



Analytica Group, LLC-Anchorage  
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8/6/2014

Kenai Watershed Forum  
44129 Sterling Highway  
Soldotna, AK 99669  
Attn: Branden Bornemann

Work Order #: A1407462  
Date: 8/6/2014  
Work ID: KWF Baseline Monitoring 2014  
Date Received: 7/22/2014  
Proj #: None

#### Sample Identification

Lab Sample Number	Client Description	Lab Sample Number	Client Description
A1407462-01	RM 70 - Jim's Landing	A1407462-02	RM 74 - Russian River
A1407462-03	RM 82 - Kenai Lake Bridge		

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,

Claire Toon  
Project Manager

*"The Science of Analysis, The Art of Service"*

## Case Narrative

*Analytica Group, LLC - Anchorage*

*Work Order: A1407462*

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:

Three (3) samples were received on 7/22/2014 4:35:00 PM, at a temperature of 9.1°C, at Analytica-Anchorage. The samples were received in good condition and in order per chain of custody.

Comments: The samples were transported to the lab by Analytica staff. The samples were received on ice on the collection date.

The samples were transferred for various analyses to Analytica Environmental Laboratories (AEL), 12189 Pennsylvania St., Thornton, Colorado 80241, where they were received at a temperature of 3.5°C, in good condition and in order per chain of custody on 7/25/2014.

### 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. A complete quality assurance report, including laboratory control, matrix spike, and sample duplicate recoveries is kept on file in our office and is available upon request.

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

Test Method: 200.7 - Metals by ICP - Total/TR - Aqueous

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

Test Method: SM4500-PE - Total Phos - Aqueous

## Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1407462

Project: KWF Baseline Monitoring 2014

Client: Kenai Watershed Forum

Client Project Number: None

### Report Section: Client Sample Report

Client Sample Name: **RM 70 - Jim's Landing**

Matrix: Aqueous

Collection Date: 7/22/2014 10:30:00AM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number: A1407462-01A

Analysis Date: 8/4/2014 11:45:00AM

Prep Date: 08-04-2014 11:08

Instrument: Thermospectr

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

File Name:

Prep Method ID:

Dilution Factor: 1

Prep Batch Number: A140805010

Report Basis: As Received

Analyst Initials: MC

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		0.218		mg/L	0.10	0.015	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: A1407462-01B

Analysis Date: 7/31/2014 3:21:03PM

Prep Date: 07-31-2014 11:07

Instrument: Optima7300Icp

Analytical Method ID: 200. 7 - Metals by ICP - Total/TR

File Name: 073114.csv

Prep Method ID: 200.7

Dilution Factor: 1

Prep Batch Number: T140731012

Report Basis: As Received

Analyst Initials: AC

Sample prep wt./vol: 50.00 ml

Prep Extract Vol: 50.00 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>
Calcium	7440-70-2	12.1		mg/L	0.10	0.0020	1
Iron	7439-89-6	0.117		mg/L	0.050	0.0070	
Magnesium	7439-96-4	0.965		mg/L	0.10	0.010	

The following test was conducted by: Analytica - Thornton

Lab Sample Number: A1407462-01C

Analysis Date: 8/5/2014 2:44:00PM

Prep Date: 08-05-2014 11:08

Instrument: Hach DR 3900

Analytical Method ID: SM4500-PE - Total Phos

File Name:

Prep Method ID: 4500-PB

Dilution Factor: 1

Prep Batch Number: T140804020

Report Basis: As Received

Analyst Initials: jkk

Sample prep wt./vol: 10.00 ml

Prep Extract Vol: 10.00 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>
Phosphorus, Total and Ortho		ND		mg/L	0.051	0.026	1

## Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1407462

Project: KWF Baseline Monitoring 2014

Client: Kenai Watershed Forum

Client Project Number: None

### Report Section: Client Sample Report

Client Sample Name: **RM 74 - Russian River**

Matrix: Aqueous Collection Date: 7/22/2014 9:45:00AM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number: A1407462-02A Analysis Date: 8/4/2014 11:45:00AM  
Prep Date: 08-04-2014 11:08 Instrument: Thermospectr  
Analytical Method ID: SM4500-NO3E - Nitrogen (Nitrate), Cadmium Reduction Method - File Name:  
Prep Method ID: Dilution Factor: 1  
Prep Batch Number: A140805010  
Report Basis: As Received Analyst Initials: MC  
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		0.287		mg/L	0.10	0.015	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: A1407462-02B Analysis Date: 7/31/2014 3:23:46PM  
Prep Date: 07-31-2014 11:07 Instrument: Optima7300Icp  
Analytical Method ID: 200. 7 - Metals by ICP - Total/TR File Name: 073114.csv  
Prep Method ID: 200.7 Dilution Factor: 1  
Prep Batch Number: T140731012  
Report Basis: As Received Analyst Initials: AC  
Sample prep wt./vol: 50.00 ml Prep Extract Vol: 50.00 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>
Calcium	7440-70-2	13.9		mg/L	0.10	0.0020	1
Iron	7439-89-6	ND		mg/L	0.050	0.0070	
Magnesium	7439-96-4	0.975		mg/L	0.10	0.010	

The following test was conducted by: Analytica - Thornton

Lab Sample Number: A1407462-02C Analysis Date: 8/5/2014 2:44:00PM  
Prep Date: 08-05-2014 11:08 Instrument: Hach DR 3900  
Analytical Method ID: SM4500-PE - Total Phos File Name:  
Prep Method ID: 4500-PB Dilution Factor: 1  
Prep Batch Number: T140804020  
Report Basis: As Received Analyst Initials: jkk  
Sample prep wt./vol: 10.00 ml Prep Extract Vol: 10.00 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>
Phosphorus, Total and Ortho		ND		mg/L	0.051	0.026	1

## Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1407462

Project: KWF Baseline Monitoring 2014

Client: Kenai Watershed Forum

Client Project Number: None

### Report Section: Client Sample Report

Client Sample Name: **RM 82 - Kenai Lake Bridge**

Matrix: Aqueous

Collection Date: 7/22/2014 9:00:00AM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number: A1407462-03A

Analysis Date: 8/4/2014 11:45:00AM

Prep Date: 08-04-2014 11:08

Instrument: Thermospectr

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

File Name:

Prep Method ID:

Dilution Factor: 1

Prep Batch Number: A140805010

Report Basis: As Received

Analyst Initials: MC

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		0.222		mg/L	0.10	0.015	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: A1407462-03B

Analysis Date: 7/31/2014 3:26:32PM

Prep Date: 07-31-2014 11:07

Instrument: Optima7300Icp

Analytical Method ID: 200. 7 - Metals by ICP - Total/TR

File Name: 073114.csv

Prep Method ID: 200.7

Dilution Factor: 1

Prep Batch Number: T140731012

Report Basis: As Received

Analyst Initials: AC

Sample prep wt./vol: 50.00 ml

Prep Extract Vol: 50.00 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>
Calcium	7440-70-2	11.7		mg/L	0.10	0.0020	1
Iron	7439-89-6	0.122		mg/L	0.050	0.0070	
Magnesium	7439-96-4	0.962		mg/L	0.10	0.010	

The following test was conducted by: Analytica - Thornton

Lab Sample Number: A1407462-03C

Analysis Date: 8/5/2014 2:44:00PM

Prep Date: 08-05-2014 11:08

Instrument: Hach DR 3900

Analytical Method ID: SM4500-PE - Total Phos

File Name:

Prep Method ID: 4500-PB

Dilution Factor: 1

Prep Batch Number: T140804020

Report Basis: As Received

Analyst Initials: jkk

Sample prep wt./vol: 10.00 ml

Prep Extract Vol: 10.00 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>
Phosphorus, Total and Ortho		ND		mg/L	0.051	0.026	1

## Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1407462

**Project:** KWF Baseline Monitoring 2014

**Client:** Kenai Watershed Forum

**Client Project Number:** None

**Report Section:** Method Blank Report

**Client Sample Name:** MB

**Matrix:** Aqueous

**Collection Date:** 8/4/2014 11:45:00AM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number: A140805010-MB

Analysis Date: 8/4/2014 11:45:00AM

Prep Date: 08-04-2014 11:08

Instrument: Thermospectr

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

File Name:

Prep Method ID:

Dilution Factor: 1

Prep Batch Number: A140805010

Report Basis: As Received

Analyst Initials: MC

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	0.015	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: T140731012-MB

Analysis Date: 7/31/2014 1:46:21PM

Prep Date: 07-31-2014 11:07

Instrument: Optima7300Icp

Analytical Method ID: 200. 7 - Metals by ICP - Total/TR

File Name: 073114.csv

Prep Method ID: 200.7

Dilution Factor: 1

Prep Batch Number: T140731012

Report Basis: As Received

Analyst Initials: AC

Sample prep wt./vol: 50.00 ml

Prep Extract Vol: 50.00 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>
Calcium	7440-70-2	ND		mg/L	0.10	0.0020	2
Iron	7439-89-6	ND		mg/L	0.050	0.0070	
Magnesium	7439-96-4	ND		mg/L	0.10	0.010	

The following test was conducted by: Analytica - Thornton

Lab Sample Number: T140804020-MB

Analysis Date: 8/5/2014 2:44:00PM

Prep Date: 08-05-2014 11:08

Instrument: Hach DR 3900

Analytical Method ID: SM4500-PE - Total Phos

File Name:

Prep Method ID: 4500-PB

Dilution Factor: 1

Prep Batch Number: T140804020

Report Basis: As Received

Analyst Initials: jkk

Sample prep wt./vol: 10.00 ml

Prep Extract Vol: 10.00 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>
Phosphorus, Total and Ortho		ND		mg/L	0.051	0.026	1

## Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): A1407462

Project: KWF Baseline Monitoring 2014

Client: Kenai Watershed Forum

Client Project Number: None

Tests Run at: Analytica Environmental Laboratories - Anchorage, Alaska

Workorder (SDG): A1407462

Project: KWF Baseline Monitoring 2014

Project Number:

Prep Batch: A140805010

### QUALITY CONTROL REPORT

#### LCS REPORT

Analysis: SM4500-NO3E - Nitrogen (Nitrate), Cadmium Reduction Method - MB: A140805010-MB

Prep Date: 8/4/2014

MB Anal. Date: 8/4/2014 11:45:00AM

Units: mg/L

LCS Anal. Date: 8/4/2014 11:45:00AM

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	5.05	5.16	97.9	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

Analytica Group, LLC - Thornton

Workorder (SDG): A1407462

Project: KWF Baseline Monitoring 2014

Client: Kenai Watershed Forum

Client Project Number: None

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado

Workorder (SDG): A1407462

Project: KWF Baseline Monitoring 2014

Project Number:

Prep Batch: T140731012

### QUALITY CONTROL REPORT

#### LCS REPORT

Analysis: 200. 7 - Metals by ICP - Total/TR

MB: T140731012-MB

Prep Date: 7/31/2014

MB Anal. Date: 7/31/2014 1:46:21PM

Units: mg/L

LCS Anal. Date: 7/31/2014 1:51:21PM

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>
Calcium	ND	9.37	10.0	93.7	85 - 115		
Iron	ND	1.01	1.00	101.0	85 - 115		
Magnesium	ND	9.82	10.0	98.2	85 - 115		

#### 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

Analytica Group, LLC - Thornton

Workorder (SDG): A1407462

Project: KWF Baseline Monitoring 2014

Client: Kenai Watershed Forum

Client Project Number: None

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado

Workorder (SDG): A1407462

Project: KWF Baseline Monitoring 2014

Project Number:

Prep Batch: T140804020

### QUALITY CONTROL REPORT

#### LCS REPORT

Analysis: SM4500-PE - Total Phos

MB: T140804020-MB

Prep Date: 8/5/2014

MB Anal. Date: 8/5/2014 2:44:00PM

Units: mg/L

LCS Anal. Date: 8/5/2014 2:44:00PM

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>
Phosphorus, Total and Ortho	ND	0.496	0.500	99.2	80 - 120		

#### 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

Analytica Group, LLC - Thornton

Workorder (SDG): A1407462

Project: KWF Baseline Monitoring 2014

Client: Kenai Watershed Forum

Client Project Number: None

### QC BATCH ASSOCIATIONS - BY METHOD BLANK

Lab Project ID: 162,325 Lab Project Number: A1407462

Prep Date: 7/31/2014

Lab Method Blank Id: T140731012-MB

Prep Batch ID: T140731012

Method: 200. 7 - Metals by ICP - Total/TR

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>
A1407459-01B	Batch QC	073114.csv	7/31/2014 1:58:43PM
A1407462-01B	RM 70 - Jim's Landing	073114.csv	7/31/2014 3:21:03PM
A1407462-02B	RM 74 - Russian River	073114.csv	7/31/2014 3:23:46PM
A1407462-03B	RM 82 - Kenai Lake Bridge	073114.csv	7/31/2014 3:26:32PM
T140731012-LCS	LCS	073114.csv	7/31/2014 1:51:21PM
A1407459-01B-DUP	DUP	073114.csv	7/31/2014 2:01:28PM
A1407459-01B-MS	MS	073114.csv	7/31/2014 2:06:45PM
A1407459-01B-MSD	MSD	073114.csv	7/31/2014 2:09:27PM

Prep Date: 8/5/2014

Lab Method Blank Id: T140804020-MB

Prep Batch ID: T140804020

Method: SM4500-PE - Total 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>
A1407460-01C	Batch QC		8/5/2014 2:44:00PM
A1407462-01C	RM 70 - Jim's Landing		8/5/2014 2:44:00PM
A1407462-02C	RM 74 - Russian River		8/5/2014 2:44:00PM
A1407462-03C	RM 82 - Kenai Lake Bridge		8/5/2014 2:44:00PM
T140804020-LCS	LCS		8/5/2014 2:44:00PM
A1407460-01C-DUP	DUP		8/5/2014 2:44:00PM
A1407460-01C-MS	MS		8/5/2014 2:44:00PM
A1407460-01C-MSD	MSD		8/5/2014 2:44:00PM

## Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): A1407462

**Project:** KWF Baseline Monitoring 2014

**Client:** Kenai Watershed Forum

**Client Project Number:** None

### QC BATCH ASSOCIATIONS - BY METHOD BLANK

**Lab Project ID:** 162,325 **Lab Project Number:** A1407462

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Prep Date: 8/4/2014

Lab Method Blank Id: A140805010-MB

Prep Batch ID: A140805010

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>
A1407461-04A	Batch QC		8/4/2014 11:45:00AM
A1407462-01A	RM 70 - Jim's Landing		8/4/2014 11:45:00AM
A1407462-02A	RM 74 - Russian River		8/4/2014 11:45:00AM
A1407462-03A	RM 82 - Kenai Lake Bridge		8/4/2014 11:45:00AM
A140805010-LCS	LCS		8/4/2014 11:45:00AM
A1407461-04A-DUP	DUP		8/4/2014 11:45:00AM
A1407461-04A-MS	MS		8/4/2014 11:45:00AM

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## Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): A1407462

**Project:** KWF Baseline Monitoring 2014

**Client:** Kenai Watershed Forum

**Client Project Number:** None

### 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

Analytica Group, LLC - Thornton

Workorder (SDG): A1407462

**Project:** KWF Baseline Monitoring 2014

**Client:** Kenai Watershed Forum

**Client Project Number:** None

### REPORTING CONVENTIONS FOR THIS REPORT

A1407462

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



# Analytica Chain of Custody Form

Page 1 of 1

121889 Pennsylvania 4307 Arctic Blvd. 475 Hall Street 1203 W. Parks Highway  
St. Anchorage, AK 99503 Fairbanks, AK 99701 Wasilla, Alaska 99654  
CO 80241 (907) 258-2155 (907) 456-3116 (907) 373-5440  
(303) 469-8868 (907) 258-6034 fax (907) 456-3125 fax

Chain of Custody No:

Client Name & Address:

Kenai Watershed Forum  
44129 Sterling Hwy  
Soldotna, AK 99669

Contact Person: Branden Bornemann

Phone No: (907) 260-5449

Fax No: (907) 260-5412

E-mail: branden@kenaiwatershed.org

Special Instructions/Comments:

TEAM ID: US Forest Service

Project Name: Kenai River Baseline Project - July 2014

Turnaround Time for Results (TAT)

Standard

Expedited (< 10 days, prior authorization required)

(please specify due date below, add if change)

Results Due Date:

P.O. or Contract

Section To be Completed by Analytica

Quote ID No: A14040019

LG#:

A1407462

Account #:

Cash:

Credit Card:

Invoice to Name & Address:

Lab Bottle Order No:

Client Sample Identification / Location

Date Sampled

Time Sampled

Matrix (S-DW-WW-Other)

No. of Containers

Nitrate SM4500-NO3E

Lot #: Pres: H2SO4

200.7 Metals by ICP-Total TR

Lot #: Pres: HNO3

200.8 Dissolved Metals

Lot #: Pres: HNO3

Total Phos SM4500

Lot #: Pres: H2SO4

Lot #: Pres:

Lot #: Pres:

Lot #: Pres:

Field Preserved

Field Filtered

MS/MSD ?

RM 70- Jim's Landing

7-22-14

10:30

Aq

4

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

RM 74- Russian River

7-22-14

09:45

Aq

4

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

RM 82- Kenai Lake Bridge

7-22-14

09:00

Aq

4

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

Collected/Relinquished by:

Date

Time

Received by:

Date

Time

Relinquished by:

Date

Time

Received by:

Date

Time

Relinquished by:

Date

Time

Received by:

Date

Time

Name of Sampler: (printed)

7/22/14 1035

7/22/14 1140

7/22/14 1140

7/22/14 1035

Shipping Via:

lab pickup

To be Completed by Analytica

THO

ANC

JUN

FBKS

Chain-of-

Custody Seal?:

N/A

Initiated By:

9.1\* redstone

Temp/Loc:

83135

Thermo ID#:

lab pickup