October 3, 2023
1737-02

AK Cornerstone LLC
320 Santa Claus Lane
North Pole, Alaska 99705

Attention: **Mike Vansickle**
Owner

Re: Annual Groundwater Sampling, ADEC File No. 102.26.007
Cornerstone Mall

Dear Mr. Vansickle:

3-Tier Alaska (3TA) is pleased to present our letter summarizing the data obtained from the groundwater sampling event conducted on August 21, 2023 at the Cornerstone Mall (Figure 1). The purpose for sampling is to monitor contaminants on site annually as is stipulated in the June 19, 2007 Conditional Closure letter from the Alaska Department of Environmental Conservation (ADEC).

Groundwater Sampling
On August 21, 2023, 3TA personnel gauged the depth to groundwater and total well depth to determine the volume of water present in MW-1. A minimum of three well volumes of groundwater was purged prior to sample collection. 3TA personnel used a peristaltic pump to purge and retrieve samples from MW-1. The groundwater sample was analyzed for benzene, toluene, ethylbenzene, xylenes (BTEX) by EPA 8260D.

For the detailed analytical results refer to the attached SGS North America Inc. report. The ADEC Laboratory Data Review Checklist was completed and is attached to this report, in addition to the field notes and historical data. Since only one well was sampled, no decontamination of equipment was required between samples.

Discussion
Results from the August 21, 2023 sampling event showed a slight increase in the concentrations of the detected analyte (benzene). Benzene was detected at 1.24 ug/L in the parent sample, and 1.40 ug/L in the duplicate, both well below the applicable cleanup level. Ethylbenzene, xylenes, and toluene were not detected in the parent sample or duplicate. The trip blank results were all non-detect for BTEX constituents. Sampling results from 2008 through 2023 are presented in the following table:

GROUNDWATER ANALYTICAL RESULTS

Monitoring Well ID	Sample Date	DTW (Feet)	DRO	GRO	Benzene	Toluene	Ethylbenzene	Total Xylene	Trichlorofluoromethane
		MCL	1.5 mg/L	2.2 mg/L	0.0046 mg/L	1.1 mg/L	0.7 mg/L	0.190 mg/L	5.2 mg/L
MW-1	11/19/08	14.94	0.906	0.981	**0.153**	0.00312	0.0125	0.03077	NA
MW-1	09/29/09	14.94	0.63	1.39	**0.154**	ND	0.0061	0.0139	NA
MW-1	10/05/10	15.60	0.139	1.48	**0.278**	ND	0.00742	0.0162	NA
MW-1	09/01/11	13.90	0.129	0.556	**0.177**	ND	0.00632	0.0161	NA
MW-1	08/09/12	14.90	0.168	0.480	**0.0532**	ND	0.004J	0.0077	NA
MW-2*	08/09/12	14.90	0.160	0.479	**0.0558**	ND	0.0039J	ND	NA
MW-1	08/05/13	15.40	0.127J	0.417	**0.0567**	0.00077J	0.00167J	0.00478J	NA
MW-2*	08/05/13	15.40	0.124J	0.412	**0.0584**	0.00074J	0.00173J	0.0048J	NA
MW-1	08/26/14	12.53	0.0609J	0.399	**0.0411**	ND	0.00156J	0.00538	NA
MW-2*	08/26/14	12.53	0.0641J	0.291	**0.0412**	ND	0.00159J	0.00542	NA
MW-1	08/28/15	14.05	N/A	N/A	**0.0126**	ND	ND	0.00145J	NA
MW-2*	08/28/15	14.05	N/A	N/A	**0.0132**	ND	ND	0.00151J	NA
MW-1	08/16/16	11.31	N/A	N/A	0.00268	0.00036J	ND	0.00107J	NA
MW-2*	08/16/16	11.31	N/A	N/A	0.00281	0.0004J	ND	0.00109J	NA
MW-1	08/22/17	14.28	N/A	N/A	0.002	0.00035J	ND	0.000810J	NA
MW-10*	08/22/17	14.28	N/A	N/A	0.00201	0.000450 J	ND	0.000740J	NA
MW-1	07/20/18	13.59	N/A	N/A	**0.00489**	ND	ND	0.00166J	NA
MW-10*	07/20/18	13.59	N/A	N/A	**0.00472**	ND	ND	0.00121J	NA
MW-1	08/28/19	12.44	N/A	N/A	0.00124	ND	ND	ND	NA
MW-10*	08/28/19	12.44	N/A	N/A	0.00126	ND	ND	ND	NA
MW-1	09/01/20	18.10	N/A	N/A	ND	ND	ND	ND	0.0147
MW-10*	09/01/20	18.10	N/A	N/A	0.000129J	ND	ND	ND	0.0137
MW-1	09/01/21	13.16	N/A	N/A	0.000450	ND	ND	ND	NA
MW-1b*	09/01/21	13.16	N/A	N/A	0.000500	ND	ND	ND	NA
MW-1	08/24/22	14.12	N/A	N/A	0.000870	ND	ND	ND	N/A
MW-1b*	08/24/22	14.12	N/A	N/A	0.000920	ND	ND	ND	N/A
MW-1	08/21/23	14.55	N/A	N/A	0.00124	ND	ND	ND	N/A
MW-1b*	08/21/23	14.55	N/A	N/A	0.00140	ND	ND	ND	N/A

Notes:
*denotes sample is a duplicate
MW-1 is a flush mount well
Bold indicates the analyte was above the ADEC groundwater cleanup level.
DTW – depth to water.
ND indicates the analyte was not detected.
NA indicates the analyte was not analyzed for.
J – Concentrations reported with a J flag are values below the reporting limit (RL) but greater than the established method detection limit (MDL). There is greater uncertainty associated with these results and data should be considered estimated.

Conclusions and Recommendations

The extent of the contaminant plume is known. Existing institutional controls (asphalt encapsulation) appear to be working. In 2018 benzene was detected above the applicable DEC cleanup levels. Since then, no analytes, including testing from this sampling event, have been above applicable cleanup levels.

MW-1 will be sampled again in 2024, although three consecutive years of monitoring below applicable DEC cleanup levels has occurred, it is the owner's preference to continue sampling at the Cornerstone Mall MW-1 location.

Please contact me at 907-455-7225 if there are any questions or concerns in regard to this monitoring report.

Sincerely,

Michaela McGee

Michaela McGee
Staff Scientist

cc: Evonne Reese, DEC Institutional Controls Unit
Attachments: Figure 1
SGS North America Inc.
DEC Laboratory Data Review Checklist
Historical Groundwater Data Table
Field Notes

3-TIER ALASKA 326 DRIVEWAY STREET FAIRBANKS, ALASKA 99701	AK CORNERSTONE, LLC. CORNERSTONE MALL		ATTACHMENT A LOCATION MAP
PROJECT NO: 1737-02	FILE: S/PROJECTS/1737/02/FIGURE 1.SKF	DATE: 08/23/23	SCALE: AS SHOWN

Laboratory Report of Analysis

To: 3-Tier AK dba Travis/Peterson (TPECI)
329 2nd St
Fairbanks, AK 99701

Report Number: **1234464**

Client Project: **AK Cornerstone LLC**

Dear Michaela McGee,

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 Jennifer 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.

Stephen C. Ede 2023.09.12 09:07:31 -08'00'

Jennifer Dawkins Date
Project Manager
Jennifer.Dawkins@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: **3-Tier AK dba Travis/Peterson (TPECI)**
SGS Project: **1234464**
Project Name/Site: **AK Cornerstone LLC**
Project Contact: **Michaela McGee**

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
MW-1	1234464001	08/21/2023	08/22/2023	Water (Surface, Eff., Ground)
MW-16	1234464002	08/21/2023	08/22/2023	Water (Surface, Eff., Ground)
Trip Blank	1234464003	08/21/2023	08/22/2023	Water (Surface, Eff., Ground)

Method	Method Description
SW8260D	Volatile Organic Compounds (W)

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Detectable Results Summary

Client Sample ID: **MW-1**
Lab Sample ID: 1234464001
Volatile GC/MS

Parameter	Result	Units
Benzene	1.24	ug/L

Client Sample ID: **MW-16**
Lab Sample ID: 1234464002
Volatile GC/MS

Parameter	Result	Units
Benzene	1.40	ug/L

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Results of **MW-1**

Client Sample ID: **MW-1**
Client Project ID: **AK Cornerstone LLC**
Lab Sample ID: 1234464001
Lab Project ID: 1234464

Collection Date: 08/21/23 12:32
Received Date: 08/22/23 09:32
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	1.24		0.400	0.120	ug/L	1		09/01/23 00:03
Ethylbenzene	1.00	U	1.00	0.310	ug/L	1		09/01/23 00:03
o-Xylene	1.00	U	1.00	0.310	ug/L	1		09/01/23 00:03
P & M -Xylene	2.00	U	2.00	0.620	ug/L	1		09/01/23 00:03
Toluene	1.00	U	1.00	0.310	ug/L	1		09/01/23 00:03
Xylenes (total)	3.00	U	3.00	1.00	ug/L	1		09/01/23 00:03
Surrogates								
1,2-Dichloroethane-D4 (surr)	102		81-118		%	1		09/01/23 00:03
4-Bromofluorobenzene (surr)	107		85-114		%	1		09/01/23 00:03
Toluene-d8 (surr)	104		89-112		%	1		09/01/23 00:03

Batch Information

Analytical Batch: VMS22717
Analytical Method: SW8260D
Analyst: JY
Analytical Date/Time: 09/01/23 00:03
Container ID: 1234464001-A

Prep Batch: VXX40351
Prep Method: SW5030B
Prep Date/Time: 08/31/23 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 09/12/2023 8:43:20AM

Results of **MW-16**

Client Sample ID: **MW-16**
Client Project ID: **AK Cornerstone LLC**
Lab Sample ID: 1234464002
Lab Project ID: 1234464

Collection Date: 08/21/23 12:36
Received Date: 08/22/23 09:32
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	1.40		0.400	0.120	ug/L	1		09/01/23 00:18
Ethylbenzene	1.00	U	1.00	0.310	ug/L	1		09/01/23 00:18
o-Xylene	1.00	U	1.00	0.310	ug/L	1		09/01/23 00:18
P & M -Xylene	2.00	U	2.00	0.620	ug/L	1		09/01/23 00:18
Toluene	1.00	U	1.00	0.310	ug/L	1		09/01/23 00:18
Xylenes (total)	3.00	U	3.00	1.00	ug/L	1		09/01/23 00:18
Surrogates								
1,2-Dichloroethane-D4 (surr)	99.4		81-118		%	1		09/01/23 00:18
4-Bromofluorobenzene (surr)	102		85-114		%	1		09/01/23 00:18
Toluene-d8 (surr)	103		89-112		%	1		09/01/23 00:18

Batch Information

Analytical Batch: VMS22717
Analytical Method: SW8260D
Analyst: JY
Analytical Date/Time: 09/01/23 00:18
Container ID: 1234464002-A

Prep Batch: VXX40351
Prep Method: SW5030B
Prep Date/Time: 08/31/23 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 09/12/2023 8:43:20AM

Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **AK Cornerstone LLC**
Lab Sample ID: 1234464003
Lab Project ID: 1234464

Collection Date: 08/21/23 00:00
Received Date: 08/22/23 09:32
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	0.400	U	0.400	0.120	ug/L	1		08/31/23 21:32
Ethylbenzene	1.00	U	1.00	0.310	ug/L	1		08/31/23 21:32
o-Xylene	1.00	U	1.00	0.310	ug/L	1		08/31/23 21:32
P & M -Xylene	2.00	U	2.00	0.620	ug/L	1		08/31/23 21:32
Toluene	1.00	U	1.00	0.310	ug/L	1		08/31/23 21:32
Xylenes (total)	3.00	U	3.00	1.00	ug/L	1		08/31/23 21:32
Surrogates								
1,2-Dichloroethane-D4 (surr)	101		81-118		%	1		08/31/23 21:32
4-Bromofluorobenzene (surr)	102		85-114		%	1		08/31/23 21:32
Toluene-d8 (surr)	102		89-112		%	1		08/31/23 21:32

Batch Information

Analytical Batch: VMS22717
Analytical Method: SW8260D
Analyst: JY
Analytical Date/Time: 08/31/23 21:32
Container ID: 1234464003-A

Prep Batch: VXX40351
Prep Method: SW5030B
Prep Date/Time: 08/31/23 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 09/12/2023 8:43:20AM

Method Blank

Blank ID: MB for HBN 1863599 [VXX/40351]
Blank Lab ID: 1732064

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1234464001, 1234464002, 1234464003

Results by **SW8260D**

Parameter	Results	LOQ/CL	DL	LOD	Units
Benzene	0.200U	0.400	0.120	0.200	ug/L
Ethylbenzene	0.500U	1.00	0.310	0.500	ug/L
o-Xylene	0.500U	1.00	0.310	0.500	ug/L
P & M -Xylene	1.00U	2.00	0.620	1.00	ug/L
Toluene	0.500U	1.00	0.310	0.500	ug/L
Xylenes (total)	1.50U	3.00	1.00	1.50	ug/L
Surrogates					
1,2-Dichloroethane-D4 (surr)	101	81-118		0	%
4-Bromofluorobenzene (surr)	98.3	85-114		0	%
Toluene-d8 (surr)	102	89-112		0	%

Batch Information

Analytical Batch: VMS22717
Analytical Method: SW8260D
Instrument: Agilent 7890-75MS
Analyst: JY
Analytical Date/Time: 8/31/2023 6:46:00PM

Prep Batch: VXX40351
Prep Method: SW5030B
Prep Date/Time: 8/31/2023 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1234464 [VXX40351]
Blank Spike Lab ID: 1732065
Date Analyzed: 08/31/2023 19:01

Spike Duplicate ID: LCSD for HBN 1234464 [VXX40351]
Spike Duplicate Lab ID: 1732066
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1234464001, 1234464002, 1234464003

Results by **SW8260D**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Benzene	30	28.6	96	30	28.6	96	(79-120)	0.02	(< 20)
Ethylbenzene	30	29.1	97	30	28.4	95	(79-121)	2.60	(< 20)
o-Xylene	30	29.6	99	30	28.7	96	(78-122)	2.80	(< 20)
P & M -Xylene	60	59.9	100	60	58.2	97	(80-121)	2.80	(< 20)
Toluene	30	28.1	94	30	27.3	91	(80-121)	2.90	(< 20)
Xylenes (total)	90	89.4	99	90	87.0	97	(79-121)	2.80	(< 20)
Surrogates									
1,2-Dichloroethane-D4 (surr)	30		91	30		92	(81-118)	1.10	
4-Bromofluorobenzene (surr)	30		97	30		95	(85-114)	1.50	
Toluene-d8 (surr)	30		99	30		99	(89-112)	0.35	

Batch Information

Analytical Batch: **VMS22717**
Analytical Method: **SW8260D**
Instrument: **Agilent 7890-75MS**
Analyst: **JY**

Prep Batch: **VXX40351**
Prep Method: **SW5030B**
Prep Date/Time: **08/31/2023 06:00**
Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Print Date: 09/12/2023 8:43:24AM

SGS

SGS North America Inc.
CHAIN OF CUSTODY RECORD

1234464

Profile #: 30083109 Int.: MBR

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

Section 1

CLIENT: 3-Tier Alaska	
CONTACT: Michaela McGee	PHONE #: 907-455-7225
PROJECT NAME: AK Cornerstone LLC	Project/Permit Number: 1737-02
	NPDL Number(DOD):
REPORTS TO:	E-MAIL: mmcgee@tpeci.com
INVOICE TO:	QUOTE #:
	P.O. #: 1737-02

Section 2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	# CONTAINERS	Sample Type: Comp	Grab	MI	Analysis*: MeOH	BTEX 8260D	REMARKS/LOC ID
1AC	MW-1	08/21/23	12:32	GW	3		G			X	
2AC	MW-1b	08/21/23	12:36	GW	3		G			X	
3AC	Trip Blank										

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

Comments:

Section 4

DOD Project? YES (NO)

Data Deliverables Requested: DataView, Level 4, SEDD, ERPIMS, EQUIS, Other:_____

Turnaround Time Requested: (Standard), Rush, Requested Rush Report Date:_____

SGS Sample Receipt (Lab Use Only)

Delivery Method: (Client), Commercial

Did each cooler have a corresponding COC? (Yes) No

Chain of Custody Seal Condition: INTACT BROKEN (ABSENT) N/A

COC Seal Location(s): N/A

Cooler ID	Temperature (°C)	Therm. ID
1	5.2	D57
1	3.6	D63

If more than three coolers are received, or for documentation of non-compliant coolers, use form FS-0029.

Note: If temp. is outside 0-6° and samples were not taken <8 hours ago OR are waste samples, Client or PM should initial here or attach an email change order to proceed with analysis. If ice is present, note on form F102B.

Intials:_____

Section 5

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
Michaela McGee	08/21/23	3:05pm	
	8/21/23	1540	
	8/22/23	9:32	

Laboratory Use Only

http://www.sgs.com/terms-and-conditions

SGS

1234464

SAMPLE RECEIPT FORM

Project Manager Completion				
Was all necessary information recorded on the COC upon receipt? (temperature, COC seals, etc.?)	Yes	No	N/A	
Was temperature between 0-6° C?	Yes	No	N/A	If "No", are the samples either exempt* or sampled <8 hours prior to receipt?
Were all analyses received within holding time*?	Yes	No	N/A	
Was a method specified for each analysis, where applicable? If no, please note correct methods.	Yes	No	N/A	
Are compound lists specified, where applicable? For project specific or special compound lists please note correct analysis code.	Yes	No	N/A	
If rush was requested by the client, was the requested TAT approved?	Yes	No	N/A	If "NO", what is the approved TAT?
If SEDD Deliverables are required, were Location ID's and an NPDL Number provided?	Yes	No	N/A	*If "NO", contact client for information.*
Sample Login Completion				
Do ID's on sample containers match COC?	Yes	No	N/A	
If provided on containers, do dates/times collected match COC?	Yes	No	N/A	Note: If times differ <1 hr., record details below and login per COC.
Were all sample containers received in good condition?	Yes	No	N/A	
Were proper containers (type/mass/volume/preservative) received for all samples? **See form F-083 "Sample Guide"*	Yes	No	N/A	*Note: If 200.8/6020 Total Metals are received unpreserved, preserve and note HNO3 lot here: If 200.8/6020 Dissolved Metals are received unpreserved, log in for LABFILTER and do not preserve. For all non-metals methods, inform Project Manager.*
Were Trip Blanks (VOC, GRO, Low-Level Hg, etc.) received with samples, where applicable*?	Yes	No	N/A	
Were all VOA vials free of headspace >6mm?	Yes	No	N/A	
Were all soil VOA samples received field extracted with Methanol?	Yes	No	N/A	
Did all soil VOA samples have an accompanying unpreserved container for % solids?	Yes	No	N/A	
If special handling is required, were containers labelled appropriately? e.g. MI/ISM, foreign soils, lab filter, Ref Lab, limited volume	Yes	No	N/A	
For Rush/Short Holding time, was the lab notified?	Yes	No	N/A	
For any question answered "NO", was the Project Manager notified?	Yes	No	N/A	PM Initials:
Was Peer Review of sample numbering/labelling completed?	Yes	No	N/A	Reviewer Initials:
Additional Notes/Clarification where Applicable, including resolution of "No" answers when a change order is not attached:				

Sample Containers and Preservatives

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition
1234464001-A	HCL to pH < 2	OK			
1234464001-B	HCL to pH < 2	OK			
1234464001-C	HCL to pH < 2	OK			
1234464002-A	HCL to pH < 2	OK			
1234464002-B	HCL to pH < 2	OK			
1234464002-C	HCL to pH < 2	OK			
1234464003-A	HCL to pH < 2	OK			
1234464003-B	HCL to pH < 2	OK			
1234464003-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.

Laboratory Data Review Checklist

Completed By:

Michaela McGee

Title:

Staff Scientist

Date:

10/03/2023

Consultant Firm:

3-Tier Alaska

Laboratory Name:

SGS North America, Inc.

Laboratory Report Number:

1234464

Laboratory Report Date:

09/12/2023

CS Site Name:

AK Cornerstone Mall

ADEC File Number:

Hazard Identification Number:

1234464

Laboratory Report Date:

09/12/2023

CS Site Name:

AK Cornerstone Mall

Note: Any N/A or No box checked must have an explanation in the comments box.

1. Laboratory

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

   Yes☒ No☐ N/A☐ 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☐ N/A☐ Comments:

   SGS Fairbanks to SGS Anchorage

2. Chain of Custody (CoC)

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

   Yes☒ No☐ N/A☐ Comments:

   b. Correct analyses requested?

   Yes☒ No☐ N/A☐ Comments:

3. Laboratory Sample Receipt Documentation

   a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

   Yes☒ No☐ N/A☐ Comments:

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

   Yes☒ No☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☐ 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☒ N/A☐ Comments:

e. Data quality or usability affected?

Comments:

None

4. Case Narrative

a. Present and understandable?

Yes☒ No☐ N/A☐ Comments:

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

Yes☐ No☒ N/A☐ Comments:

c. Were all corrective actions documented?

Yes☐ No☐ N/A☒ Comments:

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

Comments:

None

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5. Samples Results

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

Yes☒ No☐ N/A☐ Comments:

b. All applicable holding times met?

Yes☒ No☐ N/A☐ Comments:

c. All soils reported on a dry weight basis?

Yes☐ No☐ N/A☒ Comments:

Groundwater Samples. No soil

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

Yes☒ No☐ N/A☐ Comments:

e. Data quality or usability affected?

6. QC Samples

a. Method Blank

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

Yes☒ No☐ N/A☐ Comments:

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?

Yes☒ No☐ N/A☐ Comments:

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iii. If above LOQ or project specified objectives, what samples are affected?

Comments:

None

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

Yes☐ No☐ N/A☒ Comments:

v. Data quality or usability affected?

Comments:

None

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☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☐ Comments:

iv. Precision – All relative percent differences (RPD) 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☐ N/A☐ Comments:

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

Comments:

None

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

Yes☐ No☐ N/A☒ Comments:

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

Comments:

None

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☐ N/A☐ Comments:

ii. Metals/Inorganics – one MS and one MSD reported per matrix, analysis and 20 samples?

Yes☒ No☐ N/A☐ Comments:

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes☒ No☐ N/A☐ Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes☒ No☐ N/A☐ Comments:

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

Comments:

None

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

Yes☐ No☐ N/A☒ Comments:

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

Comments:

None

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☐ N/A☐ 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 for field samples and 60-120 %R for QC samples; all other analyses see the laboratory report pages)

Yes☒ No☐ N/A☐ Comments:

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

Yes☐ No☐ N/A☒ Comments:

iv. Data quality or usability affected?

Comments:

None

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e. Trip Blanks

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

Yes☒ No☐ N/A☐ Comments:

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

Yes☒ No☐ N/A☐ Comments:

iii. All results less than LOQ and project specified objectives?

Yes☒ No☐ N/A☐ Comments:

iv. If above LOQ or project specified objectives, what samples are affected?

Comments:

None

v. Data quality or usability affected?

Comments:

None

f. Field Duplicate

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

Yes☒ No☐ N/A☐ Comments:

ii. Submitted blind to lab?

Yes☒ No☐ N/A☐ Comments:

MW-1 and MW-1b – the lab labeled it MW-16

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

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

Where R_1 = Sample Concentration
R_2 = Field Duplicate Concentration

Yes☒ No☐ N/A☐ Comments:

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

Comments:

None

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

Yes☐ No☐ N/A☒ Comments:

No equipment blank.

i. All results less than LOQ and project specified objectives?

Yes☐ No☐ N/A☒ Comments:

No equipment blank.

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

Comments:

None

iii. Data quality or usability affected?

Comments:

None

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

   a. Defined and appropriate?

      Yes☒ No☐ N/A☐ Comments:

Field Duplicate Precision

Analyte	Sample MW-1		Sample MW-1b		RPD
	Results	Units	Results	Units	
Benzene	1.24	ug/L	1.4	ug/L	12.12121212

CORNERSTONE MALL GROUNDWATER MONITORING DATA

Sample ID	Date	Depth to Groundwater	DRO	GRO	Trichlorofluormethane	Benzene	Toluene	Ethylbenzene	Xylenes
ADEC Cleanup Level	mg/L	feet below ground surface	1.5	2.2	5.2	0.0046	1.1	0.015	0.19
MW-1	4/24/2003	15.98	**3.33**	**4.24**	NA	**0.112**	0.138	0.0912	0.3476
MW-1	9/26/2003	13.52	**2.85**	**2.24**	NA	**0.056**	0.0114	0.0255	0.411
MW-1	8/25/2004		**3.35**	**1.79**	NA	**0.0493**	0.00425	0.0125	0.0425
MW-1	5/23/2005	14.17	**1.49**	**1.65**	NA	**0.342**	ND	ND	0.0342
MW-1	8/14/2006	14.97	**1.62**	1.25	NA	**0.00924**	ND	ND	0.0359
MW-1	9/11/2007	14.72	ND	1.25	NA	**0.141**	0.0012	0.0133	0.0397
MW-1	11/19/2008	14.94	0.906	0.981	NA	**0.153**	0.00312	0.0125	0.03077
MW-1	9/29/2009	14.94	0.63	1.39	NA	**0.154**	ND	0.0061	0.0139
MW-1	10/5/2010	15.60	0.139	1.48	NA	**0.278**	ND	0.00742	0.0162
MW-1	10/5/2010	15.60	0.166	1.44	NA	**0.273**	ND	0.073	0.0161
MW-1	9/1/2011	13.90	0.129	0.556	NA	**0.177**	ND	0.00632	0.0161
MW-1	9/1/2011	13.90	0.141	0.535	NA	**0.108**	ND	0.00611	0.0156
MW-1	8/5/2013	15.40	0.127	0.417	NA	**0.0567**	0.00077	0.00167	0.00478
MW-1	8/5/2013	15.40	0.124	0.412	NA	**0.0584**	0.00074	0.00173	0.0048
MW-1	8/26/2014	12.53	0.0609J	0.399	NA	**0.0411**	ND	0.00156J	0.00538
MW-1	8/26/2014	12.53	0.0641J	0.291	NA	**0.0412**	ND	0.00159J	0.00542
MW-1	8/28/2015	14.05	- -	- -	NA	**0.0126**	ND	ND	0.00145J
MW-1	8/28/2015	14.05	- -	- -	NA	**0.0132**	ND	NS	0.00151J
MW-1	8/16/2016	11.31	- -	- -	NA	0.00268	0.000360 J	ND	0.00107J
MW-1	8/22/2017	14.28	- -	- -	NA	0.002	0.00035J	ND	0.000810J
MW-1	7/20/2018	13.59	- -	- -	NA	**0.00489**	ND	ND	0.00166J
MW-1	8/28/2019	12.44	- -	- -	NA	0.00124	ND	ND	ND
MW-1	9/1/2020	18.01	- -	- -	0.0147	ND	ND	ND	ND
MW-10*	9/1/2020	18.01	- -	- -	0.0137	0.000129J	ND	ND	ND
MW-1	9/1/2021	13.16	- -	- -	NA	0.00045	ND	ND	ND
MW-1b*	9/1/2021	13.16	- -	- -	NA	0.0005	ND	ND	ND
MW-1	8/24/2022	14.12	- -	- -	NA	0.00087	ND	ND	ND
MW-1b*	8/24/2022	14.12	- -	- -	NA	0.00092	ND	ND	ND
MW-1	8/21/2023	14.55	- -	- -	NA	0.00124	ND	ND	ND
MW-1b*	8/21/2023	14.55	- -	- -	NA	0.0014	ND	ND	ND
MW-2	4/24/2003	17.25	ND	ND	NA	0.000568	ND	ND	ND
MW-2	9/26/2003	13.81	ND	ND	NA	ND	ND	ND	ND
MW-2	8/25/2004		ND	ND	NA	ND	ND	ND	ND
MW-2	8/14/2006	16.02	ND	ND	NA	ND	ND	ND	ND
MW-2	9/11/2007	15.83	ND	ND	NA	ND	0.000773	ND	ND
MW-2	11/19/2008	--	--	--	--	--	--	--	--
MW-2	9/29/2009	--	--	--	--	--	--	--	--
MW-3	4/24/2003	16.92	ND	ND	NA	ND	ND	ND	ND

Sample ID	Date	Depth to Groundwater	DRO	GRO	Trichlorofluormethane	Benzene	Toluene	Ethylbenzene	Xylenes
ADEC Cleanup Level	mg/L	feet below ground surface	1.5	2.2	5.2	0.0046	1.1	0.015	0.19
MW-3	9/26/2003	13.50	ND	ND	NA	ND	ND	ND	ND
MW-3	8/25/2004		ND	ND	NA	ND	ND	ND	ND
MW-3	5/23/2005	15.16	ND	ND	NA	ND	ND	ND	ND
MW-3	8/14/2006	15.95	ND	ND	NA	ND	ND	ND	ND
MW-3	9/11/2007	15.73	ND	ND	NA	ND	ND	ND	ND
MW-3	11/19/2008	--	--	--	--	--	--	--	--
MW-3	9/29/2009	--	--	--	--	--	--	--	--
MW-4	8/25/2004		ND	ND	NA	ND	ND	ND	ND

NOTES:

DRO	Diesel Range Organic compounds
GRO	Gasoline Range Organic Compounds
mg/L	milligrams per liter
ADEC	Alaska Department of Environmental Conservation
--	Analysis not performed
BOLD	Analyte detected above cleanup level
NA	Analyte was not ran as part of sampling
ND	non-detect

Indicates most recent sampling event

MW-2 and MW-3 were decommissioned in 2021

August 21, 2023
AK Cornerstone LLC
Cornerstone #1737-02

11:20am MLM (QES/QEP) EDM arrived onsite to sample MW-1.

Objective: Sample MW-1 for BTEX by B260.

Weather: currently 53°F cloudy/raining 9 mph NE. 92% humidity.

MW-1

DTW 14.55
DTB 18.73

During water level measurements it was apparent that sediment was present in the well.

18.73 - 14.55 = 4.18 x 0.65 = 2.7 x 3 = 8.1 gallons purged

11:40am Started purging at 12.2 Agm at 17 Amp. Water appears clear no distinct smell.

12:30pm Stopped purging.

12:32pm Sampled MW-1 for BTEX.

12:36pm Sampled MW-16 *Duplicate* for BTEX.

12:40 EDM & MLM offsite.

* Buckets left by ATM in between yellow poles.
leave onsite until lab data comes back.

Rite in the Rain

Groundwater Well Sampling Log

Well ID:_____

3-Tier Alaska
326 Driveway Street
Fairbanks, Alaska 99701
Phone: (907) 455-7225

Project Information

Job No./Client: AK Cornerstone LLC #1737-02

Location:_____

Sampling Personnel: MLM & EDM

Weather Conditions/Temp: 53°F Cloudy/Rainy

GPS Data Collected? ☐ YES ☒ NO

Well Information

Type: Stickup / Flushmount

Ground surface to top of ~~stickup~~ (ft): Flush

Date: 8/21/23

Time Started: 11:20

Time Completed:_____

Well Condition

Lock present and operational? ☐ YES ☒ NO

Well label legible? ☒ YES ☐ NO

Evidence of frost-jacking? ☐ YES ☒ NO

Notes:_____

Well Data

Diameter (in): 4"

Type of casing: PVC

Depth to Water (ft): 14.55'

Depth to Bottom (ft): 18.73'

Feet of Water in Well: ~~14.55~~ 4.18'

Purge Water

Water Disposal Method: Onsite until lab data

No. of buckets: 2

Location: SIDE of MAC ATM

Gallons per foot:

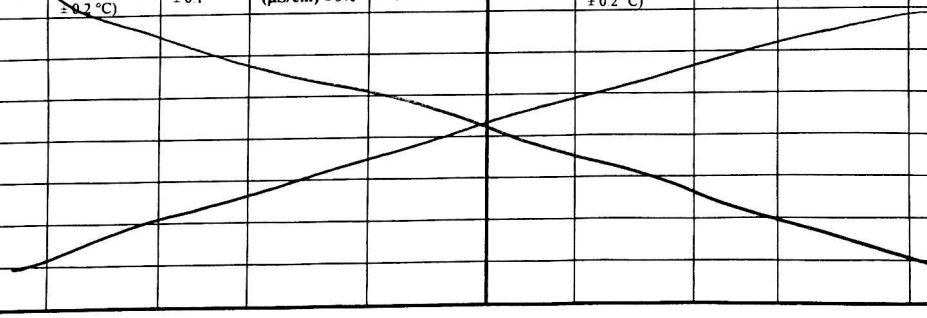
Inner diameter	1"	1.25"	2"
GPF	0.04	0.08	0.17

One Well Volume: 2.7

Total Purge Water Volume (gal): 8.1

Water Quality Parameters:

Time	Temp ± 3% (min of ± 0.2 °C)	pH ± 0.1	Conductivity (µS/cm) ± 3%	DO (mg/L) ± 10%	Time	Temp ± 3% (min of ± 0.2 °C)	pH ± 0.1	Conductivity (µS/cm) ± 3%	DO (mg/L) ± 10%



Sampling Information

Sample Name: MW-1

Duplicate: ☐ NO ☒ YES, ID: MW-16

Time: 12:32/12:36

No. of Containers: 3

Analyses: BTEX by 8260

Equipment Blank? ☐ YES ☒ NO

Pump Method: peristaltic

Pump Start: 11:40am

Purge Rate (~~gal/min~~): 12.2

Pumping End: 12:30

Pump set to depth (ft): 15.5 ft.

Notes:_____