



## Laboratory Report of Analysis

To: ADEC-Air & Water Quality  
555 Cordova St  
Anchorage, AK 99501  
907-741-1026

Report Number: **1226752**

Client Project: **Kenai River Metals Monitoring**

Dear Sarah Apsens,

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.

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Justin Nelson  
Project Manager  
Justin.Nelson@sgs.com

Date

### Case Narrative

SGS Client: **ADEC-Air & Water Quality**  
SGS Project: **1226752**  
Project Name/Site: **Kenai River Metals Monitoring**  
Project Contact: **Sarah Apsens**

Refer to sample receipt form for information on sample condition.

**MB for HBN 1847721 [MXX/35623] (1695748) MB**

200.8 - Metals analyte Zinc is detected in the MB above the LOQ. The associated sample concentrations are either less than the LOQ or greater than 5 times the MB concentration.

**1226777004(1696683MS) (1696689) MS**

200.8 - Metals MS recovery for Sodium does not meet QC criteria. The post digestion spike was unsuccessful. Sample is non - homogeneous.

200.8 - Metals MS recoveries for Calcium and Magnesium do not meet QC criteria. The post digestion spike was successful.

**1226777004(1696683MSD) (1696690) MSD**

200.8 - Metals MSD recovery for Sodium does not meet QC criteria. The post digestion spike was unsuccessful. Sample is non - homogeneous.

200.8 - Metals MSD recoveries for Calcium and Magnesium do not meet QC criteria. The post digestion spike was successful.

200.8 - Metals MSD RPD for Calcium, Magnesium, and Sodium do not meet QC criteria. The parent sample data is estimated.

**1226881001(1696684MS) (1696692) MS**

200.8 - Metals MS recovery for Phosphorus does not meet QC criteria. Post digestion spike was successful.

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

Print Date: 11/22/2022 3:32:46PM

## 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>
RM 12.75	1226752001	11/03/2022	11/04/2022	Water (Surface, Eff., Ground)
RM 12.75 DUP	1226752002	11/03/2022	11/04/2022	Water (Surface, Eff., Ground)
FIELD BLANK	1226752003	11/03/2022	11/04/2022	Water (Surface, Eff., Ground)
RM 70	1226752004	11/03/2022	11/04/2022	Water (Surface, Eff., Ground)
RM 70 DUP	1226752005	11/03/2022	11/04/2022	Water (Surface, Eff., Ground)
RM 23	1226752006	11/03/2022	11/04/2022	Water (Surface, Eff., Ground)
RM 23 DUP	1226752007	11/03/2022	11/04/2022	Water (Surface, Eff., Ground)
RM 21	1226752008	11/03/2022	11/04/2022	Water (Surface, Eff., Ground)
RM 21 DUP	1226752009	11/03/2022	11/04/2022	Water (Surface, Eff., Ground)
RM 12.75	1226752010	11/03/2022	11/04/2022	Water (Surface, Eff., Ground)
RM 12.75 DUP	1226752011	11/03/2022	11/04/2022	Water (Surface, Eff., Ground)
FIELD BLANK	1226752012	11/03/2022	11/04/2022	Water (Surface, Eff., Ground)
RM 70	1226752013	11/03/2022	11/04/2022	Water (Surface, Eff., Ground)
RM 70 DUP	1226752014	11/03/2022	11/04/2022	Water (Surface, Eff., Ground)
RM 23	1226752015	11/03/2022	11/04/2022	Water (Surface, Eff., Ground)
RM 23 DUP	1226752016	11/03/2022	11/04/2022	Water (Surface, Eff., Ground)
RM 21	1226752017	11/03/2022	11/04/2022	Water (Surface, Eff., Ground)
RM 21 DUP	1226752018	11/03/2022	11/04/2022	Water (Surface, Eff., Ground)

Method

SM 5310B  
 SM21 2340B  
 EP200.8  
 EP200.8  
 SM21 2540C

Method Description

Dissolved Organic Carbon  
 Hardness as CaCO<sub>3</sub> by ICP-MS  
 Metals in Drinking Water by ICP-MS DISSO  
 Metals in Water by 200.8 ICP-MS  
 Total Dissolved Solids SM18 2540C

### Detectable Results Summary

Client Sample ID: **RM 12.75**

Lab Sample ID: 1226752001

**Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	12800	ug/L
Hardness as CaCO <sub>3</sub>	37.2	mg/L
Magnesium	1280	ug/L

**Waters Department**

TOC Average, Dissolved	1.09	mg/L
Total Dissolved Solids	54.0	mg/L

Client Sample ID: **RM 12.75 DUP**

Lab Sample ID: 1226752002

**Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	12700	ug/L
Hardness as CaCO <sub>3</sub>	36.9	mg/L
Magnesium	1280	ug/L

**Waters Department**

TOC Average, Dissolved	1.11	mg/L
Total Dissolved Solids	59.0	mg/L

Client Sample ID: **RM 70**

Lab Sample ID: 1226752004

**Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	16300	ug/L
Hardness as CaCO <sub>3</sub>	45.6	mg/L
Magnesium	1190	ug/L

**Waters Department**

Total Dissolved Solids	56.0	mg/L
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Client Sample ID: **RM 70 DUP**

Lab Sample ID: 1226752005

**Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	16800	ug/L
Hardness as CaCO <sub>3</sub>	47.0	mg/L
Magnesium	1220	ug/L

**Waters Department**

Total Dissolved Solids	50.0	mg/L
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Client Sample ID: **RM 23**

Lab Sample ID: 1226752006

**Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	12700	ug/L
Hardness as CaCO <sub>3</sub>	36.6	mg/L
Magnesium	1200	ug/L

**Waters Department**

TOC Average, Dissolved	1.05	mg/L
Total Dissolved Solids	55.0	mg/L

Client Sample ID: **RM 23 DUP**

Lab Sample ID: 1226752007

**Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	12600	ug/L
Hardness as CaCO <sub>3</sub>	36.3	mg/L
Magnesium	1200	ug/L

**Waters Department**

TOC Average, Dissolved	1.01	mg/L
Total Dissolved Solids	54.0	mg/L

### Detectable Results Summary

Client Sample ID: **RM 21**  
 Lab Sample ID: 1226752008

**Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	12400	ug/L
Hardness as CaCO3	35.9	mg/L
Magnesium	1180	ug/L
Total Dissolved Solids	56.0	mg/L

**Waters Department**

Client Sample ID: **RM 21 DUP**  
 Lab Sample ID: 1226752009

**Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	12300	ug/L
Hardness as CaCO3	35.5	mg/L
Magnesium	1170	ug/L
Total Dissolved Solids	55.0	mg/L

**Waters Department**

Client Sample ID: **RM 12.75**  
 Lab Sample ID: 1226752010

**Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Aluminum	42.9	ug/L
Calcium	12700	ug/L
Magnesium	1200	ug/L
Potassium	861	ug/L
Sodium	1720	ug/L

Client Sample ID: **RM 12.75 DUP**  
 Lab Sample ID: 1226752011

**Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Aluminum	43.9	ug/L
Calcium	12600	ug/L
Magnesium	1180	ug/L
Potassium	843	ug/L
Sodium	1670	ug/L

Client Sample ID: **RM 70**  
 Lab Sample ID: 1226752013

**Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Aluminum	25.3	ug/L
Calcium	16400	ug/L
Magnesium	1150	ug/L
Potassium	531	ug/L
Sodium	2110	ug/L

Client Sample ID: **RM 70 DUP**  
 Lab Sample ID: 1226752014

**Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Aluminum	22.5	ug/L
Calcium	16600	ug/L
Magnesium	1160	ug/L
Potassium	537	ug/L
Sodium	1630	ug/L

### Detectable Results Summary

Client Sample ID: **RM 23**

Lab Sample ID: 1226752015

**Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Aluminum	46.7	ug/L
Calcium	12700	ug/L
Magnesium	1140	ug/L
Potassium	822	ug/L
Sodium	1570	ug/L

Client Sample ID: **RM 23 DUP**

Lab Sample ID: 1226752016

**Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Aluminum	50.9	ug/L
Calcium	13000	ug/L
Magnesium	1160	ug/L
Potassium	844	ug/L
Sodium	1590	ug/L

Client Sample ID: **RM 21**

Lab Sample ID: 1226752017

**Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Aluminum	52.7	ug/L
Calcium	12300	ug/L
Magnesium	1110	ug/L
Potassium	816	ug/L
Sodium	1580	ug/L

Client Sample ID: **RM 21 DUP**

Lab Sample ID: 1226752018

**Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Aluminum	36.9	ug/L
Calcium	12400	ug/L
Magnesium	1110	ug/L
Potassium	818	ug/L
Sodium	893	ug/L

## Results of RM 12.75

Client Sample ID: **RM 12.75**  
 Client Project ID: **Kenai River Metals Monitoring**  
 Lab Sample ID: 1226752001  
 Lab Project ID: 1226752

Collection Date: 11/03/22 15:15  
 Received Date: 11/04/22 16:32  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Metals by ICP/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	12800	500	150	ug/L	1		11/09/22 15:01
Copper	3.00 U	3.00	1.00	ug/L	1		11/09/22 15:01
Magnesium	1280	50.0	15.0	ug/L	1		11/09/22 15:01
Zinc	10.0 U	10.0	3.10	ug/L	1		11/09/22 15:01

## Batch Information

Analytical Batch: MMS11752  
 Analytical Method: EP200.8  
 Analyst: HGS  
 Analytical Date/Time: 11/09/22 15:01  
 Container ID: 1226752001-A

Prep Batch: MXX35623  
 Prep Method: E200.2  
 Prep Date/Time: 11/08/22 09:42  
 Prep Initial Wt./Vol.: 20 mL  
 Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	37.2	5.00	5.00	mg/L	1		11/09/22 15:01

## Batch Information

Analytical Batch: MMS11752  
 Analytical Method: SM21 2340B  
 Analyst: HGS  
 Analytical Date/Time: 11/09/22 15:01  
 Container ID: 1226752001-A

Prep Batch: MXX35623  
 Prep Method: E200.2  
 Prep Date/Time: 11/08/22 09:42  
 Prep Initial Wt./Vol.: 20 mL  
 Prep Extract Vol: 50 mL

Print Date: 11/22/2022 3:32:52PM





**Results of RM 12.75**

Client Sample ID: **RM 12.75**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752001  
Lab Project ID: 1226752

Collection Date: 11/03/22 15:15  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Waters Department**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
TOC Average, Dissolved	1.09	1.00	0.400	mg/L	1		11/08/22 20:24

**Batch Information**

Analytical Batch: WTC3253  
Analytical Method: SM 5310B  
Analyst: EBH  
Analytical Date/Time: 11/08/22 20:24  
Container ID: 1226752001-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Dissolved Solids	54.0	10.0	3.10	mg/L	1		11/07/22 15:10

**Batch Information**

Analytical Batch: STS7435  
Analytical Method: SM21 2540C  
Analyst: EBH  
Analytical Date/Time: 11/07/22 15:10  
Container ID: 1226752001-B

Print Date: 11/22/2022 3:32:52PM



Results of **RM 12.75 DUP**

Client Sample ID: **RM 12.75 DUP**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752002  
Lab Project ID: 1226752

Collection Date: 11/03/22 15:15  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	12700	500	150	ug/L	1		11/09/22 15:04
Copper	3.00 U	3.00	1.00	ug/L	1		11/09/22 15:04
Magnesium	1280	50.0	15.0	ug/L	1		11/09/22 15:04
Zinc	10.0 U	10.0	3.10	ug/L	1		11/09/22 15:04

**Batch Information**

Analytical Batch: MMS11752  
Analytical Method: EP200.8  
Analyst: HGS  
Analytical Date/Time: 11/09/22 15:04  
Container ID: 1226752002-A

Prep Batch: MXX35623  
Prep Method: E200.2  
Prep Date/Time: 11/08/22 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	36.9	5.00	5.00	mg/L	1		11/09/22 15:04

**Batch Information**

Analytical Batch: MMS11752  
Analytical Method: SM21 2340B  
Analyst: HGS  
Analytical Date/Time: 11/09/22 15:04  
Container ID: 1226752002-A

Prep Batch: MXX35623  
Prep Method: E200.2  
Prep Date/Time: 11/08/22 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 11/22/2022 3:32:52PM



**Results of RM 12.75 DUP**

Client Sample ID: **RM 12.75 DUP**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752002  
Lab Project ID: 1226752

Collection Date: 11/03/22 15:15  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Waters Department**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
TOC Average, Dissolved	1.11	1.00	0.400	mg/L	1		11/08/22 20:39

**Batch Information**

Analytical Batch: WTC3253  
Analytical Method: SM 5310B  
Analyst: EBH  
Analytical Date/Time: 11/08/22 20:39  
Container ID: 1226752002-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Dissolved Solids	59.0	10.0	3.10	mg/L	1		11/07/22 15:10

**Batch Information**

Analytical Batch: STS7435  
Analytical Method: SM21 2540C  
Analyst: EBH  
Analytical Date/Time: 11/07/22 15:10  
Container ID: 1226752002-B

Print Date: 11/22/2022 3:32:52PM



Results of **FIELD BLANK**

Client Sample ID: **FIELD BLANK**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752003  
Lab Project ID: 1226752

Collection Date: 11/03/22 15:25  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	500 U	500	150	ug/L	1		11/09/22 15:12
Copper	3.00 U	3.00	1.00	ug/L	1		11/09/22 15:12
Magnesium	50.0 U	50.0	15.0	ug/L	1		11/09/22 15:12
Zinc	10.0 U	10.0	3.10	ug/L	1		11/09/22 15:12

**Batch Information**

Analytical Batch: MMS11752  
Analytical Method: EP200.8  
Analyst: HGS  
Analytical Date/Time: 11/09/22 15:12  
Container ID: 1226752003-A

Prep Batch: MXX35623  
Prep Method: E200.2  
Prep Date/Time: 11/08/22 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	5.00 U	5.00	5.00	mg/L	1		11/09/22 15:12

**Batch Information**

Analytical Batch: MMS11752  
Analytical Method: SM21 2340B  
Analyst: HGS  
Analytical Date/Time: 11/09/22 15:12  
Container ID: 1226752003-A

Prep Batch: MXX35623  
Prep Method: E200.2  
Prep Date/Time: 11/08/22 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 11/22/2022 3:32:52PM



Results of **FIELD BLANK**

Client Sample ID: **FIELD BLANK**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752003  
Lab Project ID: 1226752

Collection Date: 11/03/22 15:25  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Waters Department**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
TOC Average, Dissolved	1.00 U	1.00	0.400	mg/L	1		11/08/22 20:55

**Batch Information**

Analytical Batch: WTC3253  
Analytical Method: SM 5310B  
Analyst: EBH  
Analytical Date/Time: 11/08/22 20:55  
Container ID: 1226752003-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Dissolved Solids	10.0 U	10.0	3.10	mg/L	1		11/07/22 15:10

**Batch Information**

Analytical Batch: STS7435  
Analytical Method: SM21 2540C  
Analyst: EBH  
Analytical Date/Time: 11/07/22 15:10  
Container ID: 1226752003-B

Print Date: 11/22/2022 3:32:52PM



Results of **RM 70**

Client Sample ID: **RM 70**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752004  
Lab Project ID: 1226752

Collection Date: 11/03/22 11:35  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	16300	500	150	ug/L	1		11/09/22 15:14
Copper	3.00 U	3.00	1.00	ug/L	1		11/09/22 15:14
Magnesium	1190	50.0	15.0	ug/L	1		11/09/22 15:14
Zinc	10.0 U	10.0	3.10	ug/L	1		11/09/22 15:14

**Batch Information**

Analytical Batch: MMS11752  
Analytical Method: EP200.8  
Analyst: HGS  
Analytical Date/Time: 11/09/22 15:14  
Container ID: 1226752004-A

Prep Batch: MXX35623  
Prep Method: E200.2  
Prep Date/Time: 11/08/22 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	45.6	5.00	5.00	mg/L	1		11/09/22 15:14

**Batch Information**

Analytical Batch: MMS11752  
Analytical Method: SM21 2340B  
Analyst: HGS  
Analytical Date/Time: 11/09/22 15:14  
Container ID: 1226752004-A

Prep Batch: MXX35623  
Prep Method: E200.2  
Prep Date/Time: 11/08/22 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 11/22/2022 3:32:52PM



**Results of RM 70**

Client Sample ID: **RM 70**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752004  
Lab Project ID: 1226752

Collection Date: 11/03/22 11:35  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Waters Department**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
TOC Average, Dissolved	1.00 U	1.00	0.400	mg/L	1		11/08/22 21:09

**Batch Information**

Analytical Batch: WTC3253  
Analytical Method: SM 5310B  
Analyst: EBH  
Analytical Date/Time: 11/08/22 21:09  
Container ID: 1226752004-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Dissolved Solids	56.0	10.0	3.10	mg/L	1		11/07/22 15:10

**Batch Information**

Analytical Batch: STS7435  
Analytical Method: SM21 2540C  
Analyst: EBH  
Analytical Date/Time: 11/07/22 15:10  
Container ID: 1226752004-B

Print Date: 11/22/2022 3:32:52PM



Results of **RM 70 DUP**

Client Sample ID: **RM 70 DUP**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752005  
Lab Project ID: 1226752

Collection Date: 11/03/22 11:35  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	16800	500	150	ug/L	1		11/09/22 15:17
Copper	3.00 U	3.00	1.00	ug/L	1		11/09/22 15:17
Magnesium	1220	50.0	15.0	ug/L	1		11/09/22 15:17
Zinc	10.0 U	10.0	3.10	ug/L	1		11/09/22 15:17

**Batch Information**

Analytical Batch: MMS11752  
Analytical Method: EP200.8  
Analyst: HGS  
Analytical Date/Time: 11/09/22 15:17  
Container ID: 1226752005-A

Prep Batch: MXX35623  
Prep Method: E200.2  
Prep Date/Time: 11/08/22 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	47.0	5.00	5.00	mg/L	1		11/09/22 15:17

**Batch Information**

Analytical Batch: MMS11752  
Analytical Method: SM21 2340B  
Analyst: HGS  
Analytical Date/Time: 11/09/22 15:17  
Container ID: 1226752005-A

Prep Batch: MXX35623  
Prep Method: E200.2  
Prep Date/Time: 11/08/22 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 11/22/2022 3:32:52PM





Results of **RM 70 DUP**

Client Sample ID: **RM 70 DUP**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752005  
Lab Project ID: 1226752

Collection Date: 11/03/22 11:35  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Waters Department**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
TOC Average, Dissolved	1.00 U	1.00	0.400	mg/L	1		11/08/22 21:24

**Batch Information**

Analytical Batch: WTC3253  
Analytical Method: SM 5310B  
Analyst: EBH  
Analytical Date/Time: 11/08/22 21:24  
Container ID: 1226752005-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Dissolved Solids	50.0	10.0	3.10	mg/L	1		11/07/22 15:10

**Batch Information**

Analytical Batch: STS7435  
Analytical Method: SM21 2540C  
Analyst: EBH  
Analytical Date/Time: 11/07/22 15:10  
Container ID: 1226752005-B

Print Date: 11/22/2022 3:32:52PM

## Results of RM 23

Client Sample ID: **RM 23**  
 Client Project ID: **Kenai River Metals Monitoring**  
 Lab Sample ID: 1226752006  
 Lab Project ID: 1226752

Collection Date: 11/03/22 12:58  
 Received Date: 11/04/22 16:32  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Metals by ICP/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	12700	500	150	ug/L	1		11/09/22 15:20
Copper	3.00 U	3.00	1.00	ug/L	1		11/09/22 15:20
Magnesium	1200	50.0	15.0	ug/L	1		11/09/22 15:20
Zinc	10.0 U	10.0	3.10	ug/L	1		11/09/22 15:20

## Batch Information

Analytical Batch: MMS11752  
 Analytical Method: EP200.8  
 Analyst: HGS  
 Analytical Date/Time: 11/09/22 15:20  
 Container ID: 1226752006-A

Prep Batch: MXX35623  
 Prep Method: E200.2  
 Prep Date/Time: 11/08/22 09:42  
 Prep Initial Wt./Vol.: 20 mL  
 Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	36.6	5.00	5.00	mg/L	1		11/09/22 15:20

## Batch Information

Analytical Batch: MMS11752  
 Analytical Method: SM21 2340B  
 Analyst: HGS  
 Analytical Date/Time: 11/09/22 15:20  
 Container ID: 1226752006-A

Prep Batch: MXX35623  
 Prep Method: E200.2  
 Prep Date/Time: 11/08/22 09:42  
 Prep Initial Wt./Vol.: 20 mL  
 Prep Extract Vol: 50 mL



**Results of RM 23**

Client Sample ID: **RM 23**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752006  
Lab Project ID: 1226752

Collection Date: 11/03/22 12:58  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Waters Department**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
TOC Average, Dissolved	1.05	1.00	0.400	mg/L	1		11/08/22 21:38

**Batch Information**

Analytical Batch: WTC3253  
Analytical Method: SM 5310B  
Analyst: EBH  
Analytical Date/Time: 11/08/22 21:38  
Container ID: 1226752006-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Dissolved Solids	55.0	10.0	3.10	mg/L	1		11/07/22 15:10

**Batch Information**

Analytical Batch: STS7435  
Analytical Method: SM21 2540C  
Analyst: EBH  
Analytical Date/Time: 11/07/22 15:10  
Container ID: 1226752006-B

Print Date: 11/22/2022 3:32:52PM



Results of **RM 23 DUP**

Client Sample ID: **RM 23 DUP**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752007  
Lab Project ID: 1226752

Collection Date: 11/03/22 12:58  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	12600	500	150	ug/L	1		11/09/22 15:22
Copper	3.00 U	3.00	1.00	ug/L	1		11/09/22 15:22
Magnesium	1200	50.0	15.0	ug/L	1		11/09/22 15:22
Zinc	10.0 U	10.0	3.10	ug/L	1		11/09/22 15:22

**Batch Information**

Analytical Batch: MMS11752  
Analytical Method: EP200.8  
Analyst: HGS  
Analytical Date/Time: 11/09/22 15:22  
Container ID: 1226752007-A

Prep Batch: MXX35623  
Prep Method: E200.2  
Prep Date/Time: 11/08/22 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	36.3	5.00	5.00	mg/L	1		11/09/22 15:22

**Batch Information**

Analytical Batch: MMS11752  
Analytical Method: SM21 2340B  
Analyst: HGS  
Analytical Date/Time: 11/09/22 15:22  
Container ID: 1226752007-A

Prep Batch: MXX35623  
Prep Method: E200.2  
Prep Date/Time: 11/08/22 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 11/22/2022 3:32:52PM



Results of **RM 23 DUP**

Client Sample ID: **RM 23 DUP**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752007  
Lab Project ID: 1226752

Collection Date: 11/03/22 12:58  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Waters Department**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
TOC Average, Dissolved	1.01	1.00	0.400	mg/L	1		11/16/22 16:01

**Batch Information**

Analytical Batch: WTC3255  
Analytical Method: SM 5310B  
Analyst: EBH  
Analytical Date/Time: 11/16/22 16:01  
Container ID: 1226752007-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Dissolved Solids	54.0	10.0	3.10	mg/L	1		11/07/22 15:10

**Batch Information**

Analytical Batch: STS7435  
Analytical Method: SM21 2540C  
Analyst: EBH  
Analytical Date/Time: 11/07/22 15:10  
Container ID: 1226752007-B

Print Date: 11/22/2022 3:32:52PM



Results of **RM 21**

Client Sample ID: **RM 21**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752008  
Lab Project ID: 1226752

Collection Date: 11/03/22 14:15  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	12400	500	150	ug/L	1		11/09/22 15:25
Copper	3.00 U	3.00	1.00	ug/L	1		11/09/22 15:25
Magnesium	1180	50.0	15.0	ug/L	1		11/09/22 15:25
Zinc	10.0 U	10.0	3.10	ug/L	1		11/09/22 15:25

**Batch Information**

Analytical Batch: MMS11752  
Analytical Method: EP200.8  
Analyst: HGS  
Analytical Date/Time: 11/09/22 15:25  
Container ID: 1226752008-A

Prep Batch: MXX35623  
Prep Method: E200.2  
Prep Date/Time: 11/08/22 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	35.9	5.00	5.00	mg/L	1		11/09/22 15:25

**Batch Information**

Analytical Batch: MMS11752  
Analytical Method: SM21 2340B  
Analyst: HGS  
Analytical Date/Time: 11/09/22 15:25  
Container ID: 1226752008-A

Prep Batch: MXX35623  
Prep Method: E200.2  
Prep Date/Time: 11/08/22 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 11/22/2022 3:32:52PM

## Results of RM 21

Client Sample ID: **RM 21**  
 Client Project ID: **Kenai River Metals Monitoring**  
 Lab Sample ID: 1226752008  
 Lab Project ID: 1226752

Collection Date: 11/03/22 14:15  
 Received Date: 11/04/22 16:32  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Waters Department

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
TOC Average, Dissolved	1.00 U	1.00	0.400	mg/L	1		11/16/22 16:18

### Batch Information

Analytical Batch: WTC3255  
 Analytical Method: SM 5310B  
 Analyst: EBH  
 Analytical Date/Time: 11/16/22 16:18  
 Container ID: 1226752008-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Dissolved Solids	56.0	10.0	3.10	mg/L	1		11/07/22 15:10

### Batch Information

Analytical Batch: STS7435  
 Analytical Method: SM21 2540C  
 Analyst: EBH  
 Analytical Date/Time: 11/07/22 15:10  
 Container ID: 1226752008-B

Print Date: 11/22/2022 3:32:52PM



Results of **RM 21 DUP**

Client Sample ID: **RM 21 DUP**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752009  
Lab Project ID: 1226752

Collection Date: 11/03/22 14:15  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Calcium	12300	500	150	ug/L	1		11/09/22 14:53
Copper	3.00 U	3.00	1.00	ug/L	1		11/09/22 14:53
Magnesium	1170	50.0	15.0	ug/L	1		11/09/22 14:53
Zinc	10.0 U	10.0	3.10	ug/L	1		11/09/22 14:53

**Batch Information**

Analytical Batch: MMS11752	Prep Batch: MXX35623
Analytical Method: EP200.8	Prep Method: E200.2
Analyst: HGS	Prep Date/Time: 11/08/22 09:42
Analytical Date/Time: 11/09/22 14:53	Prep Initial Wt./Vol.: 20 mL
Container ID: 1226752009-A	Prep Extract Vol: 50 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Hardness as CaCO3	35.5	5.00	5.00	mg/L	1		11/09/22 14:53

**Batch Information**

Analytical Batch: MMS11752	Prep Batch: MXX35623
Analytical Method: SM21 2340B	Prep Method: E200.2
Analyst: HGS	Prep Date/Time: 11/08/22 09:42
Analytical Date/Time: 11/09/22 14:53	Prep Initial Wt./Vol.: 20 mL
Container ID: 1226752009-A	Prep Extract Vol: 50 mL

Print Date: 11/22/2022 3:32:52PM





Results of **RM 21 DUP**

Client Sample ID: **RM 21 DUP**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752009  
Lab Project ID: 1226752

Collection Date: 11/03/22 14:15  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Waters Department**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
TOC Average, Dissolved	1.00 U	1.00	0.400	mg/L	1		11/16/22 16:34

**Batch Information**

Analytical Batch: WTC3255  
Analytical Method: SM 5310B  
Analyst: EBH  
Analytical Date/Time: 11/16/22 16:34  
Container ID: 1226752009-C

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Total Dissolved Solids	55.0	10.0	3.10	mg/L	1		11/07/22 15:10

**Batch Information**

Analytical Batch: STS7435  
Analytical Method: SM21 2540C  
Analyst: EBH  
Analytical Date/Time: 11/07/22 15:10  
Container ID: 1226752009-B

Print Date: 11/22/2022 3:32:52PM



**Results of RM 12.75**

Client Sample ID: **RM 12.75**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752010  
Lab Project ID: 1226752

Collection Date: 11/03/22 15:15  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Aluminum	42.9	20.0	6.20	ug/L	1		11/09/22 15:28
Cadmium	0.500 U	0.500	0.150	ug/L	1		11/09/22 15:28
Calcium	12700	500	150	ug/L	1		11/09/22 15:28
Copper	3.00 U	3.00	1.00	ug/L	1		11/09/22 15:28
Lead	2.00 U	2.00	0.500	ug/L	1		11/09/22 15:28
Magnesium	1200	50.0	15.0	ug/L	1		11/09/22 15:28
Potassium	861	500	150	ug/L	1		11/09/22 15:28
Selenium	5.00 U	5.00	1.50	ug/L	1		11/09/22 15:28
Sodium	1720	500	150	ug/L	1		11/09/22 15:28
Zinc	10.0 U	10.0	3.10	ug/L	1		11/09/22 15:28

**Batch Information**

Analytical Batch: MMS11752  
Analytical Method: EP200.8  
Analyst: HGS  
Analytical Date/Time: 11/09/22 15:28  
Container ID: 1226752010-A

Prep Batch: MXX35623  
Prep Method: E200.2  
Prep Date/Time: 11/08/22 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 11/22/2022 3:32:52PM



**Results of RM 12.75 DUP**

Client Sample ID: **RM 12.75 DUP**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752011  
Lab Project ID: 1226752

Collection Date: 11/03/22 15:15  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Aluminum	43.9	20.0	6.20	ug/L	1		11/09/22 15:30
Cadmium	0.500 U	0.500	0.150	ug/L	1		11/09/22 15:30
Calcium	12600	500	150	ug/L	1		11/09/22 15:30
Copper	3.00 U	3.00	1.00	ug/L	1		11/09/22 15:30
Lead	2.00 U	2.00	0.500	ug/L	1		11/09/22 15:30
Magnesium	1180	50.0	15.0	ug/L	1		11/09/22 15:30
Potassium	843	500	150	ug/L	1		11/09/22 15:30
Selenium	5.00 U	5.00	1.50	ug/L	1		11/09/22 15:30
Sodium	1670	500	150	ug/L	1		11/09/22 15:30
Zinc	10.0 U	10.0	3.10	ug/L	1		11/09/22 15:30

**Batch Information**

Analytical Batch: MMS11752  
Analytical Method: EP200.8  
Analyst: HGS  
Analytical Date/Time: 11/09/22 15:30  
Container ID: 1226752011-A

Prep Batch: MXX35623  
Prep Method: E200.2  
Prep Date/Time: 11/08/22 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 11/22/2022 3:32:52PM



**Results of FIELD BLANK**

Client Sample ID: **FIELD BLANK**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752012  
Lab Project ID: 1226752

Collection Date: 11/03/22 15:25  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Aluminum	20.0 U	20.0	6.20	ug/L	1		11/09/22 15:33
Cadmium	0.500 U	0.500	0.150	ug/L	1		11/09/22 15:33
Calcium	500 U	500	150	ug/L	1		11/09/22 15:33
Copper	3.00 U	3.00	1.00	ug/L	1		11/09/22 15:33
Lead	2.00 U	2.00	0.500	ug/L	1		11/09/22 15:33
Magnesium	50.0 U	50.0	15.0	ug/L	1		11/09/22 15:33
Potassium	500 U	500	150	ug/L	1		11/09/22 15:33
Selenium	5.00 U	5.00	1.50	ug/L	1		11/09/22 15:33
Sodium	500 U	500	150	ug/L	1		11/09/22 15:33
Zinc	10.0 U	10.0	3.10	ug/L	1		11/09/22 15:33

**Batch Information**

Analytical Batch: MMS11752  
Analytical Method: EP200.8  
Analyst: HGS  
Analytical Date/Time: 11/09/22 15:33  
Container ID: 1226752012-A

Prep Batch: MXX35623  
Prep Method: E200.2  
Prep Date/Time: 11/08/22 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 11/22/2022 3:32:52PM



**Results of RM 70**

Client Sample ID: **RM 70**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752013  
Lab Project ID: 1226752

Collection Date: 11/03/22 11:35  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Aluminum	25.3	20.0	6.20	ug/L	1		11/09/22 15:36
Cadmium	0.500 U	0.500	0.150	ug/L	1		11/09/22 15:36
Calcium	16400	500	150	ug/L	1		11/09/22 15:36
Copper	3.00 U	3.00	1.00	ug/L	1		11/09/22 15:36
Lead	2.00 U	2.00	0.500	ug/L	1		11/09/22 15:36
Magnesium	1150	50.0	15.0	ug/L	1		11/09/22 15:36
Potassium	531	500	150	ug/L	1		11/09/22 15:36
Selenium	5.00 U	5.00	1.50	ug/L	1		11/09/22 15:36
Sodium	2110	500	150	ug/L	1		11/09/22 15:36
Zinc	10.0 U	10.0	3.10	ug/L	1		11/09/22 15:36

**Batch Information**

Analytical Batch: MMS11752  
Analytical Method: EP200.8  
Analyst: HGS  
Analytical Date/Time: 11/09/22 15:36  
Container ID: 1226752013-A

Prep Batch: MXX35623  
Prep Method: E200.2  
Prep Date/Time: 11/08/22 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 11/22/2022 3:32:52PM



**Results of RM 70 DUP**

Client Sample ID: **RM 70 DUP**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752014  
Lab Project ID: 1226752

Collection Date: 11/03/22 11:35  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Aluminum	22.5	20.0	6.20	ug/L	1		11/09/22 15:44
Cadmium	0.500 U	0.500	0.150	ug/L	1		11/09/22 15:44
Calcium	16600	500	150	ug/L	1		11/09/22 15:44
Copper	3.00 U	3.00	1.00	ug/L	1		11/09/22 15:44
Lead	2.00 U	2.00	0.500	ug/L	1		11/09/22 15:44
Magnesium	1160	50.0	15.0	ug/L	1		11/09/22 15:44
Potassium	537	500	150	ug/L	1		11/09/22 15:44
Selenium	5.00 U	5.00	1.50	ug/L	1		11/09/22 15:44
Sodium	1630	500	150	ug/L	1		11/09/22 15:44
Zinc	10.0 U	10.0	3.10	ug/L	1		11/09/22 15:44

**Batch Information**

Analytical Batch: MMS11752  
Analytical Method: EP200.8  
Analyst: HGS  
Analytical Date/Time: 11/09/22 15:44  
Container ID: 1226752014-A

Prep Batch: MXX35623  
Prep Method: E200.2  
Prep Date/Time: 11/08/22 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 11/22/2022 3:32:52PM



**Results of RM 23**

Client Sample ID: **RM 23**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752015  
Lab Project ID: 1226752

Collection Date: 11/03/22 12:58  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Aluminum	46.7	20.0	6.20	ug/L	1		11/09/22 15:46
Cadmium	0.500 U	0.500	0.150	ug/L	1		11/09/22 15:46
Calcium	12700	500	150	ug/L	1		11/09/22 15:46
Copper	3.00 U	3.00	1.00	ug/L	1		11/09/22 15:46
Lead	2.00 U	2.00	0.500	ug/L	1		11/09/22 15:46
Magnesium	1140	50.0	15.0	ug/L	1		11/09/22 15:46
Potassium	822	500	150	ug/L	1		11/09/22 15:46
Selenium	5.00 U	5.00	1.50	ug/L	1		11/09/22 15:46
Sodium	1570	500	150	ug/L	1		11/09/22 15:46
Zinc	10.0 U	10.0	3.10	ug/L	1		11/09/22 15:46

**Batch Information**

Analytical Batch: MMS11752  
Analytical Method: EP200.8  
Analyst: HGS  
Analytical Date/Time: 11/09/22 15:46  
Container ID: 1226752015-A

Prep Batch: MXX35623  
Prep Method: E200.2  
Prep Date/Time: 11/08/22 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 11/22/2022 3:32:52PM



**Results of RM 23 DUP**

Client Sample ID: **RM 23 DUP**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752016  
Lab Project ID: 1226752

Collection Date: 11/03/22 12:58  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Aluminum	50.9	20.0	6.20	ug/L	1		11/09/22 15:49
Cadmium	0.500 U	0.500	0.150	ug/L	1		11/09/22 15:49
Calcium	13000	500	150	ug/L	1		11/09/22 15:49
Copper	3.00 U	3.00	1.00	ug/L	1		11/09/22 15:49
Lead	2.00 U	2.00	0.500	ug/L	1		11/09/22 15:49
Magnesium	1160	50.0	15.0	ug/L	1		11/09/22 15:49
Potassium	844	500	150	ug/L	1		11/09/22 15:49
Selenium	5.00 U	5.00	1.50	ug/L	1		11/09/22 15:49
Sodium	1590	500	150	ug/L	1		11/09/22 15:49
Zinc	10.0 U	10.0	3.10	ug/L	1		11/09/22 15:49

**Batch Information**

Analytical Batch: MMS11752  
Analytical Method: EP200.8  
Analyst: HGS  
Analytical Date/Time: 11/09/22 15:49  
Container ID: 1226752016-A

Prep Batch: MXX35623  
Prep Method: E200.2  
Prep Date/Time: 11/08/22 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 11/22/2022 3:32:52PM





**Results of RM 21**

Client Sample ID: **RM 21**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752017  
Lab Project ID: 1226752

Collection Date: 11/03/22 14:15  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Aluminum	52.7	20.0	6.20	ug/L	1		11/09/22 15:52
Cadmium	0.500 U	0.500	0.150	ug/L	1		11/09/22 15:52
Calcium	12300	500	150	ug/L	1		11/09/22 15:52
Copper	3.00 U	3.00	1.00	ug/L	1		11/09/22 15:52
Lead	2.00 U	2.00	0.500	ug/L	1		11/09/22 15:52
Magnesium	1110	50.0	15.0	ug/L	1		11/09/22 15:52
Potassium	816	500	150	ug/L	1		11/09/22 15:52
Selenium	5.00 U	5.00	1.50	ug/L	1		11/09/22 15:52
Sodium	1580	500	150	ug/L	1		11/09/22 15:52
Zinc	10.0 U	10.0	3.10	ug/L	1		11/09/22 15:52

**Batch Information**

Analytical Batch: MMS11752  
Analytical Method: EP200.8  
Analyst: HGS  
Analytical Date/Time: 11/09/22 15:52  
Container ID: 1226752017-A

Prep Batch: MXX35623  
Prep Method: E200.2  
Prep Date/Time: 11/08/22 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 11/22/2022 3:32:52PM



**Results of RM 21 DUP**

Client Sample ID: **RM 21 DUP**  
Client Project ID: **Kenai River Metals Monitoring**  
Lab Sample ID: 1226752018  
Lab Project ID: 1226752

Collection Date: 11/03/22 14:15  
Received Date: 11/04/22 16:32  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Dissolved Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Aluminum	36.9	20.0	6.20	ug/L	1		11/18/22 18:48
Cadmium	0.500 U	0.500	0.150	ug/L	1		11/18/22 18:48
Calcium	12400	500	150	ug/L	1		11/18/22 18:48
Copper	3.00 U	3.00	1.00	ug/L	1		11/18/22 18:48
Lead	2.00 U	2.00	0.500	ug/L	1		11/18/22 18:48
Magnesium	1110	50.0	15.0	ug/L	1		11/18/22 18:48
Potassium	818	500	150	ug/L	1		11/18/22 18:48
Selenium	5.00 U	5.00	1.50	ug/L	1		11/18/22 18:48
Sodium	893	500	150	ug/L	1		11/18/22 18:48
Zinc	10.0 U	10.0	3.10	ug/L	1		11/18/22 18:48

**Batch Information**

Analytical Batch: MMS11765  
Analytical Method: EP200.8  
Analyst: HGS  
Analytical Date/Time: 11/18/22 18:48  
Container ID: 1226752018-A

Prep Batch: MXX35629  
Prep Method: E200.2  
Prep Date/Time: 11/16/22 10:33  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 11/22/2022 3:32:52PM

## Method Blank

Blank ID: MB for HBN 1847721 [MXX/35623]  
 Blank Lab ID: 1695748

Matrix: Water (Surface, Eff., Ground)

### QC for Samples:

1226752001, 1226752002, 1226752003, 1226752004, 1226752005, 1226752006, 1226752007, 1226752008, 1226752009, 1226752010, 1226752011, 1226752012, 1226752013, 1226752014, 1226752015, 1226752016, 1226752017

## Results by EP200.8

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Aluminum	10.0U	20.0	6.20	ug/L
Cadmium	0.250U	0.500	0.150	ug/L
Calcium	250U	500	150	ug/L
Copper	1.50U	3.00	1.00	ug/L
Lead	1.00U	2.00	0.500	ug/L
Magnesium	25.0U	50.0	15.0	ug/L
Potassium	250U	500	150	ug/L
Selenium	2.50U	5.00	1.50	ug/L
Sodium	181J	500	150	ug/L
Zinc	12.3*	10.0	3.10	ug/L

## Batch Information

Analytical Batch: MMS11752  
 Analytical Method: EP200.8  
 Instrument: P7 Agilent 7800  
 Analyst: HGS  
 Analytical Date/Time: 11/9/2022 2:40:00PM

Prep Batch: MXX35623  
 Prep Method: E200.2  
 Prep Date/Time: 11/8/2022 9:42:35AM  
 Prep Initial Wt./Vol.: 20 mL  
 Prep Extract Vol: 50 mL

Print Date: 11/22/2022 3:32:56PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1226752 [MXX35623]  
 Blank Spike Lab ID: 1695749  
 Date Analyzed: 11/09/2022 14:42

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1226752001, 1226752002, 1226752003, 1226752004, 1226752005, 1226752006, 1226752007,  
 1226752008, 1226752009, 1226752010, 1226752011, 1226752012, 1226752013, 1226752014,  
 1226752015, 1226752016, 1226752017

## Results by EP200.8

Parameter	Blank Spike (ug/L)			CL
	Spike	Result	Rec (%)	
Aluminum	1000	1000	100	(85-115)
Cadmium	100	97.4	97	(85-115)
Calcium	10000	10000	100	(85-115)
Copper	1000	999	100	(85-115)
Lead	1000	988	99	(85-115)
Magnesium	10000	10000	100	(85-115)
Potassium	10000	10100	101	(85-115)
Selenium	1000	955	96	(85-115)
Sodium	10000	10200	102	(85-115)
Zinc	1000	970	97	(85-115)

## Batch Information

Analytical Batch: **MMS11752**  
 Analytical Method: **EP200.8**  
 Instrument: **P7 Agilent 7800**  
 Analyst: **HGS**

Prep Batch: **MXX35623**  
 Prep Method: **E200.2**  
 Prep Date/Time: **11/08/2022 09:42**  
 Spike Init Wt./Vol.: 1000 ug/L Extract Vol: 50 mL  
 Dupe Init Wt./Vol.: Extract Vol:



### Matrix Spike Summary

Original Sample ID: 1695741  
MS Sample ID: 1695751 MS  
MSD Sample ID:

Analysis Date: 11/09/2022 14:48  
Analysis Date: 11/09/2022 14:50  
Analysis Date:  
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1226752009

### Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Aluminum	10.0U	1000	993	99				70-130		
Cadmium	0.250U	100	98.8	99				70-130		
Calcium	31200	10000	40700	95				70-130		
Copper	5.46	1000	989	98				70-130		
Lead	1.00U	1000	983	98				70-130		
Magnesium	2970	10000	12700	98				70-130		
Potassium	1690	10000	11700	100				70-130		
Selenium	2.50U	1000	956	96				70-130		
Sodium	2960	10000	12800	99				70-130		
Zinc	75.7	1000	1030	96				70-130		

### Batch Information

Analytical Batch: MMS11752  
Analytical Method: EP200.8  
Instrument: P7 Agilent 7800  
Analyst: HGS  
Analytical Date/Time: 11/9/2022 2:50:46PM

Prep Batch: MXX35623  
Prep Method: DW Digest for Metals on ICP-MS  
Prep Date/Time: 11/8/2022 9:42:35AM  
Prep Initial Wt./Vol.: 20.00mL  
Prep Extract Vol: 50.00mL

Print Date: 11/22/2022 3:32:59PM



### Matrix Spike Summary

Original Sample ID: 1695742  
MS Sample ID: 1695752 MS  
MSD Sample ID:

Analysis Date: 11/09/2022 14:53  
Analysis Date: 11/09/2022 14:56  
Analysis Date:  
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1226752001, 1226752002, 1226752003, 1226752004, 1226752005, 1226752006, 1226752007, 1226752008, 1226752009, 1226752010, 1226752011, 1226752012, 1226752013, 1226752014, 1226752015, 1226752016, 1226752017

### Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Aluminum	200	1000	1210	101				70-130		
Cadmium	0.250U	100	97.7	98				70-130		
Calcium	12300	10000	22400	101				70-130		
Copper	1.15J	1000	992	99				70-130		
Lead	1.00U	1000	989	99				70-130		
Magnesium	1170	10000	11000	98				70-130		
Potassium	865	10000	10900	100				70-130		
Selenium	2.50U	1000	961	96				70-130		
Sodium	1570	10000	11400	98				70-130		
Zinc	5.00U	1000	966	97				70-130		

### Batch Information

Analytical Batch: MMS11752  
Analytical Method: EP200.8  
Instrument: P7 Agilent 7800  
Analyst: HGS  
Analytical Date/Time: 11/9/2022 2:56:05PM

Prep Batch: MXX35623  
Prep Method: DW Digest for Metals on ICP-MS  
Prep Date/Time: 11/8/2022 9:42:35AM  
Prep Initial Wt./Vol.: 20.00mL  
Prep Extract Vol: 50.00mL

Print Date: 11/22/2022 3:32:59PM

## Method Blank

Blank ID: MB for HBN 1848268 [MXX/35629]  
 Blank Lab ID: 1696686

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
 1226752018

## Results by EP200.8

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Aluminum	10.0U	20.0	6.20	ug/L
Cadmium	0.250U	0.500	0.150	ug/L
Calcium	250U	500	150	ug/L
Copper	1.50U	3.00	1.00	ug/L
Lead	1.00U	2.00	0.500	ug/L
Magnesium	29.9J	50.0	15.0	ug/L
Potassium	250U	500	150	ug/L
Selenium	2.50U	5.00	1.50	ug/L
Sodium	320J	500	150	ug/L
Zinc	5.00U	10.0	3.10	ug/L

## Batch Information

Analytical Batch: MMS11765  
 Analytical Method: EP200.8  
 Instrument: P7 Agilent 7800  
 Analyst: HGS  
 Analytical Date/Time: 11/18/2022 6:16:00PM

Prep Batch: MXX35629  
 Prep Method: E200.2  
 Prep Date/Time: 11/16/2022 10:33:56AM  
 Prep Initial Wt./Vol.: 20 mL  
 Prep Extract Vol: 50 mL

Print Date: 11/22/2022 3:33:04PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1226752 [MXX35629]  
 Blank Spike Lab ID: 1696687  
 Date Analyzed: 11/18/2022 18:18

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1226752018

## Results by EP200.8

### Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
Aluminum	1000	957	96	(85-115)
Cadmium	100	99.2	99	(85-115)
Calcium	10000	10100	101	(85-115)
Copper	1000	1010	101	(85-115)
Lead	1000	1010	101	(85-115)
Magnesium	10000	9880	99	(85-115)
Potassium	10000	10100	101	(85-115)
Selenium	1000	990	99	(85-115)
Sodium	10000	9450	95	(85-115)
Zinc	1000	1010	101	(85-115)

## Batch Information

Analytical Batch: **MMS11765**  
 Analytical Method: **EP200.8**  
 Instrument: **P7 Agilent 7800**  
 Analyst: **HGS**

Prep Batch: **MXX35629**  
 Prep Method: **E200.2**  
 Prep Date/Time: **11/16/2022 10:33**  
 Spike Init Wt./Vol.: 1000 ug/L Extract Vol: 50 mL  
 Dupe Init Wt./Vol.: Extract Vol:



## Matrix Spike Summary

Original Sample ID: 1696684  
 MS Sample ID: 1696692 MS  
 MSD Sample ID:

Analysis Date: 11/18/2022 18:34  
 Analysis Date: 11/18/2022 18:37  
 Analysis Date:  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1226752018

## Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Aluminum	10.9J	1000	961	95				70-130		
Cadmium	0.160J	100	99.3	99				70-130		
Calcium	31300	10000	41800	105				70-130		
Copper	104	1000	1080	98				70-130		
Lead	1.00U	1000	1020	102				70-130		
Magnesium	6790	10000	16700	99				70-130		
Potassium	18000	10000	28300	103				70-130		
Selenium	2.50U	1000	972	97				70-130		
Sodium	160000	10000	172000	111				70-130		
Zinc	35.2	1000	1030	99				70-130		

## Batch Information

Analytical Batch: MMS11765  
 Analytical Method: EP200.8  
 Instrument: P7 Agilent 7800  
 Analyst: HGS  
 Analytical Date/Time: 11/18/2022 6:37:00PM

Prep Batch: MXX35629  
 Prep Method: DW Digest for Metals on ICP-MS  
 Prep Date/Time: 11/16/2022 10:33:56AM  
 Prep Initial Wt./Vol.: 20.00mL  
 Prep Extract Vol: 50.00mL

Print Date: 11/22/2022 3:33:08PM

## Method Blank

Blank ID: MB for HBN 1847657 [STS/7435]

Matrix: Water (Surface, Eff., Ground)

Blank Lab ID: 1695483

QC for Samples:

1226752001, 1226752002, 1226752003, 1226752004, 1226752005, 1226752006, 1226752007, 1226752008, 1226752009

## Results by SM21 2540C

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Dissolved Solids	4.00J	10.0	3.10	mg/L

## Batch Information

Analytical Batch: STS7435

Analytical Method: SM21 2540C

Instrument:

Analyst: EBH

Analytical Date/Time: 11/7/2022 3:10:47PM

Print Date: 11/22/2022 3:33:09PM



### Duplicate Sample Summary

Original Sample ID: 1226668001

Duplicate Sample ID: 1695486

QC for Samples:

Analysis Date: 11/07/2022 15:10

Matrix: Water (Surface, Eff., Ground)

### Results by SM21 2540C

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Dissolved Solids	319	320	mg/L	0.31	(< 5 )

### Batch Information

Analytical Batch: STS7435

Analytical Method: SM21 2540C

Instrument:

Analyst: EBH

Print Date: 11/22/2022 3:33:10PM

## Duplicate Sample Summary

Original Sample ID: 1226740010  
 Duplicate Sample ID: 1695487

Analysis Date: 11/07/2022 15:10  
 Matrix: Drinking Water

QC for Samples:

1226752001, 1226752002, 1226752003, 1226752004, 1226752005, 1226752006, 1226752007, 1226752008, 1226752009

## Results by SM21 2540C

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Dissolved Solids	274	278	mg/L	1.40	(< 5 )

## Batch Information

Analytical Batch: STS7435  
 Analytical Method: SM21 2540C  
 Instrument:  
 Analyst: EBH

Print Date: 11/22/2022 3:33:10PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1226752 [STS7435]  
 Blank Spike Lab ID: 1695484  
 Date Analyzed: 11/07/2022 15:10

Spike Duplicate ID: LCSD for HBN 1226752 [STS7435]  
 Spike Duplicate Lab ID: 1695485  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1226752001, 1226752002, 1226752003, 1226752004, 1226752005, 1226752006, 1226752007, 1226752008, 1226752009

## Results by SM21 2540C

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Dissolved Solids	333	306	92	333	303	91	( 75-125 )	0.99	(< 5 )

## Batch Information

Analytical Batch: **STS7435**  
 Analytical Method: **SM21 2540C**  
 Instrument:  
 Analyst: **EBH**

Print Date: 11/22/2022 3:33:12PM



SGS North America Inc. CHAIN OF CUSTODY RECORD

1226752



**CLIENT:** Alaska Department of Environmental Conservation  
**CONTACT:** Sarah Apsens **PHONE #:** 907 741 1026  
**PROJECT NAME:** Kenai River Metals Monitoring  
**REPORTS TO:** Sarah Apsens **E-MAIL:** Sarah.apsens@alaska.gov  
**INVOICE TO:** dec.water.contracts@alaska.gov **QUOTE #:** NTP 22\*384  
**P.O. #:** Contact #18-220-70-2

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

**Section 1** Section 3 Preservative

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/MATRIX CODE	CONTAINERS	Comp Grab MI (Multi-incremental)	Analysis*				REMARKS/LOC ID
							DOC 6310B	TDS 2540C	200.8 Dissolved Metals SCEN	200.8 Metals + Hardness	
1AD 10AB	RM 12.75	11/3/22	15:15	Water	4	Grab	X	X	X	X	
2AD 11AB	RM 12.75 DUP		15:15				X	X	X	X	
3AD 12AB	Field Blank		15:25				X	X	X	X	
4AD 13AB	RM 70		11:35				X	X	X	X	
5AD 14AB	RM 70 DUP		11:35				X	X	X	X	
6AD 15AB	RM 23		12:58				X	X	X	X	
7AD 16AB	RM 23 DUP		12:58				X	X	X	X	
8AD 17AB	RM 21		14:15				X	X	X	X	
9AD 18AB	RM 21 DUP		14:15				X	X	X	X	

**Section 2**

**Section 4** DOD Project? Yes  No  Data Deliverable Requirements: Cooler ID: Requested Turnaround Time and/or Special Instructions: Return aliquot to DEC

**Section 5**

Relinquished By: (1) [Signature] Date: 11/4/22 Time: 10:00 Received By: [Signature]  
 Relinquished By: (2) [Signature] Date: [Signature] Time: [Signature] Received By: [Signature]  
 Relinquished By: (3) [Signature] Date: [Signature] Time: [Signature] Received By: [Signature]  
 Relinquished By: (4) [Signature] Date: 11/4/22 Time: 16:32 Received For Laboratory By: [Signature]

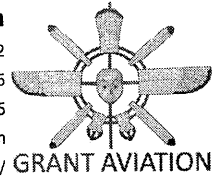
Temp Blank °C: 2.4 055 or Ambient [ ] Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT  
 Delivery Method: Hand Delivery [ ] Commerical Delivery [ ]

# AIRBILL 10742927

I hereby declare that the goods contained herein do not contain dangerous goods.

Signed..... Date .....

**Grant Aviation**  
 6420 Kulis Dr. Anchorage, AK 99502  
**Phone:** 1 (888) 359-4726  
**Freephone:** 1 (888) 359-4726  
**Email:** res@flygrant.com  
**Web:** http://www.flygrant.com/



## FREIGHT DETAILS

**FROM/TO:** Kenai -> Anchorage International

**Flight Departs:** Nov 4 22 11:40 AM

**Receiver:** sgs  
907-206-1339

**Sender:** sarah  
907-262-4311

**Accepted:** Fri, Nov 4 22 10:36:00 AM

Description & Comment	Quan.	Wgt.	Handle Fee	Hazmat Fee	Total
Standard Freight	1	49	-	-	\$36.89
Total Tax:					\$2.31
Total Payments made:					\$39.20
<b>Total Unpaid:</b>					<b>\$0.00</b>

Received in good condition by: .....

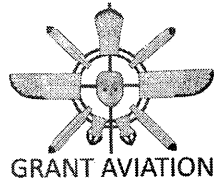
## CUSTOMER COPY

# AIRBILL 10742927

I hereby declare that the goods contained herein do not contain dangerous goods.

Signed..... Date .....

**Grant Aviation**  
 6420 Kulis Dr. Anchorage, AK 99502  
**Phone:** 1 (888) 359-4726  
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907-262-4311

**Accepted:** Fri, Nov 4 22 10:36:00 AM

Description & Comment	Quan.	Wgt.	Handle Fee	Hazmat Fee	Total
Standard Freight	1	49	-	-	\$36.89
TAX: Federal Excise Tax					\$2.31
Total Payments made:					\$39.20
<b>Total Unpaid:</b>					<b>\$0.00</b>

## TERMS AND CONDITIONS

Consignemnt Note Text

**Alert Expeditors Inc.**

**#422389**

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

Date 11/4/22

From 565

To 565

Collect  Prepay  Advance Charges

Job # PO# 60 + ~~10742127~~

Shipped Signature [Signature]

Received-By: [Signature] Total Charge 48 of 51





SGS Workorder #:

1226752

1226752

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
<b>Chain of Custody / Temperature Requirements</b>		
<i>Note: Temperature and COC seal information is found on the chain of custody form</i>		
DOD only: Did all sample coolers have a corresponding COC?	N/A	
If <0°C, were sample containers ice free?	N/A	
Note containers received with ice:		
Identify any containers received at non-compliant temperature:  (Use form FS-0029 if more space is needed)		
<b>Holding Time / Documentation / Sample Condition Requirement</b>		
<i>Note: Refer to form F-083 "Sample Guide" for specific holding times and sample containers.</i>		
Were samples received within analytical holding time?	Yes	
Do sample labels match COC? Record discrepancies.	Yes	
<b>Note:</b> If information on containers differs from COC, default to COC information for login. If times differ <1hr, record details & login per COC.		
Were analytical requests clear? <i>(i.e. method is specified for analyses with multiple option for method (Eg, BTEX 8021 vs 8260, Metals 6020 vs 200.8)</i>	Yes	
Were proper containers (type/mass/volume/preservative)used? Note: Exemption for metals analysis by 200.8/6020 in water.	Yes	
<b>Volatile Analysis Requirements (VOC, GRO, LL-Hg, etc.)</b>		
Were all soil VOAs received with a corresponding % solids container?	N/A	
Were Trip Blanks (e.g., VOAs, LL-Hg) in cooler with samples?	N/A	
Were all water VOA vials free of headspace (e.g., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with Methanol+BFB?	N/A	
<b>Note to Client:</b> Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.		
<b>Additional notes (if applicable):</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>
1226752001-A	HNO3 to pH < 2	OK	1226752016-B	No Preservative Required	OK
1226752001-B	No Preservative Required	OK	1226752017-A	No Preservative Required	OK
1226752001-C	No Preservative Required	OK	1226752017-B	No Preservative Required	OK
1226752001-D	No Preservative Required	OK	1226752018-A	No Preservative Required	OK
1226752002-A	No Preservative Required	OK	1226752018-B	No Preservative Required	OK
1226752002-B	No Preservative Required	OK			
1226752002-C	No Preservative Required	OK			
1226752002-D	No Preservative Required	OK			
1226752003-A	HNO3 to pH < 2	OK			
1226752003-B	No Preservative Required	OK			
1226752003-C	No Preservative Required	OK			
1226752003-D	No Preservative Required	OK			
1226752004-A	HNO3 to pH < 2	OK			
1226752004-B	No Preservative Required	OK			
1226752004-C	No Preservative Required	OK			
1226752004-D	No Preservative Required	OK			
1226752005-A	HNO3 to pH < 2	OK			
1226752005-B	No Preservative Required	OK			
1226752005-C	No Preservative Required	OK			
1226752005-D	No Preservative Required	OK			
1226752006-A	HNO3 to pH < 2	OK			
1226752006-B	No Preservative Required	OK			
1226752006-C	No Preservative Required	OK			
1226752006-D	No Preservative Required	OK			
1226752007-A	HNO3 to pH < 2	OK			
1226752007-B	No Preservative Required	OK			
1226752007-C	No Preservative Required	OK			
1226752007-D	No Preservative Required	OK			
1226752008-A	HNO3 to pH < 2	OK			
1226752008-B	No Preservative Required	OK			
1226752008-C	No Preservative Required	OK			
1226752008-D	No Preservative Required	OK			
1226752009-A	HNO3 to pH < 2	OK			
1226752009-B	No Preservative Required	OK			
1226752009-C	No Preservative Required	OK			
1226752009-D	No Preservative Required	OK			
1226752010-A	No Preservative Required	OK			
1226752010-B	No Preservative Required	OK			
1226752011-A	No Preservative Required	OK			
1226752011-B	No Preservative Required	OK			
1226752012-A	No Preservative Required	OK			
1226752012-B	No Preservative Required	OK			
1226752013-A	No Preservative Required	OK			
1226752013-B	No Preservative Required	OK			
1226752014-A	No Preservative Required	OK			
1226752014-B	No Preservative Required	OK			
1226752015-A	No Preservative Required	OK			
1226752015-B	No Preservative Required	OK			
1226752016-A	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.