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QUARTERLY GROUNDWATER SAMPLING

## Kasilof Riverview Lodge

57400 STERLING HIGHWAY, KASILOF, ALASKA; ADEC FILE  
NO. 2319.26.002

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Submitted To: Kasilof Riverview LLC  
P.O. Box 254  
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Attn: Mr. Joe Browning

Subject: QUARTERLY GROUNDWATER SAMPLING, KASILOF RIVERVIEW LODGE,  
57400 STERLING HIGHWAY, KASILOF, ALASKA; ADEC FILE NO.  
2319.26.002

Shannon & Wilson prepared this report and participated in this project as a consultant for Kasilof Riverview LLC. Our scope of services was specified in our proposal dated May 18, 2023. This report presents the results of our quarterly groundwater sampling activities and was prepared by the undersigned.

We appreciate the opportunity to be of service to you on this project. If you have questions concerning this report, or we may be of further service, please contact us.

Sincerely,

SHANNON & WILSON, INC.



Alec Rizzo  
Environmental Staff

Dan P. McMahon, PMP  
Vice President

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## ACRONYMS

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AK	Alaska Method
bgs	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
DRO	Diesel Range Organics
DQO	Data Quality Objective
EPA	Environmental Protection Agency
GAC	Granular Activated Carbon
GE2T	Gilfilian Engineering & Environmental Testing, Inc.
GRO	Gasoline Range Organics
IDW	Investigation-Derived Waste
LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicate
LDRC	Laboratory Data Review Checklist
LOQ	Limit of Quantitation
McLane	McLane Consulting, Inc.
mg/kg	Milligrams Per Kilogram
mg/L	Milligrams per Liter
µg/L	Micrograms per Liter
MS/MSD	Matrix Spike/Matrix Spike Duplicate
mV	Millivolt
NAD83	North American Datum of 1983
NAVD88	North American Vertical Datum of 1988
NGVD29	National Geodetic Vertical Datum of 1929
NTU	Nephelometric Turbidity Unit
ORP	Oxidation Reduction Potential
PAHs	Polynuclear Aromatic Hydrocarbons
RPD	Relative Percent Difference
SGS	SGS North America Inc.
USGS	United States Geological Survey
UST	Underground Storage Tank
VOCs	Volatile Organic Compounds

## 1 INTRODUCTION

This report presents the results of Shannon & Wilson's quarterly groundwater sampling activities conducted at Kasilof Riverview Lodge located at 57400 Sterling Highway in Kasilof, Alaska. The site is an Alaska Department of Environmental Conservation (ADEC) contaminated site identified as "Kasilof Riverview Lodge" (File No. 2319.26.002, Hazard ID 22950). A vicinity map is included as Figure 1 and quarterly site plans is included as Figures 2.1 through 2.4.

## 2 BACKGROUND

In 1993 and 1994 an on-site 6,000-gallon gasoline underground storage tank (UST) failed tightness tests. The tank was subsequently closed. In 1998, to evaluate the extent of contamination associated with the closed tank, three borings were advanced at the site by Gilfilian Engineering & Environmental Testing, Inc. (GE2T). Samples collected from each of the borings contained concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX), and gasoline range organics (GRO) at concentrations exceeding the ADEC cleanup levels, applicable at that time.

Tank upgrades were conducted at the site in 1999. At this time, soil was excavated from around the tanks and test pits were advanced. Based on soil samples collected during this effort, GE2T concluded that the extent of contamination was not fully delineated.

In 2003, A.C.E. Engineering advanced three borings (SB1, SB2, and SB3), completed as groundwater monitoring wells (MW1, MW2, and MW3), at the site. Monitoring Wells MW1, MW2, and MW3 were advanced southeast, northeast, and west of the Kasilof Riverview Lodge, respectively, as shown on Figure 2. Groundwater was encountered at approximately 24 to 27 feet below ground surface (bgs) during drilling, and groundwater flow direction was to the east. A soil sample collected from Boring SB1 contained 0.0889 milligrams per kilogram (mg/kg) benzene, which exceeds the current ADEC cleanup level of 0.022 mg/kg. A groundwater sample collected from Well MW1 contained 0.00626 milligrams per liter (mg/L) benzene, which exceeds the current ADEC Table C cleanup level of 0.0046 mg/L. A.C.E. Engineering collected additional groundwater samples from the wells in 2005 and 2016. A groundwater sample collected from Well MW1 in 2016 contained 0.0536 mg/L benzene, which exceeds the applicable ADEC cleanup level.

In 2018 and 2019, EHX Alaska collected groundwater samples from the site wells. The samples did not contain detected concentrations of the tested analytes.

In 2019 Shannon & Wilson removed one approximately 2,000-gallon diesel UST, five fuel dispensers, and piping from the site. In addition, two approximately 6,000-gallon and one 3,000-gallon gasoline USTs were closed in-place. GRO, diesel range organics (DRO), volatile organic compounds (VOCs), and polynuclear aromatic hydrocarbons (PAHs) were detected at concentrations exceeding the ADEC cleanup levels in soil.

In 2021, Shannon & Wilson installed Monitoring Well MW4 approximately 75 feet from the Kasilof River, southwest of the former gasoline USTs. Wells MW1, MW2, MW3 were also sampled in 2021. Contaminant concentrations exceeding the most stringent ADEC cleanup levels were not detected in the soil and groundwater samples collected during the release investigation activities.

The 2022 project activities consisted of advancing Boring B5 to facilitate the collection of soil samples, installing Monitoring Well MW5, and collecting groundwater and drinking water samples from all onsite groundwater wells and the Kasilof Riverview Lodge drinking water well. The soil samples collected from Boring B5 contained concentrations of benzene and ethylbenzene exceeding the respective ADEC Method Two migration to groundwater cleanup levels. Groundwater samples collected from Wells MW1 and MW5 contained concentrations of benzene exceeding the ADEC Table C cleanup levels. The remaining testing analytes were either reported at concentrations less than the applicable ADEC Table C cleanup levels or reported as non-detect. In addition, the drinking water sample contained toluene at a concentration less than the applicable ADEC Table C cleanup levels. The remaining tested analytes were reported as non-detect.

In a letter dated April 13, 2023, Mr. Peter Campbell of the ADEC requested quarterly sampling of the on-site groundwater monitoring wells and drinking water well to monitor contaminant migration toward the Kasilof River.

## 3 PROJECT ACTIVITIES

The project activities consisted of collecting quarterly groundwater and drinking water samples and treating investigation-derived waste (IDW). Field notes are included in Appendix A. It should be noted that the field notes presented in Appendix A are provided for informational purposes only. Tables 1.1 through 1.4 and 2.1 through 2.4 represent our interpretation of the field data and take precedence over the field notes.

### 3.1 Monitoring Well Sampling

Groundwater samples were obtained from the screened portion of the wells using a submersible pump with dedicated disposable tubing. Analytical samples were collected by

transferring water directly from the pump tubing into the laboratory supplied containers. The sample jars were filled in decreasing order of volatility.

Wells MW1, MW2, MW3, MW4, and MW5 were sampled in September 2023, December 2023, March 2024, and May 2024. During the May 2024 quarterly groundwater sampling event, it was observed that Well MW1 was damaged and filled with sediment; therefore, a sample was not collected. Groundwater samples were collected using a low-flow sampling method. The submersible pump was placed within 2 feet of the surface of the groundwater column. The pump rate was adjusted with a goal of limiting the sustained water drawdown to a maximum of 0.3 foot. During the purging process, field personnel monitored water quality parameters and purge volume. Purging was considered complete when at least one well volume was removed, and water quality parameters stabilized. Water quality parameters were considered stabilized when three consecutive measurements collected 3 to 5 minutes apart indicate that four or five parameters were within the following tolerance ranges: pH within 0.1 unit, temperature within 3 percent, conductivity within 3 percent, oxidation reduction potential (ORP) within 10 millivolts (mV), and/or turbidity within 10 percent or less than 10 nephelometric turbidity units (NTU).

### 3.2 Drinking Water Well Sampling

The Kasilof Riverview Lodge drinking water well was sampled in September 2023, December 2023, March 2024, and May 2024 from the pre-treatment spigot of a utility room, and an adjacent restroom sink (post treatment). The well system was purged for at least 15 minutes prior to sampling to remove water from the system piping and to obtain a representative sample of formation groundwater. The analytical samples were collected by transferring water directly from the spigot and sink into the laboratory supplied containers. The sample jars were filled in decreasing order of volatility.

### 3.3 Investigation-Derived Waste

IDW consisted of purge water. Purge water was inspected for a petroleum sheen and treated with a 5-gallon granular activated carbon (GAC) filter capable of treating petroleum hydrocarbons and discharged to the ground surface within the site boundaries and a minimum of 100 feet away from drinking water wells and the Kasilof River following each quarterly sampling event.

## 4 LABORATORY ANALYSES

The groundwater samples were submitted to SGS North America Inc. (SGS) for analytical testing, using chain-of-custody procedures. Each sample was analyzed for GRO by Alaska

Method (AK) 101, DRO by AK 102, VOCs by Environmental Protection Agency (EPA) Method 8260D, and PAHs by EPA Method 8270D SIM. Additionally, the drinking water samples were analyzed for BTEX by EPA Method 8021. For quality control purposes a trip blank was submitted with the analytical samples. One field duplicate groundwater sample was also collected and analyzed for the analytes listed above. The laboratory reports and completed ADEC Laboratory Data Review Checklists (LDRCs) are provided in Appendix B. The analytical drinking water/groundwater sample results are summarized in Table 1.2 through 4.2.

## 5 SUBSURFACE CONDITIONS

Prior to sampling, depth to groundwater was measured in each well on September 13 and December 19, 2023, and March 5 and May 29, 2024, using an electronic water-level indicator. Measurements were taken with respect to the top of the well casings and depths were determined to an accuracy of 0.01 foot. The water-level indicator was decontaminated prior to insertion in each well. The water levels are listed in Tables 1.1 through 1.4, respectively.

In general, the deepest groundwater measurements were recorded during the September 2023 sampling event and the shallowest groundwater measurements were recorded during the May 2024 event. Wells MW2, MW3, and MW4 were surveyed by McLane Consulting, Inc. (McLane) in 2021. Horizontal locations are in Alaska State Plane coordinates, Zone 4, North American Datum of 1983 (NAD83) (2011) and elevations are based on the North American Vertical Datum of 1988 (NAVD88) Geoid12b.

During each event, the highest elevations were measured in Well MW3 (39.93 to 42.09 feet) and the lowest elevations were measured in Well MW2 (35.80 to 38.57 feet). Based on each quarterly sampling event's static groundwater measurements and the survey, the measured groundwater flow direction for each of the quarterly sampling events is to the east/northeast. Although, it is assumed that the regional groundwater flow direction is to the west/northwest following the Kasilof River. The groundwater flow direction for each sampling event is shown on Figures 2.1 through 2.4.

In addition, using data collected from the United States Geological Survey (USGS) streamgage located south of the site, the Kasilof River's elevations were 40.34 feet and 36.13 feet during the September 2023 and May 2024 quarterly sampling events, respectively. The USGS streamgage was frozen during the December 2023 and March 2024 quarterly sampling events. The horizontal location of the streamgage is in NAD83 and the elevation is based on the National Geodetic Vertical Datum of 1929 (NGVD29).

A recent survey published on July 3, 2024 in the *USGS Alaska Streamgage Datum to North American Vertical of 1988 Conversion Table* provides a conversion factor from the NGVD29 vertical datum to the NAVD88 vertical datum for streamgages throughout Alaska. For the Kasilof River streamgage, the USGS conversion table provides a conversion factor of -7.1 feet. Using this information, the September 2023 and May 2024 Kasilof River elevations are converted to 33.24 feet and 29.03 feet, respectively, in the NAVD88 datum. The river elevations for both the September 2023 and May 2024 quarterly sampling events are lower than the water elevations measured in the groundwater monitoring wells at the site.

## 6 DISCUSSION OF ANALYTICAL RESULTS

The analytical groundwater results were compared to ADEC cleanup levels presented in the October 2023, 18 Alaska Administrative Code (AAC) 75 regulations. Groundwater cleanup levels are established in Table C of 18 AAC 75.345. The laboratory report and completed LDRCs are provided in Appendix B. The applicable groundwater cleanup levels are listed in Tables 1.2 through 4.2, respectively. Historical analytical results are presented in Table 5.

### 6.1 Groundwater Samples

Benzene was detected in the samples collected from Well MW5 at concentrations exceeding the ADEC Table C cleanup level of 4.6 µg/L during the September 2023 (maximum 46.1 micrograms per liter [µg/L]), December 2023 (maximum 11.9 µg/L), and March 2024 (maximum 6.18 µg/L) sampling events. During the May 2024 sampling event, benzene (maximum 4.59 µg/L) was detected at a concentration less than the ADEC Table C cleanup level. The remaining tested analytes were either not detected or detected at concentrations below the respective ADEC Table C cleanup levels.

Based on the historical analytical results presented in Table 5, benzene concentrations have decreased in Wells MW1 and MW5. GRO and DRO results have remained relatively consistent in the wells, with many sampling events exhibiting non-detect results. Toluene, ethylbenzene, and xylenes have only been detected sporadically.

### 6.2 Drinking Water Sample

The analyte results for drinking water samples collected in September and December 2023, and March and May 2024 were reported as not detected.



### 6.3 Quality Assurance Summary

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

Although less than the limit of quantitation (LOQ), estimated concentrations of 1-methylnaphthalene (0.0231 µg/L), 2-methylnaphthalene (0.0261 µg/L), and phenanthrene (0.0516 µg/L) were detected in the September 2023 method blank. The samples are flagged “B” in Table 1.2 when the reported sample concentration is within 10 times the reported method blank concentration. The concentrations of 1-methylnaphthalene, 2-methylnaphthalene, and phenanthrene detected in the samples and method blank are reported as less than the LOQ, therefore, the sample concentrations are reported as non-detect at the LOQ and flagged “B.”

Although less than the LOQ, an estimated concentration of DRO (0.237 mg/L) was detected in the December 2023 method blank. The samples are flagged “B” in Table 2.2 when the reported sample concentration is within 10x the reported method blank concentration. The concentrations of DRO detected in the samples and method blank are reported as less than the LOQ. Using professional judgement, Shannon & Wilson flagged the reported results “B” at the detected concentration in Table 2.2.

Although less than the LOQ, an estimated concentration of 2-methylnaphthalene (0.0174 µg/L) and fluoranthene (0.0217 µg/L) was detected in the March 2024 method blank. The samples are flagged “B” in Table 3.2 when the reported sample concentration is within 10x the reported method blank concentration. The concentrations of fluoranthene detected in the Samples MW1 and MW2 and method blank are reported as less than the LOQ. Therefore, the sample concentrations are reported as non-detect at the LOQ and flagged “B”. 2-Methylnaphthalene was not detected in the project samples; therefore, additional flagging is not required.

Although less than the LOQ, an estimated concentration of fluoranthene (0.0171 µg/L) was detected in the method blank. The samples are flagged “B” in Table 4.2 when the reported sample concentration is within 10x the reported method blank concentration. Fluoranthene was not detected in the project samples; therefore, additional flagging is not required.



Field quality control samples included a trip blank and field duplicate groundwater sample set for each quarterly sampling event. A laboratory-prepared water trip blank sample accompanied the project sample bottles from the laboratory to the site during sampling activities and back again to SGS. The water trip blanks from the September 2023, December 2023, and May 2024 quarterly events did not contain detectable concentrations of GRO or VOCs. During the March 2024 quarterly event, an estimated concentration of Toluene (0.620 J µg/L) was detected in the trip blank. The affected analytical results are flagged “B” in Table 3.2. Trip blanks check for sample-contamination issues during the sample collection process.

The relative percent difference (RPD) between the project sample and associated duplicate results is a measure of precision affected by matrix heterogeneity, sampling technique, and laboratory analyses. The ADEC recommends an RPD of less than 50 percent for duplicate soil samples and 30% for duplicate groundwater samples. The RPDs of chloromethane (September 2024) and DRO (May 2024) for duplicate sample set MW5/MW15 were greater than quality control criteria. The affected results are flagged “E” in Tables 1.2 and 4.2, respectively.

Shannon & Wilson conducted a limited data assessment to review the laboratory’s compliance with precision, accuracy, sensitivity, and completeness to the data quality objectives. Shannon & Wilson reviewed the SGS data deliverables and completed the ADEC’s Laboratory Data Review Checklist for each data package, which is included in Appendix B. With the exceptions noted above, no non-conformances that would adversely affect the data quality or usability of the data were noted.

## 7 CONCLUSIONS

The project consisted of quarterly groundwater and drinking water sampling activities that occurred in September and December 2023 and March and May 2024. Groundwater samples collected from Well MW5 contained concentrations of benzene exceeding the ADEC Table C cleanup level in the September and December 2023 and March 2024 sampling events. Benzene was detected in Well MW5 at a concentration less than the ADEC Table C cleanup level in the May 2024 quarterly sampling event. The remaining tested analytes were either reported at concentrations less than the applicable ADEC Table C cleanup levels or reported as non-detect. In addition, the drinking water analytical results were reported as non-detect during each quarterly sampling event. Based on groundwater sample results from Wells MW1 and MW4, petroleum-impacted groundwater is not impacting the Kasilof River south of the source area.

## 8 CLOSURE/LIMITATIONS

This report is prepared for the exclusive use of our client and their representatives in the study of this site. The findings presented within this report are based on the limited research, sampling, and analyses that were conducted. They should not be construed as definite conclusions regarding the site's soil or groundwater quality. As a result, the sampling, analyses, and data interpretations can provide you with only our professional judgment as to the environmental characteristics of this site, and in no way guarantee that an agency or its staff will reach the same conclusions as Shannon & Wilson, Inc. The data presented in this report should be considered representative of the time of our release investigation activities. Changes in site conditions can occur over time, due to natural forces or human activity. In addition, changes in government codes, regulations, or laws may occur. Because of such changes beyond our control, our observations and interpretations may need to be revised.

You are advised that various state and federal agencies (ADEC, EPA, etc.) may require the reporting of this information. Shannon & Wilson does not assume the responsibility for reporting these findings and therefore has not, and will not, disclose the results of this study unless specifically requested and authorized by the Kasilof Riverview LLC, or as required by law.

Shannon & Wilson has prepared the information in Appendix C, "Important Information About Your Geotechnical/Environmental Report," to assist you and others in understanding the use and limitations of our report.

**TABLE 1.1 - SEPTEMBER 2023 MONITORING WELL SAMPLE LOG**

	Groundwater Monitoring Well					Drinking Water	
	MW1	MW2	MW3	MW4	MW5	DW1	DW2
<b>Water Level Measurement Data</b>							
Date Water Level Measured	9/13/2023	9/13/2023	9/13/2023	9/13/2023	9/13/2023	-	-
Time Water Level Measured	14:37	14:55	15:01	15:07	14:46	-	-
Surveyed TOC Elevation (ft)	-	66.90	67.37	46.26	-	-	-
Measured Depth to Water (ft below TOC)	22.07	28.33	25.28	7.14	23.95	-	-
Water Elevation (ft)	-	38.57	42.09	39.12	-	-	-
<b>Sampling Data</b>							
Date Sampled	9/13/2023	9/13/2023	9/13/2023	9/13/2023	9/13/2023	9/13/2023	9/13/2023
Time Sampled	20:53	18:17	17:18	15:52	12:30	21:40	21:59
Measured Depth to Water (ft below TOC)	22.07	28.33	25.28	7.14	23.95	-	-
Total Depth of Well (ft below TOC)	34.37	35.12	32.69	17.76	32.08	-	-
Water Column in Well (ft)	12.30	6.79	7.41	10.62	8.13	-	-
Gallons per Foot	0.16	0.16	0.16	0.16	0.16	-	-
Water Column Volume (gallons)	1.97	1.09	1.19	1.70	1.30	-	-
Total Volume Pumped/Bailed (gallons)	1.6	1.5	1.3	0.6	2.9	-	-
Sampling Method	Submersible Pump	Submersible Pump	Submersible Pump	Submersible Pump	Submersible Pump	-	-
Diameter of Well Casing	2-inch	2-inch	2-inch	2-inch	2-inch	-	-
<b>Water Quality Data ^</b>							
Temperature (°C)	6.45	6.50	6.96	11.57	7.00	17.06	21.22
pH (Standard Units)	6.58	6.31	6.16	6.51	6.77	6.44	6.69
Specific Conductivity (µS/cm)	736	737	301	520	751	479	564
Oxidation Reduction Potential (mV)	-66.8	69.9	67.9	-18.8	-30.2	-9.8	6.8
Turbidity (NTU)	5.41	7.35	3.89	-	8.71	1.29	0.89
<b>Remarks</b>					Duplicate Sample MW15	Pre-Treatment Sample	Post Treatment Sample

Notes:

Water quality parameters were measured with Hanna Probe and Micro TPW Turbidimeter

- ^ = Water quality data at time of sampling
- TOC = Top of casing
- ft = Feet
- m/V = Millivolts

- NTU = Nephelometric Turbidity Unit
- °C = Degrees Celsius
- µS/cm = Microsiemens per Centimeter
- = Not applicable or not measured

TABLE 1.2 - SEPTEMBER 2023 SUMMARY OF WATER ANALYTICAL RESULTS

Analytical Method				Sample ID and Depth in feet BTOC (See Table 1.1, Figure 2.1)								
				Drinking Water		Groundwater						Quality Control
				DW1	DW2	MW1	MW2	MW3	MW4	MW5	MW15~	Trip Blank
		ADEC Cleanup Level*	Units	-	-	22.07	28.33	25.28	7.14	23.95	23.95	-
AK101	Gasoline Range Organics (GRO)	2,200	µg/L	-	-	<50.0	<50.0	<50.0	<50.0	171	198	<50.0
AK 102	Diesel Range Organics (DRO)	1,500	µg/L	-	-	413 J	318 J	213 J	234 J	315 J	295 J	-
<u>Volatile Organic Compound (VOCs)</u>												
EPA 8260D/8021B	Benzene	4.6	µg/L	<0.250	<0.250	1.70	<0.200	<0.200	<0.200	46.1	44.0	<0.200
	Toluene	1,100	µg/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
	Ethylbenzene	15	µg/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	6.28	5.79	<0.500
	Xylenes (total)	190	µg/L	<1.50	<1.50	<1.50	<1.50	<1.50	<1.50	2.17 J	2.06 J	<1.50
	Carbon Tetrachloride	4.6	µg/L	-	-	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	0.330 J
	Chloromethane	190	µg/L	-	-	0.310 J	<0.500	<0.500	<0.500	0.610 J, E	0.420 J, E	<0.500
	Isopropylbenzene (Cumene)	450	µg/L	-	-	<0.500	<0.500	<0.500	<0.500	3.19	3.02	<0.500
	n-Propylbenzene	660	µg/L	-	-	<0.500	<0.500	<0.500	<0.500	3.71	3.62	<0.500
	sec-Butylbenzene	2,000	µg/L	-	-	<0.500	<0.500	<0.500	<0.500	0.480 J	0.460 J	<0.500
	1,2-Dichloroethane	1.7	µg/L	-	-	0.230 J	<0.250	<0.250	<0.250	0.540	0.530	<0.250
	1,2,4-Trimethylbenzene	56	µg/L	-	-	<0.500	<0.500	<0.500	<0.500	0.720 J	0.690 J	<0.500
	1,3,5-Trimethylbenzene	60	µg/L	-	-	<0.500	<0.500	<0.500	<0.500	3.72	3.65	<0.500
	4-Isopropyltoluene	-	µg/L	-	-	<0.500	<0.500	<0.500	<0.500	0.370 J	0.390 J	<0.500
	Other VOCs	Various	µg/L	-	-	ND	ND	ND	ND	ND	ND	ND
<u>Polynuclear Aromatic Hydrocarbons (PAHs)</u>												
8270D SIM	1-Methylnaphthalene	11	µg/L	-	-	<0.0556 B	<0.0250	<0.0250	<0.0510 B	<0.0250	<0.0255	-
	2-Methylnaphthalene	36	µg/L	-	-	<0.0556 B	<0.0500 B	<0.0500 B	<0.0510 B	<0.0500 B	<0.0510 B	-
	Naphthalene	1.7	µg/L	-	-	0.0419 J	<0.0500	<0.0500	<0.0510	<0.0500	<0.0510	-
	Phenanthrene	170	µg/L	-	-	<0.0555	<0.0500	<0.100 B	<0.102 B	<0.0500	<0.0510	-
	Other PAHs	Various	µg/L	-	-	ND	ND	ND	ND	ND	ND	-

Notes:

- \* = ADEC groundwater cleanup level is the Method Two standard listed in Table C, 18 AAC 75 (October 2023)
- ~ = Field duplicate of preceding sample
- = Not applicable
- ND = Not detected
- ADEC = Alaska Department of Environmental Conservation
- EPA = Environmental Protection Agency
- BTOC = Below top of casing
- mg/L = Milligrams per liter
- µg/L = Micrograms per liter
- <0.500 = Analyte not detected; laboratory limit of detection of 0.500 µg/L
- 1.05 = Analyte detected
- 46.1 = Analyte detected above ADEC cleanup level
- J = Estimated concentration less than the limit of quantitation.
- B = Analyte concentration potentially affected by a method or trip blank detection.
- E = Result is an estimate due to a duplicate sample pair relative percent difference (RPD) failure.

**TABLE 2.1 - DECEMBER 2023 MONITORING WELL SAMPLE LOG**

	Monitoring Well					Drinking Water	
	MW1	MW2	MW3	MW4	MW5	DW1	DW2
<b>Water Level Measurement Data</b>							
Date Water Level Measured	12/19/2023	12/19/2023	12/19/2023	12/19/2023	12/19/2023	-	-
Time Water Level Measured	18:16	18:28	18:22	18:33	17:45	-	-
Surveyed TOC Elevation (ft)	-	66.90	67.37	46.26	-	-	-
Measured Depth to Water (ft below TOC)	23.41	29.82	26.80	8.27	25.09	-	-
Water Elevation (ft)	-	37.08	40.57	37.99	-	-	-
<b>Sampling Data</b>							
Date Sampled	12/20/2023	12/20/2023	12/20/2023	12/20/2023	12/20/2023	12/19/2023	12/19/2023
Time Sampled	11:39	15:36	14:32	12:52	10:20	15:41	16:06
Measured Depth to Water (ft below TOC)	23.41	29.82	26.80	8.27	25.09	-	-
Total Depth of Well (ft below TOC)	34.37	35.12	32.69	17.76	32.08	-	-
Water Column in Well (ft)	10.96	5.30	5.89	9.49	6.99	-	-
Gallons per Foot	0.16	0.16	0.16	0.16	0.16	-	-
Water Column Volume (gallons)	1.75	0.85	0.94	1.52	1.12	-	-
Total Volume Pumped/Bailed (gallons)	1.2	1.2	0.8	0.6	4.2	-	-
Sampling Method	Submersible Pump	Submersible Pump	Submersible Pump	Submersible Pump	Submersible Pump	-	-
Diameter of Well Casing	2-inch	2-inch	2-inch	2-inch	2-inch	-	-
<b>Water Quality Data ^</b>							
Temperature (°C)	3.48	2.69	4.69	2.89	4.22	10.10	10.79
pH (Standard Units)	5.87	6.28	6.06	6.17	6.05	6.10	6.85
Specific Conductivity (µS/cm)	449	445	198	240	520	219	216
Turbidity (NTU)	5.29	8.47	4.84	7.22	9.46	-	-
<b>Remarks</b>					Duplicate Sample MW15	Pre-Treatment Sample	Post Treatment Sample

Notes:

Water quality parameters were measured with Hanna Probe and Micro TPW Turbidimeter

- ^ = Water quality data at time of sampling
- TOC = Top of casing
- ft = Feet
- = Not applicable or not measured

- NTU = Nephelometric Turbidity Unit
- °C = Degrees Celsius
- µS/cm = Microsiemens per Centimeter

TABLE 2.2 - DECEMBER 2023 SUMMARY OF WATER ANALYTICAL RESULTS

Analytical Method				Sample ID and Depth in feet BTOC (See Table 2.1 and Figure 2.2)								
				Drinking Water		Groundwater						Quality Control
				DW1	DW2	MW1	MW2	MW3	MW4	MW5	MW15~	Trip Blank
		ADEC Cleanup Level*	Units	-	-	23.41	29.82	26.80	8.27	25.09	25.09	-
AK101	Gasoline Range Organics (GRO)	2,200	µg/L	-	-	<50.0	<50.0	<50.0	<50.0	98.4 J	96.2 J	<50.0
AK 102	Diesel Range Organics (DRO)	1,500	µg/L	-	-	624 B	414 B	359 B	284 B	324 J	379 J	-
<u>Volatile Organic Compound (VOCs)</u>												
EPA 8260D	Benzene	4.6	µg/L	<0.250	<0.250	0.680	<0.0200	<0.200	<0.200	11.9	11.1	<0.200
	Toluene	1,100	µg/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
	Ethylbenzene	15	µg/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	0.420 J	0.390 J	<0.500
	Xylenes (total)	190	µg/L	<1.50	<1.50	<1.50	<1.50	<1.50	<1.50	<1.50	<1.50	<1.50
	Isopropylbenzene	-	µg/L	-	-	<0.500	<0.500	<0.500	<0.500	0.540 J	0.520 J	<0.500
	n-Propylbenzene	660	µg/L	-	-	<0.500	<0.500	<0.500	<0.500	0.390 J	0.380 J	<0.500
	1,2-Dichloroethane	5.5	µg/L	-	-	<0.250	<0.250	<0.250	<0.250	0.200 J	0.210 J	<0.250
	1,3,5-Trimethylbenzene	660	µg/L	-	-	<0.500	<0.500	<0.500	<0.500	0.520 J	0.510 J	<0.500
	Other VOCs	Various	µg/L	-	-	ND	ND	ND	ND	ND	ND	ND
<u>Polynuclear Aromatic Hydrocarbons (PAHs)</u>												
8270D SIM	1-Methylnaphthalene	11	µg/L	-	-	<0.0240	<0.0240	<0.0245	<0.0245	<0.0240	<0.0245	-
	2-Methylnaphthalene	36	µg/L	-	-	<0.0240	<0.0240	<0.0245	<0.0245	0.0153 J	<0.0245	-
	Benzo(a)Anthracene	0.30	µg/L	-	-	<0.0240	<0.0240	<0.0245	<0.0245	0.0193 J	<0.0245	-
	Benzo(b)Fluoranthene	2.5	µg/L	-	-	<0.0240	<0.0240	<0.0245	<0.0245	0.0167 J	<0.0245	-
	Fluoranthene	260	µg/L	-	-	<0.0240	<0.0240	<0.0245	<0.0245	0.0190 J	<0.0245	-
	Pyrene	120	µg/L	-	-	<0.0240	<0.0240	<0.0245	<0.0245	0.0174 J	<0.0245	-
	Other PAHs	Various	µg/L	-	-	ND	ND	ND	ND	ND	ND	-

Notes:

- \* = ADEC groundwater cleanup level is the Method Two standard listed in Table C, 18 AAC 75 (October 2023)
- ~ = Field duplicate of preceding sample
- = Not applicable
- ND = Not detected
- ADEC = Alaska Department of Environmental Conservation
- EPA = Environmental Protection Agency
- BTOC = Below top of casing
- mg/L = Milligrams per liter
- µg/L = Micrograms per liter
- <0.500 = Analyte not detected; laboratory limit of detection of 0.500 µg/L
- 1.05 = Analyte detected
- 11.9 = Analyte detected above ADEC cleanup level
- J = Estimated concentration less than the limit of quantitation.
- B = Analyte concentration potentially affected by a method or trip blank detection.

**TABLE 3.1 - MARCH 2024 MONITORING WELL SAMPLING LOG**

	Monitoring Well					Drinking Water	
	MW1	MW2	MW3	MW4	MW5	DW1	DW2
<b>Water Level Measurement Data</b>							
Date Water Level Measured	3/5/2024	3/5/2024	3/5/2024	3/5/2024	3/5/2024	-	-
Time Water Level Measured	18:07	18:36	18:18	16:24	18:49	-	-
Surveyed TOC Elevation (ft)	-	66.90	67.37	46.26	-	-	-
Measured Depth to Water (ft below TOC)	24.05	30.36	27.44	8.78	24.74	-	-
Water Elevation (ft)	-	36.54	39.93	37.48	-	-	-
<b>Sampling Data</b>							
Date Sampled	3/6/2024	3/6/2024	3/6/2024	3/6/2024	3/6/2024	3/5/2024	3/5/2024
Time Sampled	9:52	11:02	12:13	13:17	14:20	16:01	16:21
Measured Depth to Water (ft below TOC)	24.05	30.36	27.44	8.78	24.74	-	-
Total Depth of Well (ft below TOC)	34.37	35.12	32.69	17.76	32.08	-	-
Water Column in Well (ft)	10.32	4.76	5.25	8.98	7.34	-	-
Gallons per Foot	0.16	0.16	0.16	0.16	0.16	-	-
Water Column Volume (gallons)	1.65	0.76	0.84	1.44	1.17	-	-
Total Volume Pumped/Bailed (gallons)	1.2	1.2	0.5	0.7	3.2	-	-
Sampling Method	Submersible Pump	Submersible Pump	Submersible Pump	Submersible Pump	Submersible Pump	-	-
Diameter of Well Casing	2-inch	2-inch	2-inch	2-inch	2-inch	-	-
<b>Water Quality Data ^</b>							
Temperature (°C)	5.49	5.17	4.14	3.56	6.19	12.07	14.29
pH (Standard Units)	6.02	6.21	6.00	6.20	6.57	6.29	7.10
Specific Conductivity (µS/cm)	541	453	187	207	506	239	129
Turbidity (NTU)	8.42	15.26	5.53	6.10	5.49	-	-
<b>Remarks</b>					Duplicate Sample MW15	Pre-Treatment Sample	Post Treatment Sample

Notes:

Water quality parameters were measured with Hanna Probe and Micro TPW Turbidimeter

- ^ = Water quality data at time of sampling
- TOC = Top of casing
- ft = Feet
- = Not applicable or not measured

- NTU = Nephelometric Turbidity Unit
- °C = Degrees Celsius
- µS/cm = Microsiemens per Centimeter

TABLE 3.2 - MARCH 2024 SUMMARY OF WATER ANALYTICAL RESULTS

Analytical Method				Sample ID and Depth in feet BTOC (See Table 3.1, and Figure 2.3)								
				Drinking Water		Groundwater						Quality Control
				DW1	DW2	MW1	MW2	MW3	MW4	MW5	MW15~	Trip Blank
		ADEC Cleanup Level*	Units	-	-	24.05	30.36	27.44	8.78	24.74	24.74	-
AK101	Gasoline Range Organics (GRO)	2,200	µg/L	-	-	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0
AK 102	Diesel Range Organics (DRO)	1,500	µg/L	-	-	<b>345 J</b>	<b>311 J</b>	<b>239 J</b>	<441	<b>227 J</b>	<b>277 J</b>	-
Volatile Organic Compound (VOCs)												
EPA 8260D	Benzene	4.6	µg/L	<0.450	<0.450	<0.300	<0.300	<0.300	<0.300	<b>6.18</b>	<b>5.34</b>	<0.300
	Toluene	1,100	µg/L	<3.75	<3.75	<0.750	<0.750	<0.750	<0.750	<0.750	<1.00 B	<b>0.620 J</b>
	Ethylbenzene	15	µg/L	<3.75	<3.75	<0.750	<0.750	<0.750	<0.750	<0.750	<0.750	<0.750
	Xylenes (total)	190	µg/L	<3.75	<3.75	<2.25	<2.25	<2.25	<2.25	<2.25	<2.25	<2.25
	Other VOCs	Various	µg/L	-	-	ND	ND	ND	ND	ND	ND	ND
Polynuclear Aromatic Hydrocarbons (PAHs)												
8270D SIM	1-Methylnaphthalene	11	µg/L	-	-	<0.0368	<0.0368	<0.0354	<0.0368	<0.0368	<0.0382	-
	2-Methylnaphthalene	36	µg/L	-	-	<0.0368	<0.0368	<0.0354	<0.0368	<0.0368	<0.0382	-
	Benzo[b]Fluoranthene	2.5	µg/L	-	-	<b>0.0155 J</b>	<0.0368	<0.0354	<0.0368	<0.0368	<0.0382	-
	Chrysene	2.0	µg/L	-	-	<b>0.0154 J</b>	<0.0368	<0.0354	<0.0368	<0.0368	<0.0382	-
	Fluoranthene	260	µg/L	-	-	<0.0490 B	<0.0490 B	<0.0354	<0.0368	<0.0368	<0.0382	-
	Pyrene	120	µg/L	-	-	<b>0.0181 J</b>	<0.0368	<0.0354	<0.0368	<0.0368	<0.0382	-
	Other PAHs	Various	µg/L	-	-	ND	ND	ND	ND	ND	ND	-

Notes:

- \* = ADEC groundwater cleanup level is the Method Two standard listed in Table C, 18 AAC 75 (October 2023)
- ~ = Field duplicate of preceding sample
- = Not applicable
- ND = Not detected
- ADEC = Alaska Department of Environmental Conservation
- EPA = Environmental Protection Agency
- BTOC = Below top of casing
- mg/L = Milligrams per liter
- µg/L = Micrograms per liter
- <0.750 = Analyte not detected; laboratory limit of detection of 0.750 µg/L
- 0.620** = Analyte detected
- 6.18** = Analyte detected above ADEC cleanup level
- J = Estimated concentration less than the limit of quantitation.
- B = Analyte concentration potentially affected by a method or trip blank detection.



**TABLE 4.1 - MAY 2024 MONITORING WELL SAMPLE LOG**

	Monitoring Well					Drinking Water	
	MW1	MW2	MW3	MW4	MW5	DW1	DW2
<b>Water Level Measurement Data</b>							
Date Water Level Measured	-	5/29/2024	5/29/2024	5/29/2024	5/29/2024	-	-
Time Water Level Measured	-	14:14	14:23	14:34	14:04	-	-
Surveyed TOC Elevation (ft)	-	66.90	67.37	46.26	-	-	-
Measured Depth to Water (ft below TOC)	-	31.10	27.29	8.20	26.03	-	-
Water Elevation (ft)	-	35.80	40.08	38.06	-	-	-
<b>Sampling Data</b>							
Date Sampled	NS	5/30/2024	5/29/2024	5/29/2024	5/29/2024	5/29/2024	5/29/2024
Time Sampled	NS	10:26	18:18	19:47	16:22	15:11	15:31
Measured Depth to Water (ft below TOC)	-	31.10	27.29	8.20	26.03	-	-
Total Depth of Well (ft below TOC)	34.37	35.12	32.69	17.76	32.08	-	-
Water Column in Well (ft)	-	4.02	5.40	9.56	6.05	-	-
Gallons per Foot	-	0.16	0.16	0.16	0.16	-	-
Water Column Volume (gallons)	-	0.64	0.86	1.53	0.97	-	-
Total Volume Pumped/Bailed (gallons)	-	2.0	1.4	1.9	3.8	-	-
Sampling Method	-	Submersible Pump	Submersible Pump	Submersible Pump	Submersible Pump	-	-
Diameter of Well Casing	2-inch	2-inch	2-inch	2-inch	2-inch	-	-
<b>Water Quality Data ^</b>							
Temperature (°C)	-	6.60	7.08	8.66	7.10	9.59	10.23
pH (Standard Units)	-	6.17	6.11	6.37	5.58	6.83	7.17
Specific Conductivity (µS/cm)	-	998	471	573	1,033	435	388
Turbidity (NTU)	-	2.84	4.80	35.69	8.63	-	-
<b>Remarks</b>	Well Damaged				Duplicate Sample MW15	Pre-Treatment Sample	Post Treatment Sample

Notes:

Water quality parameters were measured with Hanna Probe and Micro TPW Turbidimeter

- ^ = Water quality data at time of sampling
- TOC = Top of casing
- ft = Feet
- = Not applicable or not measured
- NS = Not sampled

- NTU = Nephelometric Turbidity Unit
- °C = Degrees Celsius
- µS/cm = Microsiemens per Centimeter

TABLE 4.2 - MAY 2024 SUMMARY OF WATER ANALYTICAL RESULTS

Analytical Method				Sample ID and Depth in feet BTOC (See Table 4.1, and Figure 2.4)							
				Drinking Water		Groundwater					Quality Control
				DW1	DW2	MW2	MW3	MW4	MW5	MW15~	Trip Blank
Analyte	ADEC Cleanup Level*	Units	-	-	31.10	27.29	8.20	26.03	26.03	-	
AK101	Gasoline Range Organics (GRO)	2,200	µg/L	-	-	<75.0	<75.0	<75.0	<75.0	<75.0	<75.0
AK 102	Diesel Range Organics (DRO)	1,500	µg/L	-	-	<b>237 J</b>	<441	<b>215 J</b>	<b>202 J, E</b>	<b>324 J, E</b>	-
<u>Volatile Organic Compound (VOCs)</u>											
EPA 8260D	Benzene	4.6	µg/L	<0.450	<0.450	<0.300	<0.300	<0.300	<b>4.29</b>	<b>4.59 J+</b>	<0.300
	Toluene	1,100	µg/L	<3.75	<3.75	<0.750	<0.750	<0.750	<0.750	<0.750	<0.750
	Ethylbenzene	15	µg/L	<3.75	<3.75	<0.750	<0.750	<0.750	<0.750	<b>0.340 J</b>	<0.750
	Xylenes (total)	190	µg/L	<3.75	<3.75	<2.25	<2.25	<2.25	<2.25	<2.25	<2.25
	Other VOCs	Various	µg/L	-	-	ND	ND	ND	ND	ND	ND
<u>Polynuclear Aromatic Hydrocarbons (PAHs)</u>											
8270D SIM	1-Methylnaphthalene	11	µg/L	-	-	<0.0368	<0.0368	<0.0375	<0.0368	<0.0375	-
	2-Methylnaphthalene	36	µg/L	-	-	<0.0368	<b>0.0158 J</b>	<0.0375	<b>0.0180 J</b>	<0.0375	-
	Fluoranthene	260	µg/L	-	-	<0.0368	<0.0368	<0.0375	<0.0368	<0.0750	-
	Phenanthrene	170	µg/L	-	-	<0.0368	<b>0.0314 J</b>	<b>0.0369 J</b>	<b>0.0393 J</b>	<0.0750	-
	Other PAHs	Various	µg/L	-	-	ND	ND	ND	ND	ND	-

Notes:

- \* = ADEC groundwater cleanup level is the Method Two standard listed in Table C, 18 AAC 75 (October 2023)
- ~ = Field duplicate of preceding sample
- = Not applicable
- ND = Not detected
- ADEC = Alaska Department of Environmental Conservation
- EPA = Environmental Protection Agency
- BTOC = Below top of casing
- mg/L = Milligrams per liter
- µg/L = Micrograms per liter
- <0.450 = Analyte not detected; laboratory limit of detection of 0.450 µg/L
- 0.62** = Analyte detected
- 4.29** = Analyte detected above ADEC cleanup level
- J = Estimated concentration less than the limit of quantitation.
- J+ = The result is an estimated quantity and may be biased high due to QC failures
- E = Result is an estimate due to a duplicate sample pair relative percent difference (RPD) failure.

TABLE 5 - SUMMARY OF HISTORICAL GROUNDWATER DATA

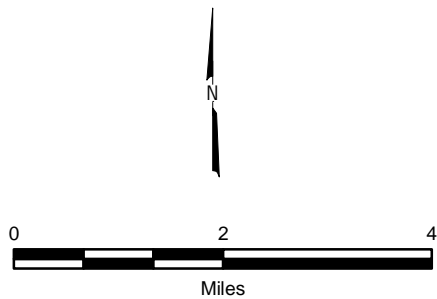
Monitoring Well	Date	Analyte and Cleanup Level (µg/L)					
		GRO 2,200	DRO 1,500	Benzene 4.6	Toluene 1,100	Ethylbenzene 15	Xylenes 190
MW1	April 2003	ND	ND	6.26	ND	ND	ND
	2/2/2005	ND	680	2.28	ND	ND	ND
	10/9/2016	139	415 J	53.6	ND	0.540 J	ND
	8/22/2018	ND	-	ND	ND	ND	ND
	7/5/2019	ND	-	ND	ND	ND	ND
	5/27/2021~	ND	ND	ND	ND	ND	ND
	10/24/2022	68.6 J	277 J	4.81	ND	0.430 J	ND
	9/13/2023	ND	413 J	1.70	ND	ND	ND
	12/20/2023	ND	624 B	0.680	ND	ND	ND
	3/6/2024	ND	345 J	ND	ND	ND	ND
5/29/2024	Well damaged and not sampled.						
MW2	April 2003	ND	ND	ND	ND	ND	ND
	2/2/2005	ND	ND	ND	ND	ND	ND
	10/9/2016	ND	266 J	ND	ND	ND	ND
	8/22/2018	ND	-	ND	ND	ND	ND
	5/27/2021	ND	ND	ND	ND	ND	ND
	10/25/2022	ND	ND	ND	ND	ND	ND
	9/13/2023	ND	318 J	ND	ND	ND	ND
	12/20/2023	ND	414 B	ND	ND	ND	ND
	3/6/2024	ND	311 J	ND	ND	ND	ND
	5/30/2024	ND	237 J	ND	ND	ND	ND
MW3	April 2003	ND	ND	ND	ND	ND	ND
	2/2/2005	ND	ND	ND	ND	ND	ND
	10/9/2016	ND	405 J	ND	ND	ND	ND
	8/22/2018	ND	-	ND	ND	ND	ND
	5/27/2021	ND	ND	ND	0.332 J	ND	ND
	10/25/2022	ND	ND	ND	ND	ND	ND
	9/13/2023	ND	213 J	ND	ND	ND	ND
	12/20/2023	ND	359 B	ND	ND	ND	ND
	3/6/2024	ND	239 J	ND	ND	ND	ND
	5/29/2024	ND	ND	ND	ND	ND	ND
MW4	5/27/2021	ND	ND	ND	ND	ND	ND
	10/25/2022	ND	ND	ND	ND	ND	ND
	9/13/2023	ND	234 J	ND	ND	ND	ND
	12/20/2023	ND	284 B	ND	ND	ND	ND
	3/6/2024	ND	ND	ND	ND	ND	ND
	5/29/2024	ND	215 J	ND	ND	ND	ND
MW5	10/25/2022~	76.5 J	ND	8.96	0.370 J	1.05	ND
	9/13/2023~	198	315 J	46.1	ND	6.28	2.17 J
	12/20/2023~	98.4 J	379 J	11.9	ND	0.420 J	ND
	3/6/2024~	ND	277 J	6.18	ND	ND	ND
	5/29/2024~	ND	324 J, E	4.59 J+	ND	0.340 J	ND


Notes:

- µg/L = Micrograms per liter
- ND = Analyte not detected
- 4.81 = Reported concentration is equal to or exceeds the ADEC cleanup level
- 277 = Analyte detected
- J = Estimated concentration less than the limit of quantitation.
- J+ = The result is an estimated quantity and may be biased high due to QC failures
- E = Result is an estimate due to a primary/field duplicate sample pair relative percent difference (RPD) failure.
- = Not applicable
- ~ = Analytical results for the sample reflect the higher concentrations for a duplicate set
- B = Analyte concentration potentially affected by a method or trip blank detection.



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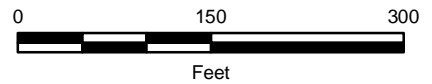


Kasilof Riverview Lodge Kasilof, Alaska	
<b>VICINITY MAP</b>	
December 2024	110026-002
 SHANNON & WILSON, INC. GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS	<b>FIG. 1</b>






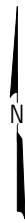


Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



**Legend**

-  Approximate location of monitoring well.
-  (39.12') Groundwater elevation in feet.
-  Approximate location of United States Geological Survey (USGS) streamgage



57440 Sterling Highway  
Kasilof, Alaska

**SEPTEMBER 2023 SITE PLAN**

December 2024

110026-002

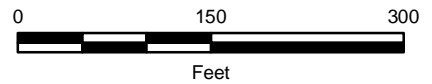
**SHANNON & WILSON, INC.**  
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

**FIG. 2.1**





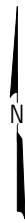


Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



**Legend**

-  Approximate location of monitoring well.
- (37.99') Groundwater elevation in feet.
-  Approximate location of United States Geological Survey (USGS) streamgage



57440 Sterling Highway  
Kasilof, Alaska

**DECEMBER 2023 SITE PLAN**

December 2024

110026-002

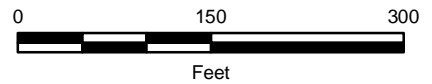
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GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

**FIG. 2.2**






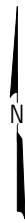



Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



**Legend**

-  Approximate location of monitoring well.
-  (37.48') Groundwater elevation in feet.
-  Approximate location of United States Geological Survey (USGS) streamgage



57440 Sterling Highway Kasilof, Alaska	
<b>MARCH 2024 SITE PLAN</b>	
December 2024	110026-002
 SHANNON & WILSON, INC. GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS	<b>FIG. 2.3</b>





Groundwater Flow Direction

Sterling Highway

MW2 (35.80')

Former Gasoline USTs

MW3 (40.08')

MW5

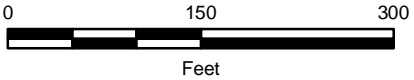
MW1

MW4 (38.06')

(29.03')

Kasilof River

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



**Legend**



Approximate location of monitoring well.

(38.06')

Groundwater elevation in feet.



Approximate location of United States Geological Survey (USGS) streamgage



57440 Sterling Highway  
Kasilof, Alaska

**MAY 2024 SITE PLAN**

December 2024

110026-002

**SHANNON & WILSON, INC.**  
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

**FIG. 2.4**



Appendix A  
Field Notes

APPENDIX A: FIELD NOTES

# FIELD ACTIVITIES DAILY LOG

Date 9/13/23

Sheet 1 of 1

Project No. 110026

Project Name: Kasilof Riverview Lodge  
 Field Activity Subject: Quarterly Groundwater + Drinking H<sub>2</sub>O Sampling  
 Calibration: 9/13/23 10:00 YSI 556 + Micro TPO  
 Description of daily activities and events: \_\_\_\_\_

- 10:00 - Load up gear; print logs; calibrate parameter meters. Gas truck
- 11:00 - Depart ANJC for site
- 14:09 - Arrive on-site; meet w/ property manager/owner.
- 14:15 - Begin well locales + collect DTW's

Well	DTW	Time	Date
MW1	22.07	14:37	9/13/23
MW2	28.33	14:55	
MW3	25.28	15:01	
MW4	7.14	15:07	
MW5	23.95	14:46	

15:10 - Set up to begin sampling. start @ MW-4

21:20 - MW1 through MW4 sampled - Meet manager - set up to collect drinking water samples

	Temp	Cond.	PH	ORP	Turb
110026 - DW1 - pretreat @ 21:40	17.06	479	6.44	9.8	1.29
110026 - DW2 - Post treat @ 21:59	21.22	564	6.69	6.8	0.89

- 22:15 - Load gear leave site
- 22:30 - Arrive @ hotel; demob End day.

9/14/23

- 11:00 - Arrive on-site; set up last well MW5, sample w/ dup
- 12:00 - Complete sampling. treat IDW
- 14:03 - IDW Treated, 4 drum soil land spread per Joe Browning direction. 3 drums cuttings remain on-site. (stW Boring 5) 2 drums, rusted (old unknown source).

- 14:05 - leave site
- stop for Geotech site visit.
- 18:50 - Anc office, de-mob gear, ice samples for next day shipping.
- 20:00 - End day.

Visitors on site: \_\_\_\_\_

Changes from plans/specifications are: \_\_\_\_\_

Weather conditions: \_\_\_\_\_

Important telephone call: \_\_\_\_\_

Personnel on site: \_\_\_\_\_

Signature: \_\_\_\_\_

Joe Sr.  
 Cell  
 -398-8123  
 Home  
 907-260-8000  
 Joe Browning

Visions: \_\_\_\_\_

Date: \_\_\_\_\_



# LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 110026 Location: Kasilof River View / Jody Weather: 63° sunny  
 Well No.: MW1  
 Date: 9/13/23 Time Started: 20:00 Time Completed: 21:19  
 Develop Date: — Develop End Time: — (24 hour break)

## INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1437 Date of Depth Measurement: 9/13/23  
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other: —  
 Diameter of Casing: 2" Well Screen Interval: —  
 Total Depth of Well Below MP: 34.37' Product Thickness, if noted: —  
 Depth-to-Water (DTW) Below MP: 22.07  
 Water Column in Well: 12.30 (Total Depth of Well Below MP - DTW Below MP)  
 Gallons per foot: 0.16  
 Gallons in Well: 1.97 (Water Column in Well x Gallons per foot)

## PURGING DATA

Date Purged: 9/13/23 Time Started: 20:21 Time Completed: 21:08  
 Three Well Volumes: 5.90 (Gallons in Well x 3)  
 Gallons Purged: 1.6 Depth of Pump (generally 2 ft from bottom): 25.0'  
 Max. Drawdown (generally 0.3 ft): 0.29 Pump Rate: 0.34/min  
 Well Purged Dry: Yes  No  (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
<u>20:36</u>	<u>0.4</u>	<u>0.3</u>	<u>22.35</u>	<u>0.28</u>	<u>6.31</u>	<u>737</u>	↓	<u>6.59</u>	<u>-64.3</u>	<u>20.84</u>
<u>20:41</u>	<u>0.0</u>	<u>0.3</u>	<u>22.35</u>	<u>0.28</u>	<u>6.44</u>	<u>735</u>	↓	<u>6.58</u>	<u>-65.8</u>	<u>9.61</u>
<u>20:46</u>	<u>1.2</u>	<u>0.3</u>	<u>22.35</u>	<u>0.28</u>	<u>6.45</u>	<u>735</u>	↓	<u>6.58</u>	<u>-66.5</u>	<u>6.25</u>
<u>20:49</u>	<u>1.4</u>	<u>0.3</u>	<u>22.35</u>	<u>0.28</u>	<u>6.45</u>	<u>737</u>	↓	<u>6.57</u>	<u>-67.5</u>	<u>6.29</u>
<u>20:52</u>	<u>1.6</u>	<u>0.3</u>	<u>22.36</u>	<u>0.29</u>	<u>6.45</u>	<u>736</u>	↓	<u>6.58</u>	<u>-66.8</u>	<u>5.41</u>

## SAMPLING DATA

Odor: Organic/Sulfur Color: Clear  
 Sample Designation: 110026-MW1 Time / Date: 20:53 9/13/23  
 QC Sample Designation: — Time / Date: —  
 QA Sample Designation: — Time / Date: —

Evacuation Method: Submersible Pump / Other: Double Whale  
 Sampling Method: Submersible Pump / Other: Double Whale  
 Water Quality Instruments Used/Manufacturer/Model Number YSI 556 + Micro TAW  
 Calibration Info (Time, Ranges, etc) 10:00 9/13/23

Remarks: —

Sampling Personnel: ZST

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65  
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



# LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 11026 - Location: Kasilof River near lodge Weather: 52° overcast  
 Well No.: MW2  
 Date: 9/13/23 Time Started: 1744 Time Completed: 18:33  
 Develop Date: - Develop End Time: - (24 hour break)

## INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1455 Date of Depth Measurement: 9/13/23  
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:  
 Diameter of Casing: 2" Well Screen Interval: -  
 Total Depth of Well Below MP: 35.12 Product Thickness, if noted: -  
 Depth-to-Water (DTW) Below MP: 28.33  
 Water Column in Well: 6.79 (Total Depth of Well Below MP - DTW Below MP)  
 Gallons per foot: 0.16  
 Gallons in Well: 1.09 (Water Column in Well x Gallons per foot)

## PURGING DATA

Date Purged: 9/13/23 Time Started: 17:57 Time Completed: 18:27  
 Three Well Volumes: 3.26 (Gallons in Well x 3)  
 Gallons Purged: 1.5 Depth of Pump (generally 2 ft from bottom): ~30.0'  
 Max. Drawdown (generally 0.3 ft): 0.22 Pump Rate: 0.3 L/min  
 Well Purged Dry: Yes  No  (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
18:02	0.4	0.3	28.53	0.20	6.57	734		6.35	68.3	9.37
18:07	0.8	0.3	28.54	0.21	6.56	733		6.32	69.6	8.80
18:10	1.0	0.3	28.55	0.22	6.54	735		6.31	69.8	5.73
18:13	1.2	0.3	28.55	0.22	6.53	736		6.31	69.6	6.67
18:16	1.5	0.3	28.55	0.22	6.50	737		6.31	69.9	7.35

## SAMPLING DATA

Odor: Organic Color: Clear  
 Sample Designation: 11026-MW2 Time / Date: 18:17 9/13/23  
 QC Sample Designation: - Time / Date: -  
 QA Sample Designation: - Time / Date: -

Evacuation Method: Submersible Pump / Other: Double Whisk  
 Sampling Method: Submersible Pump / Other: Double Whisk  
 Water Quality Instruments Used/Manufacturer/Model Number YSI 556 + Micro TRW

Calibration Info (Time, Ranges, etc) 10:00 9/13/23

Remarks: -

Sampling Personnel: ZST

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65  
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



# LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 110026 Location: Kaslof Riverview Lodge Weather: 50° overcast  
 Well No.: MW3  
 Date: 9/13/23 Time Started: 16:35 Time Completed: 17:43  
 Develop Date: — Develop End Time: — (24 hour break)

## INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 15:01 Date of Depth Measurement: 9/13/23  
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other: —  
 Diameter of Casing: 2" Well Screen Interval: —  
 Total Depth of Well Below MP: 32.69 Product Thickness, if noted: —  
 Depth-to-Water (DTW) Below MP: 25.28  
 Water Column in Well: 7.41 (Total Depth of Well Below MP - DTW Below MP)  
 Gallons per foot: 0.16  
 Gallons in Well: 1.19 (Water Column in Well x Gallons per foot)

## PURGING DATA

Date Purged: 9/13/23 Time Started: 16:56 Time Completed: 17:33  
 Three Well Volumes: 3.56 (Gallons in Well x 3)  
 Gallons Purged: 1.3 Depth of Pump (generally 2 ft from bottom): ~27.0'  
 Max. Drawdown (generally 0.3 ft): 0.25 Pump Rate: 0.2 L/min  
 Well Purged Dry: Yes  No  (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
17:01	0.3	0.2	25.53	0.25	6.43	309	↓	6.24	67.5	6.92
17:06	0.6	0.2	25.53	0.25	6.77	308		6.18	68.6	4.31
17:11	0.9	0.2	25.53	0.25	6.86	307		6.17	68.3	4.00
17:14	1.1	0.2	25.53	0.25	6.92	304		6.16	68.0	4.29
17:17	1.3	0.2	25.53	0.25	6.96	301		6.16	67.9	3.89

## SAMPLING DATA

Odor: None Color: Clear  
 Sample Designation: 110026-MW3 Time / Date: 17:18 9/13/23  
 QC Sample Designation: — Time / Date: —  
 QA Sample Designation: — Time / Date: —

Evacuation Method: Submersible Pump / Other: Double whake  
 Sampling Method: Submersible Pump / Other: Double whake  
 Water Quality Instruments Used/Manufacturer/Model Number YST 556 + Micro TRW  
 Calibration Info (Time, Ranges, etc) 10:00 9/13/23

Remarks: —

Sampling Personnel: 257

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65  
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



# LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 110026 Location: Kasilof River View Lodge Weather: 52° partly cloudy  
 Well No.: MW4  
 Date: 9/13/23 Time Started: 15:10 Time Completed: 16:30  
 Develop Date: - Develop End Time: - (24 hour break)

## INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 15:07 Date of Depth Measurement: 9/13/23  
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:  
 Diameter of Casing: 2" Well Screen Interval: -  
 Total Depth of Well Below MP: 17.76 Product Thickness, if noted: -  
 Depth-to-Water (DTW) Below MP: 7.14  
 Water Column in Well: 10.62 (Total Depth of Well Below MP - DTW Below MP)  
 Gallons per foot: 0.16  
 Gallons in Well: 1.70 (Water Column in Well x Gallons per foot)

## PURGING DATA

Date Purged: 9/13/23 Time Started: 1532 Time Completed: 16:20  
 Three Well Volumes: 5.10 (Gallons in Well x 3)  
 Gallons Purged: 0.6 Depth of Pump (generally 2 ft from bottom): ~9.5'  
 Max. Drawdown (generally 0.3 ft): 0.41 Pump Rate: 0.1 L/min  
 Well Purged Dry: Yes  No  (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
<u>15:37</u>	<u>0.2</u>	<u>0.1</u>	<u>7.54</u>	<u>0.4</u>	<u>11.73</u>	<u>514</u>	↓	<u>6.52</u>	<u>-14.3</u>	<u>7.50</u>
<u>15:42</u>	<u>0.3</u>	<u>0.1</u>	<u>7.54</u>	<u>0.4</u>	<u>11.66</u>	<u>517</u>		<u>6.51</u>	<u>-16.0</u>	<u>6.30</u>
<u>15:45</u>	<u>0.4</u>	<u>0.1</u>	<u>7.55</u>	<u>0.41</u>	<u>11.59</u>	<u>519</u>		<u>6.51</u>	<u>-17.1</u>	<u>8.75</u>
<u>15:48</u>	<u>0.5</u>	<u>0.1</u>	<u>7.55</u>	<u>0.41</u>	<u>11.55</u>	<u>522</u>		<u>6.51</u>	<u>-18.5</u>	<u>8.08</u>
<u>15:51</u>	<u>0.6</u>	<u>0.1</u>	<u>7.55</u>	<u>0.41</u>	<u>11.57</u>	<u>520</u>		<u>6.51</u>	<u>-18.8</u>	

## SAMPLING DATA

Odor: Organic Color: Clear  
 Sample Designation: 110026-MW4 Time / Date: 15:52 9/13/23  
 QC Sample Designation: / Time / Date: /  
 QA Sample Designation: / Time / Date: /

Evacuation Method: Submersible Pump / Other: Double Whisk  
 Sampling Method: Submersible Pump / Other: Double Whisk

Water Quality Instruments Used/Manufacturer/Model Number YSI 556 + Micro TPW

Calibration Info (Time, Ranges, etc) 10:00 9/13/23

Remarks: \_\_\_\_\_

Sampling Personnel: ZJT

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65  
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



# LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 110026 Location: Kasilof Riverview Lodge Weather: 48° rain  
 Well No.: MW5  
 Date: 9/14/23 Time Started: 11:00 Time Completed: 1300  
 Develop Date: — Develop End Time: — (24 hour break)

## INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 14:46 Date of Depth Measurement: 9/13/23  
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other: —  
 Diameter of Casing: 2" Well Screen Interval: —  
 Total Depth of Well Below MP: 32.08 Product Thickness, if noted: —  
 Depth-to-Water (DTW) Below MP: 23.95  
 Water Column in Well: 8.13 (Total Depth of Well Below MP - DTW Below MP)  
 Gallons per foot: 0.16  
 Gallons in Well: 130 (Water Column in Well x Gallons per foot)

## PURGING DATA

Date Purged: 9/14/23 Time Started: 11:56 Time Completed: 12:45  
 Three Well Volumes: 3.90 (Gallons in Well x 3)  
 Gallons Purged: 2.9 Depth of Pump (generally 2 ft from bottom): ~26.0'  
 Max. Drawdown (generally 0.3 ft): 0.03 Pump Rate: 0.4 L/min  
 Well Purged Dry: Yes  No  (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
12:01	0.5	0.4	23.99	0.04	7.23	754	↓	6.62	-4.6	76.31
12:06	1.0	0.4	24.01	0.06	7.12	748	↓	6.60	-10.3	57.38
12:11	1.5	0.4	24.01	0.06	7.13	749	↓	6.71	-11.5	35.87
12:16	2.0	0.4	24.02	0.07	7.09	751	↓	6.73	-26.1	16.26
12:21	2.5	0.4	24.03	0.08	6.95	752	↓	6.77	-29.8	9.23
12:24	2.7	0.4	24.03	0.08	6.98	750	↓	6.77	-30.0	6.49
12:27	2.9	0.4	24.03	0.08	7.00	751	↓	6.77	-30.2	9.71

## SAMPLING DATA

Odor: Organic Color: Tan tint  
 Sample Designation: 110026-MW5 Time / Date: 12:30 9/14/23  
 QC Sample Designation: 110026-MW5 Time / Date: 13:00 9/14/23  
 QA Sample Designation: — Time / Date: —

Evacuation Method: Submersible Pump / Other: Double Whisk  
 Sampling Method: Submersible Pump / Other: Double Whisk  
 Water Quality Instruments Used/Manufacturer/Model Number YSI 556 + Micro TPW  
 Calibration Info (Time, Ranges, etc) 9:00 9/14/23

Remarks: —

Sampling Personnel: ZJT

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65  
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



# LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 110026 Location: Kasilof River Lodge Weather: 15° overcast  
 Well No.: MW1  
 Date: 12/20/23 Time Started: 11:02 Time Completed: 12:00

## INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 18:16 Date of Depth Measurement: 12/19/23  
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:  
 Diameter of Casing: 2" Well Screen Interval: Bottom 10'  
 Total Depth of Well Below MP: 34.37 Product Thickness, if noted: \_\_\_\_\_  
 Depth-to-Water (DTW) Below MP: 23.41  
 Water Column in Well: 10.96 (Total Depth of Well Below MP - DTW Below MP)  
 Gallons per foot: 0.16  
 Gallons in Well: 1.75 (Water Column in Well x Gallons per foot)

## PURGING DATA

Date Purged: 12/20/23 Time Started: 11:22 Time Completed: 11:51  
 Three Well Volumes: 5.26 (Gallons in Well x 3)  
 Gallons Purged: 1.2 Depth of Pump (generally 2 ft from bottom): ~25.5'  
 Max. Drawdown (generally 0.3 ft): 0.27 Pump Rate: 0.3 L/min  
 Well Purged Dry: Yes  No  (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	<del>DO:</del> (mg/L)	pH: (S.U.)	<del>ORP:</del> (mV)	Turb: (NTU)
<u>11:27</u>	<u>0.4</u>	<u>0.3</u>	<u>23.68</u>	<u>0.27</u>	<u>4.38</u>	<u>460</u>	<u>↓</u>	<u>5.96</u>	<u>↓</u>	<u>19.33</u>
<u>11:32</u>	<u>0.8</u>	<u>0.3</u>	<u>23.68</u>	<u>0.27</u>	<u>3.60</u>	<u>454</u>	<u>↓</u>	<u>5.92</u>	<u>↓</u>	<u>8.48</u>
<u>11:35</u>	<u>1.0</u>	<u>0.3</u>	<u>23.68</u>	<u>0.27</u>	<u>3.52</u>	<u>451</u>	<u>↓</u>	<u>5.88</u>	<u>↓</u>	<u>6.94</u>
<u>11:38</u>	<u>1.2</u>	<u>0.3</u>	<u>23.68</u>	<u>0.27</u>	<u>3.48</u>	<u>449</u>	<u>↓</u>	<u>5.87</u>	<u>↓</u>	<u>5.29</u>

## SAMPLING DATA

Odor: None Color: Clear  
 Sample Designation: 110026-MW1 Time / Date: 11:39 12/20/23  
 QC Sample Designation: \_\_\_\_\_ Time / Date: \_\_\_\_\_  
 QA Sample Designation: \_\_\_\_\_ Time / Date: \_\_\_\_\_

Evacuation Method: Submersible Pump / Other: Double Whale  
 Sampling Method: Submersible Pump / Other: Double Whale

Water Quality Instruments Used/Manufacturer/Model Number KSI 556 + Micro TFW

Calibration Info (Time, Ranges, etc) 8:00 12/20/23

Remarks: \_\_\_\_\_

Sampling Personnel: ZJT

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65  
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23





# LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 110026 Location: Kasilof River Lodge Weather: 15° overcast  
 Well No.: MW2  
 Date: 12/20/23 Time Started: 13:05 Time Completed: 16:05

## INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 18:28 Date of Depth Measurement: 12/19/23  
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:  
 Diameter of Casing: 2" Well Screen Interval: Bottom 10'  
 Total Depth of Well Below MP: 35.12 Product Thickness, if noted: \_\_\_\_\_  
 Depth-to-Water (DTW) Below MP: 29.82  
 Water Column in Well: 5.3 (Total Depth of Well Below MP - DTW Below MP)  
 Gallons per foot: 0.16  
 Gallons in Well: 0.85 (Water Column in Well x Gallons per foot)

## PURGING DATA

Date Purged: 12/20/23 Time Started: 15:19 Time Completed: 15:50  
 Three Well Volumes: 2.54 (Gallons in Well x 3)  
 Gallons Purged: 1.2 Depth of Pump (generally 2 ft from bottom): ~32.0'  
 Max. Drawdown (generally 0.3 ft): 0.23 Pump Rate: 0.3 L/min  
 Well Purged Dry: Yes  No  (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DQ: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
15:24	0.4	0.3	29.99	0.17	2.79	448	↓	6.35	↓	7.79
15:29	0.8	0.3	30.05	0.23	2.78	446	↓	6.31	↓	5.44
15:32	1.0	0.3	30.05	0.23	2.72	445	↓	6.28	↓	7.78
15:35	1.2	0.3	30.05	0.23	2.69	445	↓	6.28	↓	8.47

## SAMPLING DATA

Odor: None Color: Clear  
 Sample Designation: 110026-MW2 Time / Date: 15:36 12/20/23  
 QC Sample Designation: \_\_\_\_\_ Time / Date: \_\_\_\_\_  
 QA Sample Designation: \_\_\_\_\_ Time / Date: \_\_\_\_\_

Evacuation Method: Submersible Pump / Other: Double Whale  
 Sampling Method: Submersible Pump / Other: Double Whale  
 Water Quality Instruments Used/Manufacturer/Model Number: YSI 556 + Micro TPW

Calibration Info (Time, Ranges, etc) 8:00 12/20/23

Remarks: \_\_\_\_\_

Sampling Personnel: ZST

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65  
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



# LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 110026 Location: Kasilof River Lodge Weather: 15° overcast  
 Well No.: MW3  
 Date: 12/20/23 Time Started: 1350 Time Completed: 15:00

## INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 18:22 Date of Depth Measurement: 12/19/23  
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:  
 Diameter of Casing: 2" Well Screen Interval: Bottom 10'  
 Total Depth of Well Below MP: 32.69 Product Thickness, if noted: ---  
 Depth-to-Water (DTW) Below MP: 26.80  
 Water Column in Well: 5.89 (Total Depth of Well Below MP - DTW Below MP)  
 Gallons per foot: 0.16  
 Gallons in Well: 0.94 (Water Column in Well x Gallons per foot)

## PURGING DATA

Date Purged: 12/20/23 Time Started: 14:10 Time Completed: 14:50  
 Three Well Volumes: 2.83 (Gallons in Well x 3)  
 Gallons Purged: 0.8 Depth of Pump (generally 2 ft from bottom): ~29.0'  
 Max. Drawdown (generally 0.3 ft): 0.45 Pump Rate: 0.1 L/min  
 Well Purged Dry: Yes  No  (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
14:15	0.3	0.2	27.09	0.29	3.60	196	↓	6.07	↓	5.35
14:20	0.5	0.1	27.21	0.41	4.26	197	↓	6.07	↓	5.22
14:25	0.6	0.1	27.24	0.44	4.60	198	↓	6.06	↓	5.36
14:28	0.7	0.1	27.25	0.45	4.68	197	↓	6.06	↓	5.08
14:31	0.8	0.1	27.25	0.45	4.69	198	↓	6.06	↓	4.84

## SAMPLING DATA

Odor: None Color: Clear  
 Sample Designation: 110026-MW3 Time / Date: 14:32 12/20/23  
 QC Sample Designation: / Time / Date: /  
 QA Sample Designation: / Time / Date: /

Evacuation Method: Submersible Pump / Other: Double Whale  
 Sampling Method: Submersible Pump / Other: Double Whale

Water Quality Instruments Used/Manufacturer/Model Number YSI 556 + Micro TPW

Calibration Info (Time, Ranges, etc) 8:00 12/20/23

Remarks: \_\_\_\_\_

Sampling Personnel: ZJT

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65  
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



# LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 110026 Location: Kasilof River Lodge Weather: 15° overcast  
 Well No.: MW4  
 Date: 12/20/23 Time Started: 12:15 Time Completed: 13:30

## INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 18:33 Date of Depth Measurement: 12/19/23  
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:  
 Diameter of Casing: 2" Well Screen Interval: Bottom 10'  
 Total Depth of Well Below MP: 17.76 Product Thickness, if noted: —  
 Depth-to-Water (DTW) Below MP: 8.27  
 Water Column in Well: 9.49 (Total Depth of Well Below MP - DTW Below MP)  
 Gallons per foot: 0.16  
 Gallons in Well: 1.52 (Water Column in Well x Gallons per foot)

## PURGING DATA

Date Purged: 12/20/23 Time Started: 12:35 Time Completed: 13:05  
 Three Well Volumes: 4.56 (Gallons in Well x 3)  
 Gallons Purged: 0.6 Depth of Pump (generally 2 ft from bottom): ~10.5'  
 Max. Drawdown (generally 0.3 ft): 0.42 Pump Rate: 0.1 L/min  
 Well Purged Dry: Yes  No  (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
<u>1240</u>	<u>0.2</u>	<u>0.1</u>	<u>8.50</u>	<u>0.23</u>	<u>2.29</u>	<u>237</u>	↓	<u>5.95</u>	↓	<u>11.69</u>
<u>1245</u>	<u>0.4</u>	<u>0.1</u>	<u>8.60</u>	<u>0.33</u>	<u>2.78</u>	<u>239</u>	↓	<u>6.11</u>	↓	<u>9.71</u>
<u>12:48</u>	<u>0.5</u>	<u>0.1</u>	<u>8.65</u>	<u>0.38</u>	<u>2.83</u>	<u>240</u>	↓	<u>6.15</u>	↓	<u>6.40</u>
<u>12:51</u>	<u>0.6</u>	<u>0.1</u>	<u>8.69</u>	<u>0.42</u>	<u>2.89</u>	<u>240</u>	↓	<u>6.17</u>	↓	<u>7.22</u>

## SAMPLING DATA

Odor: None Color: clear  
 Sample Designation: 110026-MW4 Time / Date: 12:52 12/20/23  
 QC Sample Designation: / Time / Date: /  
 QA Sample Designation: / Time / Date: /

Evacuation Method: Submersible Pump / Other: Double Whake  
 Sampling Method: Submersible Pump / Other: Double Whake

Water Quality Instruments Used/Manufacturer/Model Number YSI 556 + Micro TPW

Calibration Info (Time, Ranges, etc) 8:00 12/20/23

Remarks: \_\_\_\_\_

Sampling Personnel: ZSY

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65  
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



# LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 110026 Location: Kaslof River Lodge Weather: 18° overcast  
 Well No.: MW5  
 Date: 12/20/23 Time Started: 9:00 Time Completed: 10:00

## INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 17:45 Date of Depth Measurement: 12/19/23  
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:  
 Diameter of Casing: 2" Well Screen Interval: Bottom 10'  
 Total Depth of Well Below MP: 32.08 Product Thickness, if noted: -  
 Depth-to-Water (DTW) Below MP: 25.09  
 Water Column in Well: 6.99 (Total Depth of Well Below MP - DTW Below MP)  
 Gallons per foot: 0.16  
 Gallons in Well: 1.12 (Water Column in Well x Gallons per foot)

## PURGING DATA

Date Purged: 12/20/23 Time Started: 9:45 Time Completed: 10:51  
 Three Well Volumes: 3.36 (Gallons in Well x 3)  
 Gallons Purged: 4.2 Depth of Pump (generally 2 ft from bottom): ~27.0'  
 Max. Drawdown (generally 0.3 ft): 0.11 Pump Rate: 0.5 L/min  
 Well Purged Dry: Yes  No  (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	<del>DO: (mg/L)</del>	pH: (S.U.)	<del>ORP: (mV)</del>	Turb: (NTU)
<u>9:50</u>	<u>0.6</u>	<u>0.5</u>	<u>25.20</u>	<u>0.11</u>	<u>5.35</u>	<u>533</u>	<del>—</del>	<u>5.71</u>	<del>—</del>	<u>128.5</u>
<u>9:55</u>	<u>1.2</u>	<u>0.5</u>	<u>25.78</u>	<u>0.09</u>	<u>4.25</u>	<u>519</u>	<del>—</del>	<u>5.74</u>	<del>—</del>	<u>77.29</u>
<u>10:00</u>	<u>1.8</u>	<u>0.5</u>	<u>25.18</u>	<u>0.09</u>	<u>4.29</u>	<u>516</u>	<del>—</del>	<u>5.68</u>	<del>—</del>	<u>54.08</u>
<u>10:05</u>	<u>2.4</u>	<u>0.5</u>	<u>25.18</u>	<u>0.09</u>	<u>4.27</u>	<u>518</u>	<del>—</del>	<u>5.64</u>	<del>—</del>	<u>25.10</u>
<u>10:10</u>	<u>3.0</u>	<u>0.5</u>	<u>25.18</u>	<u>0.09</u>	<u>4.22</u>	<u>520</u>	<del>—</del>	<u>5.01</u>	<del>—</del>	<u>13.27</u>
<u>10:13</u>	<u>3.4</u>	<u>0.5</u>	<u>25.18</u>	<u>0.09</u>	<u>4.22</u>	<u>520</u>	<del>—</del>	<u>6.05</u>	<del>—</del>	<u>9.46</u>

## SAMPLING DATA

Odor: None Color: Tan tint  
 Sample Designation: 110026-MW5 Time / Date: 10:20 12/20/23  
 QC Sample Designation: 110026-MW15 Time / Date: 10:50 12/20/23  
 QA Sample Designation: - Time / Date: -

Evacuation Method: Submersible Pump / Other: Double Whale  
 Sampling Method: Submersible Pump / Other: Double Whale

Water Quality Instruments Used/Manufacturer/Model Number YSI 556 + Micro TPW

Calibration Info (Time, Ranges, etc) 8:00 12/20/23

Remarks: \_\_\_\_\_

Sampling Personnel: ZJT

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65  
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23

**WATER SUPPLY WELL SAMPLING LOG**

Address Sterling Hwy, Kasilof, AK Project Number 110026  
 Owner/Occupant Joe, B Project Name Kasilof Riverview Lodge  
 Mailing address - Date 12/19/23  
 Telephone - Time 1525  
 Sampling Personnel ZST

Sample Location utility room adjacent to the restroom  
 \_\_\_\_\_  
 \_\_\_\_\_

Sample Number 110026 - DW1 Time 1541 12/19/23  
 Duplicate \_\_\_\_\_ Time \_\_\_\_\_

Analysis BTEX Lab SGS

Purge Volume ~ 5 gal

**PARAMETERS [stabilization criteria]**

Start 1525 Time	Temp. (°C) [± 0.5]	Conductivity (µS/cm) [± 3%]	pH (std. units) [± 0.1]	Water Clarity (visual)
1530	10.01	221	5.62	Clear
1535	10.08	220	6.06	"
1540	10.10	219	6.10	"

Notes: Pre-Treatment drinking water  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



WATER SUPPLY WELL SAMPLING LOG

Address Starling Hwy, Kaslof AK Project Number 11002<sup>10</sup>  
 Owner/Occupant Joe. B Project Name Kaslof Renewal Lodge  
 Mailing address \_\_\_\_\_ Date 3-5-24  
 Telephone \_\_\_\_\_ Time \_\_\_\_\_  
 Sampling Personnel ZST

Sample Location Utility Room adjacent to restroom  
 \_\_\_\_\_  
 \_\_\_\_\_

Sample Number 11002<sup>10</sup>-D401 Time 3-5-24 16:01  
 Duplicate \_\_\_\_\_ Time \_\_\_\_\_

Analysis BTEX Lab GLS

Purge Volume 5-gal

PARAMETERS [stabilization criteria]

Start Time	Temp. (°C) [± 0.5]	Conductivity (µS/cm) [± 3%]	pH (std. units) [± 0.1]	Water Clarity (visual)
15:45	12.06	236	6.22	clear
15:55	12.08	237	6.32	"
16:00	12.07	237	6.29	"

Notes: Pre-treatment drinking H<sub>2</sub>O  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

WATER SUPPLY WELL SAMPLING LOG

Address Sterling Hwy, Kaslo BC Project Number 11026  
 Owner/Occupant Joe B Project Name Kaslo Riverview Ls dye  
 Mailing address \_\_\_\_\_ Date 3-5-24  
 Telephone — Time \_\_\_\_\_  
 Sampling Personnel ZST

Sample Location Restroom Faucet  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Sample Number 11026 - DW2 Time 3-5-24 16:21  
 Duplicate \_\_\_\_\_ Time \_\_\_\_\_

Analysis BTEX Lab ZGS

Purge Volume \_\_\_\_\_

PARAMETERS [stabilization criteria]

Start Time	Temp. (°C) [± 0.5]	Conductivity (µS/cm) [± 3%]	pH (std. units) [± 0.1]	Water Clarity (visual)
16:10	14.39	134	7.12	Clear
16:15	14.31	130	7.11	"
16:20	14.29	129	7.10	"

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_





# LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 110026 Location: KRL Weather: 28° overcast  
 Well No.: MW1  
 Date: 3-6-24 Time Started: 9:10 Time Completed: 10:20

## INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1807 Date of Depth Measurement: 3-5-24  
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:  
 Diameter of Casing: 2" Well Screen Interval: —  
 Total Depth of Well Below MP: 34.37 Product Thickness, if noted: —  
 Depth-to-Water (DTW) Below MP: 24.05  
 Water Column in Well: 10.32 (Total Depth of Well Below MP - DTW Below MP)  
 Gallons per foot: 0.16  
 Gallons in Well: 1.65 (Water Column in Well x Gallons per foot)

## PURGING DATA

Date Purged: 3-6-24 Time Started: 9:35 Time Completed: 10:10  
 Three Well Volumes: 4.95 (Gallons in Well x 3)  
 Gallons Purged: 1.2 Depth of Pump (generally 2 ft from bottom): ~26.0'  
 Max. Drawdown (generally 0.3 ft): 0.13 Pump Rate: 0.34/min  
 Well Purged Dry: Yes  No  (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	<del>DO: (mg/L)</del>	pH: (S.U.)	<del>ORP: (mV)</del>	Turb: (NTU)
<u>9:40</u>	<u>0.4</u>	<u>0.3</u>	<u>24.15</u>	<u>0.10</u>	<u>5.41</u>	<u>534</u>	<del>—</del>	<u>5.93</u>	<del>—</del>	<u>7.57</u>
<u>9:45</u>	<u>0.8</u>	<u>0.3</u>	<u>24.17</u>	<u>0.12</u>	<u>5.51</u>	<u>537</u>	<del>—</del>	<u>5.97</u>	<del>—</del>	<u>8.63</u>
<u>9:48</u>	<u>1.0</u>	<u>0.3</u>	<u>24.17</u>	<u>0.12</u>	<u>5.52</u>	<u>539</u>	<del>—</del>	<u>6.01</u>	<del>—</del>	<u>8.89</u>
<u>9:51</u>	<u>1.2</u>	<u>0.3</u>	<u>24.18</u>	<u>0.13</u>	<u>5.49</u>	<u>541</u>	<del>—</del>	<u>6.02</u>	<del>—</del>	<u>8.42</u>
							<del>—</del>		<del>—</del>	

## SAMPLING DATA

Odor: None Color: Clear  
 Sample Designation: 110026-MW1 Time / Date: 9:52 3-6-24  
 QC Sample Designation: / Time / Date: /  
 QA Sample Designation: / Time / Date: /

Evacuation Method: Submersible Pump / Other: Double Whake  
 Sampling Method: Submersible Pump / Other: Double Whake  
 Water Quality Instruments Used/Manufacturer/Model Number YSI 556 + Micro TFW  
 Calibration Info (Time, Ranges, etc) 8:00 3-6-24

Remarks: \_\_\_\_\_

Sampling Personnel: RJT

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65  
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



# LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 110026 Location: KR1 Weather: 34° overcast  
 Well No.: MW2  
 Date: 3-6-24 Time Started: 10:21 Time Completed: 11:17

## INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 18:30 Date of Depth Measurement: 3-5-24  
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:  
 Diameter of Casing: 2" Well Screen Interval: —  
 Total Depth of Well Below MP: 35.12 Product Thickness, if noted: —  
 Depth-to-Water (DTW) Below MP: 30.36  
 Water Column in Well: 4.76 (Total Depth of Well Below MP - DTW Below MP)  
 Gallons per foot: 0.16  
 Gallons in Well: 0.76 (Water Column in Well x Gallons per foot)

## PURGING DATA

Date Purged: 3-6-24 Time Started: 10:45 Time Completed: 11:12  
 Three Well Volumes: 2.28 (Gallons in Well x 3)  
 Gallons Purged: 1.2 Depth of Pump (generally 2 ft from bottom): ~32.0'  
 Max. Drawdown (generally 0.3 ft): 0.16 Pump Rate: 0.3 L/min  
 Well Purged Dry: Yes  No  (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	<del>DO: (mg/L)</del>	pH: (S.U.)	<del>ORP: (mV)</del>	Turb: (NTU)
<u>10:50</u>	<u>0.4</u>	<u>0.3</u>	<u>30.52</u>	<u>0.16</u>	<u>5.32</u>	<u>448</u>		<u>6.23</u>		<u>15.64</u>
<u>10:55</u>	<u>0.8</u>	<u>0.3</u>	<u>30.52</u>	<u>0.16</u>	<u>5.23</u>	<u>452</u>		<u>6.22</u>		<u>15.83</u>
<u>10:58</u>	<u>1.0</u>	<u>0.3</u>	<u>30.52</u>	<u>0.16</u>	<u>5.18</u>	<u>453</u>		<u>6.21</u>		<u>15.58</u>
<u>11:01</u>	<u>1.2</u>	<u>0.3</u>	<u>30.52</u>	<u>0.16</u>	<u>5.17</u>	<u>453</u>		<u>6.21</u>		<u>15.26</u>

## SAMPLING DATA

Odor: None Color: Clear  
 Sample Designation: 110026-MW2 Time / Date: 11:02 3-6-24  
 QC Sample Designation: / Time / Date: /  
 QA Sample Designation: / Time / Date: /

Evacuation Method: Submersible Pump / Other: Double Whale  
 Sampling Method: Submersible Pump / Other: Double Whale  
 Water Quality Instruments Used/Manufacturer/Model Number YSI 556 + Micro TRW

Calibration Info (Time, Ranges, etc) 8:00 3-6-24  
 Remarks: \_\_\_\_\_

Sampling Personnel: ZST

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65  
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



Shannon & Wilson, Inc.

### LOW-FLOW WATER SAMPLING LOG

Job No: 110026 Location: KRL Weather: 32° overcast  
 Well No.: MW3  
 Date: 3-6-24 Time Started: 11:40 Time Completed: 12:30

#### INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 18:18 Date of Depth Measurement: 3-5-24  
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other: \_\_\_\_\_  
 Diameter of Casing: 2" Well Screen Interval: \_\_\_\_\_  
 Total Depth of Well Below MP: 32.69 Product Thickness, if noted: \_\_\_\_\_  
 Depth-to-Water (DTW) Below MP: 27.44  
 Water Column in Well: 5.25 (Total Depth of Well Below MP - DTW Below MP)  
 Gallons per foot: 0.16  
 Gallons in Well: 0.84 (Water Column in Well x Gallons per foot)

#### PURGING DATA

Date Purged: 3-6-24 Time Started: 11:52 Time Completed: 12:23  
 Three Well Volumes: 2.52 (Gallons in Well x 3)  
 Gallons Purged: 0.5 Depth of Pump (generally 2 ft from bottom): ~29.5'  
 Max. Drawdown (generally 0.3 ft): 0.66 Pump Rate: 0.1 L/min  
 Well Purged Dry: Yes  No  (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	<del>DO: (mg/L)</del>	pH: (S.U.)	<del>ORP: (mV)</del>	Turb: (NTU)
11:57	0.2	0.1	28.10	0.66	4.40	193		6.11		5.85
12:02	0.3	0.1	28.10	0.66	4.24	190		5.99		4.20
12:07	0.4	0.1	28.10	0.66	4.19	189		6.00		7.28
12:10	0.5	0.1	28.10	0.66	4.14	187		6.00		5.53

#### SAMPLING DATA

Odor: None Color: Clear  
 Sample Designation: 110026-MW3 Time / Date: 12:13 3-6-24  
 QC Sample Designation: \_\_\_\_\_ Time / Date: \_\_\_\_\_  
 QA Sample Designation: \_\_\_\_\_ Time / Date: \_\_\_\_\_

Evacuation Method: Submersible Pump / Other: Double Whirl  
 Sampling Method: Submersible Pump / Other: Double Whirl  
 Water Quality Instruments Used/Manufacturer/Model Number YSI 556 + Micro TPW  
 Calibration Info (Time, Ranges, etc) 9:00 3-6-24

Remarks: \_\_\_\_\_

Sampling Personnel: ZJT

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65  
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



# LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 110026 Location: KRL Weather: 33° overcast  
 Well No.: MW4  
 Date: 3-6-24 Time Started: 1233 Time Completed: 13:35

## INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1624 Date of Depth Measurement: 3-6-24  
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:  
 Diameter of Casing: 2" Well Screen Interval:                       
 Total Depth of Well Below MP: 17.76 Product Thickness, if noted:                       
 Depth-to-Water (DTW) Below MP: 8.78  
 Water Column in Well: 8.98 (Total Depth of Well Below MP - DTW Below MP)  
 Gallons per foot: 0.16  
 Gallons in Well: 1.44 (Water Column in Well x Gallons per foot)

## PURGING DATA

Date Purged: 3-6-24 Time Started: 12:53 Time Completed: 1327  
 Three Well Volumes: 4.31 (Gallons in Well x 3)  
 Gallons Purged: 0.7 Depth of Pump (generally 2 ft from bottom): ~11.0'  
 Max. Drawdown (generally 0.3 ft): 1.27 Pump Rate: 0.1 L/min  
 Well Purged Dry: Yes  No  (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	<del>DO: (mg/L)</del>	pH: (S.U.)	<del>ORP: (mV)</del>	Turb: (NTU)
<u>12:58</u>	<u>0.3</u>	<u>0.2</u>	<u>9.20</u>	<u>0.42</u>	<u>3.98</u>	<u>208</u>	<del>                    </del>	<u>6.49</u>	<del>                    </del>	<u>4.47</u>
<u>13:03</u>	<u>0.4</u>	<u>0.1</u>	<u>9.78</u>	<u>1.00</u>	<u>3.73</u>	<u>199</u>	<del>                    </del>	<u>6.26</u>	<del>                    </del>	<u>2.50</u>
<u>13:08</u>	<u>0.5</u>	<u>0.1</u>	<u>9.88</u>	<u>1.10</u>	<u>3.65</u>	<u>200</u>	<del>                    </del>	<u>6.22</u>	<del>                    </del>	<u>5.31</u>
<u>13:13</u>	<u>0.6</u>	<u>0.1</u>	<u>9.98</u>	<u>1.20</u>	<u>3.60</u>	<u>203</u>	<del>                    </del>	<u>6.20</u>	<del>                    </del>	<u>3.42</u>
<u>13:16</u>	<u>0.7</u>	<u>0.1</u>	<u>10.05</u>	<u>1.27</u>	<u>3.56</u>	<u>207</u>	<del>                    </del>	<u>6.20</u>	<del>                    </del>	<u>6.10</u>

## SAMPLING DATA

Odor: None Color: Clear  
 Sample Designation: 110026-MW4 Time / Date: 1317 3-6-24  
 QC Sample Designation:                      Time / Date:                       
 QA Sample Designation:                      Time / Date:                     

Evacuation Method: Submersible Pump / Other: Single Whisk  
 Sampling Method: Submersible Pump / Other: Single Whisk  
 Water Quality Instruments Used/Manufacturer/Model Number VSI 556 + Micro TPW  
 Calibration Info (Time, Ranges, etc) 8:00 3-6-24  
 Remarks:                     

Sampling Personnel: ZJT

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65  
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



# LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 110026 Location: KRL Weather: 31° overcast  
 Well No.: MW5  
 Date: 3-6-24 Time Started: 13:40 Time Completed: \_\_\_\_\_

## INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1849 Date of Depth Measurement: 3-5-24  
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other: \_\_\_\_\_  
 Diameter of Casing: 2" Well Screen Interval: \_\_\_\_\_  
 Total Depth of Well Below MP: 32.08 Product Thickness, if noted: \_\_\_\_\_  
 Depth-to-Water (DTW) Below MP: 24.74  
 Water Column in Well: 7.34 (Total Depth of Well Below MP - DTW Below MP)  
 Gallons per foot: 0.16  
 Gallons in Well: 1.17 (Water Column in Well x Gallons per foot)

## PURGING DATA

Date Purged: 3-6-24 Time Started: 13:50 Time Completed: \_\_\_\_\_  
 Three Well Volumes: 3.52 (Gallons in Well x 3)  
 Gallons Purged: 3.2 Depth of Pump (generally 2 ft from bottom): 27.0'  
 Max. Drawdown (generally 0.3 ft): 0.06 Pump Rate: 0.5 L/min  
 Well Purged Dry: Yes  No  (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	<del>DO: (mg/L)</del>	pH: (S.U.)	<del>ORP: (mV)</del>	Turb: (NTU)
<u>14:00</u>	<u>1.2</u>	<u>0.5</u>	<u>24.80</u>	<u>0.06</u>	<u>5.90</u>	<u>503</u>	↓	<u>6.57</u>	↓	<u>136.7</u>
<u>14:05</u>	<u>1.8</u>	<u>0.5</u>	<u>24.80</u>	<u>0.06</u>	<u>6.28</u>	<u>514</u>	↓	<u>6.57</u>	↓	<u>43.90</u>
<u>14:10</u>	<u>2.4</u>	<u>0.5</u>	<u>24.80</u>	<u>0.06</u>	<u>6.21</u>	<u>510</u>	↓	<u>6.57</u>	↓	<u>8.68</u>
<u>14:13</u>	<u>2.8</u>	<u>0.5</u>	<u>24.80</u>	<u>0.06</u>	<u>6.24</u>	<u>509</u>	↓	<u>6.57</u>	↓	<u>7.63</u>
<u>14:16</u>	<u>3.2</u>	<u>0.5</u>	<u>24.80</u>	<u>0.06</u>	<u>6.19</u>	<u>506</u>	↓	<u>6.57</u>	↓	<u>5.49</u>

## SAMPLING DATA

Odor: None Color: Tan tint  
 Sample Designation: 110026-MW5 Time / Date: 1420 3-6-24  
 QC Sample Designation: 110026-MW15 Time / Date: 1450 3-6-24  
 QA Sample Designation: \_\_\_\_\_ Time / Date: \_\_\_\_\_

Evacuation Method: Submersible Pump / Other: Double Whake  
 Sampling Method: Submersible Pump / Other: Double Whake  
 Water Quality Instruments Used/Manufacturer/Model Number ZST 556 + Micro TPW  
 Calibration Info (Time, Ranges, etc) 8:00 3-6-24

Remarks: \_\_\_\_\_

Sampling Personnel: ZST

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65  
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23

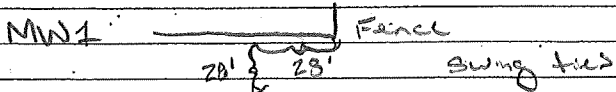
## FIELD ACTIVITIES DAILY LOG

Date 5-29-24  
 Sheet 1 of 1  
 Project No. 110026

Project Name: Kasilof Riverview Lodge  
 Field activity subject: Ground water monitoring  
 Description of daily activities and events: \_\_\_\_\_

13:30 - Arrive onsite. Meet w/ Joe Browning. Begin collecting DTW's

No	Sample	MW	DTW	Time	Notes
	①		23.50	13:35	→ Note: Well frost jacked - filled w/ sediment
	2		31.10	14:14	Total depth = 23.90, To sediment fill
	3		27.29	14:23	
	4		8.20	14:34	
	5		26.03	14:04	



14:30 - Prep gear to collect supply well samples Inside the building

15:27 - Supply wells complete - set up to sample MW5

17:30 - Complete MW5 → Note Drum Inventory; called Alex

17:44 - set up @ MW3  
Sample MW3, MW4, + MW5 w/ duplicate complete

20:00 - Depart site for Sudotha Hotel

5.30.24

8:00 - Calibrate + load gear

9:00 - Arrive on-site, complete MW2 sampling

11:15 - Depart site for ANC

14:45 - Arrive @ office; de-mob.

Prep samples + deliver to SGS

16:00 End

Visitors on site: NA

Changes from plans/specifications and other special orders and important decisions:  
NA

Weather conditions: 50's partly cloudy

Important telephone calls: Joe Browning - Drums

Personnel on site: ZSJ

Signature: [Signature] Date: \_\_\_\_\_

WATER SUPPLY WELL SAMPLING LOG

Address Sterling Hwy, Kaslof, Ak Project Number 110026  
 Owner/Occupant Joe Browning Project Name Kaslof Riverview Lodge  
 Mailing address \_\_\_\_\_ Date 5-29-24  
 Telephone - Time \_\_\_\_\_  
 Sampling Personnel ZJT

Sample Location Pressure Tank in utility room by bathroom  
 \_\_\_\_\_  
 \_\_\_\_\_

Sample Number 110026-DW1 Time 1511 5.29.24  
 Duplicate - Time \_\_\_\_\_

Analysis BTEX Lab SGS

Purge Volume ~ 15 gal

Purge Start 1455

PARAMETERS [stabilization criteria]

Time	Temp. (°C) [± 0.5]	Conductivity (µS/cm) [± 3%]	pH (std. units) [± 0.1]	Water Clarity (visual)
1500	9.67	434	6.65	clear
1505	9.61	437	6.82	clear
1510	9.59	435	6.83	clear

Notes: Pre-treatment supply well sample  
~ utility room by bathroom  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

WATER SUPPLY WELL SAMPLING LOG

Address Sterling Hwy, Kasilot, AK Project Number 110026  
 Owner/Occupant Joe Browning Project Name Kasilof Review Lodge  
 Mailing address \_\_\_\_\_ Date 5-21-24  
 \_\_\_\_\_ Time \_\_\_\_\_  
 Telephone — Sampling Personnel ZJT

Sample Location Mens Restroom sink  
 \_\_\_\_\_  
 \_\_\_\_\_

Sample Number 110026-DWJZ Time 1531  
 Duplicate — Time —

Analysis BTEX Lab SGS

Purge Volume ~ 15 gal

Purge Start: 1515

PARAMETERS [stabilization criteria]

Time	Temp. (°C) [± 0.5]	Conductivity (µS/cm) [± 3%]	pH (std. units) [± 0.1]	Water Clarity (visual)
1520	10.66	396	7.20	Clear
1525	10.45	394	7.18	Clear
1530	10.23	388	7.17	Clear

Notes: Post treatment supply well sample  
Restroom  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_





# LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 110026 Location: Sterling Hwy Weather: 46° cloudy  
 Well No.: MW2  
 Date: 5.30.24 Time Started: 9:30 Time Completed: 10:50

## INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1414 Date of Depth Measurement: 5.29.24  
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:  
 Diameter of Casing: 2" Well Screen Interval: —  
 Total Depth of Well Below MP: 35.12 Product Thickness, if noted: —  
 Depth-to-Water (DTW) Below MP: 31.10  
 Water Column in Well: 4.02 (Total Depth of Well Below MP - DTW Below MP)  
 Gallons per foot: 0.16  
 Gallons in Well: 0.64 (Water Column in Well x Gallons per foot)

## PURGING DATA

Date Purged: 5.30.24 Time Started: 10:10 Time Completed: 10:35  
 Three Well Volumes: 1.93 (Gallons in Well x 3)  
 Gallons Purged: 2.0 Depth of Pump (generally 2 ft from bottom): ~33.0'  
 Max. Drawdown (generally 0.3 ft): 0.20 Pump Rate: 0.54/min  
 Well Purged Dry: Yes  No  (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
<u>10:15</u>	<u>0.6</u>	<u>0.5</u>	<u>31.30</u>	<u>0.20</u>	<u>6.55</u>	<u>996</u>	↓	<u>6.13</u>	↓	<u>0.90</u>
<u>10:20</u>	<u>1.2</u>	<u>0.5</u>	<u>31.30</u>	<u>0.20</u>	<u>6.57</u>	<u>998</u>	↓	<u>6.16</u>	↓	<u>4.22</u>
<u>10:23</u>	<u>1.6</u>	<u>0.5</u>	<u>31.30</u>	<u>0.20</u>	<u>6.59</u>	<u>999</u>	↓	<u>6.17</u>	↓	<u>3.09</u>
<u>10:25</u>	<u>2.0</u>	<u>0.5</u>	<u>31.30</u>	<u>0.20</u>	<u>6.60</u>	<u>998</u>	↓	<u>6.17</u>	↓	<u>2.84</u>

## SAMPLING DATA

Odor: None Color: Clear  
 Sample Designation: 110026-MW2 Time / Date: 10:26 5.30.24  
 QC Sample Designation: — Time / Date: —  
 QA Sample Designation: — Time / Date: —

Evacuation Method: Submersible Pump / Other: Single Whisk  
 Sampling Method: Submersible Pump / Other: Single Whisk  
 Water Quality Instruments Used/Manufacturer/Model Number YSI 556 + Micro TPW  
 Calibration Info (Time, Ranges, etc) 9:00 5.30.24  
 Remarks: \_\_\_\_\_

Sampling Personnel: ZST

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65  
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23



# LOW-FLOW WATER SAMPLING LOG

Shannon & Wilson, Inc.

Job No: 110026 Location: Kasilof Riverw/Log Weather: 55° Partly cloudy  
 Well No.: MW3  
 Date: 5-29-24 Time Started: 1745 Time Completed: 18:45

## INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1423 Date of Depth Measurement: 5.29.24  
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other: \_\_\_\_\_  
 Diameter of Casing: 2" Well Screen Interval: \_\_\_\_\_  
 Total Depth of Well Below MP: 32.69 Product Thickness, if noted: \_\_\_\_\_  
 Depth-to-Water (DTW) Below MP: 27.29  
 Water Column in Well: 5.4 (Total Depth of Well Below MP - DTW Below MP)  
 Gallons per foot: 0.16  
 Gallons in Well: 0.86 (Water Column in Well x Gallons per foot)

## PURGING DATA

Date Purged: 5-29-24 Time Started: 1758 Time Completed: 1827  
 Three Well Volumes: 2.54 (Gallons in Well x 3)  
 Gallons Purged: 1.4 Depth of Pump (generally 2 ft from bottom): ~29.0'  
 Max. Drawdown (generally 0.3 ft): 0.84 Pump Rate: 0.1 L/min  
 Well Purged Dry: Yes  No  (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO: (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
18:03	0.6	0.5	27.95	0.76	6.91	472		6.11		10.58
18:08	0.8	0.1	28.00	0.81	7.09	470		6.11		6.84
18:11	1.0	0.1	28.01	0.82	7.09	469		6.10		5.12
18:14	1.2	0.1	28.02	0.83	7.11	469		6.10		5.11
18:17	1.4	0.1	28.03	0.84	7.08	471		6.11		4.80

## SAMPLING DATA

Odor: None Color: Clear  
 Sample Designation: 110026-MW3 Time / Date: 18:18 5-29-24  
 QC Sample Designation: \_\_\_\_\_ Time / Date: \_\_\_\_\_  
 QA Sample Designation: \_\_\_\_\_ Time / Date: \_\_\_\_\_

Evacuation Method: Submersible Pump / Other: Single Whirl  
 Sampling Method: Submersible Pump / Other: Single Whirl  
 Water Quality Instruments Used/Manufacturer/Model Number: YSE 556 + Micro TAW  
 Calibration Info (Time, Ranges, etc): 9:00 5.29.24  
 Remarks: \_\_\_\_\_

Sampling Personnel: JST

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65  
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23





Shannon & Wilson, Inc.

### LOW-FLOW WATER SAMPLING LOG

Job No: 110026 Location: Kasilof Riverview Lodge Weather: 45° overcast  
 Well No.: MW5  
 Date: 5-29-24 Time Started: 1530 Time Completed: 1730

#### INITIAL GROUNDWATER LEVEL DATA

Time of Depth Measurement: 1404 Date of Depth Measurement: 5-29-24  
 Measuring Point (MP): Top of PVC Casing / Top of Steel Protective Casing / Other:  
 Diameter of Casing: 2" Well Screen Interval: —  
 Total Depth of Well Below MP: 32.08 Product Thickness, if noted: —  
 Depth-to-Water (DTW) Below MP: 26.03  
 Water Column in Well: 6.05 (Total Depth of Well Below MP - DTW Below MP)  
 Gallons per foot: 0.16  
 Gallons in Well: 0.97 (Water Column in Well x Gallons per foot)

#### PURGING DATA

Date Purged: 5-29-24 Time Started: 1550 Time Completed: 17:00  
 Three Well Volumes: 3.86 (Gallons in Well x 3)  
 Gallons Purged: 3.8 Depth of Pump (generally 2 ft from bottom): ~28.0'  
 Max. Drawdown (generally 0.3 ft): — Pump Rate: 0.5  
 Well Purged Dry: Yes  No  (If yes, use Well Purged Dry Log)

Time:	Gallons:	Pump Rate (L/min):	DTW (ft BMP):	Drawdown (ft):	Temp: (°C)	Sp. Cond.: (uS/cm)	DO (mg/L)	pH: (S.U.)	ORP: (mV)	Turb: (NTU)
1555	0.6	0.5	26.20	0.17	6.56	998	<del>—</del>	6.54	<del>—</del>	11.20
16:00	1.2	0.5	26.20	0.17	6.84	1,015	<del>—</del>	6.56	<del>—</del>	5.33
16:05	1.8	0.5	26.18	0.15	6.99	1,041	<del>—</del>	6.55	<del>—</del>	39.64
16:10	2.4	0.5	26.18	0.15	7.06	1,041	<del>—</del>	6.56	<del>—</del>	28.78
16:15	3.0	0.5	26.18	0.15	7.20	1,034	<del>—</del>	5.60	<del>—</del>	7.42
16:18	3.4	0.5	26.18	0.15	7.17	1,035	↓	5.56	↓	7.31
16:21	3.8	0.5	26.18	0.15	7.10	1,033	↓	5.58	↓	8.63

#### SAMPLING DATA

Odor: None Color: Tan tint  
 Sample Designation: 110026-MW5 Time / Date: 16:22 5.29.24  
 QC Sample Designation: 110026-MW5 Time / Date: 16:52 5.29.24  
 QA Sample Designation: — Time / Date: —

Evacuation Method: Submersible Pump / Other: Single whake  
 Sampling Method: Submersible Pump / Other: single whake  
 Water Quality Instruments Used/Manufacturer/Model Number YSI 556 + Micro TFW  
 Calibration Info (Time, Ranges, etc) 9100 5-29-24

Remarks: \_\_\_\_\_

Sampling Personnel: ZST

WELL CASING VOLUMES (GAL/FT): 1" = 0.04 2" = 0.16 4" = 0.65  
 ANNULAR SPACE VOLUME (GAL/FT): 4" casing and 2" well = 0.23

Appendix B

# Results of Analytical Testing

APPENDIX B: RESULTS OF ANALYTICAL TESTING

## Laboratory Report of Analysis

To: Shannon & Wilson, Inc.  
5430 Fairbanks Street, Suite 3  
Anchorage, AK 99518  
(907)433-3223

Report Number: **1235062**

Client Project: **110026;Kasilof Riverview Lodge**

Dear Dan McMahon,

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

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

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

Sincerely,  
SGS North America Inc.



**Justin Nelson**  
**2023.09.28**  
**16:19:28 -08'00'**

Justin Nelson  
Project Manager  
Justin.Nelson@sgs.com

Date

## Case Narrative

SGS Client: **Shannon & Wilson, Inc.**  
SGS Project: **1235062**  
Project Name/Site: **110026;Kasilof Riverview Lodge**  
Project Contact: **Dan McMahon**

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.

Print Date: 09/28/2023 3:42:41PM

### Report of Manual Integrations

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Analytical Batch</u>	<u>Analyte</u>	<u>Reason</u>
<b>8270D SIM LV (PAH)</b>				
1235062002	110026-MW2	XMS13903	2-Methylnaphthalene	BLC
1235062006	110026-MW15	XMS13903	2-Methylnaphthalene	SP
<b>SW8260D</b>				
1235062001	110026-MW1	VMS22799	Chloromethane	SP
1235062006	110026-MW15	VMS22799	Chloromethane	SP

#### Manual Integration Reason Code Descriptions

Code	Description
O	Original Chromatogram
M	Modified Chromatogram
SS	Skimmed surrogate
BLG	Closed baseline gap
RP	Reassign peak name
PIR	Pattern integration required
IT	Included tail
SP	Split peak
RSP	Removed split peak
FPS	Forced peak start/stop
BLC	Baseline correction
PNF	Peak not found by software

All DRO/RRO analysis are integrated per SOP.



### 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, indemnification 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.

### Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
110026-MW1	1235062001	09/13/2023	09/15/2023	Water (Surface, Eff., Ground)
110026-MW2	1235062002	09/13/2023	09/15/2023	Water (Surface, Eff., Ground)
110026-MW3	1235062003	09/13/2023	09/15/2023	Water (Surface, Eff., Ground)
110026-MW4	1235062004	09/13/2023	09/15/2023	Water (Surface, Eff., Ground)
110026-MW5	1235062005	09/14/2023	09/15/2023	Water (Surface, Eff., Ground)
110026-MW15	1235062006	09/14/2023	09/15/2023	Water (Surface, Eff., Ground)
110026-DW1	1235062007	09/13/2023	09/15/2023	Water (Surface, Eff., Ground)
110026-DW2	1235062008	09/13/2023	09/15/2023	Water (Surface, Eff., Ground)
110026-WTB	1235062009	09/13/2023	09/15/2023	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
8270D SIM LV (PAH)	8270 PAH SIM GC/MS LV
SW8021B	BTEX 8021
AK102	DRO Low Volume (W)
AK101	Gasoline Range Organics (W)
SW8260D	Volatile Organic Compounds (W) FULL

Print Date: 09/28/2023 3:42:46PM

### Detectable Results Summary

Client Sample ID: **110026-MW1**

Lab Sample ID: 1235062001

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1-Methylnaphthalene	0.0244J	ug/L
2-Methylnaphthalene	0.0220J	ug/L
Naphthalene	0.0419J	ug/L

**Semivolatile Organic Fuels**

**Volatile GC/MS**

Diesel Range Organics	0.413J	mg/L
1,2-Dichloroethane	0.230J	ug/L
Benzene	1.70	ug/L
Chloromethane	0.310J	ug/L

Client Sample ID: **110026-MW2**

Lab Sample ID: 1235062002

**Polynuclear Aromatics GC/MS**

**Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
2-Methylnaphthalene	0.0198J	ug/L
Diesel Range Organics	0.318J	mg/L

Client Sample ID: **110026-MW3**

Lab Sample ID: 1235062003

**Polynuclear Aromatics GC/MS**

**Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
2-Methylnaphthalene	0.0176J	ug/L
Phenanthrene	0.0374J	ug/L
Diesel Range Organics	0.213J	mg/L

Client Sample ID: **110026-MW4**

Lab Sample ID: 1235062004

**Polynuclear Aromatics GC/MS**

**Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1-Methylnaphthalene	0.0188J	ug/L
2-Methylnaphthalene	0.0356J	ug/L
Phenanthrene	0.0485J	ug/L
Diesel Range Organics	0.234J	mg/L

Client Sample ID: **110026-MW5**

Lab Sample ID: 1235062005

**Polynuclear Aromatics GC/MS**

**Semivolatile Organic Fuels**

**Volatile Fuels**

**Volatile GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
2-Methylnaphthalene	0.0196J	ug/L
Diesel Range Organics	0.315J	mg/L
Gasoline Range Organics	0.171	mg/L
1,2,4-Trimethylbenzene	0.720J	ug/L
1,2-Dichloroethane	0.540	ug/L
1,3,5-Trimethylbenzene	3.72	ug/L
4-Isopropyltoluene	0.370J	ug/L
Benzene	46.1	ug/L
Chloromethane	0.610J	ug/L
Ethylbenzene	6.28	ug/L
Isopropylbenzene (Cumene)	3.19	ug/L
n-Propylbenzene	3.71	ug/L
P & M -Xylene	2.17	ug/L
sec-Butylbenzene	0.480J	ug/L
Xylenes (total)	2.17J	ug/L

Print Date: 09/28/2023 3:42:48PM

### Detectable Results Summary

Client Sample ID: **110026-MW15**

Lab Sample ID: 1235062006

**Polynuclear Aromatics GC/MS**

**Semivolatile Organic Fuels**

**Volatile Fuels**

**Volatile GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
2-Methylnaphthalene	0.0175J	ug/L
Diesel Range Organics	0.295J	mg/L
Gasoline Range Organics	0.198	mg/L
1,2,4-Trimethylbenzene	0.690J	ug/L
1,2-Dichloroethane	0.530	ug/L
1,3,5-Trimethylbenzene	3.65	ug/L
4-Isopropyltoluene	0.390J	ug/L
Benzene	44.0	ug/L
Chloromethane	0.420J	ug/L
Ethylbenzene	5.79	ug/L
Isopropylbenzene (Cumene)	3.02	ug/L
n-Propylbenzene	3.62	ug/L
P & M -Xylene	2.06	ug/L
sec-Butylbenzene	0.460J	ug/L
Xylenes (total)	2.06J	ug/L

Client Sample ID: **110026-WTB**

Lab Sample ID: 1235062009

**Volatile GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Carbon tetrachloride	0.330J	ug/L



**Results of 110026-MW1**

Client Sample ID: **110026-MW1**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062001  
 Lab Project ID: 1235062

Collection Date: 09/13/23 20:53  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0244	J	0.0556	0.0167	0.0278	ug/L	1		09/19/23 05:22
2-Methylnaphthalene	0.0220	J	0.0556	0.0167	0.0278	ug/L	1		09/19/23 05:22
Acenaphthene	0.0278	U	0.0556	0.0167	0.0278	ug/L	1		09/19/23 05:22
Acenaphthylene	0.0278	U	0.0556	0.0167	0.0278	ug/L	1		09/19/23 05:22
Anthracene	0.0278	U	0.0556	0.0167	0.0278	ug/L	1		09/19/23 05:22
Benzo(a)Anthracene	0.0278	U	0.0556	0.0167	0.0278	ug/L	1		09/19/23 05:22
Benzo[a]pyrene	0.0111	U	0.0222	0.00689	0.0111	ug/L	1		09/19/23 05:22
Benzo[b]Fluoranthene	0.0278	U	0.0556	0.0167	0.0278	ug/L	1		09/19/23 05:22
Benzo[g,h,i]perylene	0.0278	U	0.0556	0.0167	0.0278	ug/L	1		09/19/23 05:22
Benzo[k]fluoranthene	0.0278	U	0.0556	0.0167	0.0278	ug/L	1		09/19/23 05:22
Chrysene	0.0278	U	0.0556	0.0167	0.0278	ug/L	1		09/19/23 05:22
Dibenzo[a,h]anthracene	0.0111	U	0.0222	0.00689	0.0111	ug/L	1		09/19/23 05:22
Fluoranthene	0.0278	U	0.0556	0.0167	0.0278	ug/L	1		09/19/23 05:22
Fluorene	0.0278	U	0.0556	0.0167	0.0278	ug/L	1		09/19/23 05:22
Indeno[1,2,3-c,d] pyrene	0.0278	U	0.0556	0.0167	0.0278	ug/L	1		09/19/23 05:22
Naphthalene	0.0419	J	0.111	0.0344	0.0555	ug/L	1		09/19/23 05:22
Phenanthrene	0.0555	U	0.111	0.0344	0.0555	ug/L	1		09/19/23 05:22
Pyrene	0.0278	U	0.0556	0.0167	0.0278	ug/L	1		09/19/23 05:22

**Surrogates**

2-Methylnaphthalene-d10 (surr)	79.7		38-100			%	1		09/19/23 05:22
Fluoranthene-d10 (surr)	88.4		30-111			%	1		09/19/23 05:22

**Batch Information**

Analytical Batch: XMS13903  
 Analytical Method: 8270D SIM LV (PAH)  
 Analyst: HMW  
 Analytical Date/Time: 09/19/23 05:22  
 Container ID: 1235062001-I

Prep Batch: XXX48630  
 Prep Method: SW3535A  
 Prep Date/Time: 09/18/23 12:00  
 Prep Initial Wt./Vol.: 225 mL  
 Prep Extract Vol: 1 mL



### Results of 110026-MW1

Client Sample ID: **110026-MW1**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062001  
 Lab Project ID: 1235062

Collection Date: 09/13/23 20:53  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.413	J	0.612	0.204	0.306	mg/L	1		09/24/23 10:20
<b>Surrogates</b>									
5a Androstane (surr)	92.5		50-150			%	1		09/24/23 10:20

### Batch Information

Analytical Batch: XFC16681  
 Analytical Method: AK102  
 Analyst: NGG  
 Analytical Date/Time: 09/24/23 10:20  
 Container ID: 1235062001-G

Prep Batch: XXX48650  
 Prep Method: SW3520C  
 Prep Date/Time: 09/20/23 14:30  
 Prep Initial Wt./Vol.: 245 mL  
 Prep Extract Vol: 1 mL





Results of **110026-MW1**

Client Sample ID: **110026-MW1**  
Client Project ID: **110026;Kasilof Riverview Lodge**  
Lab Sample ID: 1235062001  
Lab Project ID: 1235062

Collection Date: 09/13/23 20:53  
Received Date: 09/15/23 12:38  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0500	U	0.100	0.0450	0.0500	mg/L	1		09/19/23 03:20
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	73.6		50-150			%	1		09/19/23 03:20

**Batch Information**

Analytical Batch: VFC16608  
Analytical Method: AK101  
Analyst: CWD  
Analytical Date/Time: 09/19/23 03:20  
Container ID: 1235062001-A

Prep Batch: VXX40442  
Prep Method: SW5030B  
Prep Date/Time: 09/18/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW1**

Client Sample ID: **110026-MW1**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062001  
 Lab Project ID: 1235062

Collection Date: 09/13/23 20:53  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 14:48
1,1,1-Trichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 14:48
1,1,2-Trichloroethane	0.200	U	0.400	0.120	0.200	ug/L	1		09/25/23 14:48
1,1-Dichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
1,1-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
1,1-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
1,2,3-Trichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 14:48
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	0.0375	ug/L	1		09/25/23 14:48
1,2-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
1,2-Dichloroethane	0.230	J	0.500	0.200	0.250	ug/L	1		09/25/23 14:48
1,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
1,3-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
1,3-Dichloropropane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 14:48
1,4-Dichlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 14:48
2,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
2-Butanone (MEK)	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 14:48
2-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
2-Hexanone	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 14:48
4-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
4-Isopropyltoluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 14:48
Benzene	1.70		0.400	0.120	0.200	ug/L	1		09/25/23 14:48
Bromobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
Bromochloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
Bromodichloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 14:48
Bromoform	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
Bromomethane	3.00	U	6.00	3.00	3.00	ug/L	1		09/25/23 14:48
Carbon disulfide	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 14:48
Carbon tetrachloride	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
Chlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 14:48
Chloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48

Print Date: 09/28/2023 3:42:49PM

J flagging is activated



**Results of 110026-MW1**

Client Sample ID: **110026-MW1**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062001  
 Lab Project ID: 1235062

Collection Date: 09/13/23 20:53  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
Chloromethane	0.310	J	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 14:48
Dibromochloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 14:48
Dibromomethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
Dichlorodifluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
Ethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
Freon-113	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 14:48
Hexachlorobutadiene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
Methylene chloride	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 14:48
Methyl-t-butyl ether	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 14:48
Naphthalene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
n-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
n-Propylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
o-Xylene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
P & M -Xylene	1.00	U	2.00	0.620	1.00	ug/L	1		09/25/23 14:48
sec-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
Styrene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
tert-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
Tetrachloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
Toluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
Trichloroethene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 14:48
Trichlorofluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 14:48
Vinyl acetate	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 14:48
Vinyl chloride	0.0750	U	0.150	0.0500	0.0750	ug/L	1		09/25/23 14:48
Xylenes (total)	1.50	U	3.00	1.00	1.50	ug/L	1		09/25/23 14:48

**Surrogates**

1,2-Dichloroethane-D4 (surr)	109		81-118			%	1		09/25/23 14:48
4-Bromofluorobenzene (surr)	103		85-114			%	1		09/25/23 14:48
Toluene-d8 (surr)	99.3		89-112			%	1		09/25/23 14:48

## Results of 110026-MW1

Client Sample ID: **110026-MW1**  
Client Project ID: **110026;Kasilof Riverview Lodge**  
Lab Sample ID: 1235062001  
Lab Project ID: 1235062

Collection Date: 09/13/23 20:53  
Received Date: 09/15/23 12:38  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS22799  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 09/25/23 14:48  
Container ID: 1235062001-D

Prep Batch: VXX40479  
Prep Method: SW5030B  
Prep Date/Time: 09/25/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW2**

Client Sample ID: **110026-MW2**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062002  
 Lab Project ID: 1235062

Collection Date: 09/13/23 18:17  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 05:39
2-Methylnaphthalene	0.0198	J	0.0500	0.0150	0.0250	ug/L	1		09/19/23 05:39
Acenaphthene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 05:39
Acenaphthylene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 05:39
Anthracene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 05:39
Benzo(a)Anthracene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 05:39
Benzo[a]pyrene	0.0100	U	0.0200	0.00620	0.0100	ug/L	1		09/19/23 05:39
Benzo[b]Fluoranthene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 05:39
Benzo[g,h,i]perylene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 05:39
Benzo[k]fluoranthene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 05:39
Chrysene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 05:39
Dibenzo[a,h]anthracene	0.0100	U	0.0200	0.00620	0.0100	ug/L	1		09/19/23 05:39
Fluoranthene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 05:39
Fluorene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 05:39
Indeno[1,2,3-c,d] pyrene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 05:39
Naphthalene	0.0500	U	0.100	0.0310	0.0500	ug/L	1		09/19/23 05:39
Phenanthrene	0.0500	U	0.100	0.0310	0.0500	ug/L	1		09/19/23 05:39
Pyrene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 05:39

**Surrogates**

2-Methylnaphthalene-d10 (surr)	75.8		38-100			%	1		09/19/23 05:39
Fluoranthene-d10 (surr)	85.8		30-111			%	1		09/19/23 05:39

**Batch Information**

Analytical Batch: XMS13903  
 Analytical Method: 8270D SIM LV (PAH)  
 Analyst: HMW  
 Analytical Date/Time: 09/19/23 05:39  
 Container ID: 1235062002-I

Prep Batch: XXX48630  
 Prep Method: SW3535A  
 Prep Date/Time: 09/18/23 12:00  
 Prep Initial Wt./Vol.: 250 mL  
 Prep Extract Vol: 1 mL

## Results of 110026-MW2

Client Sample ID: **110026-MW2**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062002  
 Lab Project ID: 1235062

Collection Date: 09/13/23 18:17  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.318	J	0.577	0.192	0.288	mg/L	1		09/24/23 10:33
<b>Surrogates</b>									
5a Androstane (surr)	84.5		50-150			%	1		09/24/23 10:33

## Batch Information

Analytical Batch: XFC16681  
 Analytical Method: AK102  
 Analyst: NGG  
 Analytical Date/Time: 09/24/23 10:33  
 Container ID: 1235062002-G

Prep Batch: XXX48650  
 Prep Method: SW3520C  
 Prep Date/Time: 09/20/23 14:30  
 Prep Initial Wt./Vol.: 260 mL  
 Prep Extract Vol: 1 mL





**Results of 110026-MW2**

Client Sample ID: **110026-MW2**  
Client Project ID: **110026;Kasilof Riverview Lodge**  
Lab Sample ID: 1235062002  
Lab Project ID: 1235062

Collection Date: 09/13/23 18:17  
Received Date: 09/15/23 12:38  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0500	U	0.100	0.0450	0.0500	mg/L	1		09/19/23 03:38
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	71.9		50-150			%	1		09/19/23 03:38

**Batch Information**

Analytical Batch: VFC16608  
Analytical Method: AK101  
Analyst: CWD  
Analytical Date/Time: 09/19/23 03:38  
Container ID: 1235062002-A

Prep Batch: VXX40442  
Prep Method: SW5030B  
Prep Date/Time: 09/18/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW2**

Client Sample ID: **110026-MW2**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062002  
 Lab Project ID: 1235062

Collection Date: 09/13/23 18:17  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:04
1,1,1-Trichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:04
1,1,2-Trichloroethane	0.200	U	0.400	0.120	0.200	ug/L	1		09/25/23 15:04
1,1-Dichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
1,1-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
1,1-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
1,2,3-Trichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:04
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	0.0375	ug/L	1		09/25/23 15:04
1,2-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
1,2-Dichloroethane	0.250	U	0.500	0.200	0.250	ug/L	1		09/25/23 15:04
1,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
1,3-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
1,3-Dichloropropane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:04
1,4-Dichlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:04
2,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
2-Butanone (MEK)	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:04
2-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
2-Hexanone	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:04
4-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
4-Isopropyltoluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:04
Benzene	0.200	U	0.400	0.120	0.200	ug/L	1		09/25/23 15:04
Bromobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
Bromochloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
Bromodichloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:04
Bromoform	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
Bromomethane	3.00	U	6.00	3.00	3.00	ug/L	1		09/25/23 15:04
Carbon disulfide	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:04
Carbon tetrachloride	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
Chlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:04
Chloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04

Print Date: 09/28/2023 3:42:49PM

J flagging is activated



**Results of 110026-MW2**

Client Sample ID: **110026-MW2**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062002  
 Lab Project ID: 1235062

Collection Date: 09/13/23 18:17  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
Chloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:04
Dibromochloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:04
Dibromomethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
Dichlorodifluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
Ethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
Freon-113	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:04
Hexachlorobutadiene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
Methylene chloride	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:04
Methyl-t-butyl ether	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:04
Naphthalene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
n-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
n-Propylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
o-Xylene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
P & M -Xylene	1.00	U	2.00	0.620	1.00	ug/L	1		09/25/23 15:04
sec-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
Styrene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
tert-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
Tetrachloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
Toluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
Trichloroethene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:04
Trichlorofluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:04
Vinyl acetate	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:04
Vinyl chloride	0.0750	U	0.150	0.0500	0.0750	ug/L	1		09/25/23 15:04
Xylenes (total)	1.50	U	3.00	1.00	1.50	ug/L	1		09/25/23 15:04
<b>Surrogates</b>									
1,2-Dichloroethane-D4 (surr)	112		81-118			%	1		09/25/23 15:04
4-Bromofluorobenzene (surr)	104		85-114			%	1		09/25/23 15:04
Toluene-d8 (surr)	101		89-112			%	1		09/25/23 15:04

## Results of 110026-MW2

Client Sample ID: **110026-MW2**  
Client Project ID: **110026;Kasilof Riverview Lodge**  
Lab Sample ID: 1235062002  
Lab Project ID: 1235062

Collection Date: 09/13/23 18:17  
Received Date: 09/15/23 12:38  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS22799  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 09/25/23 15:04  
Container ID: 1235062002-D

Prep Batch: VXX40479  
Prep Method: SW5030B  
Prep Date/Time: 09/25/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



Results of 110026-MW3

Client Sample ID: 110026-MW3
Client Project ID: 110026;Kasilof Riverview Lodge
Lab Sample ID: 1235062003
Lab Project ID: 1235062

Collection Date: 09/13/23 17:18
Received Date: 09/15/23 12:38
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Polynuclear Aromatics GC/MS

Table with 10 columns: Parameter, Result, Qual, LOQ/CL, DL, LOD, Units, DF, Allowable Limits, Date Analyzed. Lists various polynuclear aromatic hydrocarbons and their detection results.

Surrogates

Table with 2 columns: Surrogate Name, Result. Lists 2-Methylnaphthalene-d10 (surr) and Fluoranthene-d10 (surr) with their respective results.

Batch Information

Analytical Batch: XMS13903
Analytical Method: 8270D SIM LV (PAH)
Analyst: HMW
Analytical Date/Time: 09/19/23 05:55
Container ID: 1235062003-I
Prep Batch: XXX48630
Prep Method: SW3535A
Prep Date/Time: 09/18/23 12:00
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

## Results of 110026-MW3

Client Sample ID: **110026-MW3**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062003  
 Lab Project ID: 1235062

Collection Date: 09/13/23 17:18  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.213	J	0.577	0.192	0.288	mg/L	1		09/24/23 11:10
<b>Surrogates</b>									
5a Androstane (surr)	89.2		50-150			%	1		09/24/23 11:10

## Batch Information

Analytical Batch: XFC16681  
 Analytical Method: AK102  
 Analyst: NGG  
 Analytical Date/Time: 09/24/23 11:10  
 Container ID: 1235062003-G

Prep Batch: XXX48650  
 Prep Method: SW3520C  
 Prep Date/Time: 09/20/23 14:30  
 Prep Initial Wt./Vol.: 260 mL  
 Prep Extract Vol: 1 mL



**Results of 110026-MW3**

Client Sample ID: **110026-MW3**  
Client Project ID: **110026;Kasilof Riverview Lodge**  
Lab Sample ID: 1235062003  
Lab Project ID: 1235062

Collection Date: 09/13/23 17:18  
Received Date: 09/15/23 12:38  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0500	U	0.100	0.0450	0.0500	mg/L	1		09/19/23 03:57

**Surrogates**

4-Bromofluorobenzene (surr)	71.9		50-150			%	1		09/19/23 03:57
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**Batch Information**

Analytical Batch: VFC16608  
Analytical Method: AK101  
Analyst: CWD  
Analytical Date/Time: 09/19/23 03:57  
Container ID: 1235062003-A

Prep Batch: VXX40442  
Prep Method: SW5030B  
Prep Date/Time: 09/18/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL





### Results of 110026-MW3

Client Sample ID: **110026-MW3**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062003  
 Lab Project ID: 1235062

Collection Date: 09/13/23 17:18  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Volatile GC/MS

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:19
1,1,1-Trichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:19
1,1,2-Trichloroethane	0.200	U	0.400	0.120	0.200	ug/L	1		09/25/23 15:19
1,1-Dichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
1,1-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
1,1-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
1,2,3-Trichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:19
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	0.0375	ug/L	1		09/25/23 15:19
1,2-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
1,2-Dichloroethane	0.250	U	0.500	0.200	0.250	ug/L	1		09/25/23 15:19
1,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
1,3-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
1,3-Dichloropropane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:19
1,4-Dichlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:19
2,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
2-Butanone (MEK)	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:19
2-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
2-Hexanone	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:19
4-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
4-Isopropyltoluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:19
Benzene	0.200	U	0.400	0.120	0.200	ug/L	1		09/25/23 15:19
Bromobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
Bromochloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
Bromodichloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:19
Bromoform	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
Bromomethane	3.00	U	6.00	3.00	3.00	ug/L	1		09/25/23 15:19
Carbon disulfide	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:19
Carbon tetrachloride	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
Chlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:19
Chloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19

Print Date: 09/28/2023 3:42:49PM

J flagging is activated



**Results of 110026-MW3**

Client Sample ID: **110026-MW3**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062003  
 Lab Project ID: 1235062

Collection Date: 09/13/23 17:18  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
Chloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:19
Dibromochloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:19
Dibromomethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
Dichlorodifluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
Ethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
Freon-113	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:19
Hexachlorobutadiene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
Methylene chloride	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:19
Methyl-t-butyl ether	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:19
Naphthalene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
n-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
n-Propylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
o-Xylene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
P & M -Xylene	1.00	U	2.00	0.620	1.00	ug/L	1		09/25/23 15:19
sec-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
Styrene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
tert-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
Tetrachloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
Toluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
Trichloroethene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:19
Trichlorofluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:19
Vinyl acetate	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:19
Vinyl chloride	0.0750	U	0.150	0.0500	0.0750	ug/L	1		09/25/23 15:19
Xylenes (total)	1.50	U	3.00	1.00	1.50	ug/L	1		09/25/23 15:19

**Surrogates**

1,2-Dichloroethane-D4 (surr)	111		81-118			%	1		09/25/23 15:19
4-Bromofluorobenzene (surr)	104		85-114			%	1		09/25/23 15:19
Toluene-d8 (surr)	99		89-112			%	1		09/25/23 15:19

## Results of 110026-MW3

Client Sample ID: **110026-MW3**  
Client Project ID: **110026;Kasilof Riverview Lodge**  
Lab Sample ID: 1235062003  
Lab Project ID: 1235062

Collection Date: 09/13/23 17:18  
Received Date: 09/15/23 12:38  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS22799  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 09/25/23 15:19  
Container ID: 1235062003-D

Prep Batch: VXX40479  
Prep Method: SW5030B  
Prep Date/Time: 09/25/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW4**

Client Sample ID: **110026-MW4**  
Client Project ID: **110026;Kasilof Riverview Lodge**  
Lab Sample ID: 1235062004  
Lab Project ID: 1235062

Collection Date: 09/13/23 15:52  
Received Date: 09/15/23 12:38  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0188	J	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:11
2-Methylnaphthalene	0.0356	J	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:11
Acenaphthene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:11
Acenaphthylene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:11
Anthracene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:11
Benzo(a)Anthracene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:11
Benzo[a]pyrene	0.0102	U	0.0204	0.00633	0.0102	ug/L	1		09/19/23 06:11
Benzo[b]Fluoranthene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:11
Benzo[g,h,i]perylene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:11
Benzo[k]fluoranthene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:11
Chrysene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:11
Dibenzo[a,h]anthracene	0.0102	U	0.0204	0.00633	0.0102	ug/L	1		09/19/23 06:11
Fluoranthene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:11
Fluorene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:11
Indeno[1,2,3-c,d] pyrene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:11
Naphthalene	0.0510	U	0.102	0.0316	0.0510	ug/L	1		09/19/23 06:11
Phenanthrene	0.0485	J	0.102	0.0316	0.0510	ug/L	1		09/19/23 06:11
Pyrene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:11

**Surrogates**

2-Methylnaphthalene-d10 (surr)	82.1		38-100			%	1		09/19/23 06:11
Fluoranthene-d10 (surr)	91.4		30-111			%	1		09/19/23 06:11

**Batch Information**

Analytical Batch: XMS13903  
Analytical Method: 8270D SIM LV (PAH)  
Analyst: HMW  
Analytical Date/Time: 09/19/23 06:11  
Container ID: 1235062004-I

Prep Batch: XXX48630  
Prep Method: SW3535A  
Prep Date/Time: 09/18/23 12:00  
Prep Initial Wt./Vol.: 245 mL  
Prep Extract Vol: 1 mL

## Results of 110026-MW4

Client Sample ID: **110026-MW4**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062004  
 Lab Project ID: 1235062

Collection Date: 09/13/23 15:52  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.234	J	0.600	0.200	0.300	mg/L	1		09/24/23 11:23

### Surrogates

5a Androstane (surr)	94.8		50-150			%	1		09/24/23 11:23
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## Batch Information

Analytical Batch: XFC16681  
 Analytical Method: AK102  
 Analyst: NGG  
 Analytical Date/Time: 09/24/23 11:23  
 Container ID: 1235062004-G

Prep Batch: XXX48650  
 Prep Method: SW3520C  
 Prep Date/Time: 09/20/23 14:30  
 Prep Initial Wt./Vol.: 250 mL  
 Prep Extract Vol: 1 mL

## Results of 110026-MW4

Client Sample ID: **110026-MW4**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062004  
 Lab Project ID: 1235062

Collection Date: 09/13/23 15:52  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0500	U	0.100	0.0450	0.0500	mg/L	1		09/19/23 04:15

### Surrogates

4-Bromofluorobenzene (surr)	71.9		50-150			%	1		09/19/23 04:15
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## Batch Information

Analytical Batch: VFC16608  
 Analytical Method: AK101  
 Analyst: CWD  
 Analytical Date/Time: 09/19/23 04:15  
 Container ID: 1235062004-A

Prep Batch: VXX40442  
 Prep Method: SW5030B  
 Prep Date/Time: 09/18/23 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



**Results of 110026-MW4**

Client Sample ID: **110026-MW4**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062004  
 Lab Project ID: 1235062

Collection Date: 09/13/23 15:52  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:34
1,1,1-Trichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:34
1,1,2-Trichloroethane	0.200	U	0.400	0.120	0.200	ug/L	1		09/25/23 15:34
1,1-Dichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
1,1-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
1,1-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
1,2,3-Trichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:34
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	0.0375	ug/L	1		09/25/23 15:34
1,2-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
1,2-Dichloroethane	0.250	U	0.500	0.200	0.250	ug/L	1		09/25/23 15:34
1,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
1,3-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
1,3-Dichloropropane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:34
1,4-Dichlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:34
2,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
2-Butanone (MEK)	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:34
2-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
2-Hexanone	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:34
4-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
4-Isopropyltoluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:34
Benzene	0.200	U	0.400	0.120	0.200	ug/L	1		09/25/23 15:34
Bromobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
Bromochloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
Bromodichloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:34
Bromoform	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
Bromomethane	3.00	U	6.00	3.00	3.00	ug/L	1		09/25/23 15:34
Carbon disulfide	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:34
Carbon tetrachloride	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
Chlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:34
Chloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34

Print Date: 09/28/2023 3:42:49PM

J flagging is activated





**Results of 110026-MW4**

Client Sample ID: **110026-MW4**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062004  
 Lab Project ID: 1235062

Collection Date: 09/13/23 15:52  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
Chloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:34
Dibromochloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:34
Dibromomethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
Dichlorodifluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
Ethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
Freon-113	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:34
Hexachlorobutadiene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
Methylene chloride	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:34
Methyl-t-butyl ether	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:34
Naphthalene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
n-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
n-Propylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
o-Xylene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
P & M -Xylene	1.00	U	2.00	0.620	1.00	ug/L	1		09/25/23 15:34
sec-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
Styrene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
tert-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
Tetrachloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
Toluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
Trichloroethene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:34
Trichlorofluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:34
Vinyl acetate	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:34
Vinyl chloride	0.0750	U	0.150	0.0500	0.0750	ug/L	1		09/25/23 15:34
Xylenes (total)	1.50	U	3.00	1.00	1.50	ug/L	1		09/25/23 15:34
<b>Surrogates</b>									
1,2-Dichloroethane-D4 (surr)	112		81-118			%	1		09/25/23 15:34
4-Bromofluorobenzene (surr)	102		85-114			%	1		09/25/23 15:34
Toluene-d8 (surr)	98.5		89-112			%	1		09/25/23 15:34

## Results of 110026-MW4

Client Sample ID: **110026-MW4**  
Client Project ID: **110026;Kasilof Riverview Lodge**  
Lab Sample ID: 1235062004  
Lab Project ID: 1235062

Collection Date: 09/13/23 15:52  
Received Date: 09/15/23 12:38  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS22799  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 09/25/23 15:34  
Container ID: 1235062004-D

Prep Batch: VXX40479  
Prep Method: SW5030B  
Prep Date/Time: 09/25/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW5**

Client Sample ID: **110026-MW5**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062005  
 Lab Project ID: 1235062

Collection Date: 09/14/23 12:30  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 06:27
2-Methylnaphthalene	0.0196	J	0.0500	0.0150	0.0250	ug/L	1		09/19/23 06:27
Acenaphthene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 06:27
Acenaphthylene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 06:27
Anthracene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 06:27
Benzo(a)Anthracene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 06:27
Benzo[a]pyrene	0.0100	U	0.0200	0.00620	0.0100	ug/L	1		09/19/23 06:27
Benzo[b]Fluoranthene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 06:27
Benzo[g,h,i]perylene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 06:27
Benzo[k]fluoranthene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 06:27
Chrysene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 06:27
Dibenzo[a,h]anthracene	0.0100	U	0.0200	0.00620	0.0100	ug/L	1		09/19/23 06:27
Fluoranthene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 06:27
Fluorene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 06:27
Indeno[1,2,3-c,d] pyrene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 06:27
Naphthalene	0.0500	U	0.100	0.0310	0.0500	ug/L	1		09/19/23 06:27
Phenanthrene	0.0500	U	0.100	0.0310	0.0500	ug/L	1		09/19/23 06:27
Pyrene	0.0250	U	0.0500	0.0150	0.0250	ug/L	1		09/19/23 06:27

**Surrogates**

2-Methylnaphthalene-d10 (surr)	71.5		38-100			%	1		09/19/23 06:27
Fluoranthene-d10 (surr)	77.8		30-111			%	1		09/19/23 06:27

**Batch Information**

Analytical Batch: XMS13903  
 Analytical Method: 8270D SIM LV (PAH)  
 Analyst: HMW  
 Analytical Date/Time: 09/19/23 06:27  
 Container ID: 1235062005-I

Prep Batch: XXX48630  
 Prep Method: SW3535A  
 Prep Date/Time: 09/18/23 12:00  
 Prep Initial Wt./Vol.: 250 mL  
 Prep Extract Vol: 1 mL



**Results of 110026-MW5**

Client Sample ID: **110026-MW5**  
Client Project ID: **110026;Kasilof Riverview Lodge**  
Lab Sample ID: 1235062005  
Lab Project ID: 1235062

Collection Date: 09/14/23 12:30  
Received Date: 09/15/23 12:38  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.315	J	0.566	0.189	0.283	mg/L	1		09/24/23 11:35
<b>Surrogates</b>									
5a Androstane (surr)	91.3		50-150			%	1		09/24/23 11:35

**Batch Information**

Analytical Batch: XFC16681  
Analytical Method: AK102  
Analyst: NGG  
Analytical Date/Time: 09/24/23 11:35  
Container ID: 1235062005-G

Prep Batch: XXX48650  
Prep Method: SW3520C  
Prep Date/Time: 09/20/23 14:30  
Prep Initial Wt./Vol.: 265 mL  
Prep Extract Vol: 1 mL



**Results of 110026-MW5**

Client Sample ID: **110026-MW5**  
Client Project ID: **110026;Kasilof Riverview Lodge**  
Lab Sample ID: 1235062005  
Lab Project ID: 1235062

Collection Date: 09/14/23 12:30  
Received Date: 09/15/23 12:38  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.171		0.100	0.0450	0.0500	mg/L	1		09/19/23 05:11
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	86.3		50-150			%	1		09/19/23 05:11

**Batch Information**

Analytical Batch: VFC16608  
Analytical Method: AK101  
Analyst: CWD  
Analytical Date/Time: 09/19/23 05:11  
Container ID: 1235062005-A

Prep Batch: VXX40442  
Prep Method: SW5030B  
Prep Date/Time: 09/18/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW5**

Client Sample ID: **110026-MW5**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062005  
 Lab Project ID: 1235062

Collection Date: 09/14/23 12:30  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:49
1,1,1-Trichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:49
1,1,2-Trichloroethane	0.200	U	0.400	0.120	0.200	ug/L	1		09/25/23 15:49
1,1-Dichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
1,1-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
1,1-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
1,2,3-Trichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
1,2,4-Trimethylbenzene	0.720	J	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:49
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	0.0375	ug/L	1		09/25/23 15:49
1,2-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
1,2-Dichloroethane	0.540		0.500	0.200	0.250	ug/L	1		09/25/23 15:49
1,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
1,3,5-Trimethylbenzene	3.72		1.00	0.310	0.500	ug/L	1		09/25/23 15:49
1,3-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
1,3-Dichloropropane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:49
1,4-Dichlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:49
2,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
2-Butanone (MEK)	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:49
2-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
2-Hexanone	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:49
4-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
4-Isopropyltoluene	0.370	J	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:49
Benzene	46.1		0.400	0.120	0.200	ug/L	1		09/25/23 15:49
Bromobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
Bromochloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
Bromodichloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:49
Bromoform	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
Bromomethane	3.00	U	6.00	3.00	3.00	ug/L	1		09/25/23 15:49
Carbon disulfide	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:49
Carbon tetrachloride	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
Chlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:49
Chloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49

Print Date: 09/28/2023 3:42:49PM

J flagging is activated



**Results of 110026-MW5**

Client Sample ID: **110026-MW5**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062005  
 Lab Project ID: 1235062

Collection Date: 09/14/23 12:30  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
Chloromethane	0.610	J	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:49
Dibromochloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:49
Dibromomethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
Dichlorodifluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
Ethylbenzene	6.28		1.00	0.310	0.500	ug/L	1		09/25/23 15:49
Freon-113	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:49
Hexachlorobutadiene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
Isopropylbenzene (Cumene)	3.19		1.00	0.310	0.500	ug/L	1		09/25/23 15:49
Methylene chloride	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:49
Methyl-t-butyl ether	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:49
Naphthalene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
n-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
n-Propylbenzene	3.71		1.00	0.310	0.500	ug/L	1		09/25/23 15:49
o-Xylene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
P & M -Xylene	2.17		2.00	0.620	1.00	ug/L	1		09/25/23 15:49
sec-Butylbenzene	0.480	J	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
Styrene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
tert-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
Tetrachloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
Toluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
Trichloroethene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 15:49
Trichlorofluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 15:49
Vinyl acetate	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 15:49
Vinyl chloride	0.0750	U	0.150	0.0500	0.0750	ug/L	1		09/25/23 15:49
Xylenes (total)	2.17	J	3.00	1.00	1.50	ug/L	1		09/25/23 15:49

**Surrogates**

1,2-Dichloroethane-D4 (surr)	108		81-118			%	1		09/25/23 15:49
4-Bromofluorobenzene (surr)	102		85-114			%	1		09/25/23 15:49
Toluene-d8 (surr)	98.6		89-112			%	1		09/25/23 15:49

## Results of 110026-MW5

Client Sample ID: **110026-MW5**  
Client Project ID: **110026;Kasilof Riverview Lodge**  
Lab Sample ID: 1235062005  
Lab Project ID: 1235062

Collection Date: 09/14/23 12:30  
Received Date: 09/15/23 12:38  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS22799  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 09/25/23 15:49  
Container ID: 1235062005-D

Prep Batch: VXX40479  
Prep Method: SW5030B  
Prep Date/Time: 09/25/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL





**Results of 110026-MW15**

Client Sample ID: **110026-MW15**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062006  
 Lab Project ID: 1235062

Collection Date: 09/14/23 13:00  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:43
2-Methylnaphthalene	0.0175	J	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:43
Acenaphthene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:43
Acenaphthylene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:43
Anthracene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:43
Benzo(a)Anthracene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:43
Benzo[a]pyrene	0.0102	U	0.0204	0.00633	0.0102	ug/L	1		09/19/23 06:43
Benzo[b]Fluoranthene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:43
Benzo[g,h,i]perylene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:43
Benzo[k]fluoranthene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:43
Chrysene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:43
Dibenzo[a,h]anthracene	0.0102	U	0.0204	0.00633	0.0102	ug/L	1		09/19/23 06:43
Fluoranthene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:43
Fluorene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:43
Indeno[1,2,3-c,d] pyrene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:43
Naphthalene	0.0510	U	0.102	0.0316	0.0510	ug/L	1		09/19/23 06:43
Phenanthrene	0.0510	U	0.102	0.0316	0.0510	ug/L	1		09/19/23 06:43
Pyrene	0.0255	U	0.0510	0.0153	0.0255	ug/L	1		09/19/23 06:43

**Surrogates**

2-Methylnaphthalene-d10 (surr)	76.7		38-100			%	1		09/19/23 06:43
Fluoranthene-d10 (surr)	91.4		30-111			%	1		09/19/23 06:43

**Batch Information**

Analytical Batch: XMS13903  
 Analytical Method: 8270D SIM LV (PAH)  
 Analyst: HMW  
 Analytical Date/Time: 09/19/23 06:43  
 Container ID: 1235062006-I

Prep Batch: XXX48630  
 Prep Method: SW3535A  
 Prep Date/Time: 09/18/23 12:00  
 Prep Initial Wt./Vol.: 245 mL  
 Prep Extract Vol: 1 mL



**Results of 110026-MW15**

Client Sample ID: **110026-MW15**  
Client Project ID: **110026;Kasilof Riverview Lodge**  
Lab Sample ID: 1235062006  
Lab Project ID: 1235062

Collection Date: 09/14/23 13:00  
Received Date: 09/15/23 12:38  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.295	J	0.566	0.189	0.283	mg/L	1		09/24/23 11:48
<b>Surrogates</b>									
5a Androstane (surr)	82.9		50-150			%	1		09/24/23 11:48

**Batch Information**

Analytical Batch: XFC16681  
Analytical Method: AK102  
Analyst: NGG  
Analytical Date/Time: 09/24/23 11:48  
Container ID: 1235062006-G

Prep Batch: XXX48650  
Prep Method: SW3520C  
Prep Date/Time: 09/20/23 14:30  
Prep Initial Wt./Vol.: 265 mL  
Prep Extract Vol: 1 mL



**Results of 110026-MW15**

Client Sample ID: **110026-MW15**  
Client Project ID: **110026;Kasilof Riverview Lodge**  
Lab Sample ID: 1235062006  
Lab Project ID: 1235062

Collection Date: 09/14/23 13:00  
Received Date: 09/15/23 12:38  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.198		0.100	0.0450	0.0500	mg/L	1		09/21/23 11:50
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	111		50-150			%	1		09/21/23 11:50

**Batch Information**

Analytical Batch: VFC16612  
Analytical Method: AK101  
Analyst: CWD  
Analytical Date/Time: 09/21/23 11:50  
Container ID: 1235062006-A

Prep Batch: VXX40465  
Prep Method: SW5030B  
Prep Date/Time: 09/20/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW15**

Client Sample ID: **110026-MW15**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062006  
 Lab Project ID: 1235062

Collection Date: 09/14/23 13:00  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 16:05
1,1,1-Trichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 16:05
1,1,2-Trichloroethane	0.200	U	0.400	0.120	0.200	ug/L	1		09/25/23 16:05
1,1-Dichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
1,1-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
1,1-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
1,2,3-Trichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
1,2,4-Trimethylbenzene	0.690	J	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 16:05
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	0.0375	ug/L	1		09/25/23 16:05
1,2-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
1,2-Dichloroethane	0.530		0.500	0.200	0.250	ug/L	1		09/25/23 16:05
1,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
1,3,5-Trimethylbenzene	3.65		1.00	0.310	0.500	ug/L	1		09/25/23 16:05
1,3-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
1,3-Dichloropropane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 16:05
1,4-Dichlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 16:05
2,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
2-Butanone (MEK)	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 16:05
2-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
2-Hexanone	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 16:05
4-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
4-Isopropyltoluene	0.390	J	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 16:05
Benzene	44.0		0.400	0.120	0.200	ug/L	1		09/25/23 16:05
Bromobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
Bromochloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
Bromodichloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 16:05
Bromoform	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
Bromomethane	3.00	U	6.00	3.00	3.00	ug/L	1		09/25/23 16:05
Carbon disulfide	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 16:05
Carbon tetrachloride	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
Chlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 16:05
Chloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05

Print Date: 09/28/2023 3:42:49PM

J flagging is activated



**Results of 110026-MW15**

Client Sample ID: **110026-MW15**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062006  
 Lab Project ID: 1235062

Collection Date: 09/14/23 13:00  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
Chloromethane	0.420	J	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 16:05
Dibromochloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 16:05
Dibromomethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
Dichlorodifluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
Ethylbenzene	5.79		1.00	0.310	0.500	ug/L	1		09/25/23 16:05
Freon-113	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 16:05
Hexachlorobutadiene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
Isopropylbenzene (Cumene)	3.02		1.00	0.310	0.500	ug/L	1		09/25/23 16:05
Methylene chloride	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 16:05
Methyl-t-butyl ether	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 16:05
Naphthalene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
n-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
n-Propylbenzene	3.62		1.00	0.310	0.500	ug/L	1		09/25/23 16:05
o-Xylene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
P & M -Xylene	2.06		2.00	0.620	1.00	ug/L	1		09/25/23 16:05
sec-Butylbenzene	0.460	J	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
Styrene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
tert-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
Tetrachloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
Toluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
Trichloroethene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 16:05
Trichlorofluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 16:05
Vinyl acetate	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 16:05
Vinyl chloride	0.0750	U	0.150	0.0500	0.0750	ug/L	1		09/25/23 16:05
Xylenes (total)	2.06	J	3.00	1.00	1.50	ug/L	1		09/25/23 16:05
<b>Surrogates</b>									
1,2-Dichloroethane-D4 (surr)	107		81-118			%	1		09/25/23 16:05
4-Bromofluorobenzene (surr)	104		85-114			%	1		09/25/23 16:05
Toluene-d8 (surr)	97.9		89-112			%	1		09/25/23 16:05

## Results of 110026-MW15

Client Sample ID: **110026-MW15**  
Client Project ID: **110026;Kasilof Riverview Lodge**  
Lab Sample ID: 1235062006  
Lab Project ID: 1235062

Collection Date: 09/14/23 13:00  
Received Date: 09/15/23 12:38  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS22799  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 09/25/23 16:05  
Container ID: 1235062006-D

Prep Batch: VXX40479  
Prep Method: SW5030B  
Prep Date/Time: 09/25/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

## Results of 110026-DW1

Client Sample ID: **110026-DW1**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062007  
 Lab Project ID: 1235062

Collection Date: 09/13/23 21:40  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Volatile Fuels

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.250	U	0.500	0.150	0.250	ug/L	1		09/18/23 21:50
Ethylbenzene	0.500	U	1.00	0.500	0.500	ug/L	1		09/18/23 21:50
o-Xylene	0.500	U	1.00	0.500	0.500	ug/L	1		09/18/23 21:50
P & M -Xylene	1.00	U	2.00	0.900	1.00	ug/L	1		09/18/23 21:50
Toluene	0.500	U	1.00	0.500	0.500	ug/L	1		09/18/23 21:50
Xylenes (total)	1.50	U	3.00	1.40	1.50	ug/L	1		09/18/23 21:50
<b>Surrogates</b>									
1,4-Difluorobenzene (surr)	92.7		77-115			%	1		09/18/23 21:50

## Batch Information

Analytical Batch: VFC16608  
 Analytical Method: SW8021B  
 Analyst: CWD  
 Analytical Date/Time: 09/18/23 21:50  
 Container ID: 1235062007-A

Prep Batch: VXX40441  
 Prep Method: SW5030B  
 Prep Date/Time: 09/18/23 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL

## Results of 110026-DW2

Client Sample ID: **110026-DW2**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062008  
 Lab Project ID: 1235062

Collection Date: 09/13/23 21:59  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Volatile Fuels

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.250	U	0.500	0.150	0.250	ug/L	1		09/18/23 22:08
Ethylbenzene	0.500	U	1.00	0.500	0.500	ug/L	1		09/18/23 22:08
o-Xylene	0.500	U	1.00	0.500	0.500	ug/L	1		09/18/23 22:08
P & M -Xylene	1.00	U	2.00	0.900	1.00	ug/L	1		09/18/23 22:08
Toluene	0.500	U	1.00	0.500	0.500	ug/L	1		09/18/23 22:08
Xylenes (total)	1.50	U	3.00	1.40	1.50	ug/L	1		09/18/23 22:08
<b>Surrogates</b>									
1,4-Difluorobenzene (surr)	93.9		77-115			%	1		09/18/23 22:08

## Batch Information

Analytical Batch: VFC16608  
 Analytical Method: SW8021B  
 Analyst: CWD  
 Analytical Date/Time: 09/18/23 22:08  
 Container ID: 1235062008-A

Prep Batch: VXX40441  
 Prep Method: SW5030B  
 Prep Date/Time: 09/18/23 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



## Results of 110026-WTB

Client Sample ID: **110026-WTB**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062009  
 Lab Project ID: 1235062

Collection Date: 09/13/23 08:00  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0500	U	0.100	0.0450	0.0500	mg/L	1		09/18/23 19:41

### Surrogates

4-Bromofluorobenzene (surr)	80.8		50-150			%	1		09/18/23 19:41
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## Batch Information

Analytical Batch: VFC16608  
 Analytical Method: AK101  
 Analyst: CWD  
 Analytical Date/Time: 09/18/23 19:41  
 Container ID: 1235062009-A

Prep Batch: VXX40441  
 Prep Method: SW5030B  
 Prep Date/Time: 09/18/23 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



**Results of 110026-WTB**

Client Sample ID: **110026-WTB**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062009  
 Lab Project ID: 1235062

Collection Date: 09/13/23 08:00  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 13:32
1,1,1-Trichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 13:32
1,1,2-Trichloroethane	0.200	U	0.400	0.120	0.200	ug/L	1		09/25/23 13:32
1,1-Dichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
1,1-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
1,1-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
1,2,3-Trichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 13:32
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	0.0375	ug/L	1		09/25/23 13:32
1,2-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
1,2-Dichloroethane	0.250	U	0.500	0.200	0.250	ug/L	1		09/25/23 13:32
1,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
1,3-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
1,3-Dichloropropane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 13:32
1,4-Dichlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 13:32
2,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
2-Butanone (MEK)	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 13:32
2-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
2-Hexanone	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 13:32
4-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
4-Isopropyltoluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 13:32
Benzene	0.200	U	0.400	0.120	0.200	ug/L	1		09/25/23 13:32
Bromobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
Bromochloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
Bromodichloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 13:32
Bromoform	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
Bromomethane	3.00	U	6.00	3.00	3.00	ug/L	1		09/25/23 13:32
Carbon disulfide	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 13:32
Carbon tetrachloride	0.330	J	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
Chlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 13:32
Chloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32

Print Date: 09/28/2023 3:42:49PM

J flagging is activated



**Results of 110026-WTB**

Client Sample ID: **110026-WTB**  
 Client Project ID: **110026;Kasilof Riverview Lodge**  
 Lab Sample ID: 1235062009  
 Lab Project ID: 1235062

Collection Date: 09/13/23 08:00  
 Received Date: 09/15/23 12:38  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
Chloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 13:32
Dibromochloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 13:32
Dibromomethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
Dichlorodifluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
Ethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
Freon-113	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 13:32
Hexachlorobutadiene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
Methylene chloride	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 13:32
Methyl-t-butyl ether	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 13:32
Naphthalene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
n-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
n-Propylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
o-Xylene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
P & M -Xylene	1.00	U	2.00	0.620	1.00	ug/L	1		09/25/23 13:32
sec-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
Styrene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
tert-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
Tetrachloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
Toluene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
Trichloroethene	0.250	U	0.500	0.150	0.250	ug/L	1		09/25/23 13:32
Trichlorofluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		09/25/23 13:32
Vinyl acetate	5.00	U	10.0	3.10	5.00	ug/L	1		09/25/23 13:32
Vinyl chloride	0.0750	U	0.150	0.0500	0.0750	ug/L	1		09/25/23 13:32
Xylenes (total)	1.50	U	3.00	1.00	1.50	ug/L	1		09/25/23 13:32

**Surrogates**

1,2-Dichloroethane-D4 (surr)	109		81-118			%	1		09/25/23 13:32
4-Bromofluorobenzene (surr)	104		85-114			%	1		09/25/23 13:32
Toluene-d8 (surr)	100		89-112			%	1		09/25/23 13:32

## Results of 110026-WTB

Client Sample ID: **110026-WTB**  
Client Project ID: **110026;Kasilof Riverview Lodge**  
Lab Sample ID: 1235062009  
Lab Project ID: 1235062

Collection Date: 09/13/23 08:00  
Received Date: 09/15/23 12:38  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS22799  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 09/25/23 13:32  
Container ID: 1235062009-B

Prep Batch: VXX40479  
Prep Method: SW5030B  
Prep Date/Time: 09/25/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



### Method Blank

Blank ID: MB for HBN 1864448 [VXX/40441]  
Blank Lab ID: 1735085

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1235062007, 1235062008, 1235062009

### Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Benzene	0.000250U	0.000500	0.000150	0.000250	mg/L
Ethylbenzene	0.000500U	0.00100	0.000500	0.000500	mg/L
Gasoline Range Organics	0.0500U	0.100	0.0450	0.0500	mg/L
o-Xylene	0.000500U	0.00100	0.000500	0.000500	mg/L
P & M -Xylene	0.00100U	0.00200	0.000900	0.00100	mg/L
Toluene	0.000500U	0.00100	0.000500	0.000500	mg/L
Xylenes (total)	0.00150U	0.00300	0.00140	0.00150	mg/L
<b>Surrogates</b>					
1,4-Difluorobenzene (surr)	95.5	77-115		0	%
4-Bromofluorobenzene (surr)	90.1	50-150		0	%

### Batch Information

Analytical Batch: VFC16608  
Analytical Method: AK101  
Instrument: Agilent 7890 PID/FID  
Analyst: CWD  
Analytical Date/Time: 9/18/2023 2:19:00PM

Prep Batch: VXX40441  
Prep Method: SW5030B  
Prep Date/Time: 9/18/2023 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 09/28/2023 3:42:53PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1235062 [VXX40441]  
 Blank Spike Lab ID: 1735086  
 Date Analyzed: 09/18/2023 14:56

Spike Duplicate ID: LCSD for HBN 1235062 [VXX40441]  
 Spike Duplicate Lab ID: 1735087  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1235062007, 1235062008, 1235062009

## Results by AK101

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	0.100	0.0976	98	0.100	0.101	101	( 80-120 )	3.20	(< 20 )
Ethylbenzene	0.100	0.0948	95	0.100	0.0954	95	( 75-125 )	0.57	(< 20 )
o-Xylene	0.100	0.0984	98	0.100	0.0980	98	( 80-120 )	0.37	(< 20 )
P & M -Xylene	0.200	0.191	96	0.200	0.192	96	( 75-130 )	0.16	(< 20 )
Toluene	0.100	0.0947	95	0.100	0.0965	97	( 75-120 )	1.90	(< 20 )
Xylenes (total)	0.300	0.290	97	0.300	0.290	97	( 79-121 )	0.02	(< 20 )

## Surrogates

1,4-Difluorobenzene (surr)	0.0500		107	0.0500		107	( 77-115 )	0.52	
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## Batch Information

Analytical Batch: VFC16608  
 Analytical Method: AK101  
 Instrument: Agilent 7890 PID/FID  
 Analyst: CWD

Prep Batch: VXX40441  
 Prep Method: SW5030B  
 Prep Date/Time: 09/18/2023 06:00  
 Spike Init Wt./Vol.: 0.100 mg/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 0.100 mg/L Extract Vol: 5 mL

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1235062 [VXX40441]  
 Blank Spike Lab ID: 1735088  
 Date Analyzed: 09/18/2023 15:14

Spike Duplicate ID: LCSD for HBN 1235062 [VXX40441]  
 Spike Duplicate Lab ID: 1735089  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1235062007, 1235062008, 1235062009

## Results by AK101

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	1.00	0.934	93	1.00	0.902	90	( 60-120 )	3.50	(< 20 )
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	0.0500		90	0.0500		81	( 50-150 )	10.70	

## Batch Information

Analytical Batch: **VFC16608**  
 Analytical Method: **AK101**  
 Instrument: **Agilent 7890 PID/FID**  
 Analyst: **CWD**

Prep Batch: **VXX40441**  
 Prep Method: **SW5030B**  
 Prep Date/Time: **09/18/2023 06:00**  
 Spike Init Wt./Vol.: 0.0500 mg/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 0.0500 mg/L Extract Vol: 5 mL

Print Date: 09/28/2023 3:42:56PM



### Method Blank

Blank ID: MB for HBN 1864448 [VXX/40441]  
Blank Lab ID: 1735085

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1235062007, 1235062008, 1235062009

### Results by SW8021B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Benzene	0.250U	0.500	0.150	0.250	ug/L
Ethylbenzene	0.500U	1.00	0.500	0.500	ug/L
o-Xylene	0.500U	1.00	0.500	0.500	ug/L
P & M -Xylene	1.00U	2.00	0.900	1.00	ug/L
Toluene	0.500U	1.00	0.500	0.500	ug/L
Xylenes (total)	1.50U	3.00	1.40	1.50	ug/L

### Surrogates

1,4-Difluorobenzene (surr)	95.5	77-115		0	%
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### Batch Information

Analytical Batch: VFC16608  
Analytical Method: SW8021B  
Instrument: Agilent 7890 PID/FID  
Analyst: CWD  
Analytical Date/Time: 9/18/2023 2:19:00PM

Prep Batch: VXX40441  
Prep Method: SW5030B  
Prep Date/Time: 9/18/2023 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 09/28/2023 3:42:58PM



## Blank Spike Summary

Blank Spike ID: LCS for HBN 1235062 [VXX40441]  
 Blank Spike Lab ID: 1735086  
 Date Analyzed: 09/18/2023 14:56

Spike Duplicate ID: LCSD for HBN 1235062 [VXX40441]  
 Spike Duplicate Lab ID: 1735087  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1235062007, 1235062008, 1235062009

## Results by SW8021B

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	100	97.6	98	100	101	101	( 80-120 )	3.20	(< 20 )
Ethylbenzene	100	94.8	95	100	95.4	95	( 75-125 )	0.57	(< 20 )
o-Xylene	100	98.4	98	100	98.0	98	( 80-120 )	0.37	(< 20 )
P & M -Xylene	200	191	96	200	192	96	( 75-130 )	0.16	(< 20 )
Toluene	100	94.7	95	100	96.5	97	( 75-120 )	1.90	(< 20 )
Xylenes (total)	300	290	97	300	290	97	( 79-121 )	0.02	(< 20 )
<b>Surrogates</b>									
1,4-Difluorobenzene (surr)	50		107	50		107	( 77-115 )	0.52	

## Batch Information

Analytical Batch: VFC16608  
 Analytical Method: SW8021B  
 Instrument: Agilent 7890 PID/FID  
 Analyst: CWD

Prep Batch: VXX40441  
 Prep Method: SW5030B  
 Prep Date/Time: 09/18/2023 06:00  
 Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL



### Method Blank

Blank ID: MB for HBN 1864459 [VXX/40442]  
Blank Lab ID: 1735141

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1235062001, 1235062002, 1235062003, 1235062004, 1235062005

### Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Gasoline Range Organics	0.0500U	0.100	0.0450	0.0500	mg/L
<b>Surrogates</b>					
1,4-Difluorobenzene (surr)	93.9	77-115		0	%
4-Bromofluorobenzene (surr)	81.5	50-150		0	%

### Batch Information

Analytical Batch: VFC16608  
Analytical Method: AK101  
Instrument: Agilent 7890 PID/FID  
Analyst: CWD  
Analytical Date/Time: 9/18/2023 11:21:00PM

Prep Batch: VXX40442  
Prep Method: SW5030B  
Prep Date/Time: 9/18/2023 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 09/28/2023 3:43:04PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1235062 [VXX40442]  
 Blank Spike Lab ID: 1735142  
 Date Analyzed: 09/19/2023 02:07

Spike Duplicate ID: LCSD for HBN 1235062 [VXX40442]  
 Spike Duplicate Lab ID: 1735143  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1235062001, 1235062002, 1235062003, 1235062004, 1235062005

## Results by AK101

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	1.00	0.910	91	1.00	0.830	83	( 60-120 )	9.20	(< 20 )
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	0.0500		81	0.0500		78	( 50-150 )	3.60	

## Batch Information

Analytical Batch: **VFC16608**  
 Analytical Method: **AK101**  
 Instrument: **Agilent 7890 PID/FID**  
 Analyst: **CWD**

Prep Batch: **VXX40442**  
 Prep Method: **SW5030B**  
 Prep Date/Time: **09/18/2023 06:00**  
 Spike Init Wt./Vol.: 0.0500 mg/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 0.0500 mg/L Extract Vol: 5 mL

Print Date: 09/28/2023 3:43:06PM



### Method Blank

Blank ID: MB for HBN 1864771 [VXX/40465]

Blank Lab ID: 1736173

QC for Samples:

1235062006

Matrix: Water (Surface, Eff., Ground)

### Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Gasoline Range Organics	0.0500U	0.100	0.0450	0.0500	mg/L
<b>Surrogates</b>					
1,4-Difluorobenzene (surr)	100	77-115		0	%
4-Bromofluorobenzene (surr)	99.6	50-150		0	%

### Batch Information

Analytical Batch: VFC16612  
 Analytical Method: AK101  
 Instrument: Agilent 7890A PID/FID  
 Analyst: CWD  
 Analytical Date/Time: 9/21/2023 8:42:00AM

Prep Batch: VXX40465  
 Prep Method: SW5030B  
 Prep Date/Time: 9/20/2023 6:00:00AM  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL

Print Date: 09/28/2023 3:43:09PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1235062 [VXX40465]  
 Blank Spike Lab ID: 1736174  
 Date Analyzed: 09/21/2023 14:21

Spike Duplicate ID: LCSD for HBN 1235062 [VXX40465]  
 Spike Duplicate Lab ID: 1736175  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1235062006

## Results by AK101

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	1.00	0.870	87	1.00	0.876	88	( 60-120 )	0.69	(< 20 )
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	0.0500		104	0.0500		105	( 50-150 )	0.29	

## Batch Information

Analytical Batch: **VFC16612**  
 Analytical Method: **AK101**  
 Instrument: **Agilent 7890A PID/FID**  
 Analyst: **CWD**

Prep Batch: **VXX40465**  
 Prep Method: **SW5030B**  
 Prep Date/Time: **09/20/2023 06:00**  
 Spike Init Wt./Vol.: 0.0500 mg/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 0.0500 mg/L Extract Vol: 5 mL

Print Date: 09/28/2023 3:43:13PM

## Method Blank

Blank ID: MB for HBN 1864861 [VXX/40479]

Matrix: Water (Surface, Eff., Ground)

Blank Lab ID: 1736547

QC for Samples:

1235062001, 1235062002, 1235062003, 1235062004, 1235062005, 1235062006, 1235062009

## Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
1,1,1,2-Tetrachloroethane	0.250U	0.500	0.150	0.250	ug/L
1,1,1-Trichloroethane	0.500U	1.00	0.310	0.500	ug/L
1,1,2,2-Tetrachloroethane	0.250U	0.500	0.150	0.250	ug/L
1,1,2-Trichloroethane	0.200U	0.400	0.120	0.200	ug/L
1,1-Dichloroethane	0.500U	1.00	0.310	0.500	ug/L
1,1-Dichloroethene	0.500U	1.00	0.310	0.500	ug/L
1,1-Dichloropropene	0.500U	1.00	0.310	0.500	ug/L
1,2,3-Trichlorobenzene	0.500U	1.00	0.310	0.500	ug/L
1,2,3-Trichloropropane	0.500U	1.00	0.310	0.500	ug/L
1,2,4-Trichlorobenzene	0.500U	1.00	0.310	0.500	ug/L
1,2,4-Trimethylbenzene	0.500U	1.00	0.310	0.500	ug/L
1,2-Dibromo-3-chloropropane	5.00U	10.0	3.10	5.00	ug/L
1,2-Dibromoethane	0.0375U	0.0750	0.0180	0.0375	ug/L
1,2-Dichlorobenzene	0.500U	1.00	0.310	0.500	ug/L
1,2-Dichloroethane	0.250U	0.500	0.200	0.250	ug/L
1,2-Dichloropropane	0.500U	1.00	0.310	0.500	ug/L
1,3,5-Trimethylbenzene	0.500U	1.00	0.310	0.500	ug/L
1,3-Dichlorobenzene	0.500U	1.00	0.310	0.500	ug/L
1,3-Dichloropropane	0.250U	0.500	0.150	0.250	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	0.250	ug/L
2,2-Dichloropropane	0.500U	1.00	0.310	0.500	ug/L
2-Butanone (MEK)	5.00U	10.0	3.10	5.00	ug/L
2-Chlorotoluene	0.500U	1.00	0.310	0.500	ug/L
2-Hexanone	5.00U	10.0	3.10	5.00	ug/L
4-Chlorotoluene	0.500U	1.00	0.310	0.500	ug/L
4-Isopropyltoluene	0.500U	1.00	0.310	0.500	ug/L
4-Methyl-2-pentanone (MIBK)	5.00U	10.0	3.10	5.00	ug/L
Benzene	0.200U	0.400	0.120	0.200	ug/L
Bromobenzene	0.500U	1.00	0.310	0.500	ug/L
Bromochloromethane	0.500U	1.00	0.310	0.500	ug/L
Bromodichloromethane	0.250U	0.500	0.150	0.250	ug/L
Bromoform	0.500U	1.00	0.310	0.500	ug/L
Bromomethane	3.00U	6.00	3.00	3.00	ug/L
Carbon disulfide	5.00U	10.0	3.10	5.00	ug/L
Carbon tetrachloride	0.500U	1.00	0.310	0.500	ug/L
Chlorobenzene	0.250U	0.500	0.150	0.250	ug/L
Chloroethane	0.500U	1.00	0.310	0.500	ug/L
Chloroform	0.500U	1.00	0.310	0.500	ug/L
Chloromethane	0.500U	1.00	0.310	0.500	ug/L
cis-1,2-Dichloroethene	0.500U	1.00	0.310	0.500	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	0.250	ug/L
Dibromochloromethane	0.250U	0.500	0.150	0.250	ug/L

Print Date: 09/28/2023 3:43:16PM



### Method Blank

Blank ID: MB for HBN 1864861 [VXX/40479]  
Blank Lab ID: 1736547

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1235062001, 1235062002, 1235062003, 1235062004, 1235062005, 1235062006, 1235062009

### Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Dibromomethane	0.500U	1.00	0.310	0.500	ug/L
Dichlorodifluoromethane	0.500U	1.00	0.310	0.500	ug/L
Ethylbenzene	0.500U	1.00	0.310	0.500	ug/L
Freon-113	5.00U	10.0	3.10	5.00	ug/L
Hexachlorobutadiene	0.500U	1.00	0.310	0.500	ug/L
Isopropylbenzene (Cumene)	0.500U	1.00	0.310	0.500	ug/L
Methylene chloride	5.00U	10.0	3.10	5.00	ug/L
Methyl-t-butyl ether	5.00U	10.0	3.10	5.00	ug/L
Naphthalene	0.500U	1.00	0.310	0.500	ug/L
n-Butylbenzene	0.500U	1.00	0.310	0.500	ug/L
n-Propylbenzene	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
sec-Butylbenzene	0.500U	1.00	0.310	0.500	ug/L
Styrene	0.500U	1.00	0.310	0.500	ug/L
tert-Butylbenzene	0.500U	1.00	0.310	0.500	ug/L
Tetrachloroethene	0.500U	1.00	0.310	0.500	ug/L
Toluene	0.500U	1.00	0.310	0.500	ug/L
trans-1,2-Dichloroethene	0.500U	1.00	0.310	0.500	ug/L
trans-1,3-Dichloropropene	0.500U	1.00	0.310	0.500	ug/L
Trichloroethene	0.250U	0.500	0.150	0.250	ug/L
Trichlorofluoromethane	0.500U	1.00	0.310	0.500	ug/L
Vinyl acetate	5.00U	10.0	3.10	5.00	ug/L
Vinyl chloride	0.0750U	0.150	0.0500	0.0750	ug/L
Xylenes (total)	1.50U	3.00	1.00	1.50	ug/L

### Surrogates

1,2-Dichloroethane-D4 (surr)	102	81-118		0	%
4-Bromofluorobenzene (surr)	103	85-114		0	%
Toluene-d8 (surr)	99.8	89-112		0	%

### Batch Information

Analytical Batch: VMS22799  
Analytical Method: SW8260D  
Instrument: Agilent 7890-75MS  
Analyst: JY  
Analytical Date/Time: 9/25/2023 9:21:00AM

Prep Batch: VXX40479  
Prep Method: SW5030B  
Prep Date/Time: 9/25/2023 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 09/28/2023 3:43:16PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1235062 [VXX40479]  
 Blank Spike Lab ID: 1736548  
 Date Analyzed: 09/25/2023 09:36

Spike Duplicate ID: LCSD for HBN 1235062 [VXX40479]  
 Spike Duplicate Lab ID: 1736549  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1235062001, 1235062002, 1235062003, 1235062004, 1235062005, 1235062006, 1235062009

## Results by SW8260D

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,1,2-Tetrachloroethane	30	30.2	101	30	30.3	101	( 78-124 )	0.30	(< 20 )
1,1,1-Trichloroethane	30	29.6	99	30	29.7	99	( 74-131 )	0.47	(< 20 )
1,1,2,2-Tetrachloroethane	30	30.3	101	30	30.2	101	( 71-121 )	0.33	(< 20 )
1,1,2-Trichloroethane	30	31.0	103	30	30.8	103	( 80-119 )	0.55	(< 20 )
1,1-Dichloroethane	30	28.3	94	30	28.6	95	( 77-125 )	1.10	(< 20 )
1,1-Dichloroethene	30	28.8	96	30	29.0	97	( 71-131 )	0.48	(< 20 )
1,1-Dichloropropene	30	30.0	100	30	30.1	100	( 79-125 )	0.07	(< 20 )
1,2,3-Trichlorobenzene	30	28.2	94	30	33.0	110	( 69-129 )	15.70	(< 20 )
1,2,3-Trichloropropane	30	31.4	105	30	31.2	104	( 73-122 )	0.64	(< 20 )
1,2,4-Trichlorobenzene	30	29.4	98	30	31.8	106	( 69-130 )	7.90	(< 20 )
1,2,4-Trimethylbenzene	30	30.4	101	30	30.4	101	( 79-124 )	0.13	(< 20 )
1,2-Dibromo-3-chloropropane	30	33.9	113	30	33.8	113	( 62-128 )	0.50	(< 20 )
1,2-Dibromoethane	30	31.9	106	30	31.8	106	( 77-121 )	0.35	(< 20 )
1,2-Dichlorobenzene	30	29.6	99	30	29.8	99	( 80-119 )	0.57	(< 20 )
1,2-Dichloroethane	30	28.9	96	30	29.0	97	( 73-128 )	0.45	(< 20 )
1,2-Dichloropropane	30	29.6	99	30	29.6	99	( 78-122 )	0.07	(< 20 )
1,3,5-Trimethylbenzene	30	30.5	102	30	30.6	102	( 75-124 )	0.13	(< 20 )
1,3-Dichlorobenzene	30	29.9	100	30	30.0	100	( 80-119 )	0.33	(< 20 )
1,3-Dichloropropane	30	31.3	104	30	31.0	103	( 80-119 )	0.90	(< 20 )
1,4-Dichlorobenzene	30	30.2	101	30	30.2	101	( 79-118 )	0.00	(< 20 )
2,2-Dichloropropane	30	31.0	103	30	30.7	102	( 60-139 )	0.71	(< 20 )
2-Butanone (MEK)	90	128	142	90	122	135	( 56-143 )	5.00	(< 20 )
2-Chlorotoluene	30	29.8	99	30	30.0	100	( 79-122 )	0.53	(< 20 )
2-Hexanone	90	115	128	90	110	122	( 57-139 )	4.90	(< 20 )
4-Chlorotoluene	30	29.9	100	30	30.0	100	( 78-122 )	0.07	(< 20 )
4-Isopropyltoluene	30	30.4	101	30	30.9	103	( 77-127 )	1.40	(< 20 )
4-Methyl-2-pentanone (MIBK)	90	95.1	106	90	94.8	105	( 67-130 )	0.26	(< 20 )
Benzene	30	29.0	97	30	29.6	99	( 79-120 )	1.80	(< 20 )
Bromobenzene	30	29.7	99	30	29.6	99	( 80-120 )	0.40	(< 20 )
Bromochloromethane	30	29.1	97	30	29.3	98	( 78-123 )	0.86	(< 20 )
Bromodichloromethane	30	29.3	98	30	29.3	98	( 79-125 )	0.07	(< 20 )
Bromoform	30	31.6	105	30	31.3	104	( 66-130 )	1.20	(< 20 )
Bromomethane	30	25.2	84	30	27.0	90	( 53-141 )	7.20	(< 20 )

Print Date: 09/28/2023 3:43:19PM



## Blank Spike Summary

Blank Spike ID: LCS for HBN 1235062 [VXX40479]  
 Blank Spike Lab ID: 1736548  
 Date Analyzed: 09/25/2023 09:36

Spike Duplicate ID: LCSD for HBN 1235062 [VXX40479]  
 Spike Duplicate Lab ID: 1736549  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1235062001, 1235062002, 1235062003, 1235062004, 1235062005, 1235062006, 1235062009

## Results by SW8260D

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Carbon disulfide	45	43.1	96	45	42.9	95	( 64-133 )	0.35	(< 20 )
Carbon tetrachloride	30	28.7	96	30	28.6	95	( 72-136 )	0.21	(< 20 )
Chlorobenzene	30	29.9	100	30	30.0	100	( 82-118 )	0.20	(< 20 )
Chloroethane	30	27.6	92	30	27.5	92	( 60-138 )	0.29	(< 20 )
Chloroform	30	27.3	91	30	27.6	92	( 79-124 )	0.91	(< 20 )
Chloromethane	30	25.6	85	30	25.6	85	( 50-139 )	0.04	(< 20 )
cis-1,2-Dichloroethene	30	28.3	94	30	28.4	95	( 78-123 )	0.39	(< 20 )
cis-1,3-Dichloropropene	30	30.7	102	30	30.7	102	( 75-124 )	0.26	(< 20 )
Dibromochloromethane	30	31.0	103	30	31.1	104	( 74-126 )	0.03	(< 20 )
Dibromomethane	30	29.6	99	30	29.8	99	( 79-123 )	0.44	(< 20 )
Dichlorodifluoromethane	30	24.3	81	30	24.2	81	( 32-152 )	0.70	(< 20 )
Ethylbenzene	30	30.6	102	30	30.4	101	( 79-121 )	0.79	(< 20 )
Freon-113	45	44.5	99	45	44.5	99	( 70-136 )	0.05	(< 20 )
Hexachlorobutadiene	30	29.0	97	30	30.7	102	( 66-134 )	5.70	(< 20 )
Isopropylbenzene (Cumene)	30	31.1	104	30	31.1	104	( 72-131 )	0.13	(< 20 )
Methylene chloride	30	29.4	98	30	29.7	99	( 74-124 )	1.00	(< 20 )
Methyl-t-butyl ether	45	46.4	103	45	46.5	103	( 71-124 )	0.24	(< 20 )
Naphthalene	30	33.0	110	30	37.5	125	( 61-128 )	12.50	(< 20 )
n-Butylbenzene	30	31.0	103	30	31.2	104	( 75-128 )	0.77	(< 20 )
n-Propylbenzene	30	30.7	102	30	30.7	102	( 76-126 )	0.03	(< 20 )
o-Xylene	30	30.8	103	30	30.9	103	( 78-122 )	0.36	(< 20 )
P & M -Xylene	60	62.0	103	60	61.2	102	( 80-121 )	1.30	(< 20 )
sec-Butylbenzene	30	30.5	102	30	30.6	102	( 77-126 )	0.13	(< 20 )
Styrene	30	31.8	106	30	31.6	105	( 78-123 )	0.54	(< 20 )
tert-Butylbenzene	30	30.1	100	30	30.1	100	( 78-124 )	0.03	(< 20 )
Tetrachloroethene	30	30.5	102	30	30.3	101	( 74-129 )	0.69	(< 20 )
Toluene	30	29.3	98	30	29.4	98	( 80-121 )	0.51	(< 20 )
trans-1,2-Dichloroethene	30	28.5	95	30	28.7	96	( 75-124 )	0.52	(< 20 )
trans-1,3-Dichloropropene	30	32.6	109	30	32.0	107	( 73-127 )	1.70	(< 20 )
Trichloroethene	30	29.3	98	30	29.3	98	( 79-123 )	0.07	(< 20 )
Trichlorofluoromethane	30	29.2	97	30	29.0	97	( 65-141 )	0.72	(< 20 )
Vinyl acetate	30	31.7	106	30	31.5	105	( 54-146 )	0.79	(< 20 )
Vinyl chloride	30	26.7	89	30	26.6	89	( 58-137 )	0.49	(< 20 )

Print Date: 09/28/2023 3:43:19PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1235062 [VXX40479]  
 Blank Spike Lab ID: 1736548  
 Date Analyzed: 09/25/2023 09:36

Spike Duplicate ID: LCSD for HBN 1235062 [VXX40479]  
 Spike Duplicate Lab ID: 1736549  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1235062001, 1235062002, 1235062003, 1235062004, 1235062005, 1235062006, 1235062009

## Results by SW8260D

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Xylenes (total)	90	92.8	103	90	92.1	102	( 79-121 )	0.76	(< 20 )
<b>Surrogates</b>									
1,2-Dichloroethane-D4 (surr)	30		99	30		99	( 81-118 )	0.40	
4-Bromofluorobenzene (surr)	30		100	30		100	( 85-114 )	0.23	
Toluene-d8 (surr)	30		99	30		100	( 89-112 )	0.97	

## Batch Information

Analytical Batch: **VMS22799**  
 Analytical Method: **SW8260D**  
 Instrument: **Agilent 7890-75MS**  
 Analyst: **JY**

Prep Batch: **VXX40479**  
 Prep Method: **SW5030B**  
 Prep Date/Time: **09/25/2023 06:00**  
 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

## Method Blank

Blank ID: MB for HBN 1864393 [XXX/48630]  
 Blank Lab ID: 1734925

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
 1235062001, 1235062002, 1235062003, 1235062004, 1235062005, 1235062006

## Results by 8270D SIM LV (PAH)

Parameter	Results	LOQ/CL	DL	LOD	Units
1-Methylnaphthalene	0.0231J	0.0500	0.0150	0.0250	ug/L
2-Methylnaphthalene	0.0261J	0.0500	0.0150	0.0250	ug/L
Acenaphthene	0.0250U	0.0500	0.0150	0.0250	ug/L
Acenaphthylene	0.0250U	0.0500	0.0150	0.0250	ug/L
Anthracene	0.0250U	0.0500	0.0150	0.0250	ug/L
Benzo(a)Anthracene	0.0250U	0.0500	0.0150	0.0250	ug/L
Benzo[a]pyrene	0.0100U	0.0200	0.00620	0.0100	ug/L
Benzo[b]Fluoranthene	0.0250U	0.0500	0.0150	0.0250	ug/L
Benzo[g,h,i]perylene	0.0250U	0.0500	0.0150	0.0250	ug/L
Benzo[k]fluoranthene	0.0250U	0.0500	0.0150	0.0250	ug/L
Chrysene	0.0250U	0.0500	0.0150	0.0250	ug/L
Dibenzo[a,h]anthracene	0.0100U	0.0200	0.00620	0.0100	ug/L
Fluoranthene	0.0250U	0.0500	0.0150	0.0250	ug/L
Fluorene	0.0250U	0.0500	0.0150	0.0250	ug/L
Indeno[1,2,3-c,d] pyrene	0.0250U	0.0500	0.0150	0.0250	ug/L
Naphthalene	0.0500U	0.100	0.0310	0.0500	ug/L
Phenanthrene	0.0516J	0.100	0.0310	0.0500	ug/L
Pyrene	0.0250U	0.0500	0.0150	0.0250	ug/L
<b>Surrogates</b>					
2-Methylnaphthalene-d10 (surr)	73.9	38-100		0	%
Fluoranthene-d10 (surr)	94.8	30-111		0	%

## Batch Information

Analytical Batch: XMS13904  
 Analytical Method: 8270D SIM LV (PAH)  
 Instrument: Agilent 8890 GC/MS SYA  
 Analyst: HMW  
 Analytical Date/Time: 9/20/2023 1:49:00PM

Prep Batch: XXX48630  
 Prep Method: SW3535A  
 Prep Date/Time: 9/18/2023 12:00:00PM  
 Prep Initial Wt./Vol.: 250 mL  
 Prep Extract Vol: 1 mL

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1235062 [XXX48630]  
 Blank Spike Lab ID: 1734926  
 Date Analyzed: 09/19/2023 04:18

Spike Duplicate ID: LCSD for HBN 1235062 [XXX48630]  
 Spike Duplicate Lab ID: 1734927  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1235062001, 1235062002, 1235062003, 1235062004, 1235062005, 1235062006

## Results by 8270D SIM LV (PAH)

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1-Methylnaphthalene	2	1.32	66	2	1.31	65	( 41-115 )	1.10	(< 20 )
2-Methylnaphthalene	2	1.29	64	2	1.33	67	( 39-114 )	3.40	(< 20 )
Acenaphthene	2	1.51	75	2	1.53	77	( 48-114 )	1.80	(< 20 )
Acenaphthylene	2	1.66	83	2	1.66	83	( 35-121 )	0.39	(< 20 )
Anthracene	2	1.59	79	2	1.58	79	( 53-119 )	0.47	(< 20 )
Benzo(a)Anthracene	2	1.51	76	2	1.55	77	( 59-120 )	2.50	(< 20 )
Benzo[a]pyrene	2	1.53	77	2	1.60	80	( 53-120 )	4.30	(< 20 )
Benzo[b]Fluoranthene	2	1.57	79	2	1.69	84	( 53-126 )	7.20	(< 20 )
Benzo[g,h,i]perylene	2	1.43	72	2	1.48	74	( 44-128 )	3.00	(< 20 )
Benzo[k]fluoranthene	2	1.59	79	2	1.57	79	( 54-125 )	0.88	(< 20 )
Chrysene	2	1.56	78	2	1.60	80	( 57-120 )	2.70	(< 20 )
Dibenzo[a,h]anthracene	2	1.45	73	2	1.51	76	( 44-131 )	4.20	(< 20 )
Fluoranthene	2	1.64	82	2	1.63	81	( 58-120 )	0.91	(< 20 )
Fluorene	2	1.58	79	2	1.57	79	( 50-118 )	0.49	(< 20 )
Indeno[1,2,3-c,d] pyrene	2	1.52	76	2	1.57	79	( 48-130 )	3.50	(< 20 )
Naphthalene	2	1.26	63	2	1.30	65	( 43-114 )	3.60	(< 20 )
Phenanthrene	2	1.60	80	2	1.59	79	( 53-115 )	0.76	(< 20 )
Pyrene	2	1.67	84	2	1.64	82	( 53-121 )	1.60	(< 20 )
<b>Surrogates</b>									
2-Methylnaphthalene-d10 (surr)	2		75	2		75	( 38-100 )	0.15	
Fluoranthene-d10 (surr)	2		96	2		93	( 30-111 )	3.00	

## Batch Information

Analytical Batch: XMS13903  
 Analytical Method: 8270D SIM LV (PAH)  
 Instrument: Agilent 8890 GC/MS SYA  
 Analyst: HMW

Prep Batch: XXX48630  
 Prep Method: SW3535A  
 Prep Date/Time: 09/18/2023 12:00  
 Spike Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL  
 Dupe Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL

Print Date: 09/28/2023 3:43:25PM



### Method Blank

Blank ID: MB for HBN 1864560 [XXX/48650]  
Blank Lab ID: 1735540

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1235062001, 1235062002, 1235062003, 1235062004, 1235062005, 1235062006

### Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Diesel Range Organics	0.300U	0.600	0.200	0.300	mg/L
<b>Surrogates</b>					
5a Androstane (surr)	104	60-120		0	%

### Batch Information

Analytical Batch: XFC16681  
Analytical Method: AK102  
Instrument: Agilent 7890B F  
Analyst: NGG  
Analytical Date/Time: 9/24/2023 9:43:00AM

Prep Batch: XXX48650  
Prep Method: SW3520C  
Prep Date/Time: 9/20/2023 2:30:00PM  
Prep Initial Wt./Vol.: 250 mL  
Prep Extract Vol: 1 mL

Print Date: 09/28/2023 3:43:28PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1235062 [XXX48650]  
 Blank Spike Lab ID: 1735541  
 Date Analyzed: 09/24/2023 09:55

Spike Duplicate ID: LCSD for HBN 1235062 [XXX48650]  
 Spike Duplicate Lab ID: 1735542  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1235062001, 1235062002, 1235062003, 1235062004, 1235062005, 1235062006

## Results by AK102

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	20	22.5	112	20	21.2	106	( 75-125 )	6.00	(< 20 )
<b>Surrogates</b>									
5a Androstane (surr)	0.4		112	0.4		107	( 60-120 )	4.00	

## Batch Information

Analytical Batch: **XFC16681**  
 Analytical Method: **AK102**  
 Instrument: **Agilent 7890B F**  
 Analyst: **NGG**

Prep Batch: **XXX48650**  
 Prep Method: **SW3520C**  
 Prep Date/Time: **09/20/2023 14:30**  
 Spike Init Wt./Vol.: 0.4 mg/L Extract Vol: 1 mL  
 Dupe Init Wt./Vol.: 0.4 mg/L Extract Vol: 1 mL

Print Date: 09/28/2023 3:43:31PM

1235062



**Shannon & Wilson, Inc.**  
**5430 Fairbanks Street, Suite 3**  
**Anchorage, Alaska 99518**  
**(907) 561-2120**  
**Fax (206) 695-6777**

*Profile # 365300 CSW*

**SGS North America Inc.**

Date	Time	Sample ID	Total Containers	SGS North America Inc.							
				VOA Vials HCl	VOA Vials HCl	Amber HCl	Amber 4C				
9/13/2023	20:53	110026-MW1 <i>QAS</i>	10	X	X	X	X				
9/13/2023	18:17	110026-MW2 <i>QAS</i>	10	X	X	X	X				
9/13/2023	17:18	110026-MW3 <i>QAS</i>	10	X	X	X	X				
9/13/2023	15:52	110026-MW4 <i>QAS</i>	10	X	X	X	X				
9/14/2023	12:30	110026-MW5 <i>QAS</i>	10	X	X	X	X				
9/14/2023	13:00	110026-MW15 <i>QAS</i>	10	X	X	X	X				
9/13/2023	21:40	110026-DW1 <i>QAC</i>	3						X		
9/13/2023	21:59	110026-DW2 <i>QAC</i>	3						X		
9/13/2023	8:00	110026-WTB <i>QAI</i>	1 Set	X	X	X	X				
<b>Relinquished By:</b>			<b>Relinquished By:</b>			<b>Project Information</b>					
Signature: <i>[Signature]</i>			Signature: <del>_____</del>			Project Number: 110026					
Print Name: <i>Zach Thon</i>			Print Name: <del>_____</del>			Project Name: Kasilof Riverview Lodge					
Company: Shannon & Wilson, Inc.			Company: <del>_____</del>			Contact: Dan McMahon					
Date: <i>9/15/23</i>			Date: <del>_____</del>			Sampler: ZJT					
Time: <i>12:37</i>			Time: <del>_____</del>			Special Instructions:					
<b>Received By:</b>			<b>Received By:</b>			<b>Sample Receipt</b>					
Signature: <del>_____</del>			Signature: <i>Jordan Creech</i>			Shipped Via: Hand Delivered					
Print Name: <del>_____</del>			Print Name: <i>Jordan Creech</i>								
Company: <del>_____</del>			Company: <i>SGS</i>			Cooler Temperature Upon Arrival: <i>1.4 1753</i>					
Date: <del>_____</del>			Date: <i>09/15/23</i>			Sample Matrix: Water					
Time: <del>_____</del>			Time: <i>1738</i>			10 Working DAY TAT					



1235062



## SAMPLE RECEIPT FORM

Project Manager Completion				
Was all necessary information recorded on the COC upon receipt? (temperature, COC seals, etc.?)	<input checked="" type="radio"/> Yes	No	N/A	
Was temperature between 0-6° C?	<input checked="" type="radio"/> 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*?	<input checked="" type="radio"/> Yes	No	N/A	
Was a method specified for each analysis, where applicable? If no, please note correct methods.	<input checked="" type="radio"/> Yes	No	N/A	
Are compound lists specified, where applicable? For project specific or special compound lists please note correct analysis code.	Yes	No	<input checked="" type="radio"/> N/A	
If rush was requested by the client, was the requested TAT approved?	Yes	No	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> N/A	If "NO", contact client for information.
Sample Login Completion				
Do ID's on sample containers match COC?	<input checked="" type="radio"/> Yes	No	N/A	
If provided on containers, do dates/times collected match COC?	<input checked="" type="radio"/> 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?	<input checked="" type="radio"/> Yes	No	N/A	
Were proper containers (type/mass/volume/preservative) received for all samples? *See form F-083 "Sample Guide"	<input checked="" type="radio"/> 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*?	<input checked="" type="radio"/> Yes	No	N/A	
Were all VOA vials free of headspace >6mm?	<input checked="" type="radio"/> Yes	No	N/A	
Were all soil VOA samples received field extracted with Methanol?	Yes	No	<input checked="" type="radio"/> N/A	
Did all soil VOA samples have an accompanying unpreserved container for % solids?	Yes	No	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> N/A	
For Rush/Short Holding time, was the lab notified?	Yes	No	<input checked="" type="radio"/> N/A	
For any question answered "NO", was the Project Manager notified?	Yes	No	<input checked="" type="radio"/> N/A	PM Initials:
Was Peer Review of sample numbering/labelling completed?	<input checked="" type="radio"/> Yes	No	N/A	Reviewer Initials: JAC
<b>Additional Notes/Clarification where Applicable, including resolution of "No" answers when a change order is not attached:</b>				





## Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1235062001-A	HCL to pH < 2	OK	1235062005-J	No Preservative Required	OK
1235062001-B	HCL to pH < 2	OK	1235062006-A	HCL to pH < 2	OK
1235062001-C	HCL to pH < 2	OK	1235062006-B	HCL to pH < 2	OK
1235062001-D	HCL to pH < 2	OK	1235062006-C	HCL to pH < 2	OK
1235062001-E	HCL to pH < 2	OK	1235062006-D	HCL to pH < 2	OK
1235062001-F	HCL to pH < 2	OK	1235062006-E	HCL to pH < 2	OK
1235062001-G	HCL to pH < 2	OK	1235062006-F	HCL to pH < 2	OK
1235062001-H	HCL to pH < 2	OK	1235062006-G	HCL to pH < 2	OK
1235062001-I	No Preservative Required	OK	1235062006-H	HCL to pH < 2	OK
1235062001-J	No Preservative Required	OK	1235062006-I	No Preservative Required	OK
1235062002-A	HCL to pH < 2	OK	1235062006-J	No Preservative Required	OK
1235062002-B	HCL to pH < 2	OK	1235062007-A	HCL to pH < 2	OK
1235062002-C	HCL to pH < 2	OK	1235062007-B	HCL to pH < 2	OK
1235062002-D	HCL to pH < 2	OK	1235062007-C	HCL to pH < 2	OK
1235062002-E	HCL to pH < 2	OK	1235062008-A	HCL to pH < 2	OK
1235062002-F	HCL to pH < 2	OK	1235062008-B	HCL to pH < 2	OK
1235062002-G	HCL to pH < 2	OK	1235062008-C	HCL to pH < 2	OK
1235062002-H	HCL to pH < 2	OK	1235062009-A	HCL to pH < 2	OK
1235062002-I	No Preservative Required	OK	1235062009-B	HCL to pH < 2	OK
1235062002-J	No Preservative Required	OK	1235062009-C	HCL to pH < 2	OK
1235062003-A	HCL to pH < 2	OK	1235062009-D	HCL to pH < 2	OK
1235062003-B	HCL to pH < 2	OK	1235062009-E	HCL to pH < 2	OK
1235062003-C	HCL to pH < 2	OK	1235062009-F	HCL to pH < 2	OK
1235062003-D	HCL to pH < 2	OK	1235062009-G	HCL to pH < 2	OK
1235062003-E	HCL to pH < 2	OK	1235062009-H	HCL to pH < 2	OK
1235062003-F	HCL to pH < 2	OK	1235062009-I	HCL to pH < 2	OK
1235062003-G	HCL to pH < 2	OK			
1235062003-H	HCL to pH < 2	OK			
1235062003-I	No Preservative Required	OK			
1235062003-J	No Preservative Required	OK			
1235062004-A	HCL to pH < 2	OK			
1235062004-B	HCL to pH < 2	OK			
1235062004-C	HCL to pH < 2	OK			
1235062004-D	HCL to pH < 2	OK			
1235062004-E	HCL to pH < 2	OK			
1235062004-F	HCL to pH < 2	OK			
1235062004-G	HCL to pH < 2	OK			
1235062004-H	HCL to pH < 2	OK			
1235062004-I	No Preservative Required	OK			
1235062004-J	No Preservative Required	OK			
1235062005-A	HCL to pH < 2	OK			
1235062005-B	HCL to pH < 2	OK			
1235062005-C	HCL to pH < 2	OK			
1235062005-D	HCL to pH < 2	OK			
1235062005-E	HCL to pH < 2	OK			
1235062005-F	HCL to pH < 2	OK			
1235062005-G	HCL to pH < 2	OK			
1235062005-H	HCL to pH < 2	OK			
1235062005-I	No Preservative Required	OK			

Container Id

Preservative

Container  
Condition

Container Id

Preservative

Container  
Condition

#### 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.

# ADEC Contaminated Sites Program Laboratory Data Review Checklist

<b>Completed By:</b>	Zach Thon	<b>CS Site Name:</b>	Kasilof Riverview Lodge	<b>Lab Name:</b>	SGS
<b>Title:</b>	Environmental Scientist	<b>ADEC File No.:</b>	2319.26.002	<b>Lab Report No.:</b>	1235062
<b>Consulting Firm:</b>	Shannon & Wilson	<b>Hazard ID No.:</b>	22950	<b>Lab Report Date:</b>	9/28/2023

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

## 1. Laboratory

- a. Did an ADEC Contaminated Sites Laboratory Approval Program (CS-LAP) 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 CS-LAP approved?

Yes  No  N/A

Comments: *The samples were not submitted to another “network” laboratory or subcontracted to an alternate laboratory.*

## 2. Chain of Custody (CoC)

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

Yes  No  N/A

Comments:

- b. Were the correct analyses requested?

Yes  No  N/A

Analyses requested: GRO, DRO, VOCs, PAHs, BTEX

Comments:

## 3. Laboratory Sample Receipt Documentation

- a. Is the sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes  No  N/A

Cooler temperature(s): 1.4°C

**CS Site Name:** Kasilof Riverview Lodge

**Lab Report No.:** 1235062

- b. Is the sample preservation acceptable – acidified waters, methanol preserved soil (GRO, BTEX, VOCs, etc.)?

Yes  No  N/A

Comments:

- c. Is the sample condition documented – broken, leaking, zero headspace (VOA vials); canister vacuum/pressure checked and no open valves, etc.?

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, canister not holding a vacuum, etc.?

Yes  No  N/A

Comments: *No discrepancies were noted by the laboratory.*

- e. Is the data quality or usability affected?

Yes  No  N/A

Comments: *See above*

#### **4. Case Narrative**

- a. Is the case narrative present and understandable?

Yes  No  N/A

Comments:

- b. Are there discrepancies, errors, or QC failures identified by the lab?

Yes  No  N/A

Comments:

- c. Were all the corrective actions documented?

Yes  No  N/A

Comments: *No corrective actions were noted.*

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

Comments: *NA*

#### **5. Sample Results**

- a. Are the correct analyses performed/reported as requested on CoC?

Yes  No  N/A

Comments:

- b. Are all applicable holding times met?

Yes  No  N/A

Comments:

CS Site Name: Kasilof Riverview Lodge

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- c. Are all soils reported on a dry weight basis?

Yes  No  N/A

Comments:

- d. Are the reported limits of quantitation (LoQ) or limits of detections (LOD), or reporting limits (RL) less than the Cleanup Level or the action level for the project?

Yes  No  N/A

Comments: *The LOQ for 1,2,3-trichloropropane exceeds the ADEC cleanup level for all project samples.*

- e. Is the data quality or usability affected?

Yes  No  N/A

Comments: *There is a potential that the target analyte is present at a concentration greater than the ADEC cleanup level, but less than the LOQ.*

## 6. QC Samples

- a. Method Blank

- i. Was one method blank reported per matrix, analysis, and 20 samples?

Yes  No  N/A

Comments:

- ii. Are all method blank results less than LOQ (or RL)?

Yes  No

Comments: *Although less than the LOQ, estimated concentrations of 1-methylnaphthalene (0.0231 µg/L), 2-methylnaphthalene (0.0261 µg/L), and phenanthrene (0.0516 µg/L) were detected in the method blank.*

- iii. If above LoQ or RL, what samples are affected?

Comments: *MW1, MW2, MW3, MW4, and MW5.*

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

Yes  No  N/A

Comments: *The samples are flagged "B" in Table 1.2 when the reported sample concentration are within 10x the reported method blank concentration. The concentrations of 1-methylnaphthalene, 2-methylnaphthalene, and phenanthrene detected in the samples and method blank are reported as less than the LOQ, therefore, the sample concentrations are reported as non-detect at the LOQ and flagged "B".*

- v. Data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

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

- i. Organics – Are 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 – Are one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes  No  N/A

Comments:

- iii. Accuracy – Are 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 – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? Was the 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:

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

Comments:

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

Yes  No  N/A

Comments:

- vii. Is the data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

- i. Organics – Are one MS/MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A

Comments:

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- ii. Metals/Inorganics – Are one MS/MSD reported per matrix, analysis and 20 samples?  
Yes  No  N/A   
Comments:
  - iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?  
Yes  No  N/A   
Comments:
  - iv. Precision – Are 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:
  - v. If %R or RPD is outside of acceptable limits, what samples are affected?  
Comments:
  - vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?  
Yes  No  N/A   
Comments:
  - vii. Is the data quality or usability affected?  
Yes  No  N/A   
Comments: *See above.*
- d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only
- i. Are surrogate/IDA recoveries reported for organic analyses – field, QC, and laboratory samples?  
Yes  No  N/A   
Comments: .
  - ii. Accuracy – Are 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:

**CS Site Name:** Kasilof Riverview Lodge

**Lab Report No.:** 1235062

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. Is the data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

e. Trip Blanks

i. Is one trip blank reported per matrix, analysis, and for each cooler containing volatile samples? Yes  No  N/A

Comments:

ii. Are all results less than LoQ or RL?

Yes  No  N/A

Comments:

iii. If above LoQ or RL, what samples are affected?

Comments:

iv. Is the data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

f. Field Duplicate

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

Yes  No  N/A

Comments: .

ii. Was the duplicate submitted blind to lab?

Yes  No  N/A

Comments:



CS Site Name: Kasilof Riverview Lodge  
Lab Report No.: 1235062

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

$$RPD (\%) = \left| \frac{R_1 - R_2}{\left(\frac{R_1 + R_2}{2}\right)} \right| \times 100$$

Where  $R_1$  = Sample Concentration

$R_2$  = Field Duplicate Concentration

Comments: *The RPDs for chloromethane are outside QC criteria. The affected data is flagged "E" in Table 1.2*

- iv. Is the data quality or usability affected? (Explain)  
Yes  No  N/A

Comments:

g. Decontamination or Equipment Blanks

- i. Were decontamination or equipment blanks collected?  
Yes  No  N/A

Comments: *A decontamination and equipment blank were not included in our ADEC-approved work plan.*

- ii. Are all results less than LoQ or RL?  
Yes  No  N/A

Comments:

- iii. If above LoQ or RL, specify what samples are affected.  
Comments: Click or tap here to enter text.

- iv. Are data quality or usability affected?  
Yes  No  N/A

Comments: *See above.*

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

- a. Are they defined and appropriate?  
Yes  No  N/A

Comments: *A key is included on page 4 of the laboratory report.*

## Laboratory Report of Analysis

To: Shannon & Wilson, Inc.  
5430 Fairbanks Street, Suite 3  
Anchorage, AK 99518  
(907)433-3228

Report Number: **1236845**

Client Project: **110026-002; Kasilof Riverview**

Dear Alec Rizzo,

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

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

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

Sincerely,  
SGS North America Inc.



**Justin Nelson**  
**2024.01.08**  
**14:30:38 -09'00'**

Justin Nelson  
Project Manager  
Justin.Nelson@sgs.com

Date

### Case Narrative

SGS Client: **Shannon & Wilson, Inc.**  
SGS Project: **1236845**  
Project Name/Site: **110026-002; Kasilof Riverview**  
Project Contact: **Alec Rizzo**

Refer to sample receipt form for information on sample condition.

**110026-MW1 (1236845003) PS**

8270D SIM - PAH LCS recoveries for several analytes do not meet QC criteria. Sample was re-extracted outside of hold and results confirmed. In hold data is reported.

**110026-MW2 (1236845004) PS**

8270D SIM - PAH LCS recoveries for several analytes do not meet QC criteria. Sample was re-extracted outside of hold and results confirmed. In hold data is reported.

**110026-MW3 (1236845005) PS**

8270D SIM - PAH LCS recoveries for several analytes do not meet QC criteria. Sample was re-extracted outside of hold and results confirmed. In hold data is reported.

**110026-MW4 (1236845006) PS**

8270D SIM - PAH LCS recoveries for several analytes do not meet QC criteria. Sample was re-extracted outside of hold and results confirmed. In hold data is reported.

**110026-MW5 (1236845007) PS**

8270D SIM - PAH LCS recoveries for several analytes do not meet QC criteria. Sample was re-extracted outside of hold and results confirmed. In hold data is reported.

**110026-MW15 (1236845008) PS**

8270D SIM - PAH LCS recoveries for several analytes do not meet QC criteria. Sample was re-extracted outside of hold and results confirmed. In hold data is reported.

**LCS for HBN 1869655 [XXX/49129 (1750099) LCS**

8270D SIM - PAH LCS recoveries for several analytes do not meet QC criteria.

**MB for HBN 1870032 [XXX/49140] (1750676) MB**

AK103 - RRO is detect in the MB greater than one-half the LOQ, but less than the LOQ.

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

### 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, indemnification 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.

### Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
110026-DW1	1236845001	12/19/2023	12/21/2023	Water (Surface, Eff., Ground)
110026-DW2	1236845002	12/19/2023	12/21/2023	Water (Surface, Eff., Ground)
110026-MW1	1236845003	12/20/2023	12/21/2023	Water (Surface, Eff., Ground)
110026-MW2	1236845004	12/20/2023	12/21/2023	Water (Surface, Eff., Ground)
110026-MW3	1236845005	12/20/2023	12/21/2023	Water (Surface, Eff., Ground)
110026-MW4	1236845006	12/20/2023	12/21/2023	Water (Surface, Eff., Ground)
110026-MW5	1236845007	12/20/2023	12/21/2023	Water (Surface, Eff., Ground)
110026-MW15	1236845008	12/20/2023	12/21/2023	Water (Surface, Eff., Ground)
110026-WTB	1236845009	12/19/2023	12/21/2023	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
8270D SIM LV (PAH)	8270 PAH SIM GC/MS LV
SW8021B	BTEX 8021
AK102	DRO Low Volume (W)
AK101	Gasoline Range Organics (W)
SW8260D	Volatile Organic Compounds (W) FULL

Print Date: 01/08/2024 10:21:52AM

### Detectable Results Summary

Client Sample ID: **110026-MW1**

Lab Sample ID: 1236845003

**Semivolatile Organic Fuels**

**Volatile GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	0.624	mg/L
Benzene	0.680	ug/L

Client Sample ID: **110026-MW2**

Lab Sample ID: 1236845004

**Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	0.414J	mg/L

Client Sample ID: **110026-MW3**

Lab Sample ID: 1236845005

**Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	0.359J	mg/L

Client Sample ID: **110026-MW4**

Lab Sample ID: 1236845006

**Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	0.284J	mg/L

Client Sample ID: **110026-MW5**

Lab Sample ID: 1236845007

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
2-Methylnaphthalene	0.0153J	ug/L
Benzo(a)Anthracene	0.0193J	ug/L
Benzo[b]Fluoranthene	0.0167J	ug/L
Fluoranthene	0.0190J	ug/L
Pyrene	0.0174J	ug/L
Diesel Range Organics	0.324J	mg/L
Gasoline Range Organics	0.0984J	mg/L
1,2-Dichloroethane	0.200J	ug/L
1,3,5-Trimethylbenzene	0.520J	ug/L
Benzene	11.9	ug/L
Ethylbenzene	0.420J	ug/L
Isopropylbenzene (Cumene)	0.540J	ug/L
n-Propylbenzene	0.390J	ug/L

**Semivolatile Organic Fuels**

**Volatile Fuels**

**Volatile GC/MS**

Client Sample ID: **110026-MW15**

Lab Sample ID: 1236845008

**Semivolatile Organic Fuels**

**Volatile Fuels**

**Volatile GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	0.379J	mg/L
Gasoline Range Organics	0.0962J	mg/L
1,2-Dichloroethane	0.210J	ug/L
1,3,5-Trimethylbenzene	0.510J	ug/L
Benzene	11.1	ug/L
Ethylbenzene	0.390J	ug/L
Isopropylbenzene (Cumene)	0.520J	ug/L
n-Propylbenzene	0.380J	ug/L



**Results of 110026-DW1**

Client Sample ID: **110026-DW1**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1236845001  
Lab Project ID: 1236845

Collection Date: 12/19/23 15:41  
Received Date: 12/21/23 10:14  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:36
Ethylbenzene	0.500	U	1.00	0.500	0.500	ug/L	1		12/22/23 22:36
o-Xylene	0.500	U	1.00	0.500	0.500	ug/L	1		12/22/23 22:36
P & M -Xylene	1.00	U	2.00	0.900	1.00	ug/L	1		12/22/23 22:36
Toluene	0.500	U	1.00	0.500	0.500	ug/L	1		12/22/23 22:36
Xylenes (total)	1.50	U	3.00	1.40	1.50	ug/L	1		12/22/23 22:36
<b>Surrogates</b>									
1,4-Difluorobenzene (surr)	101		77-115			%	1		12/22/23 22:36

**Batch Information**

Analytical Batch: VFC16715  
Analytical Method: SW8021B  
Analyst: JY  
Analytical Date/Time: 12/22/23 22:36  
Container ID: 1236845001-A

Prep Batch: VXX40872  
Prep Method: SW5030B  
Prep Date/Time: 12/22/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-DW2**

Client Sample ID: **110026-DW2**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1236845002  
Lab Project ID: 1236845

Collection Date: 12/19/23 16:06  
Received Date: 12/21/23 10:14  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:54
Ethylbenzene	0.500	U	1.00	0.500	0.500	ug/L	1		12/22/23 22:54
o-Xylene	0.500	U	1.00	0.500	0.500	ug/L	1		12/22/23 22:54
P & M -Xylene	1.00	U	2.00	0.900	1.00	ug/L	1		12/22/23 22:54
Toluene	0.500	U	1.00	0.500	0.500	ug/L	1		12/22/23 22:54
Xylenes (total)	1.50	U	3.00	1.40	1.50	ug/L	1		12/22/23 22:54
<b>Surrogates</b>									
1,4-Difluorobenzene (surr)	101		77-115			%	1		12/22/23 22:54

**Batch Information**

Analytical Batch: VFC16715  
Analytical Method: SW8021B  
Analyst: JY  
Analytical Date/Time: 12/22/23 22:54  
Container ID: 1236845002-A

Prep Batch: VXX40872  
Prep Method: SW5030B  
Prep Date/Time: 12/22/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL





**Results of 110026-MW1**

Client Sample ID: **110026-MW1**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1236845003  
 Lab Project ID: 1236845

Collection Date: 12/20/23 11:39  
 Received Date: 12/21/23 10:14  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:11
2-Methylnaphthalene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:11
Acenaphthene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:11
Acenaphthylene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:11
Anthracene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:11
Benzo(a)Anthracene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:11
Benzo[a]pyrene	0.00960	U	0.0192	0.00596	0.00960	ug/L	1		12/27/23 22:11
Benzo[b]Fluoranthene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:11
Benzo[g,h,i]perylene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:11
Benzo[k]fluoranthene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:11
Chrysene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:11
Dibenzo[a,h]anthracene	0.00960	U	0.0192	0.00596	0.00960	ug/L	1		12/27/23 22:11
Fluoranthene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:11
Fluorene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:11
Indeno[1,2,3-c,d] pyrene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:11
Naphthalene	0.0481	U	0.0962	0.0298	0.0481	ug/L	1		12/27/23 22:11
Phenanthrene	0.0481	U	0.0962	0.0298	0.0481	ug/L	1		12/27/23 22:11
Pyrene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:11

**Surrogates**

2-Methylnaphthalene-d10 (surr)	64.1		38-100			%	1		12/27/23 22:11
Fluoranthene-d10 (surr)	76.1		30-111			%	1		12/27/23 22:11

**Batch Information**

Analytical Batch: XMS14140  
 Analytical Method: 8270D SIM LV (PAH)  
 Analyst: HMW  
 Analytical Date/Time: 12/27/23 22:11  
 Container ID: 1236845003-I

Prep Batch: XXX49129  
 Prep Method: SW3535A  
 Prep Date/Time: 12/22/23 16:00  
 Prep Initial Wt./Vol.: 260 mL  
 Prep Extract Vol: 1 mL



Results of **110026-MW1**

Client Sample ID: **110026-MW1**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1236845003  
Lab Project ID: 1236845

Collection Date: 12/20/23 11:39  
Received Date: 12/21/23 10:14  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.624		0.577	0.192	0.288	mg/L	1		01/04/24 14:46
<b>Surrogates</b>									
5a Androstane (surr)	60.6		50-150			%	1		01/04/24 14:46

**Batch Information**

Analytical Batch: XFC16777  
Analytical Method: AK102  
Analyst: T.L  
Analytical Date/Time: 01/04/24 14:46  
Container ID: 1236845003-G

Prep Batch: XXX49140  
Prep Method: SW3520C  
Prep Date/Time: 01/03/24 18:30  
Prep Initial Wt./Vol.: 260 mL  
Prep Extract Vol: 1 mL



### Results of 110026-MW1

Client Sample ID: **110026-MW1**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1236845003  
 Lab Project ID: 1236845

Collection Date: 12/20/23 11:39  
 Received Date: 12/21/23 10:14  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0500	U	0.100	0.0450	0.0500	mg/L	1		12/22/23 00:56

### Surrogates

4-Bromofluorobenzene (surr)	89.1		50-150			%	1		12/22/23 00:56
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### Batch Information

Analytical Batch: VFC16713  
 Analytical Method: AK101  
 Analyst: JY  
 Analytical Date/Time: 12/22/23 00:56  
 Container ID: 1236845003-A

Prep Batch: VXX40868  
 Prep Method: SW5030B  
 Prep Date/Time: 12/21/23 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



**Results of 110026-MW1**

Client Sample ID: **110026-MW1**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1236845003  
 Lab Project ID: 1236845

Collection Date: 12/20/23 11:39  
 Received Date: 12/21/23 10:14  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:23
1,1,1-Trichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:23
1,1,2-Trichloroethane	0.200	U	0.400	0.120	0.200	ug/L	1		12/22/23 21:23
1,1-Dichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
1,1-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
1,1-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
1,2,3-Trichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:23
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	0.0375	ug/L	1		12/22/23 21:23
1,2-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
1,2-Dichloroethane	0.250	U	0.500	0.200	0.250	ug/L	1		12/22/23 21:23
1,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
1,3-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
1,3-Dichloropropane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:23
1,4-Dichlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:23
2,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
2-Butanone (MEK)	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:23
2-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
2-Hexanone	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:23
4-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
4-Isopropyltoluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:23
Benzene	0.680		0.400	0.120	0.200	ug/L	1		12/22/23 21:23
Bromobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
Bromochloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
Bromodichloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:23
Bromoform	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
Bromomethane	3.00	U	6.00	3.00	3.00	ug/L	1		12/22/23 22:23
Carbon disulfide	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:23
Carbon tetrachloride	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
Chlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:23
Chloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23

Print Date: 01/08/2024 10:21:56AM

J flagging is activated



**Results of 110026-MW1**

Client Sample ID: **110026-MW1**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1236845003  
 Lab Project ID: 1236845

Collection Date: 12/20/23 11:39  
 Received Date: 12/21/23 10:14  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
Chloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:23
Dibromochloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:23
Dibromomethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
Dichlorodifluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
Ethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
Freon-113	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:23
Hexachlorobutadiene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
Methylene chloride	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:23
Methyl-t-butyl ether	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:23
Naphthalene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
n-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
n-Propylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
o-Xylene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
P & M -Xylene	1.00	U	2.00	0.620	1.00	ug/L	1		12/22/23 21:23
sec-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
Styrene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
tert-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
Tetrachloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
Toluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
Trichloroethene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:23
Trichlorofluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:23
Vinyl acetate	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:23
Vinyl chloride	0.0750	U	0.150	0.0500	0.0750	ug/L	1		12/22/23 22:23
Xylenes (total)	1.50	U	3.00	1.00	1.50	ug/L	1		12/22/23 21:23

**Surrogates**

1,2-Dichloroethane-D4 (surr)	104		81-118			%	1		12/22/23 21:23
4-Bromofluorobenzene (surr)	94.7		85-114			%	1		12/22/23 21:23
Toluene-d8 (surr)	101		89-112			%	1		12/22/23 21:23

## Results of 110026-MW1

Client Sample ID: **110026-MW1**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1236845003  
Lab Project ID: 1236845

Collection Date: 12/20/23 11:39  
Received Date: 12/21/23 10:14  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS23048  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 12/22/23 21:23  
Container ID: 1236845003-D

Prep Batch: VXX40879  
Prep Method: SW5030B  
Prep Date/Time: 12/22/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Analytical Batch: VMS23049  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 12/22/23 22:23  
Container ID: 1236845003-D

Prep Batch: VXX40880  
Prep Method: SW5030B  
Prep Date/Time: 12/22/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW2**

Client Sample ID: **110026-MW2**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1236845004  
 Lab Project ID: 1236845

Collection Date: 12/20/23 15:36  
 Received Date: 12/21/23 10:14  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:27
2-Methylnaphthalene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:27
Acenaphthene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:27
Acenaphthylene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:27
Anthracene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:27
Benzo(a)Anthracene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:27
Benzo[a]pyrene	0.00960	U	0.0192	0.00596	0.00960	ug/L	1		12/27/23 22:27
Benzo[b]Fluoranthene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:27
Benzo[g,h,i]perylene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:27
Benzo[k]fluoranthene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:27
Chrysene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:27
Dibenzo[a,h]anthracene	0.00960	U	0.0192	0.00596	0.00960	ug/L	1		12/27/23 22:27
Fluoranthene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:27
Fluorene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:27
Indeno[1,2,3-c,d] pyrene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:27
Naphthalene	0.0481	U	0.0962	0.0298	0.0481	ug/L	1		12/27/23 22:27
Phenanthrene	0.0481	U	0.0962	0.0298	0.0481	ug/L	1		12/27/23 22:27
Pyrene	0.0240	U	0.0481	0.0144	0.0240	ug/L	1		12/27/23 22:27

**Surrogates**

2-Methylnaphthalene-d10 (surr)	76.8		38-100			%	1		12/27/23 22:27
Fluoranthene-d10 (surr)	84.8		30-111			%	1		12/27/23 22:27

**Batch Information**

Analytical Batch: XMS14140  
 Analytical Method: 8270D SIM LV (PAH)  
 Analyst: HMW  
 Analytical Date/Time: 12/27/23 22:27  
 Container ID: 1236845004-I

Prep Batch: XXX49129  
 Prep Method: SW3535A  
 Prep Date/Time: 12/22/23 16:00  
 Prep Initial Wt./Vol.: 260 mL  
 Prep Extract Vol: 1 mL



**Results of 110026-MW2**

Client Sample ID: **110026-MW2**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1236845004  
Lab Project ID: 1236845

Collection Date: 12/20/23 15:36  
Received Date: 12/21/23 10:14  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.414	J	0.577	0.192	0.288	mg/L	1		01/04/24 14:59
<b>Surrogates</b>									
5a Androstane (surr)	63.9		50-150			%	1		01/04/24 14:59

**Batch Information**

Analytical Batch: XFC16777  
Analytical Method: AK102  
Analyst: T.L  
Analytical Date/Time: 01/04/24 14:59  
Container ID: 1236845004-G

Prep Batch: XXX49140  
Prep Method: SW3520C  
Prep Date/Time: 01/03/24 18:30  
Prep Initial Wt./Vol.: 260 mL  
Prep Extract Vol: 1 mL





Results of **110026-MW2**

Client Sample ID: **110026-MW2**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1236845004  
Lab Project ID: 1236845

Collection Date: 12/20/23 15:36  
Received Date: 12/21/23 10:14  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0500	U	0.100	0.0450	0.0500	mg/L	1		12/22/23 01:15
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	91.2		50-150			%	1		12/22/23 01:15

**Batch Information**

Analytical Batch: VFC16713  
Analytical Method: AK101  
Analyst: JY  
Analytical Date/Time: 12/22/23 01:15  
Container ID: 1236845004-A

Prep Batch: VXX40868  
Prep Method: SW5030B  
Prep Date/Time: 12/21/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



### Results of 110026-MW2

Client Sample ID: **110026-MW2**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1236845004  
 Lab Project ID: 1236845

Collection Date: 12/20/23 15:36  
 Received Date: 12/21/23 10:14  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Volatile GC/MS

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:38
1,1,1-Trichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:38
1,1,2-Trichloroethane	0.200	U	0.400	0.120	0.200	ug/L	1		12/22/23 21:38
1,1-Dichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
1,1-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
1,1-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
1,2,3-Trichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:38
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	0.0375	ug/L	1		12/22/23 21:38
1,2-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
1,2-Dichloroethane	0.250	U	0.500	0.200	0.250	ug/L	1		12/22/23 21:38
1,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
1,3-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
1,3-Dichloropropane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:38
1,4-Dichlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:38
2,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
2-Butanone (MEK)	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:38
2-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
2-Hexanone	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:38
4-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
4-Isopropyltoluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:38
Benzene	0.200	U	0.400	0.120	0.200	ug/L	1		12/22/23 21:38
Bromobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
Bromochloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
Bromodichloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:38
Bromoform	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
Bromomethane	3.00	U	6.00	3.00	3.00	ug/L	1		12/22/23 22:39
Carbon disulfide	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:38
Carbon tetrachloride	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
Chlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:38
Chloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38

Print Date: 01/08/2024 10:21:56AM

J flagging is activated



**Results of 110026-MW2**

Client Sample ID: **110026-MW2**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1236845004  
 Lab Project ID: 1236845

Collection Date: 12/20/23 15:36  
 Received Date: 12/21/23 10:14  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
Chloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:38
Dibromochloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:38
Dibromomethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
Dichlorodifluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
Ethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
Freon-113	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:38
Hexachlorobutadiene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
Methylene chloride	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:38
Methyl-t-butyl ether	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:38
Naphthalene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
n-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
n-Propylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
o-Xylene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
P & M -Xylene	1.00	U	2.00	0.620	1.00	ug/L	1		12/22/23 21:38
sec-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
Styrene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
tert-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
Tetrachloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
Toluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
Trichloroethene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:38
Trichlorofluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:38
Vinyl acetate	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:38
Vinyl chloride	0.0750	U	0.150	0.0500	0.0750	ug/L	1		12/22/23 22:39
Xylenes (total)	1.50	U	3.00	1.00	1.50	ug/L	1		12/22/23 21:38

**Surrogates**

1,2-Dichloroethane-D4 (surr)	112		81-118			%	1		12/22/23 21:38
4-Bromofluorobenzene (surr)	97.6		85-114			%	1		12/22/23 21:38
Toluene-d8 (surr)	103		89-112			%	1		12/22/23 21:38

## Results of 110026-MW2

Client Sample ID: **110026-MW2**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1236845004  
Lab Project ID: 1236845

Collection Date: 12/20/23 15:36  
Received Date: 12/21/23 10:14  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS23048  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 12/22/23 21:38  
Container ID: 1236845004-D

Prep Batch: VXX40879  
Prep Method: SW5030B  
Prep Date/Time: 12/22/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Analytical Batch: VMS23049  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 12/22/23 22:39  
Container ID: 1236845004-D

Prep Batch: VXX40880  
Prep Method: SW5030B  
Prep Date/Time: 12/22/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW3**

Client Sample ID: **110026-MW3**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1236845005  
 Lab Project ID: 1236845

Collection Date: 12/20/23 14:32  
 Received Date: 12/21/23 10:14  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:43
2-Methylnaphthalene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:43
Acenaphthene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:43
Acenaphthylene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:43
Anthracene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:43
Benzo(a)Anthracene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:43
Benzo[a]pyrene	0.00980	U	0.0196	0.00608	0.00980	ug/L	1		12/27/23 22:43
Benzo[b]Fluoranthene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:43
Benzo[g,h,i]perylene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:43
Benzo[k]fluoranthene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:43
Chrysene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:43
Dibenzo[a,h]anthracene	0.00980	U	0.0196	0.00608	0.00980	ug/L	1		12/27/23 22:43
Fluoranthene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:43
Fluorene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:43
Indeno[1,2,3-c,d] pyrene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:43
Naphthalene	0.0490	U	0.0980	0.0304	0.0490	ug/L	1		12/27/23 22:43
Phenanthrene	0.0490	U	0.0980	0.0304	0.0490	ug/L	1		12/27/23 22:43
Pyrene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:43

**Surrogates**

2-Methylnaphthalene-d10 (surr)	73.7		38-100			%	1		12/27/23 22:43
Fluoranthene-d10 (surr)	79.5		30-111			%	1		12/27/23 22:43

**Batch Information**

Analytical Batch: XMS14140  
 Analytical Method: 8270D SIM LV (PAH)  
 Analyst: HMW  
 Analytical Date/Time: 12/27/23 22:43  
 Container ID: 1236845005-I

Prep Batch: XXX49129  
 Prep Method: SW3535A  
 Prep Date/Time: 12/22/23 16:00  
 Prep Initial Wt./Vol.: 255 mL  
 Prep Extract Vol: 1 mL



**Results of 110026-MW3**

Client Sample ID: **110026-MW3**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1236845005  
Lab Project ID: 1236845

Collection Date: 12/20/23 14:32  
Received Date: 12/21/23 10:14  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.359	J	0.588	0.196	0.294	mg/L	1		01/04/24 15:11
<b>Surrogates</b>									
5a Androstane (surr)	71.9		50-150			%	1		01/04/24 15:11

**Batch Information**

Analytical Batch: XFC16777  
Analytical Method: AK102  
Analyst: T.L  
Analytical Date/Time: 01/04/24 15:11  
Container ID: 1236845005-G

Prep Batch: XXX49140  
Prep Method: SW3520C  
Prep Date/Time: 01/03/24 18:30  
Prep Initial Wt./Vol.: 255 mL  
Prep Extract Vol: 1 mL



Results of **110026-MW3**

Client Sample ID: **110026-MW3**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1236845005  
Lab Project ID: 1236845

Collection Date: 12/20/23 14:32  
Received Date: 12/21/23 10:14  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0500	U	0.100	0.0450	0.0500	mg/L	1		12/22/23 01:33
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	90.9		50-150			%	1		12/22/23 01:33

**Batch Information**

Analytical Batch: VFC16713  
Analytical Method: AK101  
Analyst: JY  
Analytical Date/Time: 12/22/23 01:33  
Container ID: 1236845005-A

Prep Batch: VXX40868  
Prep Method: SW5030B  
Prep Date/Time: 12/21/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW3**

Client Sample ID: **110026-MW3**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1236845005  
 Lab Project ID: 1236845

Collection Date: 12/20/23 14:32  
 Received Date: 12/21/23 10:14  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:53
1,1,1-Trichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:53
1,1,2-Trichloroethane	0.200	U	0.400	0.120	0.200	ug/L	1		12/22/23 21:53
1,1-Dichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
1,1-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
1,1-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
1,2,3-Trichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:53
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	0.0375	ug/L	1		12/22/23 21:53
1,2-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
1,2-Dichloroethane	0.250	U	0.500	0.200	0.250	ug/L	1		12/22/23 21:53
1,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
1,3-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
1,3-Dichloropropane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:53
1,4-Dichlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:53
2,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
2-Butanone (MEK)	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:53
2-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
2-Hexanone	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:53
4-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
4-Isopropyltoluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:53
Benzene	0.200	U	0.400	0.120	0.200	ug/L	1		12/22/23 21:53
Bromobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
Bromochloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
Bromodichloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:53
Bromoform	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
Bromomethane	3.00	U	6.00	3.00	3.00	ug/L	1		12/22/23 22:54
Carbon disulfide	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:53
Carbon tetrachloride	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
Chlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:53
Chloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53

Print Date: 01/08/2024 10:21:56AM

J flagging is activated





**Results of 110026-MW3**

Client Sample ID: **110026-MW3**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1236845005  
 Lab Project ID: 1236845

Collection Date: 12/20/23 14:32  
 Received Date: 12/21/23 10:14  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
Chloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:53
Dibromochloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:53
Dibromomethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
Dichlorodifluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
Ethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
Freon-113	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:53
Hexachlorobutadiene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
Methylene chloride	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:53
Methyl-t-butyl ether	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:53
Naphthalene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
n-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
n-Propylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
o-Xylene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
P & M -Xylene	1.00	U	2.00	0.620	1.00	ug/L	1		12/22/23 21:53
sec-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
Styrene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
tert-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
Tetrachloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
Toluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
Trichloroethene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 21:53
Trichlorofluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 21:53
Vinyl acetate	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 21:53
Vinyl chloride	0.0750	U	0.150	0.0500	0.0750	ug/L	1		12/22/23 22:54
Xylenes (total)	1.50	U	3.00	1.00	1.50	ug/L	1		12/22/23 21:53

**Surrogates**

1,2-Dichloroethane-D4 (surr)	115		81-118			%	1		12/22/23 21:53
4-Bromofluorobenzene (surr)	96.1		85-114			%	1		12/22/23 21:53
Toluene-d8 (surr)	102		89-112			%	1		12/22/23 21:53

## Results of 110026-MW3

Client Sample ID: **110026-MW3**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1236845005  
Lab Project ID: 1236845

Collection Date: 12/20/23 14:32  
Received Date: 12/21/23 10:14  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS23048  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 12/22/23 21:53  
Container ID: 1236845005-D

Prep Batch: VXX40879  
Prep Method: SW5030B  
Prep Date/Time: 12/22/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Analytical Batch: VMS23049  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 12/22/23 22:54  
Container ID: 1236845005-D

Prep Batch: VXX40880  
Prep Method: SW5030B  
Prep Date/Time: 12/22/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW4**

Client Sample ID: **110026-MW4**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1236845006  
 Lab Project ID: 1236845

Collection Date: 12/20/23 12:52  
 Received Date: 12/21/23 10:14  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:59
2-Methylnaphthalene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:59
Acenaphthene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:59
Acenaphthylene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:59
Anthracene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:59
Benzo(a)Anthracene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:59
Benzo[a]pyrene	0.00980	U	0.0196	0.00608	0.00980	ug/L	1		12/27/23 22:59
Benzo[b]Fluoranthene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:59
Benzo[g,h,i]perylene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:59
Benzo[k]fluoranthene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:59
Chrysene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:59
Dibenzo[a,h]anthracene	0.00980	U	0.0196	0.00608	0.00980	ug/L	1		12/27/23 22:59
Fluoranthene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:59
Fluorene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:59
Indeno[1,2,3-c,d] pyrene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:59
Naphthalene	0.0490	U	0.0980	0.0304	0.0490	ug/L	1		12/27/23 22:59
Phenanthrene	0.0490	U	0.0980	0.0304	0.0490	ug/L	1		12/27/23 22:59
Pyrene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 22:59

**Surrogates**

2-Methylnaphthalene-d10 (surr)	80.5		38-100			%	1		12/27/23 22:59
Fluoranthene-d10 (surr)	88.9		30-111			%	1		12/27/23 22:59

**Batch Information**

Analytical Batch: XMS14140  
 Analytical Method: 8270D SIM LV (PAH)  
 Analyst: HMW  
 Analytical Date/Time: 12/27/23 22:59  
 Container ID: 1236845006-I

Prep Batch: XXX49129  
 Prep Method: SW3535A  
 Prep Date/Time: 12/22/23 16:00  
 Prep Initial Wt./Vol.: 255 mL  
 Prep Extract Vol: 1 mL

## Results of 110026-MW4

Client Sample ID: **110026-MW4**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1236845006  
 Lab Project ID: 1236845

Collection Date: 12/20/23 12:52  
 Received Date: 12/21/23 10:14  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.284	J	0.577	0.192	0.288	mg/L	1		01/04/24 15:24
<b>Surrogates</b>									
5a Androstane (surr)	67.2		50-150			%	1		01/04/24 15:24

## Batch Information

Analytical Batch: XFC16777  
 Analytical Method: AK102  
 Analyst: T.L  
 Analytical Date/Time: 01/04/24 15:24  
 Container ID: 1236845006-G

Prep Batch: XXX49140  
 Prep Method: SW3520C  
 Prep Date/Time: 01/03/24 18:30  
 Prep Initial Wt./Vol.: 260 mL  
 Prep Extract Vol: 1 mL



Results of **110026-MW4**

Client Sample ID: **110026-MW4**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1236845006  
Lab Project ID: 1236845

Collection Date: 12/20/23 12:52  
Received Date: 12/21/23 10:14  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0500	U	0.100	0.0450	0.0500	mg/L	1		12/22/23 01:52
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	90.2		50-150			%	1		12/22/23 01:52

**Batch Information**

Analytical Batch: VFC16713  
Analytical Method: AK101  
Analyst: JY  
Analytical Date/Time: 12/22/23 01:52  
Container ID: 1236845006-A

Prep Batch: VXX40868  
Prep Method: SW5030B  
Prep Date/Time: 12/21/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW4**

Client Sample ID: **110026-MW4**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1236845006  
 Lab Project ID: 1236845

Collection Date: 12/20/23 12:52  
 Received Date: 12/21/23 10:14  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:08
1,1,1-Trichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:08
1,1,2-Trichloroethane	0.200	U	0.400	0.120	0.200	ug/L	1		12/22/23 22:08
1,1-Dichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
1,1-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
1,1-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
1,2,3-Trichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:08
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	0.0375	ug/L	1		12/22/23 22:08
1,2-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
1,2-Dichloroethane	0.250	U	0.500	0.200	0.250	ug/L	1		12/22/23 22:08
1,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
1,3-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
1,3-Dichloropropane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:08
1,4-Dichlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:08
2,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
2-Butanone (MEK)	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:08
2-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
2-Hexanone	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:08
4-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
4-Isopropyltoluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:08
Benzene	0.200	U	0.400	0.120	0.200	ug/L	1		12/22/23 22:08
Bromobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
Bromochloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
Bromodichloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:08
Bromoform	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
Bromomethane	3.00	U	6.00	3.00	3.00	ug/L	1		12/22/23 23:10
Carbon disulfide	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:08
Carbon tetrachloride	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
Chlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:08
Chloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08

Print Date: 01/08/2024 10:21:56AM

J flagging is activated



**Results of 110026-MW4**

Client Sample ID: **110026-MW4**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1236845006  
 Lab Project ID: 1236845

Collection Date: 12/20/23 12:52  
 Received Date: 12/21/23 10:14  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
Chloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:08
Dibromochloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:08
Dibromomethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
Dichlorodifluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
Ethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
Freon-113	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:08
Hexachlorobutadiene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
Methylene chloride	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:08
Methyl-t-butyl ether	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:08
Naphthalene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
n-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
n-Propylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
o-Xylene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
P & M -Xylene	1.00	U	2.00	0.620	1.00	ug/L	1		12/22/23 22:08
sec-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
Styrene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
tert-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
Tetrachloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
Toluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
Trichloroethene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:08
Trichlorofluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:08
Vinyl acetate	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:08
Vinyl chloride	0.0750	U	0.150	0.0500	0.0750	ug/L	1		12/22/23 23:10
Xylenes (total)	1.50	U	3.00	1.00	1.50	ug/L	1		12/22/23 22:08

**Surrogates**

1,2-Dichloroethane-D4 (surr)	112		81-118			%	1		12/22/23 22:08
4-Bromofluorobenzene (surr)	96.2		85-114			%	1		12/22/23 22:08
Toluene-d8 (surr)	101		89-112			%	1		12/22/23 22:08

## Results of 110026-MW4

Client Sample ID: **110026-MW4**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1236845006  
Lab Project ID: 1236845

Collection Date: 12/20/23 12:52  
Received Date: 12/21/23 10:14  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS23048  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 12/22/23 22:08  
Container ID: 1236845006-D

Prep Batch: VXX40879  
Prep Method: SW5030B  
Prep Date/Time: 12/22/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Analytical Batch: VMS23049  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 12/22/23 23:10  
Container ID: 1236845006-D

Prep Batch: VXX40880  
Prep Method: SW5030B  
Prep Date/Time: 12/22/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL





Results of 110026-MW5

Client Sample ID: 110026-MW5
Client Project ID: 110026-002; Kasilof Riverview
Lab Sample ID: 1236845007
Lab Project ID: 1236845

Collection Date: 12/20/23 10:20
Received Date: 12/21/23 10:14
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Polynuclear Aromatics GC/MS

Table with 9 columns: Parameter, Result, Qual, LOQ/CL, DL, LOD, Units, DF, Allowable Limits, Date Analyzed. Lists various polynuclear aromatic hydrocarbons and their detection results.

Surrogates

Table with 2 rows showing surrogate results for 2-Methylnaphthalene-d10 and Fluoranthene-d10.

Batch Information

Analytical Batch: XMS14140
Analytical Method: 8270D SIM LV (PAH)
Analyst: HMW
Analytical Date/Time: 12/27/23 23:15
Container ID: 1236845007-I
Prep Batch: XXX49129
Prep Method: SW3535A
Prep Date/Time: 12/22/23 16:00
Prep Initial Wt./Vol.: 260 mL
Prep Extract Vol: 1 mL



**Results of 110026-MW5**

Client Sample ID: **110026-MW5**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1236845007  
Lab Project ID: 1236845

Collection Date: 12/20/23 10:20  
Received Date: 12/21/23 10:14  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.324	J	0.577	0.192	0.288	mg/L	1		01/04/24 15:36
<b>Surrogates</b>									
5a Androstane (surr)	57.8		50-150			%	1		01/04/24 15:36

**Batch Information**

Analytical Batch: XFC16777  
Analytical Method: AK102  
Analyst: T.L  
Analytical Date/Time: 01/04/24 15:36  
Container ID: 1236845007-G

Prep Batch: XXX49140  
Prep Method: SW3520C  
Prep Date/Time: 01/03/24 18:30  
Prep Initial Wt./Vol.: 260 mL  
Prep Extract Vol: 1 mL



Results of **110026-MW5**

Client Sample ID: **110026-MW5**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1236845007  
Lab Project ID: 1236845

Collection Date: 12/20/23 10:20  
Received Date: 12/21/23 10:14  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0984	J	0.100	0.0450	0.0500	mg/L	1		12/22/23 02:10
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	95.7		50-150			%	1		12/22/23 02:10

**Batch Information**

Analytical Batch: VFC16713  
Analytical Method: AK101  
Analyst: JY  
Analytical Date/Time: 12/22/23 02:10  
Container ID: 1236845007-A

Prep Batch: VXX40868  
Prep Method: SW5030B  
Prep Date/Time: 12/21/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW5**

Client Sample ID: **110026-MW5**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1236845007  
 Lab Project ID: 1236845

Collection Date: 12/20/23 10:20  
 Received Date: 12/21/23 10:14  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:23
1,1,1-Trichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:23
1,1,2-Trichloroethane	0.200	U	0.400	0.120	0.200	ug/L	1		12/22/23 22:23
1,1-Dichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
1,1-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
1,1-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
1,2,3-Trichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:23
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	0.0375	ug/L	1		12/22/23 22:23
1,2-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
1,2-Dichloroethane	0.200	J	0.500	0.200	0.250	ug/L	1		12/22/23 22:23
1,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
1,3,5-Trimethylbenzene	0.520	J	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
1,3-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
1,3-Dichloropropane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:23
1,4-Dichlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:23
2,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
2-Butanone (MEK)	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:23
2-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
2-Hexanone	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:23
4-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
4-Isopropyltoluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:23
Benzene	11.9		0.400	0.120	0.200	ug/L	1		12/22/23 22:23
Bromobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
Bromochloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
Bromodichloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:23
Bromoform	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
Bromomethane	3.00	U	6.00	3.00	3.00	ug/L	1		12/22/23 23:25
Carbon disulfide	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:23
Carbon tetrachloride	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
Chlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:23
Chloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23

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J flagging is activated



**Results of 110026-MW5**

Client Sample ID: **110026-MW5**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1236845007  
 Lab Project ID: 1236845

Collection Date: 12/20/23 10:20  
 Received Date: 12/21/23 10:14  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
Chloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:23
Dibromochloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:23
Dibromomethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
Dichlorodifluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
Ethylbenzene	0.420	J	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
Freon-113	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:23
Hexachlorobutadiene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
Isopropylbenzene (Cumene)	0.540	J	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
Methylene chloride	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:23
Methyl-t-butyl ether	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:23
Naphthalene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
n-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
n-Propylbenzene	0.390	J	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
o-Xylene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
P & M -Xylene	1.00	U	2.00	0.620	1.00	ug/L	1		12/22/23 22:23
sec-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
Styrene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
tert-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
Tetrachloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
Toluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
Trichloroethene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:23
Trichlorofluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:23
Vinyl acetate	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:23
Vinyl chloride	0.0750	U	0.150	0.0500	0.0750	ug/L	1		12/22/23 23:25
Xylenes (total)	1.50	U	3.00	1.00	1.50	ug/L	1		12/22/23 22:23

**Surrogates**

1,2-Dichloroethane-D4 (surr)	118		81-118			%	1		12/22/23 22:23
4-Bromofluorobenzene (surr)	94.2		85-114			%	1		12/22/23 22:23
Toluene-d8 (surr)	102		89-112			%	1		12/22/23 22:23

## Results of 110026-MW5

Client Sample ID: **110026-MW5**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1236845007  
Lab Project ID: 1236845

Collection Date: 12/20/23 10:20  
Received Date: 12/21/23 10:14  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS23048  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 12/22/23 22:23  
Container ID: 1236845007-D

Prep Batch: VXX40879  
Prep Method: SW5030B  
Prep Date/Time: 12/22/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Analytical Batch: VMS23049  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 12/22/23 23:25  
Container ID: 1236845007-D

Prep Batch: VXX40880  
Prep Method: SW5030B  
Prep Date/Time: 12/22/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW15**

Client Sample ID: **110026-MW15**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1236845008  
 Lab Project ID: 1236845

Collection Date: 12/20/23 10:50  
 Received Date: 12/21/23 10:14  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 23:31
2-Methylnaphthalene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 23:31
Acenaphthene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 23:31
Acenaphthylene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 23:31
Anthracene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 23:31
Benzo(a)Anthracene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 23:31
Benzo[a]pyrene	0.00980	U	0.0196	0.00608	0.00980	ug/L	1		12/27/23 23:31
Benzo[b]Fluoranthene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 23:31
Benzo[g,h,i]perylene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 23:31
Benzo[k]fluoranthene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 23:31
Chrysene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 23:31
Dibenzo[a,h]anthracene	0.00980	U	0.0196	0.00608	0.00980	ug/L	1		12/27/23 23:31
Fluoranthene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 23:31
Fluorene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 23:31
Indeno[1,2,3-c,d] pyrene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 23:31
Naphthalene	0.0490	U	0.0980	0.0304	0.0490	ug/L	1		12/27/23 23:31
Phenanthrene	0.0490	U	0.0980	0.0304	0.0490	ug/L	1		12/27/23 23:31
Pyrene	0.0245	U	0.0490	0.0147	0.0245	ug/L	1		12/27/23 23:31

**Surrogates**

2-Methylnaphthalene-d10 (surr)	76.5		38-100			%	1		12/27/23 23:31
Fluoranthene-d10 (surr)	85		30-111			%	1		12/27/23 23:31

**Batch Information**

Analytical Batch: XMS14140  
 Analytical Method: 8270D SIM LV (PAH)  
 Analyst: HMW  
 Analytical Date/Time: 12/27/23 23:31  
 Container ID: 1236845008-I

Prep Batch: XXX49129  
 Prep Method: SW3535A  
 Prep Date/Time: 12/22/23 16:00  
 Prep Initial Wt./Vol.: 255 mL  
 Prep Extract Vol: 1 mL



**Results of 110026-MW15**

Client Sample ID: **110026-MW15**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1236845008  
Lab Project ID: 1236845

Collection Date: 12/20/23 10:50  
Received Date: 12/21/23 10:14  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.379	J	0.545	0.182	0.273	mg/L	1		01/04/24 15:48
<b>Surrogates</b>									
5a Androstane (surr)	66.1		50-150			%	1		01/04/24 15:48

**Batch Information**

Analytical Batch: XFC16777  
Analytical Method: AK102  
Analyst: T.L  
Analytical Date/Time: 01/04/24 15:48  
Container ID: 1236845008-G

Prep Batch: XXX49140  
Prep Method: SW3520C  
Prep Date/Time: 01/03/24 18:30  
Prep Initial Wt./Vol.: 275 mL  
Prep Extract Vol: 1 mL





**Results of 110026-MW15**

Client Sample ID: **110026-MW15**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1236845008  
Lab Project ID: 1236845

Collection Date: 12/20/23 10:50  
Received Date: 12/21/23 10:14  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0962	J	0.100	0.0450	0.0500	mg/L	1		12/22/23 02:29
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	95.7		50-150			%	1		12/22/23 02:29

**Batch Information**

Analytical Batch: VFC16713  
Analytical Method: AK101  
Analyst: JY  
Analytical Date/Time: 12/22/23 02:29  
Container ID: 1236845008-A

Prep Batch: VXX40868  
Prep Method: SW5030B  
Prep Date/Time: 12/21/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW15**

Client Sample ID: **110026-MW15**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1236845008  
 Lab Project ID: 1236845

Collection Date: 12/20/23 10:50  
 Received Date: 12/21/23 10:14  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:39
1,1,1-Trichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:39
1,1,2-Trichloroethane	0.200	U	0.400	0.120	0.200	ug/L	1		12/22/23 22:39
1,1-Dichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
1,1-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
1,1-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
1,2,3-Trichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:39
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	0.0375	ug/L	1		12/22/23 22:39
1,2-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
1,2-Dichloroethane	0.210	J	0.500	0.200	0.250	ug/L	1		12/22/23 22:39
1,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
1,3,5-Trimethylbenzene	0.510	J	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
1,3-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
1,3-Dichloropropane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:39
1,4-Dichlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:39
2,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
2-Butanone (MEK)	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:39
2-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
2-Hexanone	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:39
4-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
4-Isopropyltoluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:39
Benzene	11.1		0.400	0.120	0.200	ug/L	1		12/22/23 22:39
Bromobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
Bromochloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
Bromodichloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:39
Bromoform	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
Bromomethane	3.00	U	6.00	3.00	3.00	ug/L	1		12/22/23 23:41
Carbon disulfide	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:39
Carbon tetrachloride	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
Chlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:39
Chloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39

Print Date: 01/08/2024 10:21:56AM

J flagging is activated



**Results of 110026-MW15**

Client Sample ID: **110026-MW15**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1236845008  
 Lab Project ID: 1236845

Collection Date: 12/20/23 10:50  
 Received Date: 12/21/23 10:14  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
Chloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:39
Dibromochloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:39
Dibromomethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
Dichlorodifluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
Ethylbenzene	0.390	J	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
Freon-113	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:39
Hexachlorobutadiene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
Isopropylbenzene (Cumene)	0.520	J	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
Methylene chloride	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:39
Methyl-t-butyl ether	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:39
Naphthalene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
n-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
n-Propylbenzene	0.380	J	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
o-Xylene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
P & M -Xylene	1.00	U	2.00	0.620	1.00	ug/L	1		12/22/23 22:39
sec-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
Styrene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
tert-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
Tetrachloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
Toluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
Trichloroethene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 22:39
Trichlorofluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 22:39
Vinyl acetate	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 22:39
Vinyl chloride	0.0750	U	0.150	0.0500	0.0750	ug/L	1		12/22/23 23:41
Xylenes (total)	1.50	U	3.00	1.00	1.50	ug/L	1		12/22/23 22:39

**Surrogates**

1,2-Dichloroethane-D4 (surr)	118		81-118			%	1		12/22/23 22:39
4-Bromofluorobenzene (surr)	94.3		85-114			%	1		12/22/23 22:39
Toluene-d8 (surr)	102		89-112			%	1		12/22/23 22:39

## Results of 110026-MW15

Client Sample ID: **110026-MW15**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1236845008  
Lab Project ID: 1236845

Collection Date: 12/20/23 10:50  
Received Date: 12/21/23 10:14  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS23048  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 12/22/23 22:39  
Container ID: 1236845008-D

Prep Batch: VXX40879  
Prep Method: SW5030B  
Prep Date/Time: 12/22/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Analytical Batch: VMS23049  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 12/22/23 23:41  
Container ID: 1236845008-D

Prep Batch: VXX40880  
Prep Method: SW5030B  
Prep Date/Time: 12/22/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-WTB**

Client Sample ID: **110026-WTB**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1236845009  
Lab Project ID: 1236845

Collection Date: 12/19/23 08:00  
Received Date: 12/21/23 10:14  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0500	U	0.100	0.0450	0.0500	mg/L	1		12/21/23 21:51
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	87.7		50-150			%	1		12/21/23 21:51

**Batch Information**

Analytical Batch: VFC16713  
Analytical Method: AK101  
Analyst: JY  
Analytical Date/Time: 12/21/23 21:51  
Container ID: 1236845009-A

Prep Batch: VXX40868  
Prep Method: SW5030B  
Prep Date/Time: 12/21/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-WTB**

Client Sample ID: **110026-WTB**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1236845009  
 Lab Project ID: 1236845

Collection Date: 12/19/23 08:00  
 Received Date: 12/21/23 10:14  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 19:51
1,1,1-Trichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 19:51
1,1,2-Trichloroethane	0.200	U	0.400	0.120	0.200	ug/L	1		12/22/23 19:51
1,1-Dichloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
1,1-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
1,1-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
1,2,3-Trichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 19:51
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	0.0375	ug/L	1		12/22/23 19:51
1,2-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
1,2-Dichloroethane	0.250	U	0.500	0.200	0.250	ug/L	1		12/22/23 19:51
1,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
1,3-Dichlorobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
1,3-Dichloropropane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 19:51
1,4-Dichlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 19:51
2,2-Dichloropropane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
2-Butanone (MEK)	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 19:51
2-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
2-Hexanone	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 19:51
4-Chlorotoluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
4-Isopropyltoluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 19:51
Benzene	0.200	U	0.400	0.120	0.200	ug/L	1		12/22/23 19:51
Bromobenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
Bromochloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
Bromodichloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 19:51
Bromoform	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
Bromomethane	3.00	U	6.00	3.00	3.00	ug/L	1		12/22/23 20:34
Carbon disulfide	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 19:51
Carbon tetrachloride	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
Chlorobenzene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 19:51
Chloroethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51

Print Date: 01/08/2024 10:21:56AM

J flagging is activated



**Results of 110026-WTB**

Client Sample ID: **110026-WTB**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1236845009  
 Lab Project ID: 1236845

Collection Date: 12/19/23 08:00  
 Received Date: 12/21/23 10:14  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
Chloromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 19:51
Dibromochloromethane	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 19:51
Dibromomethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
Dichlorodifluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
Ethylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
Freon-113	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 19:51
Hexachlorobutadiene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
Methylene chloride	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 19:51
Methyl-t-butyl ether	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 19:51
Naphthalene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
n-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
n-Propylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
o-Xylene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
P & M -Xylene	1.00	U	2.00	0.620	1.00	ug/L	1		12/22/23 19:51
sec-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
Styrene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
tert-Butylbenzene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
Tetrachloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
Toluene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
Trichloroethene	0.250	U	0.500	0.150	0.250	ug/L	1		12/22/23 19:51
Trichlorofluoromethane	0.500	U	1.00	0.310	0.500	ug/L	1		12/22/23 19:51
Vinyl acetate	5.00	U	10.0	3.10	5.00	ug/L	1		12/22/23 19:51
Vinyl chloride	0.0750	U	0.150	0.0500	0.0750	ug/L	1		12/22/23 20:34
Xylenes (total)	1.50	U	3.00	1.00	1.50	ug/L	1		12/22/23 19:51

**Surrogates**

1,2-Dichloroethane-D4 (surr)	115		81-118			%	1		12/22/23 19:51
4-Bromofluorobenzene (surr)	90.2		85-114			%	1		12/22/23 19:51
Toluene-d8 (surr)	101		89-112			%	1		12/22/23 19:51

## Results of 110026-WTB

Client Sample ID: **110026-WTB**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1236845009  
Lab Project ID: 1236845

Collection Date: 12/19/23 08:00  
Received Date: 12/21/23 10:14  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS23048  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 12/22/23 19:51  
Container ID: 1236845009-D

Prep Batch: VXX40879  
Prep Method: SW5030B  
Prep Date/Time: 12/22/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Analytical Batch: VMS23049  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 12/22/23 20:34  
Container ID: 1236845009-D

Prep Batch: VXX40880  
Prep Method: SW5030B  
Prep Date/Time: 12/22/23 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



## Method Blank

Blank ID: MB for HBN 1869647 [VXX/40868]  
 Blank Lab ID: 1750068

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1236845003, 1236845004, 1236845005, 1236845006, 1236845007, 1236845008, 1236845009

## Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Gasoline Range Organics	0.0500U	0.100	0.0450	0.0500	mg/L
<b>Surrogates</b>					
1,4-Difluorobenzene (surr)	100	77-115		0	%
4-Bromofluorobenzene (surr)	88.8	50-150		0	%

## Batch Information

Analytical Batch: VFC16713  
 Analytical Method: AK101  
 Instrument: Agilent 7890A PID/FID  
 Analyst: JY  
 Analytical Date/Time: 12/21/2023 1:47:00PM

Prep Batch: VXX40868  
 Prep Method: SW5030B  
 Prep Date/Time: 12/21/2023 6:00:00AM  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL

Print Date: 01/08/2024 10:22:00AM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1236845 [VXX40868]  
 Blank Spike Lab ID: 1750069  
 Date Analyzed: 12/21/2023 14:24

Spike Duplicate ID: LCSD for HBN 1236845 [VXX40868]  
 Spike Duplicate Lab ID: 1750070  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1236845003, 1236845004, 1236845005, 1236845006, 1236845007, 1236845008, 1236845009

## Results by AK101

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	1.00	0.904	90	1.00	0.921	92	( 60-120 )	1.80	(< 20 )
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	0.0500		96	0.0500		94	( 50-150 )	2.60	

## Batch Information

Analytical Batch: **VFC16713**  
 Analytical Method: **AK101**  
 Instrument: **Agilent 7890A PID/FID**  
 Analyst: **JY**

Prep Batch: **VXX40868**  
 Prep Method: **SW5030B**  
 Prep Date/Time: **12/21/2023 06:00**  
 Spike Init Wt./Vol.: 0.0500 mg/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 0.0500 mg/L Extract Vol: 5 mL

Print Date: 01/08/2024 10:22:03AM



### Method Blank

Blank ID: MB for HBN 1869832 [VXX/40872]

Blank Lab ID: 1750125

QC for Samples:

1236845001, 1236845002

Matrix: Water (Surface, Eff., Ground)

### Results by SW8021B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Benzene	0.250U	0.500	0.150	0.250	ug/L
Ethylbenzene	0.500U	1.00	0.500	0.500	ug/L
o-Xylene	0.500U	1.00	0.500	0.500	ug/L
P & M -Xylene	1.00U	2.00	0.900	1.00	ug/L
Toluene	0.500U	1.00	0.500	0.500	ug/L
Xylenes (total)	1.50U	3.00	1.40	1.50	ug/L

### Surrogates

1,4-Difluorobenzene (surr)	100	77-115		0	%
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### Batch Information

Analytical Batch: VFC16715  
 Analytical Method: SW8021B  
 Instrument: Agilent 7890A PID/FID  
 Analyst: JY  
 Analytical Date/Time: 12/22/2023 2:34:00PM

Prep Batch: VXX40872  
 Prep Method: SW5030B  
 Prep Date/Time: 12/22/2023 6:00:00AM  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL

Print Date: 01/08/2024 10:22:06AM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1236845 [VXX40872]  
 Blank Spike Lab ID: 1750126  
 Date Analyzed: 12/22/2023 15:11

Spike Duplicate ID: LCSD for HBN 1236845 [VXX40872]  
 Spike Duplicate Lab ID: 1750127  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1236845001, 1236845002

## Results by SW8021B

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	100	118	118	100	117	117	( 80-120 )	1.10	(< 20 )
Ethylbenzene	100	101	101	100	99.3	99	( 75-125 )	1.30	(< 20 )
o-Xylene	100	96.9	97	100	95.6	96	( 80-120 )	1.30	(< 20 )
P & M -Xylene	200	197	98	200	194	97	( 75-130 )	1.40	(< 20 )
Toluene	100	110	110	100	108	108	( 75-120 )	1.30	(< 20 )
Xylenes (total)	300	294	98	300	290	97	( 79-121 )	1.40	(< 20 )
<b>Surrogates</b>									
1,4-Difluorobenzene (surr)	50		106	50		105	( 77-115 )	1.30	

## Batch Information

Analytical Batch: VFC16715  
 Analytical Method: SW8021B  
 Instrument: Agilent 7890A PID/FID  
 Analyst: JY

Prep Batch: VXX40872  
 Prep Method: SW5030B  
 Prep Date/Time: 12/22/2023 06:00  
 Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL



**Method Blank**

Blank ID: MB for HBN 1869872 [VXX/40879]  
Blank Lab ID: 1750286

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1236845003, 1236845004, 1236845005, 1236845006, 1236845007, 1236845008, 1236845009

**Results by SW8260D**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
1,1,1,2-Tetrachloroethane	0.250U	0.500	0.150	0.250	ug/L
1,1,1-Trichloroethane	0.500U	1.00	0.310	0.500	ug/L
1,1,2,2-Tetrachloroethane	0.250U	0.500	0.150	0.250	ug/L
1,1,2-Trichloroethane	0.200U	0.400	0.120	0.200	ug/L
1,1-Dichloroethane	0.500U	1.00	0.310	0.500	ug/L
1,1-Dichloroethene	0.500U	1.00	0.310	0.500	ug/L
1,1-Dichloropropene	0.500U	1.00	0.310	0.500	ug/L
1,2,3-Trichlorobenzene	0.500U	1.00	0.310	0.500	ug/L
1,2,3-Trichloropropane	0.500U	1.00	0.310	0.500	ug/L
1,2,4-Trichlorobenzene	0.500U	1.00	0.310	0.500	ug/L
1,2,4-Trimethylbenzene	0.500U	1.00	0.310	0.500	ug/L
1,2-Dibromo-3-chloropropane	5.00U	10.0	3.10	5.00	ug/L
1,2-Dibromoethane	0.0375U	0.0750	0.0180	0.0375	ug/L
1,2-Dichlorobenzene	0.500U	1.00	0.310	0.500	ug/L
1,2-Dichloroethane	0.250U	0.500	0.200	0.250	ug/L
1,2-Dichloropropane	0.500U	1.00	0.310	0.500	ug/L
1,3,5-Trimethylbenzene	0.500U	1.00	0.310	0.500	ug/L
1,3-Dichlorobenzene	0.500U	1.00	0.310	0.500	ug/L
1,3-Dichloropropane	0.250U	0.500	0.150	0.250	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	0.250	ug/L
2,2-Dichloropropane	0.500U	1.00	0.310	0.500	ug/L
2-Butanone (MEK)	5.00U	10.0	3.10	5.00	ug/L
2-Chlorotoluene	0.500U	1.00	0.310	0.500	ug/L
2-Hexanone	5.00U	10.0	3.10	5.00	ug/L
4-Chlorotoluene	0.500U	1.00	0.310	0.500	ug/L
4-Isopropyltoluene	0.500U	1.00	0.310	0.500	ug/L
4-Methyl-2-pentanone (MIBK)	5.00U	10.0	3.10	5.00	ug/L
Benzene	0.200U	0.400	0.120	0.200	ug/L
Bromobenzene	0.500U	1.00	0.310	0.500	ug/L
Bromochloromethane	0.500U	1.00	0.310	0.500	ug/L
Bromodichloromethane	0.250U	0.500	0.150	0.250	ug/L
Bromoform	0.500U	1.00	0.310	0.500	ug/L
Carbon disulfide	5.00U	10.0	3.10	5.00	ug/L
Carbon tetrachloride	0.500U	1.00	0.310	0.500	ug/L
Chlorobenzene	0.250U	0.500	0.150	0.250	ug/L
Chloroethane	0.500U	1.00	0.310	0.500	ug/L
Chloroform	0.500U	1.00	0.310	0.500	ug/L
Chloromethane	0.500U	1.00	0.310	0.500	ug/L
cis-1,2-Dichloroethene	0.500U	1.00	0.310	0.500	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	0.250	ug/L
Dibromochloromethane	0.250U	0.500	0.150	0.250	ug/L
Dibromomethane	0.500U	1.00	0.310	0.500	ug/L

Print Date: 01/08/2024 10:22:11AM



**Method Blank**

Blank ID: MB for HBN 1869872 [VXX/40879]  
 Blank Lab ID: 1750286

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1236845003, 1236845004, 1236845005, 1236845006, 1236845007, 1236845008, 1236845009

**Results by SW8260D**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Dichlorodifluoromethane	0.500U	1.00	0.310	0.500	ug/L
Ethylbenzene	0.500U	1.00	0.310	0.500	ug/L
Freon-113	5.00U	10.0	3.10	5.00	ug/L
Hexachlorobutadiene	0.500U	1.00	0.310	0.500	ug/L
Isopropylbenzene (Cumene)	0.500U	1.00	0.310	0.500	ug/L
Methylene chloride	5.00U	10.0	3.10	5.00	ug/L
Methyl-t-butyl ether	5.00U	10.0	3.10	5.00	ug/L
Naphthalene	0.500U	1.00	0.310	0.500	ug/L
n-Butylbenzene	0.500U	1.00	0.310	0.500	ug/L
n-Propylbenzene	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
sec-Butylbenzene	0.500U	1.00	0.310	0.500	ug/L
Styrene	0.500U	1.00	0.310	0.500	ug/L
tert-Butylbenzene	0.500U	1.00	0.310	0.500	ug/L
Tetrachloroethene	0.500U	1.00	0.310	0.500	ug/L
Toluene	0.500U	1.00	0.310	0.500	ug/L
trans-1,2-Dichloroethene	0.500U	1.00	0.310	0.500	ug/L
trans-1,3-Dichloropropene	0.500U	1.00	0.310	0.500	ug/L
Trichloroethene	0.250U	0.500	0.150	0.250	ug/L
Trichlorofluoromethane	0.500U	1.00	0.310	0.500	ug/L
Vinyl acetate	5.00U	10.0	3.10	5.00	ug/L
Xylenes (total)	1.50U	3.00	1.00	1.50	ug/L
<b>Surrogates</b>					
1,2-Dichloroethane-D4 (surr)	109	81-118		0	%
4-Bromofluorobenzene (surr)	90.8	85-114		0	%
Toluene-d8 (surr)	101	89-112		0	%

**Batch Information**

Analytical Batch: VMS23048  
 Analytical Method: SW8260D  
 Instrument: VPA 780/5975 GC/MS  
 Analyst: JY  
 Analytical Date/Time: 12/22/2023 2:55:00PM

Prep Batch: VXX40879  
 Prep Method: SW5030B  
 Prep Date/Time: 12/22/2023 6:00:00AM  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL

Print Date: 01/08/2024 10:22:11AM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1236845 [VXX40879]  
 Blank Spike Lab ID: 1750287  
 Date Analyzed: 12/22/2023 15:11

Spike Duplicate ID: LCSD for HBN 1236845 [VXX40879]  
 Spike Duplicate Lab ID: 1750288  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1236845003, 1236845004, 1236845005, 1236845006, 1236845007, 1236845008, 1236845009

## Results by SW8260D

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,1,2-Tetrachloroethane	30	33.8	113	30	34.7	116	( 78-124 )	2.60	(< 20 )
1,1,1-Trichloroethane	30	30.8	103	30	31.0	103	( 74-131 )	0.52	(< 20 )
1,1,2,2-Tetrachloroethane	30	28.6	95	30	29.0	97	( 71-121 )	1.40	(< 20 )
1,1,2-Trichloroethane	30	30.8	103	30	31.3	104	( 80-119 )	1.60	(< 20 )
1,1-Dichloroethane	30	28.7	96	30	28.8	96	( 77-125 )	0.45	(< 20 )
1,1-Dichloroethene	30	30.4	101	30	30.4	101	( 71-131 )	0.07	(< 20 )
1,1-Dichloropropene	30	29.9	100	30	30.2	101	( 79-125 )	1.00	(< 20 )
1,2,3-Trichlorobenzene	30	30.0	100	30	30.1	100	( 69-129 )	0.57	(< 20 )
1,2,3-Trichloropropane	30	30.1	100	30	30.2	101	( 73-122 )	0.40	(< 20 )
1,2,4-Trichlorobenzene	30	30.1	100	30	30.2	101	( 69-130 )	0.37	(< 20 )
1,2,4-Trimethylbenzene	30	27.8	93	30	28.3	95	( 79-124 )	2.00	(< 20 )
1,2-Dibromo-3-chloropropane	30	27.8	93	30	28.1	94	( 62-128 )	1.10	(< 20 )
1,2-Dibromoethane	30	34.2	114	30	35.0	117	( 77-121 )	2.50	(< 20 )
1,2-Dichlorobenzene	30	28.7	96	30	28.8	96	( 80-119 )	0.35	(< 20 )
1,2-Dichloroethane	30	28.9	96	30	29.5	98	( 73-128 )	2.30	(< 20 )
1,2-Dichloropropane	30	31.1	104	30	31.3	104	( 78-122 )	0.58	(< 20 )
1,3,5-Trimethylbenzene	30	27.9	93	30	27.9	93	( 75-124 )	0.04	(< 20 )
1,3-Dichlorobenzene	30	28.4	95	30	28.8	96	( 80-119 )	1.30	(< 20 )
1,3-Dichloropropane	30	31.5	105	30	32.0	107	( 80-119 )	1.60	(< 20 )
1,4-Dichlorobenzene	30	28.5	95	30	28.7	96	( 79-118 )	0.60	(< 20 )
2,2-Dichloropropane	30	29.4	98	30	30.0	100	( 60-139 )	2.00	(< 20 )
2-Butanone (MEK)	90	109	121	90	107	119	( 56-143 )	1.70	(< 20 )
2-Chlorotoluene	30	26.9	90	30	27.0	90	( 79-122 )	0.56	(< 20 )
2-Hexanone	90	98.2	109	90	99.6	111	( 57-139 )	1.40	(< 20 )
4-Chlorotoluene	30	26.6	89	30	26.5	89	( 78-122 )	0.08	(< 20 )
4-Isopropyltoluene	30	28.2	94	30	28.7	96	( 77-127 )	1.70	(< 20 )
4-Methyl-2-pentanone (MIBK)	90	103	115	90	105	116	( 67-130 )	1.10	(< 20 )
Benzene	30	29.8	99	30	30.2	101	( 79-120 )	1.10	(< 20 )
Bromobenzene	30	29.2	97	30	29.7	99	( 80-120 )	1.50	(< 20 )
Bromochloromethane	30	33.3	111	30	33.7	112	( 78-123 )	1.40	(< 20 )
Bromodichloromethane	30	31.6	105	30	31.9	106	( 79-125 )	0.98	(< 20 )
Bromoform	30	34.7	116	30	35.3	118	( 66-130 )	1.80	(< 20 )
Carbon disulfide	45	41.6	93	45	41.3	92	( 64-133 )	0.72	(< 20 )

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## Blank Spike Summary

Blank Spike ID: LCS for HBN 1236845 [VXX40879]  
 Blank Spike Lab ID: 1750287  
 Date Analyzed: 12/22/2023 15:11

Spike Duplicate ID: LCSD for HBN 1236845 [VXX40879]  
 Spike Duplicate Lab ID: 1750288  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1236845003, 1236845004, 1236845005, 1236845006, 1236845007, 1236845008, 1236845009

## Results by SW8260D

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Carbon tetrachloride	30	32.3	108	30	32.6	109	( 72-136 )	1.00	(< 20 )
Chlorobenzene	30	31.3	104	30	31.9	106	( 82-118 )	2.00	(< 20 )
Chloroethane	30	30.3	101	30	29.4	98	( 60-138 )	3.20	(< 20 )
Chloroform	30	29.7	99	30	30.0	100	( 79-124 )	1.00	(< 20 )
Chloromethane	30	24.9	83	30	25.1	84	( 50-139 )	0.56	(< 20 )
cis-1,2-Dichloroethene	30	30.3	101	30	30.7	102	( 78-123 )	1.50	(< 20 )
cis-1,3-Dichloropropene	30	32.3	108	30	32.9	110	( 75-124 )	1.80	(< 20 )
Dibromochloromethane	30	34.6	115	30	35.1	117	( 74-126 )	1.50	(< 20 )
Dibromomethane	30	31.2	104	30	32.2	107	( 79-123 )	3.20	(< 20 )
Dichlorodifluoromethane	30	31.3	104	30	30.0	100	( 32-152 )	4.20	(< 20 )
Ethylbenzene	30	30.6	102	30	30.8	103	( 79-121 )	0.62	(< 20 )
Freon-113	45	45.9	102	45	45.3	101	( 70-136 )	1.40	(< 20 )
Hexachlorobutadiene	30	29.7	99	30	30.1	100	( 66-134 )	1.20	(< 20 )
Isopropylbenzene (Cumene)	30	30.0	100	30	30.1	100	( 72-131 )	0.57	(< 20 )
Methylene chloride	30	32.4	108	30	32.3	108	( 74-124 )	0.19	(< 20 )
Methyl-t-butyl ether	45	48.1	107	45	49.1	109	( 71-124 )	2.10	(< 20 )
Naphthalene	30	31.1	104	30	31.3	104	( 61-128 )	0.90	(< 20 )
n-Butylbenzene	30	26.7	89	30	26.9	90	( 75-128 )	0.71	(< 20 )
n-Propylbenzene	30	26.7	89	30	26.7	89	( 76-126 )	0.26	(< 20 )
o-Xylene	30	30.8	103	30	31.2	104	( 78-122 )	1.20	(< 20 )
P & M -Xylene	60	61.4	102	60	61.8	103	( 80-121 )	0.50	(< 20 )
sec-Butylbenzene	30	27.1	90	30	27.1	90	( 77-126 )	0.07	(< 20 )
Styrene	30	31.6	105	30	32.1	107	( 78-123 )	1.70	(< 20 )
tert-Butylbenzene	30	27.7	92	30	27.8	93	( 78-124 )	0.25	(< 20 )
Tetrachloroethene	30	32.1	107	30	32.8	109	( 74-129 )	2.20	(< 20 )
Toluene	30	29.4	98	30	30.1	100	( 80-121 )	2.20	(< 20 )
trans-1,2-Dichloroethene	30	30.3	101	30	30.2	101	( 75-124 )	0.23	(< 20 )
trans-1,3-Dichloropropene	30	32.9	110	30	33.6	112	( 73-127 )	2.00	(< 20 )
Trichloroethene	30	30.9	103	30	30.9	103	( 79-123 )	0.10	(< 20 )
Trichlorofluoromethane	30	36.0	120	30	34.5	115	( 65-141 )	4.50	(< 20 )
Vinyl acetate	30	33.6	112	30	34.1	114	( 54-146 )	1.50	(< 20 )
Xylenes (total)	90	92.3	103	90	92.9	103	( 79-121 )	0.73	(< 20 )

## Surrogates

Print Date: 01/08/2024 10:22:15AM



## Blank Spike Summary

Blank Spike ID: LCS for HBN 1236845 [VXX40879]  
 Blank Spike Lab ID: 1750287  
 Date Analyzed: 12/22/2023 15:11

Spike Duplicate ID: LCSD for HBN 1236845 [VXX40879]  
 Spike Duplicate Lab ID: 1750288  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1236845003, 1236845004, 1236845005, 1236845006, 1236845007, 1236845008, 1236845009

## Results by SW8260D

Parameter	Blank Spike (%)			Spike Duplicate (%)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,2-Dichloroethane-D4 (surr)	30		100	30		100	( 81-118 )	0.03	
4-Bromofluorobenzene (surr)	30		91	30		92	( 85-114 )	0.33	
Toluene-d8 (surr)	30		101	30		102	( 89-112 )	0.66	

## Batch Information

Analytical Batch: **VMS23048**  
 Analytical Method: **SW8260D**  
 Instrument: **VPA 780/5975 GC/MS**  
 Analyst: **JY**

Prep Batch: **VXX40879**  
 Prep Method: **SW5030B**  
 Prep Date/Time: **12/22/2023 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: 01/08/2024 10:22:15AM



### Method Blank

Blank ID: MB for HBN 1869874 [VXX/40880]  
Blank Lab ID: 1750291

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1236845003, 1236845004, 1236845005, 1236845006, 1236845007, 1236845008, 1236845009

### Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Bromomethane	3.00U	6.00	3.00	3.00	ug/L
Vinyl chloride	0.0750U	0.150	0.0500	0.0750	ug/L
<b>Surrogates</b>					
1,2-Dichloroethane-D4 (surr)	110	81-118		0	%
4-Bromofluorobenzene (surr)	106	85-114		0	%
Toluene-d8 (surr)	105	89-112		0	%

### Batch Information

Analytical Batch: VMS23049  
Analytical Method: SW8260D  
Instrument: Agilent 7890-75MS  
Analyst: JY  
Analytical Date/Time: 12/22/2023 2:56:00PM

Prep Batch: VXX40880  
Prep Method: SW5030B  
Prep Date/Time: 12/22/2023 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 01/08/2024 10:22:18AM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1236845 [VXX40880]  
 Blank Spike Lab ID: 1750292  
 Date Analyzed: 12/22/2023 15:11

Spike Duplicate ID: LCSD for HBN 1236845 [VXX40880]  
 Spike Duplicate Lab ID: 1750293  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1236845003, 1236845004, 1236845005, 1236845006, 1236845007, 1236845008, 1236845009

## Results by SW8260D

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Bromomethane	30	39.8	133	30	40.4	135	( 53-141 )	1.70	(< 20 )
Vinyl chloride	30	25.1	84	30	24.5	82	( 58-137 )	2.60	(< 20 )
<b>Surrogates</b>									
1,2-Dichloroethane-D4 (surr)	30		100	30		102	( 81-118 )	1.80	
4-Bromofluorobenzene (surr)	30		100	30		101	( 85-114 )	0.86	
Toluene-d8 (surr)	30		104	30		103	( 89-112 )	0.84	

## Batch Information

Analytical Batch: **VMS23049**  
 Analytical Method: **SW8260D**  
 Instrument: **Agilent 7890-75MS**  
 Analyst: **JY**

Prep Batch: **VXX40880**  
 Prep Method: **SW5030B**  
 Prep Date/Time: **12/22/2023 06:00**  
 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL



### Method Blank

Blank ID: MB for HBN 1869655 [XXX/49129]  
Blank Lab ID: 1750098

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1236845003, 1236845004, 1236845005, 1236845006, 1236845007, 1236845008

### Results by 8270D SIM LV (PAH)

Parameter	Results	LOQ/CL	DL	LOD	Units
1-Methylnaphthalene	0.0250U	0.0500	0.0150	0.0250	ug/L
2-Methylnaphthalene	0.0250U	0.0500	0.0150	0.0250	ug/L
Acenaphthene	0.0250U	0.0500	0.0150	0.0250	ug/L
Acenaphthylene	0.0250U	0.0500	0.0150	0.0250	ug/L
Anthracene	0.0250U	0.0500	0.0150	0.0250	ug/L
Benzo(a)Anthracene	0.0250U	0.0500	0.0150	0.0250	ug/L
Benzo[a]pyrene	0.0100U	0.0200	0.00620	0.0100	ug/L
Benzo[b]Fluoranthene	0.0250U	0.0500	0.0150	0.0250	ug/L
Benzo[g,h,i]perylene	0.0250U	0.0500	0.0150	0.0250	ug/L
Benzo[k]fluoranthene	0.0250U	0.0500	0.0150	0.0250	ug/L
Chrysene	0.0250U	0.0500	0.0150	0.0250	ug/L
Dibenzo[a,h]anthracene	0.0100U	0.0200	0.00620	0.0100	ug/L
Fluoranthene	0.0250U	0.0500	0.0150	0.0250	ug/L
Fluorene	0.0250U	0.0500	0.0150	0.0250	ug/L
Indeno[1,2,3-c,d] pyrene	0.0250U	0.0500	0.0150	0.0250	ug/L
Naphthalene	0.0500U	0.100	0.0310	0.0500	ug/L
Phenanthrene	0.0500U	0.100	0.0310	0.0500	ug/L
Pyrene	0.0250U	0.0500	0.0150	0.0250	ug/L
<b>Surrogates</b>					
2-Methylnaphthalene-d10 (surr)	70.6	38-100		0	%
Fluoranthene-d10 (surr)	71.9	30-111		0	%

### Batch Information

Analytical Batch: XMS14140  
Analytical Method: 8270D SIM LV (PAH)  
Instrument: Agilent 8890 GC/MS SYA  
Analyst: HMW  
Analytical Date/Time: 12/27/2023 8:51:00PM

Prep Batch: XXX49129  
Prep Method: SW3535A  
Prep Date/Time: 12/22/2023 4:00:00PM  
Prep Initial Wt./Vol.: 250 mL  
Prep Extract Vol: 1 mL

Print Date: 01/08/2024 10:22:24AM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1236845 [XXX49129]  
 Blank Spike Lab ID: 1750099  
 Date Analyzed: 12/27/2023 21:07

Spike Duplicate ID: LCSD for HBN 1236845 [XXX49129]  
 Spike Duplicate Lab ID: 1750100  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1236845003, 1236845004, 1236845005, 1236845006, 1236845007, 1236845008

## Results by 8270D SIM LV (PAH)

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1-Methylnaphthalene	2	0.829	41	2	0.967	48	( 41-115 )	15.40	(< 20 )
2-Methylnaphthalene	2	0.802	40	2	0.948	47	( 39-114 )	16.70	(< 20 )
Acenaphthene	2	0.874	44	* 2	1.01	51	( 48-114 )	14.80	(< 20 )
Acenaphthylene	2	0.924	46	2	1.04	52	( 35-121 )	12.00	(< 20 )
Anthracene	2	0.956	48	* 2	1.06	53	* ( 53-119 )	10.20	(< 20 )
Benzo(a)Anthracene	2	1.42	71	2	1.48	74	( 59-120 )	3.90	(< 20 )
Benzo[a]pyrene	2	1.59	80	2	1.64	82	( 53-120 )	3.00	(< 20 )
Benzo[b]Fluoranthene	2	1.58	79	2	1.65	82	( 53-126 )	4.30	(< 20 )
Benzo[g,h,i]perylene	2	1.88	94	2	1.93	97	( 44-128 )	3.00	(< 20 )
Benzo[k]fluoranthene	2	1.67	84	2	1.74	87	( 54-125 )	3.70	(< 20 )
Chrysene	2	1.51	76	2	1.57	79	( 57-120 )	3.70	(< 20 )
Dibenzo[a,h]anthracene	2	1.93	97	2	1.97	99	( 44-131 )	2.30	(< 20 )
Fluoranthene	2	1.13	57	* 2	1.22	61	( 58-120 )	7.70	(< 20 )
Fluorene	2	0.925	46	* 2	1.08	54	( 50-118 )	15.00	(< 20 )
Indeno[1,2,3-c,d] pyrene	2	1.90	95	2	1.96	98	( 48-130 )	3.10	(< 20 )
Naphthalene	2	0.853	43	* 2	0.993	50	( 43-114 )	15.10	(< 20 )
Phenanthrene	2	0.968	48	* 2	1.11	55	( 53-115 )	13.30	(< 20 )
Pyrene	2	1.16	58	2	1.26	63	( 53-121 )	8.10	(< 20 )

## Surrogates

2-Methylnaphthalene-d10 (surr)	2		41	2		50	( 38-100 )	18.80	
Fluoranthene-d10 (surr)	2		58	2		63	( 30-111 )	9.70	

## Batch Information

Analytical Batch: XMS14140  
 Analytical Method: 8270D SIM LV (PAH)  
 Instrument: Agilent 8890 GC/MS SYA  
 Analyst: HMW

Prep Batch: XXX49129  
 Prep Method: SW3535A  
 Prep Date/Time: 12/22/2023 16:00  
 Spike Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL  
 Dupe Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL

Print Date: 01/08/2024 10:22:27AM

## Method Blank

Blank ID: MB for HBN 1870032 [XXX/49140]  
 Blank Lab ID: 1750676

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
 1236845003, 1236845004, 1236845005, 1236845006, 1236845007, 1236845008

## Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Diesel Range Organics	0.237J	0.600	0.200	0.300	mg/L
<b>Surrogates</b>					
5a Androstane (surr)	68.9	60-120		0	%

## Batch Information

Analytical Batch: XFC16777  
 Analytical Method: AK102  
 Instrument: Agilent 7890B R  
 Analyst: T.L  
 Analytical Date/Time: 1/4/2024 1:57:00PM

Prep Batch: XXX49140  
 Prep Method: SW3520C  
 Prep Date/Time: 1/3/2024 6:30:00PM  
 Prep Initial Wt./Vol.: 250 mL  
 Prep Extract Vol: 1 mL

Print Date: 01/08/2024 10:22:31AM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1236845 [XXX49140]  
 Blank Spike Lab ID: 1750677  
 Date Analyzed: 01/04/2024 14:09

Spike Duplicate ID: LCSD for HBN 1236845 [XXX49140]  
 Spike Duplicate Lab ID: 1750678  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1236845003, 1236845004, 1236845005, 1236845006, 1236845007, 1236845008

## Results by AK102

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	20	18.1	91	20	15.6	78	( 75-125 )	15.30	(< 20 )
<b>Surrogates</b>									
5a Androstane (surr)	0.4		95	0.4		95	( 60-120 )	0.02	

## Batch Information

Analytical Batch: **XFC16777**  
 Analytical Method: **AK102**  
 Instrument: **Agilent 7890B R**  
 Analyst: **T.L**

Prep Batch: **XXX49140**  
 Prep Method: **SW3520C**  
 Prep Date/Time: **01/03/2024 18:30**  
 Spike Init Wt./Vol.: 0.4 mg/L Extract Vol: 1 mL  
 Dupe Init Wt./Vol.: 0.4 mg/L Extract Vol: 1 mL

Print Date: 01/08/2024 10:22:34AM



**Shannon & Wilson, Inc.**  
**5430 Fairbanks Street, Suite 3**  
**Anchorage, Alaska 99518**  
**(907) 561-2120**  
**Fax (206) 695-6777**

SGS North America Inc.

Profile # 365427 CSW

Date	Time	Sample ID	Total Containers	GRO-AK101	VOCs- EPA Method 8260D	DRO- AK102	PAHs- EPA Method 8270D SIM	BTEX - EPA 8021		
				VOA Vials HCl	VOA Vials HCl	Amber HCl	Amber 4C	VOA Vials HCl		
12/19/2023	15:41	110026-DW1	3							X
12/19/2023	16:06	110026-DW2	3							X
12/20/2023	11:39	110026-MW1	10	X	X	X	X			
12/20/2023	15:36	110026-MW2	10	X	X	X	X			
12/20/2023	14:32	110026-MW3	10	X	X	X	X			
12/20/2023	12:52	110026-MW4	10	X	X	X	X			
12/20/2023	10:20	110026-MW5	10	X	X	X	X			
12/20/2023	10:50	110026-MW15	10	X	X	X	X			
12/19/2023	8:00	110026-WTB	2 Sets	X	X					

Relinquished By:		Relinquished By:		Project Information	
Signature: <i>ZJT</i>	Signature:	Project Number: 110026-002			
Print Name: Zach Thon	Print Name:	Project Name: Kasilof Riverview Lodge			
Company: Shannon & Wilson, Inc.	Company:	Contact: Alec Rizzo / Zach Thon			
Date: 12/21/23	Date:	Sampler: ZJT			
Time: 10:14	Time:	Special Instructions:			
Received By:		Received By:		Sample Receipt	
Signature: <i>[Signature]</i>	Signature: <i>Jeremy Gorton</i>	Shipped Via: Hand Delivered			
Print Name:	Print Name: <i>Jeremy Gorton</i>	Cooler Temperature Upon Arrival: 1.2 D30			
Company:	Company: <i>SES</i>	Sample Matrix: Water			
Date:	Date: 12/21/23 10:14	10 Working DAY TAT			
Time:	Time: 10:14				





1236845



SAMPLE RECEIPT FORM

Project Manager Completion				
Was all necessary information recorded on the COC upon receipt? (temperature, COC seals, etc.?)	<input checked="" type="radio"/> Yes	No	N/A	
Was temperature between 0-6 ° C?	<input checked="" type="radio"/> 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*?	<input checked="" type="radio"/> Yes	No	N/A	
Was a method specified for each analysis, where applicable? If no, please note correct methods.	<input checked="" type="radio"/> Yes	No	N/A	
Are compound lists specified, where applicable? For project specific or special compound lists please note correct analysis code.	Yes	No	<input checked="" type="radio"/> N/A	
If rush was requested by the client, was the requested TAT approved?	Yes	No	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> N/A	If "NO", contact client for information.
Sample Login Completion				
Do ID's on sample containers match COC?	<input checked="" type="radio"/> Yes	No	N/A	
If provided on containers, do dates/times collected match COC?	<input checked="" type="radio"/> 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?	<input checked="" type="radio"/> Yes	No	N/A	
Were proper containers (type/mass/volume/preservative) received for all samples? *See form F-083 "Sample Guide"	<input checked="" type="radio"/> 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*?	<input checked="" type="radio"/> Yes	No	N/A	
Were all VOA vials free of headspace >6mm?	<input checked="" type="radio"/> Yes	No	N/A	
Were all soil VOA samples received field extracted with Methanol?	Yes	No	<input checked="" type="radio"/> N/A	
Did all soil VOA samples have an accompanying unpreserved container for % solids?	Yes	No	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> N/A	
For Rush/Short Holding time, was the lab notified?	<input checked="" type="radio"/> Yes	No	N/A	
For any question answered "NO", was the Project Manager notified?	Yes	No	<input checked="" type="radio"/> N/A	PM Initials:
Was Peer Review of sample numbering/labelling completed?	Yes	No	<input checked="" type="radio"/> N/A	Reviewer Initials:
<b>Additional Notes/Clarification where Applicable, including resolution of "No" answers when a change order is not attached:</b>				



### Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1236845001-A	HCL to pH < 2	OK	1236845007-E	HCL to pH < 2	OK
1236845001-B	HCL to pH < 2	OK	1236845007-F	HCL to pH < 2	OK
1236845001-C	HCL to pH < 2	OK	1236845007-G	HCL to pH < 2	OK
1236845002-A	HCL to pH < 2	OK	1236845007-H	HCL to pH < 2	OK
1236845002-B	HCL to pH < 2	OK	1236845007-I	No Preservative Required	OK
1236845002-C	HCL to pH < 2	OK	1236845007-J	No Preservative Required	OK
1236845003-A	HCL to pH < 2	OK	1236845008-A	HCL to pH < 2	OK
1236845003-B	HCL to pH < 2	OK	1236845008-B	HCL to pH < 2	OK
1236845003-C	HCL to pH < 2	OK	1236845008-C	HCL to pH < 2	OK
1236845003-D	HCL to pH < 2	OK	1236845008-D	HCL to pH < 2	OK
1236845003-E	HCL to pH < 2	OK	1236845008-E	HCL to pH < 2	OK
1236845003-F	HCL to pH < 2	OK	1236845008-F	HCL to pH < 2	OK
1236845003-G	HCL to pH < 2	OK	1236845008-G	HCL to pH < 2	OK
1236845003-H	HCL to pH < 2	OK	1236845008-H	HCL to pH < 2	OK
1236845003-I	No Preservative Required	OK	1236845008-I	No Preservative Required	OK
1236845003-J	No Preservative Required	OK	1236845008-J	No Preservative Required	OK
1236845004-A	HCL to pH < 2	OK	1236845009-A	HCL to pH < 2	OK
1236845004-B	HCL to pH < 2	OK	1236845009-B	HCL to pH < 2	OK
1236845004-C	HCL to pH < 2	OK	1236845009-C	HCL to pH < 2	OK
1236845004-D	HCL to pH < 2	OK	1236845009-D	HCL to pH < 2	OK
1236845004-E	HCL to pH < 2	OK	1236845009-E	HCL to pH < 2	OK
1236845004-F	HCL to pH < 2	OK	1236845009-F	HCL to pH < 2	OK
1236845004-G	HCL to pH < 2	OK	1236845009-G	HCL to pH < 2	OK
1236845004-H	HCL to pH < 2	OK	1236845009-H	HCL to pH < 2	OK
1236845004-I	No Preservative Required	OK	1236845009-I	HCL to pH < 2	OK
1236845004-J	No Preservative Required	OK			
1236845005-A	HCL to pH < 2	OK			
1236845005-B	HCL to pH < 2	OK			
1236845005-C	HCL to pH < 2	OK			
1236845005-D	HCL to pH < 2	OK			
1236845005-E	HCL to pH < 2	OK			
1236845005-F	HCL to pH < 2	OK			
1236845005-G	HCL to pH < 2	OK			
1236845005-H	HCL to pH < 2	OK			
1236845005-I	No Preservative Required	OK			
1236845005-J	No Preservative Required	OK			
1236845006-A	HCL to pH < 2	OK			
1236845006-B	HCL to pH < 2	OK			
1236845006-C	HCL to pH < 2	OK			
1236845006-D	HCL to pH < 2	OK			
1236845006-E	HCL to pH < 2	OK			
1236845006-F	HCL to pH < 2	OK			
1236845006-G	HCL to pH < 2	OK			
1236845006-H	HCL to pH < 2	OK			
1236845006-I	No Preservative Required	OK			
1236845006-J	No Preservative Required	OK			
1236845007-A	HCL to pH < 2	OK			
1236845007-B	HCL to pH < 2	OK			
1236845007-C	HCL to pH < 2	OK			
1236845007-D	HCL to pH < 2	OK			

Container Id

Preservative

Container  
Condition

Container Id

Preservative

Container  
Condition

#### 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.

# ADEC Contaminated Sites Program Laboratory Data Review Checklist

<b>Completed By:</b>	Zach Thon	<b>CS Site Name:</b>	Kasilof Riverview Lodge	<b>Lab Name:</b>	SGS
<b>Title:</b>	Environmental Scientist	<b>ADEC File No.:</b>	2319.26.002	<b>Lab Report No.:</b>	1236845
<b>Consulting Firm:</b>	Shannon & Wilson	<b>Hazard ID No.:</b>	22950	<b>Lab Report Date:</b>	1/8/2024

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

## 1. Laboratory

- a. Did an ADEC Contaminated Sites Laboratory Approval Program (CS-LAP) 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 CS-LAP approved?

Yes  No  N/A

Comments: *The samples were not submitted to another “network” laboratory or subcontracted to an alternate laboratory.*

## 2. Chain of Custody (CoC)

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

Yes  No  N/A

Comments:

- b. Were the correct analyses requested?

Yes  No  N/A

Analyses requested: GRO, DRO, VOCs, PAHs, BTEX

Comments:

## 3. Laboratory Sample Receipt Documentation

- a. Is the sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes  No  N/A

Cooler temperature(s): 1.7°C

**CS Site Name:** Kasilof Riverview Lodge

**Lab Report No.:** 1236845

- b. Is the sample preservation acceptable – acidified waters, methanol preserved soil (GRO, BTEX, VOCs, etc.)?

Yes  No  N/A

Comments:

- c. Is the sample condition documented – broken, leaking, zero headspace (VOA vials); canister vacuum/pressure checked and no open valves, etc.?

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, canister not holding a vacuum, etc.?

Yes  No  N/A

Comments: *No discrepancies were noted by the laboratory.*

- e. Is the data quality or usability affected?

Yes  No  N/A

Comments: *See above*

#### **4. Case Narrative**

- a. Is the case narrative present and understandable?

Yes  No  N/A

Comments:

- b. Are there discrepancies, errors, or QC failures identified by the lab?

Yes  No  N/A

Comments: *The case narrative noted the following:*

*-PS- 8270D SIM – MW1, MW2, MW3, MW4, MW5, and MW15: PAH LCS recoveries for several analytes do not meet QC criteria. Sample was re-extracted outside of hold and results confirmed. In hold data is reported.*

*-LCS- 8270D SIM – PAH LCS recoveries for several analytes do not meet QC criteria.*

*-MB- AK103 – RRO is detect in the MB greater than one-half the LOQ, but less than the LOQ.*

- c. Were all the corrective actions documented?

Yes  No  N/A

Comments:

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

Comments: *See above.*

## 5. Sample Results

- a. Are the correct analyses performed/reported as requested on CoC?  
Yes  No  N/A   
Comments:
- b. Are all applicable holding times met?  
Yes  No  N/A   
Comments:
- c. Are all soils reported on a dry weight basis?  
Yes  No  N/A   
Comments:
- d. Are the reported limits of quantitation (LoQ) or limits of detections (LOD), or reporting limits (RL) less than the Cleanup Level or the action level for the project?  
Yes  No  N/A   
Comments: *The LOQ for 1,2,3-trichloropropane exceeds the ADEC cleanup level for all project samples.*
- e. Is the data quality or usability affected?  
Yes  No  N/A   
Comments: *There is a potential that the target analyte is present at a concentration greater than the ADEC cleanup level, but less than the LOQ.*

## 6. QC Samples

- a. Method Blank
- i. Was one method blank reported per matrix, analysis, and 20 samples?  
Yes  No  N/A   
Comments:
- ii. Are all method blank results less than LOQ (or RL)?  
Yes  No   
Comments: *Although less than the LOQ, an estimated concentration of DRO (0.237 mg/L) was detected in the method blank.*
- iii. If above LoQ or RL, what samples are affected?  
Comments: *MW1, MW2, MW3, MW4, and MW5.*
- iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?  
Yes  No  N/A

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Comments: *The samples are flagged "B" in Table 2.2 when the reported sample concentration is within 10x the reported method blank concentration. The concentrations of DRO detected in the samples and method blank are reported as less than the LOQ. Using professional judgement, Shannon & Wilson flagged the reported results "B" at the detected concentration in Table 2.2.*

v. Data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

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

i. Organics – Are 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 – Are one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes  No  N/A

Comments:

iii. Accuracy – Are 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: *PAH LCS % recoveries for several analytes do not meet QC criteria. Samples were re-extracted outside of hold and results were confirmed. In hold data is reported.*

iv. Precision – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? Was the 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:

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

Comments: *MW1, MW2, MW3, MW4, and MW5.*

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

Yes  No  N/A

Comments: *The LCS/LCSD %R for fluoranthene (57%) does not meet QC criteria and is biased low. The analyte was not reported above the LOQ in the associated project samples with the exception of MW5. The estimated concentration of fluoranthene (0.0190 µg/L) in MW5 if flagged J-. The remaining non-detect results do not require flagging. The remaining analytes with %R failures were not detected in the project samples. Therefore, flagging is not required.*

- vii. Is the data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

- i. Organics – Are one MS/MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A

Comments:

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

Yes  No  N/A

Comments:

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

Yes  No  N/A

Comments:

- iv. Precision – Are 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:

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

Comments:

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

Yes  No  N/A

Comments:



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vii. Is the data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

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

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

Yes  No  N/A

Comments:

ii. Accuracy – Are 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. Is the data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

e. Trip Blanks

i. Is one trip blank reported per matrix, analysis, and for each cooler containing volatile samples? Yes  No  N/A

Comments:

ii. Are all results less than LoQ or RL?

Yes  No  N/A

Comments:

iii. If above LoQ or RL, what samples are affected?

Comments:

iv. Is the data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

CS Site Name: Kasilof Riverview Lodge

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f. Field Duplicate

- i. Are one field duplicate submitted per matrix, analysis, and 10 project samples?

Yes  No  N/A

Comments: .

- ii. Was the duplicate submitted blind to lab?

Yes  No  N/A

Comments:

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

$$RPD (\%) = \left| \frac{R_1 - R_2}{\left(\frac{R_1 + R_2}{2}\right)} \right| \times 100$$

Where  $R_1$  = Sample Concentration

$R_2$  = Field Duplicate Concentration

Comments: *The RPDs were within QC criteria.*

- iv. Is the data quality or usability affected? (Explain)

Yes  No  N/A

Comments:

g. Decontamination or Equipment Blanks

- i. Were decontamination or equipment blanks collected?

Yes  No  N/A

Comments: *A decontamination and equipment blank were not included in our ADEC-approved work plan.*

- ii. Are all results less than LoQ or RL?

Yes  No  N/A

Comments:

- iii. If above LoQ or RL, specify what samples are affected.

Comments: .

- iv. Are data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

**CS Site Name:** Kasilof Riverview Lodge

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

a. Are they defined and appropriate?

Yes  No  N/A

Comments: *A key is included on page 3 of the laboratory report.*

## Laboratory Report of Analysis

To: Shannon & Wilson, Inc.  
5430 Fairbanks Street, Suite 3  
Anchorage, AK 99518  
(907)433-3228

Report Number: **1240928**

Client Project: **110026-002; Kasilof Riverview**

Dear Alec Rizzo,

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

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

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

Sincerely,  
SGS North America Inc.



**Justin Nelson**

**2024.03.27**

**16:04:59 -08'00'**

Justin Nelson  
Project Manager  
Justin.Nelson@sgs.com

Date

## Case Narrative

SGS Client: **Shannon & Wilson, Inc.**  
SGS Project: **1240928**  
Project Name/Site: **110026-002; Kasilof Riverview**  
Project Contact: **Alec Rizzo**

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.

Print Date: 03/27/2024 8:35:38AM

## 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, indemnification 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, 8270E, 8270E-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., 3/4 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.

### Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
110026-DW1	1240928001	03/05/2024	03/07/2024	Water (Surface, Eff., Ground)
110026-DW2	1240928002	03/05/2024	03/07/2024	Water (Surface, Eff., Ground)
110026-MW1	1240928003	03/06/2024	03/07/2024	Water (Surface, Eff., Ground)
110026-MW2	1240928004	03/06/2024	03/07/2024	Water (Surface, Eff., Ground)
110026-MW3	1240928005	03/06/2024	03/07/2024	Water (Surface, Eff., Ground)
110026-MW4	1240928006	03/06/2024	03/07/2024	Water (Surface, Eff., Ground)
110026-MW5	1240928007	03/06/2024	03/07/2024	Water (Surface, Eff., Ground)
110026-MW15	1240928008	03/06/2024	03/07/2024	Water (Surface, Eff., Ground)
110026-WTB	1240928009	03/05/2024	03/07/2024	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
8270E SIM LV (PAH)	8270 PAH SIM GC/MS LV
SW8021B	BTEX 8021
AK102	DRO Low Volume (W)
AK101	Gasoline Range Organics (W)
SW8260D	Volatile Organic Compounds (W) FULL

Print Date: 03/27/2024 8:35:42AM

### Detectable Results Summary

Client Sample ID: **110026-MW1**

Lab Sample ID: 1240928003

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Benzo[b]Fluoranthene	0.0155J	ug/L
Chrysene	0.0154J	ug/L
Fluoranthene	0.0242J	ug/L
Pyrene	0.0181J	ug/L
Diesel Range Organics	0.345J	mg/L

**Semivolatile Organic Fuels**

Client Sample ID: **110026-MW2**

Lab Sample ID: 1240928004

**Polynuclear Aromatics GC/MS**

**Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Fluoranthene	0.0179J	ug/L
Diesel Range Organics	0.311J	mg/L

Client Sample ID: **110026-MW3**

Lab Sample ID: 1240928005

**Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	0.239J	mg/L

Client Sample ID: **110026-MW5**

Lab Sample ID: 1240928007

**Semivolatile Organic Fuels**

**Volatile GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	0.227J	mg/L
Benzene	6.18	ug/L

Client Sample ID: **110026-MW15**

Lab Sample ID: 1240928008

**Semivolatile Organic Fuels**

**Volatile GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	0.277J	mg/L
Benzene	5.34	ug/L
Toluene	0.380J	ug/L

Client Sample ID: **110026-WTB**

Lab Sample ID: 1240928009

**Volatile GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
P & M -Xylene	0.890J	ug/L
Toluene	0.620J	ug/L





**Results of 110026-DW1**

Client Sample ID: **110026-DW1**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1240928001  
Lab Project ID: 1240928

Collection Date: 03/05/24 16:01  
Received Date: 03/07/24 13:35  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	0.450	U	0.600	0.150	0.450	ug/L	1		03/13/24 17:34
Ethylbenzene	3.75	U	5.00	2.50	3.75	ug/L	1		03/13/24 17:34
o-Xylene	3.75	U	5.00	2.50	3.75	ug/L	1		03/13/24 17:34
P & M -Xylene	3.75	U	5.00	2.50	3.75	ug/L	1		03/13/24 17:34
Toluene	3.75	U	5.00	2.50	3.75	ug/L	1		03/13/24 17:34
Xylenes (total)	3.75	U	5.00	2.50	3.75	ug/L	1		03/13/24 17:34
<b>Surrogates</b>									
1,4-Difluorobenzene (surr)	84.5		77-115			%	1		03/13/24 17:34

**Batch Information**

Analytical Batch: VFC16749  
Analytical Method: SW8021B  
Analyst: JY  
Analytical Date/Time: 03/13/24 17:34  
Container ID: 1240928001-A

Prep Batch: VXX41003  
Prep Method: SW5030B  
Prep Date/Time: 03/13/24 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

## Results of 110026-DW2

Client Sample ID: **110026-DW2**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928002  
 Lab Project ID: 1240928

Collection Date: 03/05/24 16:21  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Volatile Fuels

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.450	U	0.600	0.150	0.450	ug/L	1		03/13/24 17:52
Ethylbenzene	3.75	U	5.00	2.50	3.75	ug/L	1		03/13/24 17:52
o-Xylene	3.75	U	5.00	2.50	3.75	ug/L	1		03/13/24 17:52
P & M -Xylene	3.75	U	5.00	2.50	3.75	ug/L	1		03/13/24 17:52
Toluene	3.75	U	5.00	2.50	3.75	ug/L	1		03/13/24 17:52
Xylenes (total)	3.75	U	5.00	2.50	3.75	ug/L	1		03/13/24 17:52

## Surrogates

1,4-Difluorobenzene (surr)	84.6		77-115			%	1		03/13/24 17:52
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## Batch Information

Analytical Batch: VFC16749  
 Analytical Method: SW8021B  
 Analyst: JY  
 Analytical Date/Time: 03/13/24 17:52  
 Container ID: 1240928002-A

Prep Batch: VXX41003  
 Prep Method: SW5030B  
 Prep Date/Time: 03/13/24 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



**Results of 110026-MW1**

Client Sample ID: **110026-MW1**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928003  
 Lab Project ID: 1240928

Collection Date: 03/06/24 09:52  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 18:25
2-Methylnaphthalene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 18:25
Acenaphthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 18:25
Acenaphthylene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 18:25
Anthracene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 18:25
Benzo(a)Anthracene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 18:25
Benzo[a]pyrene	0.0147	U	0.0196	0.00608	0.0147	ug/L	1		03/20/24 18:25
Benzo[b]Fluoranthene	0.0155	J	0.0490	0.0147	0.0368	ug/L	1		03/20/24 18:25
Benzo[g,h,i]perylene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 18:25
Benzo[k]fluoranthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 18:25
Chrysene	0.0154	J	0.0490	0.0147	0.0368	ug/L	1		03/20/24 18:25
Dibenzo[a,h]anthracene	0.0147	U	0.0196	0.00608	0.0147	ug/L	1		03/20/24 18:25
Fluoranthene	0.0242	J	0.0490	0.0147	0.0368	ug/L	1		03/20/24 18:25
Fluorene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 18:25
Indeno[1,2,3-c,d] pyrene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 18:25
Naphthalene	0.0735	U	0.0980	0.0304	0.0735	ug/L	1		03/20/24 18:25
Phenanthrene	0.0735	U	0.0980	0.0304	0.0735	ug/L	1		03/20/24 18:25
Pyrene	0.0181	J	0.0490	0.0147	0.0368	ug/L	1		03/20/24 18:25

**Surrogates**

2-Methylnaphthalene-d10 (surr)	81.7		38-100			%	1		03/20/24 18:25
Fluoranthene-d10 (surr)	90.9		30-111			%	1		03/20/24 18:25

**Batch Information**

Analytical Batch: XMS14189  
 Analytical Method: 8270E SIM LV (PAH)  
 Analyst: NRB  
 Analytical Date/Time: 03/20/24 18:25  
 Container ID: 1240928003-I

Prep Batch: XXX49251  
 Prep Method: SW3535A  
 Prep Date/Time: 03/13/24 14:00  
 Prep Initial Wt./Vol.: 255 mL  
 Prep Extract Vol: 1 mL



Results of **110026-MW1**

Client Sample ID: **110026-MW1**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1240928003  
Lab Project ID: 1240928

Collection Date: 03/06/24 09:52  
Received Date: 03/07/24 13:35  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.345	J	0.600	0.200	0.450	mg/L	1		03/21/24 06:06
<b>Surrogates</b>									
5a Androstane (surr)	76.2		50-150			%	1		03/21/24 06:06

**Batch Information**

Analytical Batch: XFC16798  
Analytical Method: AK102  
Analyst: BRP  
Analytical Date/Time: 03/21/24 06:06  
Container ID: 1240928003-G

Prep Batch: XXX49262  
Prep Method: SW3520C  
Prep Date/Time: 03/18/24 16:55  
Prep Initial Wt./Vol.: 250 mL  
Prep Extract Vol: 1 mL



**Results of 110026-MW1**

Client Sample ID: **110026-MW1**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1240928003  
Lab Project ID: 1240928

Collection Date: 03/06/24 09:52  
Received Date: 03/07/24 13:35  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0750	U	0.100	0.0450	0.0750	mg/L	1		03/13/24 21:02
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	95		50-150			%	1		03/13/24 21:02

**Batch Information**

Analytical Batch: VFC16749  
Analytical Method: AK101  
Analyst: JY  
Analytical Date/Time: 03/13/24 21:02  
Container ID: 1240928003-A

Prep Batch: VXX41003  
Prep Method: SW5030B  
Prep Date/Time: 03/13/24 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW1**

Client Sample ID: **110026-MW1**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928003  
 Lab Project ID: 1240928

Collection Date: 03/06/24 09:52  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:17
1,1,1-Trichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
1,1,2,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:17
1,1,2-Trichloroethane	0.300	U	0.400	0.120	0.300	ug/L	1		03/11/24 17:17
1,1-Dichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
1,1-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
1,1-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
1,2,3-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
1,2,3-Trichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
1,2,4-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
1,2,4-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
1,2-Dibromo-3-chloropropane	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:17
1,2-Dibromoethane	0.0562	U	0.0750	0.0180	0.0562	ug/L	1		03/11/24 17:17
1,2-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
1,2-Dichloroethane	0.375	U	0.500	0.200	0.375	ug/L	1		03/11/24 17:17
1,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
1,3,5-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
1,3-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
1,3-Dichloropropane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:17
1,4-Dichlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:17
2,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
2-Butanone (MEK)	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:17
2-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
2-Hexanone	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:17
4-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
4-Isopropyltoluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
4-Methyl-2-pentanone (MIBK)	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:17
Benzene	0.300	U	0.400	0.120	0.300	ug/L	1		03/11/24 17:17
Bromobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
Bromochloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
Bromodichloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:17
Bromoform	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
Bromomethane	4.50	U	6.00	3.00	4.50	ug/L	1		03/11/24 17:17
Carbon disulfide	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:17
Carbon tetrachloride	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
Chlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:17
Chloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17

Print Date: 03/27/2024 8:35:47AM

J flagging is activated



**Results of 110026-MW1**

Client Sample ID: **110026-MW1**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928003  
 Lab Project ID: 1240928

Collection Date: 03/06/24 09:52  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
Chloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
cis-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
cis-1,3-Dichloropropene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:17
Dibromochloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:17
Dibromomethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
Dichlorodifluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
Ethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
Freon-113	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:17
Hexachlorobutadiene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
Isopropylbenzene (Cumene)	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
Methylene chloride	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:17
Methyl-t-butyl ether	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:17
Naphthalene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
n-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
n-Propylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
o-Xylene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
P & M -Xylene	1.50	U	2.00	0.620	1.50	ug/L	1		03/11/24 17:17
sec-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
Styrene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
tert-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
Tetrachloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
Toluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
trans-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
trans-1,3-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
Trichloroethene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:17
Trichlorofluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:17
Vinyl acetate	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:17
Vinyl chloride	0.112	U	0.150	0.0500	0.112	ug/L	1		03/11/24 17:17
Xylenes (total)	2.25	U	3.00	1.00	2.25	ug/L	1		03/11/24 17:17
<b>Surrogates</b>									
1,2-Dichloroethane-D4 (surr)	105		81-118			%	1		03/11/24 17:17
4-Bromofluorobenzene (surr)	99.7		85-114			%	1		03/11/24 17:17
Toluene-d8 (surr)	97.3		89-112			%	1		03/11/24 17:17

Print Date: 03/27/2024 8:35:47AM

J flagging is activated

## Results of 110026-MW1

Client Sample ID: **110026-MW1**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1240928003  
Lab Project ID: 1240928

Collection Date: 03/06/24 09:52  
Received Date: 03/07/24 13:35  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS23135  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 03/11/24 17:17  
Container ID: 1240928003-D

Prep Batch: VXX40996  
Prep Method: SW5030B  
Prep Date/Time: 03/11/24 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL





Results of 110026-MW2

Client Sample ID: 110026-MW2
Client Project ID: 110026-002; Kasilof Riverview
Lab Sample ID: 1240928004
Lab Project ID: 1240928

Collection Date: 03/06/24 11:02
Received Date: 03/07/24 13:35
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Polynuclear Aromatics GC/MS

Table with 9 columns: Parameter, Result, Qual, LOQ/CL, DL, LOD, Units, DF, Allowable Limits, Date Analyzed. Lists various polynuclear aromatic hydrocarbons and their detection results.

Surrogates

Table with 2 columns: Surrogate Name, Result. Lists 2-Methylnaphthalene-d10 (surr) and Fluoranthene-d10 (surr) with their respective results.

Batch Information

Analytical Batch: XMS14189
Analytical Method: 8270E SIM LV (PAH)
Analyst: NRB
Analytical Date/Time: 03/20/24 18:41
Container ID: 1240928004-I

Prep Batch: XXX49251
Prep Method: SW3535A
Prep Date/Time: 03/13/24 14:00
Prep Initial Wt./Vol.: 255 mL
Prep Extract Vol: 1 mL

## Results of 110026-MW2

Client Sample ID: **110026-MW2**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928004  
 Lab Project ID: 1240928

Collection Date: 03/06/24 11:02  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.311	J	0.584	0.195	0.438	mg/L	1		03/21/24 06:19

### Surrogates

5a Androstane (surr)	71.2		50-150			%	1		03/21/24 06:19
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## Batch Information

Analytical Batch: XFC16798  
 Analytical Method: AK102  
 Analyst: BRP  
 Analytical Date/Time: 03/21/24 06:19  
 Container ID: 1240928004-G

Prep Batch: XXX49262  
 Prep Method: SW3520C  
 Prep Date/Time: 03/18/24 16:55  
 Prep Initial Wt./Vol.: 257 mL  
 Prep Extract Vol: 1 mL

## Results of 110026-MW2

Client Sample ID: **110026-MW2**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928004  
 Lab Project ID: 1240928

Collection Date: 03/06/24 11:02  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0750	U	0.100	0.0450	0.0750	mg/L	1		03/13/24 21:20
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	94		50-150			%	1		03/13/24 21:20

## Batch Information

Analytical Batch: VFC16749  
 Analytical Method: AK101  
 Analyst: JY  
 Analytical Date/Time: 03/13/24 21:20  
 Container ID: 1240928004-A

Prep Batch: VXX41003  
 Prep Method: SW5030B  
 Prep Date/Time: 03/13/24 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



**Results of 110026-MW2**

Client Sample ID: **110026-MW2**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928004  
 Lab Project ID: 1240928

Collection Date: 03/06/24 11:02  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:32
1,1,1-Trichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
1,1,2,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:32
1,1,2-Trichloroethane	0.300	U	0.400	0.120	0.300	ug/L	1		03/11/24 17:32
1,1-Dichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
1,1-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
1,1-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
1,2,3-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
1,2,3-Trichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
1,2,4-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
1,2,4-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
1,2-Dibromo-3-chloropropane	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:32
1,2-Dibromoethane	0.0562	U	0.0750	0.0180	0.0562	ug/L	1		03/11/24 17:32
1,2-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
1,2-Dichloroethane	0.375	U	0.500	0.200	0.375	ug/L	1		03/11/24 17:32
1,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
1,3,5-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
1,3-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
1,3-Dichloropropane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:32
1,4-Dichlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:32
2,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
2-Butanone (MEK)	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:32
2-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
2-Hexanone	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:32
4-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
4-Isopropyltoluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
4-Methyl-2-pentanone (MIBK)	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:32
Benzene	0.300	U	0.400	0.120	0.300	ug/L	1		03/11/24 17:32
Bromobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
Bromochloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
Bromodichloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:32
Bromoform	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
Bromomethane	4.50	U	6.00	3.00	4.50	ug/L	1		03/11/24 17:32
Carbon disulfide	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:32
Carbon tetrachloride	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
Chlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:32
Chloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32

Print Date: 03/27/2024 8:35:47AM

J flagging is activated



**Results of 110026-MW2**

Client Sample ID: **110026-MW2**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928004  
 Lab Project ID: 1240928

Collection Date: 03/06/24 11:02  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
Chloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
cis-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
cis-1,3-Dichloropropene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:32
Dibromochloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:32
Dibromomethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
Dichlorodifluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
Ethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
Freon-113	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:32
Hexachlorobutadiene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
Isopropylbenzene (Cumene)	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
Methylene chloride	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:32
Methyl-t-butyl ether	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:32
Naphthalene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
n-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
n-Propylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
o-Xylene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
P & M -Xylene	1.50	U	2.00	0.620	1.50	ug/L	1		03/11/24 17:32
sec-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
Styrene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
tert-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
Tetrachloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
Toluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
trans-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
trans-1,3-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
Trichloroethene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:32
Trichlorofluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:32
Vinyl acetate	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:32
Vinyl chloride	0.112	U	0.150	0.0500	0.112	ug/L	1		03/11/24 17:32
Xylenes (total)	2.25	U	3.00	1.00	2.25	ug/L	1		03/11/24 17:32
<b>Surrogates</b>									
1,2-Dichloroethane-D4 (surr)	99.7		81-118			%	1		03/11/24 17:32
4-Bromofluorobenzene (surr)	101		85-114			%	1		03/11/24 17:32
Toluene-d8 (surr)	97.9		89-112			%	1		03/11/24 17:32

## Results of 110026-MW2

Client Sample ID: **110026-MW2**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1240928004  
Lab Project ID: 1240928

Collection Date: 03/06/24 11:02  
Received Date: 03/07/24 13:35  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS23135  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 03/11/24 17:32  
Container ID: 1240928004-D

Prep Batch: VXX40996  
Prep Method: SW5030B  
Prep Date/Time: 03/11/24 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



Results of 110026-MW3

Client Sample ID: 110026-MW3
Client Project ID: 110026-002; Kasilof Riverview
Lab Sample ID: 1240928005
Lab Project ID: 1240928

Collection Date: 03/06/24 12:13
Received Date: 03/07/24 13:35
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Polynuclear Aromatics GC/MS

Table with 10 columns: Parameter, Result, Qual, LOQ/CL, DL, LOD, Units, DF, Allowable Limits, Date Analyzed. Lists various polynuclear aromatic hydrocarbons and their detection results.

Surrogates

Table with 2 rows showing surrogate compounds: 2-Methylnaphthalene-d10 (surr) and Fluoranthene-d10 (surr) with their respective results and limits.

Batch Information

Analytical Batch: XMS14189
Analytical Method: 8270E SIM LV (PAH)
Analyst: NRB
Analytical Date/Time: 03/20/24 18:57
Container ID: 1240928005-I
Prep Batch: XXX49251
Prep Method: SW3535A
Prep Date/Time: 03/13/24 14:00
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

## Results of 110026-MW3

Client Sample ID: **110026-MW3**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928005  
 Lab Project ID: 1240928

Collection Date: 03/06/24 12:13  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.239	J	0.588	0.196	0.441	mg/L	1		03/21/24 06:31
<b>Surrogates</b>									
5a Androstane (surr)	80.8		50-150			%	1		03/21/24 06:31

## Batch Information

Analytical Batch: XFC16798  
 Analytical Method: AK102  
 Analyst: BRP  
 Analytical Date/Time: 03/21/24 06:31  
 Container ID: 1240928005-G

Prep Batch: XXX49262  
 Prep Method: SW3520C  
 Prep Date/Time: 03/18/24 16:55  
 Prep Initial Wt./Vol.: 255 mL  
 Prep Extract Vol: 1 mL



## Results of 110026-MW3

Client Sample ID: **110026-MW3**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928005  
 Lab Project ID: 1240928

Collection Date: 03/06/24 12:13  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Volatile Fuels

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0750	U	0.100	0.0450	0.0750	mg/L	1		03/13/24 22:36
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	92.9		50-150			%	1		03/13/24 22:36

## Batch Information

Analytical Batch: VFC16749  
 Analytical Method: AK101  
 Analyst: JY  
 Analytical Date/Time: 03/13/24 22:36  
 Container ID: 1240928005-A

Prep Batch: VXX41004  
 Prep Method: SW5030B  
 Prep Date/Time: 03/13/24 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



**Results of 110026-MW3**

Client Sample ID: **110026-MW3**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928005  
 Lab Project ID: 1240928

Collection Date: 03/06/24 12:13  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:47
1,1,1-Trichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
1,1,2,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:47
1,1,2-Trichloroethane	0.300	U	0.400	0.120	0.300	ug/L	1		03/11/24 17:47
1,1-Dichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
1,1-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
1,1-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
1,2,3-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
1,2,3-Trichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
1,2,4-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
1,2,4-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
1,2-Dibromo-3-chloropropane	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:47
1,2-Dibromoethane	0.0562	U	0.0750	0.0180	0.0562	ug/L	1		03/11/24 17:47
1,2-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
1,2-Dichloroethane	0.375	U	0.500	0.200	0.375	ug/L	1		03/11/24 17:47
1,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
1,3,5-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
1,3-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
1,3-Dichloropropane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:47
1,4-Dichlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:47
2,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
2-Butanone (MEK)	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:47
2-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
2-Hexanone	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:47
4-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
4-Isopropyltoluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
4-Methyl-2-pentanone (MIBK)	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:47
Benzene	0.300	U	0.400	0.120	0.300	ug/L	1		03/11/24 17:47
Bromobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
Bromochloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
Bromodichloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:47
Bromoform	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
Bromomethane	4.50	U	6.00	3.00	4.50	ug/L	1		03/11/24 17:47
Carbon disulfide	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:47
Carbon tetrachloride	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
Chlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:47
Chloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47

Print Date: 03/27/2024 8:35:47AM

J flagging is activated



### Results of 110026-MW3

Client Sample ID: **110026-MW3**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928005  
 Lab Project ID: 1240928

Collection Date: 03/06/24 12:13  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Volatile GC/MS

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
Chloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
cis-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
cis-1,3-Dichloropropene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:47
Dibromochloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:47
Dibromomethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
Dichlorodifluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
Ethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
Freon-113	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:47
Hexachlorobutadiene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
Isopropylbenzene (Cumene)	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
Methylene chloride	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:47
Methyl-t-butyl ether	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:47
Naphthalene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
n-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
n-Propylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
o-Xylene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
P & M -Xylene	1.50	U	2.00	0.620	1.50	ug/L	1		03/11/24 17:47
sec-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
Styrene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
tert-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
Tetrachloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
Toluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
trans-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
trans-1,3-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
Trichloroethene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 17:47
Trichlorofluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 17:47
Vinyl acetate	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 17:47
Vinyl chloride	0.112	U	0.150	0.0500	0.112	ug/L	1		03/11/24 17:47
Xylenes (total)	2.25	U	3.00	1.00	2.25	ug/L	1		03/11/24 17:47

### Surrogates

1,2-Dichloroethane-D4 (surr)	103		81-118		%	1		03/11/24 17:47
4-Bromofluorobenzene (surr)	100		85-114		%	1		03/11/24 17:47
Toluene-d8 (surr)	96.4		89-112		%	1		03/11/24 17:47

Print Date: 03/27/2024 8:35:47AM

J flagging is activated

## Results of 110026-MW3

Client Sample ID: **110026-MW3**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1240928005  
Lab Project ID: 1240928

Collection Date: 03/06/24 12:13  
Received Date: 03/07/24 13:35  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS23135  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 03/11/24 17:47  
Container ID: 1240928005-D

Prep Batch: VXX40996  
Prep Method: SW5030B  
Prep Date/Time: 03/11/24 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

## Results of 110026-MW4

Client Sample ID: **110026-MW4**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928006  
 Lab Project ID: 1240928

Collection Date: 03/06/24 13:17  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Polynuclear Aromatics GC/MS

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:13
2-Methylnaphthalene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:13
Acenaphthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:13
Acenaphthylene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:13
Anthracene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:13
Benzo(a)Anthracene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:13
Benzo[a]pyrene	0.0147	U	0.0196	0.00608	0.0147	ug/L	1		03/20/24 19:13
Benzo[b]Fluoranthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:13
Benzo[g,h,i]perylene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:13
Benzo[k]fluoranthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:13
Chrysene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:13
Dibenzo[a,h]anthracene	0.0147	U	0.0196	0.00608	0.0147	ug/L	1		03/20/24 19:13
Fluoranthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:13
Fluorene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:13
Indeno[1,2,3-c,d] pyrene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:13
Naphthalene	0.0735	U	0.0980	0.0304	0.0735	ug/L	1		03/20/24 19:13
Phenanthrene	0.0735	U	0.0980	0.0304	0.0735	ug/L	1		03/20/24 19:13
Pyrene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:13

## Surrogates

2-Methylnaphthalene-d10 (surr)	76.3		38-100			%	1		03/20/24 19:13
Fluoranthene-d10 (surr)	70.4		30-111			%	1		03/20/24 19:13

## Batch Information

Analytical Batch: XMS14189  
 Analytical Method: 8270E SIM LV (PAH)  
 Analyst: NRB  
 Analytical Date/Time: 03/20/24 19:13  
 Container ID: 1240928006-I

Prep Batch: XXX49251  
 Prep Method: SW3535A  
 Prep Date/Time: 03/13/24 14:00  
 Prep Initial Wt./Vol.: 255 mL  
 Prep Extract Vol: 1 mL

## Results of 110026-MW4

Client Sample ID: **110026-MW4**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928006  
 Lab Project ID: 1240928

Collection Date: 03/06/24 13:17  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.441	U	0.588	0.196	0.441	mg/L	1		03/21/24 06:44
<b>Surrogates</b>									
5a Androstane (surr)	74.5		50-150			%	1		03/21/24 06:44

## Batch Information

Analytical Batch: XFC16798  
 Analytical Method: AK102  
 Analyst: BRP  
 Analytical Date/Time: 03/21/24 06:44  
 Container ID: 1240928006-G

Prep Batch: XXX49262  
 Prep Method: SW3520C  
 Prep Date/Time: 03/18/24 16:55  
 Prep Initial Wt./Vol.: 255 mL  
 Prep Extract Vol: 1 mL

## Results of 110026-MW4

Client Sample ID: **110026-MW4**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928006  
 Lab Project ID: 1240928

Collection Date: 03/06/24 13:17  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0750	U	0.100	0.0450	0.0750	mg/L	1		03/13/24 22:55
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	92.9		50-150			%	1		03/13/24 22:55

## Batch Information

Analytical Batch: VFC16749  
 Analytical Method: AK101  
 Analyst: JY  
 Analytical Date/Time: 03/13/24 22:55  
 Container ID: 1240928006-A

Prep Batch: VXX41004  
 Prep Method: SW5030B  
 Prep Date/Time: 03/13/24 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



**Results of 110026-MW4**

Client Sample ID: **110026-MW4**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928006  
 Lab Project ID: 1240928

Collection Date: 03/06/24 13:17  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:02
1,1,1-Trichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
1,1,2,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:02
1,1,2-Trichloroethane	0.300	U	0.400	0.120	0.300	ug/L	1		03/11/24 18:02
1,1-Dichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
1,1-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
1,1-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
1,2,3-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
1,2,3-Trichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
1,2,4-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
1,2,4-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
1,2-Dibromo-3-chloropropane	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:02
1,2-Dibromoethane	0.0562	U	0.0750	0.0180	0.0562	ug/L	1		03/11/24 18:02
1,2-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
1,2-Dichloroethane	0.375	U	0.500	0.200	0.375	ug/L	1		03/11/24 18:02
1,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
1,3,5-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
1,3-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
1,3-Dichloropropane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:02
1,4-Dichlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:02
2,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
2-Butanone (MEK)	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:02
2-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
2-Hexanone	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:02
4-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
4-Isopropyltoluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
4-Methyl-2-pentanone (MIBK)	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:02
Benzene	0.300	U	0.400	0.120	0.300	ug/L	1		03/11/24 18:02
Bromobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
Bromochloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
Bromodichloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:02
Bromoform	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
Bromomethane	4.50	U	6.00	3.00	4.50	ug/L	1		03/11/24 18:02
Carbon disulfide	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:02
Carbon tetrachloride	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
Chlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:02
Chloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02

Print Date: 03/27/2024 8:35:47AM

J flagging is activated





**Results of 110026-MW4**

Client Sample ID: **110026-MW4**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928006  
 Lab Project ID: 1240928

Collection Date: 03/06/24 13:17  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
Chloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
cis-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
cis-1,3-Dichloropropene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:02
Dibromochloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:02
Dibromomethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
Dichlorodifluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
Ethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
Freon-113	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:02
Hexachlorobutadiene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
Isopropylbenzene (Cumene)	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
Methylene chloride	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:02
Methyl-t-butyl ether	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:02
Naphthalene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
n-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
n-Propylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
o-Xylene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
P & M -Xylene	1.50	U	2.00	0.620	1.50	ug/L	1		03/11/24 18:02
sec-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
Styrene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
tert-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
Tetrachloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
Toluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
trans-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
trans-1,3-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
Trichloroethene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:02
Trichlorofluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:02
Vinyl acetate	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:02
Vinyl chloride	0.112	U	0.150	0.0500	0.112	ug/L	1		03/11/24 18:02
Xylenes (total)	2.25	U	3.00	1.00	2.25	ug/L	1		03/11/24 18:02

**Surrogates**

1,2-Dichloroethane-D4 (surr)	110		81-118			%	1		03/11/24 18:02
4-Bromofluorobenzene (surr)	96.6		85-114			%	1		03/11/24 18:02
Toluene-d8 (surr)	95.9		89-112			%	1		03/11/24 18:02

## Results of 110026-MW4

Client Sample ID: **110026-MW4**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1240928006  
Lab Project ID: 1240928

Collection Date: 03/06/24 13:17  
Received Date: 03/07/24 13:35  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS23135  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 03/11/24 18:02  
Container ID: 1240928006-D

Prep Batch: VXX40996  
Prep Method: SW5030B  
Prep Date/Time: 03/11/24 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

## Results of 110026-MW5

Client Sample ID: **110026-MW5**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928007  
 Lab Project ID: 1240928

Collection Date: 03/06/24 14:20  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Polynuclear Aromatics GC/MS

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:30
2-Methylnaphthalene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:30
Acenaphthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:30
Acenaphthylene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:30
Anthracene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:30
Benzo(a)Anthracene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:30
Benzo[a]pyrene	0.0147	U	0.0196	0.00608	0.0147	ug/L	1		03/20/24 19:30
Benzo[b]Fluoranthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:30
Benzo[g,h,i]perylene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:30
Benzo[k]fluoranthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:30
Chrysene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:30
Dibenzo[a,h]anthracene	0.0147	U	0.0196	0.00608	0.0147	ug/L	1		03/20/24 19:30
Fluoranthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:30
Fluorene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:30
Indeno[1,2,3-c,d] pyrene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:30
Naphthalene	0.0735	U	0.0980	0.0304	0.0735	ug/L	1		03/20/24 19:30
Phenanthrene	0.0735	U	0.0980	0.0304	0.0735	ug/L	1		03/20/24 19:30
Pyrene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		03/20/24 19:30

## Surrogates

2-Methylnaphthalene-d10 (surr)	83.2		38-100			%	1		03/20/24 19:30
Fluoranthene-d10 (surr)	92.1		30-111			%	1		03/20/24 19:30

## Batch Information

Analytical Batch: XMS14189  
 Analytical Method: 8270E SIM LV (PAH)  
 Analyst: NRB  
 Analytical Date/Time: 03/20/24 19:30  
 Container ID: 1240928007-I

Prep Batch: XXX49251  
 Prep Method: SW3535A  
 Prep Date/Time: 03/13/24 14:00  
 Prep Initial Wt./Vol.: 255 mL  
 Prep Extract Vol: 1 mL

## Results of 110026-MW5

Client Sample ID: **110026-MW5**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928007  
 Lab Project ID: 1240928

Collection Date: 03/06/24 14:20  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.227	J	0.588	0.196	0.441	mg/L	1		03/21/24 06:56
<b>Surrogates</b>									
5a Androstane (surr)	76.1		50-150			%	1		03/21/24 06:56

## Batch Information

Analytical Batch: XFC16798  
 Analytical Method: AK102  
 Analyst: BRP  
 Analytical Date/Time: 03/21/24 06:56  
 Container ID: 1240928007-G

Prep Batch: XXX49262  
 Prep Method: SW3520C  
 Prep Date/Time: 03/18/24 16:55  
 Prep Initial Wt./Vol.: 255 mL  
 Prep Extract Vol: 1 mL

## Results of 110026-MW5

Client Sample ID: **110026-MW5**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928007  
 Lab Project ID: 1240928

Collection Date: 03/06/24 14:20  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0750	U	0.100	0.0450	0.0750	mg/L	1		03/13/24 23:14
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	95		50-150			%	1		03/13/24 23:14

## Batch Information

Analytical Batch: VFC16749  
 Analytical Method: AK101  
 Analyst: JY  
 Analytical Date/Time: 03/13/24 23:14  
 Container ID: 1240928007-A

Prep Batch: VXX41004  
 Prep Method: SW5030B  
 Prep Date/Time: 03/13/24 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



**Results of 110026-MW5**

Client Sample ID: **110026-MW5**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928007  
 Lab Project ID: 1240928

Collection Date: 03/06/24 14:20  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:18
1,1,1-Trichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
1,1,2,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:18
1,1,2-Trichloroethane	0.300	U	0.400	0.120	0.300	ug/L	1		03/11/24 18:18
1,1-Dichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
1,1-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
1,1-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
1,2,3-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
1,2,3-Trichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
1,2,4-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
1,2,4-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
1,2-Dibromo-3-chloropropane	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:18
1,2-Dibromoethane	0.0562	U	0.0750	0.0180	0.0562	ug/L	1		03/11/24 18:18
1,2-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
1,2-Dichloroethane	0.375	U	0.500	0.200	0.375	ug/L	1		03/11/24 18:18
1,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
1,3,5-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
1,3-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
1,3-Dichloropropane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:18
1,4-Dichlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:18
2,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
2-Butanone (MEK)	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:18
2-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
2-Hexanone	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:18
4-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
4-Isopropyltoluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
4-Methyl-2-pentanone (MIBK)	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:18
Benzene	6.18		0.400	0.120	0.300	ug/L	1		03/11/24 18:18
Bromobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
Bromochloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
Bromodichloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:18
Bromoform	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
Bromomethane	4.50	U	6.00	3.00	4.50	ug/L	1		03/11/24 18:18
Carbon disulfide	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:18
Carbon tetrachloride	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
Chlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:18
Chloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18

Print Date: 03/27/2024 8:35:47AM

J flagging is activated



**Results of 110026-MW5**

Client Sample ID: **110026-MW5**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928007  
 Lab Project ID: 1240928

Collection Date: 03/06/24 14:20  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
Chloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
cis-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
cis-1,3-Dichloropropene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:18
Dibromochloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:18
Dibromomethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
Dichlorodifluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
Ethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
Freon-113	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:18
Hexachlorobutadiene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
Isopropylbenzene (Cumene)	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
Methylene chloride	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:18
Methyl-t-butyl ether	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:18
Naphthalene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
n-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
n-Propylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
o-Xylene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
P & M -Xylene	1.50	U	2.00	0.620	1.50	ug/L	1		03/11/24 18:18
sec-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
Styrene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
tert-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
Tetrachloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
Toluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
trans-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
trans-1,3-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
Trichloroethene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:18
Trichlorofluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:18
Vinyl acetate	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:18
Vinyl chloride	0.112	U	0.150	0.0500	0.112	ug/L	1		03/11/24 18:18
Xylenes (total)	2.25	U	3.00	1.00	2.25	ug/L	1		03/11/24 18:18

**Surrogates**

1,2-Dichloroethane-D4 (surr)	114		81-118			%	1		03/11/24 18:18
4-Bromofluorobenzene (surr)	96.8		85-114			%	1		03/11/24 18:18
Toluene-d8 (surr)	95.5		89-112			%	1		03/11/24 18:18

## Results of 110026-MW5

Client Sample ID: **110026-MW5**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1240928007  
Lab Project ID: 1240928

Collection Date: 03/06/24 14:20  
Received Date: 03/07/24 13:35  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS23135  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 03/11/24 18:18  
Container ID: 1240928007-D

Prep Batch: VXX40996  
Prep Method: SW5030B  
Prep Date/Time: 03/11/24 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL





**Results of 110026-MW15**

Client Sample ID: **110026-MW15**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928008  
 Lab Project ID: 1240928

Collection Date: 03/06/24 14:50  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0382	U	0.0510	0.0153	0.0382	ug/L	1		03/20/24 19:46
2-Methylnaphthalene	0.0382	U	0.0510	0.0153	0.0382	ug/L	1		03/20/24 19:46
Acenaphthene	0.0382	U	0.0510	0.0153	0.0382	ug/L	1		03/20/24 19:46
Acenaphthylene	0.0382	U	0.0510	0.0153	0.0382	ug/L	1		03/20/24 19:46
Anthracene	0.0382	U	0.0510	0.0153	0.0382	ug/L	1		03/20/24 19:46
Benzo(a)Anthracene	0.0382	U	0.0510	0.0153	0.0382	ug/L	1		03/20/24 19:46
Benzo[a]pyrene	0.0153	U	0.0204	0.00633	0.0153	ug/L	1		03/20/24 19:46
Benzo[b]Fluoranthene	0.0382	U	0.0510	0.0153	0.0382	ug/L	1		03/20/24 19:46
Benzo[g,h,i]perylene	0.0382	U	0.0510	0.0153	0.0382	ug/L	1		03/20/24 19:46
Benzo[k]fluoranthene	0.0382	U	0.0510	0.0153	0.0382	ug/L	1		03/20/24 19:46
Chrysene	0.0382	U	0.0510	0.0153	0.0382	ug/L	1		03/20/24 19:46
Dibenzo[a,h]anthracene	0.0153	U	0.0204	0.00633	0.0153	ug/L	1		03/20/24 19:46
Fluoranthene	0.0382	U	0.0510	0.0153	0.0382	ug/L	1		03/20/24 19:46
Fluorene	0.0382	U	0.0510	0.0153	0.0382	ug/L	1		03/20/24 19:46
Indeno[1,2,3-c,d] pyrene	0.0382	U	0.0510	0.0153	0.0382	ug/L	1		03/20/24 19:46
Naphthalene	0.0765	U	0.102	0.0316	0.0765	ug/L	1		03/20/24 19:46
Phenanthrene	0.0765	U	0.102	0.0316	0.0765	ug/L	1		03/20/24 19:46
Pyrene	0.0382	U	0.0510	0.0153	0.0382	ug/L	1		03/20/24 19:46

**Surrogates**

2-Methylnaphthalene-d10 (surr)	78		38-100			%	1		03/20/24 19:46
Fluoranthene-d10 (surr)	85.1		30-111			%	1		03/20/24 19:46

**Batch Information**

Analytical Batch: XMS14189  
 Analytical Method: 8270E SIM LV (PAH)  
 Analyst: NRB  
 Analytical Date/Time: 03/20/24 19:46  
 Container ID: 1240928008-I

Prep Batch: XXX49251  
 Prep Method: SW3535A  
 Prep Date/Time: 03/13/24 14:00  
 Prep Initial Wt./Vol.: 245 mL  
 Prep Extract Vol: 1 mL



**Results of 110026-MW15**

Client Sample ID: **110026-MW15**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1240928008  
Lab Project ID: 1240928

Collection Date: 03/06/24 14:50  
Received Date: 03/07/24 13:35  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.277	J	0.588	0.196	0.441	mg/L	1		03/21/24 07:09
<b>Surrogates</b>									
5a Androstane (surr)	77.6		50-150			%	1		03/21/24 07:09

**Batch Information**

Analytical Batch: XFC16798  
Analytical Method: AK102  
Analyst: BRP  
Analytical Date/Time: 03/21/24 07:09  
Container ID: 1240928008-G

Prep Batch: XXX49262  
Prep Method: SW3520C  
Prep Date/Time: 03/18/24 16:55  
Prep Initial Wt./Vol.: 255 mL  
Prep Extract Vol: 1 mL

## Results of 110026-MW15

Client Sample ID: **110026-MW15**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928008  
 Lab Project ID: 1240928

Collection Date: 03/06/24 14:50  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0750	U	0.100	0.0450	0.0750	mg/L	1		03/13/24 23:33

### Surrogates

4-Bromofluorobenzene (surr)	96.2		50-150			%	1		03/13/24 23:33
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## Batch Information

Analytical Batch: VFC16749  
 Analytical Method: AK101  
 Analyst: JY  
 Analytical Date/Time: 03/13/24 23:33  
 Container ID: 1240928008-A

Prep Batch: VXX41004  
 Prep Method: SW5030B  
 Prep Date/Time: 03/13/24 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



**Results of 110026-MW15**

Client Sample ID: **110026-MW15**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928008  
 Lab Project ID: 1240928

Collection Date: 03/06/24 14:50  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:33
1,1,1-Trichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
1,1,2,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:33
1,1,2-Trichloroethane	0.300	U	0.400	0.120	0.300	ug/L	1		03/11/24 18:33
1,1-Dichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
1,1-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
1,1-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
1,2,3-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
1,2,3-Trichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
1,2,4-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
1,2,4-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
1,2-Dibromo-3-chloropropane	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:33
1,2-Dibromoethane	0.0562	U	0.0750	0.0180	0.0562	ug/L	1		03/11/24 18:33
1,2-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
1,2-Dichloroethane	0.375	U	0.500	0.200	0.375	ug/L	1		03/11/24 18:33
1,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
1,3,5-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
1,3-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
1,3-Dichloropropane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:33
1,4-Dichlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:33
2,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
2-Butanone (MEK)	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:33
2-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
2-Hexanone	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:33
4-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
4-Isopropyltoluene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
4-Methyl-2-pentanone (MIBK)	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:33
Benzene	5.34		0.400	0.120	0.300	ug/L	1		03/11/24 18:33
Bromobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
Bromochloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
Bromodichloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:33
Bromoform	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
Bromomethane	4.50	U	6.00	3.00	4.50	ug/L	1		03/11/24 18:33
Carbon disulfide	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:33
Carbon tetrachloride	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
Chlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:33
Chloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33

Print Date: 03/27/2024 8:35:47AM

J flagging is activated



**Results of 110026-MW15**

Client Sample ID: **110026-MW15**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928008  
 Lab Project ID: 1240928

Collection Date: 03/06/24 14:50  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
Chloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
cis-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
cis-1,3-Dichloropropene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:33
Dibromochloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:33
Dibromomethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
Dichlorodifluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
Ethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
Freon-113	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:33
Hexachlorobutadiene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
Isopropylbenzene (Cumene)	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
Methylene chloride	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:33
Methyl-t-butyl ether	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:33
Naphthalene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
n-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
n-Propylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
o-Xylene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
P & M -Xylene	1.50	U	2.00	0.620	1.50	ug/L	1		03/11/24 18:33
sec-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
Styrene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
tert-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
Tetrachloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
Toluene	0.380	J	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
trans-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
trans-1,3-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
Trichloroethene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 18:33
Trichlorofluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 18:33
Vinyl acetate	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 18:33
Vinyl chloride	0.112	U	0.150	0.0500	0.112	ug/L	1		03/11/24 18:33
Xylenes (total)	2.25	U	3.00	1.00	2.25	ug/L	1		03/11/24 18:33

**Surrogates**

1,2-Dichloroethane-D4 (surr)	105		81-118			%	1		03/11/24 18:33
4-Bromofluorobenzene (surr)	100		85-114			%	1		03/11/24 18:33
Toluene-d8 (surr)	96.5		89-112			%	1		03/11/24 18:33

## Results of 110026-MW15

Client Sample ID: **110026-MW15**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1240928008  
Lab Project ID: 1240928

Collection Date: 03/06/24 14:50  
Received Date: 03/07/24 13:35  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS23135  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 03/11/24 18:33  
Container ID: 1240928008-D

Prep Batch: VXX40996  
Prep Method: SW5030B  
Prep Date/Time: 03/11/24 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-WTB**

Client Sample ID: **110026-WTB**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1240928009  
Lab Project ID: 1240928

Collection Date: 03/05/24 08:00  
Received Date: 03/07/24 13:35  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0750	U	0.100	0.0450	0.0750	mg/L	1		03/13/24 17:15
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	94.8		50-150			%	1		03/13/24 17:15

**Batch Information**

Analytical Batch: VFC16749  
Analytical Method: AK101  
Analyst: JY  
Analytical Date/Time: 03/13/24 17:15  
Container ID: 1240928009-A

Prep Batch: VXX41003  
Prep Method: SW5030B  
Prep Date/Time: 03/13/24 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



Results of 110026-WTB

Client Sample ID: 110026-WTB
Client Project ID: 110026-002; Kasilof Riverview
Lab Sample ID: 1240928009
Lab Project ID: 1240928

Collection Date: 03/05/24 08:00
Received Date: 03/07/24 13:35
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Table with 9 columns: Parameter, Result, Qual, LOQ/CL, DL, LOD, Units, DF, Allowable Limits, Date Analyzed. Lists various chemical compounds and their detection results.

Print Date: 03/27/2024 8:35:47AM

J flagging is activated





**Results of 110026-WTB**

Client Sample ID: **110026-WTB**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1240928009  
 Lab Project ID: 1240928

Collection Date: 03/05/24 08:00  
 Received Date: 03/07/24 13:35  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 16:46
Chloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 16:46
cis-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 16:46
cis-1,3-Dichloropropene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 16:46
Dibromochloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 16:46
Dibromomethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 16:46
Dichlorodifluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 16:46
Ethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 16:46
Freon-113	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 16:46
Hexachlorobutadiene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 16:46
Isopropylbenzene (Cumene)	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 16:46
Methylene chloride	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 16:46
Methyl-t-butyl ether	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 16:46
Naphthalene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 16:46
n-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 16:46
n-Propylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 16:46
o-Xylene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 16:46
P & M -Xylene	0.890	J	2.00	0.620	1.50	ug/L	1		03/11/24 16:46
sec-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 16:46
Styrene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 16:46
tert-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 16:46
Tetrachloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 16:46
Toluene	0.620	J	1.00	0.310	0.750	ug/L	1		03/11/24 16:46
trans-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 16:46
trans-1,3-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 16:46
Trichloroethene	0.375	U	0.500	0.150	0.375	ug/L	1		03/11/24 16:46
Trichlorofluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		03/11/24 16:46
Vinyl acetate	7.50	U	10.0	3.10	7.50	ug/L	1		03/11/24 16:46
Vinyl chloride	0.112	U	0.150	0.0500	0.112	ug/L	1		03/11/24 16:46
Xylenes (total)	2.25	U	3.00	1.00	2.25	ug/L	1		03/11/24 16:46

**Surrogates**

1,2-Dichloroethane-D4 (surr)	110		81-118			%	1		03/11/24 16:46
4-Bromofluorobenzene (surr)	95.4		85-114			%	1		03/11/24 16:46
Toluene-d8 (surr)	96.4		89-112			%	1		03/11/24 16:46

## Results of 110026-WTB

Client Sample ID: **110026-WTB**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1240928009  
Lab Project ID: 1240928

Collection Date: 03/05/24 08:00  
Received Date: 03/07/24 13:35  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS23135  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 03/11/24 16:46  
Container ID: 1240928009-C

Prep Batch: VXX40996  
Prep Method: SW5030B  
Prep Date/Time: 03/11/24 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Method Blank**

Blank ID: MB for HBN 1872936 [VXX/40996]  
 Blank Lab ID: 1756095

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1240928003, 1240928004, 1240928005, 1240928006, 1240928007, 1240928008, 1240928009

**Results by SW8260D**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
1,1,1,2-Tetrachloroethane	0.375U	0.500	0.150	0.375	ug/L
1,1,1-Trichloroethane	0.750U	1.00	0.310	0.750	ug/L
1,1,2,2-Tetrachloroethane	0.375U	0.500	0.150	0.375	ug/L
1,1,2-Trichloroethane	0.300U	0.400	0.120	0.300	ug/L
1,1-Dichloroethane	0.750U	1.00	0.310	0.750	ug/L
1,1-Dichloroethene	0.750U	1.00	0.310	0.750	ug/L
1,1-Dichloropropene	0.750U	1.00	0.310	0.750	ug/L
1,2,3-Trichlorobenzene	0.750U	1.00	0.310	0.750	ug/L
1,2,3-Trichloropropane	0.750U	1.00	0.310	0.750	ug/L
1,2,4-Trichlorobenzene	0.750U	1.00	0.310	0.750	ug/L
1,2,4-Trimethylbenzene	0.750U	1.00	0.310	0.750	ug/L
1,2-Dibromo-3-chloropropane	7.50U	10.0	3.10	7.50	ug/L
1,2-Dibromoethane	0.0562U	0.0750	0.0180	0.0562	ug/L
1,2-Dichlorobenzene	0.750U	1.00	0.310	0.750	ug/L
1,2-Dichloroethane	0.375U	0.500	0.200	0.375	ug/L
1,2-Dichloropropane	0.750U	1.00	0.310	0.750	ug/L
1,3,5-Trimethylbenzene	0.750U	1.00	0.310	0.750	ug/L
1,3-Dichlorobenzene	0.750U	1.00	0.310	0.750	ug/L
1,3-Dichloropropane	0.375U	0.500	0.150	0.375	ug/L
1,4-Dichlorobenzene	0.375U	0.500	0.150	0.375	ug/L
2,2-Dichloropropane	0.750U	1.00	0.310	0.750	ug/L
2-Butanone (MEK)	7.50U	10.0	3.10	7.50	ug/L
2-Chlorotoluene	0.750U	1.00	0.310	0.750	ug/L
2-Hexanone	7.50U	10.0	3.10	7.50	ug/L
4-Chlorotoluene	0.750U	1.00	0.310	0.750	ug/L
4-Isopropyltoluene	0.750U	1.00	0.310	0.750	ug/L
4-Methyl-2-pentanone (MIBK)	7.50U	10.0	3.10	7.50	ug/L
Benzene	0.300U	0.400	0.120	0.300	ug/L
Bromobenzene	0.750U	1.00	0.310	0.750	ug/L
Bromochloromethane	0.750U	1.00	0.310	0.750	ug/L
Bromodichloromethane	0.375U	0.500	0.150	0.375	ug/L
Bromoform	0.750U	1.00	0.310	0.750	ug/L
Bromomethane	4.50U	6.00	3.00	4.50	ug/L
Carbon disulfide	7.50U	10.0	3.10	7.50	ug/L
Carbon tetrachloride	0.750U	1.00	0.310	0.750	ug/L
Chlorobenzene	0.375U	0.500	0.150	0.375	ug/L
Chloroethane	0.750U	1.00	0.310	0.750	ug/L
Chloroform	0.750U	1.00	0.310	0.750	ug/L
Chloromethane	0.750U	1.00	0.310	0.750	ug/L
cis-1,2-Dichloroethene	0.750U	1.00	0.310	0.750	ug/L
cis-1,3-Dichloropropene	0.375U	0.500	0.150	0.375	ug/L
Dibromochloromethane	0.375U	0.500	0.150	0.375	ug/L

Print Date: 03/27/2024 8:35:51AM



### Method Blank

Blank ID: MB for HBN 1872936 [VXX/40996]  
Blank Lab ID: 1756095

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1240928003, 1240928004, 1240928005, 1240928006, 1240928007, 1240928008, 1240928009

### Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Dibromomethane	0.750U	1.00	0.310	0.750	ug/L
Dichlorodifluoromethane	0.750U	1.00	0.310	0.750	ug/L
Ethylbenzene	0.750U	1.00	0.310	0.750	ug/L
Freon-113	7.50U	10.0	3.10	7.50	ug/L
Hexachlorobutadiene	0.750U	1.00	0.310	0.750	ug/L
Isopropylbenzene (Cumene)	0.750U	1.00	0.310	0.750	ug/L
Methylene chloride	7.50U	10.0	3.10	7.50	ug/L
Methyl-t-butyl ether	7.50U	10.0	3.10	7.50	ug/L
Naphthalene	0.750U	1.00	0.310	0.750	ug/L
n-Butylbenzene	0.750U	1.00	0.310	0.750	ug/L
n-Propylbenzene	0.750U	1.00	0.310	0.750	ug/L
o-Xylene	0.750U	1.00	0.310	0.750	ug/L
P & M -Xylene	1.50U	2.00	0.620	1.50	ug/L
sec-Butylbenzene	0.750U	1.00	0.310	0.750	ug/L
Styrene	0.750U	1.00	0.310	0.750	ug/L
tert-Butylbenzene	0.750U	1.00	0.310	0.750	ug/L
Tetrachloroethene	0.750U	1.00	0.310	0.750	ug/L
Toluene	0.750U	1.00	0.310	0.750	ug/L
trans-1,2-Dichloroethene	0.750U	1.00	0.310	0.750	ug/L
trans-1,3-Dichloropropene	0.750U	1.00	0.310	0.750	ug/L
Trichloroethene	0.375U	0.500	0.150	0.375	ug/L
Trichlorofluoromethane	0.750U	1.00	0.310	0.750	ug/L
Vinyl acetate	7.50U	10.0	3.10	7.50	ug/L
Vinyl chloride	0.112U	0.150	0.0500	0.112	ug/L
Xylenes (total)	2.25U	3.00	1.00	2.25	ug/L

### Surrogates

1,2-Dichloroethane-D4 (surr)	110	81-118		0	%
4-Bromofluorobenzene (surr)	95.5	85-114		0	%
Toluene-d8 (surr)	95.9	89-112		0	%

### Batch Information

Analytical Batch: VMS23135  
Analytical Method: SW8260D  
Instrument: VPA 780/5975 GC/MS  
Analyst: JY  
Analytical Date/Time: 3/11/2024 3:11:00PM

Prep Batch: VXX40996  
Prep Method: SW5030B  
Prep Date/Time: 3/11/2024 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 03/27/2024 8:35:51AM



### Leaching Blank

Blank ID: LB for HBN 1872389 [TCLP/12969]  
Blank Lab ID: 1755687

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1240928003, 1240928004, 1240928005, 1240928006, 1240928007, 1240928008, 1240928009

### Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
1,1-Dichloroethene	37.5U	50.0	15.5	37.5	ug/L
1,2-Dichloroethane	18.8U	25.0	10.0	18.8	ug/L
1,4-Dichlorobenzene	18.8U	25.0	7.50	18.8	ug/L
2-Butanone (MEK)	375U	500	155	375	ug/L
Benzene	15.0U	20.0	6.00	15.0	ug/L
Carbon tetrachloride	37.5U	50.0	15.5	37.5	ug/L
Chlorobenzene	18.8U	25.0	7.50	18.8	ug/L
Chloroform	37.5U	50.0	15.5	37.5	ug/L
Hexachlorobutadiene	37.5U	50.0	15.5	37.5	ug/L
Tetrachloroethene	37.5U	50.0	15.5	37.5	ug/L
Trichloroethene	18.8U	25.0	7.50	18.8	ug/L
Vinyl chloride	5.63U	7.50	2.50	5.63	ug/L

### Surrogates

1,2-Dichloroethane-D4 (surr)	103	81-118		0	%
4-Bromofluorobenzene (surr)	101	85-114		0	%
Toluene-d8 (surr)	96.8	89-112		0	%

### Batch Information

Analytical Batch: VMS23135  
Analytical Method: SW8260D  
Instrument: VPA 780/5975 GC/MS  
Analyst: JY  
Analytical Date/Time: 3/11/2024 7:19:00PM

Prep Batch: VXX40996  
Prep Method: SW5030B  
Prep Date/Time: 3/11/2024 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 03/27/2024 8:35:51AM

## Leaching Blank

Blank ID: LB for HBN 1872431 [TCLP/12970]  
 Blank Lab ID: 1755688

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1240928003, 1240928004, 1240928005, 1240928006, 1240928007, 1240928008, 1240928009

## Results by SW8260D

Parameter	Results	LOQ/CL	DL	LOD	Units
1,1-Dichloroethene	37.5U	50.0	15.5	37.5	ug/L
1,2-Dichloroethane	18.8U	25.0	10.0	18.8	ug/L
1,4-Dichlorobenzene	18.8U	25.0	7.50	18.8	ug/L
2-Butanone (MEK)	375U	500	155	375	ug/L
Benzene	15.0U	20.0	6.00	15.0	ug/L
Carbon tetrachloride	37.5U	50.0	15.5	37.5	ug/L
Chlorobenzene	18.8U	25.0	7.50	18.8	ug/L
Chloroform	37.5U	50.0	15.5	37.5	ug/L
Hexachlorobutadiene	37.5U	50.0	15.5	37.5	ug/L
Tetrachloroethene	37.5U	50.0	15.5	37.5	ug/L
Trichloroethene	18.8U	25.0	7.50	18.8	ug/L
Vinyl chloride	5.63U	7.50	2.50	5.63	ug/L

### Surrogates

1,2-Dichloroethane-D4 (surr)	105	81-118		0	%
4-Bromofluorobenzene (surr)	102	85-114		0	%
Toluene-d8 (surr)	96.6	89-112		0	%

## Batch Information

Analytical Batch: VMS23135  
 Analytical Method: SW8260D  
 Instrument: VPA 780/5975 GC/MS  
 Analyst: JY  
 Analytical Date/Time: 3/11/2024 7:35:00PM

Prep Batch: VXX40996  
 Prep Method: SW5030B  
 Prep Date/Time: 3/11/2024 6:00:00AM  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL

Print Date: 03/27/2024 8:35:51AM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1240928 [VXX40996]  
 Blank Spike Lab ID: 1756096  
 Date Analyzed: 03/11/2024 15:26

Spike Duplicate ID: LCSD for HBN 1240928 [VXX40996]  
 Spike Duplicate Lab ID: 1756097  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1240928003, 1240928004, 1240928005, 1240928006, 1240928007, 1240928008, 1240928009

## Results by SW8260D

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,1,2-Tetrachloroethane	30	33.6	112	30	35.1	117	( 78-124 )	4.40	(< 20 )
1,1,1-Trichloroethane	30	32.3	108	30	33.6	112	( 74-131 )	3.90	(< 20 )
1,1,2,2-Tetrachloroethane	30	29.8	99	30	28.6	95	( 71-121 )	4.20	(< 20 )
1,1,2-Trichloroethane	30	31.7	106	30	31.7	106	( 80-119 )	0.16	(< 20 )
1,1-Dichloroethane	30	30.7	102	30	30.0	100	( 77-125 )	2.40	(< 20 )
1,1-Dichloroethene	30	30.9	103	30	31.0	103	( 71-131 )	0.10	(< 20 )
1,1-Dichloropropene	30	32.1	107	30	32.9	110	( 79-125 )	2.60	(< 20 )
1,2,3-Trichlorobenzene	30	24.6	82	30	26.7	89	( 69-129 )	8.10	(< 20 )
1,2,3-Trichloropropane	30	30.6	102	30	31.0	103	( 73-122 )	1.40	(< 20 )
1,2,4-Trichlorobenzene	30	26.5	88	30	29.0	97	( 69-130 )	8.70	(< 20 )
1,2,4-Trimethylbenzene	30	28.6	95	30	29.7	99	( 79-124 )	3.80	(< 20 )
1,2-Dibromo-3-chloropropane	30	28.7	96	30	29.2	97	( 62-128 )	1.80	(< 20 )
1,2-Dibromoethane	30	34.0	113	30	35.7	119	( 77-121 )	4.90	(< 20 )
1,2-Dichlorobenzene	30	29.2	97	30	30.2	101	( 80-119 )	3.30	(< 20 )
1,2-Dichloroethane	30	32.6	109	30	31.5	105	( 73-128 )	3.40	(< 20 )
1,2-Dichloropropane	30	33.3	111	30	33.3	111	( 78-122 )	0.21	(< 20 )
1,3,5-Trimethylbenzene	30	28.4	95	30	29.1	97	( 75-124 )	2.70	(< 20 )
1,3-Dichlorobenzene	30	29.3	98	30	31.2	104	( 80-119 )	6.30	(< 20 )
1,3-Dichloropropane	30	32.1	107	30	32.2	107	( 80-119 )	0.44	(< 20 )
1,4-Dichlorobenzene	30	29.5	98	30	31.2	104	( 79-118 )	5.80	(< 20 )
2,2-Dichloropropane	30	31.8	106	30	32.7	109	( 60-139 )	3.00	(< 20 )
2-Butanone (MEK)	90	99.9	111	90	94.5	105	( 56-143 )	5.50	(< 20 )
2-Chlorotoluene	30	27.7	92	30	27.7	92	( 79-122 )	0.14	(< 20 )
2-Hexanone	90	101	112	90	90.7	101	( 57-139 )	10.50	(< 20 )
4-Chlorotoluene	30	28.0	93	30	27.5	92	( 78-122 )	1.60	(< 20 )
4-Isopropyltoluene	30	29.1	97	30	31.0	103	( 77-127 )	6.60	(< 20 )
4-Methyl-2-pentanone (MIBK)	90	114	126	90	107	119	( 67-130 )	5.90	(< 20 )
Benzene	30	31.8	106	30	31.5	105	( 79-120 )	0.98	(< 20 )
Bromobenzene	30	30.3	101	30	32.0	107	( 80-120 )	5.50	(< 20 )
Bromochloromethane	30	35.1	117	30	35.6	119	( 78-123 )	1.40	(< 20 )
Bromodichloromethane	30	34.7	116	30	33.6	112	( 79-125 )	3.10	(< 20 )
Bromoform	30	32.7	109	30	32.9	110	( 66-130 )	0.61	(< 20 )
Bromomethane	30	35.5	118	30	37.0	123	( 53-141 )	4.30	(< 20 )

Print Date: 03/27/2024 8:35:54AM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1240928 [VXX40996]  
 Blank Spike Lab ID: 1756096  
 Date Analyzed: 03/11/2024 15:26

Spike Duplicate ID: LCSD for HBN 1240928 [VXX40996]  
 Spike Duplicate Lab ID: 1756097  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1240928003, 1240928004, 1240928005, 1240928006, 1240928007, 1240928008, 1240928009

## Results by SW8260D

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Carbon disulfide	45	44.0	98	45	40.0	89	( 64-133 )	9.70	(< 20 )
Carbon tetrachloride	30	33.9	113	30	35.3	118	( 72-136 )	4.00	(< 20 )
Chlorobenzene	30	31.8	106	30	32.8	109	( 82-118 )	3.00	(< 20 )
Chloroethane	30	29.9	100	30	34.6	115	( 60-138 )	14.80	(< 20 )
Chloroform	30	31.8	106	30	31.1	104	( 79-124 )	2.50	(< 20 )
Chloromethane	30	30.8	103	30	28.4	95	( 50-139 )	8.20	(< 20 )
cis-1,2-Dichloroethene	30	32.0	107	30	31.8	106	( 78-123 )	0.53	(< 20 )
cis-1,3-Dichloropropene	30	35.9	120	30	36.7	122	( 75-124 )	2.10	(< 20 )
Dibromochloromethane	30	31.9	106	30	32.9	110	( 74-126 )	3.10	(< 20 )
Dibromomethane	30	34.6	115	30	34.1	114	( 79-123 )	1.50	(< 20 )
Dichlorodifluoromethane	30	28.1	94	30	24.1	80	( 32-152 )	15.40	(< 20 )
Ethylbenzene	30	30.2	101	30	30.8	103	( 79-121 )	1.90	(< 20 )
Freon-113	45	46.4	103	45	45.8	102	( 70-136 )	1.10	(< 20 )
Hexachlorobutadiene	30	28.6	95	30	28.8	96	( 66-134 )	0.80	(< 20 )
Isopropylbenzene (Cumene)	30	30.0	100	30	30.5	102	( 72-131 )	1.50	(< 20 )
Methylene chloride	30	32.5	108	30	30.5	102	( 74-124 )	6.20	(< 20 )
Methyl-t-butyl ether	45	52.5	117	45	48.9	109	( 71-124 )	7.10	(< 20 )
Naphthalene	30	26.3	88	30	30.3	101	( 61-128 )	14.30	(< 20 )
n-Butylbenzene	30	28.1	94	30	27.6	92	( 75-128 )	2.00	(< 20 )
n-Propylbenzene	30	27.3	91	30	27.1	90	( 76-126 )	0.88	(< 20 )
o-Xylene	30	30.6	102	30	30.9	103	( 78-122 )	0.88	(< 20 )
P & M -Xylene	60	60.9	101	60	61.6	103	( 80-121 )	1.20	(< 20 )
sec-Butylbenzene	30	28.2	94	30	28.2	94	( 77-126 )	0.32	(< 20 )
Styrene	30	32.5	108	30	32.1	107	( 78-123 )	1.20	(< 20 )
tert-Butylbenzene	30	28.4	95	30	30.1	100	( 78-124 )	5.70	(< 20 )
Tetrachloroethene	30	31.0	103	30	34.5	115	( 74-129 )	10.70	(< 20 )
Toluene	30	29.0	97	30	29.6	99	( 80-121 )	1.90	(< 20 )
trans-1,2-Dichloroethene	30	31.2	104	30	31.1	104	( 75-124 )	0.35	(< 20 )
trans-1,3-Dichloropropene	30	29.3	98	30	29.0	97	( 73-127 )	1.10	(< 20 )
Trichloroethene	30	32.6	109	30	33.3	111	( 79-123 )	2.30	(< 20 )
Trichlorofluoromethane	30	35.8	119	30	37.7	126	( 65-141 )	5.10	(< 20 )
Vinyl acetate	30	34.2	114	30	34.1	114	( 54-146 )	0.32	(< 20 )
Vinyl chloride	30	26.9	90	30	29.0	97	( 58-137 )	7.60	(< 20 )

Print Date: 03/27/2024 8:35:54AM



## Blank Spike Summary

Blank Spike ID: LCS for HBN 1240928 [VXX40996]  
 Blank Spike Lab ID: 1756096  
 Date Analyzed: 03/11/2024 15:26

Spike Duplicate ID: LCSD for HBN 1240928 [VXX40996]  
 Spike Duplicate Lab ID: 1756097  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1240928003, 1240928004, 1240928005, 1240928006, 1240928007, 1240928008, 1240928009

## Results by SW8260D

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Xylenes (total)	90	91.5	102	90	92.5	103	( 79-121 )	1.10	(< 20 )
<b>Surrogates</b>									
1,2-Dichloroethane-D4 (surr)	30		103	30		99	( 81-118 )	4.70	
4-Bromofluorobenzene (surr)	30		94	30		92	( 85-114 )	1.90	
Toluene-d8 (surr)	30		96	30		98	( 89-112 )	1.40	

## Batch Information

Analytical Batch: VMS23135  
 Analytical Method: SW8260D  
 Instrument: VPA 780/5975 GC/MS  
 Analyst: JY

Prep Batch: VXX40996  
 Prep Method: SW5030B  
 Prep Date/Time: 03/11/2024 06:00  
 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL



### Method Blank

Blank ID: MB for HBN 1873062 [VXX/41003]  
Blank Lab ID: 1756282

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1240928001, 1240928002, 1240928003, 1240928004, 1240928009

### Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Benzene	0.000450U	0.000600	0.000150	0.000450	mg/L
Ethylbenzene	0.00375U	0.00500	0.00250	0.00375	mg/L
Gasoline Range Organics	0.0750U	0.100	0.0450	0.0750	mg/L
o-Xylene	0.00375U	0.00500	0.00250	0.00375	mg/L
P & M -Xylene	0.00375U	0.00500	0.00250	0.00375	mg/L
Toluene	0.00375U	0.00500	0.00250	0.00375	mg/L
Xylenes (total)	0.00375U	0.00500	0.00250	0.00375	mg/L
<b>Surrogates</b>					
1,4-Difluorobenzene (surr)	84.4	77-115		0	%
4-Bromofluorobenzene (surr)	91.3	50-150		0	%

### Batch Information

Analytical Batch: VFC16749  
Analytical Method: AK101  
Instrument: Agilent 7890 PID/FID  
Analyst: JY  
Analytical Date/Time: 3/13/2024 12:38:00PM

Prep Batch: VXX41003  
Prep Method: SW5030B  
Prep Date/Time: 3/13/2024 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 03/27/2024 8:35:58AM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1240928 [VXX41003]  
 Blank Spike Lab ID: 1756283  
 Date Analyzed: 03/13/2024 13:16

Spike Duplicate ID: LCSD for HBN 1240928 [VXX41003]  
 Spike Duplicate Lab ID: 1756284  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1240928001, 1240928002, 1240928003, 1240928004, 1240928009

## Results by AK101

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	0.100	0.0949	95	0.100	0.0949	95	( 80-120 )	0.05	(< 20 )
Ethylbenzene	0.100	0.0912	91	0.100	0.0916	92	( 75-125 )	0.53	(< 20 )
o-Xylene	0.100	0.0930	93	0.100	0.0929	93	( 80-120 )	0.12	(< 20 )
P & M -Xylene	0.200	0.181	90	0.200	0.182	91	( 75-130 )	0.79	(< 20 )
Toluene	0.100	0.0933	93	0.100	0.0943	94	( 75-120 )	1.10	(< 20 )
Xylenes (total)	0.300	0.274	91	0.300	0.275	92	( 79-121 )	0.48	(< 20 )
<b>Surrogates</b>									
1,4-Difluorobenzene (surr)	0.0500		96	0.0500		97	( 77-115 )	1.10	

## Batch Information

Analytical Batch: **VFC16749**  
 Analytical Method: **AK101**  
 Instrument: **Agilent 7890 PID/FID**  
 Analyst: **JY**

Prep Batch: **VXX41003**  
 Prep Method: **SW5030B**  
 Prep Date/Time: **03/13/2024 06:00**  
 Spike Init Wt./Vol.: 0.100 mg/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 0.100 mg/L Extract Vol: 5 mL

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1240928 [VXX41003]  
 Blank Spike Lab ID: 1756285  
 Date Analyzed: 03/13/2024 13:35

Spike Duplicate ID: LCSD for HBN 1240928 [VXX41003]  
 Spike Duplicate Lab ID: 1756286  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1240928001, 1240928002, 1240928003, 1240928004, 1240928009

## Results by AK101

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	1.00	0.897	90	1.00	0.870	87	( 60-120 )	3.00	(< 20 )
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	0.0500		96	0.0500		94	( 50-150 )	1.60	

## Batch Information

Analytical Batch: **VFC16749**  
 Analytical Method: **AK101**  
 Instrument: **Agilent 7890 PID/FID**  
 Analyst: **JY**

Prep Batch: **VXX41003**  
 Prep Method: **SW5030B**  
 Prep Date/Time: **03/13/2024 06:00**  
 Spike Init Wt./Vol.: 0.0500 mg/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 0.0500 mg/L Extract Vol: 5 mL

Print Date: 03/27/2024 8:36:01AM



### Method Blank

Blank ID: MB for HBN 1873062 [VXX/41003]  
Blank Lab ID: 1756282

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1240928001, 1240928002, 1240928003, 1240928004, 1240928009

### Results by SW8021B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Benzene	0.450U	0.600	0.150	0.450	ug/L
Ethylbenzene	3.75U	5.00	2.50	3.75	ug/L
o-Xylene	3.75U	5.00	2.50	3.75	ug/L
P & M -Xylene	3.75U	5.00	2.50	3.75	ug/L
Toluene	3.75U	5.00	2.50	3.75	ug/L
Xylenes (total)	3.75U	5.00	2.50	3.75	ug/L

### Surrogates

1,4-Difluorobenzene (surr)	84.4	77-115		0	%
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### Batch Information

Analytical Batch: VFC16749  
Analytical Method: SW8021B  
Instrument: Agilent 7890 PID/FID  
Analyst: JY  
Analytical Date/Time: 3/13/2024 12:38:00PM

Prep Batch: VXX41003  
Prep Method: SW5030B  
Prep Date/Time: 3/13/2024 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 03/27/2024 8:36:05AM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1240928 [VXX41003]  
 Blank Spike Lab ID: 1756283  
 Date Analyzed: 03/13/2024 13:16

Spike Duplicate ID: LCSD for HBN 1240928 [VXX41003]  
 Spike Duplicate Lab ID: 1756284  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1240928001, 1240928002, 1240928003, 1240928004, 1240928009

## Results by SW8021B

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	100	94.9	95	100	94.9	95	( 80-120 )	0.05	(< 20 )
Ethylbenzene	100	91.2	91	100	91.6	92	( 75-125 )	0.53	(< 20 )
o-Xylene	100	93.0	93	100	92.9	93	( 80-120 )	0.12	(< 20 )
P & M -Xylene	200	181	90	200	182	91	( 75-130 )	0.79	(< 20 )
Toluene	100	93.3	93	100	94.3	94	( 75-120 )	1.10	(< 20 )
Xylenes (total)	300	274	91	300	275	92	( 79-121 )	0.48	(< 20 )
<b>Surrogates</b>									
1,4-Difluorobenzene (surr)	50		96	50		97	( 77-115 )	1.10	

## Batch Information

Analytical Batch: **VFC16749**  
 Analytical Method: **SW8021B**  
 Instrument: **Agilent 7890 PID/FID**  
 Analyst: **JY**

Prep Batch: **VXX41003**  
 Prep Method: **SW5030B**  
 Prep Date/Time: **03/13/2024 06:00**  
 Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL



### Method Blank

Blank ID: MB for HBN 1873065 [VXX/41004]  
Blank Lab ID: 1756290

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1240928005, 1240928006, 1240928007, 1240928008

### Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Gasoline Range Organics	0.0750U	0.100	0.0450	0.0750	mg/L
<b>Surrogates</b>					
1,4-Difluorobenzene (surr)	85.4	77-115		0	%
4-Bromofluorobenzene (surr)	91.1	50-150		0	%

### Batch Information

Analytical Batch: VFC16749  
Analytical Method: AK101  
Instrument: Agilent 7890 PID/FID  
Analyst: JY  
Analytical Date/Time: 3/13/2024 10:17:00PM

Prep Batch: VXX41004  
Prep Method: SW5030B  
Prep Date/Time: 3/13/2024 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 03/27/2024 8:36:11AM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1240928 [VXX41004]  
 Blank Spike Lab ID: 1756291  
 Date Analyzed: 03/14/2024 00:30

Spike Duplicate ID: LCSD for HBN 1240928 [VXX41004]  
 Spike Duplicate Lab ID: 1756292  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1240928005, 1240928006, 1240928007, 1240928008

## Results by AK101

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	1.00	0.879	88	1.00	0.837	84	( 60-120 )	4.80	(< 20 )
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	0.0500		93	0.0500		84	( 50-150 )	9.50	

## Batch Information

Analytical Batch: **VFC16749**  
 Analytical Method: **AK101**  
 Instrument: **Agilent 7890 PID/FID**  
 Analyst: **JY**

Prep Batch: **VXX41004**  
 Prep Method: **SW5030B**  
 Prep Date/Time: **03/13/2024 06:00**  
 Spike Init Wt./Vol.: 0.0500 mg/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 0.0500 mg/L Extract Vol: 5 mL

Print Date: 03/27/2024 8:36:15AM



## Method Blank

Blank ID: MB for HBN 1873032 [XXX/49251]  
 Blank Lab ID: 1756176

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
 1240928003, 1240928004, 1240928005, 1240928006, 1240928007, 1240928008

## Results by 8270E SIM LV (PAH)

Parameter	Results	LOQ/CL	DL	LOD	Units
1-Methylnaphthalene	0.0375U	0.0500	0.0150	0.0375	ug/L
2-Methylnaphthalene	0.0174J	0.0500	0.0150	0.0375	ug/L
Acenaphthene	0.0375U	0.0500	0.0150	0.0375	ug/L
Acenaphthylene	0.0375U	0.0500	0.0150	0.0375	ug/L
Anthracene	0.0375U	0.0500	0.0150	0.0375	ug/L
Benzo(a)Anthracene	0.0375U	0.0500	0.0150	0.0375	ug/L
Benzo[a]pyrene	0.0150U	0.0200	0.00620	0.0150	ug/L
Benzo[b]Fluoranthene	0.0375U	0.0500	0.0150	0.0375	ug/L
Benzo[g,h,i]perylene	0.0375U	0.0500	0.0150	0.0375	ug/L
Benzo[k]fluoranthene	0.0375U	0.0500	0.0150	0.0375	ug/L
Chrysene	0.0375U	0.0500	0.0150	0.0375	ug/L
Dibenzo[a,h]anthracene	0.0150U	0.0200	0.00620	0.0150	ug/L
Fluoranthene	0.0217J	0.0500	0.0150	0.0375	ug/L
Fluorene	0.0375U	0.0500	0.0150	0.0375	ug/L
Indeno[1,2,3-c,d] pyrene	0.0375U	0.0500	0.0150	0.0375	ug/L
Naphthalene	0.0750U	0.100	0.0310	0.0750	ug/L
Phenanthrene	0.0750U	0.100	0.0310	0.0750	ug/L
Pyrene	0.0155J	0.0500	0.0150	0.0375	ug/L
<b>Surrogates</b>					
2-Methylnaphthalene-d10 (surr)	76.4	38-100		0	%
Fluoranthene-d10 (surr)	83.1	30-111		0	%

## Batch Information

Analytical Batch: XMS14189  
 Analytical Method: 8270E SIM LV (PAH)  
 Instrument: Agilent 8890 GC/MS SYA  
 Analyst: NRB  
 Analytical Date/Time: 3/20/2024 3:27:00PM

Prep Batch: XXX49251  
 Prep Method: SW3535A  
 Prep Date/Time: 3/13/2024 2:00:00PM  
 Prep Initial Wt./Vol.: 250 mL  
 Prep Extract Vol: 1 mL

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1240928 [XXX49251]  
 Blank Spike Lab ID: 1756177  
 Date Analyzed: 03/20/2024 15:43

Spike Duplicate ID: LCSD for HBN 1240928 [XXX49251]  
 Spike Duplicate Lab ID: 1756178  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1240928003, 1240928004, 1240928005, 1240928006, 1240928007, 1240928008

## Results by 8270E SIM LV (PAH)

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1-Methylnaphthalene	2	1.53	77	2	1.49	75	( 41-115 )	2.60	(< 20 )
2-Methylnaphthalene	2	1.51	76	2	1.49	74	( 39-114 )	1.50	(< 20 )
Acenaphthene	2	1.58	79	2	1.60	80	( 48-114 )	0.99	(< 20 )
Acenaphthylene	2	1.69	85	2	1.66	83	( 35-121 )	2.30	(< 20 )
Anthracene	2	1.70	85	2	1.71	86	( 53-119 )	0.65	(< 20 )
Benzo(a)Anthracene	2	1.55	77	2	1.52	76	( 59-120 )	1.50	(< 20 )
Benzo[a]pyrene	2	1.65	82	2	1.59	79	( 53-120 )	3.60	(< 20 )
Benzo[b]Fluoranthene	2	1.56	78	2	1.55	78	( 53-126 )	0.35	(< 20 )
Benzo[g,h,i]perylene	2	1.80	90	2	1.80	90	( 44-128 )	0.18	(< 20 )
Benzo[k]fluoranthene	2	1.86	93	2	1.81	91	( 54-125 )	2.90	(< 20 )
Chrysene	2	1.72	86	2	1.72	86	( 57-120 )	0.04	(< 20 )
Dibenzo[a,h]anthracene	2	1.85	93	2	1.83	92	( 44-131 )	1.10	(< 20 )
Fluoranthene	2	1.60	80	2	1.63	81	( 58-120 )	1.70	(< 20 )
Fluorene	2	1.70	85	2	1.69	85	( 50-118 )	0.30	(< 20 )
Indeno[1,2,3-c,d] pyrene	2	1.79	90	2	1.78	89	( 48-130 )	0.55	(< 20 )
Naphthalene	2	1.61	81	2	1.56	78	( 43-114 )	3.30	(< 20 )
Phenanthrene	2	1.57	79	2	1.58	79	( 53-115 )	0.53	(< 20 )
Pyrene	2	1.55	78	2	1.58	79	( 53-121 )	1.60	(< 20 )
<b>Surrogates</b>									
2-Methylnaphthalene-d10 (surr)	2		87	2		83	( 38-100 )	3.90	
Fluoranthene-d10 (surr)	2		89	2		90	( 30-111 )	0.32	

## Batch Information

Analytical Batch: XMS14189  
 Analytical Method: 8270E SIM LV (PAH)  
 Instrument: Agilent 8890 GC/MS SYA  
 Analyst: NRB

Prep Batch: XXX49251  
 Prep Method: SW3535A  
 Prep Date/Time: 03/13/2024 14:00  
 Spike Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL  
 Dupe Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL



### Method Blank

Blank ID: MB for HBN 1873333 [XXX/49262]  
Blank Lab ID: 1756494

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1240928003, 1240928004, 1240928005, 1240928006, 1240928007, 1240928008

### Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Diesel Range Organics	0.450U	0.600	0.200	0.450	mg/L
<b>Surrogates</b>					
5a Androstane (surr)	75	60-120		0	%

### Batch Information

Analytical Batch: XFC16798  
Analytical Method: AK102  
Instrument: Agilent 7890B F  
Analyst: BRP  
Analytical Date/Time: 3/21/2024 5:29:00AM

Prep Batch: XXX49262  
Prep Method: SW3520C  
Prep Date/Time: 3/18/2024 4:55:00PM  
Prep Initial Wt./Vol.: 250 mL  
Prep Extract Vol: 1 mL

Print Date: 03/27/2024 8:36:25AM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1240928 [XXX49262]  
 Blank Spike Lab ID: 1756495  
 Date Analyzed: 03/21/2024 05:42

Spike Duplicate ID: LCSD for HBN 1240928  
 [XXX49262]  
 Spike Duplicate Lab ID: 1756496  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1240928003, 1240928004, 1240928005, 1240928006, 1240928007, 1240928008

## Results by AK102

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	20	16.6	83	20	17.0	85	( 75-125 )	2.20	(< 20 )
<b>Surrogates</b>									
5a Androstane (surr)	0.4		107	0.4		112	( 60-120 )	4.80	

## Batch Information

Analytical Batch: **XFC16798**  
 Analytical Method: **AK102**  
 Instrument: **Agilent 7890B F**  
 Analyst: **BRP**

Prep Batch: **XXX49262**  
 Prep Method: **SW3520C**  
 Prep Date/Time: **03/18/2024 16:55**  
 Spike Init Wt./Vol.: 0.4 mg/L Extract Vol: 1 mL  
 Dupe Init Wt./Vol.: 0.4 mg/L Extract Vol: 1 mL

Print Date: 03/27/2024 8:36:28AM

Profile # 365427 CSW

1240928



SGS North America Inc.

**Shannon & Wilson, Inc.**  
**5430 Fairbanks Street, Suite 3**  
**Anchorage, Alaska 99518**  
**(907) 561-2120**  
**Fax (206) 695-6777**

GRO-AK101	VOCs- EPA Method 8260D	DRO- AK102	PAHs- EPA Method 8270D SIM	BTEX - EPA 8021
-----------	------------------------	------------	----------------------------	-----------------

Date	Time	Sample ID	Total Containers	VOA Vials HCl	VOA Vials HCl	Amber HCl	Amber 4C	VOA Vials HCl
3/5/2024	16:01	110026-DW1 <u>1AC</u>	3					X
3/5/2024	16:21	110026-DW2 <u>2AC</u>	3					X
3/6/2024	9:52	110026-MW1 <u>3AS</u>	10	X	X	X	X	
3/6/2024	11:02	110026-MW2 <u>4AS</u>	10	X	X	X	X	
3/6/2024	12:13	110026-MW3 <u>5AS</u>	10	X	X	X	X	
3/6/2024	13:17	110026-MW4 <u>6AS</u>	10	X	X	X	X	
3/6/2024	14:20	110026-MW5 <u>7AS</u>	10	X	X	X	X	
3/6/2024	14:50	110026-MW15 <u>8AS</u>	10	X	X	X	X	
3/5/2024	8:00	110026-WTB <u>9AF</u>	2 Sets	X	X			

Relinquished By:	Relinquished By:	Project Information
Signature: <u>ZJT</u>	Signature:	Project Number: 110026-002
Print Name: <u>Zach Thon</u>	Print Name:	Project Name: Kaslof Riverview Lodge
Company: Shannon & Wilson, Inc.	Company:	Contact: Alec Rizzo / Zach Thon
Date: <u>3.7.24</u>	Date:	Sampler: ZJT
Time: <u>1333</u>	Time:	Special Instructions:
Received By:	Received By:	Sample Receipt
Signature:	Signature: <u>Jeremy Cozby</u>	Shipped Via: Hand Delivered
Print Name:	Print Name: <u>Jeremy Cozby</u>	
Company:	Company: <u>SGS</u>	Cooler Temperature Upon Arrival: <u>1.5 °C D58</u>
Date:	Date: <u>3/7/24</u>	Sample Matrix: Water
Time:	Time: <u>13:35</u>	10 Working DAY TAT



**SGS North America Inc.**

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



**Sample Kit Request**

Client pickup Date: **12/8/2023** Time: **09:00**

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

Deliver to client: \_\_\_\_\_

Ship by/Air Carrier: \_\_\_\_\_

Airbill Number: \_\_\_\_\_

Date to ship by: \_\_\_\_\_

Notes: \_\_\_\_\_

Kit request taken by: JAN Date: December 6, 2023

Kit prepared by: MAC Date: 12/7/23

Kit (including lid tightness for pres'd bottles) checked by: NO Date: 12/7/23

Kit packed & shipped by: NO Date: 12/7/23

Does a Profile exist in LIMS? If not, please send a request for new profile build.

Client Name: Shannon & Wilson

Ordered By: Zach Thon

Email: Zach.Thon@shanwil.com; alec.rizzo@shanwil.com

Project Name: 110026 Kasilof Riverview Lodge

Quote #: \_\_\_\_\_ Profile#: \_\_\_\_\_

Delivery Address: \_\_\_\_\_

Filename: SKIT\_Shannon & Wilson\_110026 Kasilof Riverview Lo: \*Required Items

No.	Matrix	Analysis	Container Size & Type		Pres.	Bottle Lot #	Preservative Lot #	Hold Time	# QC Bottles	Total Bottles
7	Water	AK101 GRO	3 x 40 mL	VOA	HCl			14 d	0	21
7	Water	AK102 DRO	2 x 250 mL	Amber	HCl			14 d	0	14
7	Water	8260D VOC	3 x 40 mL	VOA	HCl			14 d	0	21
7	Water	8270D SIM PAH	2 x 250 mL	Amber	None			7 d	0	14
2	Water	8021 BTEX	3 x 40 mL	VOA	HCl			14 d	0	6

Note: The first 10 Analysis and Preservative columns will auto-fill up to the capacity of the associated COC.

Additional Information	Notes for Kit Prep
Pack for Shipment via: <u>N/A</u>	
Temperature Blank: <u>Yes - Small (125 mL)</u>	
Trip Blank: <u>Yes - Water (8260, AK101, 8021, 624)</u>	<u>3 x Water TB</u>
Coolers: <u>Yes</u>	
Gel Ice: <u>Yes</u>	
Labels: <u>Yes</u>	
Custody Seals: <u>Yes</u>	
Paper Chain of Custody: <u>Yes - Standard COC</u>	
Lot Number Tracking (Required for DOD): <u>No</u>	

- Attention Client/Sampler:**
1. Do not rinse container, be aware of any acid preservative.
  2. Fill container, but do not overfill (except volatiles).
  3. Label the container with your sample ID and date/time of collection
  4. Fill out the Chain of Custody.
  5. Add frozen gel packs to your cooler and pack to prevent breakage.
- If you have any questions please contact your Project Manager.

**1240928**

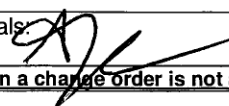




1240928



### SAMPLE RECEIPT FORM

Project Manager Completion				
Was all necessary information recorded on the COC upon receipt? (temperature, COC seals, etc.?)	<input checked="" type="radio"/> Yes	No	N/A	
Was temperature between 0-6 °C?	<input checked="" type="radio"/> 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*?	<input checked="" type="radio"/> Yes	No	N/A	
Was a method specified for each analysis, where applicable? If no, please note correct methods.	<input checked="" type="radio"/> Yes	No	N/A	
Are compound lists specified, where applicable? For project specific or special compound lists please note correct analysis code.	Yes	No	<input checked="" type="radio"/> N/A	
If rush was requested by the client, was the requested TAT approved?	Yes	No	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> N/A	If "NO", contact client for information.
Sample Login Completion				
Do ID's on sample containers match COC?	<input checked="" type="radio"/> Yes	No	N/A	
If provided on containers, do dates/times collected match COC?	<input checked="" type="radio"/> 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?	<input checked="" type="radio"/> Yes	No	N/A	
Were proper containers (type/mass/volume/preservative) received for all samples? *See form F-083 "Sample Guide"	<input checked="" type="radio"/> 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*?	<input checked="" type="radio"/> Yes	No	N/A	
Were all VOA vials free of headspace >6mm?	<input checked="" type="radio"/> Yes	No	N/A	
Were all soil VOA samples received field extracted with Methanol?	Yes	No	<input checked="" type="radio"/> N/A	
Did all soil VOA samples have an accompanying unpreserved container for % solids?	Yes	No	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> N/A	
For Rush/Short Holding time, was the lab notified?	Yes	No	<input checked="" type="radio"/> N/A	
For any question answered "NO", was the Project Manager notified?	Yes	No	<input checked="" type="radio"/> N/A	PM Initials:
Was Peer Review of sample numbering/labelling completed?	<input checked="" type="radio"/> Yes	No	N/A	Reviewer Initials: 
<b>Additional Notes/Clarification where Applicable, including resolution of "No" answers when a change order is not attached:</b>				



### Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1240928001-A	HCL to pH < 2	OK	1240928007-D	HCL to pH < 2	OK
1240928001-B	HCL to pH < 2	OK	1240928007-E	HCL to pH < 2	OK
1240928001-C	HCL to pH < 2	OK	1240928007-F	HCL to pH < 2	OK
1240928002-A	HCL to pH < 2	OK	1240928007-G	HCL to pH < 2	OK
1240928002-B	HCL to pH < 2	OK	1240928007-H	HCL to pH < 2	OK
1240928002-C	HCL to pH < 2	OK	1240928007-I	No Preservative Required	OK
1240928003-A	HCL to pH < 2	OK	1240928007-J	No Preservative Required	OK
1240928003-B	HCL to pH < 2	OK	1240928008-A	HCL to pH < 2	OK
1240928003-C	HCL to pH < 2	OK	1240928008-B	HCL to pH < 2	OK
1240928003-D	HCL to pH < 2	OK	1240928008-C	HCL to pH < 2	OK
1240928003-E	HCL to pH < 2	OK	1240928008-D	HCL to pH < 2	OK
1240928003-F	HCL to pH < 2	OK	1240928008-E	HCL to pH < 2	OK
1240928003-G	HCL to pH < 2	OK	1240928008-F	HCL to pH < 2	OK
1240928003-H	HCL to pH < 2	OK	1240928008-G	HCL to pH < 2	OK
1240928003-I	No Preservative Required	OK	1240928008-H	HCL to pH < 2	OK
1240928003-J	No Preservative Required	OK	1240928008-I	No Preservative Required	OK
1240928004-A	HCL to pH < 2	OK	1240928008-J	No Preservative Required	OK
1240928004-B	HCL to pH < 2	OK	1240928009-A	HCL to pH < 2	OK
1240928004-C	HCL to pH < 2	OK	1240928009-B	HCL to pH < 2	OK
1240928004-D	HCL to pH < 2	OK	1240928009-C	HCL to pH < 2	OK
1240928004-E	HCL to pH < 2	OK	1240928009-D	HCL to pH < 2	OK
1240928004-F	HCL to pH < 2	OK	1240928009-E	HCL to pH < 2	OK
1240928004-G	HCL to pH < 2	OK	1240928009-F	HCL to pH < 2	OK
1240928004-H	HCL to pH < 2	OK			
1240928004-I	No Preservative Required	OK			
1240928004-J	No Preservative Required	OK			
1240928005-A	HCL to pH < 2	OK			
1240928005-B	HCL to pH < 2	OK			
1240928005-C	HCL to pH < 2	OK			
1240928005-D	HCL to pH < 2	OK			
1240928005-E	HCL to pH < 2	OK			
1240928005-F	HCL to pH < 2	OK			
1240928005-G	HCL to pH < 2	OK			
1240928005-H	HCL to pH < 2	OK			
1240928005-I	No Preservative Required	OK			
1240928005-J	No Preservative Required	OK			
1240928006-A	HCL to pH < 2	OK			
1240928006-B	HCL to pH < 2	OK			
1240928006-C	HCL to pH < 2	OK			
1240928006-D	HCL to pH < 2	OK			
1240928006-E	HCL to pH < 2	OK			
1240928006-F	HCL to pH < 2	OK			
1240928006-G	HCL to pH < 2	OK			
1240928006-H	HCL to pH < 2	OK			
1240928006-I	No Preservative Required	OK			
1240928006-J	No Preservative Required	OK			
1240928007-A	HCL to pH < 2	OK			
1240928007-B	HCL to pH < 2	OK			
1240928007-C	HCL to pH < 2	OK			



Container Id

Preservative

Container  
Condition

Container Id

Preservative

Container  
Condition

#### 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.

# ADEC Contaminated Sites Program Laboratory Data Review Checklist

<b>Completed By:</b>	Zach Thon	<b>CS Site Name:</b>	Kasilof Riverview Lodge	<b>Lab Name:</b>	SGS
<b>Title:</b>	Environmental Scientist	<b>ADEC File No.:</b>	2319.26.002	<b>Lab Report No.:</b>	1240928
<b>Consulting Firm:</b>	Shannon & Wilson	<b>Hazard ID No.:</b>	22950	<b>Lab Report Date:</b>	3/27/2024

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

## 1. Laboratory

- a. Did an ADEC Contaminated Sites Laboratory Approval Program (CS-LAP) 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 CS-LAP approved?

Yes  No  N/A

Comments: *The samples were not submitted to another “network” laboratory or subcontracted to an alternate laboratory.*

## 2. Chain of Custody (CoC)

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

Yes  No  N/A

Comments:

- b. Were the correct analyses requested?

Yes  No  N/A

Analyses requested: GRO, DRO, VOCs, PAHs, BTEX

Comments:

## 3. Laboratory Sample Receipt Documentation

- a. Is the sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes  No  N/A

Cooler temperature(s): 1.5°C

**CS Site Name:** Kasilof Riverview Lodge

**Lab Report No.:** 1240928

- b. Is the sample preservation acceptable – acidified waters, methanol preserved soil (GRO, BTEX, VOCs, etc.)?

Yes  No  N/A

Comments:

- c. Is the sample condition documented – broken, leaking, zero headspace (VOA vials); canister vacuum/pressure checked and no open valves, etc.?

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, canister not holding a vacuum, etc.?

Yes  No  N/A

Comments: *No discrepancies were noted by the laboratory.*

- e. Is the data quality or usability affected?

Yes  No  N/A

Comments: *See above*

#### **4. Case Narrative**

- a. Is the case narrative present and understandable?

Yes  No  N/A

Comments:

- b. Are there discrepancies, errors, or QC failures identified by the lab?

Yes  No  N/A

Comments:

- c. Were all the corrective actions documented?

Yes  No  N/A

Comments:

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

Comments: *See above.*

#### **5. Sample Results**

- a. Are the correct analyses performed/reported as requested on CoC?

Yes  No  N/A

Comments:

- b. Are all applicable holding times met?

Yes  No  N/A

Comments:

CS Site Name: Kasilof Riverview Lodge

Lab Report No.: 1240928

c. Are all soils reported on a dry weight basis?

Yes  No  N/A

Comments:

d. Are the reported limits of quantitation (LoQ) or limits of detections (LOD), or reporting limits (RL) less than the Cleanup Level or the action level for the project?

Yes  No  N/A

Comments: *The LOQ for 1,2,3-trichloropropane exceeds the ADEC cleanup level for all project samples.*

e. Is the data quality or usability affected?

Yes  No  N/A

Comments: *There is a potential that the target analyte is present at a concentration greater than the ADEC cleanup level, but less than the LOQ.*

## 6. QC Samples

a. Method Blank

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

Yes  No  N/A

Comments:

ii. Are all method blank results less than LOQ (or RL)?

Yes  No

Comments: *Although less than the LOQ, an estimated concentration of 2-methylnaphthalene (0.0174 µg/L) and fluoranthene (0.0217 µg/L) was detected in the method blank.*

iii. If above LoQ or RL, what samples are affected?

Comments: *MW1, MW2, MW3, MW4, MW5, and MW15.*

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

Yes  No  N/A

Comments: *The samples are flagged "B" in Table 3.2 when the reported sample concentration is within 10x the reported method blank concentration. The concentrations of fluoranthene detected in the Samples MW1 and MW2 and the method blank are reported as less than the LOQ. Therefore, the sample concentrations are reported as non-detect at the LOQ and flagged "B". 2-Methylnaphthalene was not detected in the project samples; therefore, additional flagging is not required.*

CS Site Name: Kasilof Riverview Lodge

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v. Data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

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

i. Organics – Are 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 – Are one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes  No  N/A

Comments:

iii. Accuracy – Are 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 – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? Was the 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:

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

Comments: [Click or tap here to enter text.](#)

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

Yes  No  N/A

Comments:

vii. Is the data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

- i. Organics – Are one MS/MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A

Comments:

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

Yes  No  N/A

Comments:

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

Yes  No  N/A

Comments:

- iv. Precision – Are 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:

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

Comments:

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

Yes  No  N/A

Comments:

- vii. Is the data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

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

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

Yes  No  N/A

Comments:

- ii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK

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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. Is the data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

e. Trip Blanks

- i. Is one trip blank reported per matrix, analysis, and for each cooler containing volatile samples? Yes  No  N/A

Comments:

- ii. Are all results less than LoQ or RL?

Yes  No  N/A

Comments: *Toluene (0.620 J µg/L) was detected in the trip blank. The affected analytical result for Sample MW-15 is flagged "B" in Table 3.2.*

- iii. If above LoQ or RL, what samples are affected?

Comments: *Sample MW15.*

- iv. Is the data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

f. Field Duplicate

- i. Are one field duplicate submitted per matrix, analysis, and 10 project samples?

Yes  No  N/A

Comments: .

- ii. Was the duplicate submitted blind to lab?

Yes  No  N/A

Comments:

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

$$RPD (\%) = \left| \frac{R_1 - R_2}{\left(\frac{R_1 + R_2}{2}\right)} \right| \times 100$$

Where  $R_1$  = Sample Concentration

$R_2$  = Field Duplicate Concentration

Comments: *The RPDs were within QC criteria.*

- iv. Is the data quality or usability affected? (Explain)

Yes  No  N/A

Comments:

- g. Decontamination or Equipment Blanks

- i. Were decontamination or equipment blanks collected?

Yes  No  N/A

Comments: *A decontamination and equipment blank were not included in our ADEC-approved work plan.*

- ii. Are all results less than LoQ or RL?

Yes  No  N/A

Comments: .

- iii. If above LoQ or RL, specify what samples are affected.

Comments: .

- iv. Are data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

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

- a. Are they defined and appropriate?

Yes  No  N/A

Comments: *A key is included on page 3 of the laboratory report.*



## Laboratory Report of Analysis

To: Shannon & Wilson, Inc.  
5430 Fairbanks Street, Suite 3  
Anchorage, AK 99518  
(907)433-3228

Report Number: **1242429**

Client Project: **110026-002; Kasilof Riverview**

Dear Alec Rizzo,

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

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

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

Sincerely,  
SGS North America Inc.



**Justin Nelson**  
**2024.06.17**  
**16:49:45 -08'00'**

---

Justin Nelson  
Project Manager  
Justin.Nelson@sgs.com

Date

### Case Narrative

SGS Client: **Shannon & Wilson, Inc.**  
SGS Project: **1242429**  
Project Name/Site: **110026-002; Kasilof Riverview**  
Project Contact: **Alec Rizzo**

Refer to sample receipt form for information on sample condition.

**110026-MW2 (1242429004) PS**

8260D - Surrogate recovery for 1,2-dichloroethane-d4 does not meet QC criteria. All analytes associated with this surrogate were not reported above LOQ.

**110026-MW15 (1242429008) PS**

8260D - Surrogate recovery for 1,2-dichloroethane-d4 does not meet QC criteria. All analytes associated with this surrogate were not reported above LOQ.

**LCSD for HBN 1889040 [VXX/4123 (1766281) LCSD**

8260D - LCSD recovery for several analytes do not meet QC criteria. These analytes were not reported above LOQ in associated samples.

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

Print Date: 06/17/2024 2:35:07PM

## 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, indemnification 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) (Provisionally Certified as of 06/13/2024 for TTHMs 524.2) & 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, 8270E, 8270E-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., 3/4 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.

### Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
110026-DW1	1242429001	05/29/2024	05/30/2024	Water (Surface, Eff., Ground)
110026-DW2	1242429002	05/29/2024	05/30/2024	Water (Surface, Eff., Ground)
110026-MW2	1242429004	05/30/2024	05/30/2024	Water (Surface, Eff., Ground)
110026-MW3	1242429005	05/29/2024	05/30/2024	Water (Surface, Eff., Ground)
110026-MW4	1242429006	05/29/2024	05/30/2024	Water (Surface, Eff., Ground)
110026-MW5	1242429007	05/29/2024	05/30/2024	Water (Surface, Eff., Ground)
110026-MW15	1242429008	05/29/2024	05/30/2024	Water (Surface, Eff., Ground)
110026-WTB	1242429009	05/29/2024	05/30/2024	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
8270E SIM LV (PAH)	8270 PAH SIM GC/MS LV
AK101	AK101/8021 Combo.
SW8021B	AK101/8021 Combo.
SW8021B	BTEX 8021
AK102	DRO Low Volume (W)
AK101	Gasoline Range Organics (W)
SW8260D	Volatile Organic Compounds (W) FULL

Print Date: 06/17/2024 2:35:13PM

### Detectable Results Summary

Client Sample ID: **110026-MW2**

Lab Sample ID: 1242429004

**Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	0.237J	mg/L

Client Sample ID: **110026-MW3**

Lab Sample ID: 1242429005

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
2-Methylnaphthalene	0.0158J	ug/L
Phenanthrene	0.0314J	ug/L

Client Sample ID: **110026-MW4**

Lab Sample ID: 1242429006

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Phenanthrene	0.0369J	ug/L

**Semivolatile Organic Fuels**

Diesel Range Organics	0.215J	mg/L
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Client Sample ID: **110026-MW5**

Lab Sample ID: 1242429007

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
2-Methylnaphthalene	0.0180J	ug/L
Phenanthrene	0.0393J	ug/L

**Semivolatile Organic Fuels**

Diesel Range Organics	0.202J	mg/L
-----------------------	--------	------

**Volatile GC/MS**

Benzene	4.29	ug/L
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Client Sample ID: **110026-MW15**

Lab Sample ID: 1242429008

**Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	0.324J	mg/L

**Volatile GC/MS**

Benzene	4.59	ug/L
Ethylbenzene	0.340J	ug/L



**Results of 110026-DW1**

Client Sample ID: **110026-DW1**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1242429001  
Lab Project ID: 1242429

Collection Date: 05/29/24 15:11  
Received Date: 05/30/24 15:37  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	0.450	U	0.600	0.150	0.450	ug/L	1		05/31/24 18:58
Ethylbenzene	3.75	U	5.00	2.50	3.75	ug/L	1		05/31/24 18:58
o-Xylene	3.75	U	5.00	2.50	3.75	ug/L	1		05/31/24 18:58
P & M -Xylene	3.75	U	5.00	2.50	3.75	ug/L	1		05/31/24 18:58
Toluene	3.75	U	5.00	2.50	3.75	ug/L	1		05/31/24 18:58
Xylenes (total)	3.75	U	5.00	2.50	3.75	ug/L	1		05/31/24 18:58
<b>Surrogates</b>									
1,4-Difluorobenzene (surr)	91.6		77-115			%	1		05/31/24 18:58

**Batch Information**

Analytical Batch: VFC16823  
Analytical Method: SW8021B  
Analyst: T.L  
Analytical Date/Time: 05/31/24 18:58  
Container ID: 1242429001-A

Prep Batch: VXX41228  
Prep Method: SW5030B  
Prep Date/Time: 05/31/24 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-DW2**

Client Sample ID: **110026-DW2**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1242429002  
Lab Project ID: 1242429

Collection Date: 05/29/24 15:31  
Received Date: 05/30/24 15:37  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	0.450	U	0.600	0.150	0.450	ug/L	1		05/31/24 19:17
Ethylbenzene	3.75	U	5.00	2.50	3.75	ug/L	1		05/31/24 19:17
o-Xylene	3.75	U	5.00	2.50	3.75	ug/L	1		05/31/24 19:17
P & M -Xylene	3.75	U	5.00	2.50	3.75	ug/L	1		05/31/24 19:17
Toluene	3.75	U	5.00	2.50	3.75	ug/L	1		05/31/24 19:17
Xylenes (total)	3.75	U	5.00	2.50	3.75	ug/L	1		05/31/24 19:17
<b>Surrogates</b>									
1,4-Difluorobenzene (surr)	90.9		77-115			%	1		05/31/24 19:17

**Batch Information**

Analytical Batch: VFC16823  
Analytical Method: SW8021B  
Analyst: T.L  
Analytical Date/Time: 05/31/24 19:17  
Container ID: 1242429002-A

Prep Batch: VXX41228  
Prep Method: SW5030B  
Prep Date/Time: 05/31/24 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW2**

Client Sample ID: **110026-MW2**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429004  
 Lab Project ID: 1242429

Collection Date: 05/30/24 10:26  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 13:57
2-Methylnaphthalene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 13:57
Acenaphthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 13:57
Acenaphthylene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 13:57
Anthracene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 13:57
Benzo(a)Anthracene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 13:57
Benzo[a]pyrene	0.0147	U	0.0196	0.00608	0.0147	ug/L	1		06/04/24 13:57
Benzo[b]Fluoranthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 13:57
Benzo[g,h,i]perylene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 13:57
Benzo[k]fluoranthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 13:57
Chrysene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 13:57
Dibenzo[a,h]anthracene	0.0147	U	0.0196	0.00608	0.0147	ug/L	1		06/04/24 13:57
Fluoranthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 13:57
Fluorene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 13:57
Indeno[1,2,3-c,d] pyrene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 13:57
Naphthalene	0.0735	U	0.0980	0.0304	0.0735	ug/L	1		06/04/24 13:57
Phenanthrene	0.0735	U	0.0980	0.0304	0.0735	ug/L	1		06/04/24 13:57
Pyrene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 13:57

**Surrogates**

2-Methylnaphthalene-d10 (surr)	60.1		38-100			%	1		06/04/24 13:57
Fluoranthene-d10 (surr)	75.2		30-111			%	1		06/04/24 13:57

**Batch Information**

Analytical Batch: XMS14271  
 Analytical Method: 8270E SIM LV (PAH)  
 Analyst: NRB  
 Analytical Date/Time: 06/04/24 13:57  
 Container ID: 1242429004-I

Prep Batch: XXX49533  
 Prep Method: SW3535A  
 Prep Date/Time: 06/03/24 12:00  
 Prep Initial Wt./Vol.: 255 mL  
 Prep Extract Vol: 1 mL



## Results of 110026-MW2

Client Sample ID: **110026-MW2**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429004  
 Lab Project ID: 1242429

Collection Date: 05/30/24 10:26  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.237	J	0.588	0.196	0.441	mg/L	1		06/07/24 13:27
<b>Surrogates</b>									
5a Androstane (surr)	79		50-150			%	1		06/07/24 13:27

## Batch Information

Analytical Batch: XFC16898  
 Analytical Method: AK102  
 Analyst: KFC  
 Analytical Date/Time: 06/07/24 13:27  
 Container ID: 1242429004-G

Prep Batch: XXX49552  
 Prep Method: SW3520C  
 Prep Date/Time: 06/05/24 20:10  
 Prep Initial Wt./Vol.: 255 mL  
 Prep Extract Vol: 1 mL



Results of **110026-MW2**

Client Sample ID: **110026-MW2**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1242429004  
Lab Project ID: 1242429

Collection Date: 05/30/24 10:26  
Received Date: 05/30/24 15:37  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0750	U	0.100	0.0450	0.0750	mg/L	1		05/31/24 19:54
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	95.5		50-150			%	1		05/31/24 19:54

**Batch Information**

Analytical Batch: VFC16823  
Analytical Method: AK101  
Analyst: T.L  
Analytical Date/Time: 05/31/24 19:54  
Container ID: 1242429004-A

Prep Batch: VXX41228  
Prep Method: SW5030B  
Prep Date/Time: 05/31/24 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW2**

Client Sample ID: **110026-MW2**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429004  
 Lab Project ID: 1242429

Collection Date: 05/30/24 10:26  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:02
1,1,1-Trichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
1,1,2,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:02
1,1,2-Trichloroethane	0.300	U	0.400	0.120	0.300	ug/L	1		06/03/24 22:02
1,1-Dichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
1,1-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
1,1-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
1,2,3-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
1,2,3-Trichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
1,2,4-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
1,2,4-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
1,2-Dibromo-3-chloropropane	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:02
1,2-Dibromoethane	0.0562	U	0.0750	0.0180	0.0562	ug/L	1		06/03/24 22:02
1,2-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
1,2-Dichloroethane	0.375	U	0.500	0.200	0.375	ug/L	1		06/03/24 22:02
1,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
1,3,5-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
1,3-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
1,3-Dichloropropane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:02
1,4-Dichlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:02
2,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
2-Butanone (MEK)	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:02
2-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
2-Hexanone	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:02
4-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
4-Isopropyltoluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
4-Methyl-2-pentanone (MIBK)	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:02
Benzene	0.300	U	0.400	0.120	0.300	ug/L	1		06/03/24 22:02
Bromobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
Bromochloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
Bromodichloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:02
Bromoform	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
Bromomethane	4.50	U	6.00	3.00	4.50	ug/L	1		06/03/24 22:02
Carbon disulfide	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:02
Carbon tetrachloride	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
Chlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:02
Chloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02

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J flagging is activated



**Results of 110026-MW2**

Client Sample ID: **110026-MW2**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429004  
 Lab Project ID: 1242429

Collection Date: 05/30/24 10:26  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
Chloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
cis-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
cis-1,3-Dichloropropene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:02
Dibromochloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:02
Dibromomethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
Dichlorodifluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
Ethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
Freon-113	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:02
Hexachlorobutadiene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
Isopropylbenzene (Cumene)	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
Methylene chloride	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:02
Methyl-t-butyl ether	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:02
Naphthalene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
n-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
n-Propylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
o-Xylene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
P & M -Xylene	1.50	U	2.00	0.620	1.50	ug/L	1		06/03/24 22:02
sec-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
Styrene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
tert-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
Tetrachloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
Toluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
trans-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
trans-1,3-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
Trichloroethene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:02
Trichlorofluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:02
Vinyl acetate	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:02
Vinyl chloride	0.112	U	0.150	0.0500	0.112	ug/L	1		06/03/24 22:02
Xylenes (total)	2.25	U	3.00	1.00	2.25	ug/L	1		06/03/24 22:02
<b>Surrogates</b>									
1,2-Dichloroethane-D4 (surr)	120	*	81-118			%	1		06/03/24 22:02
4-Bromofluorobenzene (surr)	93.2		85-114			%	1		06/03/24 22:02
Toluene-d8 (surr)	95.9		89-112			%	1		06/03/24 22:02

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J flagging is activated

## Results of 110026-MW2

Client Sample ID: **110026-MW2**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1242429004  
Lab Project ID: 1242429

Collection Date: 05/30/24 10:26  
Received Date: 05/30/24 15:37  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS23283  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 06/03/24 22:02  
Container ID: 1242429004-D

Prep Batch: VXX41235  
Prep Method: SW5030B  
Prep Date/Time: 06/03/24 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW3**

Client Sample ID: **110026-MW3**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429005  
 Lab Project ID: 1242429

Collection Date: 05/29/24 18:18  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:13
2-Methylnaphthalene	0.0158	J	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:13
Acenaphthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:13
Acenaphthylene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:13
Anthracene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:13
Benzo(a)Anthracene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:13
Benzo[a]pyrene	0.0147	U	0.0196	0.00608	0.0147	ug/L	1		06/04/24 14:13
Benzo[b]Fluoranthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:13
Benzo[g,h,i]perylene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:13
Benzo[k]fluoranthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:13
Chrysene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:13
Dibenzo[a,h]anthracene	0.0147	U	0.0196	0.00608	0.0147	ug/L	1		06/04/24 14:13
Fluoranthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:13
Fluorene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:13
Indeno[1,2,3-c,d] pyrene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:13
Naphthalene	0.0735	U	0.0980	0.0304	0.0735	ug/L	1		06/04/24 14:13
Phenanthrene	0.0314	J	0.0980	0.0304	0.0735	ug/L	1		06/04/24 14:13
Pyrene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:13

**Surrogates**

2-Methylnaphthalene-d10 (surr)	68.6		38-100			%	1		06/04/24 14:13
Fluoranthene-d10 (surr)	83.4		30-111			%	1		06/04/24 14:13

**Batch Information**

Analytical Batch: XMS14271  
 Analytical Method: 8270E SIM LV (PAH)  
 Analyst: NRB  
 Analytical Date/Time: 06/04/24 14:13  
 Container ID: 1242429005-I

Prep Batch: XXX49533  
 Prep Method: SW3535A  
 Prep Date/Time: 06/03/24 12:00  
 Prep Initial Wt./Vol.: 255 mL  
 Prep Extract Vol: 1 mL

## Results of 110026-MW3

Client Sample ID: **110026-MW3**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429005  
 Lab Project ID: 1242429

Collection Date: 05/29/24 18:18  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.441	U	0.588	0.196	0.441	mg/L	1		06/07/24 13:37

### Surrogates

5a Androstane (surr)	75.3		50-150			%	1		06/07/24 13:37
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## Batch Information

Analytical Batch: XFC16898  
 Analytical Method: AK102  
 Analyst: KFC  
 Analytical Date/Time: 06/07/24 13:37  
 Container ID: 1242429005-G

Prep Batch: XXX49552  
 Prep Method: SW3520C  
 Prep Date/Time: 06/05/24 20:10  
 Prep Initial Wt./Vol.: 255 mL  
 Prep Extract Vol: 1 mL



### Results of 110026-MW3

Client Sample ID: **110026-MW3**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429005  
 Lab Project ID: 1242429

Collection Date: 05/29/24 18:18  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0750	U	0.100	0.0450	0.0750	mg/L	1		05/31/24 20:13

### Surrogates

4-Bromofluorobenzene (surr)	95.4		50-150			%	1		05/31/24 20:13
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### Batch Information

Analytical Batch: VFC16823  
 Analytical Method: AK101  
 Analyst: T.L  
 Analytical Date/Time: 05/31/24 20:13  
 Container ID: 1242429005-A

Prep Batch: VXX41228  
 Prep Method: SW5030B  
 Prep Date/Time: 05/31/24 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL





**Results of 110026-MW3**

Client Sample ID: **110026-MW3**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429005  
 Lab Project ID: 1242429

Collection Date: 05/29/24 18:18  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:17
1,1,1-Trichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
1,1,2,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:17
1,1,2-Trichloroethane	0.300	U	0.400	0.120	0.300	ug/L	1		06/03/24 22:17
1,1-Dichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
1,1-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
1,1-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
1,2,3-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
1,2,3-Trichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
1,2,4-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
1,2,4-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
1,2-Dibromo-3-chloropropane	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:17
1,2-Dibromoethane	0.0562	U	0.0750	0.0180	0.0562	ug/L	1		06/03/24 22:17
1,2-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
1,2-Dichloroethane	0.375	U	0.500	0.200	0.375	ug/L	1		06/03/24 22:17
1,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
1,3,5-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
1,3-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
1,3-Dichloropropane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:17
1,4-Dichlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:17
2,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
2-Butanone (MEK)	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:17
2-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
2-Hexanone	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:17
4-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
4-Isopropyltoluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
4-Methyl-2-pentanone (MIBK)	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:17
Benzene	0.300	U	0.400	0.120	0.300	ug/L	1		06/03/24 22:17
Bromobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
Bromochloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
Bromodichloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:17
Bromoform	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
Bromomethane	4.50	U	6.00	3.00	4.50	ug/L	1		06/03/24 22:17
Carbon disulfide	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:17
Carbon tetrachloride	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
Chlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:17
Chloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17

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J flagging is activated



**Results of 110026-MW3**

Client Sample ID: **110026-MW3**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429005  
 Lab Project ID: 1242429

Collection Date: 05/29/24 18:18  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
Chloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
cis-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
cis-1,3-Dichloropropene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:17
Dibromochloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:17
Dibromomethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
Dichlorodifluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
Ethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
Freon-113	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:17
Hexachlorobutadiene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
Isopropylbenzene (Cumene)	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
Methylene chloride	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:17
Methyl-t-butyl ether	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:17
Naphthalene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
n-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
n-Propylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
o-Xylene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
P & M -Xylene	1.50	U	2.00	0.620	1.50	ug/L	1		06/03/24 22:17
sec-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
Styrene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
tert-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
Tetrachloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
Toluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
trans-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
trans-1,3-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
Trichloroethene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:17
Trichlorofluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:17
Vinyl acetate	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:17
Vinyl chloride	0.112	U	0.150	0.0500	0.112	ug/L	1		06/03/24 22:17
Xylenes (total)	2.25	U	3.00	1.00	2.25	ug/L	1		06/03/24 22:17

**Surrogates**

1,2-Dichloroethane-D4 (surr)	115		81-118			%	1		06/03/24 22:17
4-Bromofluorobenzene (surr)	95.2		85-114			%	1		06/03/24 22:17
Toluene-d8 (surr)	95.6		89-112			%	1		06/03/24 22:17

## Results of 110026-MW3

Client Sample ID: **110026-MW3**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1242429005  
Lab Project ID: 1242429

Collection Date: 05/29/24 18:18  
Received Date: 05/30/24 15:37  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS23283  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 06/03/24 22:17  
Container ID: 1242429005-D

Prep Batch: VXX41235  
Prep Method: SW5030B  
Prep Date/Time: 06/03/24 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW4**

Client Sample ID: **110026-MW4**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429006  
 Lab Project ID: 1242429

Collection Date: 05/29/24 19:47  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 14:29
2-Methylnaphthalene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 14:29
Acenaphthene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 14:29
Acenaphthylene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 14:29
Anthracene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 14:29
Benzo(a)Anthracene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 14:29
Benzo[a]pyrene	0.0150	U	0.0200	0.00620	0.0150	ug/L	1		06/04/24 14:29
Benzo[b]Fluoranthene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 14:29
Benzo[g,h,i]perylene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 14:29
Benzo[k]fluoranthene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 14:29
Chrysene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 14:29
Dibenzo[a,h]anthracene	0.0150	U	0.0200	0.00620	0.0150	ug/L	1		06/04/24 14:29
Fluoranthene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 14:29
Fluorene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 14:29
Indeno[1,2,3-c,d] pyrene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 14:29
Naphthalene	0.0750	U	0.100	0.0310	0.0750	ug/L	1		06/04/24 14:29
Phenanthrene	0.0369	J	0.100	0.0310	0.0750	ug/L	1		06/04/24 14:29
Pyrene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 14:29

**Surrogates**

2-Methylnaphthalene-d10 (surr)	62.8		38-100			%	1		06/04/24 14:29
Fluoranthene-d10 (surr)	76.3		30-111			%	1		06/04/24 14:29

**Batch Information**

Analytical Batch: XMS14271  
 Analytical Method: 8270E SIM LV (PAH)  
 Analyst: NRB  
 Analytical Date/Time: 06/04/24 14:29  
 Container ID: 1242429006-I

Prep Batch: XXX49533  
 Prep Method: SW3535A  
 Prep Date/Time: 06/03/24 12:00  
 Prep Initial Wt./Vol.: 250 mL  
 Prep Extract Vol: 1 mL

## Results of 110026-MW4

Client Sample ID: **110026-MW4**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429006  
 Lab Project ID: 1242429

Collection Date: 05/29/24 19:47  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.215	J	0.600	0.200	0.450	mg/L	1		06/07/24 13:46
<b>Surrogates</b>									
5a Androstane (surr)	93.3		50-150			%	1		06/07/24 13:46

## Batch Information

Analytical Batch: XFC16898  
 Analytical Method: AK102  
 Analyst: KFC  
 Analytical Date/Time: 06/07/24 13:46  
 Container ID: 1242429006-G

Prep Batch: XXX49552  
 Prep Method: SW3520C  
 Prep Date/Time: 06/05/24 20:10  
 Prep Initial Wt./Vol.: 250 mL  
 Prep Extract Vol: 1 mL

## Results of 110026-MW4

Client Sample ID: **110026-MW4**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429006  
 Lab Project ID: 1242429

Collection Date: 05/29/24 19:47  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0750	U	0.100	0.0450	0.0750	mg/L	1		05/31/24 20:31
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	94.1		50-150			%	1		05/31/24 20:31

## Batch Information

Analytical Batch: VFC16823  
 Analytical Method: AK101  
 Analyst: T.L  
 Analytical Date/Time: 05/31/24 20:31  
 Container ID: 1242429006-A

Prep Batch: VXX41228  
 Prep Method: SW5030B  
 Prep Date/Time: 05/31/24 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



**Results of 110026-MW4**

Client Sample ID: **110026-MW4**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429006  
 Lab Project ID: 1242429

Collection Date: 05/29/24 19:47  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:32
1,1,1-Trichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
1,1,2,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:32
1,1,2-Trichloroethane	0.300	U	0.400	0.120	0.300	ug/L	1		06/03/24 22:32
1,1-Dichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
1,1-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
1,1-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
1,2,3-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
1,2,3-Trichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
1,2,4-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
1,2,4-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
1,2-Dibromo-3-chloropropane	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:32
1,2-Dibromoethane	0.0562	U	0.0750	0.0180	0.0562	ug/L	1		06/03/24 22:32
1,2-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
1,2-Dichloroethane	0.375	U	0.500	0.200	0.375	ug/L	1		06/03/24 22:32
1,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
1,3,5-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
1,3-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
1,3-Dichloropropane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:32
1,4-Dichlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:32
2,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
2-Butanone (MEK)	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:32
2-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
2-Hexanone	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:32
4-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
4-Isopropyltoluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
4-Methyl-2-pentanone (MIBK)	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:32
Benzene	0.300	U	0.400	0.120	0.300	ug/L	1		06/03/24 22:32
Bromobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
Bromochloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
Bromodichloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:32
Bromoform	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
Bromomethane	4.50	U	6.00	3.00	4.50	ug/L	1		06/03/24 22:32
Carbon disulfide	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:32
Carbon tetrachloride	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
Chlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:32
Chloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32

Print Date: 06/17/2024 2:35:16PM

J flagging is activated



**Results of 110026-MW4**

Client Sample ID: **110026-MW4**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429006  
 Lab Project ID: 1242429

Collection Date: 05/29/24 19:47  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
Chloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
cis-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
cis-1,3-Dichloropropene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:32
Dibromochloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:32
Dibromomethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
Dichlorodifluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
Ethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
Freon-113	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:32
Hexachlorobutadiene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
Isopropylbenzene (Cumene)	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
Methylene chloride	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:32
Methyl-t-butyl ether	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:32
Naphthalene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
n-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
n-Propylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
o-Xylene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
P & M -Xylene	1.50	U	2.00	0.620	1.50	ug/L	1		06/03/24 22:32
sec-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
Styrene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
tert-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
Tetrachloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
Toluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
trans-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
trans-1,3-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
Trichloroethene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:32
Trichlorofluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:32
Vinyl acetate	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:32
Vinyl chloride	0.112	U	0.150	0.0500	0.112	ug/L	1		06/03/24 22:32
Xylenes (total)	2.25	U	3.00	1.00	2.25	ug/L	1		06/03/24 22:32

**Surrogates**

1,2-Dichloroethane-D4 (surr)	117		81-118			%	1		06/03/24 22:32
4-Bromofluorobenzene (surr)	94.8		85-114			%	1		06/03/24 22:32
Toluene-d8 (surr)	95.3		89-112			%	1		06/03/24 22:32



## Results of 110026-MW4

Client Sample ID: **110026-MW4**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1242429006  
Lab Project ID: 1242429

Collection Date: 05/29/24 19:47  
Received Date: 05/30/24 15:37  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS23283  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 06/03/24 22:32  
Container ID: 1242429006-D

Prep Batch: VXX41235  
Prep Method: SW5030B  
Prep Date/Time: 06/03/24 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW5**

Client Sample ID: **110026-MW5**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429007  
 Lab Project ID: 1242429

Collection Date: 05/29/24 16:22  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:45
2-Methylnaphthalene	0.0180	J	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:45
Acenaphthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:45
Acenaphthylene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:45
Anthracene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:45
Benzo(a)Anthracene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:45
Benzo[a]pyrene	0.0147	U	0.0196	0.00608	0.0147	ug/L	1		06/04/24 14:45
Benzo[b]Fluoranthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:45
Benzo[g,h,i]perylene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:45
Benzo[k]fluoranthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:45
Chrysene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:45
Dibenzo[a,h]anthracene	0.0147	U	0.0196	0.00608	0.0147	ug/L	1		06/04/24 14:45
Fluoranthene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:45
Fluorene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:45
Indeno[1,2,3-c,d] pyrene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:45
Naphthalene	0.0735	U	0.0980	0.0304	0.0735	ug/L	1		06/04/24 14:45
Phenanthrene	0.0393	J	0.0980	0.0304	0.0735	ug/L	1		06/04/24 14:45
Pyrene	0.0368	U	0.0490	0.0147	0.0368	ug/L	1		06/04/24 14:45

**Surrogates**

2-Methylnaphthalene-d10 (surr)	71		38-100			%	1		06/04/24 14:45
Fluoranthene-d10 (surr)	83		30-111			%	1		06/04/24 14:45

**Batch Information**

Analytical Batch: XMS14271  
 Analytical Method: 8270E SIM LV (PAH)  
 Analyst: NRB  
 Analytical Date/Time: 06/04/24 14:45  
 Container ID: 1242429007-I

Prep Batch: XXX49533  
 Prep Method: SW3535A  
 Prep Date/Time: 06/03/24 12:00  
 Prep Initial Wt./Vol.: 255 mL  
 Prep Extract Vol: 1 mL

## Results of 110026-MW5

Client Sample ID: **110026-MW5**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429007  
 Lab Project ID: 1242429

Collection Date: 05/29/24 16:22  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.202	J	0.556	0.185	0.417	mg/L	1		06/07/24 13:56
<b>Surrogates</b>									
5a Androstane (surr)	95.1		50-150			%	1		06/07/24 13:56

## Batch Information

Analytical Batch: XFC16898  
 Analytical Method: AK102  
 Analyst: KFC  
 Analytical Date/Time: 06/07/24 13:56  
 Container ID: 1242429007-G

Prep Batch: XXX49552  
 Prep Method: SW3520C  
 Prep Date/Time: 06/05/24 20:10  
 Prep Initial Wt./Vol.: 270 mL  
 Prep Extract Vol: 1 mL

## Results of 110026-MW5

Client Sample ID: **110026-MW5**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429007  
 Lab Project ID: 1242429

Collection Date: 05/29/24 16:22  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0750	U	0.100	0.0450	0.0750	mg/L	1		05/31/24 20:50

### Surrogates

4-Bromofluorobenzene (surr)	94.4		50-150			%	1		05/31/24 20:50
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## Batch Information

Analytical Batch: VFC16823  
 Analytical Method: AK101  
 Analyst: T.L  
 Analytical Date/Time: 05/31/24 20:50  
 Container ID: 1242429007-A

Prep Batch: VXX41228  
 Prep Method: SW5030B  
 Prep Date/Time: 05/31/24 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



**Results of 110026-MW5**

Client Sample ID: **110026-MW5**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429007  
 Lab Project ID: 1242429

Collection Date: 05/29/24 16:22  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:47
1,1,1-Trichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
1,1,2,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:47
1,1,2-Trichloroethane	0.300	U	0.400	0.120	0.300	ug/L	1		06/03/24 22:47
1,1-Dichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
1,1-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
1,1-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
1,2,3-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
1,2,3-Trichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
1,2,4-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
1,2,4-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
1,2-Dibromo-3-chloropropane	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:47
1,2-Dibromoethane	0.0562	U	0.0750	0.0180	0.0562	ug/L	1		06/03/24 22:47
1,2-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
1,2-Dichloroethane	0.375	U	0.500	0.200	0.375	ug/L	1		06/03/24 22:47
1,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
1,3,5-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
1,3-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
1,3-Dichloropropane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:47
1,4-Dichlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:47
2,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
2-Butanone (MEK)	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:47
2-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
2-Hexanone	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:47
4-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
4-Isopropyltoluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
4-Methyl-2-pentanone (MIBK)	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:47
Benzene	4.29		0.400	0.120	0.300	ug/L	1		06/03/24 22:47
Bromobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
Bromochloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
Bromodichloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:47
Bromoform	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
Bromomethane	4.50	U	6.00	3.00	4.50	ug/L	1		06/03/24 22:47
Carbon disulfide	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:47
Carbon tetrachloride	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
Chlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:47
Chloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47

Print Date: 06/17/2024 2:35:16PM

J flagging is activated



**Results of 110026-MW5**

Client Sample ID: **110026-MW5**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429007  
 Lab Project ID: 1242429

Collection Date: 05/29/24 16:22  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
Chloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
cis-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
cis-1,3-Dichloropropene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:47
Dibromochloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:47
Dibromomethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
Dichlorodifluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
Ethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
Freon-113	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:47
Hexachlorobutadiene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
Isopropylbenzene (Cumene)	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
Methylene chloride	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:47
Methyl-t-butyl ether	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:47
Naphthalene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
n-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
n-Propylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
o-Xylene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
P & M -Xylene	1.50	U	2.00	0.620	1.50	ug/L	1		06/03/24 22:47
sec-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
Styrene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
tert-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
Tetrachloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
Toluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
trans-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
trans-1,3-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
Trichloroethene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 22:47
Trichlorofluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 22:47
Vinyl acetate	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 22:47
Vinyl chloride	0.112	U	0.150	0.0500	0.112	ug/L	1		06/03/24 22:47
Xylenes (total)	2.25	U	3.00	1.00	2.25	ug/L	1		06/03/24 22:47

**Surrogates**

1,2-Dichloroethane-D4 (surr)	116		81-118			%	1		06/03/24 22:47
4-Bromofluorobenzene (surr)	96.2		85-114			%	1		06/03/24 22:47
Toluene-d8 (surr)	95.1		89-112			%	1		06/03/24 22:47

## Results of 110026-MW5

Client Sample ID: **110026-MW5**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1242429007  
Lab Project ID: 1242429

Collection Date: 05/29/24 16:22  
Received Date: 05/30/24 15:37  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS23283  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 06/03/24 22:47  
Container ID: 1242429007-D

Prep Batch: VXX41235  
Prep Method: SW5030B  
Prep Date/Time: 06/03/24 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW15**

Client Sample ID: **110026-MW15**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429008  
 Lab Project ID: 1242429

Collection Date: 05/29/24 16:52  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 15:02
2-Methylnaphthalene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 15:02
Acenaphthene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 15:02
Acenaphthylene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 15:02
Anthracene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 15:02
Benzo(a)Anthracene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 15:02
Benzo[a]pyrene	0.0150	U	0.0200	0.00620	0.0150	ug/L	1		06/04/24 15:02
Benzo[b]Fluoranthene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 15:02
Benzo[g,h,i]perylene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 15:02
Benzo[k]fluoranthene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 15:02
Chrysene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 15:02
Dibenzo[a,h]anthracene	0.0150	U	0.0200	0.00620	0.0150	ug/L	1		06/04/24 15:02
Fluoranthene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 15:02
Fluorene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 15:02
Indeno[1,2,3-c,d] pyrene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 15:02
Naphthalene	0.0750	U	0.100	0.0310	0.0750	ug/L	1		06/04/24 15:02
Phenanthrene	0.0750	U	0.100	0.0310	0.0750	ug/L	1		06/04/24 15:02
Pyrene	0.0375	U	0.0500	0.0150	0.0375	ug/L	1		06/04/24 15:02

**Surrogates**

2-Methylnaphthalene-d10 (surr)	63.4		38-100			%	1		06/04/24 15:02
Fluoranthene-d10 (surr)	78.8		30-111			%	1		06/04/24 15:02

**Batch Information**

Analytical Batch: XMS14271  
 Analytical Method: 8270E SIM LV (PAH)  
 Analyst: NRB  
 Analytical Date/Time: 06/04/24 15:02  
 Container ID: 1242429008-I

Prep Batch: XXX49533  
 Prep Method: SW3535A  
 Prep Date/Time: 06/03/24 12:00  
 Prep Initial Wt./Vol.: 250 mL  
 Prep Extract Vol: 1 mL





**Results of 110026-MW15**

Client Sample ID: **110026-MW15**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1242429008  
Lab Project ID: 1242429

Collection Date: 05/29/24 16:52  
Received Date: 05/30/24 15:37  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.324	J	0.584	0.195	0.438	mg/L	1		06/07/24 14:06
<b>Surrogates</b>									
5a Androstane (surr)	70.7		50-150			%	1		06/07/24 14:06

**Batch Information**

Analytical Batch: XFC16898  
Analytical Method: AK102  
Analyst: KFC  
Analytical Date/Time: 06/07/24 14:06  
Container ID: 1242429008-G

Prep Batch: XXX49552  
Prep Method: SW3520C  
Prep Date/Time: 06/05/24 20:10  
Prep Initial Wt./Vol.: 257 mL  
Prep Extract Vol: 1 mL



**Results of 110026-MW15**

Client Sample ID: **110026-MW15**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1242429008  
Lab Project ID: 1242429

Collection Date: 05/29/24 16:52  
Received Date: 05/30/24 15:37  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0750	U	0.100	0.0450	0.0750	mg/L	1		05/31/24 21:09
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	93.5		50-150			%	1		05/31/24 21:09

**Batch Information**

Analytical Batch: VFC16823  
Analytical Method: AK101  
Analyst: T.L  
Analytical Date/Time: 05/31/24 21:09  
Container ID: 1242429008-A

Prep Batch: VXX41228  
Prep Method: SW5030B  
Prep Date/Time: 05/31/24 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-MW15**

Client Sample ID: **110026-MW15**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429008  
 Lab Project ID: 1242429

Collection Date: 05/29/24 16:52  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 23:02
1,1,1-Trichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
1,1,2,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 23:02
1,1,2-Trichloroethane	0.300	U	0.400	0.120	0.300	ug/L	1		06/03/24 23:02
1,1-Dichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
1,1-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
1,1-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
1,2,3-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
1,2,3-Trichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
1,2,4-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
1,2,4-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
1,2-Dibromo-3-chloropropane	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 23:02
1,2-Dibromoethane	0.0562	U	0.0750	0.0180	0.0562	ug/L	1		06/03/24 23:02
1,2-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
1,2-Dichloroethane	0.375	U	0.500	0.200	0.375	ug/L	1		06/03/24 23:02
1,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
1,3,5-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
1,3-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
1,3-Dichloropropane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 23:02
1,4-Dichlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 23:02
2,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
2-Butanone (MEK)	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 23:02
2-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
2-Hexanone	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 23:02
4-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
4-Isopropyltoluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
4-Methyl-2-pentanone (MIBK)	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 23:02
Benzene	4.59		0.400	0.120	0.300	ug/L	1		06/05/24 22:08
Bromobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
Bromochloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
Bromodichloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 23:02
Bromoform	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
Bromomethane	4.50	U	6.00	3.00	4.50	ug/L	1		06/03/24 23:02
Carbon disulfide	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 23:02
Carbon tetrachloride	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
Chlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 23:02
Chloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02

Print Date: 06/17/2024 2:35:16PM

J flagging is activated



**Results of 110026-MW15**

Client Sample ID: **110026-MW15**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429008  
 Lab Project ID: 1242429

Collection Date: 05/29/24 16:52  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
Chloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
cis-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
cis-1,3-Dichloropropene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 23:02
Dibromochloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 23:02
Dibromomethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
Dichlorodifluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
Ethylbenzene	0.340	J	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
Freon-113	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 23:02
Hexachlorobutadiene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
Isopropylbenzene (Cumene)	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
Methylene chloride	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 23:02
Methyl-t-butyl ether	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 23:02
Naphthalene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
n-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
n-Propylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
o-Xylene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
P & M -Xylene	1.50	U	2.00	0.620	1.50	ug/L	1		06/03/24 23:02
sec-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
Styrene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
tert-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
Tetrachloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
Toluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
trans-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
trans-1,3-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
Trichloroethene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 23:02
Trichlorofluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 23:02
Vinyl acetate	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 23:02
Vinyl chloride	0.112	U	0.150	0.0500	0.112	ug/L	1		06/03/24 23:02
Xylenes (total)	2.25	U	3.00	1.00	2.25	ug/L	1		06/03/24 23:02

**Surrogates**

1,2-Dichloroethane-D4 (surr)	119	*	81-118		%	1		06/03/24 23:02
4-Bromofluorobenzene (surr)	95		85-114		%	1		06/03/24 23:02
Toluene-d8 (surr)	95.6		89-112		%	1		06/03/24 23:02

## Results of 110026-MW15

Client Sample ID: **110026-MW15**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1242429008  
Lab Project ID: 1242429

Collection Date: 05/29/24 16:52  
Received Date: 05/30/24 15:37  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS23290  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 06/05/24 22:08  
Container ID: 1242429008-E

Prep Batch: VXX41251  
Prep Method: SW5030B  
Prep Date/Time: 06/05/24 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Analytical Batch: VMS23283  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 06/03/24 23:02  
Container ID: 1242429008-D

Prep Batch: VXX41235  
Prep Method: SW5030B  
Prep Date/Time: 06/03/24 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of 110026-WTB**

Client Sample ID: **110026-WTB**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429009  
 Lab Project ID: 1242429

Collection Date: 05/29/24 08:00  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0750	U	0.100	0.0450	0.0750	mg/L	1		05/31/24 18:38

**Surrogates**

4-Bromofluorobenzene (surr)	90.8		50-150			%	1		05/31/24 18:38
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**Batch Information**

Analytical Batch: VFC16823  
 Analytical Method: AK101  
 Analyst: T.L  
 Analytical Date/Time: 05/31/24 18:38  
 Container ID: 1242429009-A

Prep Batch: VXX41228  
 Prep Method: SW5030B  
 Prep Date/Time: 05/31/24 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	0.450	U	0.600	0.150	0.450	ug/L	1		05/31/24 18:38
Ethylbenzene	3.75	U	5.00	2.50	3.75	ug/L	1		05/31/24 18:38
o-Xylene	3.75	U	5.00	2.50	3.75	ug/L	1		05/31/24 18:38
P & M -Xylene	3.75	U	5.00	2.50	3.75	ug/L	1		05/31/24 18:38
Toluene	3.75	U	5.00	2.50	3.75	ug/L	1		05/31/24 18:38
Xylenes (total)	3.75	U	5.00	2.50	3.75	ug/L	1		05/31/24 18:38

**Surrogates**

1,4-Difluorobenzene (surr)	92.2		77-115			%	1		05/31/24 18:38
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**Batch Information**

Analytical Batch: VFC16823  
 Analytical Method: SW8021B  
 Analyst: T.L  
 Analytical Date/Time: 05/31/24 18:38  
 Container ID: 1242429009-A

Prep Batch: VXX41228  
 Prep Method: SW5030B  
 Prep Date/Time: 05/31/24 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



**Results of 110026-WTB**

Client Sample ID: **110026-WTB**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429009  
 Lab Project ID: 1242429

Collection Date: 05/29/24 08:00  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 20:30
1,1,1-Trichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
1,1,2,2-Tetrachloroethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 20:30
1,1,2-Trichloroethane	0.300	U	0.400	0.120	0.300	ug/L	1		06/03/24 20:30
1,1-Dichloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
1,1-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
1,1-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
1,2,3-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
1,2,3-Trichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
1,2,4-Trichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
1,2,4-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
1,2-Dibromo-3-chloropropane	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 20:30
1,2-Dibromoethane	0.0562	U	0.0750	0.0180	0.0562	ug/L	1		06/03/24 20:30
1,2-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
1,2-Dichloroethane	0.375	U	0.500	0.200	0.375	ug/L	1		06/03/24 20:30
1,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
1,3,5-Trimethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
1,3-Dichlorobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
1,3-Dichloropropane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 20:30
1,4-Dichlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 20:30
2,2-Dichloropropane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
2-Butanone (MEK)	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 20:30
2-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
2-Hexanone	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 20:30
4-Chlorotoluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
4-Isopropyltoluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
4-Methyl-2-pentanone (MIBK)	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 20:30
Benzene	0.300	U	0.400	0.120	0.300	ug/L	1		06/03/24 20:30
Bromobenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
Bromochloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
Bromodichloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 20:30
Bromoform	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
Bromomethane	4.50	U	6.00	3.00	4.50	ug/L	1		06/03/24 20:30
Carbon disulfide	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 20:30
Carbon tetrachloride	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
Chlorobenzene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 20:30
Chloroethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30

Print Date: 06/17/2024 2:35:16PM

J flagging is activated



**Results of 110026-WTB**

Client Sample ID: **110026-WTB**  
 Client Project ID: **110026-002; Kasilof Riverview**  
 Lab Sample ID: 1242429009  
 Lab Project ID: 1242429

Collection Date: 05/29/24 08:00  
 Received Date: 05/30/24 15:37  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

**Results by Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	LOD	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
Chloromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
cis-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
cis-1,3-Dichloropropene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 20:30
Dibromochloromethane	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 20:30
Dibromomethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
Dichlorodifluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
Ethylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
Freon-113	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 20:30
Hexachlorobutadiene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
Isopropylbenzene (Cumene)	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
Methylene chloride	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 20:30
Methyl-t-butyl ether	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 20:30
Naphthalene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
n-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
n-Propylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
o-Xylene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
P & M -Xylene	1.50	U	2.00	0.620	1.50	ug/L	1		06/03/24 20:30
sec-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
Styrene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
tert-Butylbenzene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
Tetrachloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
Toluene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
trans-1,2-Dichloroethene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
trans-1,3-Dichloropropene	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
Trichloroethene	0.375	U	0.500	0.150	0.375	ug/L	1		06/03/24 20:30
Trichlorofluoromethane	0.750	U	1.00	0.310	0.750	ug/L	1		06/03/24 20:30
Vinyl acetate	7.50	U	10.0	3.10	7.50	ug/L	1		06/03/24 20:30
Vinyl chloride	0.112	U	0.150	0.0500	0.112	ug/L	1		06/03/24 20:30
Xylenes (total)	2.25	U	3.00	1.00	2.25	ug/L	1		06/03/24 20:30

**Surrogates**

1,2-Dichloroethane-D4 (surr)	109		81-118			%	1		06/03/24 20:30
4-Bromofluorobenzene (surr)	99		85-114			%	1		06/03/24 20:30
Toluene-d8 (surr)	98.1		89-112			%	1		06/03/24 20:30



## Results of 110026-WTB

Client Sample ID: **110026-WTB**  
Client Project ID: **110026-002; Kasilof Riverview**  
Lab Sample ID: 1242429009  
Lab Project ID: 1242429

Collection Date: 05/29/24 08:00  
Received Date: 05/30/24 15:37  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

## Results by Volatile GC/MS

### Batch Information

Analytical Batch: VMS23283  
Analytical Method: SW8260D  
Analyst: JY  
Analytical Date/Time: 06/03/24 20:30  
Container ID: 1242429009-D

Prep Batch: VXX41235  
Prep Method: SW5030B  
Prep Date/Time: 06/03/24 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



### Method Blank

Blank ID: MB for HBN 1888731 [VXX/41228]  
Blank Lab ID: 1766060

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1242429001, 1242429002, 1242429004, 1242429005, 1242429006, 1242429007, 1242429008, 1242429009

### Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Benzene	0.000450U	0.000600	0.000150	0.000450	mg/L
Ethylbenzene	0.00375U	0.00500	0.00250	0.00375	mg/L
Gasoline Range Organics	0.0750U	0.100	0.0450	0.0750	mg/L
o-Xylene	0.00375U	0.00500	0.00250	0.00375	mg/L
P & M -Xylene	0.00375U	0.00500	0.00250	0.00375	mg/L
Toluene	0.00375U	0.00500	0.00250	0.00375	mg/L
Xylenes (total)	0.00375U	0.00500	0.00250	0.00375	mg/L
<b>Surrogates</b>					
1,4-Difluorobenzene (surr)	92.5	77-115		0	%
4-Bromofluorobenzene (surr)	94.7	50-150		0	%

### Batch Information

Analytical Batch: VFC16823  
Analytical Method: AK101  
Instrument: Agilent 7890 PID/FID  
Analyst: T.L  
Analytical Date/Time: 5/31/2024 5:03:00PM

Prep Batch: VXX41228  
Prep Method: SW5030B  
Prep Date/Time: 5/31/2024 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 06/17/2024 2:35:20PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242429 [VXX41228]  
 Blank Spike Lab ID: 1766061  
 Date Analyzed: 05/31/2024 17:41

Spike Duplicate ID: LCSD for HBN 1242429 [VXX41228]  
 Spike Duplicate Lab ID: 1766062  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242429001, 1242429002, 1242429004, 1242429005, 1242429006, 1242429007, 1242429008, 1242429009

## Results by AK101

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	0.100	0.0910	91	0.100	0.0933	93	( 80-120 )	2.50	(< 20 )
Ethylbenzene	0.100	0.0918	92	0.100	0.0946	95	( 75-125 )	3.00	(< 20 )
o-Xylene	0.100	0.0949	95	0.100	0.0985	99	( 80-120 )	3.70	(< 20 )
P & M -Xylene	0.200	0.185	93	0.200	0.192	96	( 75-130 )	3.70	(< 20 )
Toluene	0.100	0.0896	90	0.100	0.0924	92	( 75-120 )	3.10	(< 20 )
Xylenes (total)	0.300	0.280	93	0.300	0.291	97	( 79-121 )	3.70	(< 20 )

## Surrogates

1,4-Difluorobenzene (surr)	0.0500		103	0.0500		102	( 77-115 )	0.23	
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## Batch Information

Analytical Batch: **VFC16823**  
 Analytical Method: **AK101**  
 Instrument: **Agilent 7890 PID/FID**  
 Analyst: **T.L**

Prep Batch: **VXX41228**  
 Prep Method: **SW5030B**  
 Prep Date/Time: **05/31/2024 06:00**  
 Spike Init Wt./Vol.: 0.100 mg/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 0.100 mg/L Extract Vol: 5 mL

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242429 [VXX41228]  
 Blank Spike Lab ID: 1766068  
 Date Analyzed: 05/31/2024 18:00

Spike Duplicate ID: LCSD for HBN 1242429 [VXX41228]  
 Spike Duplicate Lab ID: 1766069  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242429001, 1242429002, 1242429004, 1242429005, 1242429006, 1242429007, 1242429008, 1242429009

## Results by AK101

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	1.00	0.888	89	1.00	0.925	93	( 60-120 )	4.20	(< 20 )
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	0.0500		96	0.0500		100	( 50-150 )	3.80	

## Batch Information

Analytical Batch: **VFC16823**  
 Analytical Method: **AK101**  
 Instrument: **Agilent 7890 PID/FID**  
 Analyst: **T.L**

Prep Batch: **VXX41228**  
 Prep Method: **SW5030B**  
 Prep Date/Time: **05/31/2024 06:00**  
 Spike Init Wt./Vol.: 0.0500 mg/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 0.0500 mg/L Extract Vol: 5 mL

Print Date: 06/17/2024 2:35:23PM



### Method Blank

Blank ID: MB for HBN 1888731 [VXX/41228]  
Blank Lab ID: 1766060

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1242429001, 1242429002, 1242429004, 1242429005, 1242429006, 1242429007, 1242429008, 1242429009

### Results by SW8021B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Benzene	0.450U	0.600	0.150	0.450	ug/L
Ethylbenzene	3.75U	5.00	2.50	3.75	ug/L
o-Xylene	3.75U	5.00	2.50	3.75	ug/L
P & M -Xylene	3.75U	5.00	2.50	3.75	ug/L
Toluene	3.75U	5.00	2.50	3.75	ug/L
Xylenes (total)	3.75U	5.00	2.50	3.75	ug/L

### Surrogates

1,4-Difluorobenzene (surr)	92.5	77-115		0	%
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### Batch Information

Analytical Batch: VFC16823  
Analytical Method: SW8021B  
Instrument: Agilent 7890 PID/FID  
Analyst: T.L  
Analytical Date/Time: 5/31/2024 5:03:00PM

Prep Batch: VXX41228  
Prep Method: SW5030B  
Prep Date/Time: 5/31/2024 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 06/17/2024 2:35:26PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242429 [VXX41228]  
 Blank Spike Lab ID: 1766061  
 Date Analyzed: 05/31/2024 17:41

Spike Duplicate ID: LCSD for HBN 1242429 [VXX41228]  
 Spike Duplicate Lab ID: 1766062  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242429001, 1242429002, 1242429004, 1242429005, 1242429006, 1242429007, 1242429008, 1242429009

## Results by SW8021B

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	100	91.0	91	100	93.3	93	( 80-120 )	2.50	(< 20 )
Ethylbenzene	100	91.8	92	100	94.6	95	( 75-125 )	3.00	(< 20 )
o-Xylene	100	94.9	95	100	98.5	99	( 80-120 )	3.70	(< 20 )
P & M -Xylene	200	185	93	200	192	96	( 75-130 )	3.70	(< 20 )
Toluene	100	89.6	90	100	92.4	92	( 75-120 )	3.10	(< 20 )
Xylenes (total)	300	280	93	300	291	97	( 79-121 )	3.70	(< 20 )
<b>Surrogates</b>									
1,4-Difluorobenzene (surr)	50		103	50		102	( 77-115 )	0.23	

## Batch Information

Analytical Batch: VFC16823  
 Analytical Method: SW8021B  
 Instrument: Agilent 7890 PID/FID  
 Analyst: T.L

Prep Batch: VXX41228  
 Prep Method: SW5030B  
 Prep Date/Time: 05/31/2024 06:00  
 Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL



**Method Blank**

Blank ID: MB for HBN 1889040 [VXX/41235]  
Blank Lab ID: 1766279

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1242429004, 1242429005, 1242429006, 1242429007, 1242429008, 1242429009

**Results by SW8260D**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
1,1,1,2-Tetrachloroethane	0.375U	0.500	0.150	0.375	ug/L
1,1,1-Trichloroethane	0.750U	1.00	0.310	0.750	ug/L
1,1,2,2-Tetrachloroethane	0.375U	0.500	0.150	0.375	ug/L
1,1,2-Trichloroethane	0.300U	0.400	0.120	0.300	ug/L
1,1-Dichloroethane	0.750U	1.00	0.310	0.750	ug/L
1,1-Dichloroethene	0.750U	1.00	0.310	0.750	ug/L
1,1-Dichloropropene	0.750U	1.00	0.310	0.750	ug/L
1,2,3-Trichlorobenzene	0.750U	1.00	0.310	0.750	ug/L
1,2,3-Trichloropropane	0.750U	1.00	0.310	0.750	ug/L
1,2,4-Trichlorobenzene	0.750U	1.00	0.310	0.750	ug/L
1,2,4-Trimethylbenzene	0.750U	1.00	0.310	0.750	ug/L
1,2-Dibromo-3-chloropropane	7.50U	10.0	3.10	7.50	ug/L
1,2-Dibromoethane	0.0562U	0.0750	0.0180	0.0562	ug/L
1,2-Dichlorobenzene	0.750U	1.00	0.310	0.750	ug/L
1,2-Dichloroethane	0.375U	0.500	0.200	0.375	ug/L
1,2-Dichloropropane	0.750U	1.00	0.310	0.750	ug/L
1,3,5-Trimethylbenzene	0.750U	1.00	0.310	0.750	ug/L
1,3-Dichlorobenzene	0.750U	1.00	0.310	0.750	ug/L
1,3-Dichloropropane	0.375U	0.500	0.150	0.375	ug/L
1,4-Dichlorobenzene	0.375U	0.500	0.150	0.375	ug/L
2,2-Dichloropropane	0.750U	1.00	0.310	0.750	ug/L
2-Butanone (MEK)	7.50U	10.0	3.10	7.50	ug/L
2-Chlorotoluene	0.750U	1.00	0.310	0.750	ug/L
2-Hexanone	7.50U	10.0	3.10	7.50	ug/L
4-Chlorotoluene	0.750U	1.00	0.310	0.750	ug/L
4-Isopropyltoluene	0.750U	1.00	0.310	0.750	ug/L
4-Methyl-2-pentanone (MIBK)	7.50U	10.0	3.10	7.50	ug/L
Benzene	0.300U	0.400	0.120	0.300	ug/L
Bromobenzene	0.750U	1.00	0.310	0.750	ug/L
Bromochloromethane	0.750U	1.00	0.310	0.750	ug/L
Bromodichloromethane	0.375U	0.500	0.150	0.375	ug/L
Bromoform	0.750U	1.00	0.310	0.750	ug/L
Bromomethane	4.50U	6.00	3.00	4.50	ug/L
Carbon disulfide	7.50U	10.0	3.10	7.50	ug/L
Carbon tetrachloride	0.750U	1.00	0.310	0.750	ug/L
Chlorobenzene	0.375U	0.500	0.150	0.375	ug/L
Chloroethane	0.750U	1.00	0.310	0.750	ug/L
Chloroform	0.750U	1.00	0.310	0.750	ug/L
Chloromethane	0.750U	1.00	0.310	0.750	ug/L
cis-1,2-Dichloroethene	0.750U	1.00	0.310	0.750	ug/L
cis-1,3-Dichloropropene	0.375U	0.500	0.150	0.375	ug/L
Dibromochloromethane	0.375U	0.500	0.150	0.375	ug/L

Print Date: 06/17/2024 2:35:32PM



### Method Blank

Blank ID: MB for HBN 1889040 [VXX/41235]  
Blank Lab ID: 1766279

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1242429004, 1242429005, 1242429006, 1242429007, 1242429008, 1242429009

### Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Dibromomethane	0.750U	1.00	0.310	0.750	ug/L
Dichlorodifluoromethane	0.750U	1.00	0.310	0.750	ug/L
Ethylbenzene	0.750U	1.00	0.310	0.750	ug/L
Freon-113	7.50U	10.0	3.10	7.50	ug/L
Hexachlorobutadiene	0.750U	1.00	0.310	0.750	ug/L
Isopropylbenzene (Cumene)	0.750U	1.00	0.310	0.750	ug/L
Methylene chloride	7.50U	10.0	3.10	7.50	ug/L
Methyl-t-butyl ether	7.50U	10.0	3.10	7.50	ug/L
Naphthalene	0.750U	1.00	0.310	0.750	ug/L
n-Butylbenzene	0.750U	1.00	0.310	0.750	ug/L
n-Propylbenzene	0.750U	1.00	0.310	0.750	ug/L
o-Xylene	0.750U	1.00	0.310	0.750	ug/L
P & M -Xylene	1.50U	2.00	0.620	1.50	ug/L
sec-Butylbenzene	0.750U	1.00	0.310	0.750	ug/L
Styrene	0.750U	1.00	0.310	0.750	ug/L
tert-Butylbenzene	0.750U	1.00	0.310	0.750	ug/L
Tetrachloroethene	0.750U	1.00	0.310	0.750	ug/L
Toluene	0.750U	1.00	0.310	0.750	ug/L
trans-1,2-Dichloroethene	0.750U	1.00	0.310	0.750	ug/L
trans-1,3-Dichloropropene	0.750U	1.00	0.310	0.750	ug/L
Trichloroethene	0.375U	0.500	0.150	0.375	ug/L
Trichlorofluoromethane	0.750U	1.00	0.310	0.750	ug/L
Vinyl acetate	7.50U	10.0	3.10	7.50	ug/L
Vinyl chloride	0.112U	0.150	0.0500	0.112	ug/L
Xylenes (total)	2.25U	3.00	1.00	2.25	ug/L
<b>Surrogates</b>					
1,2-Dichloroethane-D4 (surr)	111	81-118		0	%
4-Bromofluorobenzene (surr)	99.3	85-114		0	%
Toluene-d8 (surr)	95.7	89-112		0	%

### Batch Information

Analytical Batch: VMS23283  
Analytical Method: SW8260D  
Instrument: VPA 780/5975 GC/MS  
Analyst: JY  
Analytical Date/Time: 6/3/2024 5:15:00PM

Prep Batch: VXX41235  
Prep Method: SW5030B  
Prep Date/Time: 6/3/2024 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 06/17/2024 2:35:32PM



## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242429 [VXX41235]  
 Blank Spike Lab ID: 1766280  
 Date Analyzed: 06/03/2024 17:30

Spike Duplicate ID: LCSD for HBN 1242429 [VXX41235]  
 Spike Duplicate Lab ID: 1766281  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242429004, 1242429005, 1242429006, 1242429007, 1242429008, 1242429009

## Results by SW8260D

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,1,2-Tetrachloroethane	30	34.2	114	30	36.0	120	( 78-124 )	5.10	(< 20 )
1,1,1-Trichloroethane	30	37.8	126	30	36.6	122	( 74-131 )	3.20	(< 20 )
1,1,2,2-Tetrachloroethane	30	27.2	91	30	28.5	95	( 71-121 )	4.70	(< 20 )
1,1,2-Trichloroethane	30	28.5	95	30	30.5	102	( 80-119 )	6.60	(< 20 )
1,1-Dichloroethane	30	32.1	107	30	31.7	106	( 77-125 )	1.30	(< 20 )
1,1-Dichloroethene	30	37.1	124	30	34.2	114	( 71-131 )	8.10	(< 20 )
1,1-Dichloropropene	30	33.3	111	30	32.5	108	( 79-125 )	2.70	(< 20 )
1,2,3-Trichlorobenzene	30	28.8	96	30	30.9	103	( 69-129 )	7.10	(< 20 )
1,2,3-Trichloropropane	30	30.2	101	30	31.6	105	( 73-122 )	4.60	(< 20 )
1,2,4-Trichlorobenzene	30	29.4	98	30	31.7	106	( 69-130 )	7.50	(< 20 )
1,2,4-Trimethylbenzene	30	30.5	102	30	31.3	104	( 79-124 )	2.50	(< 20 )
1,2-Dibromo-3-chloropropane	30	30.5	102	30	32.4	108	( 62-128 )	6.20	(< 20 )
1,2-Dibromoethane	30	32.3	108	30	34.7	116	( 77-121 )	7.10	(< 20 )
1,2-Dichlorobenzene	30	28.6	95	30	30.9	103	( 80-119 )	7.80	(< 20 )
1,2-Dichloroethane	30	34.1	114	30	36.5	122	( 73-128 )	6.90	(< 20 )
1,2-Dichloropropane	30	30.6	102	30	31.5	105	( 78-122 )	2.80	(< 20 )
1,3,5-Trimethylbenzene	30	30.2	101	30	31.2	104	( 75-124 )	3.20	(< 20 )
1,3-Dichlorobenzene	30	28.9	96	30	31.0	103	( 80-119 )	7.20	(< 20 )
1,3-Dichloropropane	30	28.7	96	30	30.5	102	( 80-119 )	6.10	(< 20 )
1,4-Dichlorobenzene	30	28.7	96	30	30.6	102	( 79-118 )	6.40	(< 20 )
2,2-Dichloropropane	30	38.7	129	30	37.4	125	( 60-139 )	3.40	(< 20 )
2-Butanone (MEK)	90	99.6	111	90	110	122	( 56-143 )	9.60	(< 20 )
2-Chlorotoluene	30	27.8	93	30	29.0	97	( 79-122 )	4.30	(< 20 )
2-Hexanone	90	89.0	99	90	96.8	108	( 57-139 )	8.40	(< 20 )
4-Chlorotoluene	30	28.5	95	30	29.8	99	( 78-122 )	4.40	(< 20 )
4-Isopropyltoluene	30	30.8	103	30	32.5	108	( 77-127 )	5.10	(< 20 )
4-Methyl-2-pentanone (MIBK)	90	103	114	90	114	127	( 67-130 )	10.60	(< 20 )
Benzene	30	31.9	106	30	31.8	106	( 79-120 )	0.09	(< 20 )
Bromobenzene	30	28.9	96	30	29.9	100	( 80-120 )	3.30	(< 20 )
Bromochloromethane	30	35.9	120	30	38.2	127	* ( 78-123 )	6.30	(< 20 )
Bromodichloromethane	30	36.7	122	30	38.1	127	* ( 79-125 )	3.80	(< 20 )
Bromoform	30	33.4	111	30	36.9	123	( 66-130 )	10.10	(< 20 )
Bromomethane	30	36.2	121	30	38.7	129	( 53-141 )	6.70	(< 20 )

Print Date: 06/17/2024 2:35:36PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242429 [VXX41235]  
 Blank Spike Lab ID: 1766280  
 Date Analyzed: 06/03/2024 17:30

Spike Duplicate ID: LCSD for HBN 1242429 [VXX41235]  
 Spike Duplicate Lab ID: 1766281  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242429004, 1242429005, 1242429006, 1242429007, 1242429008, 1242429009

## Results by SW8260D

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Carbon disulfide	45	51.6	115	45	48.6	108	( 64-133 )	6.10	(< 20 )
Carbon tetrachloride	30	36.1	120	30	35.4	118	( 72-136 )	1.80	(< 20 )
Chlorobenzene	30	31.4	105	30	32.5	108	( 82-118 )	3.50	(< 20 )
Chloroethane	30	34.3	114	30	31.5	105	( 60-138 )	8.40	(< 20 )
Chloroform	30	33.6	112	30	33.4	111	( 79-124 )	0.36	(< 20 )
Chloromethane	30	31.5	105	30	30.1	100	( 50-139 )	4.50	(< 20 )
cis-1,2-Dichloroethene	30	34.1	114	30	34.4	115	( 78-123 )	0.85	(< 20 )
cis-1,3-Dichloropropene	30	34.7	116	30	36.7	122	( 75-124 )	5.60	(< 20 )
Dibromochloromethane	30	35.1	117	30	37.5	125	( 74-126 )	6.70	(< 20 )
Dibromomethane	30	34.1	114	30	37.2	124	* ( 79-123 )	8.60	(< 20 )
Dichlorodifluoromethane	30	32.4	108	30	29.0	97	( 32-152 )	10.80	(< 20 )
Ethylbenzene	30	31.5	105	30	32.6	109	( 79-121 )	3.40	(< 20 )
Freon-113	45	57.1	127	45	54.6	121	( 70-136 )	4.40	(< 20 )
Hexachlorobutadiene	30	31.6	105	30	34.0	113	( 66-134 )	7.20	(< 20 )
Isopropylbenzene (Cumene)	30	31.5	105	30	33.5	112	( 72-131 )	6.00	(< 20 )
Methylene chloride	30	32.6	109	30	33.2	111	( 74-124 )	1.80	(< 20 )
Methyl-t-butyl ether	45	51.1	114	45	55.2	123	( 71-124 )	7.70	(< 20 )
Naphthalene	30	29.3	98	30	31.7	106	( 61-128 )	7.80	(< 20 )
n-Butylbenzene	30	31.3	104	30	32.3	108	( 75-128 )	3.00	(< 20 )
n-Propylbenzene	30	28.1	94	30	28.8	96	( 76-126 )	2.70	(< 20 )
o-Xylene	30	30.8	103	30	32.4	108	( 78-122 )	5.10	(< 20 )
P & M -Xylene	60	62.6	104	60	65.2	109	( 80-121 )	4.10	(< 20 )
sec-Butylbenzene	30	29.0	97	30	30.5	102	( 77-126 )	5.10	(< 20 )
Styrene	30	32.4	108	30	34.6	115	( 78-123 )	6.60	(< 20 )
tert-Butylbenzene	30	29.2	97	30	30.3	101	( 78-124 )	3.60	(< 20 )
Tetrachloroethene	30	31.5	105	30	32.3	108	( 74-129 )	2.60	(< 20 )
Toluene	30	29.4	98	30	29.5	98	( 80-121 )	0.41	(< 20 )
trans-1,2-Dichloroethene	30	35.4	118	30	33.6	112	( 75-124 )	5.20	(< 20 )
trans-1,3-Dichloropropene	30	33.4	111	30	35.3	118	( 73-127 )	5.60	(< 20 )
Trichloroethene	30	34.9	116	30	34.5	115	( 79-123 )	1.30	(< 20 )
Trichlorofluoromethane	30	40.2	134	30	36.2	121	( 65-141 )	10.40	(< 20 )
Vinyl acetate	30	32.4	108	30	34.6	115	( 54-146 )	6.50	(< 20 )
Vinyl chloride	30	30.9	103	30	27.7	92	( 58-137 )	10.90	(< 20 )

Print Date: 06/17/2024 2:35:36PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242429 [VXX41235]  
 Blank Spike Lab ID: 1766280  
 Date Analyzed: 06/03/2024 17:30

Spike Duplicate ID: LCSD for HBN 1242429 [VXX41235]  
 Spike Duplicate Lab ID: 1766281  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242429004, 1242429005, 1242429006, 1242429007, 1242429008, 1242429009

## Results by SW8260D

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Xylenes (total)	90	93.3	104	90	97.6	108	( 79-121 )	4.50	(< 20 )
<b>Surrogates</b>									
1,2-Dichloroethane-D4 (surr)	30		111	30		118	( 81-118 )	5.70	
4-Bromofluorobenzene (surr)	30		96	30		95	( 85-114 )	1.70	
Toluene-d8 (surr)	30		98	30		96	( 89-112 )	1.50	

## Batch Information

Analytical Batch: **VMS23283**  
 Analytical Method: **SW8260D**  
 Instrument: **VPA 780/5975 GC/MS**  
 Analyst: **JY**

Prep Batch: **VXX41235**  
 Prep Method: **SW5030B**  
 Prep Date/Time: **06/03/2024 06:00**  
 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL



### Method Blank

Blank ID: MB for HBN 1889947 [VXX/41251]  
Blank Lab ID: 1766642

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1242429008

### Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Benzene	0.300U	0.400	0.120	0.300	ug/L
<b>Surrogates</b>					
1,2-Dichloroethane-D4 (surr)	100	81-118		0	%
4-Bromofluorobenzene (surr)	100	85-114		0	%
Toluene-d8 (surr)	98.6	89-112		0	%

### Batch Information

Analytical Batch: VMS23290  
Analytical Method: SW8260D  
Instrument: Agilent 7890-75MS  
Analyst: JY  
Analytical Date/Time: 6/5/2024 1:39:00PM

Prep Batch: VXX41251  
Prep Method: SW5030B  
Prep Date/Time: 6/5/2024 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 06/17/2024 2:35:40PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242429 [VXX41251]  
 Blank Spike Lab ID: 1766643  
 Date Analyzed: 06/05/2024 14:56

Spike Duplicate ID: LCSD for HBN 1242429 [VXX41251]  
 Spike Duplicate Lab ID: 1766644  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242429008

## Results by SW8260D

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	30	29.6	99	30	28.6	95	( 79-120 )	3.40	(< 20 )
<b>Surrogates</b>									
1,2-Dichloroethane-D4 (surr)	30		96	30		96	( 81-118 )	0.07	
4-Bromofluorobenzene (surr)	30		100	30		99	( 85-114 )	0.87	
Toluene-d8 (surr)	30		101	30		100	( 89-112 )	0.27	

## Batch Information

Analytical Batch: VMS23290  
 Analytical Method: SW8260D  
 Instrument: Agilent 7890-75MS  
 Analyst: JY

Prep Batch: VXX41251  
 Prep Method: SW5030B  
 Prep Date/Time: 06/05/2024 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: 06/17/2024 2:35:43PM

## Method Blank

Blank ID: MB for HBN 1888632 [XXX/49533]  
 Blank Lab ID: 1766057

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
 1242429004, 1242429005, 1242429006, 1242429007, 1242429008

## Results by 8270E SIM LV (PAH)

Parameter	Results	LOQ/CL	DL	LOD	Units
1-Methylnaphthalene	0.0375U	0.0500	0.0150	0.0375	ug/L
2-Methylnaphthalene	0.0375U	0.0500	0.0150	0.0375	ug/L
Acenaphthene	0.0375U	0.0500	0.0150	0.0375	ug/L
Acenaphthylene	0.0375U	0.0500	0.0150	0.0375	ug/L
Anthracene	0.0375U	0.0500	0.0150	0.0375	ug/L
Benzo(a)Anthracene	0.0375U	0.0500	0.0150	0.0375	ug/L
Benzo[a]pyrene	0.0150U	0.0200	0.00620	0.0150	ug/L
Benzo[b]Fluoranthene	0.0375U	0.0500	0.0150	0.0375	ug/L
Benzo[g,h,i]perylene	0.0375U	0.0500	0.0150	0.0375	ug/L
Benzo[k]fluoranthene	0.0375U	0.0500	0.0150	0.0375	ug/L
Chrysene	0.0375U	0.0500	0.0150	0.0375	ug/L
Dibenzo[a,h]anthracene	0.0150U	0.0200	0.00620	0.0150	ug/L
Fluoranthene	0.0171J	0.0500	0.0150	0.0375	ug/L
Fluorene	0.0375U	0.0500	0.0150	0.0375	ug/L
Indeno[1,2,3-c,d] pyrene	0.0375U	0.0500	0.0150	0.0375	ug/L
Naphthalene	0.0750U	0.100	0.0310	0.0750	ug/L
Phenanthrene	0.0750U	0.100	0.0310	0.0750	ug/L
Pyrene	0.0375U	0.0500	0.0150	0.0375	ug/L
<b>Surrogates</b>					
2-Methylnaphthalene-d10 (surr)	65	38-100		0	%
Fluoranthene-d10 (surr)	82.5	30-111		0	%

## Batch Information

Analytical Batch: XMS14271  
 Analytical Method: 8270E SIM LV (PAH)  
 Instrument: Agilent 8890 GC/MS SYA  
 Analyst: NRB  
 Analytical Date/Time: 6/4/2024 1:08:00PM

Prep Batch: XXX49533  
 Prep Method: SW3535A  
 Prep Date/Time: 6/3/2024 12:00:00PM  
 Prep Initial Wt./Vol.: 250 mL  
 Prep Extract Vol: 1 mL

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242429 [XXX49533]  
 Blank Spike Lab ID: 1766058  
 Date Analyzed: 06/04/2024 13:24

Spike Duplicate ID: LCSD for HBN 1242429  
 [XXX49533]  
 Spike Duplicate Lab ID: 1766059  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242429004, 1242429005, 1242429006, 1242429007, 1242429008

## Results by 8270E SIM LV (PAH)

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1-Methylnaphthalene	2	1.39	70	2	1.58	79	( 41-115 )	12.60	(< 20 )
2-Methylnaphthalene	2	1.40	70	2	1.57	79	( 39-114 )	11.80	(< 20 )
Acenaphthene	2	1.51	76	2	1.69	85	( 48-114 )	11.00	(< 20 )
Acenaphthylene	2	1.55	77	2	1.71	86	( 35-121 )	10.30	(< 20 )
Anthracene	2	1.69	85	2	1.78	89	( 53-119 )	5.50	(< 20 )
Benzo(a)Anthracene	2	1.73	86	2	1.73	87	( 59-120 )	0.42	(< 20 )
Benzo[a]pyrene	2	1.64	82	2	1.66	83	( 53-120 )	0.86	(< 20 )
Benzo[b]Fluoranthene	2	1.69	85	2	1.71	85	( 53-126 )	1.00	(< 20 )
Benzo[g,h,i]perylene	2	1.77	88	2	1.80	90	( 44-128 )	2.00	(< 20 )
Benzo[k]fluoranthene	2	1.82	91	2	1.84	92	( 54-125 )	1.30	(< 20 )
Chrysene	2	1.74	87	2	1.75	88	( 57-120 )	0.36	(< 20 )
Dibenzo[a,h]anthracene	2	1.79	89	2	1.84	92	( 44-131 )	2.90	(< 20 )
Fluoranthene	2	1.72	86	2	1.76	88	( 58-120 )	2.20	(< 20 )
Fluorene	2	1.62	81	2	1.77	88	( 50-118 )	8.40	(< 20 )
Indeno[1,2,3-c,d] pyrene	2	1.67	84	2	1.71	86	( 48-130 )	2.30	(< 20 )
Naphthalene	2	1.33	66	2	1.51	75	( 43-114 )	12.60	(< 20 )
Phenanthrene	2	1.72	86	2	1.85	92	( 53-115 )	7.40	(< 20 )
Pyrene	2	1.71	86	2	1.73	87	( 53-121 )	1.20	(< 20 )
<b>Surrogates</b>									
2-Methylnaphthalene-d10 (surr)	2		66	2		76	( 38-100 )	13.60	
Fluoranthene-d10 (surr)	2		80	2		83	( 30-111 )	3.40	

## Batch Information

Analytical Batch: XMS14271  
 Analytical Method: 8270E SIM LV (PAH)  
 Instrument: Agilent 8890 GC/MS SYA  
 Analyst: NRB

Prep Batch: XXX49533  
 Prep Method: SW3535A  
 Prep Date/Time: 06/03/2024 12:00  
 Spike Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL  
 Dupe Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL

## Method Blank

Blank ID: MB for HBN 1889939 [XXX/49552]  
 Blank Lab ID: 1766616

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
 1242429004, 1242429005, 1242429006, 1242429007, 1242429008

## Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>LOD</u>	<u>Units</u>
Diesel Range Organics	0.450U	0.600	0.200	0.450	mg/L
<b>Surrogates</b>					
5a Androstane (surr)	80.5	60-120		0	%

## Batch Information

Analytical Batch: XFC16898  
 Analytical Method: AK102  
 Instrument: Agilent 7890B R  
 Analyst: KFC  
 Analytical Date/Time: 6/7/2024 12:58:00PM

Prep Batch: XXX49552  
 Prep Method: SW3520C  
 Prep Date/Time: 6/5/2024 8:10:00PM  
 Prep Initial Wt./Vol.: 250 mL  
 Prep Extract Vol: 1 mL

Print Date: 06/17/2024 2:35:53PM



## Blank Spike Summary

Blank Spike ID: LCS for HBN 1242429 [XXX49552]  
 Blank Spike Lab ID: 1766617  
 Date Analyzed: 06/07/2024 13:08

Spike Duplicate ID: LCSD for HBN 1242429 [XXX49552]  
 Spike Duplicate Lab ID: 1766618  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1242429004, 1242429005, 1242429006, 1242429007, 1242429008

## Results by AK102

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	20	18.3	92	20	20.5	103	( 75-125 )	11.30	(< 20 )
<b>Surrogates</b>									
5a Androstane (surr)	0.4		99	0.4		116	( 60-120 )	16.70	

## Batch Information

Analytical Batch: **XFC16898**  
 Analytical Method: **AK102**  
 Instrument: **Agilent 7890B R**  
 Analyst: **KFC**

Prep Batch: **XXX49552**  
 Prep Method: **SW3520C**  
 Prep Date/Time: **06/05/2024 20:10**  
 Spike Init Wt./Vol.: 0.4 mg/L Extract Vol: 1 mL  
 Dupe Init Wt./Vol.: 0.4 mg/L Extract Vol: 1 mL

Print Date: 06/17/2024 2:35:57PM

Profile # 365 427 CJW

**Shannon & Wilson, Inc.**  
**5430 Fairbanks Street, Suite 3**  
**Anchorage, Alaska 99518**  
**(907) 561-2120**  
**Fax (206) 695-6777**

SGS North America Inc.

**1242429**



Date	Time	Sample ID	Total Containers	SGS North America Inc.				
				VOA Vials HCl	VOA Vials HCl	Amber HCl	Amber 4C	VOA Vials HCl
5/29/2024	15:11	110026-DW1	3					X
5/29/2024	15:31	110026-DW2	3					X
5/29/2024	9:52	110026-MW1	10	X	X	X	X	
5/30/2024	10:26	110026-MW2	10	X	X	X	X	
5/29/2024	18:18	110026-MW3	10	X	X	X	X	
5/29/2024	19:47	110026-MW4	10	X	X	X	X	
5/29/2024	16:22	110026-MW5	10	X	X	X	X	
5/29/2024	16:52	110026-MW15	10	X	X	X	X	
5/29/2024	8:00	110026-WTB	2 Sets	X	X			

Relinquished By:		Relinquished By:		Project Information:	
Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>	Project Number: 110026-002			
Print Name: <i>Zach Thon</i>	Print Name: <i>[Signature]</i>	Project Name: Kasilof Riverview Lodge			
Company: Shannon & Wilson, Inc.	Company: <i>[Signature]</i>	Contact: Alec Rizzo / Zach Thon			
Date: <i>5-30-24</i>	Date: <i>[Signature]</i>	Sampler: ZJT			
Time: <i>15:37</i>	Time: <i>[Signature]</i>	Special Instructions:			
Received By:		Sample Receipt			
Signature: <i>[Signature]</i>	Signature: <i>Jeremy Corley</i>	Shipped Via: Hand Delivered			
Print Name: <i>[Signature]</i>	Print Name: <i>Jeremy Corley</i>				
Company: <i>SGS</i>	Company: <i>SGS</i>	Cooler Temperature Upon Arrival:			
Date: <i>5/30/24</i>	Date: <i>5/30/24</i>	Sample Matrix: Water			
Time: <i>15:37</i>	Time: <i>15:37</i>	10 Working DAY TAT			

Hand Delivered Temp 4.9 DC3  
 CS: Absent



1242429



SAMPLE RECEIPT FORM

Project Manager Completion				
Was all necessary information recorded on the COC upon receipt? (temperature, COC seals, etc.?)	<input checked="" type="radio"/> Yes	No	N/A	
Was temperature between 0-6 °C?	<input checked="" type="radio"/> 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*?	<input checked="" type="radio"/> Yes	No	N/A	
Was a method specified for each analysis, where applicable? If no, please note correct methods.	<input checked="" type="radio"/> Yes	No	N/A	
Are compound lists specified, where applicable? For project specific or special compound lists please note correct analysis code.	Yes	No	<input checked="" type="radio"/> N/A	
If rush was requested by the client, was the requested TAT approved?	Yes	No	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> N/A	If "NO", contact client for information.
Sample Login Completion				
Do ID's on sample containers match COC?	<input checked="" type="radio"/> Yes	<input checked="" type="radio"/> No	N/A	
If provided on containers, do dates/times collected match COC?	<input checked="" type="radio"/> Yes	<input checked="" type="radio"/> No	N/A	Note: If times differ <1 hr., record details below and login per COC.
Were all sample containers received in good condition?	<input checked="" type="radio"/> Yes	No	N/A	
Were proper containers (type/mass/volume/preservative) received for all samples? *See form F-083 "Sample Guide"	<input checked="" type="radio"/> 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*?	<input checked="" type="radio"/> Yes	No	N/A	
Were all VOA vials free of headspace >6mm?	<input checked="" type="radio"/> Yes	No	N/A	
Were all soil VOA samples received field extracted with Methanol?	Yes	No	<input checked="" type="radio"/> N/A	
Did all soil VOA samples have an accompanying unpreserved container for % solids?	Yes	No	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> N/A	
For Rush/Short Holding time, was the lab notified?	Yes	No	<input checked="" type="radio"/> N/A	
For any question answered "NO", was the Project Manager notified?	<input checked="" type="radio"/> Yes	No	N/A	PM Initials:
Was Peer Review of sample numbering/labelling completed?	Yes	No	<input checked="" type="radio"/> N/A	Reviewer Initials:
<b>Additional Notes/Clarification where Applicable, including resolution of "No" answers when a change order is not attached:</b>				
Sample "116026 - MW1" <del>does not exist</del> . was not received. 9/11				



## Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1242429001-A	HCL to pH < 2	OK	1242429007-D	HCL to pH < 2	OK
1242429001-B	HCL to pH < 2	OK	1242429007-E	HCL to pH < 2	OK
1242429001-C	HCL to pH < 2	OK	1242429007-F	HCL to pH < 2	OK
1242429002-A	HCL to pH < 2	OK	1242429007-G	HCL to pH < 2	OK
1242429002-B	HCL to pH < 2	OK	1242429007-H	HCL to pH < 2	OK
1242429002-C	HCL to pH < 2	OK	1242429007-I	No Preservative Required	OK
1242429003-A	HCL to pH < 2	OK	1242429007-J	No Preservative Required	OK
1242429003-B	HCL to pH < 2	OK	1242429008-A	HCL to pH < 2	OK
1242429003-C	HCL to pH < 2	OK	1242429008-B	HCL to pH < 2	OK
1242429003-D	HCL to pH < 2	OK	1242429008-C	HCL to pH < 2	OK
1242429003-E	HCL to pH < 2	OK	1242429008-D	HCL to pH < 2	OK
1242429003-F	HCL to pH < 2	OK	1242429008-E	HCL to pH < 2	OK
1242429003-G	HCL to pH < 2	OK	1242429008-F	HCL to pH < 2	OK
1242429003-H	HCL to pH < 2	OK	1242429008-G	HCL to pH < 2	OK
1242429003-I	No Preservative Required	OK	1242429008-H	HCL to pH < 2	OK
1242429003-J	No Preservative Required	OK	1242429008-I	No Preservative Required	OK
1242429004-A	HCL to pH < 2	OK	1242429008-J	No Preservative Required	OK
1242429004-B	HCL to pH < 2	OK	1242429009-A	HCL to pH < 2	OK
1242429004-C	HCL to pH < 2	OK	1242429009-B	HCL to pH < 2	OK
1242429004-D	HCL to pH < 2	OK	1242429009-C	HCL to pH < 2	OK
1242429004-E	HCL to pH < 2	OK	1242429009-D	HCL to pH < 2	OK
1242429004-F	HCL to pH < 2	OK	1242429009-E	HCL to pH < 2	OK
1242429004-G	HCL to pH < 2	OK	1242429009-F	HCL to pH < 2	OK
1242429004-H	HCL to pH < 2	OK			
1242429004-I	No Preservative Required	OK			
1242429004-J	No Preservative Required	OK			
1242429005-A	HCL to pH < 2	OK			
1242429005-B	HCL to pH < 2	OK			
1242429005-C	HCL to pH < 2	OK			
1242429005-D	HCL to pH < 2	OK			
1242429005-E	HCL to pH < 2	OK			
1242429005-F	HCL to pH < 2	OK			
1242429005-G	HCL to pH < 2	OK			
1242429005-H	HCL to pH < 2	OK			
1242429005-I	No Preservative Required	OK			
1242429005-J	No Preservative Required	OK			
1242429006-A	HCL to pH < 2	OK			
1242429006-B	HCL to pH < 2	OK			
1242429006-C	HCL to pH < 2	OK			
1242429006-D	HCL to pH < 2	OK			
1242429006-E	HCL to pH < 2	OK			
1242429006-F	HCL to pH < 2	OK			
1242429006-G	HCL to pH < 2	OK			
1242429006-H	HCL to pH < 2	OK			
1242429006-I	No Preservative Required	OK			
1242429006-J	No Preservative Required	OK			
1242429007-A	HCL to pH < 2	OK			
1242429007-B	HCL to pH < 2	OK			
1242429007-C	HCL to pH < 2	OK			

Container Id

Preservative

Container  
Condition

Container Id

Preservative

Container  
Condition

#### 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.

# ADEC Contaminated Sites Program Laboratory Data Review Checklist

<b>Completed By:</b>	Zach Thon	<b>CS Site Name:</b>	Kasilof Riverview Lodge	<b>Lab Name:</b>	SGS
<b>Title:</b>	Environmental Scientist	<b>ADEC File No.:</b>	2319.26.002	<b>Lab Report No.:</b>	1242429
<b>Consulting Firm:</b>	Shannon & Wilson	<b>Hazard ID No.:</b>	22950	<b>Lab Report Date:</b>	6/17/2024

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

## 1. Laboratory

- a. Did an ADEC Contaminated Sites Laboratory Approval Program (CS-LAP) 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 CS-LAP approved?

Yes  No  N/A

Comments: *The samples were not submitted to another “network” laboratory or subcontracted to an alternate laboratory.*

## 2. Chain of Custody (CoC)

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

Yes  No  N/A

Comments:

- b. Were the correct analyses requested?

Yes  No  N/A

Analyses requested: GRO, DRO, VOCs, PAHs, BTEX

Comments:

## 3. Laboratory Sample Receipt Documentation

- a. Is the sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes  No  N/A

Cooler temperature(s): 4.9°C

CS Site Name: Kasilof Riverview Lodge

Lab Report No.: 1242429

- b. Is the sample preservation acceptable – acidified waters, methanol preserved soil (GRO, BTEX, VOCs, etc.)?

Yes  No  N/A

Comments:

- c. Is the sample condition documented – broken, leaking, zero headspace (VOA vials); canister vacuum/pressure checked and no open valves, etc.?

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, canister not holding a vacuum, etc.?

Yes  No  N/A

Comments: *Sample 110026-MW1 was inadvertently included on the COC, however that sample was not collected.*

- e. Is the data quality or usability affected?

Yes  No  N/A

Comments: *See above*

#### 4. Case Narrative

- a. Is the case narrative present and understandable?

Yes  No  N/A

Comments:

- b. Are there discrepancies, errors, or QC failures identified by the lab?

Yes  No  N/A

Comments: *The case narrative noted the following:*

*-PS- 8260D – Surrogate recovery for 1,2-dichloroethane-d4 does not meet QC criteria. All analytes associated with this surrogate were not reported above the LOQ.*

*-LCSD- 8260D – LCSD Recovery for several analytes do not meet QC criteria. These analytes were not reported above the LOQ in associated samples.*

- c. Were all the corrective actions documented?

Yes  No  N/A

Comments:

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

Comments: *See above.*

## 5. Sample Results

- a. Are the correct analyses performed/reported as requested on CoC?  
Yes  No  N/A   
Comments:
- b. Are all applicable holding times met?  
Yes  No  N/A   
Comments:
- c. Are all soils reported on a dry weight basis?  
Yes  No  N/A   
Comments:
- d. Are the reported limits of quantitation (LoQ) or limits of detections (LOD), or reporting limits (RL) less than the Cleanup Level or the action level for the project?  
Yes  No  N/A   
Comments: *The LOQ for 1,2,3-trichloropropane exceeds the ADEC cleanup level for all project samples.*
- e. Is the data quality or usability affected?  
Yes  No  N/A   
Comments: *There is a potential that the target analyte is present at a concentration greater than the ADEC cleanup level, but less than the LOQ.*

## 6. QC Samples

- a. Method Blank
- i. Was one method blank reported per matrix, analysis, and 20 samples?  
Yes  No  N/A   
Comments:
- ii. Are all method blank results less than LOQ (or RL)?  
Yes  No   
Comments: *Although less than the LOQ, an estimated concentration of fluoranthene (0.0171 µg/L) was detected in the method blank.*
- iii. If above LoQ or RL, what samples are affected?  
Comments: *MW2, MW3, MW4, MW5, and MW15.*



CS Site Name: Kasilof Riverview Lodge

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

Yes  No  N/A

Comments: *The samples are flagged "B" in Table 4.2 when the reported sample concentration is within 10x the reported method blank concentration. Fluoranthene was not detected in the project samples; therefore, additional flagging is not required.*

- v. Data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

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

- i. Organics – Are 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 – Are one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes  No  N/A

Comments:

- iii. Accuracy – Are 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: *The percent recovery for bromochloromethane, bromodichloromethane, and dibromomethane were outside of laboratory limits.*

- iv. Precision – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? Was the 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: *The analytes reported outside of laboratory limits for %R were not detected above the LOQ in project samples MW2, MW3, MW4, MW5, and MW15. Therefore, flagging is not required.*

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

Yes  No  N/A

Comments: .

- vii. Is the data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

- i. Organics – Are one MS/MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A

Comments:

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

Yes  No  N/A

Comments:

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

Yes  No  N/A

Comments:

- iv. Precision – Are 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:

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

Comments:

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

Yes  No  N/A

Comments:

CS Site Name: Kasilof Riverview Lodge

Lab Report No.: 1242429

vii. Is the data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

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

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

Yes  No  N/A

Comments:

ii. Accuracy – Are 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: *Surrogate recovery for 1,2-dichloroethane-d4 does not meet laboratory limits in project samples MW2, and MW15.*

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: *For Sample MW15, benzene was flagged “J+” in Table 4.2.*

iv. Is the data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

e. Trip Blanks

i. Is one trip blank reported per matrix, analysis, and for each cooler containing volatile samples? Yes  No  N/A

Comments:

ii. Are all results less than LoQ or RL?

Yes  No  N/A

Comments:

iii. If above LoQ or RL, what samples are affected?

Comments:

iv. Is the data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

f. Field Duplicate

- i. Are one field duplicate submitted per matrix, analysis, and 10 project samples?

Yes  No  N/A

Comments: .

- ii. Was the duplicate submitted blind to lab?

Yes  No  N/A

Comments:

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

$$RPD (\%) = \left| \frac{R_1 - R_2}{\left(\frac{R_1 + R_2}{2}\right)} \right| \times 100$$

Where  $R_1$  = Sample Concentration

$R_2$  = Field Duplicate Concentration

*Comments: The RPD for DRO is outside QC criteria. The affected data is flagged "E" in Table 4.2*

- iv. Is the data quality or usability affected? (Explain)

Yes  No  N/A

Comments: .

g. Decontamination or Equipment Blanks

- i. Were decontamination or equipment blanks collected?

Yes  No  N/A

*Comments: A decontamination and equipment blank were not included in our ADEC-approved work plan.*

- ii. Are all results less than LoQ or RL?

Yes  No  N/A

Comments:

- iii. If above LoQ or RL, specify what samples are affected.

Comments:

- iv. Are data quality or usability affected?

Yes  No  N/A

Comments: *See above.*

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

a. Are they defined and appropriate?

Yes  No  N/A

Comments: *A key is included on page 3 of the laboratory report.*

Appendix C

# Important Information

About Your Geotechnical/ Environmental Report

IMPORTANT INFORMATION

## ENVIRONMENTAL SITE ASSESSMENTS/EVALUATIONS ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.

This report was prepared to meet the needs you specified with respect to your specific site and your risk management preferences. Unless indicated otherwise, we prepared your report expressly for you and for the purposes you indicated. No one other than you should use this report for any purpose without first conferring with us. No one is authorized to use this report for any purpose other than that originally contemplated without our prior written consent.

The findings and conclusions documented in this site assessment/evaluation have been prepared for specific application to this project and have been developed in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in this area. The conclusions presented are based on interpretation of information currently available to us and are made within the operational scope, budget, and schedule constraints of this project. No warranty, express or implied, is made.

## OUR REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

Our environmental site assessment is based on several factors and may include (but not be limited to) reviewing public documents to chronicle site ownership for the past 30, 40, or more years; investigating the site's regulatory history to learn about permits granted or citations issued; determining prior uses of the site and those adjacent to it; reviewing available topographic and real estate maps, historical aerial photos, geologic information, and hydrologic data; reviewing readily available published information about surface and subsurface conditions; reviewing federal and state lists of known and potentially contaminated sites; evaluating the potential for naturally occurring hazards; and interviewing public officials, owners/operators, and/or adjacent owners with respect to local concerns and environmental conditions.

Except as noted within the text of the report, no sampling or quantitative laboratory testing was performed by us as part of this site assessment. Where such analyses were conducted by an outside laboratory, Shannon & Wilson relied upon the data provided and did not conduct an independent evaluation regarding the reliability of the data.

## CONDITIONS CAN CHANGE.

Site conditions, both surface and subsurface, may be affected as a result of natural processes or human influence. An environmental site assessment/evaluation is based on conditions that existed at the time of the evaluation. Because so many aspects of a historical review rely on third-party information, most consultants will refuse to certify (warrant) that a site is free of contaminants, as it is impossible to know with absolute certainty if such a condition exists. Contaminants may be present in areas that were not surveyed or sampled or may migrate to areas that showed no signs of contamination at the time they were studied.

Unless your consultant indicates otherwise, your report should not be construed to represent geotechnical subsurface conditions at or adjacent to the site and does not provide sufficient information for construction-related activities. Your report also should not be used following floods, earthquakes, or other acts of nature; if the size or configuration of the site is altered; if the location of the site is modified; or if there is a change of ownership and/or use of the property.

## INCIDENTAL DAMAGE MAY OCCUR DURING SAMPLING ACTIVITIES.

Incidental damage to a facility may occur during sampling activities. Asbestos and lead-based paint sampling often require destructive sampling of pipe insulation, floor tile, walls, doors, ceiling tile, roofing, and other building materials. Shannon & Wilson does not provide for paint repair. Limited repair of asbestos sample locations is provided. However, Shannon & Wilson neither warrants repairs made by our field personnel, nor are we held liable for injuries or damages as a result of those repairs. If you desire a specific form of repair, such as those provided by a licensed roofing contractor, you need to request the specific repair at the time of the proposal. The owner is responsible for repair methods that are not specified in the proposal.

## READ RESPONSIBILITY CLAUSES CAREFULLY.

Environmental site assessments/evaluations are less exact than other design disciplines because they are based extensively on judgment and opinion and there may not have been any (or very limited) investigation of actual subsurface conditions. Wholly unwarranted claims have been lodged against consultants. To limit this exposure, consultants have developed a number of clauses for use in their contracts, reports, and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses may appear in this report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

Consultants cannot accept responsibility for problems that may develop if they are not consulted after factors considered in their reports have changed or conditions at the site have changed. Therefore, it is incumbent upon you to notify your consultant of any factors that may have changed prior to submission of the final assessment/evaluation.

An assessment/evaluation of a site helps reduce your risk but does not eliminate it. Even the most rigorous professional assessment may fail to identify all existing conditions.

## ONE OF THE OBLIGATIONS OF YOUR CONSULTANT IS TO PROTECT THE SAFETY, HEALTH, PROPERTY, AND WELFARE OF THE PUBLIC.

If our environmental site assessment/evaluation discloses the existence of conditions that may endanger the safety, health, property, or welfare of the public, we may be obligated under rules of professional conduct, statutory law, or common law to notify you and others of these conditions.

**The preceding paragraphs are based on information provided by the ASFE/Association of Engineering Firms Practicing in the Geosciences, Silver Spring, Maryland**