add 4mL HNO3 from LW19-0463-16-14.*

c. Sample condition documented - broken, leaking (MeOH), zero headspace (VOC vials)? **Yes / No / NA**
Comments:

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.? **Yes / No / NA**
Comments: *No discrepancies were noted.*

e. Data quality or usability affected?
Comments: *Data quality/usability considered unaffected; see above.*

4. Case Narrative

a. Present and understandable? **Yes / No / NA**
Comments:

b. Discrepancies, errors or QC failures noted by the lab? **Yes / No / NA**
Comments: *The case narrative noted the following:*

- *100378-W1 PS – EPA 245. 1- Total Hg was analyzed by SGS of Orlando, FL.*
- *LCS - AK102/103 - Surrogate recoveries in the LCS for 5a androstane and n triacontane do not meet QC criteria; however, the surrogate recoveries in the samples are within criteria.*

c. Were all corrective actions documented? **Yes / No / NA**
Comments:

d. What is the effect on data quality/usability, according to the case narrative?
Comments: *See above.*

5. Sample Results

a. Correct analyses performed/reported as requested on COC? **Yes / No / NA**
Comments:

b. All applicable holding times met? **Yes / No / NA**
Comments:

c. All soils reported on a dry weight basis? **Yes / No / NA**
Comments:

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project? **Yes / No / NA**
Comments:

e. Data quality or usability affected?
Comments:

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis, and 20 samples?
Yes / No / NA
Comments:

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?
Yes / No / NA
Comments:

iii. If above LOQ or project specified objectives, what samples are affected?
Comments:

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes / No / NA
Comments:

v. Data quality or usability affected?
Comments: *See above.*

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

i. Organics - One LCS/LCSD reported per matrix, analysis, and 20 samples?
(LCS/LCSD required per AK methods, LCS required per SW846) **Yes / No / NA**
Comments:

ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples? **Yes / No / NA**
Comments:

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable. (AK petroleum methods: AK 101 60%-120%, AK 102 75%-125%, AK 103 60%-120%; all other analyses see the laboratory QC pages) **Yes / No / NA**
Comments: *Surrogate recoveries in the LCS for 5a androstane and n-triacontane do not meet QC criteria; however, the surrogate recoveries in the samples are within criteria.*

iv. Precision – All relative percent differences (RPDs) reported and less than method or laboratory limits and project specified objectives, if applicable. RPD reported from LCS/LCSD, and/or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages) **Yes / No / NA**
Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?
Comments: *Sample 100378-W1.*

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined?
Yes / No / NA
Comments: *Data flagging was not required; the surrogate recoveries in the samples are within criteria.*

vii. Data quality or usability affected?
Comments*: No, see above.*

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)
Note: Leave blank if not required for project

i. Organics - One MS/MSD reported per matrix, analysis, and 20 samples?
Yes / No / NA
Comments:

ii. Metals/Inorganics - One MS and one MSD reported per matrix, analysis and 20 samples? **Yes / No / NA**
Comments:

iii. Accuracy – All percent recoveries (%R) reported and *w*ithin method or laboratory limits and project specified objectives, if applicable. (AK petroleum methods: AK 101 60%-120%, AK 102 75%-125%, AK 103 60%-120%; all other analyses see the laboratory QC pages) **Yes / No / NA**
Comments:

iv. Precision – All relative percent differences (RPDs) reported and less than method or laboratory limits and project specified objectives, if applicable. RPD reported from MS/MSD, and/or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages) **Yes / No / NA**
Comments:

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

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined? **Yes / No / NA**
Comments:

vii. Data quality or usability affected?
Comments*: No, see above.*

d. Surrogates - Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses - field, QC, and laboratory samples? **Yes / No / NA**
Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages) **Yes / No / NA**
Comments:

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

iv. Data quality or usability affected?
Comments: *No, see above.*

e. Trip Blank - Volatile analyses only (GRO, BTEX, VOCs, etc.)

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? **Yes / No / NA**
Comments: *A trip blank was not submitted with the samples.*

ii. Is the cooler used to transport the trip blank and volatile samples clearly indicated on the COC? **Yes / No / NA**
Comments:

iii. All results less than LOQ and project specified objectives? **Yes / No / NA**
Comments*:*

iv. If above LOQ or project specified DQOs, what samples are affected?
Comments:

v. Data quality or usability affected?
Comments:

f. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?
Yes / No / NA
Comments: *A field duplicate was not submitted to the lab.*

ii. Were the field duplicates submitted blind to the lab? **Yes / No / NA**
Comments*:*

iii. Precision – All relative percent differences (RPDs) less than specified project objectives? (Recommended: 30% for water, 50% for soil) **Yes / No / NA**
Comments:

iv. Data quality or usability affected?
Comments:

g. Decontamination or Equipment Blank (if not applicable, a comment stating why must be entered below)**.**
Yes / No / NA
Comments: *A decontamination blank was not included in our ADEC-approved workplan.*

i. All results less than LOQ and project specified objectives?
Yes / No / NA
Comments:

ii. If above LOQ or project specified objectives, what samples are affected?
Comments:

iii. Data quality or usability affected?
Comments:

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

a. Defined and appropriate? **Yes / No / NA**
Comments: *A key is provided on page 3 of the Anchorage SGS laboratory report, and Page 51 of the Orlando SGS laboratory report.*

ATTACHMENT 3

Disposal Documentation

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites and Prevention Preparedness and Response Programs

Contaminated Media Transport and Treatment or Disposal Approval Form

DEC HAZARD/SPILL ID #	NAME OF CONTAMINATED SITE OR SPILL	
Pending	MOA AWWU M Street Right of Way	
CONTAMINATED SITE OR SPILL LOCATION – ADDRESS OR OTHER APPROPRIATE DESCRIPTION		
M Street ROW between West 5th and 6th Avenues, Anchorage, AK 99501		
CURRENT PHYSICAL LOCATION OF MEDIA	**SOURCE OF THE CONTAMINATION (DAY TANK, WASH BAY, FIRE TRAINING PIT, LUST, ETC.)**	
in-situ	Unknown - suspected heating oil tank	
CONTAMINANTS OF CONCERN	**ESTIMATED VOLUME**	**DATE(S) GENERATED**
DRO, VOCs	TBD	TBD
POST TREATMENT ANALYSIS REQUIRED *(such as GRO, DRO, RRO, VOCs, metals, PFAS, and/or Chlorinated Solvents)*		
NA		
COMMENTS OR OTHER IMPORTANT INFORMATION		
Excavation and transport by Frawner Corporation. Characterization sample exceeds MTG CULs for 1,2,3-Trichloropropane, 1,2-Dibromoethane, Chloroform, and dibromochloromethane		

TREATMENT FACILITY, LANDFILL, AND/OR FINAL DESTINATION OF MEDIA	PHYSICAL ADDRESS/PHONE NUMBER
Anchorage Regional Landfill	15500 E Eagle River Loop/907-343-6298
RESPONSIBLE PARTY	**ADDRESS/PHONE NUMBER**
AWWU/James Armstrong	3000 Arctic Blvd, Anchorage/907-561-2751
WASTE MANAGEMENT CO. / ORGANIZER	**ADDRESS/PHONE NUMBER**
AWWU/James Armstrong	3000 Arctic Blvd, Anchorage/907-561-2751

***Note, disposal of polluted soil in a landfill requires prior approval from the landfill operator and ADEC Solid Waste Program.**

Stafford Glashan — Name of the Person Requesting Approval (printed)

Senior Engineer, Shannon & Wilson — Title/Association

Signature

8/24/20 — Date

907-433-3214 — Phone Number

----------DEC USE ONLY----------

Based on the information provided, ADEC approves transport of the above mentioned material. The Responsible Party or their consultant must submit to the DEC Project Manager a copy of weight receipts of the loads transported and a post treatment analytical report, if disposed of at an approved treatment facility. The contaminated soil shall be transported as a covered load in compliance with 18 AAC 60.015.

Grant Lidren — DEC Project Manager Name (printed)

EPS IV — Project Manager Title

Signature

8/24/2020 — Date

229-4969 — Phone Number

DATE	TICKET #	QTY	COST	
27-Aug-20	825100	14.38	$ 945.49	
	825117	15.57	$ 1,023.73	
	825168	13.54	$ 890.26	
	825198	12.71	$ 835.68	
	825242	15.12	$ 994.14	
	825264	12.78	$ 840.29	
	825300	11.93	$ 784.40	
	825386	10.86	$ 714.05	$ 7,028.04 Check # 1644
28-Aug-20	825586	14.67	$ 964.55	
	825645	13.39	$ 880.39	
	825648	12.77	$ 839.63	
	825657	14.60	$ 959.95	
	825714	13.59	$ 893.54	
	825804	16.03	$ 1,053.97	
	825817	11.63	$ 764.67	
	825827	14.19	$ 932.99	
	825863	14.7	$ 966.53	
	825936	11.44	$ 752.18	
	825943	12.35	$ 812.01	
	825983	12.34	$ 811.36	
	825991	13.69	$ 900.12	
	825948	11.86	$ 779.80	$ 12,311.69 Check # 1645
29-Aug-20	826077	13.62	$ 895.52	
	826113	15.55	$ 1,022.41	
	826183	12.59	$ 827.79	
	826215	13.72	$ 902.09	
	826348	14.06	$ 924.45	
	826086	14.23	$ 935.62	
	826147	13.12	$ 862.64	
	826205	13.66	$ 898.15	
	826248	12.85	$ 844.89	
	826351	9.87	$ 648.95	
	826067	1.69	$ 702.87	
	826105	10.87	$ 714.70	
	826150	7.32	$ 481.29	
	826196	11.08	$ 728.51	
	826231	12.3	$ 808.73	
	826353	8.5	$ 558.88	$ 12,757.49 Check # 1646
	TOTALS	**479.17 Tons**	**$ 32,097.22**	

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 825100
Date: 8/27/2020
Time: 09:27:24 - 09:42:04

AUG 3 1 2020

		Scale	
Gross:	51500 LB	In	Scale ARL I
Tare:	22740 LB	Out	Scale IN
Net:	28760 LB		

Truck: PENA
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

Grid: C
Comment: SOILS/CONTAMINATED SOILS

PO: CS40004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED SC	14.38	Ton	$63.75/TON	$916.73
NA/Not Applicable	RECY CM AR/Community recy	14.38	Ton	$2.00/TON	$28.76

Total Amount:	$945.49
Check # 1644:	$945.49
Change:	$0.00

Driver: _____

Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

AUG 3 1 2020

Ticket: 825117
Date: 8/27/2020
Time: 09:38:32 - 09:54:21
Scale
Gross: 54920 LB In Scale ARL I
Tare: 23780 LB Out Scale IN
Net: 31140 LB

Truck: A695PENA
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

Comment: A695 CK

PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED SC	15.57	Ton	$63.75/TON	$992.59
NA/Not Applicable	RECY CM AR/Community recy	15.57	Ton	$2.00/TON	$31.14

Total Amount: $1,023.73
Check # 1644: $1,023.73
Change: $0.00

Driver: _____

Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

AUG 3 1 2020

Ticket: 825168
Date: 8/27/2020
Time: 10:29:35 - 10:42:45

			Scale
Gross:	49760 LB	In	Scale ARL I
Tare:	22680 LB	Out	Scale IN
Net:	27080 LB		

Truck: PENARED
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

Comment:

PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED SC	13.54	Ton	$63.75/TON	$863.18
NA/Not Applicable	RECY CM AR/Community recy	13.54	Ton	$2.00/TON	$27.08

Total Amount:	$890.26
Check # 1644:	$890.26
Change:	$0.00

Driver: _____

Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

AUG 3 1 2020

Ticket: 825198
Date: 8/27/2020
Time: 10:51:12 - 11:12:54

Truck: PENAMAR
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUST(

Scale
Gross: 49380 LB In Scale ARL I
Tare: 23960 LB Out Scale IN
Net: 25420 LB

Comment:

PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED S(	12.71	Ton	$63.75/TON	$810.26
NA/Not Applicable	RECY CM AR/Community recy	12.71	Ton	$2.00/TON	$25.42

Total Amount: $835.68
Check # 1644: $835.68
Change: $0.00

Driver: _____

Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

AUG 3 1 2020

Ticket: 825242
Date: 8/27/2020
Time: 11:47:09 - 12:02:04

			Scale
Gross:	52680 LB	In	Scale ARL I
Tare:	22440 LB	Out	Scale IN
Net:	30240 LB		

Truck: PENARED
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUST(

Comment: PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED S(	15.12	Ton	$63.75/TON	$963.90
NA/Not Applicable	RECY CM AR/Community recy	15.12	Ton	$2.00/TON	$30.24

Total Amount:	$994.14
Check # 1644:	$994.14
Change:	$0.00

Driver: _____

Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 825264
Date: 8/27/2020
Time: 12:03:59 - 12:23:21
Scale
Gross: 49300 LB In Scale ARL I
Tare: 23740 LB Out Scale IN
Net: 25560 LB

Truck: PENAMAR
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

AUG 3 1 2020

Comment:

PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED SC	12.78	Ton	$63.75/TON	$814.73
NA/Not Applicable	RECY CM AR/Community recy	12.78	Ton	$2.00/TON	$25.56

Total Amount: $840.29
Check # 1644: $840.29
Change: $0.00

Driver: _____

Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

AUG 3 1 2020

Ticket: 825300
Date: 8/27/2020
Time: 12:52:51 - 13:05:14
Scale
Gross: 46260 LB In Scale ARL I
Tare: 22400 LB Out Scale IN
Net: 23860 LB

Truck: PENARED
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUST(

Comment:

PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED S(	11.93	Ton	$63.75/TON	$760.54
NA/Not Applicable	RECY CM AR/Community recy	11.93	Ton	$2.00/TON	$23.86

Total Amount: $784.40
Check # 1644: $784.40
Change: $0.00

Driver: _____

Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

AUG 3 1 2020

Ticket: 825386
Date: 8/27/2020
Time: 14:23:57 - 14:35:59
Scale
Gross: 44100 LB In Scale ARL I
Tare: 22380 LB Out Scale IN
Net: 21720 LB

Truck: PENARED
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUST(

Grid: C
Comment: SOILS/CONTAMINATED SOILS
PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED S(	10.86	Ton	$63.75/TON	$692.33
NA/Not Applicable	RECY CM AR/Community recy	10.86	Ton	$2.00/TON	$21.72

Total Amount: $714.05
Check # 1644: $714.05

Driver: _____

Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 825586
Date: 8/28/2020
Time: 09:10:31 - 09:21:27

		Scale	
Gross:	51720 LB	In	Scale ARL I
Tare:	22380 LB	Out	Scale IN
Net:	29340 LB		

Truck: PENARED
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

Grid: C
Comment: SOILS CONTAMINAT ED SOILS PO: CS200004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED SC	14.67	Ton	$63.75/TON	$935.21
NA/Not Applicable	RECY CM AR/Community recy	14.67	Ton	$2.00/TON	$29.34

Total Amount:	$964.55
Check # 1645:	$964.55
Change:	$0.00

Driver: _____ Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 825645
Date: 8/28/2020
Time: 10:01:40 - 10:20:27
Scale
Gross: 51580 LB In Scale ARL I
Tare: 24800 LB Out Scale IN
Net: 26780 LB

Truck: PENAA695
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

Grid: C
Comment: SOILS/CONTAMINAT A695
ED SOILS
PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED SC	13.39	Ton	$63.75/TON	$853.61
NA/Not Applicable	RECY CM AR/Community recy	13.39	Ton	$2.00/TON	$26.78

Total Amount: $880.39
Check # 1645: $880.39
Change: $0.00

Driver: _____

Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 825648
Date: 8/28/2020
Time: 09:59:53 - 10:21:46

			Scale
Gross:	49820 LB	In	Scale ARL I
Tare:	24280 LB	Out	Scale IN
Net:	25540 LB		

Truck: PENASLV
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

Grid: C
Comment: CK# 1645 SOILS CONTAMINATED SOILS PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED SC	12.77	Ton	$63.75/TON	$814.09
NA/Not Applicable	RECY CM AR/Community recy	12.77	Ton	$2.00/TON	$25.54

Total Amount:	$839.63
Check # 1645:	$839.63
Change:	$0.00

Driver: _____

Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 825657
Date: 8/28/2020
Time: 10:18:13 - 10:34:43
Scale
Gross: 51620 LB In Scale ARL I
Tare: 22420 LB Out Scale IN
Net: 29200 LB

Truck: PENARED
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

Grid: C
Comment: SOILS/CONTAMINATED SOILS PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED SC	14.60	Ton	$63.75/TON	$930.75
NA/Not Applicable	RECY CM AR/Community recy	14.60	Ton	$2.00/TON	$29.20

Total Amount: $959.95
Check # 1645: $959.95
Change: $0.00

Driver: _____ Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 825714
Date: 8/28/2020
Time: 11:08:11 - 11:23:36

		Scale	
Gross:	50900 LB	In	Scale ARL I
Tare:	23720 LB	Out	Scale IN
Net:	27180 LB		

Truck: MARPENA
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

Comment: PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED S(	13.59	Ton	$63.75/TON	$866.36
NA/Not Applicable	RECY CM AR/Community recy	13.59	Ton	$2.00/TON	$27.18

Total Amount: $893.54
Check # 1645: $893.54

Driver: _____

Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 825804
Date: 8/28/2020
Time: 12:49:18 - 13:02:54

		Scale	
Gross:	55680 LB	In	Scale ARL I
Tare:	23620 LB	Out	Scale IN
Net:	32060 LB		

Truck: PENAMAR
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

Comment: PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED SC	16.03	Ton	$63.75/TON	$1,021.91
NA/Not Applicable	RECY CM AR/Community recy	16.03	Ton	$2.00/TON	$32.06

Total Amount:	$1,053.97
Check # 1645:	$1,053.97
Change:	$0.00

Driver: _____ Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 825817
Date: 8/28/2020
Time: 12:58:45 - 13:13:09

		Scale	
Gross:	47160 LB	In	Scale ARL I
Tare:	23900 LB	Out	Scale IN
Net:	23260 LB		

Truck: PENASILV
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

Comment: PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED SC	11.63	Ton	$63.75/TON	$741.41
NA/Not Applicable	RECY CM AR/Community recy	11.63	Ton	$2.00/TON	$23.26

Total Amount: $764.67
Check # 1645: $764.67
Change: $0.00

Driver: _____ Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 825827
Date: 8/28/2020
Time: 13:04:20 - 13:25:11

			Scale
Gross:	50560 LB	In	Scale ARL I
Tare:	22180 LB	Out	Scale IN
Net:	28380 LB		

Truck: PENARED
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUST(

Comment: PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED S(	14.19	Ton	$63.75/TON	$904.61
NA/Not Applicable	RECY CM AR/Community recy	14.19	Ton	$2.00/TON	$28.38

Total Amount: $932.99
Check # 1645: $932.99
Change: $0.00

Driver: _____ Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 825863
Date: 8/28/2020
Time: 13:49:42 - 14:02:53

		Scale	
Gross:	52960 LB	In	Scale ARL I
Tare:	23560 LB	Out	Scale IN
Net:	29400 LB		

Truck: PENA695
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

Grid: C
Comment: SOILS/CONTAMINATED SOILS PO: CS200004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED S(	14.70	Ton	$63.75/TON	$937.13
NA/Not Applicable	RECY CM AR/Community recy	14.70	Ton	$2.00/TON	$29.40

Total Amount:	$966.53
Check # 1645:	$966.53
Change:	$0.00

Driver: _____ Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 825936
Date: 8/28/2020
Time: 14:58:03 - 15:09:31

		Scale	
Gross:	45060 LB	In	Scale ARL I
Tare:	22180 LB	Out	Scale IN
Net:	22880 LB		

Truck: PENARED
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUST(

Comment: PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED S(	11.44	Ton	$63.75/TON	$729.30
NA/Not Applicable	RECY CM AR/Community recy	11.44	Ton	$2.00/TON	$22.88

Total Amount:	$752.18
Check # 1645:	$752.18
Change:	$0.00

Driver: _____

Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 825943
Date: 8/28/2020
Time: 15:02:33 - 15:18:37

			Scale
Gross:	48200 LB	In	Scale ARL I
Tare:	23500 LB	Out	Scale IN
Net:	24700 LB		

Truck: MARPENA
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

Comment:

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED S(	12.35	Ton	$63.75/TON	$787.31
NA/Not Applicable	RECY CM AR/Community recy	12.35	Ton	$2.00/TON	$24.70

Total Amount: $812.01
Check # 1645: $812.01

Driver: _____

Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 825983
Date: 8/28/2020
Time: 16:02:21 - 16:17:33

			Scale
Gross:	46840 LB	In	Scale ARL I
Tare:	22160 LB	Out	Scale IN
Net:	24680 LB		

Truck: REDCSOIL
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUST(

Grid: C
Comment: SOILS/CONTAMINATED SOILS PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED S(	12.34	Ton	$63.75/TON	$786.68
NA/Not Applicable	RECY CM AR/Community recy	12.34	Ton	$2.00/TON	$24.68

Total Amount:	$811.36
Check # 1645:	$811.36
Change:	$0.00

Driver: _____ Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 825991
Date: 8/28/2020
Time: 16:07:51 - 16:27:13

		Scale	
Gross:	50900 LB	In	Manual Wt
Tare:	23520 LB	Out	Scale IN
Net:	27380 LB		

Truck: MARPENA
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

Grid: C
Comment: SOILS/CONTAMINATED SOILS
PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED S(	13.69	Ton	$63.75/TON	$872.74
NA/Not Applicable	RECY CM AR/Community recy	13.69	Ton	$2.00/TON	$27.38

Total Amount:	$900.12
Check # 1645:	$900.12
Change:	$0.00

Driver: _____

Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 825948
Date: 8/28/2020
Time: ~~15:07:00~~ - 15:24:20
Scale
Gross: 47580 LB In Scale ARL I
Tare: 23860 LB Out Scale IN
Net: 23720 LB

Truck: SLVDMP
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUST(

AUG 3 1 2020

Grid: C
Comment: SOILS/CONTAMINATED SOILS
PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED S(	11.86	Ton	$63.75/TON	$756.08
NA/Not Applicable	RECY CM AR/Community recy	11.86	Ton	$2.00/TON	$23.72

Total Amount: $779.80
Check # 1645: $779.80

Driver: _____

Deputy Weighmaster: _____
CKR

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 826077
Date: 8/29/2020
Time: 08:53:11 - 09:06:01
Scale
Gross: 50700 LB In Scale ARL I
Tare: 23460 LB Out Scale IN
Net: 27240 LB

Truck: PENABURG
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUST(

AUG 3 1 2020

Grid: C
Comment: SOILS/CONTAMINATED SOILS PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED S(	13.62	Ton	$63.75/TON	$868.28
NA/Not Applicable	RECY CM AR/Community recy	13.62	Ton	$2.00/TON	$27.24

Total Amount: $895.52
Check # 1646: $895.52

Driver: _____ Deputy Weighmaster: _____
DAC

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 826113
Date: 8/29/2020
Time: 09:48:28 - 10:02:09

		Scale	
Gross:	54520 LB	In	Scale ARL I
Tare:	23420 LB	Out	Scale IN
Net:	31100 LB		

Truck: PENABURG
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUST(

AUG 3 1 2020

Grid: C
Comment: SOILS/CONTAMINATED SOILS
PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED S(	15.55	Ton	$63.75/TON	$991.31
NA/Not Applicable	RECY CM AR/Community recy	15.55	Ton	$2.00/TON	$31.10

Total Amount: $1,022.41
Check # 1646: $1,022.41

Driver: _____

Deputy Weighmaster: _____
DAC

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 826183
Date: 8/29/2020
Time: 11:52:04 - 12:06:42
Scale
Gross: 48500 LB In Scale ARL I
Tare: 23320 LB Out Scale IN
Net: 25180 LB

Truck: PENABRUG
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUST(

AUG 3 1 2020

Grid: C
Comment: SOILS/CONTAMINATED SOILS
PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED S(	12.59	Ton	$63.75/TON	$802.61
NA/Not Applicable	RECY CM AR/Community recy	12.59	Ton	$2.00/TON	$25.18

Total Amount: $827.79
Check # 1646: $827.79

Driver: _____

Deputy Weighmaster: _____
DAC

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 826215
Date: 8/29/2020
Time: 12:52:53 - 13:03:10
Scale
Gross: 50740 LB In Scale ARL I
Tare: 23300 LB Out Scale IN
Net: 27440 LB

Truck: BURGPENA
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

AUG 3 1 2020

Grid: C
Comment: SOILS/CONTAMINATED SOILS
PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED S(	13.72	Ton	$63.75/TON	$874.65
NA/Not Applicable	RECY CM AR/Community recy	13.72	Ton	$2.00/TON	$27.44

Total Amount: $902.09
Check # 1646: $902.09

Driver: _____

Deputy Weighmaster: _____
DAC

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 826348
Date: 8/29/2020
Time: 16:21:09 - 16:31:23

		Scale	
Gross:	51380 LB	In	Scale ARL I
Tare:	23260 LB	Out	Scale IN
Net:	28120 LB		

Truck: BURGPENA
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

AUG 3 1 2020

Grid: C
Comment: SOILS/CONTAMINATED SOILS
PO: CA20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED S(	14.06	Ton	$63.75/TON	$896.33
NA/Not Applicable	RECY CM AR/Community recy	14.06	Ton	$2.00/TON	$28.12

Total Amount: $924.45
Check # 1646: $924.45

Driver: _____

Deputy Weighmaster: _____
DAC

ARL
1111 E 56th Ave
Anchorage, AK 99518

AUG 3 1 2020

Ticket: 826086
Date: 8/29/2020
Time: 09:03:54 - 09:15:56
Scale
Gross: 51260 LB In Scale ARL I
Tare: 22800 LB Out Scale IN
Net: 28460 LB

Truck: PENARED
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUST(

Comment:

PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED S(	14.23	Ton	$63.75/TON	$907.16
NA/Not Applicable	RECY CM AR/Community recy	14.23	Ton	$2.00/TON	$28.46

Total Amount: $935.62
Check # 1646: $935.62

Driver: _____

Deputy Weighmaster: _____
DAC

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 826147
Date: 8/29/2020
Time: 10:49:05 - 11:01:50
Scale

AUG 3 1 2020

Truck: REDPENA
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

Gross: 49020 LB In Scale ARL I
Tare: 22780 LB Out Scale IN
Net: 26240 LB

Grid: C
Comment: SOILS/CONTAMINATED SOILS
PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED S(	13.12	Ton	$63.75/TON	$836.40
NA/Not Applicable	RECY CM AR/Community recy	13.12	Ton	$2.00/TON	$26.24

Total Amount: $862.64
Check # 1646: $862.64
Change: $0.00

Driver: _____

Deputy Weighmaster: _____
DAC

ARL
1111 E 56th Ave
Anchorage, AK 99518

AUG 3 1 2020

Ticket: 826205
Date: 8/29/2020
Time: 12:30:08 - 12:44:26

			Scale
Gross:	50060 LB	In	Scale ARL I
Tare:	22740 LB	Out	Scale IN
Net:	27320 LB		

Truck: PENARED
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

Grid: C
Comment: SOILS/CONTAMINATED SOILS
PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED SC	13.66	Ton	$63.75/TON	$870.83
NA/Not Applicable	RECY CM AR/Community recy	13.66	Ton	$2.00/TON	$27.32

Total Amount:	$898.15
Check # 1646:	$898.15
Change:	$0.00

Driver: _____

Deputy Weighmaster: _____
DAC

ARL
1111 E 56th Ave
Anchorage, AK 99518

AUG 3 1 2020

Ticket: 826248
Date: 8/29/2020
Time: 13:28:55 - 13:41:13
Scale
Gross: 48500 LB In Scale ARL I
Tare: 22800 LB Out Scale IN
Net: 25700 LB

Truck: REDPENA
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

Grid: C
Comment: SOILS/CONTAMINATED SOILS
PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED SC	12.85	Ton	$63.75/TON	$819.19
NA/Not Applicable	RECY CM AR/Community recy	12.85	Ton	$2.00/TON	$25.70

Total Amount: $844.89
Check # 1646: $844.89
Change: $0.00

Driver: _____

Deputy Weighmaster: _____
DAC

ARL
1111 E 56th Ave
Anchorage, AK 99518

AUG 3 1 2020

Ticket: 826351
Date: 8/29/2020
Time: 16:27:46 - 16:43:32
Scale
Gross: 42420 LB In Scale ARL I
Tare: 22680 LB Out Scale IN
Net: 19740 LB

Truck: REDPENA
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

Grid: C
Comment: SOILS/CONTAMINATED SOILS
PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED SC	9.87	Ton	$63.75/TON	$629.21
NA/Not Applicable	RECY CM AR/Community recy	9.87	Ton	$2.00/TON	$19.74

Total Amount: $648.95
Check # 1646: $648.95
Change: $0.00

Driver: _____

Deputy Weighmaster: _____
DAC

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 826067
Date: 8/29/2020
Time: 08:21:37 - 08:41:07

		Scale	
Gross:	45180 LB	In	Scale ARL I
Tare:	23800 LB	Out	Scale IN
Net:	21380 LB		

Truck: PENABLU
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

AUG 3 1 2020

Grid: C
Comment: SOILS/CONTAMINATED SOILS PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED SC	10.69	Ton	$63.75/TON	$681.49
NA/Not Applicable	RECY CM AR/Community recy	10.69	Ton	$2.00/TON	$21.38

Total Amount:	$702.87
Check # 1646:	$702.87
Change:	$0.00

Driver: _____ Deputy Weighmaster: _____
AC

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 826105
Date: 8/29/2020
Time: 09:25:53 - 09:44:48

		Scale	
Gross:	45480 LB	In	Scale ARL I
Tare:	23740 LB	Out	Scale IN
Net:	21740 LB		

Truck: GRYPENA
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUST(

AUG 3 1 2020

Grid: C
Comment: SOILS/CONTAMINATED SOILS PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED S(	10.87	Ton	$63.75/TON	$692.96
NA/Not Applicable	RECY CM AR/Community recy	10.87	Ton	$2.00/TON	$21.74

Total Amount: $714.70
Check # 1646: $714.70

Driver: D.P.

Deputy Weighmaster: DAC

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 826150
Date: 8/29/2020
Time: 10:51:35 - 11:12:34

		Scale	
Gross:	38380 LB	In	Scale ARL I
Tare:	23740 LB	Out	Scale IN
Net:	14640 LB		

AUG 3 1 2020

Truck: GRYPENA
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUST(

Grid: C
Comment: SOILS/CONTAMINATED SOILS
PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED S(	7.32	Ton	$63.75/TON	$466.65
NA/Not Applicable	RECY CM AR/Community recy	7.32	Ton	$2.00/TON	$14.64

Total Amount: $481.29
Check # 1646: $481.29

Driver: D.P.

Deputy Weighmaster: DAC

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 826196
Date: 8/29/2020
Time: 12:03:57 - 12:21:18

		Scale	
Gross:	45820 LB	In	Scale ARL I
Tare:	23660 LB	Out	Scale IN
Net:	22160 LB		

Truck: GRYPENA
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

AUG 3 1 2020

Grid: C
Comment: SOILS/CONTAMINATED SOILS PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED SC	11.08	Ton	$63.75/TON	$706.35
NA/Not Applicable	RECY CM AR/Community recy	11.08	Ton	$2.00/TON	$22.16

Total Amount: $728.51
Check # 1646: $728.51

Driver: _____

Deputy Weighmaster: _____
DAC

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 826231
Date: 8/29/2020
Time: 13:09:22 - 13:22:22
Scale
Gross: 48240 LB In Scale ARL I
Tare: 23640 LB Out Scale IN
Net: 24600 LB

Truck: GRYPENA
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

AUG 3 1 2020

Grid: C
Comment: SOILS/CONTAMINATED SOILS PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED SC	12.30	Ton	$63.75/TON	$784.13
NA/Not Applicable	RECY CM AR/Community recy	12.30	Ton	$2.00/TON	$24.60

Total Amount: $808.73
Check # 1646: $808.73

Driver: _____

Deputy Weighmaster: _____
DAC

ARL
1111 E 56th Ave
Anchorage, AK 99518

Ticket: 826353
Date: 8/29/2020
Time: 16:33:03 - 16:45:13

			Scale
Gross:	40580 LB	In	Scale ARL I
Tare:	23580 LB	Out	Scale IN
Net:	17000 LB		

Truck: GRYPENA
Customer: 1099999999002/SWS CASH WE
Carrier: 07/WEIGHED CASH CUSTC

AUG 3 1 2020

Grid: C
Comment: SOILS/CONTAMINATED SOILS
PO: CS20004

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
NA/Not Applicable	CSOIL I/CONTAMINATED SC	8.50	Ton	$63.75/TON	$541.88
NA/Not Applicable	RECY CM AR/Community recy	8.50	Ton	$2.00/TON	$17.00

Total Amount: $558.88
Check # 1646: $558.88

Driver: _____

Deputy Weighmaster: _____
DAC

ATTACHMENT 4

IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL/ENVIRONMENTAL REPORT

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

Attachment to and part of Report 100478-200.208

Date January 2021
To: Stephl Engineering LLC

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