

Laboratory Report of Analysis

To: Kenai Watershed Forum
44129 Sterling Highway
Soldotna, AK 99669
(907)260-5449

Report Number: **1194284**

Client Project: **Kenai River Water Quality**

Dear Branden Bornemann,

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

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

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

Sincerely,
SGS North America Inc.

Justin Nelson
Project Manager
Justin.Nelson@sgs.com

Date

Case Narrative

SGS Client: **Kenai Watershed Forum**
SGS Project: **1194284**
Project Name/Site: **Kenai River Water Quality**
Project Contact: **Branden Bornemann**

Refer to sample receipt form for information on sample condition.

KWF-Slikok Creek (1194284001) PS

Calcium, Iron and Magnesium by 200.7 were analyzed by ALS of Kelso, WA.

1194397001MSD (1524595) MSD

4500NO3-F - Nitrate/Nitrite - MSD recovery for Total Nitrite / Nitrate is outside of QC criteria. Refer to LCS for accuracy requirements.

*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: 08/20/2019 9:44:31AM

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, 6020A, 7470A, 7471B, 8015C, 8021B, 8082A, 8260C, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification, 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 |
| 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> |
|-------------------------|----------------------|------------------|-----------------|-------------------------------|
| KWF-Slikok Creek | 1194284001 | 07/30/2019 | 07/31/2019 | Water (Surface, Eff., Ground) |
| KWF-Soldotna Bridge | 1194284002 | 07/30/2019 | 07/31/2019 | Water (Surface, Eff., Ground) |
| KWF-Soldotna Creek | 1194284003 | 07/30/2019 | 07/31/2019 | Water (Surface, Eff., Ground) |
| KWF-Swiftwater Park | 1194284004 | 07/30/2019 | 07/31/2019 | Water (Surface, Eff., Ground) |

| <u>Method</u> | <u>Method Description</u> |
|----------------|--|
| EP200.8 | Metals in Drinking Water by ICP-MS DISSO |
| SM21 4500NO3-F | Nitrate/Nitrite Flow injection Pres. |
| SM21 4500P-B,E | Total Phosphorus (W) |

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Detectable Results Summary

Client Sample ID: **KWF-Slikok Creek**

Lab Sample ID: 1194284001

Dissolved Metals by ICP/MS

Waters Department

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|-------------------------|---------------|--------------|
| Arsenic | 3.43J | ug/L |
| Copper | 0.684J | ug/L |
| Zinc | 4.01J | ug/L |
| Total Nitrate/Nitrite-N | 0.478 | mg/L |
| Total Phosphorus | 0.0277 | mg/L |

Client Sample ID: **KWF-Soldotna Bridge**

Lab Sample ID: 1194284002

Dissolved Metals by ICP/MS

Waters Department

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|-------------------------|---------------|--------------|
| Copper | 0.493J | ug/L |
| Total Nitrate/Nitrite-N | 0.162J | mg/L |
| Total Phosphorus | 0.00790J | mg/L |

Client Sample ID: **KWF-Soldotna Creek**

Lab Sample ID: 1194284003

Dissolved Metals by ICP/MS

Waters Department

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|-------------------------|---------------|--------------|
| Arsenic | 8.67 | ug/L |
| Copper | 0.424J | ug/L |
| Total Nitrate/Nitrite-N | 0.0852J | mg/L |
| Total Phosphorus | 0.0751 | mg/L |

Client Sample ID: **KWF-Swiftwater Park**

Lab Sample ID: 1194284004

Dissolved Metals by ICP/MS

Waters Department

| <u>Parameter</u> | <u>Result</u> | <u>Units</u> |
|-------------------------|---------------|--------------|
| Copper | 0.398J | ug/L |
| Zinc | 3.49J | ug/L |
| Total Nitrate/Nitrite-N | 0.190J | mg/L |
| Total Phosphorus | 0.00670J | mg/L |

Results of KWF-Slikok Creek

Client Sample ID: **KWF-Slikok Creek**
 Client Project ID: **Kenai River Water Quality**
 Lab Sample ID: 1194284001
 Lab Project ID: 1194284

Collection Date: 07/30/19 09:00
 Received Date: 07/31/19 16:40
 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> |
|------------------|--------------------|---------------|-----------|--------------|-----------|-------------------------|----------------------|
| Arsenic | 3.43 J | 5.00 | 1.50 | ug/L | 1 | | 08/05/19 20:40 |
| Cadmium | 0.250 U | 0.500 | 0.150 | ug/L | 1 | | 08/05/19 20:40 |
| Chromium | 1.00 U | 2.00 | 0.800 | ug/L | 1 | | 08/05/19 20:40 |
| Copper | 0.684 J | 1.00 | 0.310 | ug/L | 1 | | 08/05/19 20:40 |
| Lead | 0.100 U | 0.200 | 0.0700 | ug/L | 1 | | 08/05/19 20:40 |
| Zinc | 4.01 J | 10.0 | 3.10 | ug/L | 1 | | 08/05/19 20:40 |

Batch Information

Analytical Batch: MMS10582
 Analytical Method: EP200.8
 Analyst: DSH
 Analytical Date/Time: 08/05/19 20:40
 Container ID: 1194284001-C

Prep Batch: MXX32633
 Prep Method: E200.2
 Prep Date/Time: 08/05/19 10:22
 Prep Initial Wt./Vol.: 20 mL
 Prep Extract Vol: 50 mL

Results of KWF-Slikok Creek

Client Sample ID: **KWF-Slikok Creek**
 Client Project ID: **Kenai River Water Quality**
 Lab Sample ID: 1194284001
 Lab Project ID: 1194284

Collection Date: 07/30/19 09:00
 Received Date: 07/31/19 16:40
 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> |
|-------------------------|--------------------|---------------|-----------|--------------|-----------|-------------------------|----------------------|
| Total Nitrate/Nitrite-N | 0.478 | 0.200 | 0.0500 | mg/L | 2 | | 08/09/19 14:57 |

Batch Information

Analytical Batch: WFI2832
 Analytical Method: SM21 4500NO3-F
 Analyst: EWW
 Analytical Date/Time: 08/09/19 14:57
 Container ID: 1194284001-A

| <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 Phosphorus | 0.0277 | 0.0200 | 0.00500 | mg/L | 1 | | 08/15/19 11:47 |

Batch Information

Analytical Batch: WDA4629
 Analytical Method: SM21 4500P-B,E
 Analyst: DMM
 Analytical Date/Time: 08/15/19 11:47
 Container ID: 1194284001-A

Prep Batch: WXX12974
 Prep Method: SM21 4500P-B,E
 Prep Date/Time: 08/14/19 21:30
 Prep Initial Wt./Vol.: 25 mL
 Prep Extract Vol: 25 mL

Results of KWF-Soldotna Bridge

Client Sample ID: **KWF-Soldotna Bridge**
 Client Project ID: **Kenai River Water Quality**
 Lab Sample ID: 1194284002
 Lab Project ID: 1194284

Collection Date: 07/30/19 09:32
 Received Date: 07/31/19 16:40
 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> |
|------------------|--------------------|---------------|-----------|--------------|-----------|-------------------------|----------------------|
| Arsenic | 2.50 U | 5.00 | 1.50 | ug/L | 1 | | 08/05/19 20:43 |
| Cadmium | 0.250 U | 0.500 | 0.150 | ug/L | 1 | | 08/05/19 20:43 |
| Chromium | 1.00 U | 2.00 | 0.800 | ug/L | 1 | | 08/05/19 20:43 |
| Copper | 0.493 J | 1.00 | 0.310 | ug/L | 1 | | 08/05/19 20:43 |
| Lead | 0.100 U | 0.200 | 0.0700 | ug/L | 1 | | 08/05/19 20:43 |
| Zinc | 5.00 U | 10.0 | 3.10 | ug/L | 1 | | 08/05/19 20:43 |

Batch Information

Analytical Batch: MMS10582
 Analytical Method: EP200.8
 Analyst: DSH
 Analytical Date/Time: 08/05/19 20:43
 Container ID: 1194284002-C

Prep Batch: MXX32633
 Prep Method: E200.2
 Prep Date/Time: 08/05/19 10:22
 Prep Initial Wt./Vol.: 20 mL
 Prep Extract Vol: 50 mL

Results of KWF-Soldotna Bridge

Client Sample ID: **KWF-Soldotna Bridge**
 Client Project ID: **Kenai River Water Quality**
 Lab Sample ID: 1194284002
 Lab Project ID: 1194284

Collection Date: 07/30/19 09:32
 Received Date: 07/31/19 16:40
 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> |
|-------------------------|--------------------|---------------|-----------|--------------|-----------|-------------------------|----------------------|
| Total Nitrate/Nitrite-N | 0.162 J | 0.200 | 0.0500 | mg/L | 2 | | 08/09/19 14:59 |

Batch Information

Analytical Batch: WFI2832
 Analytical Method: SM21 4500NO3-F
 Analyst: EWW
 Analytical Date/Time: 08/09/19 14:59
 Container ID: 1194284002-A

| <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 Phosphorus | 0.00790 J | 0.0200 | 0.00500 | mg/L | 1 | | 08/15/19 11:50 |

Batch Information

Analytical Batch: WDA4629
 Analytical Method: SM21 4500P-B,E
 Analyst: DMM
 Analytical Date/Time: 08/15/19 11:50
 Container ID: 1194284002-A

Prep Batch: WXX12974
 Prep Method: SM21 4500P-B,E
 Prep Date/Time: 08/14/19 21:30
 Prep Initial Wt./Vol.: 25 mL
 Prep Extract Vol: 25 mL

Results of KWF-Soldotna Creek

Client Sample ID: **KWF-Soldotna Creek**
 Client Project ID: **Kenai River Water Quality**
 Lab Sample ID: 1194284003
 Lab Project ID: 1194284

Collection Date: 07/30/19 08:10
 Received Date: 07/31/19 16:40
 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> |
|------------------|--------------------|---------------|-----------|--------------|-----------|-------------------------|----------------------|
| Arsenic | 8.67 | 5.00 | 1.50 | ug/L | 1 | | 08/05/19 20:46 |
| Cadmium | 0.250 U | 0.500 | 0.150 | ug/L | 1 | | 08/05/19 20:46 |
| Chromium | 1.00 U | 2.00 | 0.800 | ug/L | 1 | | 08/05/19 20:46 |
| Copper | 0.424 J | 1.00 | 0.310 | ug/L | 1 | | 08/05/19 20:46 |
| Lead | 0.100 U | 0.200 | 0.0700 | ug/L | 1 | | 08/05/19 20:46 |
| Zinc | 5.00 U | 10.0 | 3.10 | ug/L | 1 | | 08/05/19 20:46 |

Batch Information

Analytical Batch: MMS10582
 Analytical Method: EP200.8
 Analyst: DSH
 Analytical Date/Time: 08/05/19 20:46
 Container ID: 1194284003-C

Prep Batch: MXX32633
 Prep Method: E200.2
 Prep Date/Time: 08/05/19 10:22
 Prep Initial Wt./Vol.: 20 mL
 Prep Extract Vol: 50 mL

Results of KWF-Soldotna Creek

Client Sample ID: **KWF-Soldotna Creek**
 Client Project ID: **Kenai River Water Quality**
 Lab Sample ID: 1194284003
 Lab Project ID: 1194284

Collection Date: 07/30/19 08:10
 Received Date: 07/31/19 16:40
 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> |
|-------------------------|--------------------|---------------|-----------|--------------|-----------|-------------------------|----------------------|
| Total Nitrate/Nitrite-N | 0.0852 J | 0.200 | 0.0500 | mg/L | 2 | | 08/09/19 15:01 |

Batch Information

Analytical Batch: WFI2832
 Analytical Method: SM21 4500NO3-F
 Analyst: EWW
 Analytical Date/Time: 08/09/19 15:01
 Container ID: 1194284003-A

| <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 Phosphorus | 0.0751 | 0.0200 | 0.00500 | mg/L | 1 | | 08/15/19 11:51 |

Batch Information

Analytical Batch: WDA4629
 Analytical Method: SM21 4500P-B,E
 Analyst: DMM
 Analytical Date/Time: 08/15/19 11:51
 Container ID: 1194284003-A

Prep Batch: WXX12974
 Prep Method: SM21 4500P-B,E
 Prep Date/Time: 08/14/19 21:30
 Prep Initial Wt./Vol.: 25 mL
 Prep Extract Vol: 25 mL

Results of KWF-Swiftwater Park

Client Sample ID: **KWF-Swiftwater Park**
 Client Project ID: **Kenai River Water Quality**
 Lab Sample ID: 1194284004
 Lab Project ID: 1194284

Collection Date: 07/30/19 10:15
 Received Date: 07/31/19 16:40
 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> |
|------------------|--------------------|---------------|-----------|--------------|-----------|-------------------------|----------------------|
| Arsenic | 2.50 U | 5.00 | 1.50 | ug/L | 1 | | 08/05/19 20:49 |
| Cadmium | 0.250 U | 0.500 | 0.150 | ug/L | 1 | | 08/05/19 20:49 |
| Chromium | 1.00 U | 2.00 | 0.800 | ug/L | 1 | | 08/05/19 20:49 |
| Copper | 0.398 J | 1.00 | 0.310 | ug/L | 1 | | 08/05/19 20:49 |
| Lead | 0.100 U | 0.200 | 0.0700 | ug/L | 1 | | 08/05/19 20:49 |
| Zinc | 3.49 J | 10.0 | 3.10 | ug/L | 1 | | 08/05/19 20:49 |

Batch Information

Analytical Batch: MMS10582
 Analytical Method: EP200.8
 Analyst: DSH
 Analytical Date/Time: 08/05/19 20:49
 Container ID: 1194284004-C

Prep Batch: MXX32633
 Prep Method: E200.2
 Prep Date/Time: 08/05/19 10:22
 Prep Initial Wt./Vol.: 20 mL
 Prep Extract Vol: 50 mL

Results of KWF-Swiftwater Park

Client Sample ID: **KWF-Swiftwater Park**
 Client Project ID: **Kenai River Water Quality**
 Lab Sample ID: 1194284004
 Lab Project ID: 1194284

Collection Date: 07/30/19 10:15
 Received Date: 07/31/19 16:40
 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> |
|-------------------------|--------------------|---------------|-----------|--------------|-----------|-------------------------|----------------------|
| Total Nitrate/Nitrite-N | 0.190 J | 0.200 | 0.0500 | mg/L | 2 | | 08/09/19 15:18 |

Batch Information

Analytical Batch: WFI2832
 Analytical Method: SM21 4500NO3-F
 Analyst: EWW
 Analytical Date/Time: 08/09/19 15:18
 Container ID: 1194284004-A

| <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 Phosphorus | 0.00670 J | 0.0200 | 0.00500 | mg/L | 1 | | 08/15/19 11:52 |

Batch Information

Analytical Batch: WDA4629
 Analytical Method: SM21 4500P-B,E
 Analyst: DMM
 Analytical Date/Time: 08/15/19 11:52
 Container ID: 1194284004-A

Prep Batch: WXX12974
 Prep Method: SM21 4500P-B,E
 Prep Date/Time: 08/14/19 21:30
 Prep Initial Wt./Vol.: 25 mL
 Prep Extract Vol: 25 mL

Method Blank

Blank ID: MB for HBN 1797384 [MXX/32633]
Blank Lab ID: 1523171

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1194284001, 1194284002, 1194284003, 1194284004

Results by EP200.8

| <u>Parameter</u> | <u>Results</u> | <u>LOQ/CL</u> | <u>DL</u> | <u>Units</u> |
|------------------|----------------|---------------|-----------|--------------|
| Arsenic | 2.50U | 5.00 | 1.50 | ug/L |
| Cadmium | 0.250U | 0.500 | 0.150 | ug/L |
| Chromium | 1.00U | 2.00 | 0.800 | ug/L |
| Copper | 0.500U | 1.00 | 0.310 | ug/L |
| Lead | 0.100U | 0.200 | 0.0700 | ug/L |
| Zinc | 5.00U | 10.0 | 3.10 | ug/L |

Batch Information

Analytical Batch: MMS10583
Analytical Method: EP200.8
Instrument: Perkin Elmer Nexlon P5
Analyst: DSH
Analytical Date/Time: 8/6/2019 12:42:16PM

Prep Batch: MXX32633
Prep Method: E200.2
Prep Date/Time: 8/5/2019 10:22:40AM
Prep Initial Wt./Vol.: 20 mL
Prep Extract Vol: 50 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1194284 [MXX32633]

Blank Spike Lab ID: 1523172

Date Analyzed: 08/06/2019 12:45

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1194284001, 1194284002, 1194284003, 1194284004

Results by EP200.8

| Blank Spike (ug/L) | | | | |
|--------------------|-------|--------|---------|------------|
| Parameter | Spike | Result | Rec (%) | CL |
| Arsenic | 1000 | 1020 | 102 | (85-115) |
| Cadmium | 100 | 102 | 102 | (85-115) |
| Chromium | 400 | 443 | 111 | (85-115) |
| Copper | 1000 | 1080 | 108 | (85-115) |
| Lead | 1000 | 1050 | 105 | (85-115) |
| Zinc | 1000 | 1100 | 110 | (85-115) |

Batch Information

Analytical Batch: MMS10583

Analytical Method: EP200.8

Instrument: Perkin Elmer Nexlon P5

Analyst: DSH

Prep Batch: MXX32633

Prep Method: E200.2

Prep Date/Time: 08/05/2019 10:22

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

Dupe Init Wt./Vol.: Extract Vol:

Print Date: 08/20/2019 9:44:38AM

Matrix Spike Summary

Original Sample ID: 1523174
MS Sample ID: 1523179 MS
MSD Sample ID:

Analysis Date: 08/05/2019 20:25
Analysis Date: 08/05/2019 20:28
Analysis Date:
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1194284001, 1194284002, 1194284003, 1194284004

Results by EP200.8

| Parameter | Sample | Matrix Spike (ug/L) | | | Spike Duplicate (ug/L) | | | CL | RPD (%) | RPD CL |
|-----------|--------|---------------------|--------|---------|------------------------|--------|---------|--------|---------|--------|
| | | Spike | Result | Rec (%) | Spike | Result | Rec (%) | | | |
| Arsenic | 2.50U | 1000 | 1050 | 105 | | | | 70-130 | | |
| Cadmium | 0.250U | 100 | 105 | 105 | | | | 70-130 | | |
| Chromium | 1.00U | 400 | 428 | 107 | | | | 70-130 | | |
| Copper | 38.2 | 1000 | 1090 | 105 | | | | 70-130 | | |
| Lead | 1.40 | 1000 | 1110 | 111 | | | | 70-130 | | |
| Zinc | 60.1 | 1000 | 1100 | 104 | | | | 70-130 | | |

Batch Information

Analytical Batch: MMS10582
Analytical Method: EP200.8
Instrument: Perkin Elmer Nexlon P5
Analyst: DSH
Analytical Date/Time: 8/5/2019 8:28:15PM

Prep Batch: MXX32633
Prep Method: DW Digest for Metals on ICP-MS
Prep Date/Time: 8/5/2019 10:22:40AM
Prep Initial Wt./Vol.: 20.00mL
Prep Extract Vol: 50.00mL

Print Date: 08/20/2019 9:44:39AM

Matrix Spike Summary

Original Sample ID: 1523180
MS Sample ID: 1523182 MS
MSD Sample ID:

Analysis Date: 08/05/2019 21:04
Analysis Date: 08/05/2019 21:06
Analysis Date:
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1194284001, 1194284002, 1194284003, 1194284004

Results by EP200.8

| Parameter | Sample | Matrix Spike (ug/L) | | | Spike Duplicate (ug/L) | | | CL | RPD (%) | RPD CL |
|-----------|--------|---------------------|--------|---------|------------------------|--------|---------|--------|---------|--------|
| | | Spike | Result | Rec (%) | Spike | Result | Rec (%) | | | |
| Arsenic | 25.0 | 1000 | 1090 | 106 | | | | 70-130 | | |
| Cadmium | 0.250U | 100 | 104 | 104 | | | | 70-130 | | |
| Chromium | 1.00U | 400 | 433 | 108 | | | | 70-130 | | |
| Copper | 64.3 | 1000 | 1110 | 105 | | | | 70-130 | | |
| Lead | 0.953 | 1000 | 1110 | 110 | | | | 70-130 | | |
| Zinc | 31.1 | 1000 | 1060 | 103 | | | | 70-130 | | |

Batch Information

Analytical Batch: MMS10582
Analytical Method: EP200.8
Instrument: Perkin Elmer Nexlon P5
Analyst: DSH
Analytical Date/Time: 8/5/2019 9:06:59PM

Prep Batch: MXX32633
Prep Method: DW Digest for Metals on ICP-MS
Prep Date/Time: 8/5/2019 10:22:40AM
Prep Initial Wt./Vol.: 20.00mL
Prep Extract Vol: 50.00mL

Print Date: 08/20/2019 9:44:39AM

Method Blank

Blank ID: MB for HBN 1797709 (WFI/2832)
Blank Lab ID: 1524804

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1194284001, 1194284002, 1194284003, 1194284004

Results by SM21 4500NO3-F

| <u>Parameter</u> | <u>Results</u> | <u>LOQ/CL</u> | <u>DL</u> | <u>Units</u> |
|-------------------------|----------------|---------------|-----------|--------------|
| Nitrate-N | 0.100U | 0.200 | 0.0500 | mg/L |
| Nitrite-N | 0.100U | 0.200 | 0.0500 | mg/L |
| Total Nitrate/Nitrite-N | 0.100U | 0.200 | 0.0500 | mg/L |

Batch Information

Analytical Batch: WFI2832
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: EWW
Analytical Date/Time: 8/9/2019 2:28:09PM

Print Date: 08/20/2019 9:44:40AM

Method Blank

Blank ID: MB for HBN 1797709 (WFI/2832)
Blank Lab ID: 1524806

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1194284001, 1194284002, 1194284003, 1194284004

Results by SM21 4500NO3-F

| <u>Parameter</u> | <u>Results</u> | <u>LOQ/CL</u> | <u>DL</u> | <u>Units</u> |
|-------------------------|----------------|---------------|-----------|--------------|
| Nitrate-N | 0.100U | 0.200 | 0.0500 | mg/L |
| Nitrite-N | 0.100U | 0.200 | 0.0500 | mg/L |
| Total Nitrate/Nitrite-N | 0.100U | 0.200 | 0.0500 | mg/L |

Batch Information

Analytical Batch: WFI2832
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: EWW
Analytical Date/Time: 8/9/2019 3:34:39PM

Print Date: 08/20/2019 9:44:40AM

Method Blank

Blank ID: MB for HBN 1797709 (WFI/2832)

Blank Lab ID: 1524808

QC for Samples:

Matrix: Water (Surface, Eff., Ground)

Results by SM21 4500NO3-F

| <u>Parameter</u> | <u>Results</u> | <u>LOQ/CL</u> | <u>DL</u> | <u>Units</u> |
|-------------------------|----------------|---------------|-----------|--------------|
| Nitrate-N | 0.100U | 0.200 | 0.0500 | mg/L |
| Nitrite-N | 0.100U | 0.200 | 0.0500 | mg/L |
| Total Nitrate/Nitrite-N | 0.100U | 0.200 | 0.0500 | mg/L |

Batch Information

Analytical Batch: WFI2832

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EWW

Analytical Date/Time: 8/9/2019 4:20:09PM

Print Date: 08/20/2019 9:44:40AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1194284 [WFI2832]

Blank Spike Lab ID: 1524803

Date Analyzed: 08/09/2019 14:26

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1194284001, 1194284002, 1194284003, 1194284004

Results by SM21 4500NO3-F

Blank Spike (mg/L)

| Parameter | Spike | Result | Rec (%) | CL |
|-------------------------|-------|--------|---------|------------|
| Nitrate-N | 2.5 | 2.52 | 101 | (70-130) |
| Nitrite-N | 2.5 | 2.58 | 103 | (90-110) |
| Total Nitrate/Nitrite-N | 5 | 5.10 | 102 | (90-110) |

Batch Information

Analytical Batch: WFI2832

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EWW

Print Date: 08/20/2019 9:44:42AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1194284 [WFI2832]

Blank Spike Lab ID: 1524805

Date Analyzed: 08/09/2019 15:32

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1194284001, 1194284002, 1194284003, 1194284004

Results by SM21 4500NO3-F

Blank Spike (mg/L)

| Parameter | Spike | Result | Rec (%) | CL |
|-------------------------|-------|--------|---------|------------|
| Nitrate-N | 2.5 | 2.52 | 101 | (70-130) |
| Nitrite-N | 2.5 | 2.67 | 107 | (90-110) |
| Total Nitrate/Nitrite-N | 5 | 5.18 | 104 | (90-110) |

Batch Information

Analytical Batch: WFI2832

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EWW

Print Date: 08/20/2019 9:44:42AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1194284 [WFI2832]

Blank Spike Lab ID: 1524807

Date Analyzed: 08/09/2019 16:18

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

Results by SM21 4500NO3-F

Blank Spike (mg/L)

| Parameter | Spike | Result | Rec (%) | CL |
|-------------------------|-------|--------|---------|------------|
| Nitrate-N | 2.5 | 2.47 | 99 | (70-130) |
| Nitrite-N | 2.5 | 2.61 | 105 | (90-110) |
| Total Nitrate/Nitrite-N | 5 | 5.09 | 102 | (90-110) |

Batch Information

Analytical Batch: WFI2832

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EWW

Print Date: 08/20/2019 9:44:42AM

Matrix Spike Summary

Original Sample ID: 1194337009
MS Sample ID: 1524592 MS
MSD Sample ID: 1524593 MSD

QC for Samples: 1194284004

Analysis Date: 08/09/2019 15:48
Analysis Date: 08/09/2019 15:50
Analysis Date: 08/09/2019 15:52
Matrix: Water (Surface, Eff., Ground)

Results by SM21 4500NO3-F

| Parameter | Sample | Matrix Spike (mg/L) | | | Spike Duplicate (mg/L) | | | CL | RPD (%) | RPD CL |
|-------------------------|--------|---------------------|--------|---------|------------------------|--------|---------|--------|---------|---------|
| | | Spike | Result | Rec (%) | Spike | Result | Rec (%) | | | |
| Total Nitrate/Nitrite-N | 0.140J | 5.00 | 5.51 | 107 | 5.00 | 5.60 | 109 | 90-110 | 1.70 | (< 25) |

Batch Information

Analytical Batch: WFI2832
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: EWW
Analytical Date/Time: 8/9/2019 3:50:24PM

Print Date: 08/20/2019 9:44:43AM

Matrix Spike Summary

Original Sample ID: 1194397001
MS Sample ID: 1524594 MS
MSD Sample ID: 1524595 MSD

Analysis Date: 08/09/2019 15:08
Analysis Date: 08/09/2019 15:10
Analysis Date: 08/09/2019 15:11
Matrix: Drinking Water

QC for Samples: 1194284001, 1194284002, 1194284003, 1194284004

Results by SM21 4500NO3-F

| Parameter | Sample | Matrix Spike (mg/L) | | | Spike Duplicate (mg/L) | | | CL | RPD (%) | RPD CL |
|-------------------------|--------|---------------------|--------|---------|------------------------|--------|---------|--------|---------|---------|
| | | Spike | Result | Rec (%) | Spike | Result | Rec (%) | | | |
| Total Nitrate/Nitrite-N | 8.14 | 20.0 | 29.3 | 106 | 20.0 | 30.5 | 112 * | 90-110 | 3.90 | (< 25) |

Batch Information

Analytical Batch: WFI2832
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: EWW
Analytical Date/Time: 8/9/2019 3:10:09PM

Print Date: 08/20/2019 9:44:43AM

Method Blank

Blank ID: MB for HBN 1798080 [WXX/12974]
Blank Lab ID: 1526063

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1194284001, 1194284002, 1194284003, 1194284004

Results by SM21 4500P-B,E

| <u>Parameter</u> | <u>Results</u> | <u>LOQ/CL</u> | <u>DL</u> | <u>Units</u> |
|------------------|----------------|---------------|-----------|--------------|
| Total Phosphorus | 0.0100U | 0.0200 | 0.00500 | mg/L |

Batch Information

Analytical Batch: WDA4629
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 8/15/2019 11:44:38AM

Prep Batch: WXX12974
Prep Method: SM21 4500P-B,E
Prep Date/Time: 8/14/2019 9:30:00PM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Print Date: 08/20/2019 9:44:44AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1194284 [WXX12974]
 Blank Spike Lab ID: 1526064
 Date Analyzed: 08/15/2019 11:45

Spike Duplicate ID: LCSD for HBN 1194284 [WXX12974]
 Spike Duplicate Lab ID: 1526065
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1194284001, 1194284002, 1194284003, 1194284004

Results by SM21 4500P-B,E

| Parameter | Blank Spike (mg/L) | | | Spike Duplicate (mg/L) | | | CL | RPD (%) | RPD CL |
|------------------|--------------------|--------|---------|------------------------|--------|---------|------------|---------|---------|
| | Spike | Result | Rec (%) | Spike | Result | Rec (%) | | | |
| Total Phosphorus | 0.2 | 0.189 | 94 | 0.2 | 0.170 | 85 | (75-125) | 10.50 | (< 25) |

Batch Information

Analytical Batch: WDA4629
 Analytical Method: SM21 4500P-B,E
 Instrument: Discrete Analyzer 2
 Analyst: DMM

Prep Batch: WXX12974
 Prep Method: SM21 4500P-B,E
 Prep Date/Time: 08/14/2019 21:30
 Spike Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL

Print Date: 08/20/2019 9:44:45AM

Matrix Spike Summary

Original Sample ID: 1194284001
MS Sample ID: 1526066 MS
MSD Sample ID: 1526067 MSD

Analysis Date: 08/15/2019 11:47
Analysis Date: 08/15/2019 11:48
Analysis Date: 08/15/2019 11:49
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1194284001, 1194284002, 1194284003, 1194284004

Results by SM21 4500P-B,E

| Parameter | Sample | Matrix Spike (mg/L) | | | Spike Duplicate (mg/L) | | | CL | RPD (%) | RPD CL |
|------------------|--------|---------------------|--------|---------|------------------------|--------|---------|--------|---------|---------|
| | | Spike | Result | Rec (%) | Spike | Result | Rec (%) | | | |
| Total Phosphorus | 0.0277 | 0.200 | .207 | 90 | 0.200 | 0.210 | 91 | 75-125 | 1.80 | (< 25) |

Batch Information

Analytical Batch: WDA4629
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 8/15/2019 11:48:32AM

Prep Batch: WXX12974
Prep Method: Total Phosphorus (W) Ext.
Prep Date/Time: 8/14/2019 9:30:00PM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Print Date: 08/20/2019 9:44:46AM



e-Sample Receipt Form

SGS Workorder #:

1194284



1 1 9 4 2 8 4

| Review Criteria | | Condition (Yes, No, N/A) | Exceptions Noted below | |
|--|-----|--|---|---|
| Chain of Custody / Temperature Requirements | | | N/A | Exemption permitted if sampler hand carries/delivers. |
| Were Custody Seals intact? Note # & location | Yes | 2F | | |
| COC accompanied samples? | Yes | | | |
| DOD: Were samples received in COC corresponding coolers? | N/A | | | |
| N/A **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required | | | | |
| Temperature blank compliant* (i.e., 0-6 °C after CF)? | Yes | Cooler ID: 1 | @ 3.5 °C | Therm. ID: D58 |
| If samples received without a temperature blank, the "cooler temperature" will be documented instead & "COOLER TEMP" will be noted to the right. "ambient" or "chilled" will be noted if neither is available. | | Cooler ID: | @ | °C Therm. ID: |
| | | Cooler ID: | @ | °C Therm. ID: |
| | | Cooler ID: | @ | °C Therm. ID: |
| | | Cooler ID: | @ | °C Therm. ID: |
| *If >6°C, were samples collected <8 hours ago? | | N/A | | |
| If <0°C, were sample containers ice free? | | N/A | | |
| Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed. | | | | |
| Holding Time / Documentation / Sample Condition Requirements | | Note: Refer to form F-083 "Sample Guide" for specific holding times. | | |
| Were samples received within holding time? | Yes | | | |
| Do samples match COC** (i.e., sample IDs, dates/times collected)? | Yes | | | |
| **Note: If times differ <1hr, record details & login per COC. | | | | |
| ***Note: If sample information on containers differs from COC, SGS will default to COC information | | | | |
| Were analytical requests clear? (i.e., method is specified for analyses with multiple option for analysis (Ex: BTEX, Metals)) | Yes | | | |
| Were proper containers (type/mass/volume/preservative***) used? | Yes | Yes | ***Exemption permitted for metals (e.g. 200.8/6020A). | |
| Volatile / LL-Hg Requirements | | | | |
| Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples? | N/A | | | |
| Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)? | N/A | | | |
| Were all soil VOAs field extracted with MeOH+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> |
|---------------------|---------------------|----------------------------|---------------------|---------------------|----------------------------|
| 1194284001-A | H2SO4 to pH < 2 | OK | | | |
| 1194284001-B | HNO3 to pH < 2 | OK | | | |
| 1194284001-C | HNO3 to pH < 2 | OK | | | |
| 1194284002-A | H2SO4 to pH < 2 | OK | | | |
| 1194284002-B | HNO3 to pH < 2 | OK | | | |
| 1194284002-C | HNO3 to pH < 2 | OK | | | |
| 1194284003-A | H2SO4 to pH < 2 | OK | | | |
| 1194284003-B | HNO3 to pH < 2 | OK | | | |
| 1194284003-C | HNO3 to pH < 2 | OK | | | |
| 1194284004-A | H2SO4 to pH < 2 | OK | | | |
| 1194284004-B | HNO3 to pH < 2 | OK | | | |
| 1194284004-C | HNO3 to pH < 2 | OK | | | |

Container Condition Glossary

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

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.



August 15, 2019

Service Request No:K1907046

Julie Shumway
SGS North America, Inc.
200 West Potter Drive
Anchorage, AK 99518

Laboratory Results for: 1194284

Dear Julie,

Enclosed are the results of the sample(s) submitted to our laboratory August 02, 2019
For your reference, these analyses have been assigned our service request number **K1907046**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3364. You may also contact me via email at howard.holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Howard Holmes
Project Manager

ADDRESS 1317 S. 13th Avenue, Kelso, WA 98626
PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: SGS North America, Inc. (SGS Environmental)
Project: 1194284
Sample Matrix: Water

Service Request: K1907046
Date Received: 08/02/2019

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Four water samples were received for analysis at ALS Environmental on 08/02/2019. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

Approved by



Date

08/15/2019

SAMPLE DETECTION SUMMARY

| | |
|------------------------------------|-----------------------------|
| CLIENT ID: KWF-Slikok Creek | Lab ID: K1907046-001 |
|------------------------------------|-----------------------------|

| Analyte | Results | Flag | MDL | MRL | Units | Method |
|-----------|---------|------|--------|--------|-------|--------|
| Calcium | 20.0 | | 0.003 | 0.021 | mg/L | 200.7 |
| Iron | 1.20 | | 0.008 | 0.021 | mg/L | 200.7 |
| Magnesium | 5.74 | | 0.0004 | 0.0053 | mg/L | 200.7 |

| | |
|---------------------------------------|-----------------------------|
| CLIENT ID: KWF-Soldotna Bridge | Lab ID: K1907046-002 |
|---------------------------------------|-----------------------------|

| Analyte | Results | Flag | MDL | MRL | Units | Method |
|-----------|---------|------|--------|--------|-------|--------|
| Calcium | 11.6 | | 0.003 | 0.021 | mg/L | 200.7 |
| Iron | 0.556 | | 0.008 | 0.021 | mg/L | 200.7 |
| Magnesium | 1.12 | | 0.0004 | 0.0053 | mg/L | 200.7 |

| | |
|--------------------------------------|-----------------------------|
| CLIENT ID: KWF-Soldotna Creek | Lab ID: K1907046-003 |
|--------------------------------------|-----------------------------|

| Analyte | Results | Flag | MDL | MRL | Units | Method |
|-----------|---------|------|--------|--------|-------|--------|
| Calcium | 22.5 | | 0.003 | 0.021 | mg/L | 200.7 |
| Iron | 0.571 | | 0.008 | 0.021 | mg/L | 200.7 |
| Magnesium | 6.12 | | 0.0004 | 0.0053 | mg/L | 200.7 |

| | |
|---------------------------------------|-----------------------------|
| CLIENT ID: KWF-Swiftwater Park | Lab ID: K1907046-004 |
|---------------------------------------|-----------------------------|

| Analyte | Results | Flag | MDL | MRL | Units | Method |
|-----------|---------|------|--------|--------|-------|--------|
| Calcium | 11.5 | | 0.003 | 0.021 | mg/L | 200.7 |
| Iron | 0.598 | | 0.008 | 0.021 | mg/L | 200.7 |
| Magnesium | 1.12 | | 0.0004 | 0.0053 | mg/L | 200.7 |



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

**SGS North America Inc.
CHAIN OF CUSTODY RECORD**



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|---|-----------------------|------------------|--------------|-----------------------------|---|--|---|----------------------------|-------------------------|--------------------------------|----------------------|-----|------------|-------------|-------------|--|
| CLIENT: SGS North America Inc. - Alaska Division | | | | | SGS Reference: ALS Kelso | | | | | | | | | | Page 1 of 1 | |
| CONTACT: Julie Shumway PHONE NO: (907) 562-2343 | | | | | Additional Comments: All soils report out in dry weight unless | | | | | | | | | | | |
| PROJECT NAME: 1194284 PWSID#: | | | | | # C O N T A I N E R S | Preserv- ative Used: | TYPE C = COMP G = GRAB MI = Multi Incremental Soils | Calcium by 200.7 <Ref Lab> | Iron by 200.7 <Ref Lab> | Magnesium by 200.7 <Ref Lab> | MS | MSD | SGS lab # | Location ID | | |
| REPORTS TO: Julie Shumway E-MAIL: Julie.Shumway@sgs.com | | | | | | | | | | | | | | | | |
| INVOICE TO: SGS - Alaska QUOTE #: | | | | | | | | | | | | | | | | |
| P.O. #: 1194284 | | | | | | | | | | | | | | | | |
| RESERVED for lab use | SAMPLE IDENTIFICATION | DATE mm/dd/yy | TIME HHMM | MATRIX/ MATRIX CODE | | | | | | | | | | | | |
| | KWF-Slikok Creek | 07/30/2019 | 09:00:00 | Water | 1 | | X | X | X | | | | 1194284001 | | | |
| | KWF-Soldotna Bridge | 07/30/2019 | 09:32:00 | Water | 1 | | X | X | X | | | | 1194284002 | | | |
| | KWF-Soldotna Creek | 07/30/2019 | 08:10:00 | Water | 1 | | X | X | X | | | | 1194284003 | | | |
| | KWF-Swiftwater Park | 07/30/2019 | 10:15:00 | Water | 1 | | X | X | X | | | | 1194284004 | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Relinquished By: (1) | | Date 8/2/19 | Time 0925 | Received By: | | DOD Project? | | NO | | Data Deliverable Requirements: | | | | | | |
| | | | | | | Report to DL (J Flags)? YES | | | | Level II | | | | | | |
| Relinquished By: (2) | | Date | Time | Received By: | | Cooler ID: | | | | | | | | | | |
| | | | | | | Requested Turnaround Time and-or Special Instructions: | | | | | | | | | | |
| Relinquished By: (3) | | Date | Time | Received By: | | Temp Blank °C: | | | | | | | | | | |
| | | | | | | Chain of Custody Seal: (Circle) | | | | | | | | | | |
| Relinquished By: (4) | | Date 8/1/19 | Time 0943 | Received For Laboratory By: | | or Ambient [] | | | | | INTACT BROKEN ABSENT | | | | | |

[X] 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
 [] 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

http://www.sgs.com/terms_and_conditions.htm

PC H2

Cooler Receipt and Preservation Form

Client SGS Service Request K19
 Received: 8/2/19 Opened: 8/2/19 By: A Unloaded: 8/2/19 By: D

1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
 2. Samples were received in: (circle) Cooler Box Envelope Other NA
 3. Were custody seals on coolers? NA Y N If yes, how many and where? 2 sides
 If present, were custody seals intact? Y N If present, were they signed and dated? Y N

| Raw Cooler Temp | Corrected Cooler Temp | Raw Temp Blank | Corrected Temp Blank | Corr. Factor | Thermometer ID | Cooler/COC ID | Tracking Number | NA | Filed |
|-----------------|-----------------------|----------------|----------------------|--------------|----------------|---------------|-----------------|----|-------|
| 3.5 | 3.7 | 2.6 | 2.8 | +0.2 | 371 | NA | 1Z A8619W016833 | NA | |
| | | | | | | | 2744 | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

4. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
 5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
 6. Were samples received in good condition (temperature, unbroken)? Indicate in the table below. NA Y N
 If applicable, tissue samples were received: Frozen Partially Thawed Thawed
 7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
 8. Did all sample labels and tags agree with custody papers? Indicate major discrepancies in the table on page 2. NA Y N
 9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
 10. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
 11. Were VOA vials received without headspace? Indicate in the table below. NA Y N
 12. Was C12/Res negative? NA Y N

| Sample ID on Bottle | Sample ID on COC | Identified by: |
|---------------------|------------------|----------------|
| | | |
| | | |
| | | |

| Sample ID | Bottle Count | Bottle Type | Out of Temp | Head-space | Broke | pH | Reagent | Volume added | Reagent Lot Number | Initials | Time |
|-----------|--------------|-------------|-------------|------------|-------|----|---------|--------------|--------------------|----------|------|
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Notes, Discrepancies, & Resolutions:



Miscellaneous Forms

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Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

| Agency | Web Site | Number |
|--------------------------|---|---------------|
| Alaska DEH | http://dec.alaska.gov/eh/lab/cs/csapproval.htm | UST-040 |
| Arizona DHS | http://www.azdhs.gov/lab/license/env.htm | AZ0339 |
| Arkansas - DEQ | http://www.adeq.state.ar.us/techsvs/labcert.htm | 88-0637 |
| California DHS (ELAP) | http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx | 2795 |
| DOD ELAP | http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm | L16-58-R4 |
| Florida DOH | http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm | E87412 |
| Hawaii DOH | http://health.hawaii.gov/ | - |
| ISO 17025 | http://www.pjllabs.com/ | L16-57 |
| Louisiana DEQ | http://www.deq.louisiana.gov/page/la-lab-accreditation | 03016 |
| Maine DHS | http://www.maine.gov/dhhs/ | WA01276 |
| Minnesota DOH | http://www.health.state.mn.us/accreditation | 053-999-457 |
| Nevada DEP | http://ndep.nv.gov/bsdwlabservice.htm | WA01276 |
| New Jersey DEP | http://www.nj.gov/dep/enforcement/oqa.html | WA005 |
| New York - DOH | https://www.wadsworth.org/regulatory/elap | 12060 |
| North Carolina DEQ | https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification | 605 |
| Oklahoma DEQ | http://www.deq.state.ok.us/CSDnew/labcert.htm | 9801 |
| Oregon – DEQ (NELAP) | http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx | WA100010 |
| South Carolina DHEC | http://www.scdhec.gov/environment/EnvironmentalLabCertification/ | 61002 |
| Texas CEQ | http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html | T104704427 |
| Washington DOE | http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html | C544 |
| Wyoming (EPA Region 8) | https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water | - |
| Kelso Laboratory Website | www.alsglobal.com | NA |

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

| | |
|------------|--|
| ASTM | American Society for Testing and Materials |
| A2LA | American Association for Laboratory Accreditation |
| CARB | California Air Resources Board |
| CAS Number | Chemical Abstract Service registry Number |
| CFC | Chlorofluorocarbon |
| CFU | Colony-Forming Unit |
| DEC | Department of Environmental Conservation |
| DEQ | Department of Environmental Quality |
| DHS | Department of Health Services |
| DOE | Department of Ecology |
| DOH | Department of Health |
| EPA | U. S. Environmental Protection Agency |
| ELAP | Environmental Laboratory Accreditation Program |
| GC | Gas Chromatography |
| GC/MS | Gas Chromatography/Mass Spectrometry |
| LOD | Limit of Detection |
| LOQ | Limit of Quantitation |
| LUFT | Leaking Underground Fuel Tank |
| M | Modified |
| MCL | Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA. |
| MDL | Method Detection Limit |
| MPN | Most Probable Number |
| MRL | Method Reporting Limit |
| NA | Not Applicable |
| NC | Not Calculated |
| NCASI | National Council of the Paper Industry for Air and Stream Improvement |
| ND | Not Detected |
| NIOSH | National Institute for Occupational Safety and Health |
| PQL | Practical Quantitation Limit |
| RCRA | Resource Conservation and Recovery Act |
| SIM | Selected Ion Monitoring |
| TPH | Total Petroleum Hydrocarbons |
| tr | Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL. |

ALS Group USA, Corp.

dba ALS Environmental

Analyst Summary report

Client: SGS North America, Inc. (SGS Environmental)
Project: 1194284/

Service Request: K1907046

Sample Name: KWF-Slikok Creek
Lab Code: K1907046-001
Sample Matrix: Water

Date Collected: 07/30/19**Date Received:** 08/2/19

Analysis Method
200.7

Extracted/Digested By
YZOOK

Analyzed By
JCHAN

Sample Name: KWF-Soldotna Bridge
Lab Code: K1907046-002
Sample Matrix: Water

Date Collected: 07/30/19**Date Received:** 08/2/19

Analysis Method
200.7

Extracted/Digested By
YZOOK

Analyzed By
JCHAN

Sample Name: KWF-Soldotna Creek
Lab Code: K1907046-003
Sample Matrix: Water

Date Collected: 07/30/19**Date Received:** 08/2/19

Analysis Method
200.7

Extracted/Digested By
YZOOK

Analyzed By
JCHAN

Sample Name: KWF-Swiftwater Park
Lab Code: K1907046-004
Sample Matrix: Water

Date Collected: 07/30/19**Date Received:** 08/2/19

Analysis Method
200.7

Extracted/Digested By
YZOOK

Analyzed By
JCHAN



Sample Results

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SGS North America, Inc. (SGS Environmental)
Project: 1194284
Sample Matrix: Water
Sample Name: KWF-Slikok Creek
Lab Code: K1907046-001

Service Request: K1907046
Date Collected: 07/30/19 09:00
Date Received: 08/02/19 09:25

Basis: NA

Total Metals

| Analyte Name | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|--------------|-----------------|--------|-------|--------|--------|------|----------------|----------------|---|
| Calcium | 200.7 | 20.0 | mg/L | 0.021 | 0.003 | 1 | 08/07/19 10:12 | 08/06/19 | |
| Iron | 200.7 | 1.20 | mg/L | 0.021 | 0.008 | 1 | 08/07/19 10:12 | 08/06/19 | |
| Magnesium | 200.7 | 5.74 | mg/L | 0.0053 | 0.0004 | 1 | 08/07/19 10:12 | 08/06/19 | |

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SGS North America, Inc. (SGS Environmental)
Project: 1194284
Sample Matrix: Water
Sample Name: KWF-Soldotna Bridge
Lab Code: K1907046-002

Service Request: K1907046
Date Collected: 07/30/19 09:32
Date Received: 08/02/19 09:25

Basis: NA

Total Metals

| Analyte Name | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|--------------|-----------------|--------|-------|--------|--------|------|----------------|----------------|---|
| Calcium | 200.7 | 11.6 | mg/L | 0.021 | 0.003 | 1 | 08/07/19 10:20 | 08/06/19 | |
| Iron | 200.7 | 0.556 | mg/L | 0.021 | 0.008 | 1 | 08/07/19 10:20 | 08/06/19 | |
| Magnesium | 200.7 | 1.12 | mg/L | 0.0053 | 0.0004 | 1 | 08/07/19 10:20 | 08/06/19 | |

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SGS North America, Inc. (SGS Environmental)
Project: 1194284
Sample Matrix: Water
Sample Name: KWF-Soldotna Creek
Lab Code: K1907046-003

Service Request: K1907046
Date Collected: 07/30/19 08:10
Date Received: 08/02/19 09:25
Basis: NA

Total Metals

| Analyte Name | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|--------------|-----------------|--------|-------|--------|--------|------|----------------|----------------|---|
| Calcium | 200.7 | 22.5 | mg/L | 0.021 | 0.003 | 1 | 08/07/19 10:30 | 08/06/19 | |
| Iron | 200.7 | 0.571 | mg/L | 0.021 | 0.008 | 1 | 08/07/19 10:30 | 08/06/19 | |
| Magnesium | 200.7 | 6.12 | mg/L | 0.0053 | 0.0004 | 1 | 08/07/19 10:30 | 08/06/19 | |

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SGS North America, Inc. (SGS Environmental)
Project: 1194284
Sample Matrix: Water
Sample Name: KWF-Swiftwater Park
Lab Code: K1907046-004

Service Request: K1907046
Date Collected: 07/30/19 10:15
Date Received: 08/02/19 09:25

Basis: NA

Total Metals

| Analyte Name | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|--------------|-----------------|--------|-------|--------|--------|------|----------------|----------------|---|
| Calcium | 200.7 | 11.5 | mg/L | 0.021 | 0.003 | 1 | 08/07/19 10:32 | 08/06/19 | |
| Iron | 200.7 | 0.598 | mg/L | 0.021 | 0.008 | 1 | 08/07/19 10:32 | 08/06/19 | |
| Magnesium | 200.7 | 1.12 | mg/L | 0.0053 | 0.0004 | 1 | 08/07/19 10:32 | 08/06/19 | |



QC Summary Forms

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: SGS North America, Inc. (SGS Environmental)
Project: 1194284
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ1910861-01

Service Request: K1907046
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

| Analyte Name | Analysis Method | Result | Units | MRL | MDL | Dil. | Date Analyzed | Date Extracted | Q |
|--------------|-----------------|----------|-------|--------|--------|------|----------------|----------------|---|
| Calcium | 200.7 | ND U | mg/L | 0.021 | 0.003 | 1 | 08/07/19 10:07 | 08/06/19 | |
| Iron | 200.7 | ND U | mg/L | 0.021 | 0.008 | 1 | 08/07/19 10:07 | 08/06/19 | |
| Magnesium | 200.7 | 0.0007 J | mg/L | 0.0053 | 0.0004 | 1 | 08/07/19 10:07 | 08/06/19 | |

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SGS North America, Inc. (SGS Environmental)
Project: 1194284
Sample Matrix: Water

Service Request: K1907046
Date Collected: 07/30/19
Date Received: 08/02/19
Date Analyzed: 08/7/19
Date Extracted: 08/6/19

Matrix Spike Summary
Total Metals

Sample Name: KWF-Slikok Creek
Lab Code: K1907046-001
Analysis Method: 200.7
Prep Method: EPA CLP ILM04.0

Units: mg/L
Basis: NA

Matrix Spike
KQ1910861-04

| Analyte Name | Sample Result | Result | Spike Amount | % Rec | % Rec Limits |
|--------------|---------------|--------|--------------|-------|--------------|
| Calcium | 20.0 | 29.5 | 10.0 | 95 | 70-130 |
| Iron | 1.20 | 2.16 | 1.00 | 97 | 70-130 |
| Magnesium | 5.74 | 15.7 | 10.0 | 99 | 70-130 |

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: SGS North America, Inc. (SGS Environmental)
Project 1194284
Sample Matrix: Water

Service Request: K1907046**Date Collected:** 07/30/19**Date Received:** 08/02/19**Date Analyzed:** 08/07/19**Replicate Sample Summary****Total Metals****Sample Name:** KWF-Slikok Creek**Units:** mg/L**Lab Code:** K1907046-001**Basis:** NA

| Analyte Name | Analysis Method | MRL | MDL | Sample Result | Duplicate Sample KQ1910861-03 | Average | RPD | RPD Limit |
|--------------|-----------------|--------|--------|---------------|----------------------------------|---------|-----|-----------|
| | | | | | Result | | | |
| Calcium | 200.7 | 0.021 | 0.003 | 20.0 | 20.1 | 20.1 | <1 | 20 |
| Iron | 200.7 | 0.021 | 0.008 | 1.20 | 1.21 | 1.21 | <1 | 20 |
| Magnesium | 200.7 | 0.0053 | 0.0004 | 5.74 | 5.76 | 5.75 | <1 | 20 |

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: SGS North America, Inc. (SGS Environmental)
Project: 1194284
Sample Matrix: Water

Service Request: K1907046
Date Analyzed: 08/07/19

Lab Control Sample Summary
Total Metals

Units:mg/L
Basis:NA

Lab Control Sample
KQ1910861-02

| Analyte Name | Analytical Method | Result | Spike Amount | % Rec | % Rec Limits |
|--------------|-------------------|--------|--------------|-------|--------------|
| Calcium | 200.7 | 12.6 | 12.5 | 101 | 85-115 |
| Iron | 200.7 | 2.53 | 2.50 | 101 | 85-115 |
| Magnesium | 200.7 | 12.9 | 12.5 | 103 | 85-115 |