



facility 149017
project 10243

Inorganics Case Narrative

COGCC

PW NORM 2017 -- 10048

Work Order Number: 1705158

1. This report consists of 1 water sample.
2. The sample was received cool and intact by ALS on 05/08/17.
3. The sample was prepared for analysis based on SW-846, 3rd Edition procedures and Standard Methods for the Examination of Water and Wastewater, 20th Edition 1998 procedures.
4. The sample was analyzed following SW-846 and Standard Method procedures for the current revisions of the following SOPs and methods:

<u>Analyte</u>	<u>Method</u>	<u>SOP #</u>
Alkalinity	SM2320B	1106
Bicarbonate	SM2320B	1106
Carbonate	SM2320B	1106
pH	9040C	1126
Specific conductance	SM2510B	1128
TDS	SM2540C	1101
TSS	SM2540D	1100
Bromide	9056	1113
Chloride	9056	1113
Fluoride	9056	1113
Sulfate	9056	1113

5. All standards and solutions were used within their recommended shelf life.
6. The sample was prepared and analyzed within the established hold time for each analysis.

All in house quality control procedures were followed, as described below.

7. General quality control procedures.



- n A preparation (method) blank, laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) were prepared and analyzed with the samples in each applicable preparation batch.
- n The method blank associated with each applicable batch was below the reporting limit for the requested analytes.
- n All laboratory control sample criteria were met with the exception of the RPD for TSS analysis. Since the recoveries for TSS in the laboratory control sample and laboratory control sample duplicate were within control limits, no further action was taken.
- n All initial and continuing calibration blanks were below the reporting limit for the requested analytes.
- n All initial and continuing calibration verifications were within the acceptance criteria for the requested analytes.

8. Matrix specific quality control procedures.

Sample 1705158-1 was designated as the quality control sample for the alkalinity, bicarbonate, carbonate and specific conductance analyses. Per method requirements, matrix QC was performed for the remaining analyses. Since a sample from this order number was not the selected quality control (QC) sample, matrix specific QC results are not included in this report.

Similarity of matrix and therefore relevance of the QC results should not be automatically inferred for any sample other than the native sample selected for QC.

- n A sample duplicate was prepared and analyzed with the alkalinity, bicarbonate, carbonate and specific conductance batches. All guidance criteria for precision were met.
9. Electrical conductivity screening indicated that the concentration of dissolved salts was high in the sample. Therefore, it was necessary to dilute the sample prior to injection into the ion chromatograph in order to minimize the amount of salts loaded into the analytical column.

It was necessary to further dilute the sample in order to bring the chloride concentration into the analytical range of the ion chromatograph (IC).

Reduced aliquots were taken of the sample for the alkalinity, bicarbonate, carbonate and TDS analyses. Reporting limits were elevated accordingly.

10. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in the current revision of SOP 939. Whenever manual integrations are performed, before and after chromatograms of the peak that were manually integrated are included in the report along with the reason why the re-integration was necessary.



The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Megan Johnstone
Megan Johnstone
Inorganics Primary Data Reviewer

5/25/17
Date

Steve Workman
Steve Workman
Inorganics Final Data Reviewer

5/25/17
Date



Inorganic Data Reporting Qualifiers

The following qualifiers are used by the laboratory when reporting results of inorganic analyses.

- Concentration qualifier -- A “J” is entered if the reported value was obtained from a reading that was less than the Reporting Limit but greater than or equal to ALS’s Method Detection Limit. If the analyte was analyzed for but not detected a “U” is entered.
- QC qualifier -- Specified entries and their meanings are as follows:
 - N - Spiked sample recovery not within control limits.
 - * - Duplicate analysis (relative percent difference) not within control limits.
 - Z - Calibration spike recovery not within control limits.

Chain of Custody

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 1705158

Client Name: COGCC

Client Project Name: PW NORM 2017

Client Project Number: 10048

Client PO Number: CT 2017-3066

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
149017 Wellington Rapid Infiltrati	1705158-1		WATER	08-May-17	10:40
149017 Wellington Rapid Infiltrati	1705158-2		WATER	08-May-17	10:40



TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

Turnaround time for samples received after 2 p.m. will be calculated beginning from the next business day.

Turnaround time for samples received Saturday will be calculated beginning from the next business day.

[illegible]

Time Zone (Circle):	MST	Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter	Form 2029																																			
NOTES		<table border="1"> <thead> <tr> <th>RELINQUISHED BY</th> <th>SIGNATURE</th> <th>PRINTED NAME</th> <th>DATE</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td>RELINQUISHED BY</td> <td><i>[Signature]</i></td> <td>RAUCAN</td> <td>5/8/17</td> <td>11:00</td> </tr> <tr> <td>RECEIVED BY</td> <td><i>[Signature]</i></td> <td>C Trumble</td> <td>5-8-17</td> <td>1110</td> </tr> <tr> <td>RELINQUISHED BY</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>RECEIVED BY</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>RELINQUISHED BY</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>RECEIVED BY</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		RELINQUISHED BY	SIGNATURE	PRINTED NAME	DATE	TIME	RELINQUISHED BY	<i>[Signature]</i>	RAUCAN	5/8/17	11:00	RECEIVED BY	<i>[Signature]</i>	C Trumble	5-8-17	1110	RELINQUISHED BY					RECEIVED BY					RELINQUISHED BY					RECEIVED BY				
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GAB prepped (coprecip) and counted within 4 days of sampling 224Ra prepped and counted within 4 days of sampling 232Th only if 6020 "total" U > 3µg/l 238Th only if 6020 "total" Th > 3µg/l		<table border="1"> <thead> <tr> <th>REPORT LEVEL / QC REQUESTED</th> <th>Summary (Standard QC)</th> </tr> </thead> <tbody> <tr> <td>LEVEL II</td> <td></td> </tr> <tr> <td>LEVEL III (Std)</td> <td></td> </tr> <tr> <td>QC + (same)</td> <td></td> </tr> <tr> <td>LEVEL IV (Std QC + forms + new data)</td> <td>X</td> </tr> </tbody> </table>		REPORT LEVEL / QC REQUESTED	Summary (Standard QC)	LEVEL II		LEVEL III (Std)		QC + (same)		LEVEL IV (Std QC + forms + new data)	X																									
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QC + (same)																																						
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PRESERVATION KEY		1-HCl 2-HNO3 3-H2SO4 4-HNO3 5-NaOH/2-Acetate 6-Ha/504 7-4°C 8-Other																																				



TF: (800) 443-1511 PH: (870) 490-1511 FX: (970) 490-1522

Turnaround time for samples received after 2 p.m. will be calculated beginning from the next business day.

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1705158

[illegible]



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: COGCC

Workorder No: 1705158

Project Manager: SS

Initials: EDT Date: 5-8-17

1. Does this project require any special handling in addition to standard ALS procedures?		YES	<u>NO</u>
2. Are custody seals on shipping containers intact?	<u>NONE</u>	YES	NO
3. Are Custody seals on sample containers intact?	<u>NONE</u>	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		<u>YES</u>	NO
5. Are the COC and bottle labels complete and legible?		<u>YES</u>	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		<u>YES</u>	NO
7. Were airbills / shipping documents present and/or removable?	<u>DROP OFF</u>	YES	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	N/A	<u>YES</u>	NO
9. Are all aqueous non-preserved samples pH 4-9?	N/A	<u>YES</u>	NO
10. Is there sufficient sample for the requested analyses?		<u>YES</u>	NO
11. Were all samples placed in the proper containers for the requested analyses?		<u>YES</u>	NO
12. Are all samples within holding times for the requested analyses?		<u>YES</u>	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		<u>YES</u>	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ____ < green pea ____ > green pea	N/A	<u>YES</u>	NO
15. Do any water samples contain sediment? Amount Amount of sediment: ____ dusting ____ moderate ____ heavy	N/A	YES	<u>NO</u>
16. Were the samples shipped on ice?		<u>YES</u>	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: <u>#2</u> #4 RAD ONLY		<u>YES</u>	NO
Cooler #: <u>1</u>			
Temperature (°C): <u>4.6</u>			
No. of custody seals on cooler: <u>0</u>			
External µR/hr reading: <u>NA</u>			
Background µR/hr reading: <u>NA</u>			
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? YES / NO <u>NA</u> (If no, see Form 008.)			

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

If applicable, was the client contacted? YES / NO / NA Contact: Shiloh Lemay Date/Time: _____

Project Manager Signature / Date: Shiloh Lemay

Sample Results

BICARBONATE AS CaCO₃

Method SM2320B

Sample Results

Lab Name: ALS -- Fort Collins
Client Name: COGCC
Client Project ID: PW NORM 2017 10048
Work Order Number: 1705158
Reporting Basis: As Received
Prep Method: NONE
Analyst: Alyssa M. Gruziano
Final Volume: 100 ml
Matrix: WATER
Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ/LOD	Flag	Sample Aliquot
149017 Wellington Rapid Infiltr	1705158-1	05/08/2017	05/23/2017	05/23/2017	N/A	1	1300	100		5 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: AK1705158-1

Date Printed: Thursday, May 25, 2017

ALS -- Fort Collins

LIMS Version: 6.842

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CARBONATE AS CaCO₃

Method SM2320B

Sample Results

Lab Name: ALS -- Fort Collins
Client Name: COGCC
Client Project ID: PW NORM 2017 10048
Work Order Number: 1705158
Reporting Basis: As Received
Prep Method: NONE
Analyst: Alyssa M. Gruziano
Final Volume: 100 ml
Matrix: WATER
Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/LOQ/LOD	Flag	Sample Aliquot
149017 Wellington Rapid Infiltr	1705158-1	05/08/2017	05/23/2017	05/23/2017	N/A	1	100	100	U	5 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: AK1705158-1

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TOTAL ALKALINITY AS CaCO3

Method SM2320B

Sample Results

Lab Name: ALS -- Fort Collins
Client Name: COGCC
Client Project ID: PW NORM 2017 10048
Work Order Number: 1705158
Reporting Basis: As Received
Prep Method: NONE
Analyst: Alyssa M. Gruziano
Final Volume: 100 ml
Matrix: WATER
Result Units: MG/L

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ/LOD	Flag	Sample Aliquot
149017 Wellington Rapid Infiltr	1705158-1	05/08/2017	05/23/2017	05/23/2017	N/A	1	1300	100		5 ml

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

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pH

Method SW9040

Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Field ID:	149017 Wellington Rapid Inf
Lab ID:	1705158-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 08-May-17

Date Extracted: 11-May-17

Date Analyzed: 11-May-17

Prep Method: NONE

Prep Batch: PH170511-1

QCBatchID: PH170511-1-1

Run ID: PH170511-1A1

Cleanup: NONE

Basis: As Received

File Name:

Analyst: Hannah M. Alt

Sample Aliquot: 20 ML

Final Volume: 20 ML

Result Units: pH

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	DL
10-29-7	PH AnalysisTime: 12:00	1	8.45		0.1	

Data Package ID: pH1705158-1

Date Printed: Thursday, May 25, 2017

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Specific Conductance in Water

Method SM2510B

Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Field ID:	149017 Wellington Rapid Inf
Lab ID:	1705158-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 08-May-17

Date Extracted: 11-May-17

Date Analyzed: 11-May-17

Prep Method: NONE

Prep Batch: SC170511-1

QCBatchID: SC170511-1-1

Run ID: SC170511-1A1

Cleanup: NONE

Basis: As Received

File Name:

Analyst: Hannah M. Alt

Sample Aliquot: 20 ML

Final Volume: 20 ML

Result Units: umhos/cm

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	DL
10-34-4	SPECIFIC CONDUCTIVITY AnalysisTime: 10:45	1	3410		1	

Data Package ID: SC1705158-1

Date Printed: Thursday, May 25, 2017

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Total Dissolved Solids

Method SM2540C

Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Field ID:	149017 Wellington Rapid Inf
Lab ID:	1705158-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 08-May-17

Date Extracted: 10-May-17

Date Analyzed: 11-May-17

Prep Method: METHOD

Prep Batch: TD170510-1

QCBatchID: TD170510-1-1

Run ID: TD170511-1A1

Cleanup: NONE

Basis: As Received

File Name: Manual Entry

Analyst: Hannah M. Alt

Sample Aliquot: 25 ML

Final Volume: 25 ML

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	DL
10-33-3	TOTAL DISSOLVED SOLIDS	1	2200		80	

Data Package ID: TD1705158-1

Date Printed: Thursday, May 25, 2017

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Total Suspended Solids

Method SM2540D

Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Field ID:	149017 Wellington Rapid Inf
Lab ID:	1705158-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 08-May-17

Date Extracted: 15-May-17

Date Analyzed: 16-May-17

Prep Method: METHOD

Prep Batch: TS170515-1

QCBatchID: TS170515-1-1

Run ID: TS170516-1A1

Cleanup: NONE

Basis: As Received

File Name: Manual Entry

Analyst: Hannah M. Alt

Sample Aliquot: 100 ML

Final Volume: 100 ML

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	DL
10-32-2	TOTAL SUSPENDED SOLIDS	1	20	U	20	

Data Package ID: TS1705158-1

Date Printed: Thursday, May 25, 2017

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Ion Chromatography

Method SW9056

Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Field ID: 149017 Wellington Rapid Inf
Lab ID: 1705158-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 08-May-17

Date Extracted: 11-May-17

Date Analyzed: 11-May-17

Prep Method: NONE

Prep Batch: IC170511-1

QCBatchID: IC170511-1-2

Run ID: IC170511-1a3

Cleanup: NONE

Basis: As Received

File Name: 70511_021.dxd

Analyst: Alyssa M. Gruziano

Sample Aliquot: 5 ml

Final Volume: 5 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	MDL
16984-48-8	FLUORIDE AnalysisTime: 13:20	5	3.8		0.5	0.15
16887-00-6	CHLORIDE AnalysisTime: 15:42	25	360		5	1.5
24959-67-9	BROMIDE AnalysisTime: 13:20	5	3		1	0.3
14808-79-8	SULFATE AnalysisTime: 13:20	5	13		5	0.75

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Summary Report Forms

BICARBONATE AS CaCO₃

Method SM2320B

Method Blank

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: AK170523-1MB

Sample Matrix: WATER

% Moisture: N/A

Prep Batch: AK170523-1

QCBatchID: AK170523-1-3

Run ID: AK170523-1a1

Cleanup: NONE

Basis: N/A

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ	Flag
AK170523-1MB	5/23/2017	05/23/2017	N/A	1	5	5	U

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: AK1705158-1

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CARBONATE AS CaCO₃

Method SM2320B

Method Blank

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: AK170523-1MB

Sample Matrix: WATER

% Moisture: N/A

Prep Batch: AK170523-1

QCBatchID: AK170523-1-3

Run ID: AK170523-1a1

Cleanup: NONE

Basis: N/A

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ	Flag
AK170523-1MB	5/23/2017	05/23/2017	N/A	1	5	5	U

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

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TOTAL ALKALINITY AS CaCO3

Method SM2320B

Method Blank

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: AK170523-1MB

Sample Matrix: WATER

% Moisture: N/A

Prep Batch: AK170523-1

QCBatchID: AK170523-1-3

Run ID: AK170523-1a1

Cleanup: NONE

Basis: N/A

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Lab ID	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit/ LOQ	Flag
AK170523-1MB	5/23/2017	05/23/2017	N/A	1	5	5	U

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

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TOTAL ALKALINITY AS CaCO₃

Method SM2320B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: AK170523-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 23-May-17

Date Analyzed: 23-May-17

Prep Method: NONE

Prep Batch: AK170523-1

QCBatchID: AK170523-1-3

Run ID: AK170523-1a1

Cleanup: NONE

Basis: N/A

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
	TOTAL ALKALINITY AS CaCO ₃	100	101	5		101	85 - 115

Lab ID: AK170523-1LCSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 23-May-17

Date Analyzed: 23-May-17

Prep Method: NONE

Prep Batch: AK170523-1

QCBatchID: AK170523-1-3

Run ID: AK170523-1a1

Cleanup: NONE

Basis: N/A

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
	TOTAL ALKALINITY AS CaCO ₃	100	102	5		102	15	1

Data Package ID: AK1705158-1

Date Printed: Thursday, May 25, 2017

ALS -- Fort Collins

LIMS Version: 6.842

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BICARBONATE AS CaCO3

Method SM2320B

Duplicate Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Reporting Basis: As Received

Sample Aliquot: 5 ml

Final Volume: 100ml

Matrix: WATER

Result Units MG/L

Client Sample ID	Lab ID	Date Prepared	Date Analyzed	Dilution Factor	Duplicate Result	Dup Qual	Sample Result	Samp Qual	Reporting Limit	RPD	RPD Limit
149017 Wellington Rapid Infiltr	1705158-1D	05/23/2017	05/23/2017	1	1380		1300		100	3	15

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: AK1705158-1

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CARBONATE AS CaCO₃

Method SM2320B

Duplicate Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Reporting Basis: As Received

Sample Aliquot: 5 ml

Final Volume: 100ml

Matrix: WATER

Result Units MG/L

Client Sample ID	Lab ID	Date Prepared	Date Analyzed	Dilution Factor	Duplicate Result	Dup Qual	Sample Result	Samp Qual	Reporting Limit	RPD	RPD Limit
149017 Wellington Rapid Infiltr	1705158-1D	05/23/2017	05/23/2017	1	100	U	100	U	100		15

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: AK1705158-1

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TOTAL ALKALINITY AS CaCO3

Method SM2320B

Duplicate Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Reporting Basis: As Received

Sample Aliquot: 5 ml

Final Volume: 100ml

Matrix: WATER

Result Units MG/L

Client Sample ID	Lab ID	Date Prepared	Date Analyzed	Dilution Factor	Duplicate Result	Dup Qual	Sample Result	Samp Qual	Reporting Limit	RPD	RPD Limit
149017 Wellington Rapid Infiltr	1705158-1D	05/23/2017	05/23/2017	1	1380		1300		100	3	15

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

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Prep Batch ID: AK170523-1

Start Date: 05/23/17

End Date: 05/23/17

Concentration Method: NONE

Batch Created By: amg

Start Time: 11:00

End Time: 11:30

Extract Method: NONE

Date Created: 05/23/17

Prep Analyst: Alyssa M. Gruziano

Initial Volume Units: ml

Time Created: 12:13

Comments:

Final Volume Units: ml

Validated By: mmj

Date Validated: 05/23/17

Time Validated: 16:57

QC Batch ID: AK170523-1-3

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
AK170523-1	MB	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705158
AK170523-1	LCS	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705158
AK170523-1	LCSD	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705158
1705158-1	DUP	149017 Wellington Rapid Infiltrati	WATER	5/8/2017	5	100	NONE	1	1705158
1705256-24	DUP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1705256
1705158-1	SMP	149017 Wellington Rapid Infiltrati	WATER	5/8/2017	5	100	NONE	1	1705158
1705202-1	SMP	XXXXXX	WATER	XXXXXX	5	100	NONE	1	1705202
1705203-1	SMP	XXXXXX	WATER	XXXXXX	5	100	NONE	1	1705203
1705240-1	SMP	XXXXXX	WATER	XXXXXX	10	100	NONE	1	1705240
1705242-1	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1705242
1705243-1	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1705243
1705256-24	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1705256
1705331-1	SMP	XXXXXX	WATER	XXXXXX	25	100	NONE	1	1705331

QC Types

CAR	Carrier reference sample	DUP	Laboratory Duplicate
LCS	Laboratory Control Sample	LCSD	Laboratory Control Sample Duplicate
MB	Method Blank	MS	Laboratory Matrix Spike
MSD	Laboratory Matrix Spike Duplicate	REP	Sample replicate
RVS	Reporting Level Verification Standard	SMP	Field Sample
SYS	Sample Yield Spike		

Prep Batch ID: PH170511-1

Start Date: 05/11/17

End Date: 05/11/17

Concentration Method: NONE

Batch Created By: hma

Start Time: 10:20

End Time: 10:25

Extract Method: NONE

Date Created: 05/11/17

Prep Analyst: Hannah M. Alt

Initial Volume Units: ml

Time Created: 11:32

Final Volume Units: ml

Validated By: hma

Date Validated: 05/12/17

Time Validated: 8:26

Comments:

QC Batch ID: PH170511-1-1

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
CCV	CCV	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705212
ICV	ICV	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705212
1705212-1	DUP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705212
1705158-1	SMP	149017 Wellington Rapid Infiltrati	WATER	5/8/2017	20	20	NONE	1	1705158
1705177-1	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705177
1705177-2	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705177
1705177-3	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705177
1705202-1	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705202
1705203-1	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705203
1705212-1	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705212

QC Types

CAR	Carrier reference sample	DUP	Laboratory Duplicate
LCS	Laboratory Control Sample	LCSD	Laboratory Control Sample Duplicate
MB	Method Blank	MS	Laboratory Matrix Spike
MSD	Laboratory Matrix Spike Duplicate	REP	Sample replicate
RVS	Reporting Level Verification Standard	SMP	Field Sample
SYS	Sample Yield Spike		

PH
Method SW9040
Calibration Verifications

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Run ID: PH170511-1A1

Result Units: pH

Lab ID	Verification Type	Date Analyzed	Time Analyzed	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
ICV	Initial Calibration	5/11/2017		7	7.03	0.1	N/A		6.95 - 7.05
CCV	Continuing Calibration	5/11/2017		7	7.01	0.1	N/A		6.9 - 7.1

Data Package ID: *pH1705158-1*

Date Printed: Thursday, May 25, 2017

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Specific Conductance in Water

Method SM2510B

Duplicate Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Field ID: 149017 Wellington Rapid Infi

Lab ID: 1705158-1D

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 05/08/2017

Date Extracted: 05/11/2017

Date Analyzed: 05/11/2017

Prep Batch: SC170511-1

QCBatchID: SC170511-1-1

Run ID: SC170511-1A1

Cleanup: NONE

Basis: As Received

File Name:

Sample Aliquot: 20 ml

Final Volume: 20 ml

Result Units: umhos/cm

Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
10-34-4	SPECIFIC CONDUCTIVITY	3410		3500		1	1	3	10

Data Package ID: SC1705158-1

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Prep Batch ID: SC170511-1

Start Date: 05/11/17

End Date: 05/11/17

Concentration Method: NONE

Batch Created By: hma

Start Time: 10:20

End Time: 10:25

Extract Method: NONE

Date Created: 05/11/17

Prep Analyst: Hannah M. Alt

Initial Volume Units: ml

Time Created: 11:20

Comments:

Final Volume Units: ml

Validated By: hma

Date Validated: 05/12/17

Time Validated: 8:33

QC Batch ID: SC170511-1-1

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
CCV	CCV	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705158
ICV	ICV	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705158
1705158-1	DUP	149017 Wellington Rapid Infiltrati	WATER	5/8/2017	20	20	NONE	1	1705158
1705158-1	SMP	149017 Wellington Rapid Infiltrati	WATER	5/8/2017	20	20	NONE	1	1705158
1705177-1	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705177
1705177-2	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705177
1705177-3	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705177
1705202-1	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705202
1705203-1	SMP	XXXXXX	WATER	XXXXXX	20	20	NONE	1	1705203

QC Types

CAR	Carrier reference sample	DUP	Laboratory Duplicate
LCS	Laboratory Control Sample	LCSD	Laboratory Control Sample Duplicate
MB	Method Blank	MS	Laboratory Matrix Spike
MSD	Laboratory Matrix Spike Duplicate	REP	Sample replicate
RVS	Reporting Level Verification Standard	SMP	Field Sample
SYS	Sample Yield Spike		

SPECIFIC CONDUCTIVITY

Method SM2510B

Calibration Verifications

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Run ID: SC170511-1A1

Result Units: umhos/c

Lab ID	Verification Type	Date Analyzed	Time Analyzed	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
ICV	Initial Calibration	5/11/2017		718	744	1	N/A	104	646.2 - 789.7
CCV	Continuing Calibration	5/11/2017		1410	1500	1	N/A	106	1271.7 - 1554.3

Data Package ID: *sc1705158-1*

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Total Dissolved Solids

Method SM2540C

Method Blank

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: TD170510-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 10-May-17

Date Analyzed: 11-May-17

Prep Method: METHOD

Prep Batch: TD170510-1

QCBatchID: TD170510-1-1

Run ID: TD170511-1A1

Cleanup: NONE

Basis: N/A

File Name: Manual Entry

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	Result Qualifier	Reporting Limit	MDL
10-33-3	TOTAL DISSOLVED SOLIDS	1	20	U	20	

Data Package ID: TD1705158-1

Date Printed: Thursday, May 25, 2017

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Total Dissolved Solids

Method SM2540C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: TD170510-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 05/10/2017

Date Analyzed: 05/11/2017

Prep Method: METHOD

Prep Batch: TD170510-1

QCBatchID: TD170510-1-1

Run ID: TD170511-1A1

Cleanup: NONE

Basis: N/A

File Name: Manual Entry

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
10-33-3	TOTAL DISSOLVED SOLIDS	400	424	20		106	85 - 115%

Lab ID: TD170510-1LCSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 05/10/2017

Date Analyzed: 05/11/2017

Prep Method: METHOD

Prep Batch: TD170510-1

QCBatchID: TD170510-1-1

Run ID: TD170511-1A1

Cleanup: NONE

Basis: N/A

File Name: Manual Entry

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
10-33-3	TOTAL DISSOLVED SOLIDS	400	440	20		110	5	4

Data Package ID: TD1705158-1

Prep Batch ID: TD170510-1

Start Date: 05/10/17

End Date: 05/10/17

Concentration Method: NONE

Batch Created By: hma

Start Time: 10:00

End Time: 11:00

Extract Method: METHOD

Date Created: 05/10/17

Prep Analyst: Hannah M. Alt

Initial Volume Units: ml

Time Created: 10:54

Comments:

Final Volume Units: ml

Validated By: hma

Date Validated: 05/11/17

Time Validated: 17:13

QC Batch ID: TD170510-1-1

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
TD170510-1	MB	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705138
TD170510-1	LCS	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705138
TD170510-1	LCSD	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705138
1705138-2	DUP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705138
1705082-1	SMP	XXXXXX	WATER	XXXXXX	50	50	NONE	1	1705082
1705095-1	SMP	XXXXXX	WATER	XXXXXX	1	1	NONE	1	1705095
1705130-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705130
1705130-2	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705130
1705138-10	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705138
1705138-11	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705138
1705138-13	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705138
1705138-15	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705138
1705138-2	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705138
1705138-4	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705138
1705138-5	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705138
1705138-7	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705138
1705140-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705140
1705158-1	SMP	149017 Wellington Rapid Infiltrati	WATER	5/8/2017	25	25	NONE	1	1705158
1705177-1	SMP	XXXXXX	WATER	XXXXXX	2	2	NONE	1	1705177
1705177-2	SMP	XXXXXX	WATER	XXXXXX	2	2	NONE	1	1705177

Prep Batch ID: TD170510-1

Start Date: 05/10/17

End Date: 05/10/17

Concentration Method: NONE

Batch Created By: hma

Start Time: 10:00

End Time: 11:00

Extract Method: METHOD

Date Created: 05/10/17

Prep Analyst: Hannah M. Alt

Initial Volume Units: ml

Time Created: 10:54

Comments:

Final Volume Units: ml

Validated By: hma

Date Validated: 05/11/17

Time Validated: 17:13

Oven Number: 18

	Date	Time	Temp	Units
In Oven:	5/10/2017	10:30	180	CELSIUS
Out of Oven:	5/10/2017	11:30	180	CELSIUS

QC Types

CAR	Carrier reference sample	DUP	Laboratory Duplicate
LCS	Laboratory Control Sample	LCSD	Laboratory Control Sample Duplicate
MB	Method Blank	MS	Laboratory Matrix Spike
MSD	Laboratory Matrix Spike Duplicate	REP	Sample replicate
RVS	Reporting Level Verification Standard	SMP	Field Sample
SYS	Sample Yield Spike		

Total Suspended Solids

Method SM2540D

Method Blank

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: TS170515-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 15-May-17

Date Analyzed: 16-May-17

Prep Method: METHOD

Prep Batch: TS170515-1

QCBatchID: TS170515-1-1

Run ID: TS170516-1A1

Cleanup: NONE

Basis: N/A

File Name: Manual Entry

Sample Aliquot: 500 ml

Final Volume: 500 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	Result Qualifier	Reporting Limit	MDL
10-32-2	TOTAL SUSPENDE SOLIDS	1	4	U	4	

Data Package ID: TS1705158-1

Date Printed: Thursday, May 25, 2017

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Total Suspended Solids

Method SM2540D

Laboratory Control Sample

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: TS170515-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 05/15/2017

Date Analyzed: 05/16/2017

Prep Method: METHOD

Prep Batch: TS170515-1

QCBatchID: TS170515-1-1

Run ID: TS170516-1A1

Cleanup: NONE

Basis: N/A

File Name: Manual Entry

Sample Aliquot: 100 ml

Final Volume: 100 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
10-32-2	TOTAL SUSPENDED SOLIDS	802	762	20		95	85 - 115%

Data Package ID: TS1705158-1

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Prep Batch ID: TS170515-1

Start Date: 05/15/17

End Date: 05/15/17

Concentration Method: NONE

Batch Created By: hma

Start Time: 10:00

End Time: 11:35

Extract Method: METHOD

Date Created: 05/15/17

Prep Analyst: Hannah M. Alt

Initial Volume Units: ml

Time Created: 11:35

Comments:

Final Volume Units: ml

Validated By: hma

Date Validated: 05/16/17

Time Validated: 12:08

QC Batch ID: TS170515-1-1

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
TS170515-1	MB	XXXXXX	WATER	XXXXXX	500	500	NONE	1	1705212
TS170515-1	LCS	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705212
1705212-1	DUP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705212
1705158-1	SMP	149017 Wellington Rapid Infiltrati	WATER	5/8/2017	100	100	NONE	1	1705158
1705177-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705177
1705177-2	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705177
1705177-3	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705177
1705202-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705202
1705203-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705203
1705212-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705212
1705240-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705240
1705242-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705242
1705243-1	SMP	XXXXXX	WATER	XXXXXX	100	100	NONE	1	1705243

Oven Number: 12

Date

Time

Temp

Units

In Oven:

5/15/2017

11:35

85

CELSIUS

Out of Oven:

5/16/2017

8:15

85

CELSIUS

QC Types

CAR	Carrier reference sample	DUP	Laboratory Duplicate
LCS	Laboratory Control Sample	LCSD	Laboratory Control Sample Duplicate
MB	Method Blank	MS	Laboratory Matrix Spike
MSD	Laboratory Matrix Spike Duplicate	REP	Sample replicate
RVS	Reporting Level Verification Standard	SMP	Field Sample
SYS	Sample Yield Spike		

Ion Chromatography

Method SW9056

Method Blank

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: IC170511-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 11-May-17

Date Analyzed: 11-May-17

Prep Batch: IC170511-1

QCBatchID: IC170511-1-2

Run ID: IC170511-1a3

Cleanup: NONE

Basis: N/A

File Name: 70511_014.dxd

Sample Aliquot: 5 ml

Final Volume: 5 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	Result Qualifier	Reporting Limit	MDL
16984-48-8	FLUORIDE	1	0.03	U	0.1	0.03
16887-00-6	CHLORIDE	1	0.06	U	0.2	0.06
24959-67-9	BROMIDE	1	0.06	U	0.2	0.06
14808-79-8	SULFATE	1	0.15	U	1	0.15

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Ion Chromatography

Method SW9056

Laboratory Control Sample

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: IC170511-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 05/11/2017

Date Analyzed: 05/11/2017

Prep Method: NONE

Prep Batch: IC170511-1

QCBatchID: IC170511-1-2

Run ID: IC170511-1a3

Cleanup: NONE

Basis: N/A

File Name: 70511_015.dxd

Sample Aliquot: 5 ml

Final Volume: 5 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
16984-48-8	FLUORIDE	2	1.9	0.1		95	90 - 110%
16887-00-6	CHLORIDE	5	4.96	0.2		99	90 - 110%
24959-67-9	BROMIDE	5	4.93	0.2		99	90 - 110%
14808-79-8	SULFATE	20	19.3	1		97	90 - 110%

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Prep Batch ID: IC170511-1

Start Date: 05/11/17

End Date: 05/11/17

Concentration Method: NONE

Batch Created By: amg

Start Time: 10:30

End Time: 14:20

Extract Method: NONE

Date Created: 05/11/17

Prep Analyst: Alyssa M. Gruziano

Initial Volume Units: ml

Time Created: 10:47

Final Volume Units: ml

Validated By: amg

Date Validated: 05/11/17

Time Validated: 14:21

Comments:

QC Batch ID: IC170511-1-2

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
IC170511-1	MB	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1705095
IC170511-1	LCS	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1705095
IC170511-1	LCSD	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1705095
1705095-1	SMP	XXXXXX	WATER	XXXXXX	5	5	NONE	1	1705095
1705158-1	SMP	149017 Wellington Rapid Infiltrati	WATER	5/8/2017	5	5	NONE	1	1705158

QC Types

CAR	Carrier reference sample	DUP	Laboratory Duplicate
LCS	Laboratory Control Sample	LCSD	Laboratory Control Sample Duplicate
MB	Method Blank	MS	Laboratory Matrix Spike
MSD	Laboratory Matrix Spike Duplicate	REP	Sample replicate
RVS	Reporting Level Verification Standard	SMP	Field Sample
SYS	Sample Yield Spike		

Ion Chromatography

Method SW9056 Calibration Verifications

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: ICV

QC Type: Initial Calibration

File Name: 70427_009.dxd

Run ID: IC170511-1a3

Date Analyzed: 04/27/2017

Time Analyzed: 13:14

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16984-48-8	FLUORIDE	2.5	2.37	0.1		95	90 - 110%
16887-00-6	CHLORIDE	5	4.60	0.2		92	90 - 110%
24959-67-9	BROMIDE	5	4.63	0.2		93	90 - 110%
14808-79-8	SULFATE	25	23.4	1		94	90 - 110%

Data Package ID: IC1705158-1

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Ion Chromatography

Method SW9056 Calibration Verifications

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: CCV1

QC Type: Continuing Calibration

File Name: 70511_012.dxd

Run ID: IC170511-1a3

Date Analyzed: 05/11/2017

Time Analyzed: 11:04

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16984-48-8	FLUORIDE	5	4.76	0.1		95	90 - 110%
16887-00-6	CHLORIDE	10	10.0	0.2		100	90 - 110%
24959-67-9	BROMIDE	10	9.89	0.2		99	90 - 110%
14808-79-8	SULFATE	50	52.5	1		105	90 - 110%

Data Package ID: IC1705158-1

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Ion Chromatography

Method SW9056 Calibration Verifications

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: CCV2

QC Type: Continuing Calibration

File Name: 70511_024.dxd

Run ID: IC170511-1a3

Date Analyzed: 05/11/2017

Time Analyzed: 14:05

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16984-48-8	FLUORIDE	5	4.74	0.1		95	90 - 110%
16887-00-6	CHLORIDE	10	9.79	0.2		98	90 - 110%
24959-67-9	BROMIDE	10	9.66	0.2		97	90 - 110%
14808-79-8	SULFATE	50	49.1	1		98	90 - 110%

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Ion Chromatography

Method SW9056 Calibration Verifications

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: CCV3

QC Type: Continuing Calibration

File Name: 70511_036.dxd

Run ID: IC170511-1a3

Date Analyzed: 05/11/2017

Time Analyzed: 17:07

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16984-48-8	FLUORIDE	5	4.80	0.1		96	90 - 110%
16887-00-6	CHLORIDE	10	9.81	0.2		98	90 - 110%
24959-67-9	BROMIDE	10	9.64	0.2		96	90 - 110%
14808-79-8	SULFATE	50	49.4	1		99	90 - 110%

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Ion Chromatography

Method SW9056 Calibration Verifications

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: CCV4

QC Type: Continuing Calibration

File Name: 70511_048.dxd

Run ID: IC170511-1a3

Date Analyzed: 05/11/2017

Time Analyzed: 20:08

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16984-48-8	FLUORIDE	5	4.86	0.1		97	90 - 110%
16887-00-6	CHLORIDE	10	9.82	0.2		98	90 - 110%
24959-67-9	BROMIDE	10	9.66	0.2		97	90 - 110%
14808-79-8	SULFATE	50	49.4	1		99	90 - 110%

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Ion Chromatography

Method SW9056 Calibration Verifications

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: CCV5

QC Type: Continuing Calibration

File Name: 70511_060.dxd

Run ID: IC170511-1a3

Date Analyzed: 05/11/2017

Time Analyzed: 23:09

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16984-48-8	FLUORIDE	5	4.88	0.1		98	90 - 110%
16887-00-6	CHLORIDE	10	9.83	0.2		98	90 - 110%
24959-67-9	BROMIDE	10	9.61	0.2		96	90 - 110%
14808-79-8	SULFATE	50	49.3	1		99	90 - 110%

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Ion Chromatography

Method SW9056 Calibration Verifications

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: CCV6

QC Type: Continuing Calibration

File Name: 70511_067.dxd

Run ID: IC170511-1a3

Date Analyzed: 05/12/2017

Time Analyzed: 0:55

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16984-48-8	FLUORIDE	5	4.87	0.1		97	90 - 110%
16887-00-6	CHLORIDE	10	9.78	0.2		98	90 - 110%
24959-67-9	BROMIDE	10	9.58	0.2		96	90 - 110%
14808-79-8	SULFATE	50	49.1	1		98	90 - 110%

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Ion Chromatography

Method SW9056 Calibration Verifications

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: ICV

QC Type: Initial Calibration

File Name: 70427_009.dxd

Run ID: IC170512-1a4

Date Analyzed: 04/27/2017

Time Analyzed: 13:14

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16887-00-6	CHLORIDE	5	4.60	0.2		92	90 - 110%

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Ion Chromatography

Method SW9056 Calibration Verifications

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: CCV1

QC Type: Continuing Calibration

File Name: 70512_012.dxd

Run ID: IC170512-1a4

Date Analyzed: 05/12/2017

Time Analyzed: 12:11

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16887-00-6	CHLORIDE	10	9.71	0.2		97	90 - 110%

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Ion Chromatography

Method SW9056 Calibration Verifications

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: CCV2

QC Type: Continuing Calibration

File Name: 70512_024.dxd

Run ID: IC170512-1a4

Date Analyzed: 05/12/2017

Time Analyzed: 15:12

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16887-00-6	CHLORIDE	10	9.61	0.2		96	90 - 110%

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Ion Chromatography

Method SW9056 Calibration Verifications

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: CCV3

QC Type: Continuing Calibration

File Name: 70512_036.DXD

Run ID: IC170512-1a4

Date Analyzed: 05/12/2017

Time Analyzed: 18:13

Result Units: MG/L

CASNO	Target Analyte	Spike Added	Result	Reporting Limit	Result Qualifier	% Rec.	Control Limits
16887-00-6	CHLORIDE	10	9.68	0.2		97	90 - 110%

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Ion Chromatography

Method SW9056

Calibration Blanks

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: ICB

QC Type: Initial Calibration

Run ID: IC170511-1a3

Date Analyzed: 04/27/2017

Time Analyzed: 1:29:27 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16984-48-8	FLUORIDE	0.03	0.1	U
16887-00-6	CHLORIDE	0.087	0.2	J
24959-67-9	BROMIDE	0.06	0.2	U
14808-79-8	SULFATE	0.15	1	U

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Ion Chromatography

Method SW9056

Calibration Blanks

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: CCB1

QC Type: Continuing Calibration

Run ID: IC170511-1a3

Date Analyzed: 05/11/2017

Time Analyzed: 11:19:30 AM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16984-48-8	FLUORIDE	0.03	0.1	U
16887-00-6	CHLORIDE	0.06	0.2	U
24959-67-9	BROMIDE	0.06	0.2	U
14808-79-8	SULFATE	0.15	1	U

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Ion Chromatography

Method SW9056

Calibration Blanks

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: CCB2

QC Type: Continuing Calibration

Run ID: IC170511-1a3

Date Analyzed: 05/11/2017

Time Analyzed: 2:20:49 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16984-48-8	FLUORIDE	0.03	0.1	U
16887-00-6	CHLORIDE	0.06	0.2	U
24959-67-9	BROMIDE	0.06	0.2	U
14808-79-8	SULFATE	0.15	1	U

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Ion Chromatography

Method SW9056

Calibration Blanks

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: CCB3

QC Type: Continuing Calibration

Run ID: IC170511-1a3

Date Analyzed: 05/11/2017

Time Analyzed: 5:22:11 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16984-48-8	FLUORIDE	0.03	0.1	U
16887-00-6	CHLORIDE	0.06	0.2	U
24959-67-9	BROMIDE	0.06	0.2	U
14808-79-8	SULFATE	0.15	1	U

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Ion Chromatography

Method SW9056

Calibration Blanks

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: CCB4

QC Type: Continuing Calibration

Run ID: IC170511-1a3

Date Analyzed: 05/11/2017

Time Analyzed: 8:23:36 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16984-48-8	FLUORIDE	0.03	0.1	U
16887-00-6	CHLORIDE	0.06	0.2	U
24959-67-9	BROMIDE	0.06	0.2	U
14808-79-8	SULFATE	0.15	1	U

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Ion Chromatography

Method SW9056

Calibration Blanks

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: CCB5

QC Type: Continuing Calibration

Run ID: IC170511-1a3

Date Analyzed: 05/11/2017

Time Analyzed: 11:24:58 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16984-48-8	FLUORIDE	0.03	0.1	U
16887-00-6	CHLORIDE	0.0842	0.2	J
24959-67-9	BROMIDE	0.06	0.2	U
14808-79-8	SULFATE	0.15	1	U

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Ion Chromatography

Method SW9056

Calibration Blanks

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: CCB6

QC Type: Continuing Calibration

Run ID: IC170511-1a3

Date Analyzed: 05/12/2017

Time Analyzed: 1:10:47 AM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16984-48-8	FLUORIDE	0.0375	0.1	J
16887-00-6	CHLORIDE	0.0817	0.2	J
24959-67-9	BROMIDE	0.06	0.2	U
14808-79-8	SULFATE	0.15	1	U

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Ion Chromatography

Method SW9056

Calibration Blanks

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: ICB

QC Type: Initial Calibration

Run ID: IC170512-1a4

Date Analyzed: 04/27/2017

Time Analyzed: 1:29:27 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16887-00-6	CHLORIDE	0.087	0.2	J

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Ion Chromatography

Method SW9056

Calibration Blanks

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: CCB1

QC Type: Continuing Calibration

Run ID: IC170512-1a4

Date Analyzed: 05/12/2017

Time Analyzed: 12:26:08 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16887-00-6	CHLORIDE	0.06	0.2	U

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Ion Chromatography

Method SW9056

Calibration Blanks

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: CCB2

QC Type: Continuing Calibration

Run ID: IC170512-1a4

Date Analyzed: 05/12/2017

Time Analyzed: 3:27:28 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16887-00-6	CHLORIDE	0.06	0.2	U

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Ion Chromatography

Method SW9056

Calibration Blanks

Lab Name: ALS -- Fort Collins

Work Order Number: 1705158

Client Name: COGCC

ClientProject ID: PW NORM 2017 10048

Lab ID: CCB3

QC Type: Continuing Calibration

Run ID: IC170512-1a4

Date Analyzed: 05/12/2017

Time Analyzed: 6:28:48 PM

Result Units: MG/L

CASNO	Target Analyte	Result	Reporting Limit	Result Qualifier
16887-00-6	CHLORIDE	0.06	0.2	U

Data Package ID: IC1705158-1

Date Printed: Thursday, May 25, 2017

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Raw Data

Alkalinity Raw Data Worksheet

Anal Run ID **AK170523-1a1**

Anal Start Date **5/23/2017**

Standardization Ref ID **AlkalinityCAL170523-1**

Standardization Of Alkalinity

Rep Num	THAM Conc	Aliq Titrated (mL)	vol to pH 4.5(mL)	HCl Conc(N)	Conc Units	Avg HCl Conc
1	0.2	1	10.55	0.0189574	N	0.01893975
2	0.2	1	10.51	0.0190295	N	
3	0.2	1	10.62	0.0188324	N	

Num	Don't Use	ReRun Num	Lab ID	QC Type	Anal Dil	Aliq Titrated (mL)	vol to pH 8.3(mL)	vol to pH 4.5(mL)	total vol(mL)	HCO ₃ (mg/L as CaCO ₃)	CO ₃ (mg/L as CaCO ₃)	OH (mg/L as CaCO ₃)	Total Alk (mg/L as CaCO ₃)	Expected	%Rec	vol to LL pH(mL)
1	<input type="checkbox"/>	0	AK170523-1	MB	1	100	0	0.23	0.23	2.178071	0	0	2.178071			NA
2	<input type="checkbox"/>	0	AK170523-1	LCS	1	100	5.01	5.68	10.69	6.344816	94.88814	0	101.233			NA
3	<input type="checkbox"/>	0	AK170523-1	LCSD	1	100	5.03	5.77	10.8	7.007704	95.26693	0	102.2746			NA
4	<input type="checkbox"/>	0	1705158-1	SMP	1	5	0	7.1	7.1	1344.722	0	0	1344.722			NA
5	<input type="checkbox"/>	0	1705158-1	DUP	1	5	0	7.3	7.3	1382.602	0	0	1382.602			NA
6	<input type="checkbox"/>	0	1705202-1	SMP	1	5	0	4.84	4.84	916.6838	0	0	916.6838			NA
7	<input type="checkbox"/>	0	1705203-1	SMP	1	5	0	5.95	5.95	1126.915	0	0	1126.915			NA
8	<input type="checkbox"/>	0	1705240-1	SMP	1	10	0	5.68	5.68	537.8888	0	0	537.8888			NA
9	<input type="checkbox"/>	0	1705242-1	SMP	1	25	0	14.01	14.01	530.6917	0	0	530.6917			NA
10	<input type="checkbox"/>	0	1705243-1	SMP	1	25	0	8.05	8.05	304.9299	0	0	304.9299			NA
11	<input type="checkbox"/>	0	1705211-1	SMP	1	25	0	5.25	5.25	198.8673	0	0	198.8673			NA
12	<input type="checkbox"/>	0	1705248-1	SMP	1	25	0	5.22	5.22	197.7309	0	0	197.7309			NA
13	<input type="checkbox"/>	0	1705250-1	SMP	1	25	0	2.89	2.89	109.4717	0	0	109.4717			NA
14	<input type="checkbox"/>	0	1705256-6	SMP	1	25	0	1.55	1.55	58.71321	0	0	58.71321			NA
15	<input type="checkbox"/>	0	1705256-12	SMP	1	25	0	5.65	5.65	214.0191	0	0	214.0191			NA
16	<input type="checkbox"/>	0	1705256-18	SMP	1	25	0	3.19	3.19	120.8356	0	0	120.8356			NA
17	<input type="checkbox"/>	0	1705256-24	SMP	1	25	0	1.3	1.3	49.24334	0	0	49.24334			NA
18	<input type="checkbox"/>	0	1705256-24	DUP	1	25	0	1.29	1.29	48.86454	0	0	48.86454			NA
19	<input type="checkbox"/>	0	1705460-1	SMP	1	1.044	0	1.63	1.63	1478.534	0	0	1478.534			NA
20	<input type="checkbox"/>	0	1705460-2	SMP	1	1.061	0	0.29	0.29	258.8372	0	0	258.8372			NA
21	<input type="checkbox"/>	0	1705331-1	SMP	1	25	0	6.32	6.32	239.3984	0	0	239.3984			NA

Comments:

Standards, Batch QC, and Matrix Spike Information				
ID	Parent ID	Parent Conc	Parent Vol.	Final Vol.
ICV	ST101202-3	10000	1	100
CCV	ST101202-3	10000	1	100

Reagent List:

0.020 N HCl Titrant **RG161102-1**
 Phenolphthalein Indicator **RG141105-2**
 Bromocresol Green Indicator **RG160628-1**
 0.20 N Std. THAM **ST161228-1**
 0.20 N NaCO₃ (ICV, LCS, CCV's - 1.0 mL) **ST161028-2**

pH Calculations and Quality Control Results

Prep & Analysis Date: 5/11/2017

Prep & Analysis Time: 1030

Analyst: HMA

Reagent List:

4.01: ST160428-1

10.01: ST160428-3

7.00 (CCV): ST170317-4

7.00 (ICV): ST160428-5

ID	Temp. (°C)	Method	sample vol (g)	sample vol (mL)	pH Value	QC Acceptance Range (pH units)
pH 4.01	24.7	NA	NA	NA	4.01	+/- 0.05
pH 7.00	24.7	NA	NA	NA	7.00	
pH 10.01	24.7	NA	NA	NA	10.01	
ICV - pH 7.00	24.7	NA	NA	NA	7.03	
1705212-1	24.7	EPA150.1	NA	20.0	6.83	
1705212-1DUP	24.7	EPA150.1	NA	20.0	6.79	
1705212-2	24.7	EPA150.1	NA	20.0	6.78	
1705212-3	24.7	EPA150.1	NA	20.0	6.97	
1705158-1	24.7	SW9040	NA	20.0	8.45	
1705177-1	24.7	SW9040	NA	20.0	7.55	
1705177-2	24.7	SW9040	NA	20.0	7.58	+/- 0.10
1705177-3	24.7	SW9040	NA	20.0	7.10	
1705202-1	24.7	SW9040	NA	20.0	7.75	
1705203-1	24.7	SW9040	NA	20.0	7.75	
CCV- pH 7.00	24.7	NA	NA	NA	7.01	

DUPLICATE SUMMARY (Aq)

ID	native pH Value	duplic pH Value	difference of native - dup	accept. limit
1705212-1	6.83	6.79	0.04	0.2 pH units

pH INFORMATION:

SOP 1126 rev.17 / EPA Method 150.1, 9040C, 9045D, and SM4500-H+ B

Instrument : Fisher Scientific pH / mV meter model 50 (SN C0000643)

Electrode : Orion - Ross Sure-Flow Electrode Model 81-72BN

Specific Conductivity Calculations & Quality Control Results

Prep & Analysis Date: 5/11/2017
 Prep & Analysis Time: 10:20
 Analyst: HMA

ID	Prep Dilution Factor	Initial Sample Volume (mL)	Final Sample Volume (mL)	Temp. °C	Conductivity Instrument Reading	Instrument Units	Calculated Conductivity (umhos/cm)	% Recovery	Recovery Limit
Calibration Standard (*)		30	30		1413	umhos/cm	1413		
ICV-2nd Source (**)		30	30		744	umhos/cm	744	104	646.2 - 789.8
1705158-1	1	30	30		3410	umhos/cm	3410		
1705158-1DUP	1	30	30		3500	umhos/cm	3500		
1705177-1	1	30	30		50200	umhos/cm	50200		
1705177-2	1	30	30		50300	umhos/cm	50300		
1705177-3	1	30	30		27300	umhos/cm	27300		
1705202-1	1	30	30		25100	umhos/cm	25100		
1705203-1	1	30	30		20790	umhos/cm	20790		
CCV-1 (*)		30	30		1497	umhos/cm	1497	106	1271.7 - 1554.3

DUPLICATE SUMMARY

ID	native Spec. Cond. Value	duplic Spec. Cond. Value	RPD %	RPD accept. limit
1705158-1	3410	3500	3	0-10%

Specific Conductivity - EPA Method 120.1/9050A/SM2510B - SOP 1128

Instrument : Fisher Scientific Conductivity/pH/mV meter model accumet 50 (SN C0000643)
 Electrode : YSI Incorporated, Model 3440 (Cell K = 10/cm) OR
 VWR Digital Conductivity Meter w/ electrode NIST (SN A22036)
 Reagent List: 0.010 M KCl Solution [1413umhos/cm] (*): ST170201-4
 0.005 M KCl Solution [718umhos/cm] (**): ST170201-1

TDS Raw Data Worksheet

Anal Run ID **TD170511-1A1**

Anal Start Date **5/11/2017**

Num	Don't Use	ReRun Num	Lab ID	QC Type	Samp Vol (ml)	Empty Beaker (g)	A - Beaker + Residue gross (g)	A - Net mass (mg)	B - Beaker + Residue gross (g)	B - Net mass (mg)	Constant Wt (+/- 0.5mg)	Constant Wt (+/- 4%)	calculated conc (mg/L)	DL (mg/L)
1	<input type="checkbox"/>	0	TD170510-1	MB	100	3.4119	3.4123	0.4	3.4119	0	0.4	NA	0	20
2	<input type="checkbox"/>	0	TD170510-1	LCS	100	3.3867	3.4287	42	3.4291	42.4	0.4	0.95%	424	20
3	<input type="checkbox"/>	0	TD170510-1	LCSD	100	3.3863	3.4301	43.8	3.4303	44	0.2	0.46%	440	20
4	<input type="checkbox"/>	0	1705093-1	SMP	50	3.4191	3.5048	85.7	3.5042	85.1	0.6	0.70%	1702	40
5	<input type="checkbox"/>	0	1705093-1	DUP	50	3.4339	3.5196	85.7	3.5192	85.3	0.4	0.47%	1706	40
6	<input type="checkbox"/>	0	1705082-1	SMP	50	3.3996	3.4556	56	3.4553	55.7	0.3	0.54%	1114	40
7	<input type="checkbox"/>	0	1705095-1	SMP	1	3.4098	3.5764	166.6	3.5754	165.6	1	0.60%	165600	2000
8	<input type="checkbox"/>	0	1705130-1	SMP	100	3.372	3.4379	65.9	3.4379	65.9	0	0.00%	659	20
9	<input type="checkbox"/>	0	1705130-2	SMP	100	3.4346	3.4791	44.5	3.4788	44.2	0.3	0.68%	442	20
10	<input type="checkbox"/>	0	1705138-2	SMP	100	3.4263	3.453	26.7	3.4527	26.4	0.3	1.13%	264	20
11	<input type="checkbox"/>	0	1705138-2	DUP	100	3.4325	3.459	26.5	3.4589	26.4	0.1	0.38%	264	20
12	<input type="checkbox"/>	0	1705138-4	SMP	100	3.4078	3.4384	30.6	3.4375	29.7	0.9	2.99%	297	20
13	<input type="checkbox"/>	0	1705138-5	SMP	100	3.3949	3.4617	66.8	3.4609	66	0.8	1.20%	660	20
14	<input type="checkbox"/>	0	1705138-7	SMP	100	3.4328	3.4652	32.4	3.4647	31.9	0.5	1.56%	319	20
15	<input type="checkbox"/>	0	1705138-10	SMP	100	3.4302	3.4511	20.9	3.451	20.8	0.1	0.48%	208	20
16	<input type="checkbox"/>	0	1705138-11	SMP	100	3.3638	3.3904	26.6	3.39	26.2	0.4	1.52%	262	20
17	<input type="checkbox"/>	0	1705138-13	SMP	100	3.4092	3.4529	43.7	3.4532	44	0.3	0.68%	440	20
18	<input type="checkbox"/>	0	1705138-15	SMP	100	3.3998	3.4423	42.5	3.4424	42.6	0.1	0.24%	426	20
19	<input type="checkbox"/>	0	1705140-1	SMP	100	3.4207	3.5159	95.2	3.5156	94.9	0.3	0.32%	949	20
20	<input type="checkbox"/>	0	1705158-1	SMP	25	3.3776	3.4324	54.8	3.4322	54.6	0.2	0.37%	2184	80
21	<input type="checkbox"/>	0	1705177-1	SMP	2	3.3998	3.4692	69.4	3.4689	69.1	0.3	0.43%	34550	1000
22	<input type="checkbox"/>	0	1705177-2	SMP	2	3.3802	3.4501	69.9	3.4497	69.5	0.4	0.57%	34750	1000

Comments:

Standards, Batch QC, and Matrix Spike Information

ID	Parent ID	Parent Conc	Parent Vol.	Final Vol.
LCS	ST161028-3	40000	1	100

Reagent List:

TDS Spike Solution: 40.0 mg NaCl/mL **ST161028-3**

Shaded values used to determine the calculated concentration

TSS Raw Data Worksheet

Anal Run ID TS170516-1A1

Anal Start Date 5/16/2017

Num	Don't Use	ReRun Num	Lab ID	QC Type	Samp Vol (ml)	Filter + Boat (g)	A - Filer + Boat gross (g)	A - Net mass (mg)	B - Filer + Boat gross (g)	B - Net mass (mg)	Constant Wt (+/- 0.5mg)	Constant Wt (+/- 4%)	calculated conc (mg/L)	DL (mg/L)
1	<input type="checkbox"/>	0	TS170515-1	MB	500	1.3695	1.3697	0.2	1.3697	0.2	0	NA	0.4	4
2	<input type="checkbox"/>	0	TS170515-2	MB	500	1.3809	1.3804	-0.5	1.3808	-0.1	0.4	NA	-0.2	4
3	<input type="checkbox"/>	0	TS170515-1	LCS	100	1.3581	1.4341	76	1.4343	76.2	0.2	0.26%	762	20
4	<input type="checkbox"/>	0	TS170515-2	LCS	100	1.3532	1.4121	58.9	1.4123	59.1	0.2	0.34%	591	20
5	<input type="checkbox"/>	0	TS170515-2	LCSD	100	1.3612	1.4199	58.7	1.4196	58.4	0.3	0.51%	584	20
6	<input type="checkbox"/>	0	1705212-1	SMP	100	1.3524	1.3552	2.8	1.3555	3.1	0.3	10.17%	31	20
7	<input type="checkbox"/>	0	1705212-1	DUP	100	1.3696	1.3727	3.1	1.3726	3	0.1	3.28%	30	20
8	<input type="checkbox"/>	0	1705212-2	SMP	100	1.3486	1.3518	3.2	1.352	3.4	0.2	6.06%	34	20
9	<input type="checkbox"/>	0	1705212-3	SMP	100	1.384	1.3862	2.2	1.3867	2.7	0.5	20.41%	27	20
10	<input type="checkbox"/>	0	1705252-1	SMP	100	1.3807	1.3842	3.5	1.3842	3.5	0	0.00%	35	20
11	<input type="checkbox"/>	0	1705252-1	DUP	100	1.3721	1.3754	3.3	1.3755	3.4	0.1	2.99%	34	20
12	<input type="checkbox"/>	0	1705158-1	SMP	100	1.375	1.3753	0.3	1.3752	0.2	0.1	NA	2	20
13	<input type="checkbox"/>	0	1705177-1	SMP	100	1.3889	1.3991	10.2	1.399	10.1	0.1	0.99%	101	20
14	<input type="checkbox"/>	0	1705177-2	SMP	100	1.3625	1.3809	18.4	1.3808	18.3	0.1	0.54%	183	20
15	<input type="checkbox"/>	0	1705177-3	SMP	100	1.3816	1.3822	0.6	1.3822	0.6	0	NA	6	20
16	<input type="checkbox"/>	0	1705202-1	SMP	100	1.3645	1.4268	62.3	1.4264	61.9	0.4	0.64%	619	20
17	<input type="checkbox"/>	0	1705203-1	SMP	100	1.3854	1.3886	3.2	1.3886	3.2	0	0.00%	32	20
18	<input type="checkbox"/>	0	1705240-1	SMP	100	1.3868	1.3867	-0.1	1.3867	-0.1	0	NA	-1	20
19	<input type="checkbox"/>	0	1705242-1	SMP	100	1.3699	1.3706	0.7	1.3707	0.8	0.1	NA	8	20
20	<input type="checkbox"/>	0	1705243-1	SMP	100	1.3843	1.3852	0.9	1.3853	1	0.1	NA	10	20
21	<input type="checkbox"/>	0	1705228-1	SMP	500	1.3739	1.3791	5.2	1.3787	4.8	0.4	8.00%	9.6	4
22	<input type="checkbox"/>	0	1705271-17	SMP	500	1.372	1.3727	0.7	1.3726	0.6	0.1	NA	1.2	4
23	<input type="checkbox"/>	0	1705275-2	SMP	500	1.3813	1.3922	10.9	1.3918	10.5	0.4	3.74%	21	4
24	<input type="checkbox"/>	0	1705275-4	SMP	500	1.3743	1.3801	5.8	1.3797	5.4	0.4	7.14%	10.8	4
25	<input type="checkbox"/>	0	1705275-5	SMP	500	1.3808	1.3811	0.3	1.3809	0.1	0.2	NA	0.2	4
26	<input type="checkbox"/>	0	1705275-7	SMP	500	1.3643	1.3777	13.4	1.3773	13	0.4	3.03%	26	4
27	<input type="checkbox"/>	0	1705275-10	SMP	500	1.3614	1.3662	4.8	1.3658	4.4	0.4	8.70%	8.8	4
28	<input type="checkbox"/>	0	1705275-11	SMP	500	1.3765	1.3986	22.1	1.3984	21.9	0.2	0.91%	43.8	4
29	<input type="checkbox"/>	0	1705275-13	SMP	500	1.3807	1.3817	1	1.3812	0.5	0.5	NA	1	4
30	<input type="checkbox"/>	0	1705275-15	SMP	500	1.3674	1.3842	16.8	1.384	16.6	0.2	1.20%	33.2	4
31	<input type="checkbox"/>	0	1705276-2	SMP	500	1.3702	1.3718	1.6	1.3716	1.4	0.2	NA	2.8	4
32	<input type="checkbox"/>	0	1705276-2	DUP	500	1.3715	1.373	1.5	1.3726	1.1	0.4	NA	2.2	4

Comments:

Standards, Batch QC, and Matrix Spike Information				
ID	Parent ID	Parent Conc	Parent Vol.	Final Vol.

Reagent List:

TSS Spike Material: pottery clay ST170509-4

Shaded values used to determine the calculated concentration

Line	Sample	Sample Type	Level	Method	Data File	Comment
1	Blank	Sample		170427ic2.met	c:\peaknet2\data02\170427ic2\170427_001.dxd	Water
2	0 STD	Calibration	7	170427ic2.met	c:\peaknet2\data02\170427ic2\170427_002.dxd	
3	1000X STD	Calibration	6	170427ic2.met	c:\peaknet2\data02\170427ic2\170427_003.dxd	
4	500X STD	Calibration	5	170427ic2.met	c:\peaknet2\data02\170427ic2\170427_004.dxd	
5	100X STD	Calibration	4	170427ic2.met	c:\peaknet2\data02\170427ic2\170427_005.dxd	
6	25X STD	Calibration	3	170427ic2.met	c:\peaknet2\data02\170427ic2\170427_006.dxd	
7	10X STD	Calibration	2	170427ic2.met	c:\peaknet2\data02\170427ic2\170427_007.dxd	
8	5X STD	Calibration	1	170427ic2.met	c:\peaknet2\data02\170427ic2\170427_008.dxd	
9	ICV	Sample		170427ic2.met	c:\peaknet2\data02\170427ic2\170427_009.dxd	ICV
10	ICB	Sample		170427ic2.met	c:\peaknet2\data02\170427ic2\170427_010.dxd	ICB
11	BLANK	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_011.dxd	BLANK
12	CCV	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_012.dxd	CCV
13	CCB	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_013.dxd	CCB
14	IC170511-1MB	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_014.dxd	MB
15	IC170511-1LCS	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_015.dxd	LCS
16	IC170511-1LCSD	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_016.dxd	LCSD
17	1705015-1 10x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_017.dxd	RRing Br only
18	1705221-2 2x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_018.dxd	RRing NO3 only
19	1705095-1 200x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_019.dxd	Br, Cl
20	1705095-1 500x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_020.dxd	Br, Cl
21	1705158-1 5x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_021.dxd	Br, Cl, SO4, F
22	1705018-1 2x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_022.dxd	Cl, SO4
23	1705018-1 20x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_023.dxd	Cl, SO4
24	CCV	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_024.dxd	CCV
25	CCB	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_025.dxd	CCB
26	1704604-1	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_026.dxd	F, Cl, SO4
27	1704604-2	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_027.dxd	F, Cl, SO4
28	1704604-3	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_028.dxd	F, Cl, SO4
29	1704604-4	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_029.dxd	F, Cl, SO4
30	1704604-5	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_030.dxd	F, Cl, SO4
31	1704604-6	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_031.dxd	F, Cl, SO4
32	1705094-2 1x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_032.dxd	F, Cl, SO4
33	1705211-1 1x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_033.dxd	F, Cl, Br, SO4
34	1705211-1 10x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_034.dxd	F, Cl, Br, SO4
35	1705204-1 20x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_035.dxd	Cl, SO4
36	CCV	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_036.dxd	CCV
37	CCB	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_037.dxd	CCB
38	1704513-1 1x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_038.dxd	F, Cl, SO4
39	1704513-2 1x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_039.dxd	F, Cl, SO4
40	1704513-2 10x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_040.dxd	F, Cl, SO4
41	1704513-3 1x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_041.dxd	F, Cl, SO4
42	1704513-3 10x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_042.dxd	F, Cl, SO4
43	1704513-4 1x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_043.dxd	F, Cl, SO4
44	1704513-4 10x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_044.dxd	F, Cl, SO4
45	1704513-4MS 10x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_045.dxd	F, Cl, SO4
46	1704513-4MSD 10x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_046.dxd	F, Cl, SO4
47	1704513-5 1x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_047.dxd	F, Cl, SO4
48	CCV	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_048.dxd	CCV
49	CCB	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_049.dxd	CCB
50	1704512-1 1x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_050.dxd	F, Cl, Br, SO4
51	1704512-2 1x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_051.dxd	F, Cl, Br, SO4
52	1704512-3 1x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_052.dxd	F, Cl, Br, SO4
53	IC170511-2MB	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_053.dxd	MB
54	IC170511-2LCS	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_054.dxd	LCS
55	IC170511-2LCSD	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_055.dxd	LCSD
56	1705247-1 1x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_056.dxd	F, NO3
57	1705247-2 1x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_057.dxd	F, NO3
58	1705247-3 1x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_058.dxd	F, NO3
59	1705247-4 1x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_059.dxd	F, NO3
60	CCV	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_060.dxd	CCV
61	CCB	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_061.dxd	CCB
62	1705247-4 1x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_062.dxd	F, NO3
63	1705247-4MS 1x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_063.dxd	F, NO3
64	1705247-4MSD 1x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_064.dxd	F, NO3
65	1705248-1 1x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_065.dxd	F, Br, Cl, NO2, NO3, SO4
66	1705250-1 1x	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_066.dxd	F, Br, Cl, NO2, NO3, SO4
67	CCV	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_067.dxd	CCV
68	CCB	Sample		170427aic2.met	c:\peaknet2\data02\170511c2\170511_068.dxd	CCB
69	STOP	Sample		stop.met	c:\peaknet2\data02\170511c2\170511_069.dxd	STOP

Default Method Path: C:\PEAKNET2\METHOD02

Default Data Path: C:\PEAKNET2\DATA02\170214IC2

Comment:

BatchDx created schedule.

Analyst: *AMG*

Instrument #2: DIONEX DX-120. ID Serial Number: 99060762

Analytical Column: Dionex IonPac AS14

PeakNet 5.1

Methods: EPA 300.0 and SW9056. ALS SOP 1113

Final_ID_Aliq

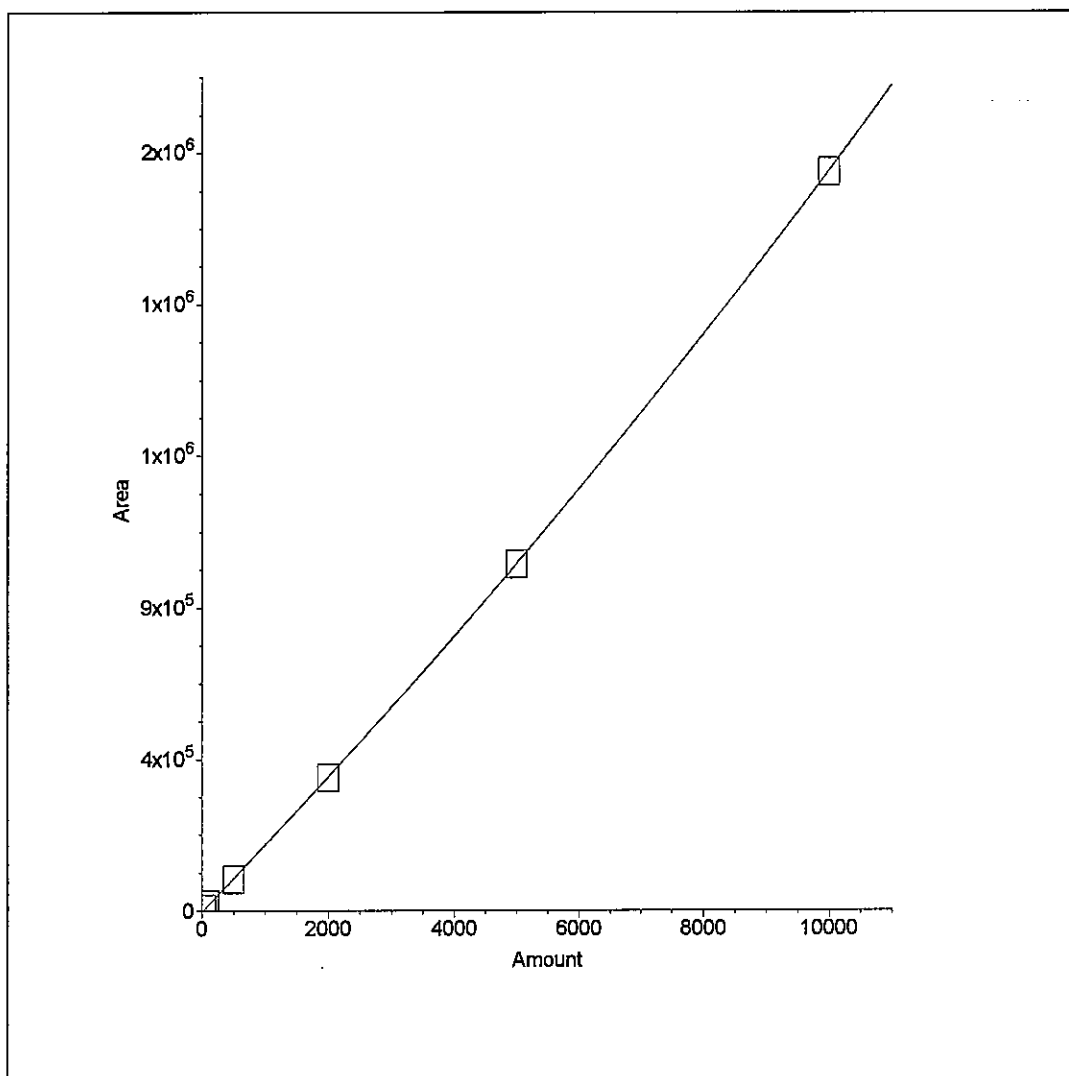
ICAL std level 7 (0x)			
ICAL std level 6 (1000x)	50.00	ST170207-8, ST170317-2	0.05
ICAL std level 5 (500x)	5.00	"	0.01
ICAL std level 4 (100x)	5.00	"	0.05
ICAL std level 3 (25x)	5.00	"	0.20
ICAL std level 2 (10x)	5.00	"	0.50
ICAL std level 1 (5x)	5.00	"	1.00

CCV	5.00	ST170207-8, ST170317-2	0.50
RVS	5.00	ST160920-1, ST170116-9	0.01
ICV	5.00	ST160707-6	0.25
		ST170314-1	0.08
LCS & MS/D	5.00	ST160809-2	0.05
		ST170116-8	0.05

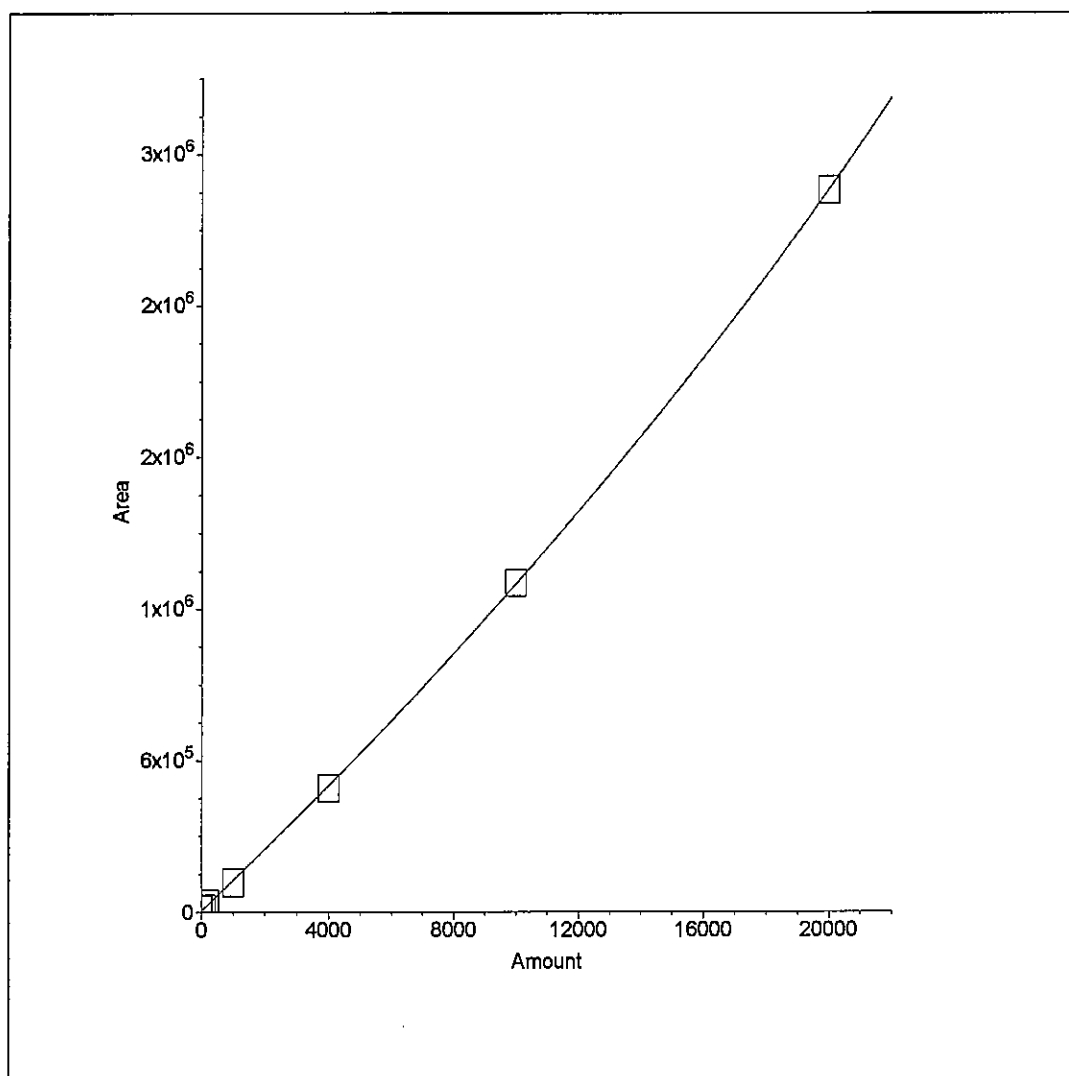
Dilutions Table: All to 5mL Final Volume (FV) unless specified otherwise:

2x (2.5mL)	4x (1.25mL)	5x (1mL)	8x (0.625mL)
10x (0.5mL)	12.5x (0.4mL)	20x (0.25mL)	25x (0.2mL)
40x (0.125mL)	50x (0.1mL)	62.5x (0.08mL)	100x (0.05mL)
125x (0.04mL)	200x (0.025mL)	250x (0.02mL)	500x (0.01mL)
1000x (100uL to 100mL FV)		2000x (50uL to 100mL FV)	
2500x (40uL to 100mL FV)		4000x (25uL to 100mL FV)	
5000x (50uL to 250mL FV)		10000x (25uL to 250mL FV)	

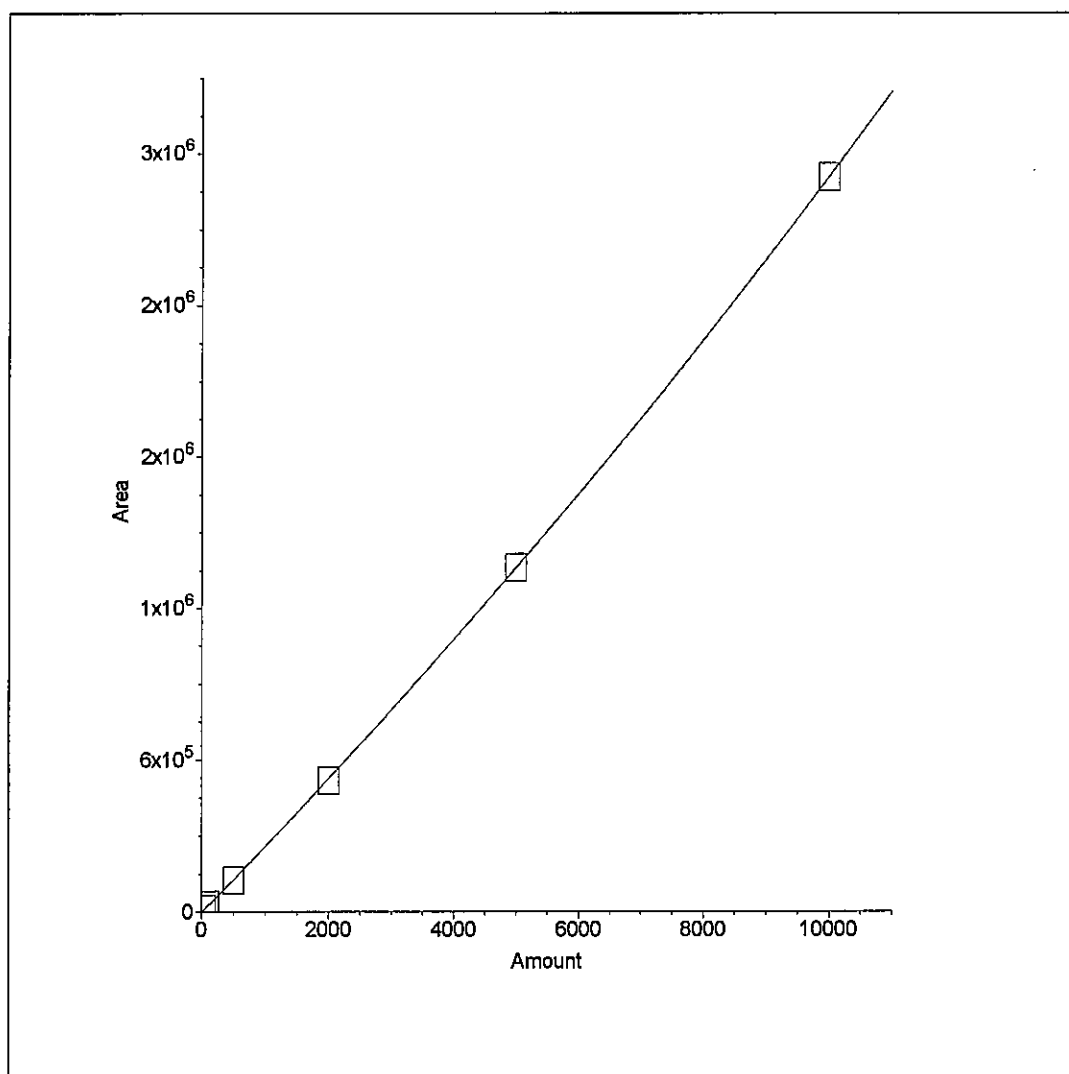
1. Component:Fluoride
Standard:External Fit Type:Quadratic
Origin:Ignore Calibration:Area
 $r^2=0.999988$
 $Amt=-2.209566e-010*Resp^2+$
 $4.770738e-003*Resp+12.51$



2. Component:Chloride
Standard:External Fit Type:Quadratic
Origin:Ignore Calibration:Area
 $r^2=0.999954$
Amt= $-3.662777e-010 \cdot \text{Resp}^2 +$
 $7.361878e-003 \cdot \text{Resp} + 56.64$



3. Component:Nitrite as N
Standard:External Fit Type:Quadratic
Origin:Ignore Calibration:Area
 $r^2=0.999980$
 $Amt=-1.169340e-010*Resp^2+$
 $3.404305e-003*Resp+6.851$



4. Component:Bromide

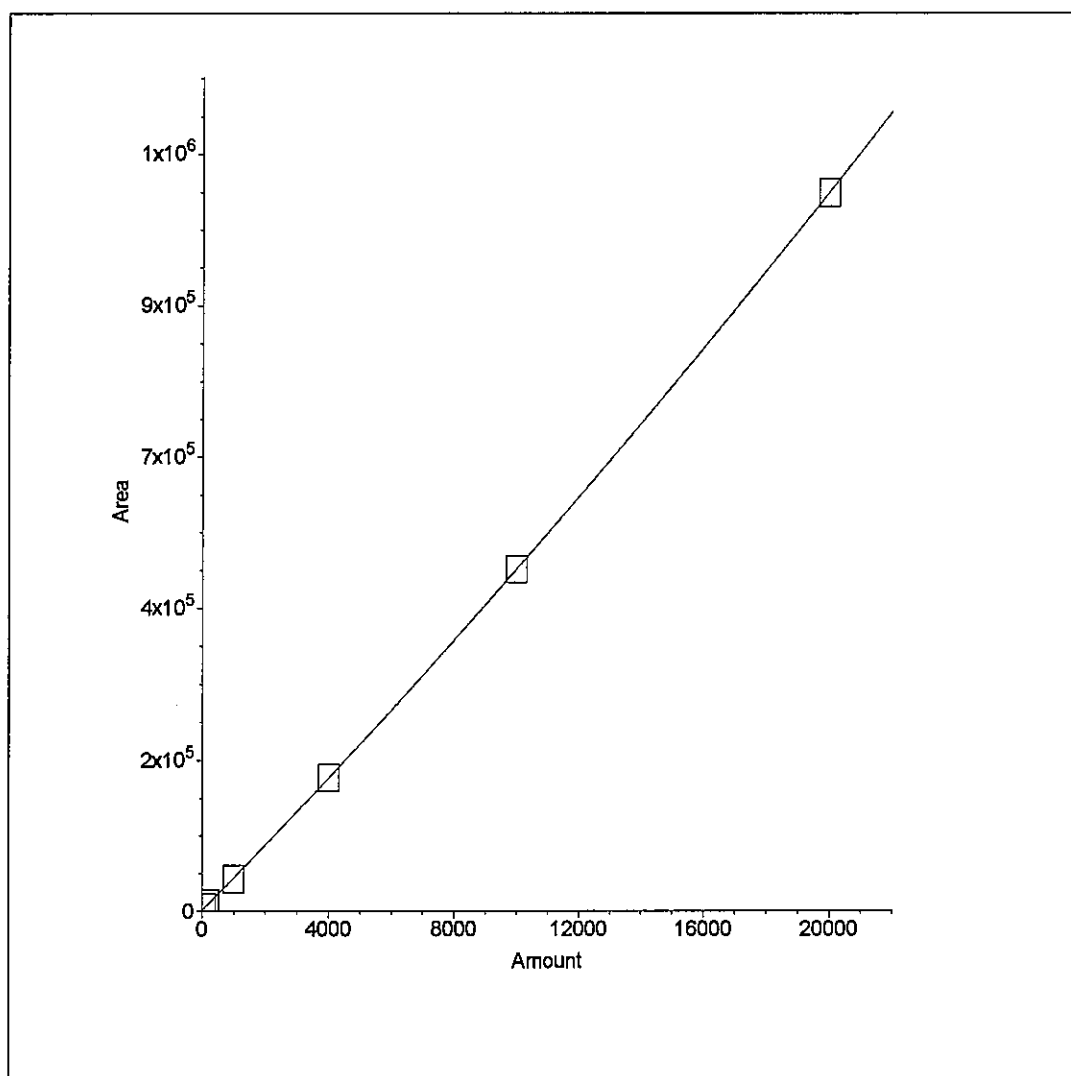
Standard:External Fit Type:Quadratic

Origin:Ignore Calibration:Area

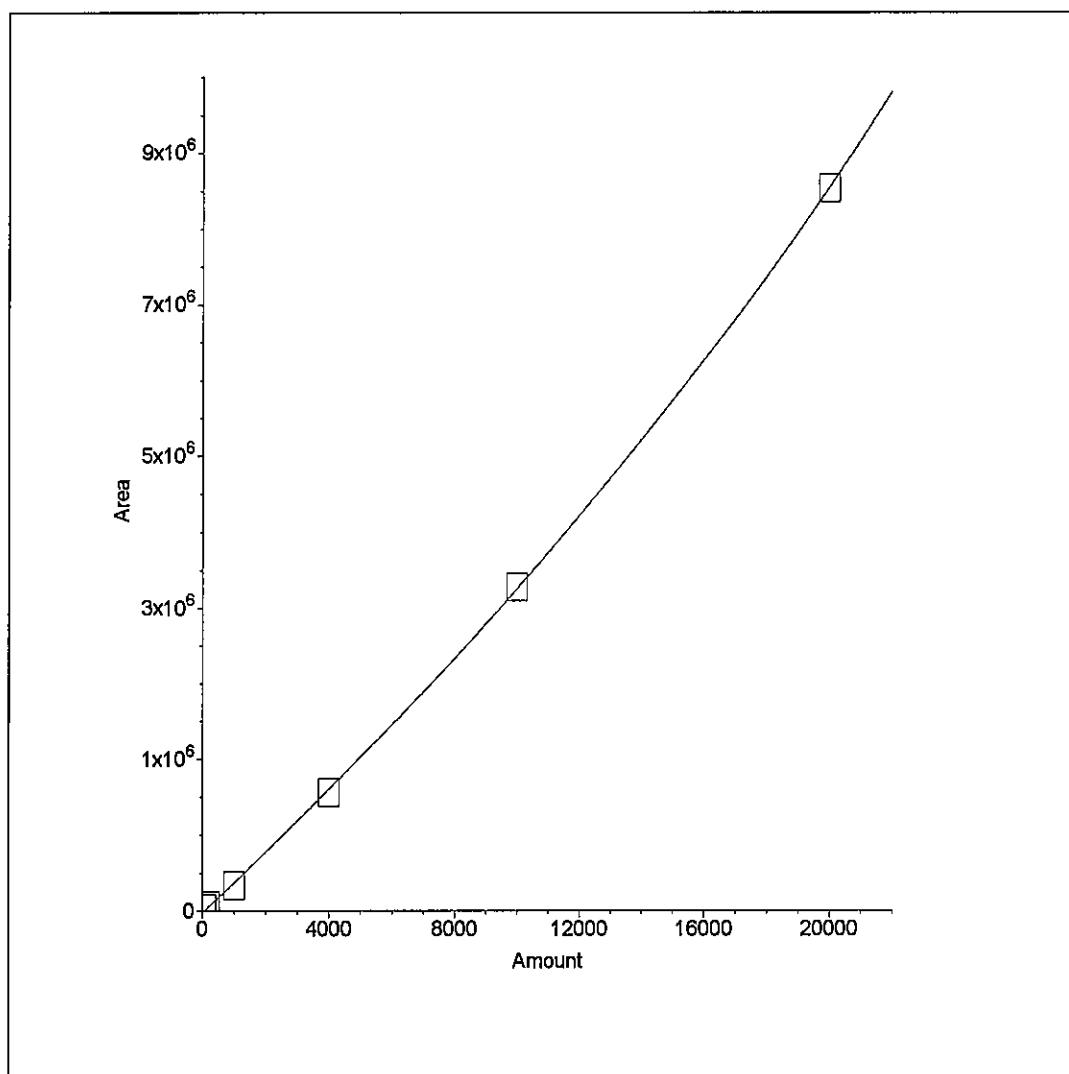
$r^2=0.999994$

Amt=-1.458552e-009*Resp²+

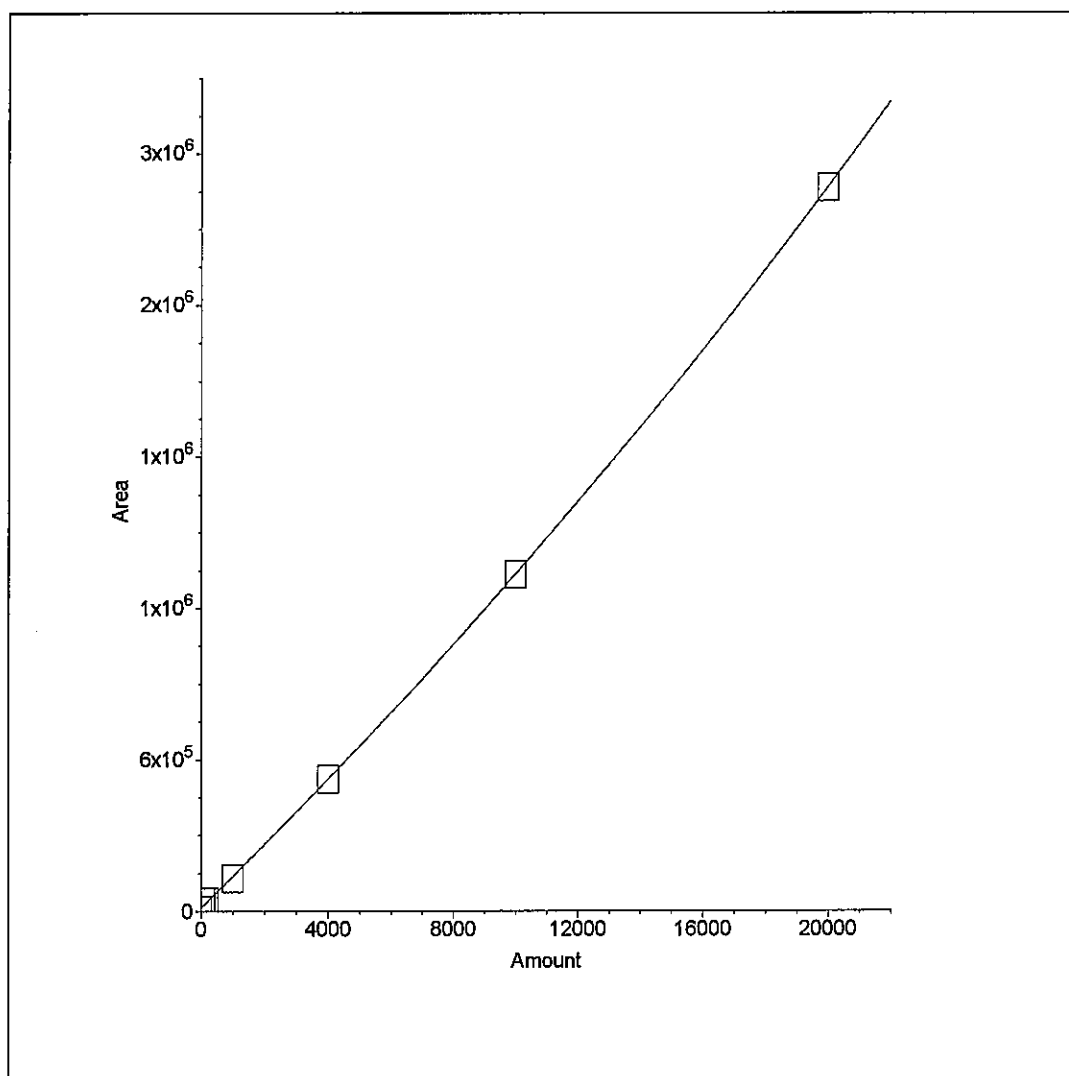
1.867890e-002*Resp+-23.1



5. Component:Nitrate as N
Standard:External Fit Type:Quadratic
Origin:Ignore Calibration:Area
 $r^2=0.999915$
 $Amt=-5.692649e-011*Resp^2+$
 $2.794676e-003*Resp+63.68$



6. Component:Orthophosphate as P
Standard:External Fit Type:Quadratic
Origin:Ignore Calibration:Area
 $r^2=0.999949$
 $Amt=-3.474518e-010*Resp^2+$
 $7.829541e-003*Resp+-116.3$



7. Component:Sulfate

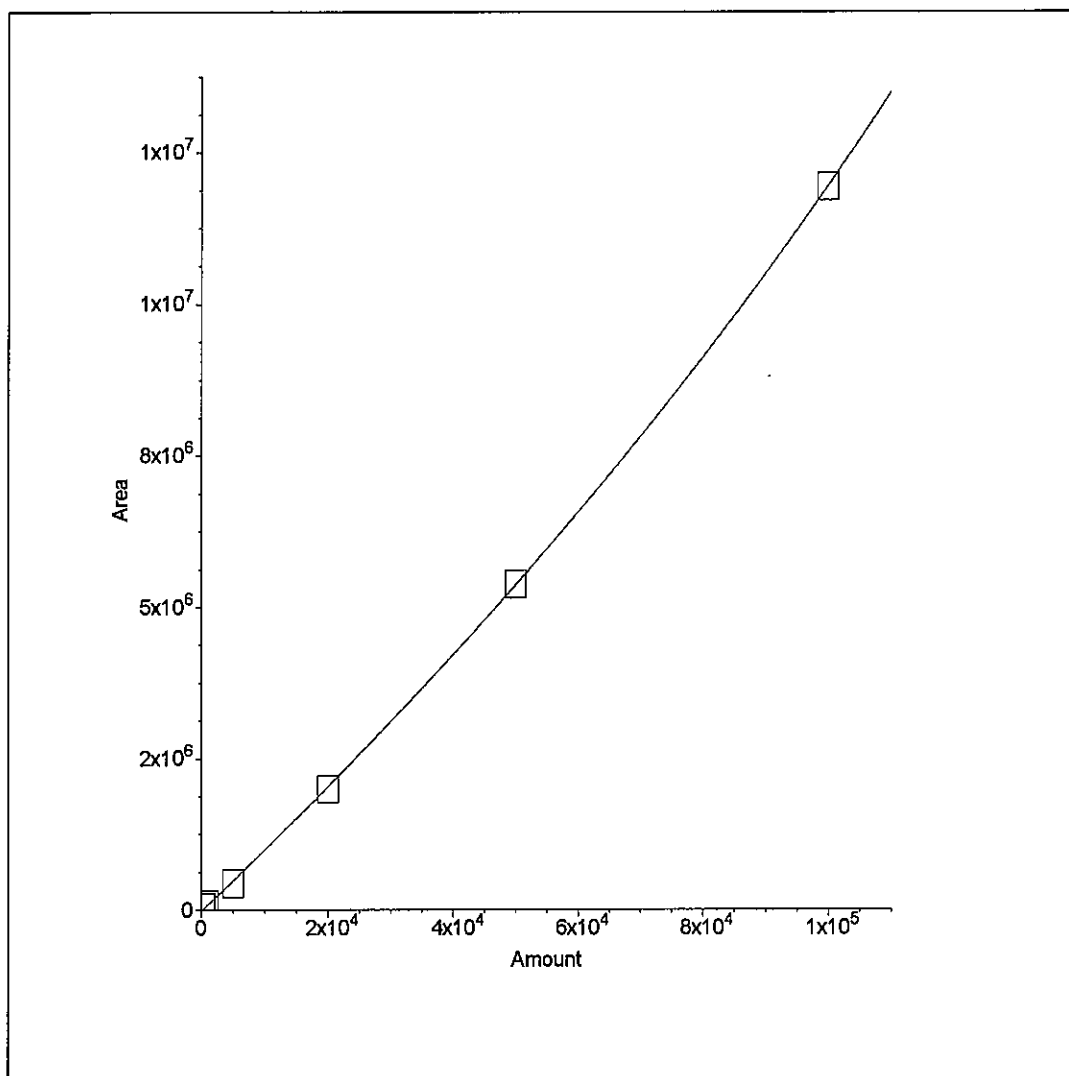
Standard:External Fit Type:Quadratic

Origin:Ignore Calibration:Area

$r^2=0.999940$

$Amt=-1.164150e-010*Resp^2+$

$9.127843e-003*Resp+204.3$



8. Component:Nitrate/Nitrite as N
Standard:External Fit Type:Quadratic
Origin:Ignore Calibration:Area

(No Levels Component)

Sample Analysis Report

Sample Name : Blank

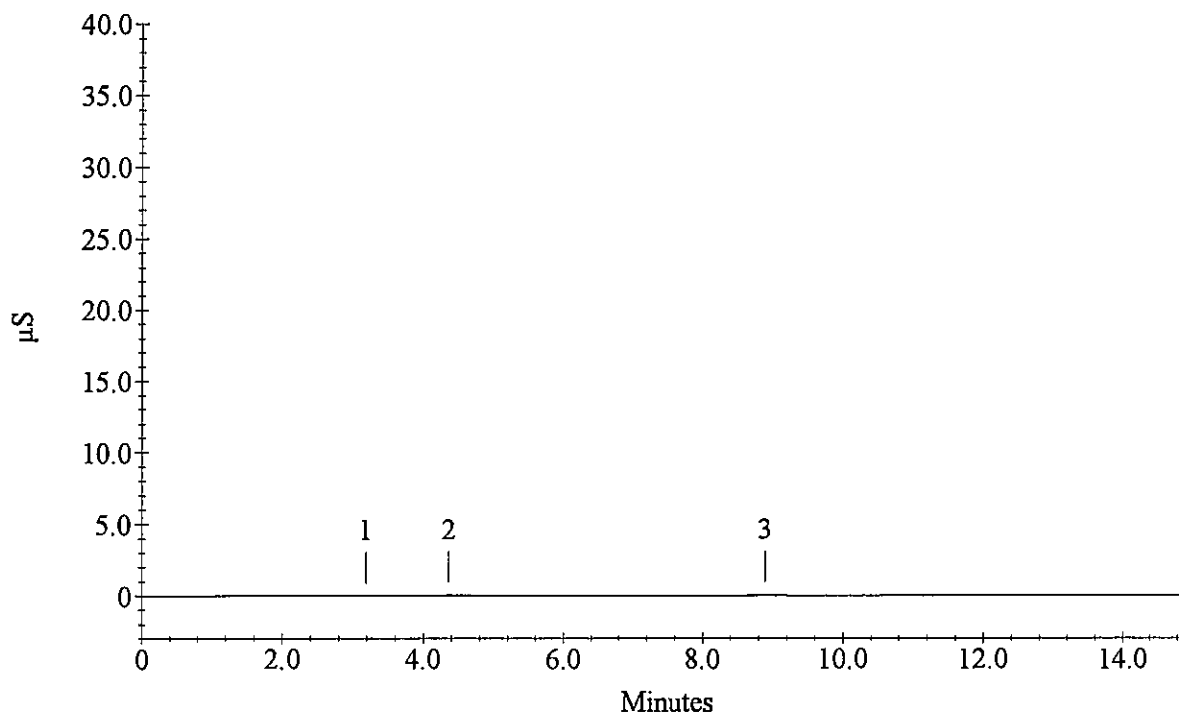
Data File Name : c:\peaknet2\data02\170427ic2\170427_001.DXD

Method File Name : c:\peaknet2\method02\170427ic2.met Current Date : 4/27/17
Date, Time Analyzed : 4/27/17 11:13:30 AM Current Time : 11:28:33 AM
System Operator : amg Datafile Updated : 4/27/17 11:28:33 AM
Calibration Updated : 4/25/17 3:16:17 PM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1		3.19	0.0		618
2	Chloride	4.36	88.0	-	14515
	Nitrite as N				
	Bromide				
	Nitrate as N				
3	Orthophosphate as P	8.89	22.6	-	15800
	Sulfate				
	Nitrate/Nitrite as N				

Blank



Calibration Update Report

Sample Name : 0 STD

Data File Name : c:\peaknet2\data02\170427ic2\170427_002.DXD

Method File Name : c:\peaknet2\method02\170427ic2.met System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170427ic2.sch Datafile Updated : 4/27/17 11:43:38 AM
Date Time Acquired : 4/27/17 11:28:35 AM Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 4/27/17 11:43:38 AM Eluent = ...

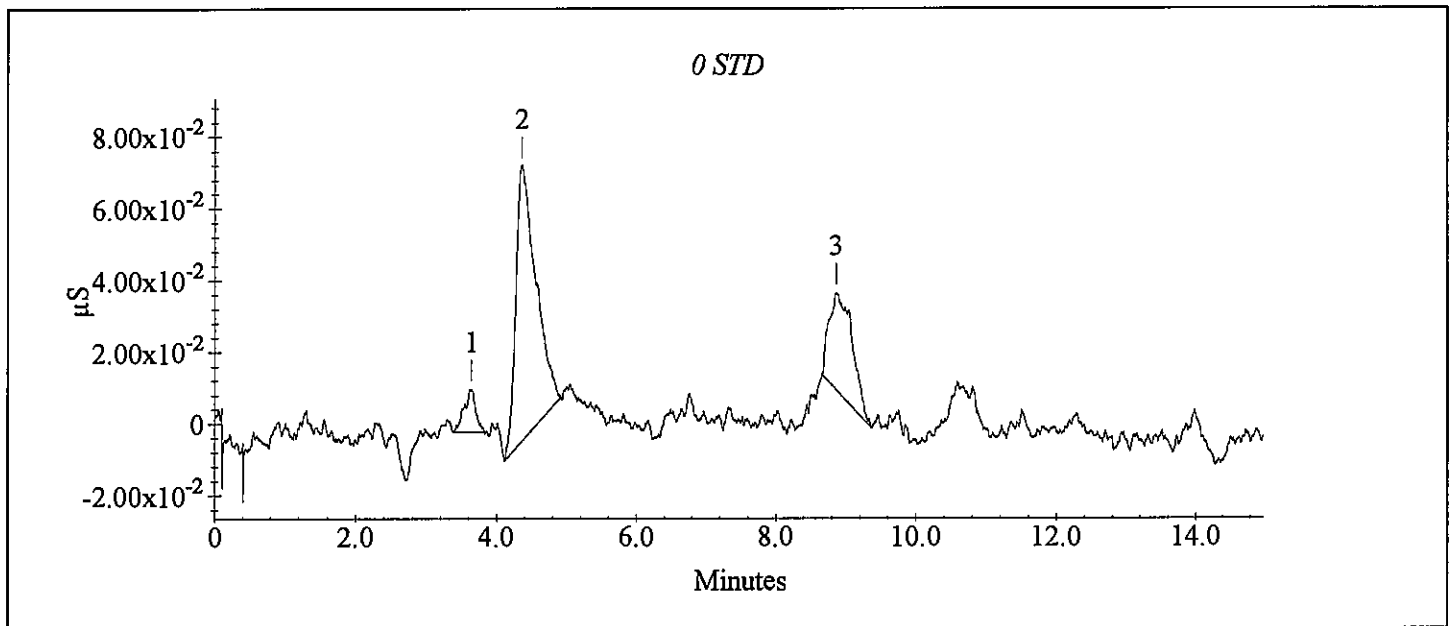
Peak Information : All Components				
Peak #	Analyte	Retention Time (min.)	Concentration	Peak Area
1		3.64	0	
2	Chloride	4.36	0	15349
	Nitrite as N			
	Bromide			
	Nitrate as N			
3	Orthophosphate as P	8.87	0	6490
	Sulfate			
	Nitrate/Nitrite as N			

Calibration Update Report

Sample Name : 0 STD

Data File Name : c:\peaknet2\data02\170427ic2\170427_002.DXD

Method File Name : c:\peaknet2\method02\170427ic2.met System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170427ic2.sch Datafile Updated : 4/27/17 11:43:38 AM
Date Time Acquired : 4/27/17 11:28:35 AM Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 4/27/17 11:43:38 AM Eluent = ...



Calibration Update Report

Sample Name : 1000X STD

Data File Name : c:\peaknet2\data02\170427ic2\170427_003.DXD

Method File Name : c:\peaknet2\method02\170427ic2.met System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170427ic2.sch Datafile Updated : 4/27/17 11:58:45 AM
Date Time Acquired : 4/27/17 11:43:41 AM Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 4/27/17 11:58:45 AM Eluent = ...

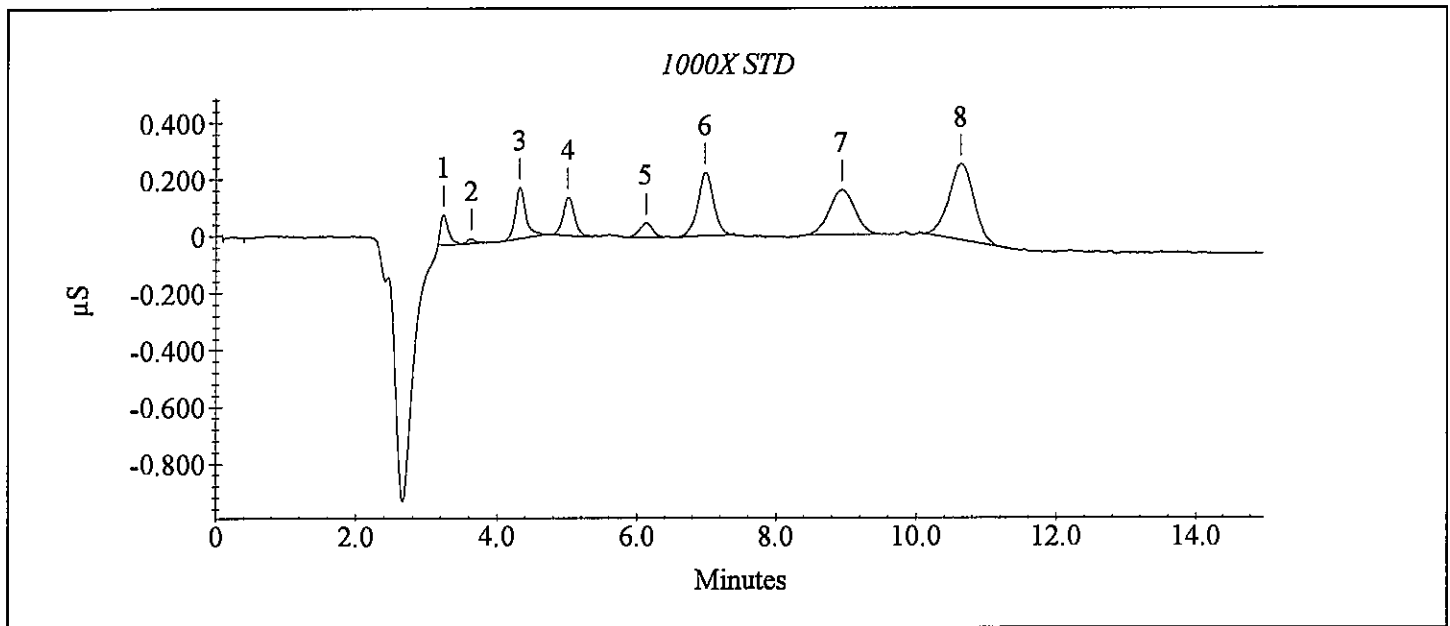
Peak Information : All Components				
Peak #	Analyte	Retention Time (min.)	Concentration	Peak Area
1	Fluoride	3.24	50	7677
3	Chloride	4.32	100	18602
4	Nitrite as N	5.01	50	15363
5	Bromide	6.13	100	6431
6	Nitrate as N	6.99	100	35206
7	Orthophosphate as P	8.95	100	39779
8	Sulfate	10.64	500	66465
	Nitrate/Nitrite as N			

Calibration Update Report

Sample Name : 1000X STD

Data File Name : c:\peaknet2\data02\170427ic2\170427_003.DXD

Method File Name : c:\peaknet2\method02\170427ic2.met System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170427ic2.sch Datafile Updated : 4/27/17 11:58:45 AM
Date Time Acquired : 4/27/17 11:43:41 AM Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 4/27/17 11:58:45 AM Eluent = ...



Calibration Update Report

Sample Name : 500X STD

Data File Name : c:\peaknet2\data02\170427ic2\170427_004.DXD

Method File Name : c:\peaknet2\method02\170427ic2.met System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170427ic2.sch Datafile Updated : 4/27/17 12:13:52 PM
Date Time Acquired : 4/27/17 11:58:49 AM Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 4/27/17 12:13:52 PM Eluent = ...

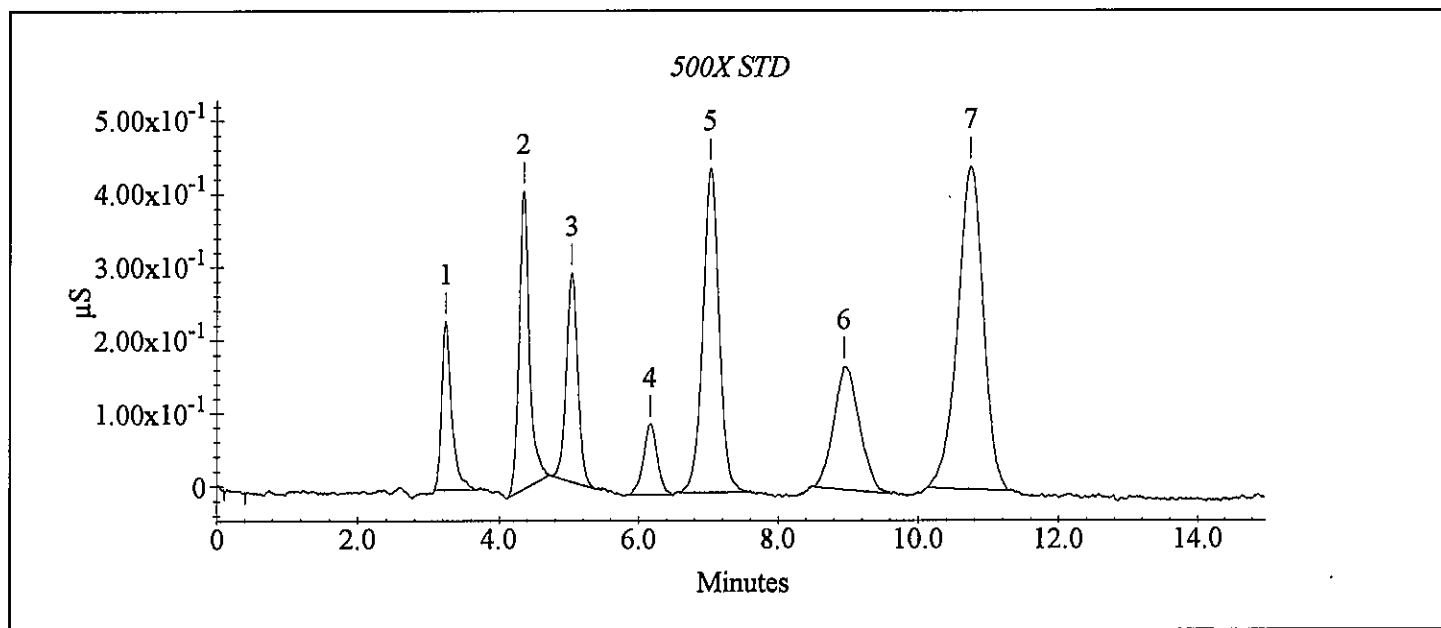
Peak Information : All Components				
Peak #	Analyte	Retention Time (min.)	Concentration	Peak Area
1	Fluoride	3.24	100	22879
2	Chloride	4.35	200	41700
3	Nitrite as N	5.04	100	32726
4	Bromide	6.16	200	13459
5	Nitrate as N	7.03	200	71887
6	Orthophosphate as P	8.95	200	42897
7	Sulfate	10.75	1000	111827
	Nitrate/Nitrite as N			

Calibration Update Report

Sample Name : 500X STD

Data File Name : c:\peaknet2\data02\170427ic2\170427_004.DXD

Method File Name : c:\peaknet2\method02\170427ic2.met System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170427ic2.sch Datafile Updated : 4/27/17 12:13:52 PM
Date Time Acquired : 4/27/17 11:58:49 AM Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 4/27/17 12:13:52 PM Eluent = ...



Calibration Update Report

Sample Name : 100X STD

Data File Name : c:\peaknet2\data02\170427ic2\170427_005.DXD

Method File Name : c:\peaknet2\method02\170427ic2.met System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170427ic2.sch Datafile Updated : 4/27/17 12:28:58 PM
Date Time Acquired : 4/27/17 12:13:54 PM Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 4/27/17 12:28:58 PM Eluent = ...

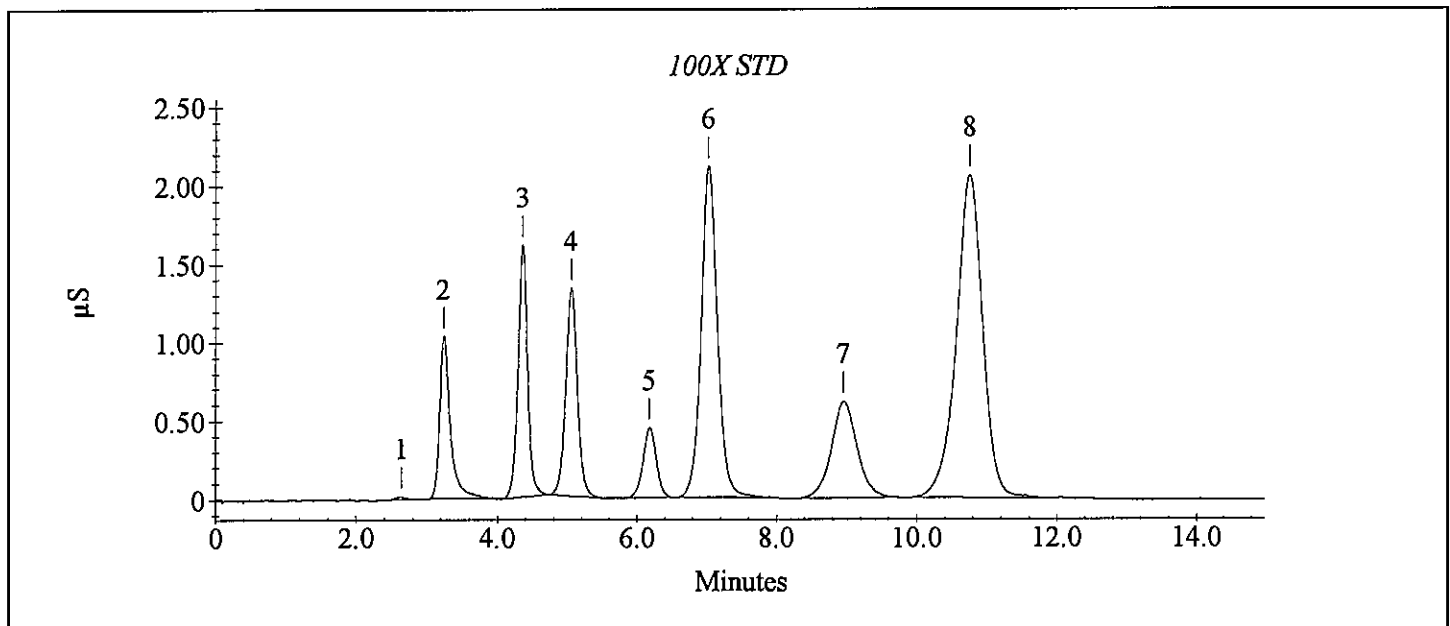
Peak Information : All Components				
Peak #	Analyte	Retention Time (min.)	Concentration	Peak Area
2	Fluoride	3.24	500	107127
3	Chloride	4.36	1000	151920
4	Nitrite as N	5.05	500	153510
5	Bromide	6.17	1000	59086
6	Nitrate as N	7.03	1000	341213
7	Orthophosphate as P	8.96	1000	155984
8	Sulfate	10.76	5000	536836
	Nitrate/Nitrite as N			

Calibration Update Report

Sample Name : 100X STD

Data File Name : c:\peaknet2\data02\170427ic2\170427_005.DXD

Method File Name : c:\peaknet2\method02\170427ic2.met System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170427ic2.sch Datafile Updated : 4/27/17 12:28:58 PM
Date Time Acquired : 4/27/17 12:13:54 PM Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 4/27/17 12:28:58 PM Eluent = ...



Calibration Update Report

Sample Name : 25X STD

Data File Name : c:\peaknet2\data02\170427ic2\170427_006.DXD

Method File Name : c:\peaknet2\method02\170427ic2.met System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170427ic2.sch Datafile Updated : 4/27/17 12:44:05 PM
Date Time Acquired : 4/27/17 12:29:00 PM Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 4/27/17 12:44:05 PM Eluent = ...

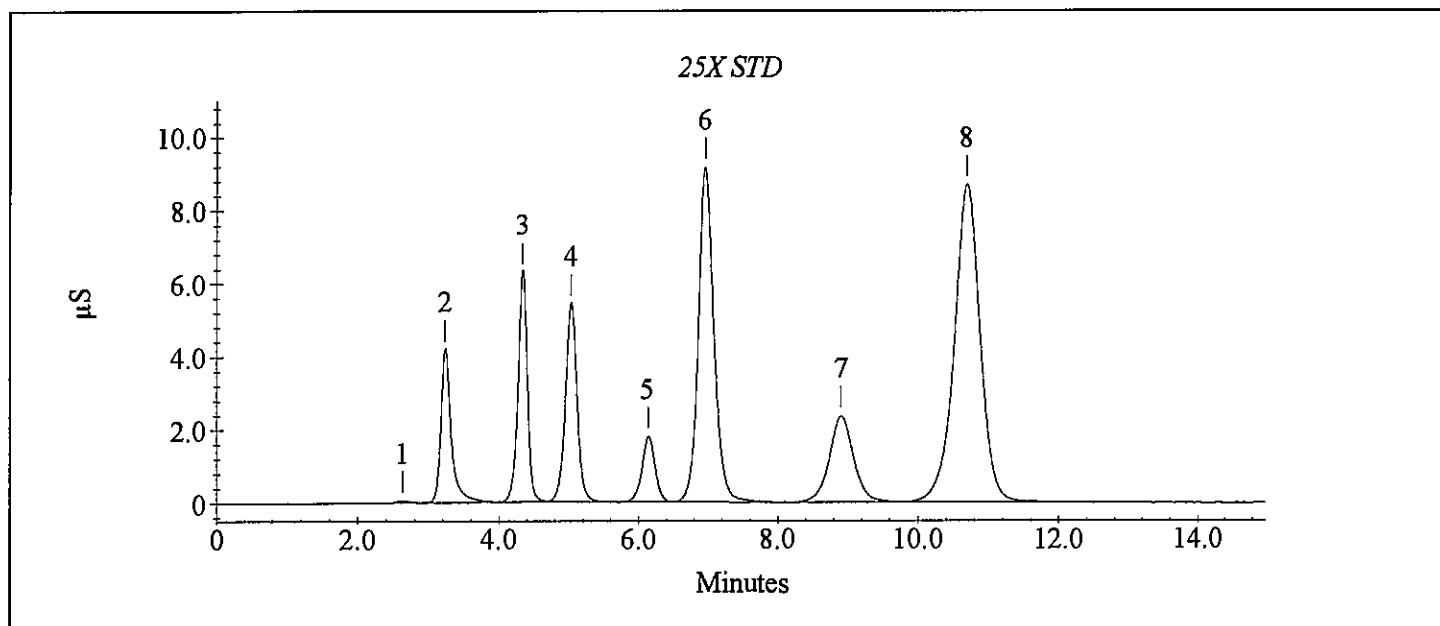
Peak Information : All Components				
Peak #	Analyte	Retention Time (min.)	Concentration	Peak Area
2	Fluoride	3.23	2000	436751
3	Chloride	4.33	4000	584606
4	Nitrite as N	5.03	2000	631484
5	Bromide	6.13	4000	234686
6	Nitrate as N	6.96	4000	1426603
7	Orthophosphate as P	8.91	4000	566555
8	Sulfate	10.69	20000	2196552
	Nitrate/Nitrite as N			

Calibration Update Report

Sample Name : 25X STD

Data File Name : c:\peaknet2\data02\170427ic2\170427_006.DXD

Method File Name : c:\peaknet2\method02\170427ic2.met System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170427ic2.sch Datafile Updated : 4/27/17 12:44:05 PM
Date Time Acquired : 4/27/17 12:29:00 PM Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 4/27/17 12:44:05 PM Eluent = ...



Calibration Update Report

Sample Name : 10X STD

Data File Name : c:\peaknet2\data02\170427ic2\170427_007.DXD

Method File Name : c:\peaknet2\method02\170427ic2.met System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170427ic2.sch Datafile Updated : 4/27/17 12:59:12 PM
Date Time Acquired : 4/27/17 12:44:09 PM Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 4/27/17 12:59:12 PM Eluent = ...

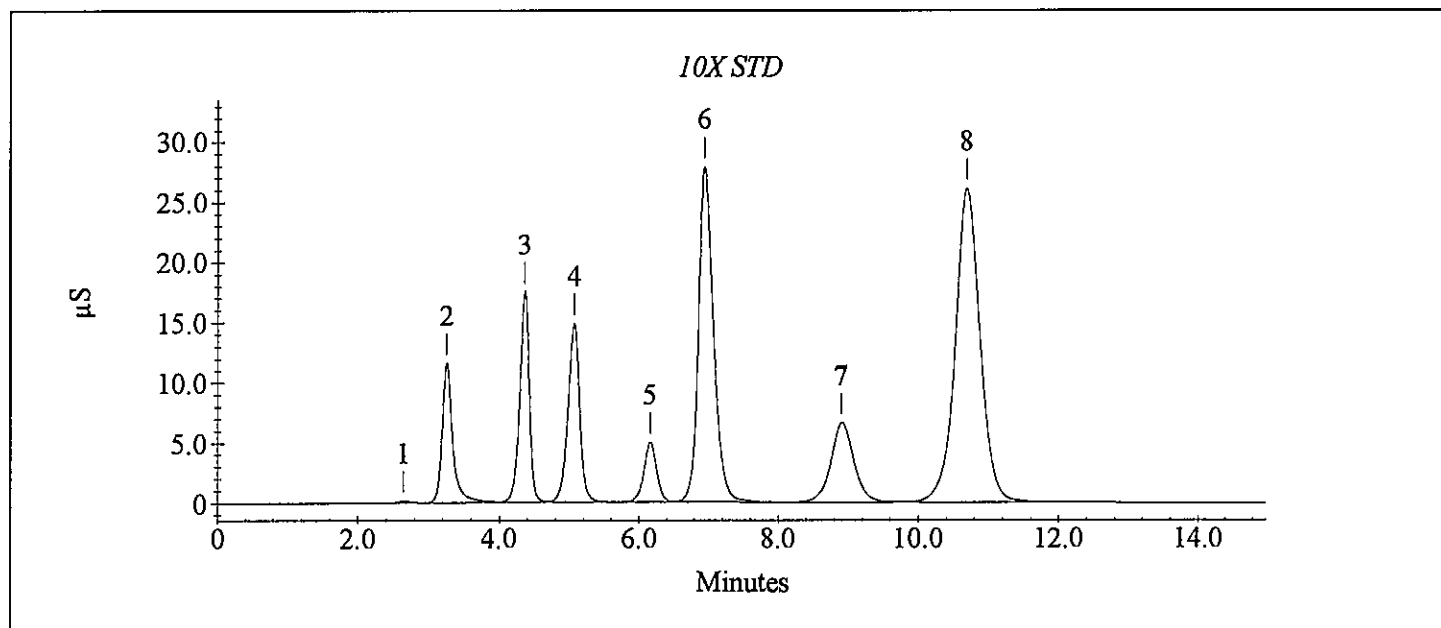
Peak Information : All Components				
Peak #	Analyte	Retention Time (min.)	Concentration	Peak Area
2	Fluoride	3.25	5000	1201969
3	Chloride	4.36	10000	1647195
4	Nitrite as N	5.07	5000	1738763
5	Bromide	6.16	10000	637192
6	Nitrate as N	6.95	10000	4193946
7	Orthophosphate as P	8.91	10000	1511745
8	Sulfate	10.69	50000	6378637
	Nitrate/Nitrite as N			

Calibration Update Report

Sample Name : 10X STD

Data File Name : c:\peaknet2\data02\170427ic2\170427_007.DXD

Method File Name : c:\peaknet2\method02\170427ic2.met System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170427ic2.sch Datafile Updated : 4/27/17 12:59:12 PM
Date Time Acquired : 4/27/17 12:44:09 PM Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 4/27/17 12:59:12 PM Eluent = ...



Calibration Update Report

Sample Name : 5X STD

Data File Name : c:\peaknet2\data02\170427ic2\170427_008.DXD

Method File Name : c:\peaknet2\method02\170427ic2.met System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170427ic2.sch Datafile Updated : 4/27/17 1:14:19 PM
Date Time Acquired : 4/27/17 12:59:15 PM Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 4/27/17 1:14:19 PM Eluent = ...

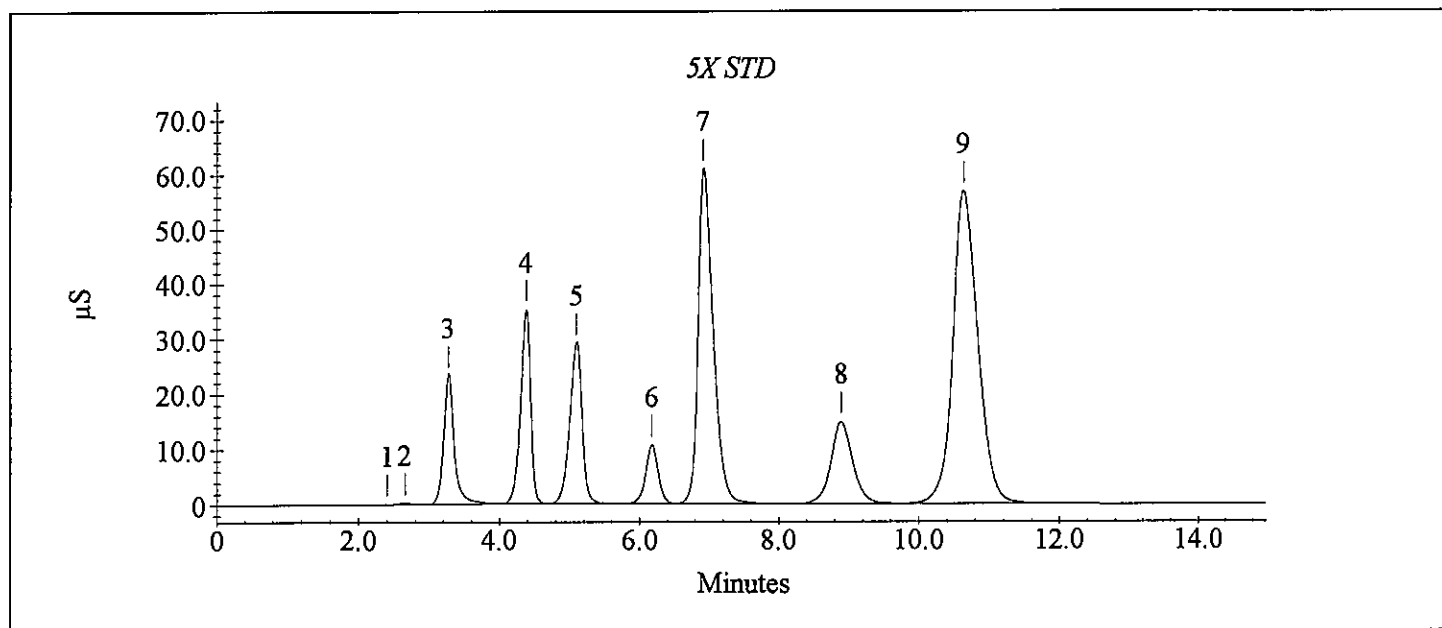
Peak Information : All Components				
Peak #	Analyte	Retention Time (min.)	Concentration	Peak Area
3	Fluoride	3.27	10000	2512327
4	Chloride	4.39	20000	3546919
5	Nitrite as N	5.09	10000	3600206
6	Bromide	6.17	20000	1327276
7	Nitrate as N	6.92	20000	9196108
8	Orthophosphate as P	8.89	20000	3221576
9	Sulfate	10.64	100000	13873698
	Nitrate/Nitrite as N			

Calibration Update Report

Sample Name : 5X STD

Data File Name : c:\peaknet2\data02\170427ic2\170427_008.DXD

Method File Name : c:\peaknet2\method02\170427ic2.met System Operator : amg
Schedule File Name : c:\peaknet2\schedule02\170427ic2.sch Datafile Updated : 4/27/17 1:14:19 PM
Date Time Acquired : 4/27/17 12:59:15 PM Method Comment : Flow rate = 1.2 mL/min,
Calibration Date : 4/27/17 1:14:19 PM Eluent = ...



Sample Analysis Report

Sample Name : ICV

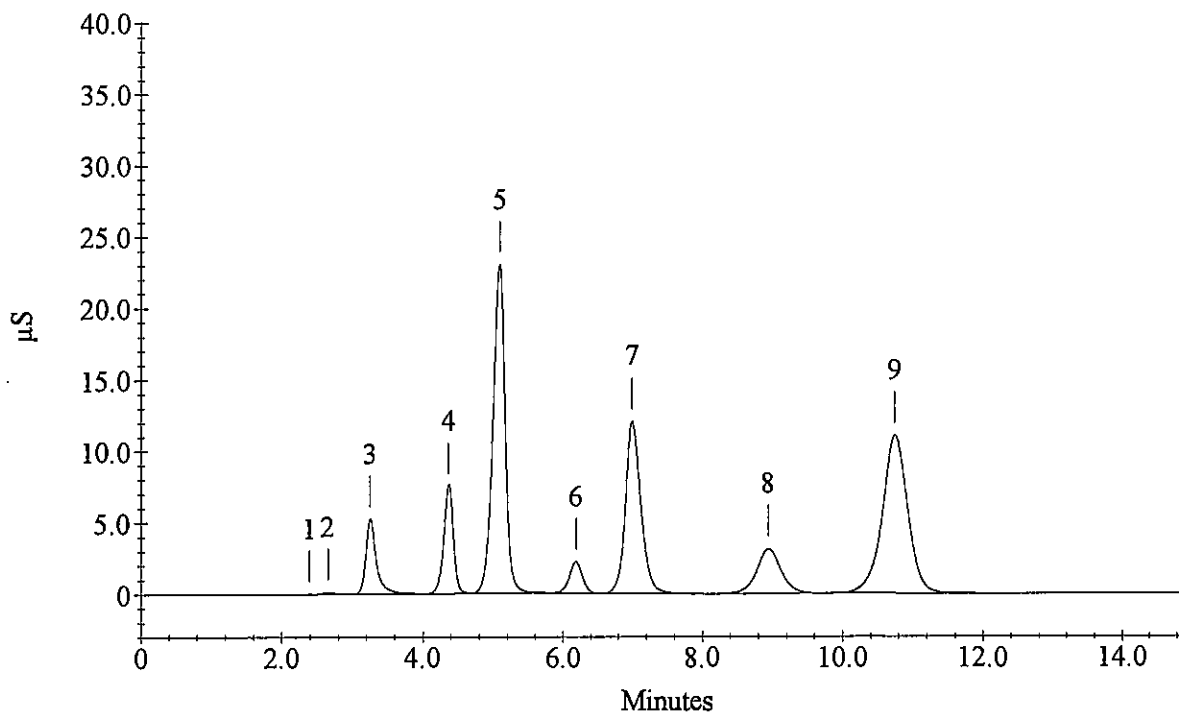
Data File Name : c:\peaknet2\data02\170427ic2\170427_009.DXD

Method File Name : c:\peaknet2\method02\170427ic2.met Current Date : 4/27/17
Date, Time Analyzed : 4/27/17 1:14:22 PM Current Time : 1:29:26 PM
System Operator : amg Datafile Updated : 4/27/17 1:29:25 PM
Calibration Updated : 4/27/17 1:14:19 PM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
3	Fluoride	3.25	2374.2		547023
4	Chloride	4.36	4595.4		718595
5	Nitrite as N	5.09	7856.9		2774105
6	Bromide	6.19	4628.0		284257
7	Nitrate as N	7.00	4778.6		1865928
8	Orthophosphate as P	8.95	5100.6		748350
9	Sulfate	10.75	23396.2		2792173
	Nitrate/Nitrite as N				

ICV



Sample Analysis Report

Sample Name : ICB

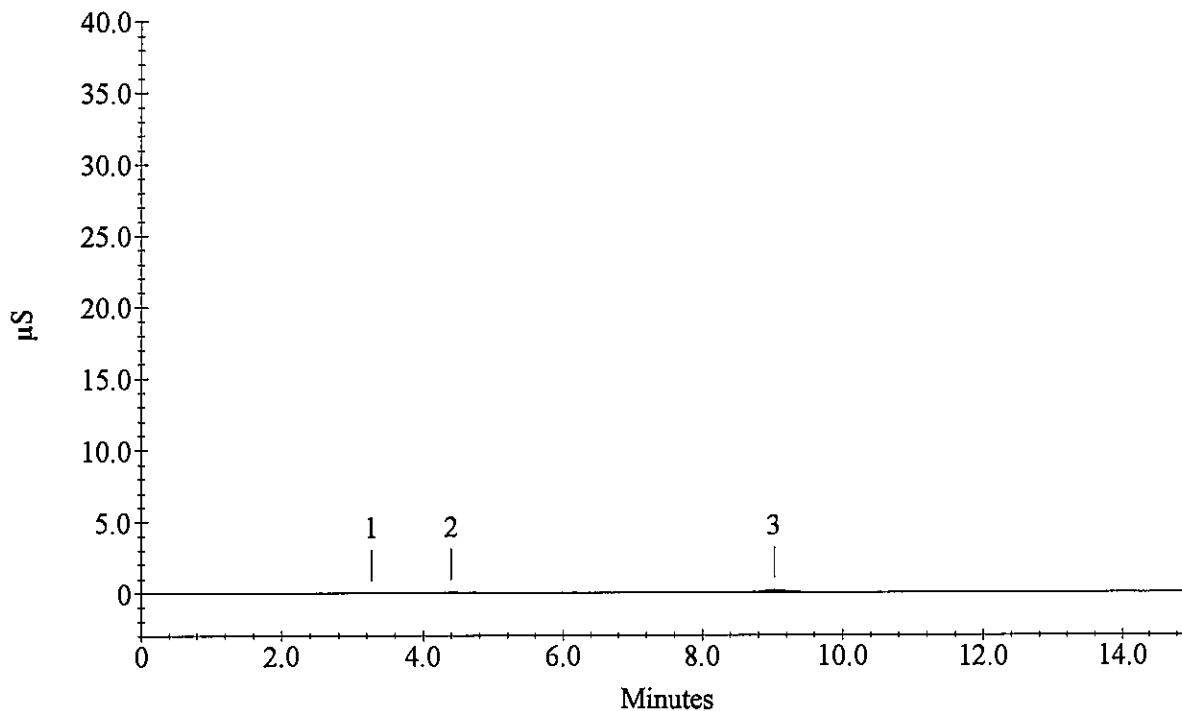
Data File Name : c:\peaknet2\data02\170427ic2\170427_010.DXD

Method File Name : c:\peaknet2\method02\170427ic2.met Current Date : 4/27/17
Date, Time Analyzed : 4/27/17 1:29:27 PM Current Time : 1:44:31 PM
System Operator : amg Datafile Updated : 4/27/17 1:44:31 PM
Calibration Updated : 4/27/17 1:14:19 PM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1		3.27	0.0		640
2	Chloride	4.40	87.0	-	15684
	Nitrite as N				
	Bromide				
	Nitrate as N				
3	Orthophosphate as P	9.03	201.5	-	41234
	Sulfate				
	Nitrate/Nitrite as N				

ICB



Sample Analysis Report

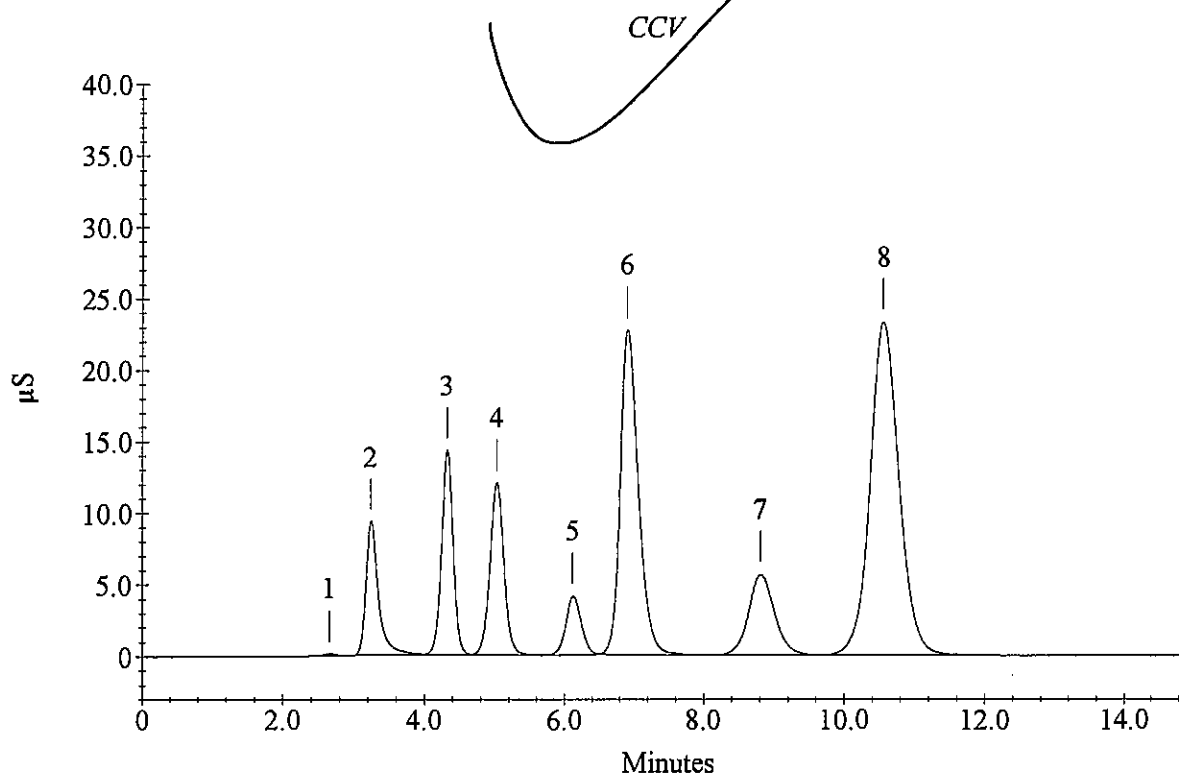
Sample Name : CCV

Data File Name : c:\peaknet2\data02\170511ic2\170511_012.DXD

Method File Name : c:\peaknet2\method02\170427aic2.met Current Date : 5/11/17
Date, Time Analyzed : 5/11/17 11:04:24 AM Current Time : 11:19:28 AM
System Operator : amg Datafile Updated : 5/11/17 11:19:28 AM
Calibration Updated : 5/8/17 8:55:26 AM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	3.24	4755.3		1128013
3	Chloride	4.32	9995.5		1623132
4	Nitrite as N	5.03	4837.0		1660001
5	Bromide	6.12	9886.6		623642
6	Nitrate as N	6.91	9943.7		4098936
7	Orthophosphate as P	8.81	9635.4		1443045
8	Sulfate	10.56	52482.6		6620324
	Nitrate/Nitrite as N				



Sample Analysis Report

Sample Name : CCB

Data File Name : c:\peaknet2\data02\170511ic2\170511_013.DXD

Method File Name : c:\peaknet2\method02\170427aic2.met Current Date : 5/11/17

Date, Time Analyzed : 5/11/17 11:19:30 AM

Current Time : 11:34:34 AM

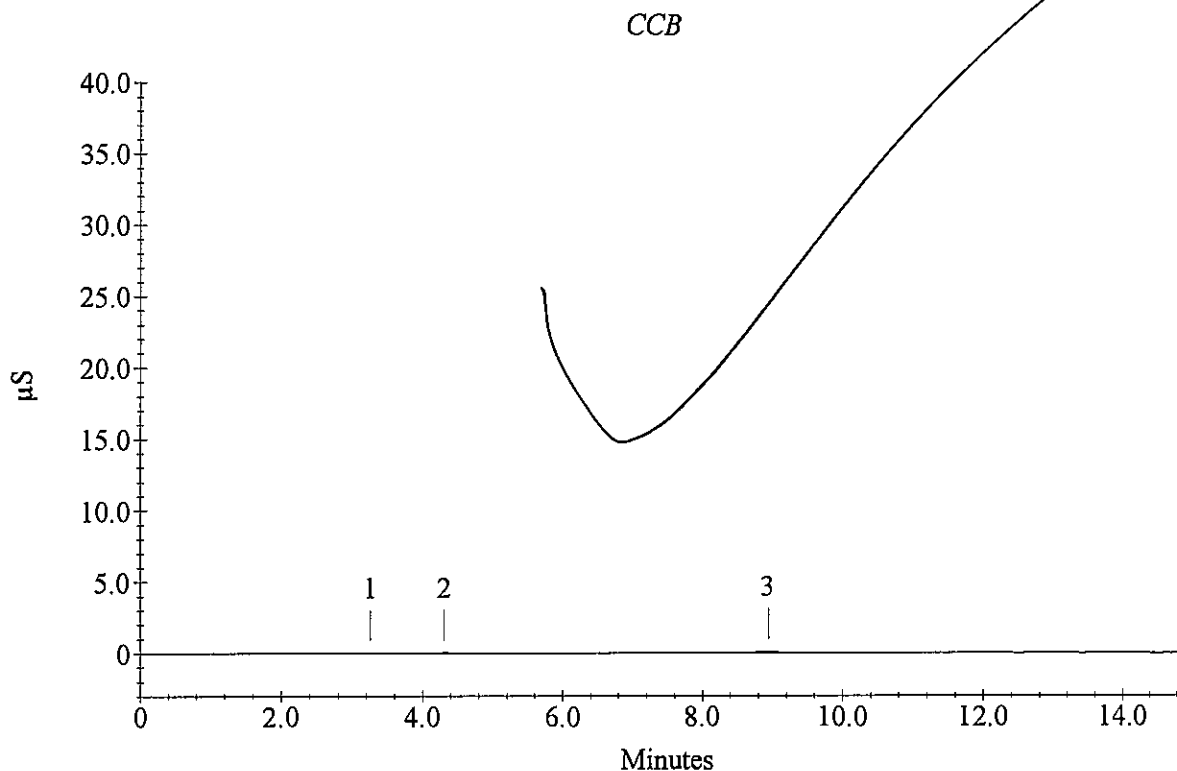
System Operator : amg

Datafile Updated : 5/11/17 11:34:34 AM

Calibration Updated : 5/8/17 8:55:26 AM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1		3.25	0.0		637
2	Chloride	4.31	-5.9	-	1636
	Nitrite as N				
	Bromide				
	Nitrate as N				
3	Orthophosphate as P	8.95	128.0	-	30931
	Sulfate				
	Nitrate/Nitrite as N				



Sample Analysis Report

Sample Name : IC170511-1MB

Data File Name : c:\peaknet2\data02\170511ic2\170511_014.DXD

Method File Name : c:\peaknet2\method02\170427aic2.met Current Date : 5/11/17

Date, Time Analyzed : 5/11/17 11:34:35 AM

Current Time : 11:49:40 AM

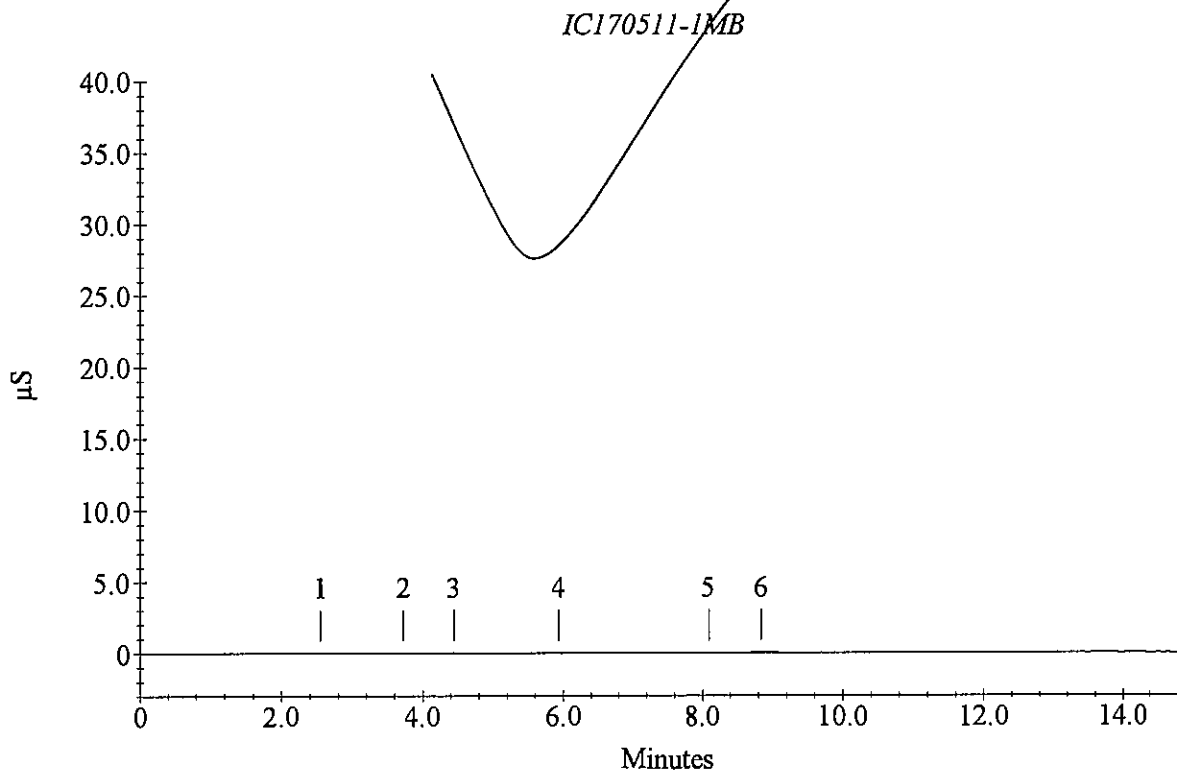
System Operator : amg

Datafile Updated : 5/11/17 11:49:39 AM

Calibration Updated : 5/8/17 8:55:26 AM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1		2.55	0.0		493
3	Chloride	4.44	21.5	-	5769
	Nitrite as N				
4	Bromide	5.93	44.0	-	900
	Nitrate as N				
6	Orthophosphate as P	8.84	3.1	-	13430
	Sulfate				
	Nitrate/Nitrite as N				



Sample Analysis Report

Sample Name : IC170511-1LCS

Data File Name : c:\peaknet2\data02\170511ic2\170511_015.DXD

Method File Name : c:\peaknet2\method02\170427aic2.met Current Date : 5/11/17

Date, Time Analyzed : 5/11/17 11:49:42 AM

Current Time : 12:04:47 PM

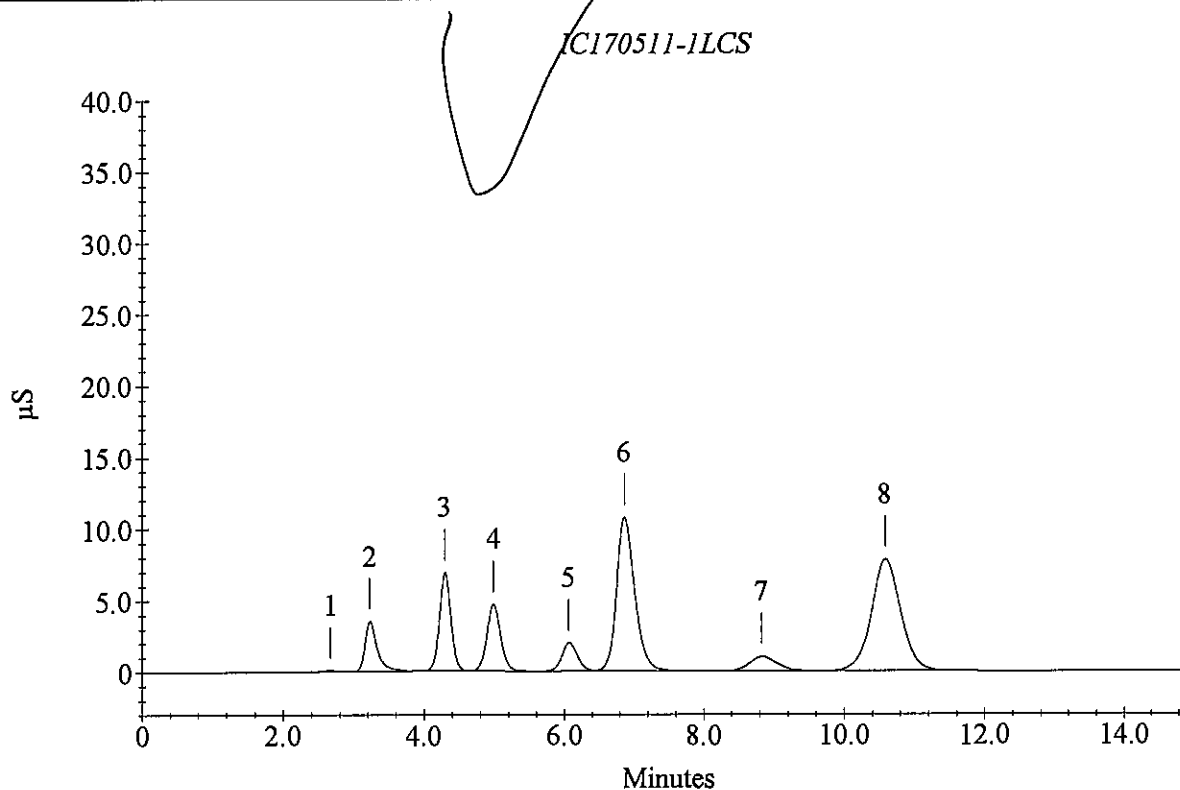
System Operator : amg

Datafile Updated : 5/11/17 12:04:46 PM

Calibration Updated : 5/8/17 8:55:26 AM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	3.23	1900.4		434487
3	Chloride	4.29	4956.3		776763
4	Nitrite as N	4.99	1931.6		641250
5	Bromide	6.07	4932.3		303460
6	Nitrate as N	6.87	4967.5		1944170
7	Orthophosphate as P	8.83	1832.4		272093
8	Sulfate	10.59	19303.5		2281495
	Nitrate/Nitrite as N				



Sample Analysis Report

Sample Name : 1705158-1 5x

Data File Name : c:\peaknet2\data02\170511ic2\170511_021.DXD

Method File Name : c:\peaknet2\method02\170427aic2.met Current Date : 5/11/17

Date, Time Analyzed : 5/11/17 1:20:23 PM

Current Time : 1:35:27 PM

System Operator : amg

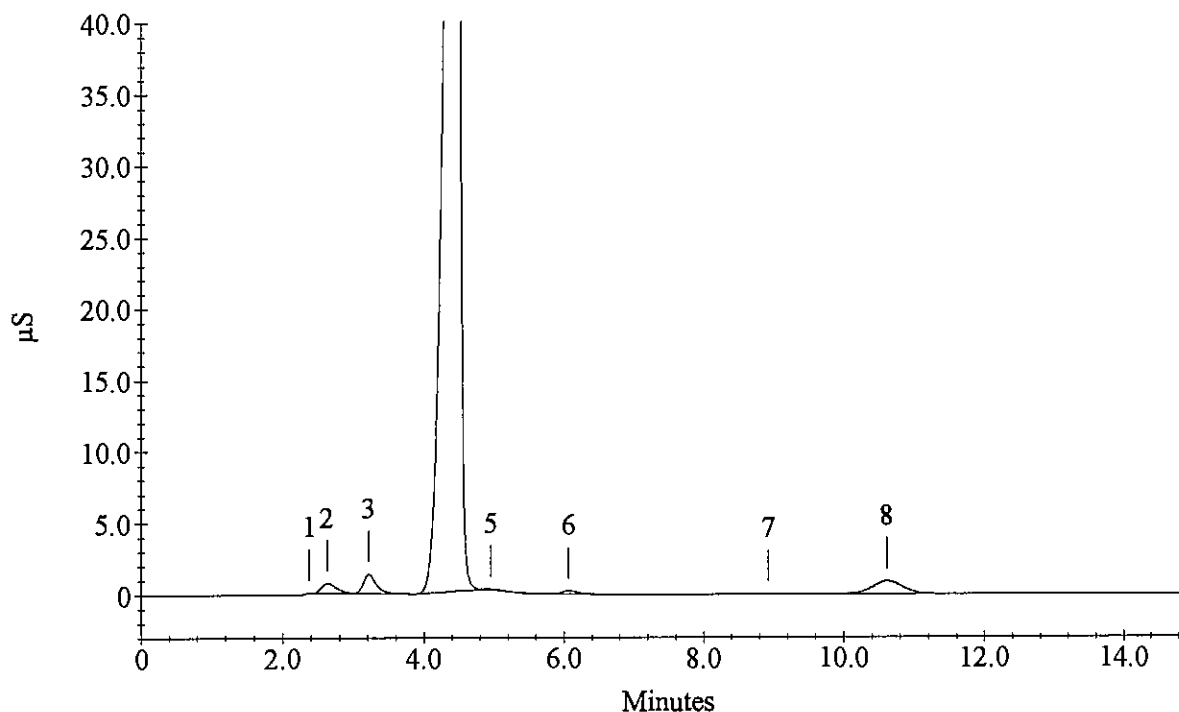
Datafile Updated : 5/11/17 1:35:27 PM

Calibration Updated : 5/8/17 8:55:26 AM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
3	Fluoride	3.21	756.9		166764
4	Chloride	4.45	36853.6	+	15142191
5	Nitrite as N	4.96	47.0	-	4867
6	Bromide	6.07	609.9		35297
	Nitrate as N				
7	Orthophosphate as P	8.93	-26.0	-	9365
8	Sulfate	10.61	2654.0		265069
	Nitrate/Nitrite as N				

1705158-1 5x



Sample Analysis Report

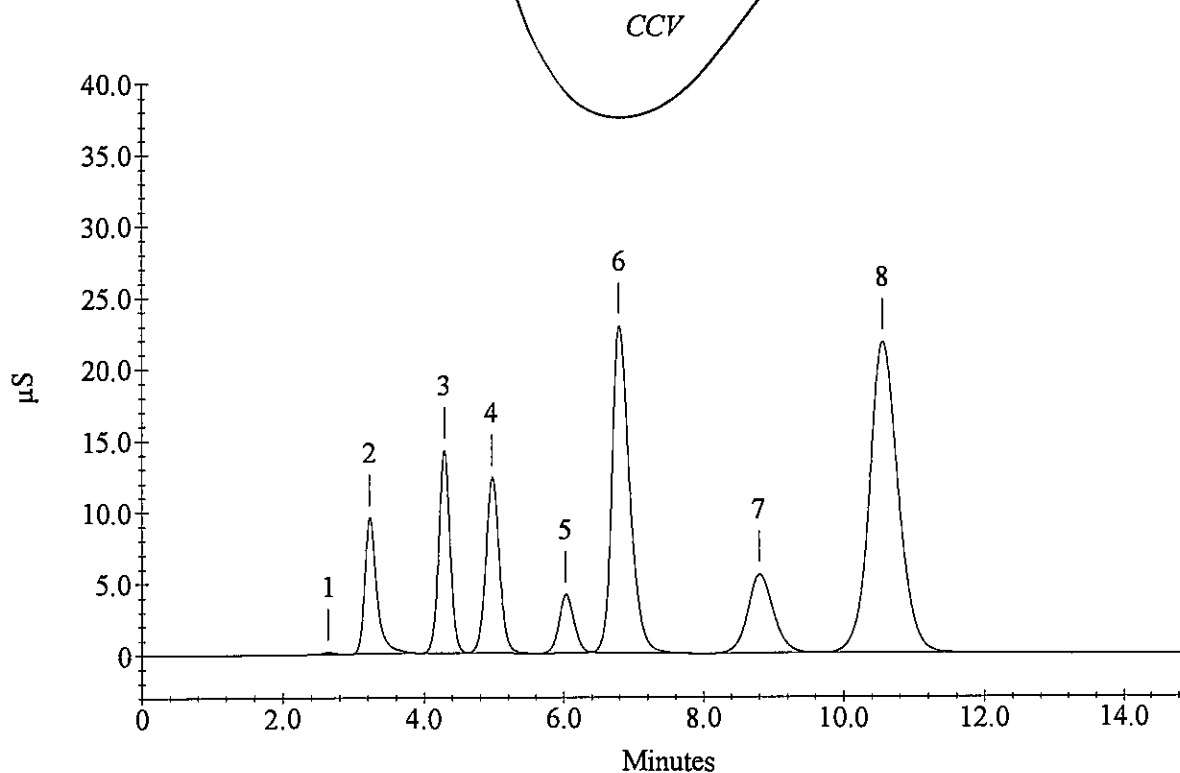
Sample Name : CCV

Data File Name : c:\peaknet2\data02\170511ic2\170511_024.DXD

Method File Name : c:\peaknet2\method02\170427aic2.met Current Date : 5/11/17
Date, Time Analyzed : 5/11/17 2:05:43 PM Current Time : 2:20:47 PM
System Operator : amg Datafile Updated : 5/11/17 2:20:47 PM
Calibration Updated : 5/8/17 8:55:26 AM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	3.23	4743.5		1125064
3	Chloride	4.29	9788.5		1586996
4	Nitrite as N	4.97	4863.1		1669397
5	Bromide	6.03	9655.1		608351
6	Nitrate as N	6.80	9757.6		4014763
7	Orthophosphate as P	8.80	9451.7		1414055
8	Sulfate	10.56	49055.8		6149340
	Nitrate/Nitrite as N				



Sample Analysis Report

Sample Name : CCB

Data File Name : c:\peaknet2\data02\170511ic2\170511_025.DXD

Method File Name : c:\peaknet2\method02\170427aic2.met Current Date : 5/11/17

Date, Time Analyzed : 5/11/17 2:20:49 PM

Current Time : 2:35:55 PM

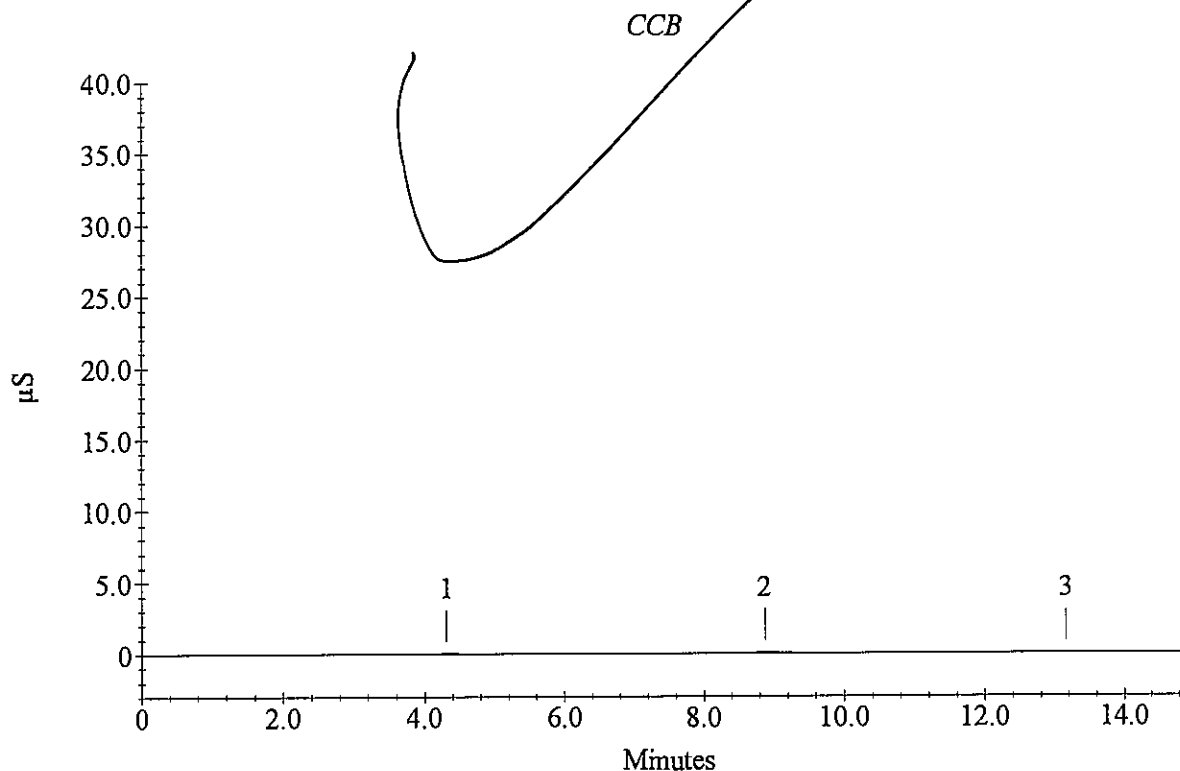
System Operator : amg

Datafile Updated : 5/11/17 2:35:54 PM

Calibration Updated : 5/8/17 8:55:26 AM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1	Chloride	4.31	20.2	-	5576
1	Chloride	4.31	20.2	-	5576
	Nitrite as N				
	Bromide				
	Nitrate as N				
2	Orthophosphate as P	8.88	159.0	-	35277
	Sulfate				
	Nitrate/Nitrite as N				



Line	Sample	Sample Type	Level	Method	Data File	Comment
1	Blank	Sample		170427ic2.met	c:\peaknet2\data02\170427ic2\170427_001.dxd	Water
2	0 STD	Calibration	7	170427ic2.met	c:\peaknet2\data02\170427ic2\170427_002.dxd	
3	1000X STD	Calibration	6	170427ic2.met	c:\peaknet2\data02\170427ic2\170427_003.dxd	
4	500X STD	Calibration	5	170427ic2.met	c:\peaknet2\data02\170427ic2\170427_004.dxd	
5	100X STD	Calibration	4	170427ic2.met	c:\peaknet2\data02\170427ic2\170427_005.dxd	
6	25X STD	Calibration	3	170427ic2.met	c:\peaknet2\data02\170427ic2\170427_006.dxd	
7	10X STD	Calibration	2	170427ic2.met	c:\peaknet2\data02\170427ic2\170427_007.dxd	
8	5X STD	Calibration	1	170427ic2.met	c:\peaknet2\data02\170427ic2\170427_008.dxd	
9	ICV	Sample		170427ic2.met	c:\peaknet2\data02\170427ic2\170427_009.dxd	ICV
10	ICB	Sample		170427ic2.met	c:\peaknet2\data02\170427ic2\170427_010.dxd	ICB
11	BLANK	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_011.dxd	BLANK
12	CCV	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_012.dxd	CCV
13	CCB	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_013.dxd	CCB
14	IC170512-1MB	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_014.dxd	MB
15	IC170512-1LCS	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_015.dxd	LCS
16	IC170512-1LCSD	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_016.dxd	LCSD
17	1705247-4 1x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_017.dxd	RRing F, NO3
18	1705250-1 5x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_018.dxd	RRing Cl only
19	1705248-1 25x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_019.dxd	RRing SO4 only
20	1705248-1MS 25x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_020.dxd	RRing SO4 only
21	1705248-1MSD 25x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_021.dxd	RRing SO4 only
22	1704512-2 2x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_022.dxd	RRing Cl, SO4
23	1705095-1 5000x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_023.dxd	RRing Cl
24	CCV	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_024.dxd	CCV
25	CCB	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_025.dxd	CCB
26	1705158-1 25x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_026.dxd	RRing Cl
27	1704604-3 5x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_027.dxd	RRing Cl
28	1704604-4 5x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_028.dxd	RRing Cl
29	1704604-5 5x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_029.dxd	RRing Cl
30	1704604-6 5x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_030.dxd	RRing Cl
31	IC170504-1LCS	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_031.dxd	LCS
32	1705155-1 10x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_032.dxd	Cl, SO4
33	1705155-1 250x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_033.dxd	Cl, SO4
34	1705155-2 10x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_034.dxd	Cl, SO4
35	1705155-2 250x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_035.dxd	Cl, SO4
36	CCV	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_036.dxd	CCV
37	CCB	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_037.dxd	CCB
38	1705176-1 10x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_038.dxd	SO4
39	1705176-2 10x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_039.dxd	SO4
40	1705176-3 10x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_040.dxd	SO4
41	1705176-4 10x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_041.dxd	SO4
42	1705176-5 10x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_042.dxd	SO4
43	1705176-6 10x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_043.dxd	SO4
44	1705176-7 10x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_044.dxd	SO4
45	1705176-8 10x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_045.dxd	SO4
46	1705176-9 10x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_046.dxd	SO4
47	1705176-10 10x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_047.dxd	SO4
48	CCV	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_048.dxd	CCV
49	CCB	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_049.dxd	CCB
50	1705176-11 10x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_050.dxd	Cl, SO4
51	1705176-11 250x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_051.dxd	Cl, SO4
52	1705176-12 10x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_052.dxd	Cl, SO4
53	1705176-12 250x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_053.dxd	Cl, SO4
54	1705176-13 10x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_054.dxd	Cl, SO4
55	1705176-13 250x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_055.dxd	Cl, SO4
56	IC170512-2MB	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_056.dxd	MB
57	IC170512-2LCS	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_057.dxd	LCS
58	IC170512-2LCSD	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_058.dxd	LCSD
59	1705279-1 1x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_059.dxd	F, NO3
60	CCV	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_060.dxd	CCV
61	CCB	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_061.dxd	CCB
62	1705279-1MS 1x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_062.dxd	F, NO3
63	1705279-1MSD 1x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_063.dxd	F, NO3
64	1705279-2 1x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_064.dxd	F, NO3
65	1705279-3 1x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_065.dxd	F, NO3
66	1705278-1	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_066.dxd	F, NO3
67	1705278-2	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_067.dxd	F, NO3
68	1705278-3	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_068.dxd	F, NO3
69	1705278-4	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_069.dxd	F, NO3
70	1705176-1MS 10x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_070.dxd	SO4
71	1705176-1MSD 10x	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_071.dxd	SO4
72	CCV	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_072.dxd	CCV
73	CCB	Sample		170427aic2.met	c:\peaknet2\data02\170512ic2\170512_073.dxd	CCB
74	STOP	Sample		stop.met	c:\peaknet2\data02\170512ic2\170512_074.dxd	STOP

Default Method Path: C:\PEAKNET2\METHOD02

Default Data Path: C:\PEAKNET2\DATA02\170214IC2

Comment:

BatchDx created schedule.

Analyst: Adler

Instrument #2: DIONEX DX-120. ID Serial Number: 99060762

Analytical Column: Dionex IonPac AS14

Methods: EPA 300.0 and SW9056. ALS SOP 1113

Final_ID_Aliq

ICAL std level 7 (0x)			
ICAL std level 6 (1000x)	5.00	ST170207-8, ST170317-2	0.05
ICAL std level 5 (500x)	5.00	"	0.01
ICAL std level 4 (100x)	5.00	"	0.05
ICAL std level 3 (25x)	5.00	"	0.20
ICAL std level 2 (10x)	5.00	"	0.50
ICAL std level 1 (5x)	5.00	"	1.00

CCV	5.00	ST170207-8, ST170317-2	0.50
RVS	5.00	ST160920-1, ST170116-9	0.01
ICV	5.00	ST160707-6	0.25
		ST170314-1	0.08
LCS & MS/D	5.00	ST160809-2	0.05
		ST170116-8	0.05

Dilutions Table: All to 5mL Final Volume (FV) unless specified otherwise:

2x (2.5mL)	4x (1.25mL)	5x (1mL)	8x (0.625mL)
10x (0.5mL)	12.5x (0.4mL)	20x (0.25mL)	25x (0.2mL)
40x (0.125mL)	50x (0.1mL)	62.5x (0.08mL)	100x (0.05mL)
125x (0.04mL)	200x (0.025mL)	250x (0.02mL)	500x (0.01mL)
1000x (100uL to 100mL FV)		2000x (50uL to 100mL FV)	
2500x (40uL to 100mL FV)		4000x (25uL to 100mL FV)	
5000x (50uL to 250mL FV)		10000x (25uL to 250mL FV)	

Sample Analysis Report

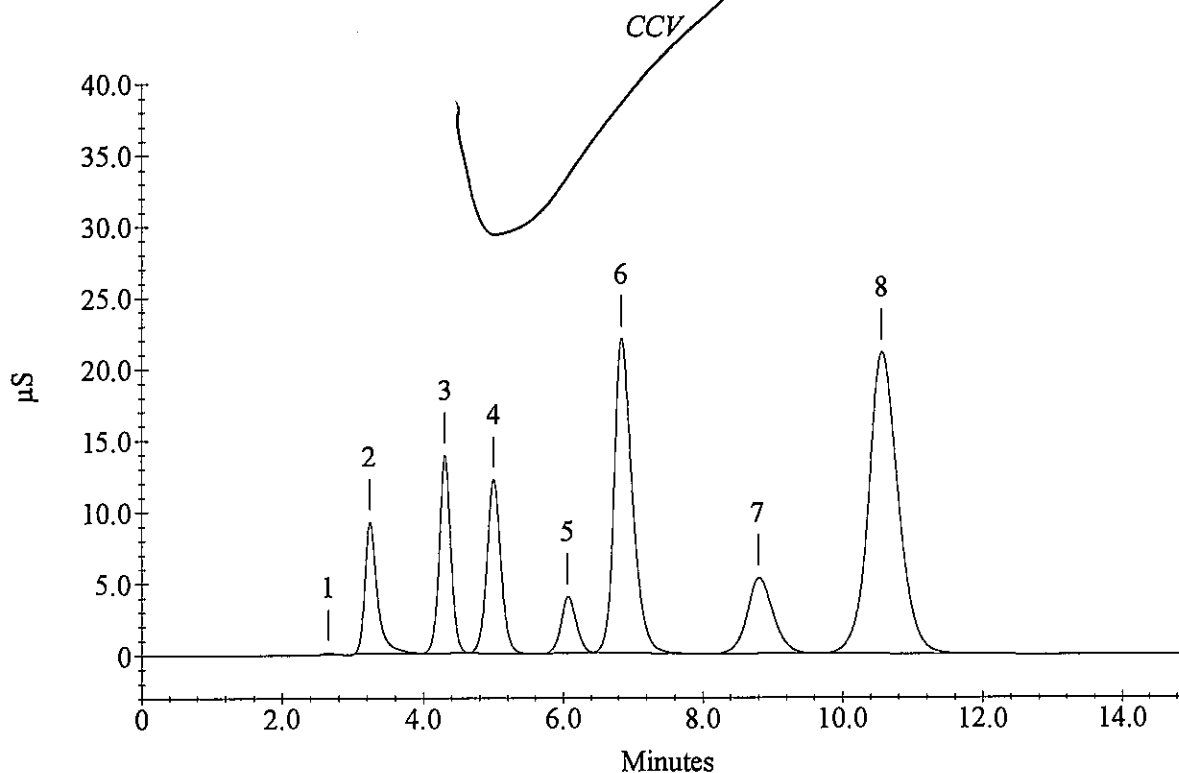
Sample Name : CCV

Data File Name : c:\peaknet2\data02\170512ic2\170512_012.DXD

Method File Name : c:\peaknet2\method02\170427aic2.met Current Date : 5/12/17
Date, Time Analyzed : 5/12/17 12:11:02 PM Current Time : 12:26:06 PM
System Operator : amg Datafile Updated : 5/12/17 12:26:06 PM
Calibration Updated : 5/8/17 8:55:26 AM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	3.24	4717.0		1118465
3	Chloride	4.31	9712.7		1573797
4	Nitrite as N	5.00	4899.8		1682592
5	Bromide	6.07	9472.0		596277
6	Nitrate as N	6.84	9685.0		3982030
7	Orthophosphate as P	8.80	9250.6		1382421
8	Sulfate	10.56	49014.2		6143658
	Nitrate/Nitrite as N				



Sample Analysis Report

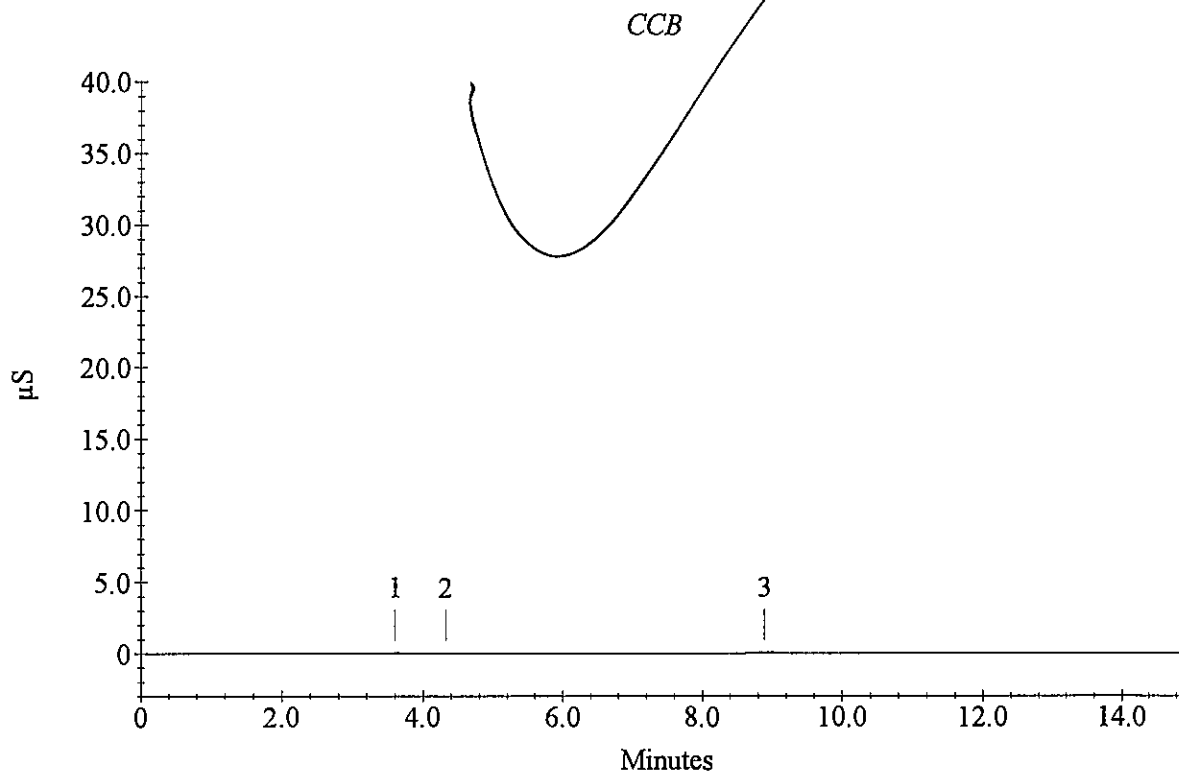
Sample Name : CCB

Data File Name : c:\peaknet2\data02\170512ic2\170512_013.DXD

Method File Name : c:\peaknet2\method02\170427aic2.met Current Date : 5/12/17
Date, Time Analyzed : 5/12/17 12:26:08 PM Current Time : 12:41:12 PM
System Operator : amg Datafile Updated : 5/12/17 12:41:12 PM
Calibration Updated : 5/8/17 8:55:26 AM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1		3.60	0.0		1153
2	Chloride	4.32	0.6	-	2619
	Nitrite as N				
	Bromide				
	Nitrate as N				
3	Orthophosphate as P	8.89	48.8	-	19837
	Sulfate				
	Nitrate/Nitrite as N				



Sample Analysis Report

Sample Name : CCV

Data File Name : c:\peaknet2\data02\170512ic2\170512_024.DXD

Method File Name : c:\peaknet2\method02\170427aic2.met Current Date : 5/12/17

Date, Time Analyzed : 5/12/17 3:12:21 PM

Current Time : 3:27:25 PM

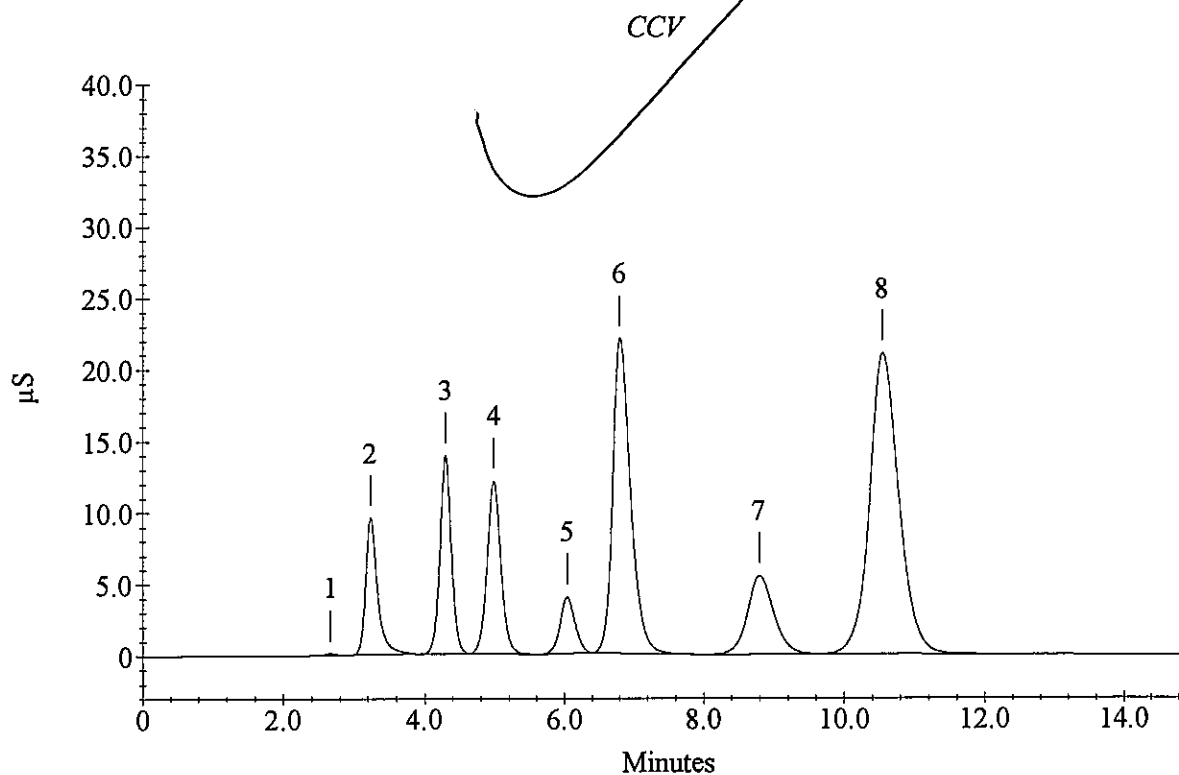
System Operator : amg

Datafile Updated : 5/12/17 3:27:25 PM

Calibration Updated : 5/8/17 8:55:26 AM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	3.24	4733.4		1122553
3	Chloride	4.29	9610.8		1556084
4	Nitrite as N	4.99	4823.5		1655185
5	Bromide	6.04	9398.6		591446
6	Nitrate as N	6.80	9579.5		3934539
7	Orthophosphate as P	8.80	9590.3		1435916
8	Sulfate	10.55	48563.6		6082169
	Nitrate/Nitrite as N				



Sample Analysis Report

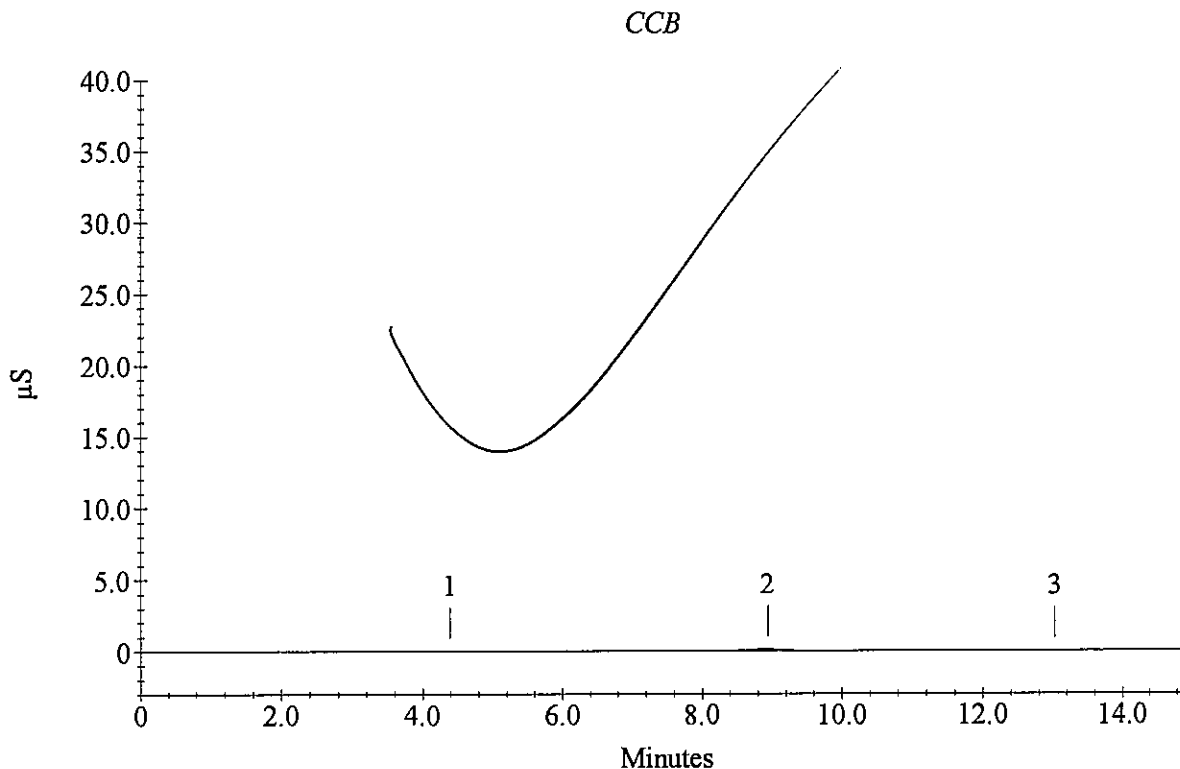
Sample Name : CCB

Data File Name : c:\peaknet2\data02\170512ic2\170512_025.DXD

Method File Name : c:\peaknet2\method02\170427aic2.met	Current Date : 5/12/17
Date, Time Analyzed : 5/12/17 3:27:28 PM	Current Time : 3:42:32 PM
System Operator : amg	Datafile Updated : 5/12/17 3:42:32 PM
Calibration Updated : 5/8/17 8:55:26 AM	

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1	Chloride	4.39	3.9	-	3109
1	Chloride	4.39	3.9	-	3109
	Nitrite as N				
	Bromide				
	Nitrate as N				
2	Orthophosphate as P	8.95	220.6	-	43905
	Sulfate				
	Nitrate/Nitrite as N				



Sample Analysis Report

Sample Name : 1705158-1 25x

Data File Name : c:\peaknet2\data02\170512ic2\170512_026.DXD

Method File Name : c:\peaknet2\method02\170427aic2.met Current Date : 5/12/17

Date, Time Analyzed : 5/12/17 3:42:34 PM

Current Time : 3:57:39 PM

System Operator : amg

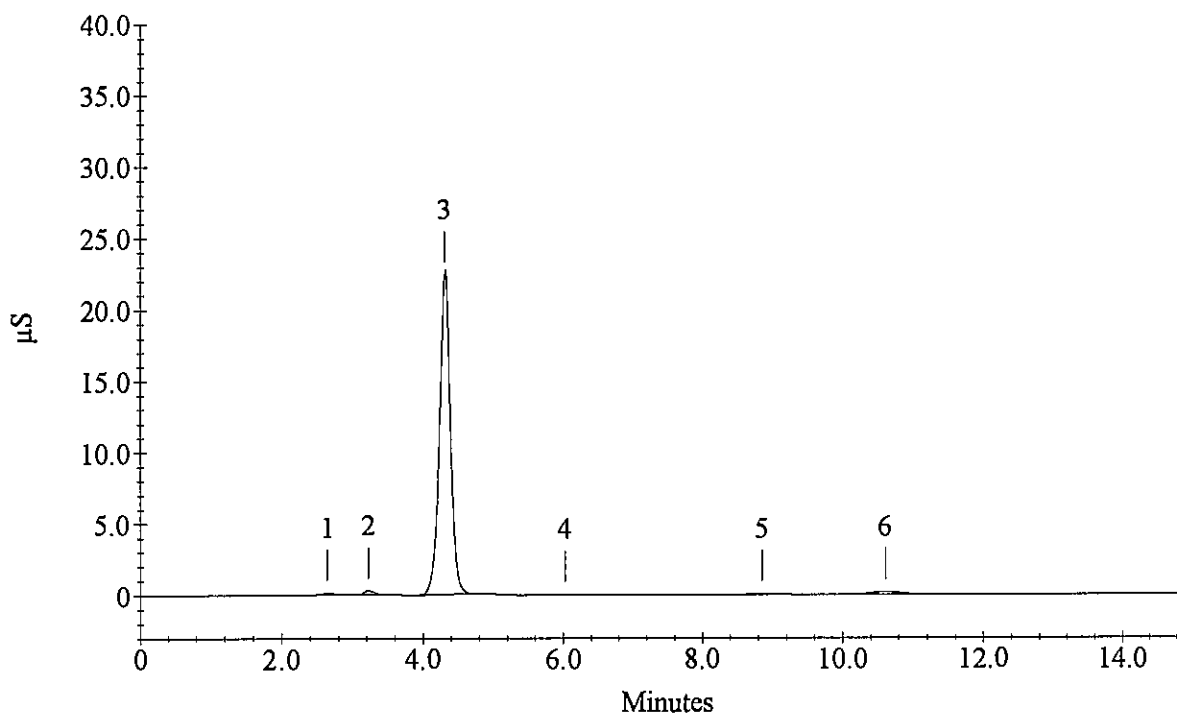
Datafile Updated : 5/12/17 3:57:38 PM

Calibration Updated : 5/8/17 8:55:26 AM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	3.23	162.4		29670
3	Chloride	4.31	14546.9		2451966
	Nitrite as N				
4	Bromide	6.03	130.3	-	6136
	Nitrate as N				
5	Orthophosphate as P	8.85	38.3	-	18369
6	Sulfate	10.61	809.3		47308
	Nitrate/Nitrite as N				

1705158-1 25x



Sample Analysis Report

Sample Name : CCV

Data File Name : c:\peaknet2\data02\170512ic2\170512_036.DXD

Method File Name : c:\peaknet2\method02\170427aic2.met Current Date : 5/12/17

Date, Time Analyzed : 5/12/17 6:13:41 PM

Current Time : 6:28:46 PM

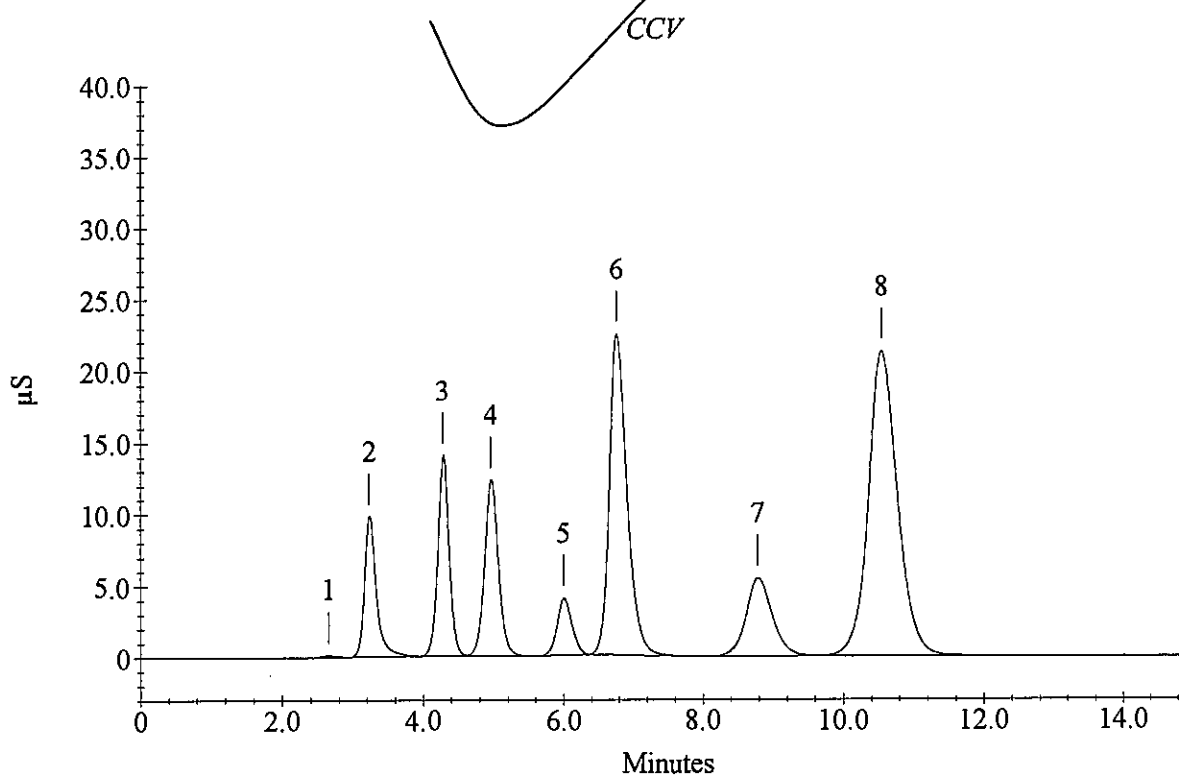
System Operator : amg

Datafile Updated : 5/12/17 6:28:45 PM

Calibration Updated : 5/8/17 8:55:26 AM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
2	Fluoride	3.23	4808.4		1141284
3	Chloride	4.28	9681.0		1568285
4	Nitrite as N	4.96	4876.1		1674070
5	Bromide	6.00	9427.2		593329
6	Nitrate as N	6.76	9637.8		3960798
7	Orthophosphate as P	8.79	9498.3		1421400
8	Sulfate	10.55	48929.9		6132144
	Nitrate/Nitrite as N				



Sample Analysis Report

Sample Name : CCB

Data File Name : c:\peaknet2\data02\170512ic2\170512_037.DXD

Method File Name : c:\peaknet2\method02\170427aic2.met Current Date : 5/12/17

Date, Time Analyzed : 5/12/17 6:28:48 PM

Current Time : 6:43:53 PM

System Operator : amg

Datafile Updated : 5/12/17 6:43:53 PM

Calibration Updated : 5/8/17 8:55:26 AM

Peak Information : All Components

Peak Number	Analyte	Retention Time (min.)	Concentration (ug/L)	Limit Exceeded	Peak Area
1	Chloride	4.33	3.9	-	3111
1	Chloride	4.33	3.9	-	3111
	Nitrite as N				
	Bromide				
	Nitrate as N				
3	Orthophosphate as P	8.85	196.0	-	40459
	Sulfate				
	Nitrate/Nitrite as N				

