



ARS Aleut Analytical, LLC
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5/16/2018

Kenai Watershed Forum
44129 Sterling Highway
Soldotna, AK 99669
Attn: Jeff Sires

Work Order #: A1804326
Date: 5/16/2018
Work ID: ADF&G Habitat Division
Date Received: 4/24/2018
Proj #: ADF&G Habitat Division

Sample Identification

Lab Sample Number	Client Description	Lab Sample Number	Client Description
A1804326-01	RM - Silkok Creek	A1804326-02	RM 19 - Silkok Creek Duplicate
A1804326-03	Rm 21 - Soldotna Bridge	A1804326-04	Rm 22 - Soldotna Creek
A1804326-05	RM 23 - Swift Water Park		

Enclosed are the analytical results for the submitted sample(s). Please review the CASE NARRATIVE for a discussion of any data and/or quality control issues. Listings of data qualifiers, analytical codes, key dates, and QC relationships are provided at the end of the report.

Sincerely,

Jerry Baker
Project Manager

"The Science of Analysis, The Art of Service"

Case Narrative

ARS Aleut Analytical, LLC

Work Order: A1804326

Samples were prepared and analyzed according to EPA or equivalent methods outlined in the following references:

Methods for the Determination of Metals in Environmental Samples, EPA/600/R-94/111, May 1994.

Standard Methods for the Examination of Water and Wastewater, 21st Edition, 2005.

SAMPLE RECEIPT:

Five (5) samples were received 4/24/2018 11:55 AM at ARS Aleut Analytical - Anchorage. Samples were received at a temperature of 9.8 deg C.in cooler 1 at ARS Aleut Analytical. Samples were received in Anchorage on frozen ice within 24 hours of sampling. The samples were received in good condition and in order per chain of custody.

Samples requiring metals analyses were subcontracted to Test America - Denver and arrived 4/27/2018 9:10 AM and at a temperature of 16.7°C.

Samples requiring inorganic analyses were subcontracted to Test America - Houston and arrived 4/27/2018 9:10 AM and at a temperature of 0.6°C. Please see sample results for individual analysis locations.

REVIEW FOR COMPLIANCE WITH ANALYTICA QA PLAN:

A summary of our review is shown below.

All analytical results contained in this report have been reviewed under Analytica's internal quality assurance and quality control program. Any deviations in quality control parameters for specific analyses are noted in the following text.

All method specifications were met for the following tests, unless otherwise noted:

Test Method: SM4500-NO3E - Nitrogen (Nitrate), Cadmium Reduction Method - nitrate+nitrite pres f - Aqueous

The following are subcontracted tests and have been represented to us as having met criteria:

Test Method: 200.7 - Metals by ICP - 200.7 metals - Aqueous

METHOD BLANK OUTLEIRS:

Iron was recovered in the MB above the method detection limit but below the reporting limit. The analyte may be biased high the associated samples. The data have been reported with a 'B' flag.

Test Method: 200.8 - Metals by ICP/MS - Dissolved 200.8 Metals - Aqueous

METHOD BLANK OUTLEIRS:

Copper and Zinc were recovered in the MB above the method detection limit but below the reporting limit. The analytes may be biased high the associated samples. The data have

Case Narrative

ARS Aleut Analytical, LLC

Work Order: A1804326

(continued)

been reported with a 'B' flag.

Test Method: SM4500-PE - Total Phos HACH 8190 - Aqueous

Detailed Analytical Report

ARS Aleut Analytical, LLC

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Client: Kenai Watershed Forum

Client Project Number: ADF&G Habitat Division

Report Section: Client Sample Report

Client Sample Name: **RM - Silkok Creek**

Matrix: Aqueous

Collection Date: 4/24/2018 10:07:00AM

The following test was conducted by: ARS Aleut Analytical, LLC

Lab Sample Number: A1804326-01A

Analysis Date: 5/1/2018 3:42:00PM

Prep Date: 05-01-2018 15:05

Instrument: Thermospectr

Analytical Method ID: SM4500-NO3E - Nitrogen (Nitrate), Cadmium Reduction Method - File Name:

Prep Method ID:

Dilution Factor: 1

Prep Batch Number: A180502008

Report Basis: As Received

Analyst Initials: AAS/CS/JR

Sample prep wt./vol: 25.00 ml

Prep Extract Vol: 25.00 ml

pH on receipt: < 2.00

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Nitrate-Nitrite as Nitrogen		ND		mg/L	0.10	0.028	1

The following test was conducted by: TestAmerica - Houston

Lab Sample Number: A1804326-01D

Analysis Date: 5/10/2018 2:25:00PM

Prep Date: 05-10-2018 05:05

Instrument:

Analytical Method ID: SM4500-PE - Phos

File Name:

Prep Method ID: 4500-PB

Dilution Factor: 1

Prep Batch Number: R1805150601-3

Report Basis: As Received

Analyst Initials: SC1

Sample prep wt./vol:

Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Phosphorous, Total		ND		mg/L	0.050	0.021	1

The following test was conducted by: TestAmerica - Denver

Lab Sample Number: A1804326-01C

Analysis Date: 5/2/2018 7:05:00PM

Prep Date: 05-02-2018 07:05

Instrument:

Analytical Method ID: 200.8 - Metals by ICP/MS - Dissolved 200.8 Metals

File Name:

Prep Method ID:

Dilution Factor: 1

Prep Batch Number: R1805140622-9

Report Basis: As Received

Analyst Initials: LMT

Sample prep wt./vol:

Prep Extract Vol: ml

pH on receipt: < 2.00

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Arsenic	7440-38-2	ND		ug/L	5.0	0.50	1
Cadmium	7440-43-9	ND		ug/L	1.0	0.040	
Chromium	7440-47-3	ND		ug/L	3.0	0.88	
Copper	7440-50-8	ND		ug/L	2.0	0.20	
Lead	7439-92-1	ND		ug/L	1.0	0.10	

Detailed Analytical Report

ARS Aleut Analytical, LLC

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Client: Kenai Watershed Forum

Client Project Number: ADF&G Habitat Division

Report Section: Client Sample Report

Client Sample Name: RM - Silkok Creek

Matrix: Aqueous Collection Date: 4/24/2018 10:07:00AM

Lab Sample Number: A1804326-01C Analysis Date: 5/7/2018 8:23:00PM
Prep Date: 05-02-2018 07:05 Instrument:
Analytical Method ID: 200.8 - Metals by ICP/MS - Dissolved 200.8 Metals File Name:
Prep Method ID: Dilution Factor: 1
Prep Batch Number: R1805140622-9
Report Basis: As Received Analyst Initials: LMT
Sample prep wt./vol: Prep Extract Vol: ml
pH on receipt: < 2.00

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Zinc	7440-66-6	60.0	B	ug/L	10	2.0	2

The following test was conducted by: TestAmerica - Denver

Lab Sample Number: A1804326-01B Analysis Date: 5/3/2018 9:43:00PM
Prep Date: 05-03-2018 08:05 Instrument:
Analytical Method ID: 200. 7 - Metals by ICP - 200.7 metals File Name:
Prep Method ID: Dilution Factor: 1
Prep Batch Number: R1805140622-8
Report Basis: As Received Analyst Initials: SJS
Sample prep wt./vol: Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Calcium	7440-70-2	7,200		ug/L	200	35	1
Magnesium	7439-96-4	2,500		ug/L	200	11	

Lab Sample Number: A1804326-01B Analysis Date: 5/8/2018 2:11:00PM
Prep Date: 05-03-2018 08:05 Instrument:
Analytical Method ID: 200. 7 - Metals by ICP - 200.7 metals File Name:
Prep Method ID: Dilution Factor: 1
Prep Batch Number: R1805140622-8
Report Basis: As Received Analyst Initials: SJS
Sample prep wt./vol: Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Iron	7439-89-6	1,600	B	ug/L	100	22	2

Detailed Analytical Report

ARS Aleut Analytical, LLC

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Client: Kenai Watershed Forum

Client Project Number: ADF&G Habitat Division

Report Section: Client Sample ReportClient Sample Name: **RM 19 - Silkok Creek Duplicate**

Matrix: Aqueous

Collection Date: 4/24/2018 10:07:00AM

The following test was conducted by: ARS Aleut Analytical, LLC

Lab Sample Number: A1804326-02A

Analysis Date: 5/1/2018 3:42:00PM

Prep Date: 05-01-2018 15:05

Instrument: Thermospectr

Analytical Method ID: SM4500-NO3E - Nitrogen (Nitrate), Cadmium Reduction Method -

File Name:

Prep Method ID:

Dilution Factor: 1

Prep Batch Number: A180502005

Report Basis: As Received

Analyst Initials: AAS/CS/JR

Sample prep wt./vol: 25.00 ml

Prep Extract Vol: 25.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Nitrate-Nitrite as Nitrogen		ND		mg/L	0.10	0.028	1

The following test was conducted by: TestAmerica - Houston

Lab Sample Number: A1804326-02D

Analysis Date: 5/10/2018 2:25:00PM

Prep Date: 05-10-2018 05:05

Instrument:

Analytical Method ID: SM4500-PE - Phos

File Name:

Prep Method ID: 4500-PB

Dilution Factor: 1

Prep Batch Number: R1805150601-3

Report Basis: As Received

Analyst Initials: SC1

Sample prep wt./vol:

Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Phosphorous, Total		0.080		mg/L	0.050	0.021	1

The following test was conducted by: TestAmerica - Denver

Lab Sample Number: A1804326-02C

Analysis Date: 5/2/2018 7:08:00PM

Prep Date: 05-02-2018 07:05

Instrument:

Analytical Method ID: 200.8 - Metals by ICP/MS - Dissolved 200.8 Metals

File Name:

Prep Method ID:

Dilution Factor: 1

Prep Batch Number: R1805140622-9

Report Basis: As Received

Analyst Initials: LMT

Sample prep wt./vol:

Prep Extract Vol: ml

pH on receipt: < 2.00

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Arsenic	7440-38-2	ND		ug/L	5.0	0.50	1
Cadmium	7440-43-9	ND		ug/L	1.0	0.040	
Chromium	7440-47-3	ND		ug/L	3.0	0.88	
Copper	7440-50-8	3.9	B	ug/L	2.0	0.20	
Lead	7439-92-1	ND		ug/L	1.0	0.10	

Detailed Analytical Report

ARS Aleut Analytical, LLC

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Client: Kenai Watershed Forum

Client Project Number: ADF&G Habitat Division

Report Section: Client Sample Report

Client Sample Name: **RM 19 - Silkok Creek Duplicate**

Matrix: Aqueous Collection Date: 4/24/2018 10:07:00AM

Lab Sample Number: A1804326-02C Analysis Date: 5/7/2018 8:26:00PM
Prep Date: 05-02-2018 07:05 Instrument:
Analytical Method ID: 200.8 - Metals by ICP/MS - Dissolved 200.8 Metals File Name:
Prep Method ID: Dilution Factor: 1
Prep Batch Number: R1805140622-9
Report Basis: As Received Analyst Initials: LMT
Sample prep wt./vol: Prep Extract Vol: ml
pH on receipt: < 2.00

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Zinc	7440-66-6	95.0	B	ug/L	10	2.0	2

The following test was conducted by: TestAmerica - Denver

Lab Sample Number: A1804326-02B Analysis Date: 5/3/2018 10:03:00PM
Prep Date: 05-03-2018 08:05 Instrument:
Analytical Method ID: 200. 7 - Metals by ICP - 200.7 metals File Name:
Prep Method ID: Dilution Factor: 1
Prep Batch Number: R1805140622-8
Report Basis: As Received Analyst Initials: SJS
Sample prep wt./vol: Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Calcium	7440-70-2	7,200		ug/L	200	35	1
Magnesium	7439-96-4	2,500		ug/L	200	11	

Lab Sample Number: A1804326-02B Analysis Date: 5/8/2018 2:32:00PM
Prep Date: 05-03-2018 08:05 Instrument:
Analytical Method ID: 200. 7 - Metals by ICP - 200.7 metals File Name:
Prep Method ID: Dilution Factor: 1
Prep Batch Number: R1805140622-8
Report Basis: As Received Analyst Initials: SJS
Sample prep wt./vol: Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Iron	7439-89-6	1,500	B	ug/L	100	22	2

Detailed Analytical Report

ARS Aleut Analytical, LLC

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Client: Kenai Watershed Forum

Client Project Number: ADF&G Habitat Division

Report Section: Client Sample Report

Client Sample Name: **Rm 21 - Soldotna Bridge**

Matrix: Aqueous

Collection Date: 4/24/2018 10:30:00AM

The following test was conducted by: ARS Aleut Analytical, LLC

Lab Sample Number: A1804326-03A

Analysis Date: 5/1/2018 3:42:00PM

Prep Date: 05-01-2018 15:05

Instrument: Thermospectr

Analytical Method ID: SM4500-NO3E - Nitrogen (Nitrate), Cadmium Reduction Method -

File Name:

Prep Method ID:

Dilution Factor: 1

Prep Batch Number: A180502005

Report Basis: As Received

Analyst Initials: AAS/CS/JR

Sample prep wt./vol: 25.00 ml

Prep Extract Vol: 25.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Nitrate-Nitrite as Nitrogen		ND		mg/L	0.10	0.028	1

The following test was conducted by: TestAmerica - Houston

Lab Sample Number: A1804326-03D

Analysis Date: 5/10/2018 2:25:00PM

Prep Date: 05-10-2018 05:05

Instrument:

Analytical Method ID: SM4500-PE - Phos

File Name:

Prep Method ID: 4500-PB

Dilution Factor: 1

Prep Batch Number: R1805150601-3

Report Basis: As Received

Analyst Initials: SC1

Sample prep wt./vol:

Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Phosphorous, Total		0.082		mg/L	0.050	0.021	1

The following test was conducted by: TestAmerica - Denver

Lab Sample Number: A1804326-03C

Analysis Date: 5/2/2018 7:12:00PM

Prep Date: 05-02-2018 07:05

Instrument:

Analytical Method ID: 200.8 - Metals by ICP/MS - Dissolved 200.8 Metals

File Name:

Prep Method ID:

Dilution Factor: 1

Prep Batch Number: R1805140622-9

Report Basis: As Received

Analyst Initials: LMT

Sample prep wt./vol:

Prep Extract Vol: ml

pH on receipt: < 2.00

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Arsenic	7440-38-2	ND		ug/L	5.0	0.50	1
Cadmium	7440-43-9	ND		ug/L	1.0	0.040	
Chromium	7440-47-3	ND		ug/L	3.0	0.88	
Copper	7440-50-8	ND		ug/L	2.0	0.20	
Lead	7439-92-1	ND		ug/L	1.0	0.10	

Detailed Analytical Report

ARS Aleut Analytical, LLC

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Client: Kenai Watershed Forum

Client Project Number: ADF&G Habitat Division

Report Section: Client Sample Report

Client Sample Name: Rm 21 - Soldotna Bridge

Matrix: Aqueous Collection Date: 4/24/2018 10:30:00AM

Lab Sample Number: A1804326-03C Analysis Date: 5/7/2018 8:30:00PM
Prep Date: 05-02-2018 07:05 Instrument:
Analytical Method ID: 200.8 - Metals by ICP/MS - Dissolved 200.8 Metals File Name:
Prep Method ID: Dilution Factor: 1
Prep Batch Number: R1805140622-9
Report Basis: As Received Analyst Initials: LMT
Sample prep wt./vol: Prep Extract Vol: ml
pH on receipt: < 2.00

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Zinc	7440-66-6	41.0	B	ug/L	10	2.0	2

The following test was conducted by: TestAmerica - Denver

Lab Sample Number: A1804326-03B Analysis Date: 5/3/2018 10:05:00PM
Prep Date: 05-03-2018 08:05 Instrument:
Analytical Method ID: 200. 7 - Metals by ICP - 200.7 metals File Name:
Prep Method ID: Dilution Factor: 1
Prep Batch Number: R1805140622-8
Report Basis: As Received Analyst Initials: SJS
Sample prep wt./vol: Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Calcium	7440-70-2	9,800		ug/L	200	35	1
Magnesium	7439-96-4	1,700		ug/L	200	11	

Lab Sample Number: A1804326-03B Analysis Date: 5/8/2018 2:35:00PM
Prep Date: 05-03-2018 08:05 Instrument:
Analytical Method ID: 200. 7 - Metals by ICP - 200.7 metals File Name:
Prep Method ID: Dilution Factor: 1
Prep Batch Number: R1805140622-8
Report Basis: As Received Analyst Initials: SJS
Sample prep wt./vol: Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Iron	7439-89-6	750	B	ug/L	100	22	2

Detailed Analytical Report

ARS Aleut Analytical, LLC

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Client: Kenai Watershed Forum

Client Project Number: ADF&G Habitat Division

Report Section: Client Sample Report

Client Sample Name: **Rm 22 - Soldotna Creek**

Matrix: Aqueous

Collection Date: 4/24/2018 10:55:00AM

The following test was conducted by: ARS Aleut Analytical, LLC

Lab Sample Number: A1804326-04A

Analysis Date: 5/1/2018 3:42:00PM

Prep Date: 05-01-2018 15:05

Instrument: Thermospectr

Analytical Method ID: SM4500-NO3E - Nitrogen (Nitrate), Cadmium Reduction Method - File Name:

Prep Method ID:

Dilution Factor: 1

Prep Batch Number: A180502005

Report Basis: As Received

Analyst Initials: AAS/CS/JR

Sample prep wt./vol: 25.00 ml

Prep Extract Vol: 25.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Nitrate-Nitrite as Nitrogen		ND		mg/L	0.10	0.028	1

The following test was conducted by: TestAmerica - Houston

Lab Sample Number: A1804326-04D

Analysis Date: 5/10/2018 2:25:00PM

Prep Date: 05-10-2018 05:05

Instrument:

Analytical Method ID: SM4500-PE - Phos

File Name:

Prep Method ID: 4500-PB

Dilution Factor: 1

Prep Batch Number: R1805150601-3

Report Basis: As Received

Analyst Initials: SC1

Sample prep wt./vol:

Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Phosphorous, Total		0.066		mg/L	0.050	0.021	1

The following test was conducted by: TestAmerica - Denver

Lab Sample Number: A1804326-04C

Analysis Date: 5/2/2018 7:16:00PM

Prep Date: 05-02-2018 07:05

Instrument:

Analytical Method ID: 200.8 - Metals by ICP/MS - Dissolved 200.8 Metals

File Name:

Prep Method ID:

Dilution Factor: 1

Prep Batch Number: R1805140622-9

Report Basis: As Received

Analyst Initials: LMT

Sample prep wt./vol:

Prep Extract Vol: ml

pH on receipt: < 2.00

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Arsenic	7440-38-2	5.7		ug/L	5.0	0.50	1
Cadmium	7440-43-9	ND		ug/L	1.0	0.040	
Chromium	7440-47-3	ND		ug/L	3.0	0.88	
Copper	7440-50-8	ND		ug/L	2.0	0.20	
Lead	7439-92-1	ND		ug/L	1.0	0.10	

Detailed Analytical Report

ARS Aleut Analytical, LLC

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Client: Kenai Watershed Forum

Client Project Number: ADF&G Habitat Division

Report Section: Client Sample Report

Client Sample Name: Rm 22 - Soldotna Creek

Matrix: Aqueous Collection Date: 4/24/2018 10:55:00AM

Lab Sample Number: A1804326-04C Analysis Date: 5/7/2018 8:33:00PM
Prep Date: 05-02-2018 07:05 Instrument:
Analytical Method ID: 200.8 - Metals by ICP/MS - Dissolved 200.8 Metals File Name:
Prep Method ID: Dilution Factor: 1
Prep Batch Number: R1805140622-9
Report Basis: As Received Analyst Initials: LMT
Sample prep wt./vol: Prep Extract Vol: ml
pH on receipt: < 2.00

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Zinc	7440-66-6	48.0	B	ug/L	10	2.0	2

The following test was conducted by: TestAmerica - Denver

Lab Sample Number: A1804326-04B Analysis Date: 5/3/2018 10:08:00PM
Prep Date: 05-03-2018 08:05 Instrument:
Analytical Method ID: 200. 7 - Metals by ICP - 200.7 metals File Name:
Prep Method ID: Dilution Factor: 1
Prep Batch Number: R1805140622-8
Report Basis: As Received Analyst Initials: SJS
Sample prep wt./vol: Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Calcium	7440-70-2	11,000		ug/L	200	35	1
Magnesium	7439-96-4	3,500		ug/L	200	11	

Lab Sample Number: A1804326-04B Analysis Date: 5/8/2018 2:37:00PM
Prep Date: 05-03-2018 08:05 Instrument:
Analytical Method ID: 200. 7 - Metals by ICP - 200.7 metals File Name:
Prep Method ID: Dilution Factor: 1
Prep Batch Number: R1805140622-8
Report Basis: As Received Analyst Initials: SJS
Sample prep wt./vol: Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Iron	7439-89-6	1,900	B	ug/L	100	22	2

Detailed Analytical Report

ARS Aleut Analytical, LLC

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Client: Kenai Watershed Forum

Client Project Number: ADF&G Habitat Division

Report Section: Client Sample Report

Client Sample Name: **RM 23 - Swift Water Park**

Matrix: Aqueous

Collection Date: 4/24/2018 11:25:00AM

The following test was conducted by: ARS Aleut Analytical, LLC

Lab Sample Number: A1804326-05A

Analysis Date: 5/1/2018 3:42:00PM

Prep Date: 05-01-2018 15:05

Instrument: Thermospectr

Analytical Method ID: SM4500-NO3E - Nitrogen (Nitrate), Cadmium Reduction Method -

File Name:

Prep Method ID:

Dilution Factor: 1

Prep Batch Number: A180502005

Report Basis: As Received

Analyst Initials: AAS/CS/JR

Sample prep wt./vol: 25.00 ml

Prep Extract Vol: 25.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Nitrate-Nitrite as Nitrogen		ND		mg/L	0.10	0.028	1

The following test was conducted by: TestAmerica - Houston

Lab Sample Number: A1804326-05D

Analysis Date: 5/10/2018 2:25:00PM

Prep Date: 05-10-2018 05:05

Instrument:

Analytical Method ID: SM4500-PE - Phos

File Name:

Prep Method ID: 4500-PB

Dilution Factor: 1

Prep Batch Number: R1805150601-3

Report Basis: As Received

Analyst Initials: SC1

Sample prep wt./vol:

Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Phosphorous, Total		0.066		mg/L	0.050	0.021	1

The following test was conducted by: TestAmerica - Denver

Lab Sample Number: A1804326-05C

Analysis Date: 5/2/2018 7:19:00PM

Prep Date: 05-02-2018 07:05

Instrument:

Analytical Method ID: 200.8 - Metals by ICP/MS - Dissolved 200.8 Metals

File Name:

Prep Method ID:

Dilution Factor: 1

Prep Batch Number: R1805140622-9

Report Basis: As Received

Analyst Initials: LMT

Sample prep wt./vol:

Prep Extract Vol: ml

pH on receipt: < 2.00

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Arsenic	7440-38-2	ND		ug/L	5.0	0.50	1
Cadmium	7440-43-9	ND		ug/L	1.0	0.040	
Chromium	7440-47-3	ND		ug/L	3.0	0.88	
Copper	7440-50-8	ND		ug/L	2.0	0.20	
Lead	7439-92-1	ND		ug/L	1.0	0.10	

Detailed Analytical Report

ARS Aleut Analytical, LLC

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Client: Kenai Watershed Forum

Client Project Number: ADF&G Habitat Division

Report Section: Client Sample Report

Client Sample Name: **RM 23 - Swift Water Park**

Matrix: Aqueous Collection Date: 4/24/2018 11:25:00AM

Lab Sample Number: A1804326-05C Analysis Date: 5/7/2018 8:36:00PM
Prep Date: 05-02-2018 07:05 Instrument:
Analytical Method ID: 200.8 - Metals by ICP/MS - Dissolved 200.8 Metals File Name:
Prep Method ID: Dilution Factor: 1
Prep Batch Number: R1805140622-9
Report Basis: As Received Analyst Initials: LMT
Sample prep wt./vol: Prep Extract Vol: ml
pH on receipt: < 2.00

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Zinc	7440-66-6	59.0	B	ug/L	10	2.0	2

The following test was conducted by: TestAmerica - Denver

Lab Sample Number: A1804326-05B Analysis Date: 5/3/2018 10:10:00PM
Prep Date: 05-03-2018 08:05 Instrument:
Analytical Method ID: 200. 7 - Metals by ICP - 200.7 metals File Name:
Prep Method ID: Dilution Factor: 1
Prep Batch Number: R1805140622-8
Report Basis: As Received Analyst Initials: SJS
Sample prep wt./vol: Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Calcium	7440-70-2	10,000		ug/L	200	35	1
Magnesium	7439-96-4	1,700		ug/L	200	11	

Lab Sample Number: A1804326-05B Analysis Date: 5/8/2018 2:40:00PM
Prep Date: 05-03-2018 08:05 Instrument:
Analytical Method ID: 200. 7 - Metals by ICP - 200.7 metals File Name:
Prep Method ID: Dilution Factor: 1
Prep Batch Number: R1805140622-8
Report Basis: As Received Analyst Initials: SJS
Sample prep wt./vol: Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Iron	7439-89-6	650	B	ug/L	100	22	2

Detailed Analytical Report

ARS Aleut Analytical, LLC

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Client: Kenai Watershed Forum

Client Project Number: ADF&G Habitat Division

Report Section: Method Blank Report

Client Sample Name: MB

Matrix: Aqueous

Collection Date: 5/1/2018 3:42:00PM

The following test was conducted by: ARS Aleut Analytical, LLC

Lab Sample Number: A180502005-MB

Analysis Date: 5/1/2018 3:42:00PM

Prep Date: 05-01-2018 15:05

Instrument: Thermospectr

Analytical Method ID: SM4500-NO3E - Nitrogen (Nitrate), Cadmium Reduction Method - File Name:

Prep Method ID:

Dilution Factor: 1

Prep Batch Number: A180502005

Report Basis: As Received

Analyst Initials: AAS/CS/JR

Sample prep wt./vol: 25.00 ml

Prep Extract Vol: 25.00 ml

pH on receipt: 0.00

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Nitrate-Nitrite as Nitrogen		ND		mg/L	0.10	0.028	1

Lab Sample Number: A180502008-MB

Analysis Date: 5/1/2018 3:42:00PM

Prep Date: 05-01-2018 15:05

Instrument: Thermospectr

Analytical Method ID: SM4500-NO3E - Nitrogen (Nitrate), Cadmium Reduction Method - File Name:

Prep Method ID:

Dilution Factor: 1

Prep Batch Number: A180502008

Report Basis: As Received

Analyst Initials: AAS/CS/JR

Sample prep wt./vol: 25.00 ml

Prep Extract Vol: 25.00 ml

pH on receipt: 0.00

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Nitrate-Nitrite as Nitrogen		ND		mg/L	0.10	0.028	1

Detailed Analytical Report

ARS Aleut Analytical, LLC

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Client: Kenai Watershed Forum

Client Project Number: ADF&G Habitat Division

Report Section: Method Blank Report

Client Sample Name: MB 600-238187/3-A

Matrix:

Collection Date: 5/10/2018 5:12:00AM

The following test was conducted by: TestAmerica - Houston

Lab Sample Number: MB 600-238187/3-A

Analysis Date: 5/10/2018 2:25:00PM

Prep Date: 05-10-2018 05:05

Instrument:

Analytical Method ID: SM4500-PE - Phos

File Name:

Prep Method ID: 4500-PB

Dilution Factor: 1

Prep Batch Number: R1805150601-3

Report Basis: As Received

Analyst Initials: SC1

Sample prep wt./vol:

Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Phosphorous, Total		ND		mg/L	0.050	0.021	1

Detailed Analytical Report

ARS Aleut Analytical, LLC

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Client: Kenai Watershed Forum

Client Project Number: ADF&G Habitat Division

Report Section: Method Blank Report

Client Sample Name: MB 280-413333/1-A

Matrix:

Collection Date: 5/3/2018 8:41:00AM

The following test was conducted by: TestAmerica - Denver

Lab Sample Number: MB 280-413333/1-A

Prep Date: 05-03-2018 08:05

Analytical Method ID: 200. 7 - Metals by ICP - 200.7 metals

Prep Method ID:

Prep Batch Number: R1805140622-8

Report Basis: As Received

Sample prep wt./vol:

Analysis Date: 5/3/2018 9:38:00PM

Instrument:

File Name:

Dilution Factor: 1

Analyst Initials: SJS

Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Calcium	7440-70-2	ND		ug/L	200	35	1
Magnesium	7439-96-4	ND		ug/L	200	11	

Lab Sample Number: MB 280-413333/1-A

Prep Date: 05-03-2018 08:05

Analytical Method ID: 200. 7 - Metals by ICP - 200.7 metals

Prep Method ID:

Prep Batch Number: R1805140622-8

Report Basis: As Received

Sample prep wt./vol:

Analysis Date: 5/8/2018 2:06:00PM

Instrument:

File Name:

Dilution Factor: 1

Analyst Initials: SJS

Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Iron	7439-89-6	ND		ug/L	100	22	2

Detailed Analytical Report

ARS Aleut Analytical, LLC

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Client: Kenai Watershed Forum

Client Project Number: ADF&G Habitat Division

Tests Run at: Analytica Environmental Laboratories - Anchorage, Alaska

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Project Number:

QUALITY CONTROL REPORT

Prep Batch: A180502008

LCS REPORT

Analysis: SM4500-NO3E - Nitrogen (Nitrate), Cadmium Reduction Method -MB: A180502008-MB

Prep Date: 5/1/2018

MB Anal. Date: 5/1/2018 3:42:00PM

Units: mg/L

LCS Anal. Date: 5/1/2018 3:42:00PM

Matrix: Aqueous

<u>Analyte Name</u>	<u>SampResult</u>	<u>LCSRes.</u>	<u>SPLev</u>	<u>Recov.</u>	<u>Recov Lim</u>	<u>RPDLim</u>	<u>Flag</u>
Nitrate-Nitrite as Nitrogen	ND	0.702	0.690	101.7	90 - 110		

FOOTNOTES TO QC REPORT

Note 1: Results are shown to three significant figures to avoid rounding errors in calculations.

Note 2: If the sample concentration is greater than 4 times the spike level, a recovery is not meaningful, and the result should be used as a replicate. In such cases the spike is not as high as expected random measurement variability of the sample result itself.

Note 3: For sample duplicates, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample and duplicate results are not five times the PQL or greater, then the RPD is not expected to fall within the window shown and the comparison should be made on the basis of the absolute difference. Analytica uses the criterion that the absolute difference should be less than the PQL for water or less than 2XPQL for other matrices.

Note 4: For serial dilutions, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample result is not 50 times the MDL or greater, then the fact that the RPD does not meet the 10% criterion has little significance. Otherwise it indicates that a matrix bias may exist at the analytical step.

Detailed Analytical Report

ARS Aleut Analytical, LLC

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Client: Kenai Watershed Forum

Client Project Number: ADF&G Habitat Division

Tests Run at: TestAmerica - Denver

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Project Number:

Prep Batch: R1805140622-8

QUALITY CONTROL REPORT

LCS REPORT

Analysis: 200. 7 - Metals by ICP - 200.7 metals

MB: MB 280-413333/1-A

Prep Date: 5/3/2018

MB Anal. Date: 5/3/2018 9:38:00PM

Units: ug/L

LCS Anal. Date: 5/3/2018 9:41:00PM

Matrix:

Analyte Name	SampResult	LCSRes.	SPLev	Recov.	Recov Lim	RPDLim	Flag
Calcium	ND	46,800	50,000	93.6	90 - 111		
Iron	ND	1,080	1,000	108.0	89 - 115		
Magnesium	ND	51,800	50,000	103.6	90 - 113		

MS/MSD REPORT

Analysis: 200. 7 - Metals by ICP - 200.7 metals

Parent: A1804326-01B

Prep Date: 5/3/2018

Samp. Anal. Date: 5/3/2018 9:43:00PM

Units: ug/L

MS Anal. Date: 5/3/2018 9:48:00PM MSD Anal. Date: 5/3/2018 9:50:00PM

Matrix: Aqueous

Analyte Name	SampResult	MSRes.	MSDRes	SPLev	SPDLev	Recov.	MSD Rec.	RPD	Recov Lim	RPDLim	Flag
Calcium	7,200	53,800	53,400	50,100	50,200	93.0	92.0	0.7	70 - 130	0	RPD
Iron	1,600	2,540	2,470	969	967	97.0	90.0	2.8	70 - 130	0	RPD
Magnesium	2,500	53,900	54,000	49,900	50,000	103.0	103.0	0.2	70 - 130	0	RPD

Prep Batch: R1805150601-3

LCS REPORT

Analysis: SM4500-PE - Phos

MB: MB 600-238187/3-A

Prep Date: 5/10/2018

MB Anal. Date: 5/10/2018 2:25:00PM

Units: mg/L

LCS Anal. Date: 5/10/2018 2:25:00PM

Matrix:

Analyte Name	SampResult	LCSRes.	SPLev	Recov.	Recov Lim	RPDLim	Flag
Phosphorous, Total	ND	0.477	0.500	95.4	90 - 110		

Detailed Analytical Report

ARS Aleut Analytical, LLC

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Client: Kenai Watershed Forum

Client Project Number: ADF&G Habitat Division

FOOTNOTES TO QC REPORT

Note 1: Results are shown to three significant figures to avoid rounding errors in calculations.

Note 2: If the sample concentration is greater than 4 times the spike level, a recovery is not meaningful, and the result should be used as a replicate. In such cases the spike is not as high as expected random measurement variability of the sample result itself.

Note 3: For sample duplicates, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample and duplicate results are not five times the PQL or greater, then the RPD is not expected to fall within the window shown and the comparison should be made on the basis of the absolute difference. Analytica uses the criterion that the absolute difference should be less than the PQL for water or less than 2XPQL for other matrices.

Note 4: For serial dilutions, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample result is not 50 times the MDL or greater, then the fact that the RPD does not meet the 10% criterion has little significance. Otherwise it indicates that a matrix bias may exist at the analytical step.

Detailed Analytical Report

ARS Aleut Analytical, LLC

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Client: Kenai Watershed Forum

Client Project Number: ADF&G Habitat Division

QC BATCH ASSOCIATIONS - BY METHOD BLANK

Lab Project ID: 194,277 Lab Project Number: A1804326

Prep Date: 5/1/2018

Lab Method Blank Id: A180502005-MB

Prep Batch ID: A180502005

Method: SM4500-NO3E - Nitrogen (Nitrate), Cadmium Reduction Method -

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

<u>SampleNum</u>	<u>ClientSampleName</u>	<u>DataFile</u>	<u>AnalysisDate</u>
A1804322-01B	Batch QC		5/1/2018 3:42:00PM
A1804326-02A	RM 19 - Silkok Creek Duplicate		5/1/2018 3:42:00PM
A1804326-03A	Rm 21 - Soldotna Bridge		5/1/2018 3:42:00PM
A1804326-04A	Rm 22 - Soldotna Creek		5/1/2018 3:42:00PM
A1804326-05A	RM 23 - Swift Water Park		5/1/2018 3:42:00PM
A180502005-LCS	LCS		5/1/2018 3:42:00PM
A1804322-01B-DUP	DUP		5/1/2018 3:42:00PM
A1804322-01B-MS	MS		5/1/2018 3:42:00PM

Prep Date: 5/1/2018

Lab Method Blank Id: A180502008-MB

Prep Batch ID: A180502008

Method: SM4500-NO3E - Nitrogen (Nitrate), Cadmium Reduction Method -

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

<u>SampleNum</u>	<u>ClientSampleName</u>	<u>DataFile</u>	<u>AnalysisDate</u>
A1804319-01B	Batch QC		5/1/2018 3:42:00PM
A1804326-01A	RM - Silkok Creek		5/1/2018 3:42:00PM
A180502008-LCS	LCS		5/1/2018 3:42:00PM
A1804319-01B-DUP	DUP		5/1/2018 3:42:00PM
A1804319-01B-MS	MS		5/1/2018 3:42:00PM

Detailed Analytical Report

ARS Aleut Analytical, LLC

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Client: Kenai Watershed Forum

Client Project Number: ADF&G Habitat Division

QC BATCH ASSOCIATIONS - BY METHOD BLANK

Lab Project ID: 194,277 Lab Project Number: A1804326

Prep Date: 5/3/2018

Lab Method Blank Id: MB 280-413333/1-A

Prep Batch ID: R1805140622-8

Method: 200. 7 - Metals by ICP - 200.7 metals

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

<u>SampleNum</u>	<u>ClientSampleName</u>	<u>DataFile</u>	<u>AnalysisDate</u>
A1804326-01B	RM - Silkok Creek		5/3/2018 9:43:00PM
A1804326-01B	RM - Silkok Creek		5/8/2018 2:11:00PM
A1804326-02B	RM 19 - Silkok Creek Duplicate		5/3/2018 10:03:00PM
A1804326-02B	RM 19 - Silkok Creek Duplicate		5/8/2018 2:32:00PM
A1804326-03B	Rm 21 - Soldotna Bridge		5/3/2018 10:05:00PM
A1804326-03B	Rm 21 - Soldotna Bridge		5/8/2018 2:35:00PM
A1804326-04B	Rm 22 - Soldotna Creek		5/3/2018 10:08:00PM
A1804326-04B	Rm 22 - Soldotna Creek		5/8/2018 2:37:00PM
A1804326-05B	RM 23 - Swift Water Park		5/3/2018 10:10:00PM
A1804326-05B	RM 23 - Swift Water Park		5/8/2018 2:40:00PM
LCS 280-413333/2-A	LCS 280-413333/2-A		5/3/2018 9:41:00PM
LCS 280-413333/2-A	LCS 280-413333/2-A		5/8/2018 2:09:00PM
280-109068-1	A1804326-01B		5/3/2018 9:48:00PM
280-109068-1	A1804326-01B		5/8/2018 2:17:00PM
280-109068-1	A1804326-01B		5/3/2018 9:50:00PM
280-109068-1	A1804326-01B		5/8/2018 2:20:00PM

Prep Date: 5/10/2018

Lab Method Blank Id: MB 600-238187/3-A

Prep Batch ID: R1805150601-3

Method: SM4500-PE - Phos

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

<u>SampleNum</u>	<u>ClientSampleName</u>	<u>DataFile</u>	<u>AnalysisDate</u>
A1804326-01D	RM - Silkok Creek		5/10/2018 2:25:00PM
A1804326-02D	RM 19 - Silkok Creek Duplicate		5/10/2018 2:25:00PM
A1804326-03D	Rm 21 - Soldotna Bridge		5/10/2018 2:25:00PM
A1804326-04D	Rm 22 - Soldotna Creek		5/10/2018 2:25:00PM
A1804326-05D	RM 23 - Swift Water Park		5/10/2018 2:25:00PM
LCS 600-238187/4-A	LCS 600-238187/4-A		5/10/2018 2:25:00PM

Detailed Analytical Report

ARS Aleut Analytical, LLC

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Client: Kenai Watershed Forum

Client Project Number: ADF&G Habitat Division

DATA FLAGS AND DEFINITIONS

The PQL is the Method Quantitation Limit as defined by USACE.

Reporting Limit: Limit below which results are shown as "ND". This may be the PQL, MDL, or a value between. See the report conventions below.

Result Field:

ND = Not Detected at or above the Reporting Limit

NA = Analyte not applicable (see Case Narrative for discussion)

Qualifier Fields:

LOW = Recovery is below Lower Control Limit

HIGH = Recovery, RPD, or other parameter is above Upper Control Limit

E = Reported concentration is above the instrument calibration upper range

Organic Analysis Flags:

B = Analyte was detected in the laboratory method blank

J = Analyte was detected above MDL or Reporting Limit but below the Quant Limit (PQL)

Inorganic Analysis Flags:

J = Analyte was detected above the Reporting Limit but below the Quant Limit (PQL)

W = Post digestion spike did not meet criteria

S = Reported value determined by the Method of Standard Additions (MSA)

Several ways of defining the limit of detection and quantitation are prevalent in the laboratory industry and may appear in Analytica reports. These include the following:

MRL = "minimum reporting level", from the EPA Safe Drinking Water program (SDW)

PQL = "practical quantitation limit", from SW-846

EQL = "estimated quantitation limit", from SW-846

LOQ = "limit of quantitation", from a number of authoritative sources

In Analytica's work, all of these terms have the same meaning, equivalent to the EPA definition of the MRL. This reporting level is supported by a satisfactory calibration data point which is at that level or lower, and also is supported by a method detection limit (MDL) determined by the procedure in 40CFR. The MDL is lower than the MRL and represents an estimate of the level where positive detections have a 99% probability of being real, but where quantitation accuracy is unknown.

The MRL as defined by Analytica is the lowest demonstrated point of known quantitation accuracy.

The MRL should not be confused with the MCL, which is the EPA-defined "maximum contaminant level" allowed for certain regulated targets under specific regulations, such as the National Primary Drinking Water Regulations. Normally, the MRL is set at a level which is much lower than the MCL in order to ensure that levels are well below those limits. Not all target analytes have MCL levels established.

Other Flags may be applied. See Case Narrative for Description

Detailed Analytical Report

ARS Aleut Analytical, LLC

Workorder (SDG): A1804326

Project: ADF&G Habitat Division

Client: Kenai Watershed Forum

Client Project Number: ADF&G Habitat Division

REPORTING CONVENTIONS FOR THIS REPORT

A1804326

<u>TestPkgName</u>	<u>Basis</u>	<u># Sig Figs</u>	<u>Reporting Limit</u>
200.7 (Aqueous) - 200.7 metals	As Received	2	Report to PQL
200.8 (Aqueous) - Dissolved 200.8 Metals	As Received	2	Report to PQL
4500-NO3E (Aqueous) - Nitrate+Nitrite pres	As Received	3	Report to PQL
4500-PE/4500-PB (Aqueous) - Phos	As Received	2	Report to PQL

