3-TIER ALASKA
CIVIL ENGINEERING & SURVEYING

TRAVIS / PETERSON
ENVIRONMENTAL CONSULTING

September 8, 2022
1737-01

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:

Travis/Peterson Environmental Consulting (TPEC) is pleased to present our letter summarizing the data obtained from the groundwater sampling event conducted on August 24, 2022 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 24, 2022, TPEC 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. TPEC 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 24, 2022 sampling event showed a slight increase in the concentrations of the detected analyte (benzene). Benzene was detected at 0.870 ug/L in the parent sample, and 0.920 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 2022 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

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 2023, 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.

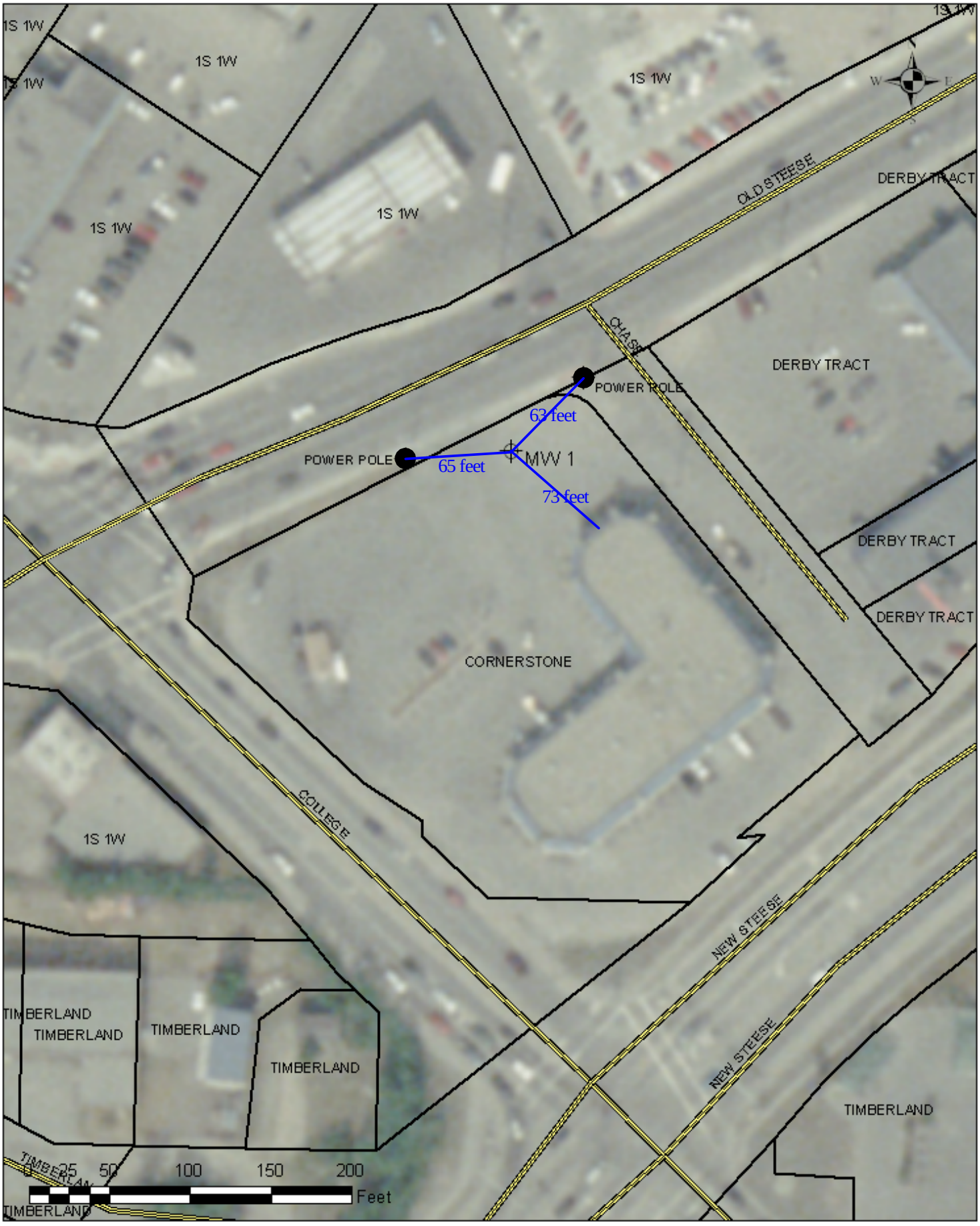
Please contact me at 907-455-7225 if there are any questions or concerns in regard to this monitoring report.

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



TRAVIS/PETERSON ENVIRONMENTAL CONSULTING 329 SECOND STREET FAIRBANKS, ALASKA 99701	AK CORNERSTONE, LLC	FIGURE 1 LOCATION & VICINITY	
PROJECT NO: 1737-01	FILE: S/PROJECTS/1737/01/FIGURES/SITE PLAN FIGURE.SKF	DATE: 9/08/2022	SCALE: AS SHOWN

Laboratory Report of Analysis

To: Travis/Peterson (TPECI)
329 2nd Street
Fairbanks, AK 99701
(907)455-7225

Report Number: **1225095**

Client Project: **AK Cornerstore**

Dear Eddie Packee,

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.

_____

Jennifer Dawkins Date
Project Manager
Jennifer.Dawkins@sgs.com

Case Narrative

SGS Client: **Travis/Peterson (TPECI)**
SGS Project: **1225095**
Project Name/Site: **AK Cornerstore**
Project Contact: **Eddie Packee**

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	1225095001	08/24/2022	08/25/2022	Water (Surface, Eff., Ground)
MW-1B	1225095002	08/24/2022	08/25/2022	Water (Surface, Eff., Ground)
Trip Blank	1225095003	08/24/2022	08/25/2022	Water (Surface, Eff., Ground)

Method	Method Description
SW8021B	BTEX 8021

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Detectable Results Summary

Client Sample ID: **MW-1**
Lab Sample ID: 1225095001

Volatile Fuels	Parameter	Result	Units
	Benzene	0.870	ug/L

Client Sample ID: **MW-1B**
Lab Sample ID: 1225095002

Volatile Fuels	Parameter	Result	Units
	Benzene	0.920	ug/L

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Results of **MW-1**

Client Sample ID: **MW-1**
Client Project ID: **AK Cornerstore**
Lab Sample ID: 1225095001
Lab Project ID: 1225095

Collection Date: 08/24/22 11:15
Received Date: 08/25/22 09:42
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.870		0.500	0.150	ug/L	1		08/29/22 21:24
Ethylbenzene	0.500	U	1.00	0.500	ug/L	1		08/29/22 21:24
o-Xylene	0.500	U	1.00	0.500	ug/L	1		08/29/22 21:24
P & M -Xylene	1.00	U	2.00	0.900	ug/L	1		08/29/22 21:24
Toluene	0.500	U	1.00	0.500	ug/L	1		08/29/22 21:24
Xylenes (total)	1.50	U	3.00	1.40	ug/L	1		08/29/22 21:24
Surrogates								
1,4-Difluorobenzene (surr)	88.1		77-115		%	1		08/29/22 21:24

Batch Information

Analytical Batch: VFC16233
Analytical Method: SW8021B
Analyst: PHK
Analytical Date/Time: 08/29/22 21:24
Container ID: 1225095001-A

Prep Batch: VXX39082
Prep Method: SW5030B
Prep Date/Time: 08/29/22 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **MW-1B**

Client Sample ID: **MW-1B**
Client Project ID: **AK Cornerstore**
Lab Sample ID: 1225095002
Lab Project ID: 1225095

Collection Date: 08/24/22 11:20
Received Date: 08/25/22 09:42
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.920		0.500	0.150	ug/L	1		08/29/22 21:42
Ethylbenzene	0.500	U	1.00	0.500	ug/L	1		08/29/22 21:42
o-Xylene	0.500	U	1.00	0.500	ug/L	1		08/29/22 21:42
P & M -Xylene	1.00	U	2.00	0.900	ug/L	1		08/29/22 21:42
Toluene	0.500	U	1.00	0.500	ug/L	1		08/29/22 21:42
Xylenes (total)	1.50	U	3.00	1.40	ug/L	1		08/29/22 21:42
Surrogates								
1,4-Difluorobenzene (surr)	88.2		77-115		%	1		08/29/22 21:42

Batch Information

Analytical Batch: VFC16233
Analytical Method: SW8021B
Analyst: PHK
Analytical Date/Time: 08/29/22 21:42
Container ID: 1225095002-A

Prep Batch: VXX39082
Prep Method: SW5030B
Prep Date/Time: 08/29/22 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 08/31/2022 1:15:34PM

J flagging is activated

Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **AK Cornerstore**
Lab Sample ID: 1225095003
Lab Project ID: 1225095

Collection Date: 08/24/22 11:15
Received Date: 08/25/22 09:42
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.250 U		0.500	0.150	ug/L	1		08/29/22 18:39
Ethylbenzene	0.500 U		1.00	0.500	ug/L	1		08/29/22 18:39
o-Xylene	0.500 U		1.00	0.500	ug/L	1		08/29/22 18:39
P & M -Xylene	1.00 U		2.00	0.900	ug/L	1		08/29/22 18:39
Toluene	0.500 U		1.00	0.500	ug/L	1		08/29/22 18:39
Xylenes (total)	1.50 U		3.00	1.40	ug/L	1		08/29/22 18:39
Surrogates								
1,4-Difluorobenzene (surr)	89.4		77-115		%	1		08/29/22 18:39

Batch Information

Analytical Batch: VFC16233
Analytical Method: SW8021B
Analyst: PHK
Analytical Date/Time: 08/29/22 18:39
Container ID: 1225095003-A

Prep Batch: VXX39082
Prep Method: SW5030B
Prep Date/Time: 08/29/22 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 08/31/2022 1:15:34PM

J flagging is activated

Method Blank

Blank ID: MB for HBN 1842355 [VXX/39082]
Blank Lab ID: 1682370

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1225095001, 1225095002, 1225095003

Results by **SW8021B**

Parameter	Results	LOQ/CL	DL	Units
Benzene	0.250U	0.500	0.150	ug/L
Ethylbenzene	0.500U	1.00	0.500	ug/L
o-Xylene	0.500U	1.00	0.500	ug/L
P & M -Xylene	1.00U	2.00	0.900	ug/L
Toluene	0.500U	1.00	0.500	ug/L
Xylenes (total)	1.50U	3.00	1.40	ug/L
Surrogates				
1,4-Difluorobenzene (surr)	87.8	77-115		%

Batch Information

Analytical Batch: VFC16233
Analytical Method: SW8021B
Instrument: Agilent 7890 PID/FID
Analyst: PHK
Analytical Date/Time: 8/29/2022 11:54:00AM

Prep Batch: VXX39082
Prep Method: SW5030B
Prep Date/Time: 8/29/2022 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 1225095 [VXX39082]
Blank Spike Lab ID: 1682371
Date Analyzed: 08/29/2022 12:30

Spike Duplicate ID: LCSD for HBN 1225095 [VXX39082]
Spike Duplicate Lab ID: 1682372
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1225095001, 1225095002, 1225095003

Results by **SW8021B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Benzene	100	108	108	100	109	109	(80-120)	0.56	(< 20)
Ethylbenzene	100	103	103	100	101	101	(75-125)	1.50	(< 20)
o-Xylene	100	103	103	100	99.9	100	(80-120)	3.00	(< 20)
P & M -Xylene	200	205	103	200	201	100	(75-130)	2.20	(< 20)
Toluene	100	103	103	100	102	102	(75-120)	0.78	(< 20)
Xylenes (total)	300	308	103	300	301	100	(79-121)	2.40	(< 20)
Surrogates									
1,4-Difluorobenzene (surr)	50		102	50		101	(77-115)	1.80	

Batch Information

Analytical Batch: **VFC16233**
Analytical Method: **SW8021B**
Instrument: **Agilent 7890 PID/FID**
Analyst: **PHK**

Prep Batch: **VXX39082**
Prep Method: **SW5030B**
Prep Date/Time: **08/29/2022 06:00**
Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL

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SGS

1225095

SGS North America Inc.
CHAIN OF CUSTODY RECORD

Profile #: Int.:

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

Page 1 of 1

Section 1

CLIENT: Travis/Peterson Environmental

CONTACT: Michaela McGee | PHONE #: 907-455-7225

PROJECT NAME: AK Cornerstone | Project/Permit Number: | NPDL Number(DOD):

REPORTS TO: | E-MAIL: mmcgee@tpeci.com

INVOICE TO: | QUOTE #: | P.O. #: 1737-01

Section 3 — Preservative: MEOH

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

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*: BTEX 8021	REMARKS/LOC ID
1AC	MW-1	8/24/22	11:15A	WATER	3	G	X	
2AC	MW-1B	8/24/22	11:20A	WATER	3	G	X	
3AC	TRIP BLANK	—			1		—	

Comments:

Section 4

DOD Project? YES **NO** (circled)

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

Turnaround Time Requested: **Standard** (circled) / Rush / Requested Rush Report Date:

SGS Sample Receipt (Lab Use Only)

Delivery Method: Client (circled) / Commercial

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

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

COC Seal Location(s):

Section 5

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:
[signature]	8/24	1234	[signature]
[signature]	8/24/22	1500	[signature]
[signature]	8/25/22	0942	[signature]

Laboratory Use Only — DLF

Cooler ID	Temperature (°C)	Therm. ID
—	Ambient	—
1	2.1	D58

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:

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

F083-Blank_COC_20181228

1225095

e-Sample Receipt Form FBK

SGS Workorder #: TPEC

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	
Yes — **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required		
Temperature blank compliant* (i.e., 0-6 °C after CF)?		Cooler ID: @ °C Therm. ID:
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?	Yes	
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?	Yes	
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	Yes	
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 #	336472	336472

e-Sample Receipt Form

SGS Workorder #:	1225095	1225095

Review Criteria	Condition (Yes, No, N/A	Exceptions Noted below
Chain of Custody / Temperature Requirements	*Note:* Temperature and COC seal information is found on the chain of custody form	
DOD only: Did all sample coolers have a corresponding COC?	N/A	
If <0°C, were sample containers ice free?	N/A	
Note containers received with ice:		
Identify any containers received at non-compliant temperature: *(Use form FS-0029 if more space is needed)*		1225093
Holding Time / Documentation / Sample Condition Requirements	*Note:* Refer to form F-083 "Sample Guide" for specific holding times and sample containers.	
Were samples received within analytical holding time?	Yes	
Do sample labels match COC? Record discrepancies. ***Note:*** *If information on containers differs from COC, default to COC information for login. If times differ <1hr, record details & login per COC.*	Yes	
Were analytical requests clear? *(i.e. method is specified for analyses with multiple option for method (Eg, BTEX 8021 vs 8260, Metals 6020 vs 200.8)*	Yes	
Were proper containers (type/mass/volume/preservative)used? Note: Exemption for metals analysis by 200.8/6020 in water.	Yes	
Volatile Analysis Requirements (VOC, GRO, LL-Hg, etc.)		
Were all soil VOAs received with a corresponding % solids container?	N/A	
Were Trip Blanks (e.g., VOAs, LL-Hg) in cooler with samples?	Yes	
Were all water VOA vials free of headspace (e.g., bubbles ≤ 6mm)?	Yes	
Were all soil VOAs field extracted with Methanol+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
1225095001-A	Methanol field pres. 4 C	OK			
1225095001-B	Methanol field pres. 4 C	OK			
1225095001-C	Methanol field pres. 4 C	OK			
1225095002-A	Methanol field pres. 4 C	OK			
1225095002-B	Methanol field pres. 4 C	OK			
1225095002-C	Methanol field pres. 4 C	OK			
1225095003-A	Methanol field pres. 4 C	OK			
1225095003-B	Methanol field pres. 4 C	OK			
1225095003-C	Methanol field pres. 4 C	OK			

Container Condition Glossary

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

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

Laboratory Data Review Checklist

Completed By:

Michaela McGee

Title:

Staff Scientist

Date:

09/7/2022

Consultant Firm:

Travis/Peterson Environmental Consulting

Laboratory Name:

SGS North America, Inc.

Laboratory Report Number:

1225095

Laboratory Report Date:

08/31/2022

CS Site Name:

AK Cornerstone Mall

ADEC File Number:

Hazard Identification Number:

1225095

Laboratory Report Date:

08/31/2022

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

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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	0.87	ug/L	0.92	ug/L	5.586592179

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-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
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

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	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	Indicates most recent sampling event
GRO	Gasoline Range Organic Compounds	
mg/L	milligrams per liter	
ADEC	Alaska Department of Environmental Conservation	
--	Analysis not performed	MW-2 and MW-3 were decommissioned in 2021
BOLD	Analyte detected above cleanup level	
NA	Analyte was not ran as part of sampling	
ND	non-detect	

Groundwater Well Sampling Log

Well ID: MW-1

Travis/Peterson Environmental Consulting
329 2nd Street
Fairbanks, Alaska 99701
Phone: (907) 455-7225

Project Information

Job No./Client: 1737-01 ALCORNERSTONE LLC
Location: COLLEGE/OLD STEESE
Sampling Personnel: MLM / AIR
Weather Conditions/Temp: 55°F, CLOUDY
GPS Data Collected? ☐ YES ☐ NO

Well Information

Type: Stickup / (Flushmount)
Ground surface to top of stickup (ft): _____
Date: 8/24/22
Time Started: 10:37A
Time Completed: 11:45 am

Well Condition

Lock present and operational? ☐ YES ☒ NO
Well label legible? ☒ YES ☐ NO
Evidence of frost-jacking? ☐ YES ☒ NO
Notes: _____

Well Data

Diameter (in): 3"
Type of casing: PVC STEEL FLUSHMOUNT
Depth to Water (ft): 14.12
Depth to Bottom (ft): 18.85
Feet of Water in Well: 4.73

Gallons per foot:

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

One Well Volume: 1.75
Total Purge Water Volume (gal): 5.25

Purge Water

Water Disposal Method: LEAVE ONSITE. IF DIRTY, GAC
No. of buckets: 2
Location: next to building.

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-1B
Time: 11:15A & 11:20A
No. of Containers: 3
Analyses: BTEX
Equipment Blank? ☐ YES ☐ NO

Pump Method: PERISTALTIC
Pump Start: 10:37 am
Purge Rate (~~gal/min~~): 13.76
Pumping End: 11:12 am
Pump set to depth (ft): 15 ft.

Notes: PART OF ANNUAL LONG TERM MONITORING.

ANGUST 24TH, 2022
AK CORNERSTONE LLC
1737-01

10:22a MLM & AIR ARRIVED ONSITE

WEATHER: 55°F, 50-68°F, cloudy
WIND 2mpH SW

OBJECTIVE: SAMPLE ~~to~~ AIR MW-1
WITH PERISTALTIC PUMP FOR BTEX.

MW-1 DTW: 14.12
DTB: 18.85

18.85	~~#75~~ AIR	4.73	1.75
-14.12		x0.37	x 3
04.73		1.75	5.25

5.25 gal of PURGE WATER.

10:37pm Started purging well.
Water appears relatively clear
no distinct odor.
purging rate 13.76

11:12am stopped purging

11:15am Collected sample MW-1
for BTEX.

11:20am · Collected sample MW-16
for BTEX *duplicate*

Left bucket onsite where
last years buckets were.
Collected clean last years
buckets to bring to office & dump.

11:45am MLM & AIR offsite.