

Laboratory Report of Analysis

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

Report Number: **1221680**

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 Alexandra 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.

Alexandra Lambe
Project Manager
Alexandra.Lambe@sgs.com

Date

Case Narrative

SGS Client: **ADEC-Air & Water Quality**
SGS Project: **1221680**
Project Name/Site: **Kenai River Metals Monitoring**
Project Contact: **Sarah Apsens**

Refer to sample receipt form for information on sample condition.

1221746006DUP (1661397) DUP

2540C - Total Dissolved Solids - Sample duplicate RPD was outside of acceptance limits. Refer to LCS/LCSD RPD for batch precision.

*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: 05/11/2022 11:12:11AM

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 70	1221680001	04/19/2022	04/19/2022	Water (Surface, Eff., Ground)
RM 70 DUP	1221680002	04/19/2022	04/19/2022	Water (Surface, Eff., Ground)
RM 21	1221680003	04/19/2022	04/19/2022	Water (Surface, Eff., Ground)
RM 21 DUP	1221680004	04/19/2022	04/19/2022	Water (Surface, Eff., Ground)
RM 21.1	1221680005	04/19/2022	04/19/2022	Water (Surface, Eff., Ground)
RM 31	1221680006	04/19/2022	04/19/2022	Water (Surface, Eff., Ground)
RM 31 DUP	1221680007	04/19/2022	04/19/2022	Water (Surface, Eff., Ground)
RM 5	1221680008	04/19/2022	04/19/2022	Water (Surface, Eff., Ground)
RM 5 DUP	1221680009	04/19/2022	04/19/2022	Water (Surface, Eff., Ground)
Field Blank	1221680010	04/19/2022	04/19/2022	Water (Surface, Eff., Ground)
RM 70	1221680011	04/19/2022	04/19/2022	Water (Surface, Eff., Ground)
RM 70 DUP	1221680012	04/19/2022	04/19/2022	Water (Surface, Eff., Ground)
RM 21	1221680013	04/19/2022	04/19/2022	Water (Surface, Eff., Ground)
RM 21 DUP	1221680014	04/19/2022	04/19/2022	Water (Surface, Eff., Ground)
RM 21.1	1221680015	04/19/2022	04/19/2022	Water (Surface, Eff., Ground)
RM 31	1221680016	04/19/2022	04/19/2022	Water (Surface, Eff., Ground)
RM 31 DUP	1221680017	04/19/2022	04/19/2022	Water (Surface, Eff., Ground)
RM 5	1221680018	04/19/2022	04/19/2022	Water (Surface, Eff., Ground)
RM 5 DUP	1221680019	04/19/2022	04/19/2022	Water (Surface, Eff., Ground)
Field Blank	1221680020	04/19/2022	04/19/2022	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
SM 5310B	Dissolved Organic Carbon
SM21 2340B	Hardness as CaCO ₃ by ICP-MS
EP200.8	Metals in Drinking Water by ICP-MS DISSO
EP200.8	Metals in Water by 200.8 ICP-MS
SM21 2540C	Total Dissolved Solids SM18 2540C

Detectable Results Summary

Client Sample ID: **RM 70**
 Lab Sample ID: 1221680001

Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	19100	ug/L
Hardness as CaCO3	53.1	mg/L
Magnesium	1310	ug/L
Total Dissolved Solids	60.0	mg/L

Waters Department

Client Sample ID: **RM 70 DUP**
 Lab Sample ID: 1221680002

Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	19700	ug/L
Hardness as CaCO3	54.8	mg/L
Magnesium	1360	ug/L
Total Dissolved Solids	66.0	mg/L

Waters Department

Client Sample ID: **RM 21**
 Lab Sample ID: 1221680003

Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	12200	ug/L
Hardness as CaCO3	37.9	mg/L
Magnesium	1780	ug/L
TOC Average, Dissolved	3.24	mg/L
Total Dissolved Solids	60.0	mg/L

Waters Department

Client Sample ID: **RM 21 DUP**
 Lab Sample ID: 1221680004

Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	12600	ug/L
Hardness as CaCO3	38.8	mg/L
Magnesium	1820	ug/L
TOC Average, Dissolved	3.26	mg/L
Total Dissolved Solids	13.0	mg/L

Waters Department

Client Sample ID: **RM 21.1**
 Lab Sample ID: 1221680005

Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	12500	ug/L
Hardness as CaCO3	38.8	mg/L
Magnesium	1820	ug/L
TOC Average, Dissolved	3.49	mg/L
Total Dissolved Solids	63.0	mg/L

Waters Department

Client Sample ID: **RM 31**
 Lab Sample ID: 1221680006

Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	13900	ug/L
Copper	3.58	ug/L
Hardness as CaCO3	42.3	mg/L
Magnesium	1840	ug/L
TOC Average, Dissolved	3.91	mg/L
Total Dissolved Solids	61.5	mg/L

Waters Department

Detectable Results Summary

Client Sample ID: **RM 31 DUP**

Lab Sample ID: 1221680007

Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	14000	ug/L
Hardness as CaCO3	42.5	mg/L
Magnesium	1840	ug/L

Waters Department

TOC Average, Dissolved	3.87	mg/L
Total Dissolved Solids	61.0	mg/L

Client Sample ID: **RM 5**

Lab Sample ID: 1221680008

Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	271000	ug/L
Copper	153	ug/L
Hardness as CaCO3	3880	mg/L
Magnesium	778000	ug/L
Zinc	30.9	ug/L

Waters Department

TOC Average, Dissolved	1.75	mg/L
Total Dissolved Solids	22200	mg/L

Client Sample ID: **RM 5 DUP**

Lab Sample ID: 1221680009

Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	277000	ug/L
Copper	244	ug/L
Hardness as CaCO3	4040	mg/L
Magnesium	813000	ug/L
Zinc	45.0	ug/L

Waters Department

TOC Average, Dissolved	1.68	mg/L
Total Dissolved Solids	22400	mg/L

Client Sample ID: **RM 70**

Lab Sample ID: 1221680011

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Aluminum	196	ug/L
Calcium	12900	ug/L
Copper	9.70	ug/L
Magnesium	2260	ug/L
Potassium	1280	ug/L
Sodium	1980	ug/L

Client Sample ID: **RM 70 DUP**

Lab Sample ID: 1221680012

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Aluminum	174	ug/L
Calcium	12900	ug/L
Copper	3.32	ug/L
Magnesium	2030	ug/L
Potassium	1150	ug/L
Sodium	2000	ug/L

Detectable Results Summary

Client Sample ID: **RM 21**

Lab Sample ID: 1221680013

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Aluminum	156	ug/L
Calcium	13300	ug/L
Magnesium	2090	ug/L
Potassium	1160	ug/L
Sodium	2090	ug/L

Client Sample ID: **RM 21 DUP**

Lab Sample ID: 1221680014

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Aluminum	172	ug/L
Calcium	13600	ug/L
Magnesium	1950	ug/L
Potassium	1070	ug/L
Sodium	1900	ug/L

Client Sample ID: **RM 21.1**

Lab Sample ID: 1221680015

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	19900	ug/L
Magnesium	1440	ug/L
Potassium	640	ug/L
Sodium	1550	ug/L

Client Sample ID: **RM 31**

Lab Sample ID: 1221680016

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Calcium	20300	ug/L
Magnesium	1440	ug/L
Potassium	640	ug/L
Sodium	1630	ug/L

Client Sample ID: **RM 31 DUP**

Lab Sample ID: 1221680017

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Aluminum	111	ug/L
Calcium	14500	ug/L
Magnesium	2030	ug/L
Potassium	1110	ug/L
Sodium	1990	ug/L

Client Sample ID: **RM 5**

Lab Sample ID: 1221680018

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Aluminum	9570	ug/L
Calcium	283000	ug/L
Copper	169	ug/L
Lead	4.75	ug/L
Magnesium	827000	ug/L
Potassium	243000	ug/L
Sodium	6690000	ug/L
Zinc	46.9	ug/L

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Detectable Results Summary

Client Sample ID: **RM 5 DUP**

Lab Sample ID: 1221680019

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Aluminum	9690	ug/L
Calcium	274000	ug/L
Copper	319	ug/L
Lead	4.86	ug/L
Magnesium	814000	ug/L
Potassium	238000	ug/L
Sodium	6620000	ug/L
Zinc	46.8	ug/L

Client Sample ID: **Field Blank**

Lab Sample ID: 1221680020

Dissolved Metals by ICP/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Aluminum	26.7	ug/L



Results of **RM 70**

Client Sample ID: **RM 70**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680001
Lab Project ID: 1221680

Collection Date: 04/19/22 09:40
Received Date: 04/19/22 16:18
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	19100	500	150	ug/L	1		05/02/22 13:21
Copper	3.00 U	3.00	1.00	ug/L	1		05/02/22 13:21
Magnesium	1310	50.0	15.0	ug/L	1		05/02/22 13:21
Zinc	10.0 U	10.0	3.10	ug/L	1		05/02/22 13:21

Batch Information

Analytical Batch: MMS11536
Analytical Method: EP200.8
Analyst: DSD
Analytical Date/Time: 05/02/22 13:21
Container ID: 1221680001-A

Prep Batch: MXX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
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	53.1	5.00	5.00	mg/L	1		05/02/22 13:21

Batch Information

Analytical Batch: MMS11536
Analytical Method: SM21 2340B
Analyst: DSD
Analytical Date/Time: 05/02/22 13:21
Container ID: 1221680001-A

Prep Batch: MXX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 05/11/2022 11:12:16AM



Results of RM 70

Client Sample ID: **RM 70**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680001
Lab Project ID: 1221680

Collection Date: 04/19/22 09:40
Received Date: 04/19/22 16:18
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		05/02/22 23:38

Batch Information

Analytical Batch: WTC3195
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 05/02/22 23:38
Container ID: 1221680001-B

<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	60.0	10.0	3.10	mg/L	1		04/26/22 22:45

Batch Information

Analytical Batch: STS7247
Analytical Method: SM21 2540C
Analyst: NRZ
Analytical Date/Time: 04/26/22 22:45
Container ID: 1221680001-C

Print Date: 05/11/2022 11:12:16AM



Results of **RM 70 DUP**

Client Sample ID: **RM 70 DUP**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680002
Lab Project ID: 1221680

Collection Date: 04/19/22 09:40
Received Date: 04/19/22 16:18
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	19700	500	150	ug/L	1		05/02/22 13:31
Copper	3.00 U	3.00	1.00	ug/L	1		05/02/22 13:31
Magnesium	1360	50.0	15.0	ug/L	1		05/02/22 13:31
Zinc	10.0 U	10.0	3.10	ug/L	1		05/02/22 13:31

Batch Information

Analytical Batch: MMS11536
Analytical Method: EP200.8
Analyst: DSD
Analytical Date/Time: 05/02/22 13:31
Container ID: 1221680002-A

Prep Batch: MXX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
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	54.8	5.00	5.00	mg/L	1		05/02/22 13:31

Batch Information

Analytical Batch: MMS11536
Analytical Method: SM21 2340B
Analyst: DSD
Analytical Date/Time: 05/02/22 13:31
Container ID: 1221680002-A

Prep Batch: MXX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 05/11/2022 11:12:16AM

Results of RM 70 DUP

Client Sample ID: **RM 70 DUP**
 Client Project ID: **Kenai River Metals Monitoring**
 Lab Sample ID: 1221680002
 Lab Project ID: 1221680

Collection Date: 04/19/22 09:40
 Received Date: 04/19/22 16:18
 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		05/02/22 23:51

Batch Information

Analytical Batch: WTC3195
 Analytical Method: SM 5310B
 Analyst: EBH
 Analytical Date/Time: 05/02/22 23:51
 Container ID: 1221680002-B

<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	66.0	10.0	3.10	mg/L	1		04/26/22 22:45

Batch Information

Analytical Batch: STS7247
 Analytical Method: SM21 2540C
 Analyst: NRZ
 Analytical Date/Time: 04/26/22 22:45
 Container ID: 1221680002-C



Results of **RM 21**

Client Sample ID: **RM 21**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680003
Lab Project ID: 1221680

Collection Date: 04/19/22 12:00
Received Date: 04/19/22 16:18
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	12200	500	150	ug/L	1		05/02/22 13:34
Copper	3.00 U	3.00	1.00	ug/L	1		05/02/22 13:34
Magnesium	1780	50.0	15.0	ug/L	1		05/02/22 13:34
Zinc	10.0 U	10.0	3.10	ug/L	1		05/02/22 13:34

Batch Information

Analytical Batch: MMS11536
Analytical Method: EP200.8
Analyst: DSD
Analytical Date/Time: 05/02/22 13:34
Container ID: 1221680003-A

Prep Batch: MXX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
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	37.9	5.00	5.00	mg/L	1		05/02/22 13:34

Batch Information

Analytical Batch: MMS11536
Analytical Method: SM21 2340B
Analyst: DSD
Analytical Date/Time: 05/02/22 13:34
Container ID: 1221680003-A

Prep Batch: MXX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 05/11/2022 11:12:16AM



Results of **RM 21**

Client Sample ID: **RM 21**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680003
Lab Project ID: 1221680

Collection Date: 04/19/22 12:00
Received Date: 04/19/22 16:18
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	3.24	1.00	0.400	mg/L	1		05/03/22 00:07

Batch Information

Analytical Batch: WTC3195
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 05/03/22 00:07
Container ID: 1221680003-B

<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	60.0	10.0	3.10	mg/L	1		04/26/22 22:45

Batch Information

Analytical Batch: STS7247
Analytical Method: SM21 2540C
Analyst: NRZ
Analytical Date/Time: 04/26/22 22:45
Container ID: 1221680003-C

Print Date: 05/11/2022 11:12:16AM



Results of **RM 21 DUP**

Client Sample ID: **RM 21 DUP**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680004
Lab Project ID: 1221680

Collection Date: 04/19/22 12:00
Received Date: 04/19/22 16:18
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		05/02/22 13:37
Copper	3.00 U	3.00	1.00	ug/L	1		05/02/22 13:37
Magnesium	1820	50.0	15.0	ug/L	1		05/02/22 13:37
Zinc	10.0 U	10.0	3.10	ug/L	1		05/02/22 13:37

Batch Information

Analytical Batch: MMS11536
Analytical Method: EP200.8
Analyst: DSD
Analytical Date/Time: 05/02/22 13:37
Container ID: 1221680004-A

Prep Batch: MXX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
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	38.8	5.00	5.00	mg/L	1		05/02/22 13:37

Batch Information

Analytical Batch: MMS11536
Analytical Method: SM21 2340B
Analyst: DSD
Analytical Date/Time: 05/02/22 13:37
Container ID: 1221680004-A

Prep Batch: MXX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 05/11/2022 11:12:16AM



Results of **RM 21 DUP**

Client Sample ID: **RM 21 DUP**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680004
Lab Project ID: 1221680

Collection Date: 04/19/22 12:00
Received Date: 04/19/22 16:18
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	3.26	1.00	0.400	mg/L	1		05/03/22 00:23

Batch Information

Analytical Batch: WTC3195
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 05/03/22 00:23
Container ID: 1221680004-B

<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	13.0	10.0	3.10	mg/L	1		04/26/22 22:45

Batch Information

Analytical Batch: STS7247
Analytical Method: SM21 2540C
Analyst: NRZ
Analytical Date/Time: 04/26/22 22:45
Container ID: 1221680004-C

Print Date: 05/11/2022 11:12:16AM



Results of **RM 21.1**

Client Sample ID: **RM 21.1**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680005
Lab Project ID: 1221680

Collection Date: 04/19/22 11:45
Received Date: 04/19/22 16:18
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	12500	500	150	ug/L	1		05/02/22 13:45
Copper	3.00 U	3.00	1.00	ug/L	1		05/02/22 13:45
Magnesium	1820	50.0	15.0	ug/L	1		05/02/22 13:45
Zinc	10.0 U	10.0	3.10	ug/L	1		05/02/22 13:45

Batch Information

Analytical Batch: MMS11536
Analytical Method: EP200.8
Analyst: DSD
Analytical Date/Time: 05/02/22 13:45
Container ID: 1221680005-A

Prep Batch: MXX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
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	38.8	5.00	5.00	mg/L	1		05/02/22 13:45

Batch Information

Analytical Batch: MMS11536
Analytical Method: SM21 2340B
Analyst: DSD
Analytical Date/Time: 05/02/22 13:45
Container ID: 1221680005-A

Prep Batch: MXX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 05/11/2022 11:12:16AM



Results of **RM 21.1**

Client Sample ID: **RM 21.1**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680005
Lab Project ID: 1221680

Collection Date: 04/19/22 11:45
Received Date: 04/19/22 16:18
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	3.49	1.00	0.400	mg/L	1		05/03/22 00:38

Batch Information

Analytical Batch: WTC3195
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 05/03/22 00:38
Container ID: 1221680005-B

<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	63.0	10.0	3.10	mg/L	1		04/26/22 22:45

Batch Information

Analytical Batch: STS7247
Analytical Method: SM21 2540C
Analyst: NRZ
Analytical Date/Time: 04/26/22 22:45
Container ID: 1221680005-C

Print Date: 05/11/2022 11:12:16AM



Results of RM 31

Client Sample ID: RM 31
Client Project ID: Kenai River Metals Monitoring
Lab Sample ID: 1221680006
Lab Project ID: 1221680

Collection Date: 04/19/22 10:45
Received Date: 04/19/22 16:18
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Metals by ICP/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows include Calcium, Copper, Magnesium, and Zinc.

Batch Information

Analytical Batch: MMS11536
Analytical Method: EP200.8
Analyst: DSD
Analytical Date/Time: 05/02/22 13:48
Container ID: 1221680006-A
Prep Batch: MXX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row includes Hardness as CaCO3.

Batch Information

Analytical Batch: MMS11536
Analytical Method: SM21 2340B
Analyst: DSD
Analytical Date/Time: 05/02/22 13:48
Container ID: 1221680006-A
Prep Batch: MXX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 05/11/2022 11:12:16AM

Results of RM 31

Client Sample ID: **RM 31**
 Client Project ID: **Kenai River Metals Monitoring**
 Lab Sample ID: 1221680006
 Lab Project ID: 1221680

Collection Date: 04/19/22 10:45
 Received Date: 04/19/22 16:18
 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	3.91	1.00	0.400	mg/L	1		05/03/22 00:53

Batch Information

Analytical Batch: WTC3195
 Analytical Method: SM 5310B
 Analyst: EBH
 Analytical Date/Time: 05/03/22 00:53
 Container ID: 1221680006-B

<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	61.5	12.8	3.97	mg/L	1		04/26/22 22:45

Batch Information

Analytical Batch: STS7247
 Analytical Method: SM21 2540C
 Analyst: NRZ
 Analytical Date/Time: 04/26/22 22:45
 Container ID: 1221680006-C

Print Date: 05/11/2022 11:12:16AM



Results of RM 31 DUP

Client Sample ID: RM 31 DUP
Client Project ID: Kenai River Metals Monitoring
Lab Sample ID: 1221680007
Lab Project ID: 1221680

Collection Date: 04/19/22 10:45
Received Date: 04/19/22 16:18
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Metals by ICP/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows include Calcium, Copper, Magnesium, and Zinc.

Batch Information

Analytical Batch: MMS11536
Analytical Method: EP200.8
Analyst: DSD
Analytical Date/Time: 05/02/22 13:50
Container ID: 1221680007-A
Prep Batch: MXX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row includes Hardness as CaCO3.

Batch Information

Analytical Batch: MMS11536
Analytical Method: SM21 2340B
Analyst: DSD
Analytical Date/Time: 05/02/22 13:50
Container ID: 1221680007-A
Prep Batch: MXX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 05/11/2022 11:12:16AM

Results of RM 31 DUP

Client Sample ID: **RM 31 DUP**
 Client Project ID: **Kenai River Metals Monitoring**
 Lab Sample ID: 1221680007
 Lab Project ID: 1221680

Collection Date: 04/19/22 10:45
 Received Date: 04/19/22 16:18
 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	3.87	1.00	0.400	mg/L	1		05/03/22 01:45

Batch Information

Analytical Batch: WTC3195
 Analytical Method: SM 5310B
 Analyst: EBH
 Analytical Date/Time: 05/03/22 01:45
 Container ID: 1221680007-B

<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	61.0	10.0	3.10	mg/L	1		04/26/22 22:45

Batch Information

Analytical Batch: STS7247
 Analytical Method: SM21 2540C
 Analyst: NRZ
 Analytical Date/Time: 04/26/22 22:45
 Container ID: 1221680007-C

Print Date: 05/11/2022 11:12:16AM



Results of **RM 5**

Client Sample ID: **RM 5**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680008
Lab Project ID: 1221680

Collection Date: 04/19/22 08:10
Received Date: 04/19/22 16:18
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	271000	500	150	ug/L	1		05/02/22 13:53
Copper	153	3.00	1.00	ug/L	1		05/02/22 13:53
Magnesium	778000	50.0	15.0	ug/L	1		05/02/22 13:53
Zinc	30.9	10.0	3.10	ug/L	1		05/02/22 13:53

Batch Information

Analytical Batch: MMS11536	Prep Batch: MXX35077
Analytical Method: EP200.8	Prep Method: E200.2
Analyst: DSD	Prep Date/Time: 04/26/22 10:00
Analytical Date/Time: 05/02/22 13:53	Prep Initial Wt./Vol.: 20 mL
Container ID: 1221680008-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	3880	5.00	5.00	mg/L	1		05/02/22 13:53

Batch Information

Analytical Batch: MMS11536	Prep Batch: MXX35077
Analytical Method: SM21 2340B	Prep Method: E200.2
Analyst: DSD	Prep Date/Time: 04/26/22 10:00
Analytical Date/Time: 05/02/22 13:53	Prep Initial Wt./Vol.: 20 mL
Container ID: 1221680008-A	Prep Extract Vol: 50 mL

Print Date: 05/11/2022 11:12:16AM



Results of **RM 5**

Client Sample ID: **RM 5**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680008
Lab Project ID: 1221680

Collection Date: 04/19/22 08:10
Received Date: 04/19/22 16:18
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	1.75	1.00	0.400	mg/L	1		05/03/22 01:59

Batch Information

Analytical Batch: WTC3195
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 05/03/22 01:59
Container ID: 1221680008-B

<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	22200	500	155	mg/L	1		04/26/22 22:45

Batch Information

Analytical Batch: STS7247
Analytical Method: SM21 2540C
Analyst: NRZ
Analytical Date/Time: 04/26/22 22:45
Container ID: 1221680008-C

Print Date: 05/11/2022 11:12:16AM

Results of RM 5 DUP

Client Sample ID: **RM 5 DUP**
 Client Project ID: **Kenai River Metals Monitoring**
 Lab Sample ID: 1221680009
 Lab Project ID: 1221680

Collection Date: 04/19/22 08:10
 Received Date: 04/19/22 16:18
 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	277000	500	150	ug/L	1		05/02/22 13:56
Copper	244	3.00	1.00	ug/L	1		05/02/22 13:56
Magnesium	813000	50.0	15.0	ug/L	1		05/02/22 13:56
Zinc	45.0	10.0	3.10	ug/L	1		05/02/22 13:56

Batch Information

Analytical Batch: MMS11536
 Analytical Method: EP200.8
 Analyst: DSD
 Analytical Date/Time: 05/02/22 13:56
 Container ID: 1221680009-A

Prep Batch: MXX35077
 Prep Method: E200.2
 Prep Date/Time: 04/26/22 10:00
 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	4040	5.00	5.00	mg/L	1		05/02/22 13:56

Batch Information

Analytical Batch: MMS11536
 Analytical Method: SM21 2340B
 Analyst: DSD
 Analytical Date/Time: 05/02/22 13:56
 Container ID: 1221680009-A

Prep Batch: MXX35077
 Prep Method: E200.2
 Prep Date/Time: 04/26/22 10:00
 Prep Initial Wt./Vol.: 20 mL
 Prep Extract Vol: 50 mL



Results of **RM 5 DUP**

Client Sample ID: **RM 5 DUP**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680009
Lab Project ID: 1221680

Collection Date: 04/19/22 08:10
Received Date: 04/19/22 16:18
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	1.68	1.00	0.400	mg/L	1		05/03/22 02:13

Batch Information

Analytical Batch: WTC3195
Analytical Method: SM 5310B
Analyst: EBH
Analytical Date/Time: 05/03/22 02:13
Container ID: 1221680009-B

<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	22400	500	155	mg/L	1		04/26/22 22:45

Batch Information

Analytical Batch: STS7247
Analytical Method: SM21 2540C
Analyst: NRZ
Analytical Date/Time: 04/26/22 22:45
Container ID: 1221680009-C

Print Date: 05/11/2022 11:12:16AM



Results of Field Blank

Client Sample ID: **Field Blank**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680010
Lab Project ID: 1221680

Collection Date: 04/19/22 08:22
Received Date: 04/19/22 16:18
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		05/02/22 13:26
Copper	3.00 U	3.00	1.00	ug/L	1		05/02/22 13:26
Magnesium	50.0 U	50.0	15.0	ug/L	1		05/02/22 13:26
Zinc	10.0 U	10.0	3.10	ug/L	1		05/02/22 13:26

Batch Information

Analytical Batch: MMS11536
Analytical Method: EP200.8
Analyst: DSD
Analytical Date/Time: 05/02/22 13:26
Container ID: 1221680010-A

Prep Batch: MXX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
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		05/02/22 13:26

Batch Information

Analytical Batch: MMS11536
Analytical Method: SM21 2340B
Analyst: DSD
Analytical Date/Time: 05/02/22 13:26
Container ID: 1221680010-A

Prep Batch: MXX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 05/11/2022 11:12:16AM

Results of Field Blank

Client Sample ID: **Field Blank**
 Client Project ID: **Kenai River Metals Monitoring**
 Lab Sample ID: 1221680010
 Lab Project ID: 1221680

Collection Date: 04/19/22 08:22
 Received Date: 04/19/22 16:18
 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		05/03/22 02:27

Batch Information

Analytical Batch: WTC3195
 Analytical Method: SM 5310B
 Analyst: EBH
 Analytical Date/Time: 05/03/22 02:27
 Container ID: 1221680010-B

<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		04/26/22 22:45

Batch Information

Analytical Batch: STS7247
 Analytical Method: SM21 2540C
 Analyst: NRZ
 Analytical Date/Time: 04/26/22 22:45
 Container ID: 1221680010-C

Print Date: 05/11/2022 11:12:16AM



Results of RM 70

Client Sample ID: **RM 70**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680011
Lab Project ID: 1221680

Collection Date: 04/19/22 09:40
Received Date: 04/19/22 16:18
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	196	20.0	6.20	ug/L	1		05/02/22 13:59
Cadmium	0.500 U	0.500	0.150	ug/L	1		05/02/22 13:59
Calcium	12900	500	150	ug/L	1		05/02/22 13:59
Copper	9.70	3.00	1.00	ug/L	1		05/02/22 13:59
Lead	2.00 U	2.00	0.500	ug/L	1		05/02/22 13:59
Magnesium	2260	50.0	15.0	ug/L	1		05/02/22 13:59
Potassium	1280	500	150	ug/L	1		05/02/22 13:59
Selenium	5.00 U	5.00	1.50	ug/L	1		05/02/22 13:59
Sodium	1980	500	150	ug/L	1		05/03/22 13:44
Zinc	10.0 U	10.0	3.10	ug/L	1		05/02/22 13:59

Batch Information

Analytical Batch: MMS11538
Analytical Method: EP200.8
Analyst: AKA
Analytical Date/Time: 05/03/22 13:44
Container ID: 1221680011-A

Prep Batch: MXX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS11536
Analytical Method: EP200.8
Analyst: DSD
Analytical Date/Time: 05/02/22 13:59
Container ID: 1221680011-A

Prep Batch: MXX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 05/11/2022 11:12:16AM



Results of RM 70 DUP

Client Sample ID: **RM 70 DUP**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680012
Lab Project ID: 1221680

Collection Date: 04/19/22 09:40
Received Date: 04/19/22 16:18
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	174	20.0	6.20	ug/L	1		05/02/22 14:01
Cadmium	0.500 U	0.500	0.150	ug/L	1		05/02/22 14:01
Calcium	12900	500	150	ug/L	1		05/02/22 14:01
Copper	3.32	3.00	1.00	ug/L	1		05/02/22 14:01
Lead	2.00 U	2.00	0.500	ug/L	1		05/02/22 14:01
Magnesium	2030	50.0	15.0	ug/L	1		05/02/22 14:01
Potassium	1150	500	150	ug/L	1		05/02/22 14:01
Selenium	5.00 U	5.00	1.50	ug/L	1		05/02/22 14:01
Sodium	2000	500	150	ug/L	1		05/03/22 13:46
Zinc	10.0 U	10.0	3.10	ug/L	1		05/02/22 14:01

Batch Information

Analytical Batch: MMS11538
Analytical Method: EP200.8
Analyst: AKA
Analytical Date/Time: 05/03/22 13:46
Container ID: 1221680012-A

Prep Batch: MX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS11536
Analytical Method: EP200.8
Analyst: DSD
Analytical Date/Time: 05/02/22 14:01
Container ID: 1221680012-A

Prep Batch: MX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 05/11/2022 11:12:16AM



Results of RM 21

Client Sample ID: **RM 21**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680013
Lab Project ID: 1221680

Collection Date: 04/19/22 12:00
Received Date: 04/19/22 16:18
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	156	20.0	6.20	ug/L	1		05/02/22 14:04
Cadmium	0.500 U	0.500	0.150	ug/L	1		05/02/22 14:04
Calcium	13300	500	150	ug/L	1		05/02/22 14:04
Copper	3.00 U	3.00	1.00	ug/L	1		05/02/22 14:04
Lead	2.00 U	2.00	0.500	ug/L	1		05/02/22 14:04
Magnesium	2090	50.0	15.0	ug/L	1		05/02/22 14:04
Potassium	1160	500	150	ug/L	1		05/02/22 14:04
Selenium	5.00 U	5.00	1.50	ug/L	1		05/02/22 14:04
Sodium	2090	500	150	ug/L	1		05/03/22 13:49
Zinc	10.0 U	10.0	3.10	ug/L	1		05/02/22 14:04

Batch Information

Analytical Batch: MMS11538
Analytical Method: EP200.8
Analyst: AKA
Analytical Date/Time: 05/03/22 13:49
Container ID: 1221680013-A

Prep Batch: MX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS11536
Analytical Method: EP200.8
Analyst: DSD
Analytical Date/Time: 05/02/22 14:04
Container ID: 1221680013-A

Prep Batch: MX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 05/11/2022 11:12:16AM



Results of RM 21 DUP

Client Sample ID: RM 21 DUP
Client Project ID: Kenai River Metals Monitoring
Lab Sample ID: 1221680014
Lab Project ID: 1221680

Collection Date: 04/19/22 12:00
Received Date: 04/19/22 16:18
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Dissolved Metals by ICP/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows include Aluminum, Cadmium, Calcium, Copper, Lead, Magnesium, Potassium, Selenium, Sodium, and Zinc.

Batch Information

Analytical Batch: MMS11538
Analytical Method: EP200.8
Analyst: AKA
Analytical Date/Time: 05/03/22 13:52
Container ID: 1221680014-A

Prep Batch: MX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS11536
Analytical Method: EP200.8
Analyst: DSD
Analytical Date/Time: 05/02/22 14:07
Container ID: 1221680014-A

Prep Batch: MX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL



Results of **RM 21.1**

Client Sample ID: **RM 21.1**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680015
Lab Project ID: 1221680

Collection Date: 04/19/22 11:45
Received Date: 04/19/22 16:18
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		05/02/22 14:09
Cadmium	0.500 U	0.500	0.150	ug/L	1		05/02/22 14:09
Calcium	19900	500	150	ug/L	1		05/02/22 14:09
Copper	3.00 U	3.00	1.00	ug/L	1		05/02/22 14:09
Lead	2.00 U	2.00	0.500	ug/L	1		05/02/22 14:09
Magnesium	1440	50.0	15.0	ug/L	1		05/02/22 14:09
Potassium	640	500	150	ug/L	1		05/02/22 14:09
Selenium	5.00 U	5.00	1.50	ug/L	1		05/02/22 14:09
Sodium	1550	500	150	ug/L	1		05/03/22 13:54
Zinc	10.0 U	10.0	3.10	ug/L	1		05/02/22 14:09

Batch Information

Analytical Batch: MMS11538
Analytical Method: EP200.8
Analyst: AKA
Analytical Date/Time: 05/03/22 13:54
Container ID: 1221680015-A

Prep Batch: MX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS11536
Analytical Method: EP200.8
Analyst: DSD
Analytical Date/Time: 05/02/22 14:09
Container ID: 1221680015-A

Prep Batch: MX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 05/11/2022 11:12:16AM



Results of RM 31

Client Sample ID: **RM 31**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680016
Lab Project ID: 1221680

Collection Date: 04/19/22 10:45
Received Date: 04/19/22 16:18
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		05/02/22 14:17
Cadmium	0.500 U	0.500	0.150	ug/L	1		05/02/22 14:17
Calcium	20300	500	150	ug/L	1		05/02/22 14:17
Copper	3.00 U	3.00	1.00	ug/L	1		05/02/22 14:17
Lead	2.00 U	2.00	0.500	ug/L	1		05/02/22 14:17
Magnesium	1440	50.0	15.0	ug/L	1		05/02/22 14:17
Potassium	640	500	150	ug/L	1		05/02/22 14:17
Selenium	5.00 U	5.00	1.50	ug/L	1		05/02/22 14:17
Sodium	1630	500	150	ug/L	1		05/03/22 13:57
Zinc	10.0 U	10.0	3.10	ug/L	1		05/02/22 14:17

Batch Information

Analytical Batch: MMS11538
Analytical Method: EP200.8
Analyst: AKA
Analytical Date/Time: 05/03/22 13:57
Container ID: 1221680016-A

Prep Batch: MX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS11536
Analytical Method: EP200.8
Analyst: DSD
Analytical Date/Time: 05/02/22 14:17
Container ID: 1221680016-A

Prep Batch: MX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 05/11/2022 11:12:16AM



Results of RM 31 DUP

Client Sample ID: **RM 31 DUP**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680017
Lab Project ID: 1221680

Collection Date: 04/19/22 10:45
Received Date: 04/19/22 16:18
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	111	20.0	6.20	ug/L	1		05/02/22 14:20
Cadmium	0.500 U	0.500	0.150	ug/L	1		05/02/22 14:20
Calcium	14500	500	150	ug/L	1		05/02/22 14:20
Copper	3.00 U	3.00	1.00	ug/L	1		05/02/22 14:20
Lead	2.00 U	2.00	0.500	ug/L	1		05/02/22 14:20
Magnesium	2030	50.0	15.0	ug/L	1		05/02/22 14:20
Potassium	1110	500	150	ug/L	1		05/02/22 14:20
Selenium	5.00 U	5.00	1.50	ug/L	1		05/02/22 14:20
Sodium	1990	500	150	ug/L	1		05/03/22 14:00
Zinc	10.0 U	10.0	3.10	ug/L	1		05/02/22 14:20

Batch Information

Analytical Batch: MMS11538
Analytical Method: EP200.8
Analyst: AKA
Analytical Date/Time: 05/03/22 14:00
Container ID: 1221680017-A

Prep Batch: MX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS11536
Analytical Method: EP200.8
Analyst: DSD
Analytical Date/Time: 05/02/22 14:20
Container ID: 1221680017-A

Prep Batch: MX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 05/11/2022 11:12:16AM



Results of RM 5

Client Sample ID: **RM 5**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680018
Lab Project ID: 1221680

Collection Date: 04/19/22 08:10
Received Date: 04/19/22 16:18
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	9570	20.0	6.20	ug/L	1		05/02/22 14:23
Cadmium	0.500 U	0.500	0.150	ug/L	1		05/02/22 14:23
Calcium	283000	500	150	ug/L	1		05/02/22 14:23
Copper	169	3.00	1.00	ug/L	1		05/02/22 14:23
Lead	4.75	2.00	0.500	ug/L	1		05/02/22 14:23
Magnesium	827000	50.0	15.0	ug/L	1		05/02/22 14:23
Potassium	243000	500	150	ug/L	1		05/02/22 14:23
Selenium	5.00 U	5.00	1.50	ug/L	1		05/02/22 14:23
Sodium	6690000	25000	7500	ug/L	50		05/03/22 14:02
Zinc	46.9	10.0	3.10	ug/L	1		05/02/22 14:23

Batch Information

Analytical Batch: MMS11538
Analytical Method: EP200.8
Analyst: AKA
Analytical Date/Time: 05/03/22 14:02
Container ID: 1221680018-A

Prep Batch: MX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS11536
Analytical Method: EP200.8
Analyst: DSD
Analytical Date/Time: 05/02/22 14:23
Container ID: 1221680018-A

Prep Batch: MX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 05/11/2022 11:12:16AM



Results of RM 5 DUP

Client Sample ID: **RM 5 DUP**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680019
Lab Project ID: 1221680

Collection Date: 04/19/22 08:10
Received Date: 04/19/22 16:18
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	9690	20.0	6.20	ug/L	1		05/02/22 14:26
Cadmium	0.500 U	0.500	0.150	ug/L	1		05/02/22 14:26
Calcium	274000	500	150	ug/L	1		05/02/22 14:26
Copper	319	3.00	1.00	ug/L	1		05/02/22 14:26
Lead	4.86	2.00	0.500	ug/L	1		05/02/22 14:26
Magnesium	814000	50.0	15.0	ug/L	1		05/02/22 14:26
Potassium	238000	500	150	ug/L	1		05/02/22 14:26
Selenium	5.00 U	5.00	1.50	ug/L	1		05/02/22 14:26
Sodium	6620000	25000	7500	ug/L	50		05/03/22 14:05
Zinc	46.8	10.0	3.10	ug/L	1		05/02/22 14:26

Batch Information

Analytical Batch: MMS11538
Analytical Method: EP200.8
Analyst: AKA
Analytical Date/Time: 05/03/22 14:05
Container ID: 1221680019-A

Prep Batch: MX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Analytical Batch: MMS11536
Analytical Method: EP200.8
Analyst: DSD
Analytical Date/Time: 05/02/22 14:26
Container ID: 1221680019-A

Prep Batch: MX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 05/11/2022 11:12:16AM



Results of Field Blank

Client Sample ID: **Field Blank**
Client Project ID: **Kenai River Metals Monitoring**
Lab Sample ID: 1221680020
Lab Project ID: 1221680

Collection Date: 04/19/22 08:22
Received Date: 04/19/22 16:18
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	26.7	20.0	6.20	ug/L	1		05/03/22 14:08
Cadmium	0.500 U	0.500	0.150	ug/L	1		05/03/22 14:08
Calcium	500 U	500	150	ug/L	1		05/03/22 14:08
Copper	3.00 U	3.00	1.00	ug/L	1		05/03/22 14:08
Lead	2.00 U	2.00	0.500	ug/L	1		05/03/22 14:08
Magnesium	50.0 U	50.0	15.0	ug/L	1		05/03/22 14:08
Potassium	500 U	500	150	ug/L	1		05/03/22 14:08
Selenium	5.00 U	5.00	1.50	ug/L	1		05/03/22 14:08
Sodium	500 U	500	150	ug/L	1		05/03/22 14:08
Zinc	10.0 U	10.0	3.10	ug/L	1		05/03/22 14:08

Batch Information

Analytical Batch: MMS11538
Analytical Method: EP200.8
Analyst: AKA
Analytical Date/Time: 05/03/22 14:08
Container ID: 1221680020-A

Prep Batch: MXX35077
Prep Method: E200.2
Prep Date/Time: 04/26/22 10:00
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 05/11/2022 11:12:16AM



Method Blank

Blank ID: MB for HBN 1835252 [MXX/35077]
Blank Lab ID: 1661316

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1221680001, 1221680002, 1221680003, 1221680004, 1221680005, 1221680006, 1221680007, 1221680008, 1221680009, 1221680010, 1221680011, 1221680012, 1221680013, 1221680014, 1221680015, 1221680016, 1221680017, 1221680018, 1221680019, 1221680020

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	250U	500	150	ug/L
Zinc	5.00U	10.0	3.10	ug/L

Batch Information

Analytical Batch: MMS11536
Analytical Method: EP200.8
Instrument: P7 Agilent 7800
Analyst: DSD
Analytical Date/Time: 5/2/2022 1:13:05PM

Prep Batch: MXX35077
Prep Method: E200.2
Prep Date/Time: 4/26/2022 10:00:24AM
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Print Date: 05/11/2022 11:12:19AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1221680 [MXX35077]

Blank Spike Lab ID: 1661317

Date Analyzed: 05/02/2022 13:15

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1221680001, 1221680002, 1221680003, 1221680004, 1221680005, 1221680006, 1221680007, 1221680008, 1221680009, 1221680010, 1221680011, 1221680012, 1221680013, 1221680014, 1221680015, 1221680016, 1221680017, 1221680018, 1221680019, 1221680020

Results by EP200.8

Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
Aluminum	1000	1020	102	(85-115)
Cadmium	100	101	101	(85-115)
Calcium	10000	10100	101	(85-115)
Copper	1000	1040	104	(85-115)
Lead	1000	1030	103	(85-115)
Magnesium	10000	9990	100	(85-115)
Potassium	10000	10100	101	(85-115)
Selenium	1000	1010	101	(85-115)
Sodium	10000	9970	100	(85-115)
Zinc	1000	1020	102	(85-115)

Batch Information

Analytical Batch: **MMS11536**

Analytical Method: **EP200.8**

Instrument: **P7 Agilent 7800**

Analyst: **DSD**

Prep Batch: **MXX35077**

Prep Method: **E200.2**

Prep Date/Time: **04/26/2022 10:00**

Spike Init Wt./Vol.: 1000 ug/L Extract Vol: 50 mL

Dupe Init Wt./Vol.: Extract Vol:

Matrix Spike Summary

Original Sample ID: 1221680001
 MS Sample ID: 1661319 MS
 MSD Sample ID:

Analysis Date: 05/02/2022 13:21
 Analysis Date: 05/02/2022 13:23
 Analysis Date:
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1221680001, 1221680002, 1221680003, 1221680004, 1221680005, 1221680006, 1221680007,
 1221680008, 1221680009, 1221680010

Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Calcium	19100	10000	29600	105				70-130		
Copper	3.00U	1000	1020	102				70-130		
Magnesium	1310	10000	11200	99				70-130		
Zinc	10.0U	1000	1010	101				70-130		

Batch Information

Analytical Batch: MMS11536
 Analytical Method: EP200.8
 Instrument: P7 Agilent 7800
 Analyst: DSD
 Analytical Date/Time: 5/2/2022 1:23:53PM

Prep Batch: MX35077
 Prep Method: DW Digest for Metals on ICP-MS
 Prep Date/Time: 4/26/2022 10:00:24AM
 Prep Initial Wt./Vol.: 20.00mL
 Prep Extract Vol: 50.00mL

Matrix Spike Summary

Original Sample ID: 1221680010
 MS Sample ID: 1661320 MS
 MSD Sample ID:

Analysis Date: 05/02/2022 13:26
 Analysis Date: 05/02/2022 13:29
 Analysis Date:
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1221680002, 1221680003, 1221680004, 1221680005, 1221680006, 1221680007, 1221680008, 1221680009, 1221680010, 1221680011, 1221680012, 1221680013, 1221680014, 1221680015, 1221680016, 1221680017, 1221680018, 1221680019, 1221680020

Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Calcium	500U	10000	10100	101				70-130		
Copper	3.00U	1000	1020	102				70-130		
Magnesium	50.0U	10000	10000	100				70-130		
Zinc	10.0U	1000	1010	101				70-130		

Batch Information

Analytical Batch: MMS11536
 Analytical Method: EP200.8
 Instrument: P7 Agilent 7800
 Analyst: DSD
 Analytical Date/Time: 5/2/2022 1:29:15PM

Prep Batch: MX35077
 Prep Method: DW Digest for Metals on ICP-MS
 Prep Date/Time: 4/26/2022 10:00:24AM
 Prep Initial Wt./Vol.: 20.00mL
 Prep Extract Vol: 50.00mL

Method Blank

Blank ID: MB for HBN 1835263 [STS/7247]

Matrix: Water (Surface, Eff., Ground)

Blank Lab ID: 1661394

QC for Samples:

1221680001, 1221680002, 1221680003, 1221680004, 1221680005, 1221680006, 1221680007, 1221680008, 1221680009, 1221680010

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: STS7247

Analytical Method: SM21 2540C

Instrument:

Analyst: NRZ

Analytical Date/Time: 4/26/2022 10:45:15PM

Print Date: 05/11/2022 11:12:26AM

Duplicate Sample Summary

Original Sample ID: 1221746006

Duplicate Sample ID: 1661397

QC for Samples:

1221680001, 1221680002, 1221680003, 1221680004, 1221680005, 1221680006, 1221680007, 1221680008, 1221680009, 1221680010

Analysis Date: 04/26/2022 22:45

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	210	172	mg/L	19.90*	(< 5)

Batch Information

Analytical Batch: STS7247

Analytical Method: SM21 2540C

Instrument:

Analyst: NRZ

Blank Spike Summary

Blank Spike ID: LCS for HBN 1221680 [STS7247]
 Blank Spike Lab ID: 1661395
 Date Analyzed: 04/26/2022 22:45

Spike Duplicate ID: LCSD for HBN 1221680 [STS7247]
 Spike Duplicate Lab ID: 1661396
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1221680001, 1221680002, 1221680003, 1221680004, 1221680005, 1221680006, 1221680007, 1221680008, 1221680009, 1221680010

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	303	91	333	311	94	(75-125)	2.60	(< 5)

Batch Information

Analytical Batch: STS7247
 Analytical Method: SM21 2540C
 Instrument:
 Analyst: NRZ



SGS North America Inc.
CHAIN OF CUSTODY RECORD

366978 AL

www.us.sgs.com

CLIENT: Alaska Department of Environmental Conservation					Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.					Page 1 of 1		
CONTACT: Sarah Apsens					PHONE #: 907-741-1026					Section 3 Preservative		
PROJECT NAME: Kengai River Metals Monitoring					PROJECT/PWSID/PERMIT#: [blank]					# CONTAINERS Analysis* 200.8 Metals 2510B Hardness 200.8 Dissolved Metals 530B DOC 2540C TDS		
REPORTS TO: Sarah Apsens					E-MAIL: sarah.apsens@alaska.gov							
INVOICE TO: Dec. Water Contracts@alaska.gov					QUOTE #: NTP# 22.384 P.O. #: termcontract # 18-220-20-2							
RESERVED for lab use		SAMPLE IDENTIFICATION		DATE mm/dd/yy	TIME HH:MM	MATRIX/MATRIX CODE	4 Grab MI (Multi-incremental)					NOTE: *The following analyses require specific method and/or compound list: BTEX, Metals, PFAS REMARKS/LOC ID
①AC①A		RM 70		4/19/22	09:40	W		X	X	X	X	
②AC②A		RM 70 DUP		4/19/22	09:40			X	X	X	X	
③AC③A		RM 21			12:00			X	X	X	X	
④AC④A		RM 21 DUP			12:00			X	X	X	X	
⑤AC⑤A		RM 21.1			11:45			X	X	X	X	
⑥AC⑥A		RM 31			10:45			X	X	X	X	
⑦AC⑦A		RM 31 DUP			10:45			X	X	X	X	
⑧AC⑧A		RM 5			08:10			X	X	X	X	
⑨AC⑨A		RM 5 DUP			08:10			X	X	X	X	
⑩AC⑩A		Field Blank			08:22		X	X	X	X		
Relinquished By: (1) [Signature]			Date	Time	Received By:			Section 4 DOD Project? Yes (No)		Data Deliverable Requirements:		
Relinquished By: (2)			Date	Time	Received By:			Cooler ID:				
Relinquished By: (3)			Date	Time	Received By:			Requested Turnaround Time and/or Special Instructions:				
Relinquished By: (4)			Date	Time	Received For Laboratory By:			Temp Blank °C: 10.8 DO2		Chain of Custody Seal: (Circle) INTACT		
							or Ambient []		BROKEN ABSENT			
							Delivery Method: Hand Delivery [] Commerical Delivery []					

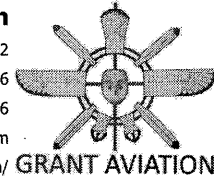
http://www.sgs.com/terms-and-conditions

AIRBILL 9759612

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: Apr 19 22 2:40 PM

Receiver: ALLIE @ SGS
 NORTH AMERICA
 907-550-3217

Sender: SARAH APSENS
 970-741-1026

Accepted: Tue, Apr 19 22 2:10:00 PM

Description & Comment	Quan.	Wgt.	Handle Fee	Hazmat Fee	Total
Standard Freight	1	32	-	-	\$28.24
Total Tax:					\$1.76
Total Payments made:					\$30.00
Total Unpaid:					\$0.00

Received in good condition by:

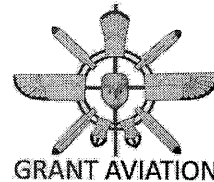
CUSTOMER COPY

AIRBILL 9759612

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Signed..... Date

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Phone: 1 (888) 359-4726
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FROM/TO: Kenai -> Anchorage International

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Receiver: ALLIE @ SGS NORTH
 AMERICA
 907-550-3217

Sender: SARAH APSENS
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Accepted: Tue, Apr 19 22 2:10:00 PM

Description & Comment	Quan.	Wgt.	Handle Fee	Hazmat Fee	Total
Standard Freight	1	32	-	-	\$28.24
TAX: Federal Excise Tax					\$1.76
Total Payments made:					\$30.00
Total Unpaid:					\$0.00

TERMS AND CONDITIONS

Consignemnt Note Text

Alert Expeditors Inc.

#418191

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

Date 4/19/22
From ADEC
To SGS

Collect	Prepay	Advance Charges
Job #	PO# <u>Grant 9759612</u>	

Shipped Signature [Signature]

Received By: [Signature] Total Charge



SGS Workorder #:

1221680

1221680

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
Chain of Custody / Temperature Requirements		
<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)		
Holding Time / Documentation / Sample Condition Requirements		
<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	
Note: 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.e. method is specified for analyses with multiple option for method (Eg, BTEX 8021 vs 8260, Metals 6020 vs 200.8)	Yes	
Were proper containers (type/mass/volume/preservative)used? Note: Exemption for metals analysis by 200.8/6020 in water.	Yes	1mL HNO3 preservative added to all dissolved metals containers. LW09-0463-19-04
Volatile Analysis Requirements (VOC, GRO, LL-Hg, etc.)		
Were all soil VOAs received with a corresponding % solids container?	N/A	
Were Trip Blanks (e.g., VOAs, LL-Hg) in cooler with samples?	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	
Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.		
Additional notes (if applicable):		



Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1221680001-A	HNO3 to pH < 2	OK			
1221680001-B	No Preservative Required	OK			
1221680001-C	No Preservative Required	OK			
1221680002-A	HNO3 to pH < 2	OK			
1221680002-B	No Preservative Required	OK			
1221680002-C	No Preservative Required	OK			
1221680003-A	HNO3 to pH < 2	OK			
1221680003-B	No Preservative Required	OK			
1221680003-C	No Preservative Required	OK			
1221680004-A	HNO3 to pH < 2	OK			
1221680004-B	No Preservative Required	OK			
1221680004-C	No Preservative Required	OK			
1221680005-A	HNO3 to pH < 2	OK			
1221680005-B	No Preservative Required	OK			
1221680005-C	No Preservative Required	OK			
1221680006-A	HNO3 to pH < 2	OK			
1221680006-B	No Preservative Required	OK			
1221680006-C	No Preservative Required	OK			
1221680007-A	HNO3 to pH < 2	OK			
1221680007-B	No Preservative Required	OK			
1221680007-C	No Preservative Required	OK			
1221680008-A	HNO3 to pH < 2	OK			
1221680008-B	No Preservative Required	OK			
1221680008-C	No Preservative Required	OK			
1221680009-A	HNO3 to pH < 2	OK			
1221680009-B	No Preservative Required	OK			
1221680009-C	No Preservative Required	OK			
1221680010-A	HNO3 to pH < 2	OK			
1221680010-B	No Preservative Required	OK			
1221680010-C	No Preservative Required	OK			
1221680011-A	HNO3 to pH < 2	PA			
1221680012-A	HNO3 to pH < 2	PA			
1221680013-A	HNO3 to pH < 2	PA			
1221680014-A	HNO3 to pH < 2	PA			
1221680015-A	HNO3 to pH < 2	PA			
1221680016-A	HNO3 to pH < 2	PA			
1221680017-A	HNO3 to pH < 2	PA			
1221680018-A	HNO3 to pH < 2	PA			
1221680019-A	HNO3 to pH < 2	PA			
1221680020-A	HNO3 to pH < 2	PA			

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.