



**SUSTAINABLE ENVIRONMENT, ENERGY,
HEALTH & SAFETY PROFESSIONAL SERVICES**

January 22, 2015

Sent by email to:
Danielle.duncan@alaska.gov

Danielle Duncan
ADEC
410 Willoughby suite 303
Juneau, Alaska 99803

Accounting Office:
2400 College Rd
Fairbanks, AK 99709
907.452.5688
907.452.5694 Fax

**RE: November 2014 Annual Soil Sampling Assessment
9209 and 9211 Sharon Street
Juneau, Alaska
ADEC File Number: 1513.38.087**

3105 Lakeshore Drive
Suite A106
Anchorage, AK 99517
907.222.2445
907.222.0915 Fax

Ms. Duncan:

NORTECH is pleased to submit this report summarizing the November 2014 Annual Soil Sampling Assessment regarding a former release of home heating oil. The release occurred from an above ground storage tank (AST) system at 9209 and 9211 Sharon Street in Juneau, Alaska (the Site). The annual soil sampling assessment was completed in November, 2014 and is discussed in this document. Of primary concern are contaminated soils in treatment on the east and west sides of the duplex. Figure 1 shows the Location Map, Figure 2 shows the Vicinity Map, and Figure 3 shows the Site map with sampling locations and results.

5438 Shaune Drive
Suite B
Juneau, AK 99801
907.586.6813
907.586.6819 Fax

Background and Objectives

In December 2006, Neil Atkinson contacted **NORTECH** regarding the release of home heating fuel at his duplex located at 9209 and 9211 Sharon Street in Juneau, Alaska (the Site). Due to faulty plumbing, an estimated 200 gallons of fuel on the east side and 30 gallons of fuel on the west side of the duplex were released onto the ground. During the 2009 Site Assessment work, **NORTECH** identified an estimated 250 cubic yards of contaminated soils on the east side of the home, and 75 cubic yards of contaminated soils on the west side of the home. Beginning in the fall of 2009, Mr. Atkinson installed nutrient addition ports on both sides of the home for in-situ treatment of the contaminated soils using high nitrogen fertilizer. Mr. Atkinson has been treating the contaminated soils this way during the non-freezing months of 2009 through 2014.

1623 Mill Bay Rd #5
Kodiak, AK 99615
907.942.7700
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NORTECH has been performing annual Site assessments to characterize how remediation at the Site is progressing. This report presents the most recent soil sampling efforts completed during November 2014.

Field Activities and Methods

NORTECH arrived on Site to assess the 9209 and 9211 Sharon Street property on November 13, 2014. One single level, two family residential property is located on the Site. Site sample locations were determined based

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on historical assessment of the spill area and knowledge of the site. Four samples were taken near the smaller spill area to the west of the duplex in two borings at two depths. Location S1 was sampled at 20 inches and 28 inches below ground surface (bgs). Location S2 was sampled at 24 inches, and water was encountered at 25 inches in both borings.

At the source of the larger spill on the east side of the duplex, two additional samples were collected at locations S3 and S4. All samples were field screened via photoionization detector, with the highest field screening reading from each side of the building used for the laboratory sample. Both locations were sampled at 24 inches bgs to remain above ground water. After assessment of the samples, S1-24, S4-24, and the field duplicate S4B-24 were collected into clean, lab supplied glassware. Samples were placed in a cooler under ice and chilled to $4^{\circ}\text{C} \pm 2^{\circ}$. Samples were transported under a chain of custody to SGS Anchorage for analysis.

Sampling was completed in general accordance with the May 2010 ADEC Draft Field Sampling Guidance. The results are discussed below.

Sample Results with Discussion

Samples collected on the west side of the Site during the 2014 sampling assessment indicate soil conditions that have recovered to pre-spill levels. Neither location read more than 1.2 during headspace field screening analysis. The S1 location was non-detect for DRO and follows a declining trend reflected in the past sampling results.

The collected sample and duplicate at the larger spill area at the east side of the duplex was higher than previous years and is an outlier to the declining trend. The two sample results were 4950 mg/kg and 4440 mg/kg. These results exceed the ADEC cleanup level of 230 mg/kg of DRO in an "Over 40 inch zone".

Sample locations are shown on the attached Site Sketch, and the SGS laboratory report is attached.

All Quality control indicators are within acceptable limits and all sample results are deemed valid.

Conclusions and Recommendations

Contaminated soil on the smaller west side spill have declined below detection limits and are below the ADEC cleanup limits. This area has exhibited a declining trend and was approaching cleanup limits at the last sampling assessment. The area trend and the small spill size at this location lead to a quick remediation and does not require further treatment or monitoring.

The larger spill location on the east side of the duplex was higher than the previous assessment and the results are an outlier in the downward trend. This sample may have been collected in a hot spot, though it still indicates high levels of DRO at deeper soil levels. Further treatment and time are expected to reduce contaminated soil, we expect to collect additional samples from this area in the fall of 2015.



Please contact me, at your earliest convenience if you have any questions about the data presented in the report or the site in general.

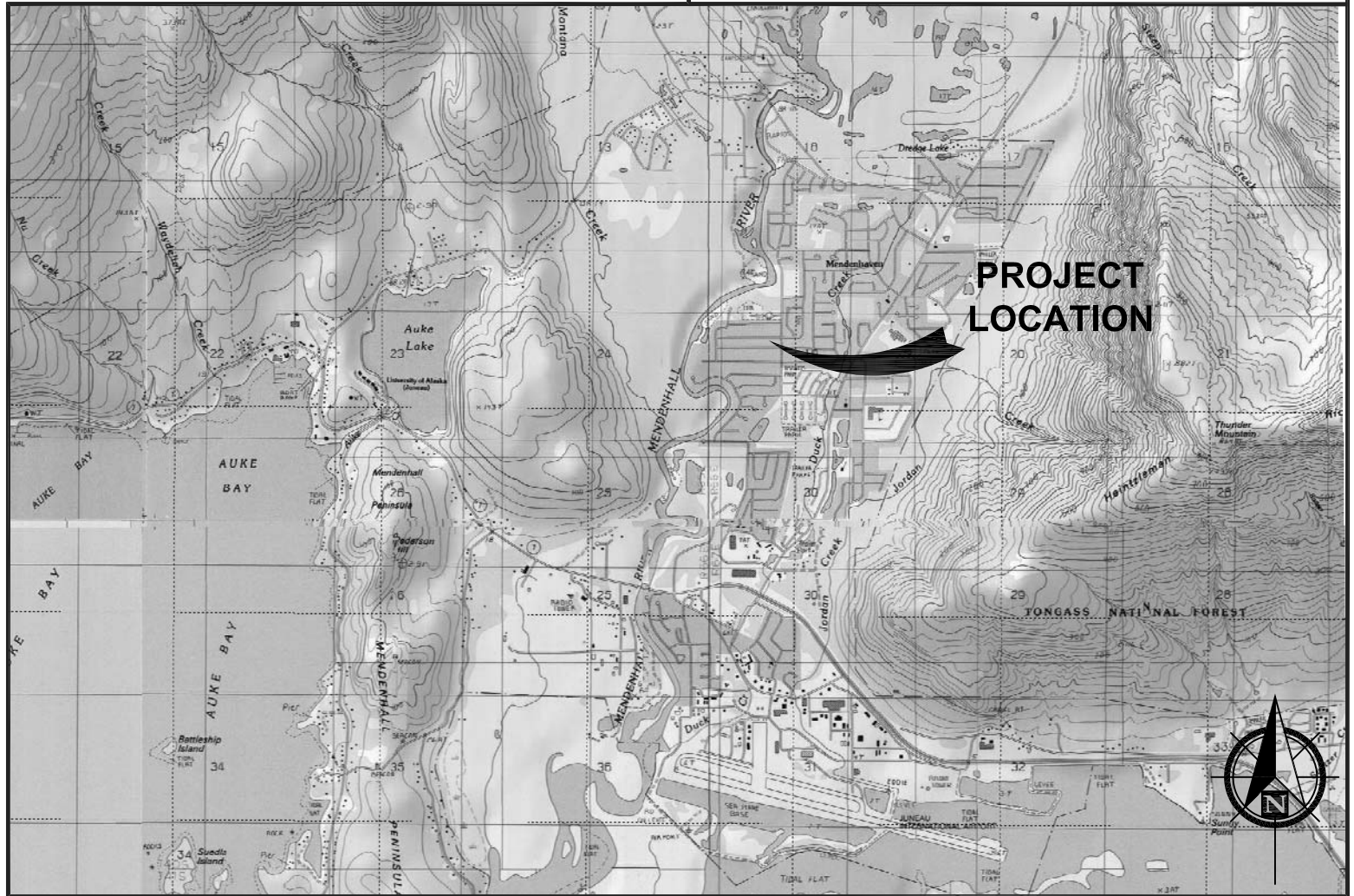
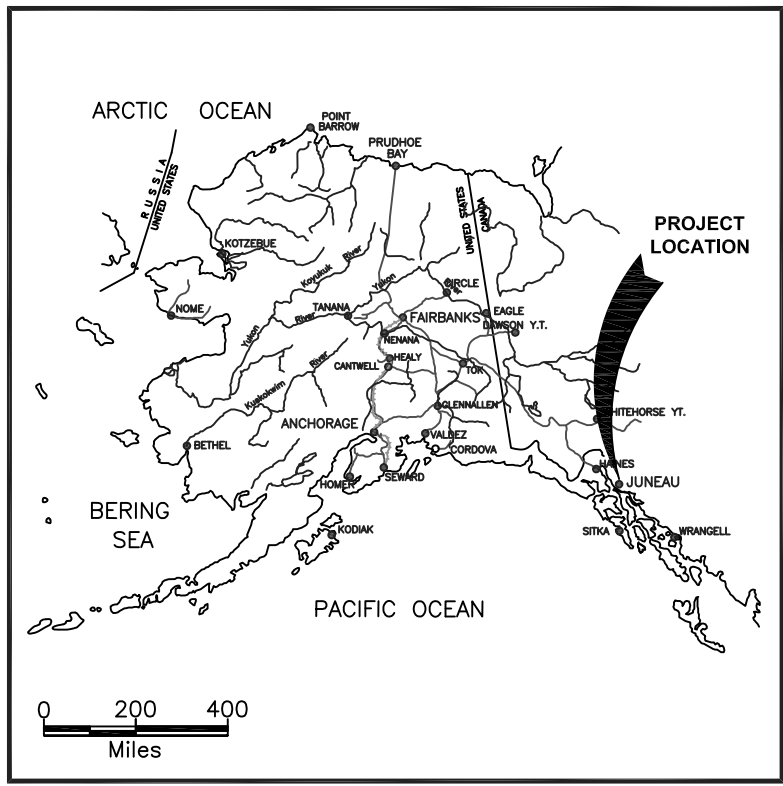
Sincerely,
NORTECH

Thomas Brado
Environmental Specialist

Reviewed By:

Jason Ginter, PMP, CEA
Principal, Environmental Projects Manager

- Attachment 1: Figures
 Figure 1 Location Map
 Figure 2 Site Location
 Figure 3 Site Map with Sampling Locations and Results
- Attachment 2:
 SGS Laboratory Report
 ADEC Lab Review Data Checklist



ENVIRONMENTAL ENGINEERING HEALTH & SAFETY
 2400 College Road, Fairbanks, Alaska 99709 Ph: 907-452-5688
 3105 Lakeshore Dr. Anch, Alaska 99517, Ph: 907-222-2445
 4402 Thane Road, Juneau, Alaska 99801 Ph: 907-586-6813

Location Map
 9209 and 9211 Sharon Street
 Juneau, Alaska

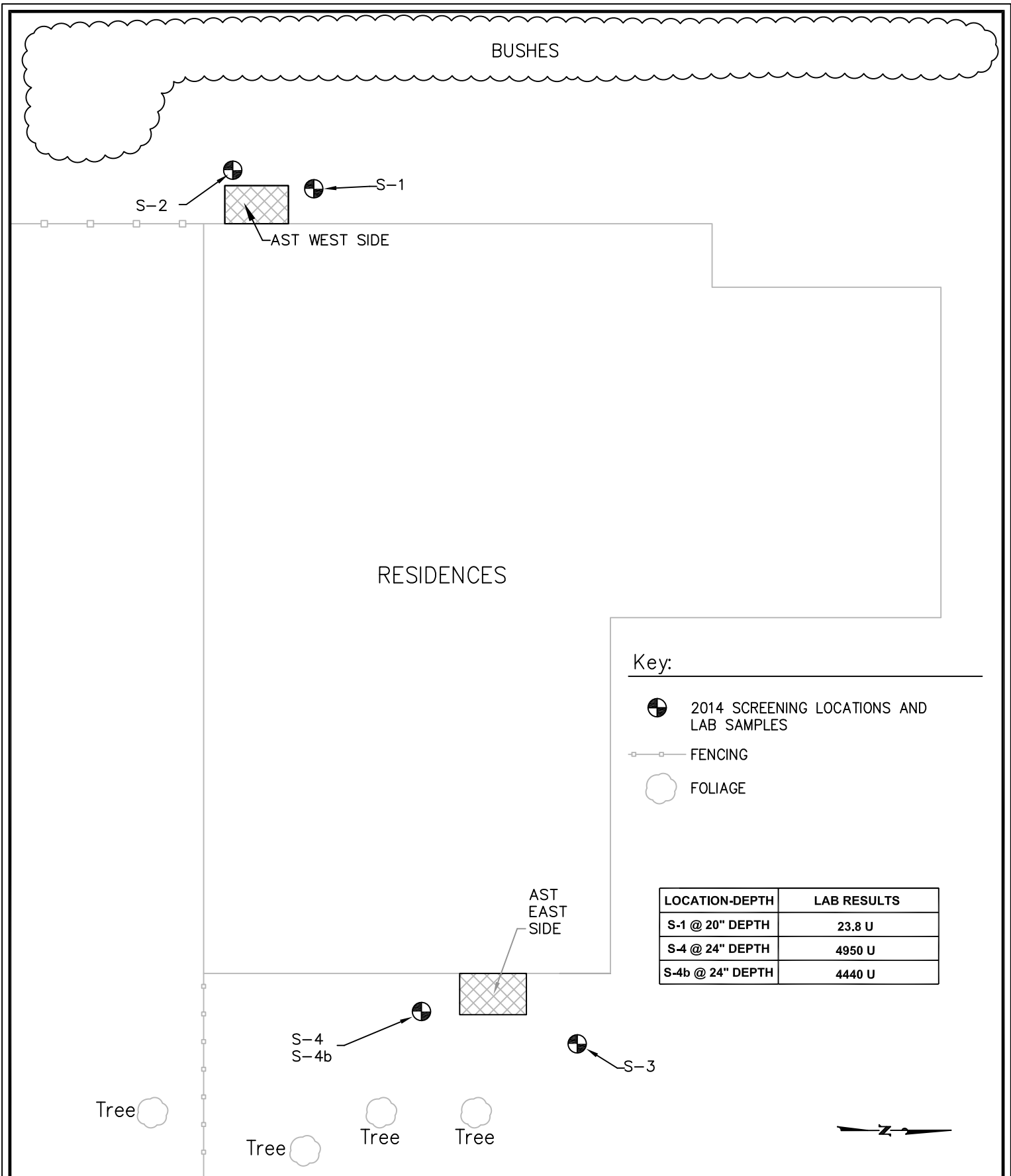
SCALE: 1"=1 mile'	FIGURE: 1
DESIGN: TJ	
DRAWN: FCW	
PROJECT NO: 12-1089	
DWG: 121089a1	
DATE: 2/23/15	



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 4402 Thane Road, Juneau, Alaska 99801 Ph: 907-586-6813

Vicinity Map
 9209 and 9211 Sharon Street
 Juneau, Alaska

SCALE: 1" = 300'	FIGURE: 2
DESIGN: TJ	
DRAWN: FCW	
PROJECT NO: 12-1089	
DWG: 121089a2	
DATE: 2/23/15	



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2014 SITE MAP WITH SAMPLING LOCATIONS
 9209 and 9211 Sharon Street
 Juneau, Alaska

SCALE: 1" = 10'	FIGURE: 3
DESIGN: TJ	
DRAWN: FCW	
PROJECT NO: 14-1157	
DWG: 14-1157a.4	
DATE: 02/23/2015	

Laboratory Report of Analysis

To: Nortech
5438 Shaune Dr, #B
Juneau, AK 99801
(907)250-0731

Report Number: **1145656**

Client Project: **Atkinson**

Dear Jason Ginter,

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

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

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

Sincerely,
SGS North America Inc.



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

Victoria Pennick

2014.11.20

13:56:50 -09'00'

Victoria Pennick
Project Manager
Victoria.Pennick@sgs.com

Date

Case Narrative

SGS Client: **Nortech**
SGS Project: **1145656**
Project Name/Site: **Atkinson**
Project Contact: **Jason Ginter**

Refer to sample receipt form for information on sample condition.

S4-24 (1145656002) PS

AK102 - 5a-Androstane (surrogate) recovery is outside QC criteria due to sample dilution.
AK102 - The pattern is consistent with a weathered middle distillate.

S4B-24 (1145656003) PS

AK102 - 5a-Androstane (surrogate) recovery is outside QC criteria due to sample dilution.
AK102 - The pattern is consistent with a weathered middle distillate.

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

Print Date: 11/19/2014 1:36:04PM

Laboratory Qualifiers

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

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

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

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

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

Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
S1-24	1145656001	11/12/2014	11/13/2014	Soil/Solid (dry weight)
S4-24	1145656002	11/12/2014	11/13/2014	Soil/Solid (dry weight)
S4B-24	1145656003	11/12/2014	11/13/2014	Soil/Solid (dry weight)

<u>Method</u>	<u>Method Description</u>
AK102	Diesel Range Organics (S)
SM21 2540G	Percent Solids SM2540G

Print Date: 11/19/2014 1:36:07PM

Detectable Results Summary

Client Sample ID: **S4-24**
Lab Sample ID: 1145656002
Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	4950	mg/Kg

Client Sample ID: **S4B-24**
Lab Sample ID: 1145656003
Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	4440	mg/Kg



Results of S1-24

Client Sample ID: **S1-24**
Client Project ID: **Atkinson**
Lab Sample ID: 1145656001
Lab Project ID: 1145656

Collection Date: 11/12/14 15:50
Received Date: 11/13/14 16:09
Matrix: Soil/Solid (dry weight)
Solids (%): 83.9
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	23.8 U	23.8	7.38	mg/Kg	1		11/14/14 21:41
Surrogates							
5a Androstane	82.7	50-150		%	1		11/14/14 21:41

Batch Information

Analytical Batch: XFC11683
Analytical Method: AK102
Analyst: AYC
Analytical Date/Time: 11/14/14 21:41
Container ID: 1145656001-A

Prep Batch: XXX32422
Prep Method: SW3550C
Prep Date/Time: 11/14/14 13:27
Prep Initial Wt./Vol.: 30.022 g
Prep Extract Vol: 1 mL

Print Date: 11/19/2014 1:36:09PM



Results of S4-24

Client Sample ID: **S4-24**
Client Project ID: **Atkinson**
Lab Sample ID: 1145656002
Lab Project ID: 1145656

Collection Date: 11/12/14 15:20
Received Date: 11/13/14 16:09
Matrix: Soil/Solid (dry weight)
Solids (%): 88.9
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable</u> <u>Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	4950		446	138	mg/Kg	20		11/17/14 19:42
Surrogates								
5a Androstane	0	*	50-150		%	20		11/17/14 19:42

Batch Information

Analytical Batch: XFC11686
Analytical Method: AK102
Analyst: AYC
Analytical Date/Time: 11/17/14 19:42
Container ID: 1145656002-A

Prep Batch: XXX32422
Prep Method: SW3550C
Prep Date/Time: 11/14/14 13:27
Prep Initial Wt./Vol.: 30.241 g
Prep Extract Vol: 1 mL

Print Date: 11/19/2014 1:36:09PM



Results of S4B-24

Client Sample ID: **S4B-24**
Client Project ID: **Atkinson**
Lab Sample ID: 1145656003
Lab Project ID: 1145656

Collection Date: 11/12/14 16:00
Received Date: 11/13/14 16:09
Matrix: Soil/Solid (dry weight)
Solids (%): 84.6
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	4440		471	146	mg/Kg	20		11/17/14 19:52
Surrogates								
5a Androstane	0	*	50-150		%	20		11/17/14 19:52

Batch Information

Analytical Batch: XFC11686
Analytical Method: AK102
Analyst: AYC
Analytical Date/Time: 11/17/14 19:52
Container ID: 1145656003-A

Prep Batch: XXX32422
Prep Method: SW3550C
Prep Date/Time: 11/14/14 13:27
Prep Initial Wt./Vol.: 30.092 g
Prep Extract Vol: 1 mL

Print Date: 11/19/2014 1:36:09PM



Method Blank

Blank ID: MB for HBN 1676361 [SPT/9492]

Blank Lab ID: 1245465

QC for Samples:

1145656001, 1145656002, 1145656003

Matrix: Soil/Solid (dry weight)

Results by SM21 2540G

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Solids	100			%

Batch Information

Analytical Batch: SPT9492

Analytical Method: SM21 2540G

Instrument:

Analyst: MJN

Analytical Date/Time: 11/13/2014 6:10:00PM

Print Date: 11/19/2014 1:36:11PM

Duplicate Sample Summary

Original Sample ID: 1145651002

Duplicate Sample ID: 1245466

QC for Samples:

1145656001, 1145656002, 1145656003

Analysis Date: 11/13/2014 18:10

Matrix: Soil/Solid (dry weight)

Results by SM21 2540G

<u>NAME</u>	<u>Original ()</u>	<u>Duplicate ()</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	93.7	94.5	0.85	15.00

Batch Information

Analytical Batch: SPT9492

Analytical Method: SM21 2540G

Instrument:

Analyst: MJN

Print Date: 11/19/2014 1:36:12PM



Method Blank

Blank ID: MB for HBN 1676769 [XXX/32422]
Blank Lab ID: 1245582

Matrix: Soil/Solid (dry weight)

QC for Samples:
1145656001, 1145656002, 1145656003

Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	10.0U	20.0	6.20	mg/Kg
Surrogates				
5a Androstane	74.4	60-120		%

Batch Information

Analytical Batch: XFC11683
Analytical Method: AK102
Instrument: HP 6890 Series II FID SV D R
Analyst: AYC
Analytical Date/Time: 11/14/2014 8:51:00PM

Prep Batch: XXX32422
Prep Method: SW3550C
Prep Date/Time: 11/14/2014 1:27:44PM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 1 mL

Print Date: 11/19/2014 1:36:14PM



Blank Spike Summary

Blank Spike ID: LCS for HBN 1145656 [XXX32422]
 Blank Spike Lab ID: 1245583
 Date Analyzed: 11/14/2014 21:01

Spike Duplicate ID: LCSD for HBN 1145656
 [XXX32422]
 Spike Duplicate Lab ID: 1245584
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1145656001, 1145656002, 1145656003

Results by AK102

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	167	165	99	167	157	94	(75-125)	5.10	(< 20)
Surrogates									
5a Androstane	3.33	99.8	100	3.33	95.7	96	(60-120)	4.20	

Batch Information

Analytical Batch: **XFC11683**
 Analytical Method: **AK102**
 Instrument: **HP 6890 Series II FID SV D R**
 Analyst: **AYC**

Prep Batch: **XXX32422**
 Prep Method: **SW3550C**
 Prep Date/Time: **11/14/2014 13:27**
 Spike Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL
 Dupe Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL

Print Date: 11/19/2014 1:36:16PM



SGS North America Inc.
CHAIN OF CUSTODY RECORD

1145656



Locations Nationwide
Alaska Maryland
New Jersey New York
North Carolina Indiana
West Virginia Kentucky
www.us.sgs.com

CLIENT: NORTECH CONTACT: J. GINTER PROJECT NAME: ATKINSON REPORTS TO: J. GINTER INVOICE TO: NORTECH FBX		PHONE NO: 907 586 6813 PROJECT/ PWSID/ PERMIT#: 12-1089 E-MAIL: jginter@notecheng.com QUOTE #: P.O. #:		Section 3 Preservative # C O N T A I N E R S Type C = COMP G = GRAB M = Multi-Incre-mental S = Soils		Section 4 DOD Project? Yes No Cooler ID: Requested Turnaround Time and/or Special Instructions:		Section 5 Relinquished By: (1) Relinquished By: (2) Relinquished By: (3) Relinquished By: (4)		Section 6 Data Deliverable Requirements: Chain of Custody Seal: (Circle) Temp Blank °C: 3.0 / #238 or Ambient [] (See attached Sample Receipt Form)		REMARKS/ LOC ID	
Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.				Page <u>1</u> of <u>1</u>									
Section 1 RESERVED for lab use		DATE mm/dd/yy TIME HH:MM MATRIX/MATRIX CODE		11/12/14 1550 S 11/12/14 1520 S 11/12/14 1600 S		1 6 1 6 1 6		X X X X X X X X X		DEOPYAK102			

[] 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



SAMPLE RECEIPT FORM

Review Criteria:	Condition:	Comments/Action Taken:
Were custody seals intact? Note # & location, if applicable. COC accompanied samples?	Yes No <u>N/A</u> <u>Yes</u> No	<input type="checkbox"/> Exemption permitted if sampler hand carries/delivers.
Temperature blank compliant* (i.e., 0-6°C after CF)? If >6°C, were samples collected <8 hours ago? If <0°C, were all sample containers ice free? Cooler ID: _____ @ <u>4.9</u> w/ Therm.ID: <u>11</u> Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ If samples are received <u>without</u> a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "COOLER TEMP" will be noted to the right. In cases where neither a temp blank <u>nor</u> cooler temp can be obtained, note "ambient" or "chilled."	<u>Yes</u> No Yes No <u>N/A</u> Yes No <u>N/A</u>	<input type="checkbox"/> Exemption permitted if chilled & collected <8 hrs ago. <i>Note: Identify containers received at non-compliant temperature. Use form FS-0029 if more space is needed.</i>
Delivery method (specify all that apply): USPS Lynden <u>AK Air</u> <u>Alert Courier</u> UPS FedEx RAVN C&D Delivery Carlisle Pen Air Warp Speed Other: _____ → For WO# with airbills, was the WO# & airbill info recorded in the Front Counter eLog?	Tracking/AB # ok see attached or N/A <u>Yes</u> No N/A	
→ For samples received with payment, note amount (\$) and whether cash / check / CC (circle one) was received. → For samples received in FBKS , ANCH staff will verify all criteria are reviewed. SRF initiated in FBKS by:		
Were samples received within hold time? Do samples match COC* (i.e., sample IDs, dates/times collected)? Were analyses requested unambiguous?	<u>Yes</u> No N/A <u>Yes</u> No N/A <u>Yes</u> No N/A	<i>Note: Refer to form F-083 "Sample Guide" for hold times. Note: If times differ <1hr, record details and login per COC.</i>
Were samples in good condition (no leaks/cracks/breakage)? Packing material used (specify all that apply): <u>Bubble Wrap</u> Separate plastic bags Vermiculite Other:	<u>Yes</u> No	
Were proper containers (type/mass/volume/preservative*) used? Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples? Were all VOA vials free of headspace (i.e., bubbles ≤6 mm)? Were all soil VOAs field extracted with MeOH+BFB?	<u>Yes</u> No N/A Yes No <u>N/A</u> Yes No <u>N/A</u> Yes No <u>N/A</u>	<input type="checkbox"/> Exemption permitted for metals (e.g., 200.8/6020A).
For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was pH verified and compliant ? If pH was adjusted, were bottles flagged (i.e., stickers)?	Yes No <u>N/A</u> Yes No <u>N/A</u>	
For special handling (e.g., "MI" soils, foreign soils, lab filter for dissolved..., lab extract for volatiles, Ref Lab, limited volume), were bottles/paperwork flagged (e.g., sticker)?	Yes No <u>N/A</u>	
For RUSH/SHORT Hold Time , were COC/Bottles flagged accordingly? Was Rush/Short HT email sent, if applicable?	Yes No <u>N/A</u>	
For SITE-SPECIFIC QC , e.g. BMS/BMSD/BDUP, were containers / paperwork flagged accordingly?	Yes No <u>N/A</u>	
For any question answered "No," has the PM been notified and the problem resolved (or paperwork put in their bin)?	Yes No <u>N/A</u>	SRF Completed by: <u>WLF 11-13-14</u> PM notified: N/A
Was PEER REVIEW of sample numbering/labeling completed?	<u>Yes</u> No N/A	Peer Reviewed by: <u>SLC</u> N/A
Additional notes (if applicable):		

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



Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1145656001-A	No Preservative Required	OK			
1145656002-A	No Preservative Required	OK			
1145656003-A	No Preservative Required	OK			

Container Condition Glossary

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

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



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

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

027 JNU 1351 6856

027-1351 6856

S

Shipper's Name and Address Nortech 2400 College Rd Fairbanks, AK 99709 USA Tel: 9074525688		Shipper's Account Number 27442126076 Customer's ID Number 10588		Not Negotiable Air Waybill Issued By <i>Alaska Air Cargo</i> ALASKA AIRLINES & HORIZON AIR P.O. BOX 68900 SEATTLE, WA 98168 800-225-2752 ALASKACARGO.COM			
Consignee's Name and Address SGS North America Inc 200 W Potter Drive Anchorage, AK 99518 USA Tel: 9075622343		Consignee's Account Number 27400215947		Also notify Tel:			
Issuing Carrier's Agent and City Agent's IATA Code Account No.		Accounting Information Nortech 2400 College Rd Fairbanks, AK 99709 USA 10588 1145656 		SRN/JENNIFER GoldStreak			
Airport of Departure (Addr. of First Carrier) and Requested Routing Juneau		Currency USD PX X X Declared Value For Carriage NVD Declared Value For Customs NCV		Amount of Insurance XXX			
To By First Carrier ANC Alaska Airlines		To / By		To / By			
Airport of Destination Anchorage		Flight/Date AS 065/13		Flight/Date			
Handling Information 907 562 2343 SCI							
No of Pieces	Gross Weight	kg lb	Commodity Item No.	Chargeable Weight	Rate / Charge	Total	Nature and Quantity of Goods (Incl. Dimensions or Volume)
1	9.0	L		9.0		AS AGREED	SOIL SAMPLES Dims: 9 x 12 x12 x 1
1	9.0					AS AGREED	GSX Volume: 0.750
Prepaid		Weight Charge		Collect		Other Charges	
AS AGREED						MYC 1.26 SCC 2.00 XBC 0.00	
		Valuation Charge					
		Tax					
Total Other Charges Due Agent						Shipper certifies that the particulars on the face hereof are correct and that insofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulations. I consent to the inspection of this cargo.	
Total Other Charges Due Carrier						For: Nortech Signature of Shipper or his Agent 	
						<input checked="" type="checkbox"/> THIS SHIPMENT DOES NOT CONTAIN DANGEROUS GOODS <input type="checkbox"/> THIS SHIPMENT DOES CONTAIN DANGEROUS GOODS	
Total Prepaid		Total Collect				13 Nov 2014 09:56 Executed On (Date)	
AS AGREED						Juneau at (Place)	
						Alaska Airlines Signature of Issuing Carrier or its Agent	
						027-1351 6856	

Alert Expeditors Inc.
DBA/Petroleum Courier Service

#350016

Citywide Delivery • 440-3351
8421 Flamingo Drive • Anchorage, Alaska 99502

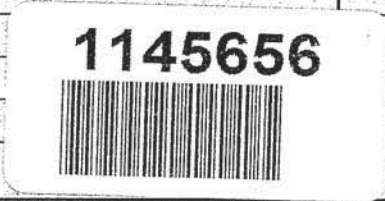
Date 11/13/14
From Nortech

To 565

Collect <input type="checkbox"/>	Prepay <input type="checkbox"/> Account <input type="checkbox"/>	Advance Charges <input type="checkbox"/>
Job #	PO#	

1 Cooler

GSX-1351 6856



Shipped Signature

Received By: [Signature]

Total Charge 10.09

Laboratory Data Review Checklist

Completed by:	Thomas Brado		
Title:	Environmental Specialist	Date:	2/2/2015
CS Report Name:	2014 Annual Soil Sampling 9209 & 9211 Sharon St.	Report Date:	2/2/2015
Consultant Firm:	NORTECH, Inc.		
Laboratory Name:	SGS Anchorage	Laboratory Report Number:	
ADEC File Number:	1513.38.087	ADEC RecKey Number:	

1. Laboratory

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

Yes No NA (Please explain.) Comments:

b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

Yes No NA (Please explain) Comments:

None transferred

2. Chain of Custody (COC)

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

Yes No NA (Please explain) Comments:

b. Correct analyses requested?

Yes No NA (Please explain) Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ} \text{C}$)?

Yes No NA (Please explain) Comments:

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

Yes No NA (Please explain) Comments:

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

Yes No NA (Please explain) Comments:

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

Yes No NA (Please explain) Comments:

No discrepancies

e. Data quality or usability affected? (Please explain)

Comments:

Not affected

4. Case Narrative

a. Present and understandable?

Yes No NA (Please explain) Comments:

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

Yes No NA (Please explain) Comments:

Surrogate recover outside QC criteria due to sample dilution

c. Were all corrective actions documented?

Yes No NA (Please explain) Comments:

No corrective action

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

Comments:

No affect.

5. Samples Results

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

Yes No NA (Please explain)

Comments:

b. All applicable holding times met?

Yes No NA (Please explain)

Comments:

c. All soils reported on a dry weight basis?

Yes No NA (Please explain)

Comments:

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

Yes No NA (Please explain)

Comments:

e. Data quality or usability affected? (Please explain)

Comments:

Not affected

6. QC Samples

a. Method Blank

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

Yes No NA (Please explain)

Comments:

ii. All method blank results less than PQL?

Yes No NA (Please explain)

Comments:

iii. If above PQL, 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 (Please explain) Comments:

None affected

v. Data quality or usability affected? (Please explain)

Comments:

Not affected

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

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

Yes No NA (Please explain) Comments:

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

Yes No NA (Please explain) Comments:

No metals analysis

iii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes No NA (Please explain) Comments:

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

Yes No NA (Please explain) Comments:

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

Comments:

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

Yes No NA (Please explain) Comments:

None affected

vii. Data quality or usability affected? (Please explain) Comments:

Not affected

c. Surrogates - Organics Only

i. Are surrogate recoveries reported for organic analyses - field, QC and laboratory samples?

Yes No NA (Please explain) Comments:

ii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

Yes No NA (Please explain) Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

Yes No NA (Please explain) Comments:

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

Comments:

Not affected, results over cleanup limits, site not subject to closure.

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

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

Yes No NA (Please explain.) Comments:

No volatile samples

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

Yes No NA (Please explain.) Comments:

No trip blank.

iii. All results less than PQL?

Yes No NA (Please explain.)

Comments:

iv. If above PQL, what samples are affected?

Comments:

v. Data quality or usability affected? (Please explain.)

Comments:

e. Field Duplicate

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

Yes No NA (Please explain.)

Comments:

ii. Submitted blind to lab?

Yes No NA (Please explain.)

Comments:

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

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

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Yes No NA (Please explain.)

Comments:

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

Yes No NA (Please explain.)

Comments:

f. Decontamination or Equipment Blank (if applicable)

Yes No NA (Please explain)

Comments:

No decontamination or equipment blank

i. All results less than PQL?

Yes No NA (Please explain)

Comments:

ii. If above PQL, what samples are affected?

Comments:

iii. Data quality or usability affected? (Please explain.)

Comments:

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

a. Defined and appropriate?

Yes No NA (Please explain)

Comments:

Reset Form