ALTA GEOSCIENCES, Inc.
Environmental & Geotechnical Solutions

2020 Maltby Road, Suite 7-197
Bothell, Washington 98021
Phone: 206.979.8282

October 21, 2021

Ms. Evonne Reese
Alaska Department of Environmental Conservation
610 University Ave.
Fairbanks, AK 99709-3643

Re: **AT&T Fairbanks Warehouse Site**
2021 Groundwater Monitoring Report
ADEC File No. 100.38.170

Dear Ms. Reese:

This letter report summarizes the results of groundwater monitoring performed at the AT&T Fairbanks Warehouse Site located at 704-30th Avenue in Fairbanks, Alaska. Monitoring well MW-7 was sampled on October 4, 2021. A field duplicate sample was also collected. Samples were submitted for laboratory analysis of diesel-range organics (DRO). The activities and results of the sampling are described below.

This work was performed, and this document prepared by ALTA Geosciences on behalf of Avangrid Renewables Holdings, Inc., which is conducting investigation and remediation at this site.

The depth to water and the total depth of the well were first measured and the well volume was calculated. The depth of water was measured as 7.27 feet below ground surface, approximately one foot deeper than in 2019. The well was sampled using a submersible centrifugal pump. Field parameters were monitored during purging at five-minute intervals and included depth to water, temperature, pH, and conductivity. Purging was continued until monitored parameters stabilized within allowable limits as shown on the attached *Groundwater Sampling Field Log*.

The parent sample (FBKS-MW-01) and a duplicate (identified as FBKS-Dup-1) were each collected and placed in laboratory supplied 250-ml amber bottles preserved with hydrochloric acid for DRO analysis. The samples were delivered immediately to the SGS facility in Fairbanks. Note that the sample was incorrectly identified on the chain of custody form and sample labels as coming from MW-01, rather than MW-07. MW-01 was decommissioned many years ago and discussions with the sampling technician indicated that this was a labelling error.

SGS reported the analytical results under lab report 1216667. The sample contained 0.959 mg/L DRO and the duplicate sample contained 0.797 mg/L DRO, both of which are significantly below the DRO groundwater cleanup criteria of 1.5 mg/L (see Table 1).

The quality assurance review included, where appropriate, evaluation of holding times, blanks, matrix spike (MS) and laboratory control sample (LCS) recoveries, duplicate sample relative percent differences (RPDs), reporting limits, and overall assessment of data in the sample. No significant QA anomalies were noted. All data are considered valid and useable for the intended purpose.

The laboratory report and the ADEC *Laboratory Data Review Checklist* are attached, as are the field sampling field notes. The historical analytical data from well MW-7 are summarized in the attached Table 1.

As described in the determination of *"Cleanup Complete-Institutional Controls"* from ADEC dated June 24, 2010, groundwater monitoring is to be continued until two successive monitoring events meet the cleanup criteria. During the 2019 groundwater monitoring event, the sample contained 1.00 mg/L DRO and the duplicate sample contained 0.940 mg/L DRO. Therefore, further groundwater monitoring will not be performed at this site. All other institutional controls will remain in effect.

With the submittal of this groundwater monitoring report, we are also proposing to decommission well MW-07 in accordance with ADEC criteria as described in "*Monitoring Well Guidance*" (ADEC, September 2013).

Please do not hesitate to contact me if you have questions concerning this project.

Sincerely,

ALTA Geosciences Inc.

Alex Tula, L.G.
Principal Consultant

Attachments:

Table 1 - Summary of analytical data, Fairbanks Warehouse Site
Groundwater Sampling Field Log
SGS Lab Report 1216667
ADEC Laboratory Data Review Checklist

CC: Ms. Kristy Abel; Avangrid Renewables Holdings, Inc.
Mr. Greg Rainwater; AT&T

Table 1 - Summary of groundwater analytical data, Monitoring Well MW-7 (µg/L except as noted)

Duplicate samples	Lab ID	Sample Date	DRO (mg/L)	Benzene	Toluene	Ethylbenzene	Xylenes
ADEC criteria			1.5	4.6	1100	15	190
	AQH0078-04	15-Aug-07	1.23	--	--	--	--
	10826280-01	23-Jun-08	**5.06 J**	--	--	--	--
	10939070-08	2-Jul-09	**2.01**	--	--	--	--
	11068260-01	8-Oct-10	**2.31**	--	--	--	--
	11185900-01	29-Jul-11	**1.52 J**	1.92 J	2.00 U	7.91 J	12.44 J
*	11185900-02	29-Jul-11	**2.13 J**	2.83 J	2.00 U	12.4 J	19.26 J
	1138549-01	4-Oct-13	1.41 J	4.65 J	1.56	25.8	27.65
*	1138549-04	4-Oct-13	**1.96 J**	4.42	4.42	24.2	24.94
	1158283-01	15-Jul-15	**3.21**	--	--	--	--
*	1158283-02	15-Jul-15	**3.29**	--	--	--	--
	1178068-01	14-Jul-17	**2.83**	--	--	--	--
*	1178068-02	14-Jul-17	**2.71**	--	--	--	--
	1199743-01	8-Sep-19	1.00	--	--	--	--
*	1199743-02	8-Sep-19	0.94	--	--	--	--
	1216667-01	4-Oct-21	0.959	--	--	--	--
*	1216667-02	4-Oct-21	0.797	--	--	--	--

* Duplicate sample of MW-7.
-- Not analyzed.
J Estimated concentration.
U The analyte was not detected at the reporting limit shown
"**BOLD**" indicates result exceeds ADEC criteria

ALTA GEOSCIENCES, Inc.

LOW-FLOW GROUNDWATER SAMPLING FIELD LOG

Project/Phase: Fairbanks ~~TOK~~ JY	WELL NO.: MW-07
Date: 10/4/21 By: JT	WELL DIAM.: 2 in
Analyses: DRO	TOTAL DEPTH: 14.15
Volume purged: 4 gallons	QA SAMPLES: DUP-1 @ 1300

Time	DTW (ft)	ORP (mv)	Sp Cond (uS/cm)	pH	Temp. deg. C	Turbidity (ntu)	Purge Rate (gph)	Comments
Stabilization goals>	0.33 ft	+/- 3%	+/- 3%	+/- 0.1	+/- 1	<5	8 gph	PO
1340	7.27	START					8	
1345	7.31	195.0	0.691	6.13	4.85	966	8	2.27
1350	7.31	179	0.674	6.31 ~~5.80~~	5.00	157	8	1.97
1355	7.33	171	0.666	6.39	5.90	42.2	8	1.08
1400	7.33	163	0.661	6.47	5.86	17.4	8	0.69
1405	7.33	158	0.659	6.54	5.93	9.43	8	0.51
1410	7.33	160	0.660	6.57	5.98	4.98	8	0.43
1415	collected Sample							

Flow meter conversions: 1.0 L/min = 16 gph 0.5 L/min = 8 gph 0.2 L/min = 3.2 gph

Optional parameters: TOTAL DEPTH, ORP, VOLUME PURGED (if flow rate monitored)

Other comments:

Laboratory Report of Analysis

To: ALTA Geosciences, Inc.
2020 Maltby Rd Ste 7 #197
Bothell, WA 98021

Report Number: **1216667**

Client Project: **Fairbanks AT&T Warehouse**

Dear Alex Tula,

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 Chuck 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.

_____

Chuck Homestead Date
Project Manager
Charles.Homestead@sgs.com

SGS North America Inc. 200 West Potter Drive, Anchorage, AK 99518
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Case Narrative

SGS Client: **ALTA Geosciences, Inc.**
SGS Project: **1216667**
Project Name/Site: **Fairbanks AT&T Warehouse**
Project Contact: **Alex Tula**

Refer to sample receipt form for information on sample condition.

*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
FBKS-MW-01	1216667001	10/04/2021	10/07/2021	Water (Surface, Eff., Ground)
FBKS-Dup-1	1216667002	10/04/2021	10/07/2021	Water (Surface, Eff., Ground)

Method	Method Description
AK102	DRO Low Volume (W)

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Detectable Results Summary

Client Sample ID: **FBKS-MW-01**
Lab Sample ID: 1216667001
Semivolatile Organic Fuels

Parameter	Result	Units
Diesel Range Organics	0.959	mg/L

Client Sample ID: **FBKS-Dup-1**
Lab Sample ID: 1216667002
Semivolatile Organic Fuels

Parameter	Result	Units
Diesel Range Organics	0.797	mg/L

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Results of **FBKS-MW-01**

Client Sample ID: **FBKS-MW-01**
Client Project ID: **Fairbanks AT&T Warehouse**
Lab Sample ID: 1216667001
Lab Project ID: 1216667

Collection Date: 10/04/21 14:15
Received Date: 10/07/21 08:50
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.959		0.625	0.208	mg/L	1		10/11/21 18:59
Surrogates								
5a Androstane (surr)	88.9		50-150		%	1		10/11/21 18:59

Batch Information

Analytical Batch: XFC16111
Analytical Method: AK102
Analyst: IVM
Analytical Date/Time: 10/11/21 18:59
Container ID: 1216667001-A

Prep Batch: XXX45699
Prep Method: SW3520C
Prep Date/Time: 10/08/21 15:46
Prep Initial Wt./Vol.: 240 mL
Prep Extract Vol: 1 mL

Print Date: 10/15/2021 3:25:57PM

Results of **FBKS-Dup-1**

Client Sample ID: **FBKS-Dup-1**
Client Project ID: **Fairbanks AT&T Warehouse**
Lab Sample ID: 1216667002
Lab Project ID: 1216667

Collection Date: 10/04/21 13:00
Received Date: 10/07/21 08:50
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.797		0.612	0.204	mg/L	1		10/11/21 19:09
Surrogates								
5a Androstane (surr)	72.5		50-150		%	1		10/11/21 19:09

Batch Information

Analytical Batch: XFC16111
Analytical Method: AK102
Analyst: IVM
Analytical Date/Time: 10/11/21 19:09
Container ID: 1216667002-A

Prep Batch: XXX45699
Prep Method: SW3520C
Prep Date/Time: 10/08/21 15:46
Prep Initial Wt./Vol.: 245 mL
Prep Extract Vol: 1 mL

Print Date: 10/15/2021 3:25:57PM

Method Blank

Blank ID: MB for HBN 1826759 [XXX/45699]
Blank Lab ID: 1640995

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1216667001, 1216667002

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	0.300U	0.600	0.200	mg/L
Surrogates				
5a Androstane (surr)	76.1	60-120		%

Batch Information

Analytical Batch: XFC16111
Analytical Method: AK102
Instrument: Agilent 7890B R
Analyst: IVM
Analytical Date/Time: 10/11/2021 4:51:00PM

Prep Batch: XXX45699
Prep Method: SW3520C
Prep Date/Time: 10/8/2021 3:46:28PM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Print Date: 10/15/2021 3:25:59PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1216667 [XXX45699]
Blank Spike Lab ID: 1640996
Date Analyzed: 10/11/2021 17:01

Spike Duplicate ID: LCSD for HBN 1216667 [XXX45699]
Spike Duplicate Lab ID: 1640997
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1216667001, 1216667002

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	20	19.2	96	20	18.8	94	(75-125)	2.00	(< 20)
Surrogates									
5a Androstane (surr)	0.4		101	0.4		100	(60-120)	1.00	

Batch Information

Analytical Batch: **XFC16111**
Analytical Method: **AK102**
Instrument: **Agilent 7890B R**
Analyst: **IVM**

Prep Batch: **XXX45699**
Prep Method: **SW3520C**
Prep Date/Time: **10/08/2021 15:46**
Spike Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL
Dupe Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL

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CHAIN OF CUSTODY RECORD

P# 338622 COC

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Page 1 of 1

Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.

Section 1

CLIENT:	Alta Geosciences, Inc.		
CONTACT:	Jeremy Yancey	PHONE #:	907-252-8366
PROJECT NAME:	Fairbanks AT&T warehouse	PROJECT/ PWSID/ PERMIT#:	
REPORTS TO:	Alex Tula	E-MAIL:	atula@altageo.com
		Profile #:	
INVOICE TO:	Alta Geosciences, Inc.	QUOTE #:	
		P.O. #:	

Section 2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	# CONTAINERS	Comp Grab MI (Multi-incremental)	Preservative: HCl	Analysis*: DRO	Analysis*: 1216667	REMARKS/LOC ID
1AD	FBKS-MW-01	10/4/21	1415	water	2	Grab		2		
2AD	FBKS-Dup-1	10/4/21	1300	water	2	Grab		2		

NOTE: *The following analyses require specific method and/or compound list: BTEX, Metals, PFAS

Section 5

	Date	Time	
Relinquished By: (1)	10/6/21	1130	Received By:
Relinquished By: (2)	10/6/21	1500	Received By:
Relinquished By: (3)			Received By:
Relinquished By: (4)	10/7/21	9:50	Received For Laboratory By:

Section 4

DOD Project? Yes No

Data Deliverable Requirements:

Cooler ID:

Requested Turnaround Time and/or Special Instructions:

Temp Blank °C: 5.2 or Ambient [ ]

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Delivery Method: Hand Delivery[ ] Commerical Delivery[ ]

http://www.sgs.com/terms-and-conditions 1F, 1B

e-Sample Receipt Form FBK

SGS Workorder #: **Alta Geo** | Alta Geo

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**	
COC accompanied samples?	**Yes**	
DOD: Were samples received in COC corresponding coolers?	**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 @ 5.2 °C Therm. ID: D62
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:
If >6°C, were samples collected <8 hours ago?		
If <0°C, were sample containers ice free?		
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.
Do samples **match COC**** (i.e.,sample IDs,dates/times collected)?	**N/C**	
**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 samples in good condition (no leaks/cracks/breakage)?	**Yes**	
Were analytical requests clear? (i.e., method is specified for analyses with multiple option for analysis (Ex: BTEX, Metals)	**Yes**	
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	**N/A**	
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	**N/A**	
Were all soil VOAs field extracted with MeOH+BFB?	**N/A**	
For Rush/Short Hold Time, was RUSH/Short HT email sent?	**N/A**	
Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.		

Additional notes (if applicable):

SGS Profile #		0

e-Sample Receipt Form

SGS Workorder #:	1216667	1216667

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
Chain of Custody / Temperature Requirements		N/A Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	Yes	1F ,1B
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 @ 5.2 °C Therm. ID: D52
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?	N/A	
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	N/A	
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
1216667001-A	HCL to pH < 2	OK			
1216667001-B	HCL to pH < 2	OK			
1216667002-A	HCL to pH < 2	OK			
1216667002-B	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.

Laboratory Data Review Checklist

Completed by:	Alex Tula		
Title:	Environmental Geologist	Date:	Oct. 22, 2021
CS Report Name:	2021 GROUNDWATER MONITORING REPORT FAIRBANKS WAREHOUSE SITE	Report Date:	Oct. 15, 2021
Consultant Firm:	Alta Geosciences, Inc.		
Laboratory Name:	SGS North America, Inc.	Laboratory Report Number:	1216667
ADEC File Number:	100.38.170	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:

Samples were not subcontracted.

2. Chain of Custody (COC)

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

(•) Yes ( ) No ( ) NA (Please explain) Comments:

b. Correct analyses requested?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

3. Laboratory Sample Receipt Documentation

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

(•) Yes ( ) No ( ) NA (Please explain) Comments:

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:

No data quality or usability was affected by sample receipt.

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:

c. Were all corrective actions documented?

(•) Yes ( ) No ( ) NA (Please explain) Comments:

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

Comments:

No data quality or usability was affected by the case narrative.

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:

No soil samples were included.

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:

No data quality or usability was 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:

NA

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

○ Yes ○ No ◉ NA (Please explain) Comments:

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

No data quality or usability was affected by the method blanks.

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:

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:

No flagging was necessary.

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

No data quality or usability was affected by accuracy or precision.

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:

No data quality or usability was affected by the surrogates.

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:

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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:

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)

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

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:

RPD=18%

f. Decontamination or Equipment Blank (if applicable)

○ Yes ◉ No ○ NA (Please explain) Comments:

i. All results less than PQL?

○ Yes ○ No ◉ NA (Please explain) Comments:

No equipment blank was submitted.

ii. If above PQL, what samples are affected?

Comments:

NA

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

Comments:

No data quality or usability was affected.

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

a. Defined and appropriate?

◉ Yes ○ No ○ NA (Please explain) Comments:

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