

Anion / Cation Summary Report

Lab ID: **1308382-1**

QC Type: SMP

Field ID Peterson Water Well

Analyte	Final Result	Report Units	mEq
BICARBONATE AS CaCO3	316.8334	MG/L	6.33
CARBONATE AS CaCO3	20	MG/L	0.00
CHLORIDE	82.66189	MG/L	2.33
FLUORIDE	0.4558384	MG/L	0.02
NITRATE/NITRITE AS N	0.01	MG/L	0.00
SULFATE	681.3441	MG/L	14.19
Anion Result Sum	1101.31		

Analyte	Final Result	Report Units	mEq
CALCIUM	14.81913	MG/L	0.74
IRON	0.1	MG/L	0.00
MAGNESIUM	2.26684	MG/L	0.19
MANGANESE	0.03639	MG/L	0.00
POTASSIUM	2.64608	MG/L	0.07
SODIUM	499.1959	MG/L	21.71
Cation Result Sum	519.06		

Total Result: **1620.37** MG/L
TDS Result: **1516.000** MG/L
RPD: 6.66%

Anion mEq Sum: **22.87**
Cation mEq Sum: **22.71**
RPD: 0.72%

Below is a list of Lab IDs for this Order Number that were logged in for metals analyses. Note: if this area is empty then either no metals analyses were requested or the cations of interest were not requested.

1308382-1



Inorganics Case Narrative

COGCC

Peterson Water Well -- 200276485

Work Order Number: 1308382

1. This report consists of 1 water sample.
2. The sample was received cool and intact by ALS on 08/21/13.
3. The sample had been correctly preserved for the nitrate/nitrite as N analysis.
4. The sample was prepared for analysis based on Methods for the Chemical Analysis of Waters and Wastes (MCAWW), May 1994 procedures and Environmental Monitoring Systems Laboratory (EMSL) Rev 2.1 procedures.
5. The sample was analyzed following MCAWW and EMSL procedures for the current revisions of the following SOPs and methods:

<u>Analyte</u>	<u>Method</u>	<u>SOP #</u>
Alkalinity	310.1	1106
Bicarbonate	310.1	1106
Carbonate	310.1	1106
Nitrate/nitrite as N	353.2 Revision 2.0	1127
pH	150.1	1126
Specific conductance	120.1	1128
TDS	160.1	1101
Bromide	300.0 Revision 2.1	1113
Chloride	300.0 Revision 2.1	1113
Fluoride	300.0 Revision 2.1	1113
Sulfate	300.0 Revision 2.1	1113

6. All standards and solutions were used within their recommended shelf life.
7. 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.



8. General quality control procedures.

- n A preparation (method) blank and laboratory control sample (LCS) 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.
- 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.

9. Matrix specific quality control procedures.

Sample 1308382-1 was designated as the quality control sample for the pH, specific conductance, bromide, chloride, fluoride, and sulfate 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 matrix spike (MS) and matrix spike duplicate (MSD) were prepared and analyzed with the bromide, chloride, fluoride, and sulfate batch. All guidance criteria for precision and accuracy were met.
- n Matrix spike recoveries could not be evaluated for the following analytes:

<u>Analyte</u>	<u>Sample ID</u>
Chloride	1308382-1MS & MSD
Sulfate	1308382-1MS & MSD

The chloride and sulfate concentrations in the native sample were above the analytical range; therefore accurate quantitation of MS/MSD recoveries were not possible. The LCS, ICV, and CCV results indicate the procedure was in control for these analytes.

- n A sample duplicate was prepared and analyzed with the pH and specific conductance batches. All guidance criteria for precision were met.

For pH, the difference between the pH of the sample and its duplicate must be less than or equal to 0.2 pH units to be in control. RPD is not calculated for this analysis.

10. It was necessary to dilute the sample in order to bring the chloride and sulfate concentrations into the analytical range of the ion chromatograph (IC).

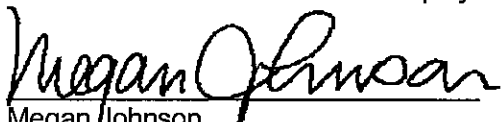


Reduced aliquots were taken of the sample for the alkalinity, bicarbonate, and carbonate analysis. Reporting limits were elevated accordingly.

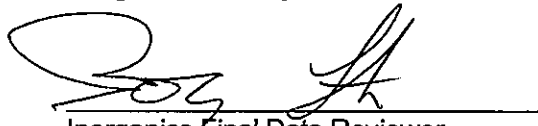
A reduced aliquot was taken of the sample for the TDS analysis. Reporting limits were elevated accordingly.

11. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in the current revision of SOP 939.

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 Johnson
Inorganics Primary Data Reviewer

8/30/13
Date


Inorganics Final Data Reviewer

8/30/13
Date



Inorganic Data Reporting Qualifiers

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

- Concentration qualifier -- 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.

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1308382

Client Name: COGCC

Client Project Name: Peterson Water Well

Client Project Number: 200276485

Client PO Number: PHA 14-09

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Peterson Water Well	1308382-1		WATER	21-Aug-13	11:00



225 Commerce Drive, Fort Collins, Colorado 80524
 TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

Form 202r8

Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analytes below.

Comments:		QC PACKAGE (check below)	
Pb, As, Cations/ Metals = Ca, Fe, Mg, Mn, K, Na, Ba, B, Cr, Se, Sr - Lab Filter Metals on Cation/Anion Balance email pdf, EDD and invoice to rickallison@shp.co.us		LEVEL II (Standard QC)	X
		LEVEL III (Std QC + forms)	
		LEVEL IV (Std QC + forms + raw data)	
Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035			



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: COGCC

Workorder No: 1308382

Project Manager: ARW

Initials: LAS Date: 8/21/13

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
<u>5</u> Are the COC and bottle labels complete and legible?		YES	<u>NO</u> *
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>4.8</u>			
No. of custody seals on cooler: <u>0</u>			
External µR/hr reading: <u>N/A</u>			
Background µR/hr reading: <u>11</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.

*5 COC did not list sample date/time.
Bottle labels have date = 8/21/13 and time = 1355 JAW 8/21/13
time = 1100.

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

Project Manager Signature / Date: [Signature] 8/23/13

BICARBONATE AS CaCO₃

Method EPA310.1

Sample Results

Lab Name: ALS Environmental -- FC
Client Name: COGCC
Client Project ID: Peterson Water Well 200276485
Work Order Number: 1308382 Final Volume: 100 ml
Reporting Basis: As Received Matrix: WATER
Prep Method: NONE Result Units: MG/L
Analyst: Alex J. Devonald

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit LOD/LOQ	Flag	Sample Aliquot
Peterson Water Well	1308382-1	08/21/2013	08/26/2013	08/26/2013	N/A	1	320	20		25 ml

Comments:

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

Data Package ID: *ak1308382-1*

Date Printed: Thursday, August 29, 2013

ALS Environmental -- FC

LIMS Version: 6.657

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CARBONATE AS CaCO3

Method EPA310.1

Sample Results

Lab Name: ALS Environmental -- FC
Client Name: COGCC
Client Project ID: Peterson Water Well 200276485
Work Order Number: 1308382 Final Volume: 100 ml
Reporting Basis: As Received Matrix: WATER
Prep Method: NONE Result Units: MG/L
Analyst: Alex J. Devonald

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit LOD/LOQ	Flag	Sample Aliquot
Peterson Water Well	1308382-1	08/21/2013	08/26/2013	08/26/2013	N/A	1	20	20	U	25 ml

Comments:

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

Data Package ID: *ak1308382-1*

Date Printed: Thursday, August 29, 2013

ALS Environmental -- FC

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TOTAL ALKALINITY AS CaCO3

Method EPA310.1

Sample Results

Lab Name: ALS Environmental -- FC
Client Name: COGCC
Client Project ID: Peterson Water Well 200276485
Work Order Number: 1308382 Final Volume: 100 ml
Reporting Basis: As Received Matrix: WATER
Prep Method: NONE Result Units: MG/L
Analyst: Alex J. Devonald

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	RptLimit LOD/LOQ	Flag	Sample Aliquot
Peterson Water Well	1308382-1	08/21/2013	08/26/2013	08/26/2013	N/A	1	320	20		25 ml

Comments:

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

Data Package ID: *ak1308382-1*

Date Printed: Thursday, August 29, 2013

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Nitrate/Nitrite as N

Method EPA353.2 Revision 2.0

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Field ID:	Peterson Water Well	Sample Matrix:	WATER	Prep Batch:	NN130828-1	Analyst:	Alex J. Devonald
Lab ID:	1308382-1	% Moisture:	N/A	QCBatchID:	NN130828-1-1	Sample Aliquot:	5 ML
		Date Collected:	21-Aug-13	Run ID:	NN130828-1A	Final Volume:	5 ML
		Date Extracted:	28-Aug-13	Cleanup:	NONE	Result Units:	MG/L
		Date Analyzed:	28-Aug-13	Basis:	As Received	Clean DF:	1
		Prep Method:	NONE	File Name:	0828NOX.FDT		

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	Result Qualifier	EPA Qualifier
1-005	NITRATE/NITRITE AS N	1	0.01	0.01	U	

Data Package ID: *nn1308382-1*

pH

Method EPA150.1

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Field ID:	Peterson Water Well	Sample Matrix:	WATER	Prep Batch:	ph130823-2	Analyst:	Kristen A. Middleton
Lab ID:	1308382-1	% Moisture:	N/A	QCBatchID:	ph130823-2-2	Sample Aliquot:	20 ML
		Date Collected:	21-Aug-13	Run ID:	ph130823-1A	Final Volume:	20 ML
		Date Extracted:	23-Aug-13	Cleanup:	NONE	Result Units:	pH
		Date Analyzed:	23-Aug-13	Basis:	As Received	Clean DF:	1
		Prep Method:	METHOD	File Name:			

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	Result Qualifier	EPA Qualifier
10-29-7	PH AnalysisTime: 11:00	1	8.48	0.1		

Data Package ID: *ph1308382-1*

Specific Conductance in Water

Method EPA120.1

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Field ID:	Peterson Water Well	Sample Matrix:	WATER	Prep Batch:	sc130823-1	Analyst:	Kristen A. Middleton
Lab ID:	1308382-1	% Moisture:	N/A	QCBatchID:	sc130823-1-1	Sample Aliquot:	45 ML
		Date Collected:	21-Aug-13	Run ID:	SC130823-1A	Final Volume:	45 ML
		Date Extracted:	23-Aug-13	Cleanup:	NONE	Result Units:	umhos/cm
		Date Analyzed:	23-Aug-13	Basis:	As Received	Clean DF:	1
		Prep Method:	METHOD	File Name:			

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	Result Qualifier	EPA Qualifier
10-34-4	SPECIFIC CONDUCTIVITY AnalysisTime: 11:15	1	2270	1		

Data Package ID: sc1308382-1

Total Dissolved Solids

Method EPA160.1

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Field ID:	Peterson Water Well	Sample Matrix:	WATER	Prep Batch:	TD130828-1	Analyst:	Kristen A. Middleton
Lab ID:	1308382-1	% Moisture:	N/A	QCBatchID:	TD130828-1-2	Sample Aliquot:	50 ML
		Date Collected:	21-Aug-13	Run ID:	TD130829-1A	Final Volume:	50 ML
		Date Extracted:	28-Aug-13	Cleanup:	NONE	Result Units:	MG/L
		Date Analyzed:	29-Aug-13	Basis:	As Received	Clean DF:	1
		Prep Method:	METHOD	File Name:	Manual Entry		

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	Result Qualifier	EPA Qualifier
10-33-3	TOTAL DISSOLVED SOLIDS	1	1500	40		

Data Package ID: *td1308382-1*

Ion Chromatography

Method EPA300.0 Revision 2.1

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Field ID:	Peterson Water Well
Lab ID:	1308382-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 21-Aug-13

Date Extracted: 26-Aug-13

Date Analyzed: 26-Aug-13

Prep Method: NONE

Prep Batch: IC130826-1

QCBatchID: IC130826-1-1

Run ID: IC130826-1A1

Cleanup: NONE

Basis: As Received

File Name: 30826_041.dxd

Analyst: Alex J. Devonald

Sample Aliquot: 5 ML

Final Volume: 5 ML

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	Result Qualifier	EPA Qualifier
16984-48-8	FLUORIDE AnalysisTime: 22:42	2	0.46	0.2		
16887-00-6	CHLORIDE AnalysisTime: 23:24	20	83	4		
24959-67-9	BROMIDE AnalysisTime: 22:42	2	1	0.4		
14808-79-8	SULFATE AnalysisTime: 23:24	20	680	20		

Data Package ID: ic1308382-1

BICARBONATE AS CaCO₃

Method EPA310.1

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: AK130826-1MB

Sample Matrix: WATER

% Moisture: N/A

Prep Batch: AK130826-1

QCBatchID: AK130826-1-1

Run ID: AK130826-1A

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 LOD/LOQ	Flag
AK130826-1MB	8/26/2013	08/26/2013	N/A	1	5	5	U

Comments:

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

Data Package ID: *ak1308382-1*

Date Printed: Thursday, August 29, 2013

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CARBONATE AS CaCO₃

Method EPA310.1

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: AK130826-1MB

Sample Matrix: WATER

% Moisture: N/A

Prep Batch: AK130826-1

QCBatchID: AK130826-1-1

Run ID: AK130826-1A

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 LOD/LOQ	Flag
AK130826-1MB	8/26/2013	08/26/2013	N/A	1	5	5	U

Comments:

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

Data Package ID: *ak1308382-1*

Date Printed: Thursday, August 29, 2013

ALS Environmental -- FC

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TOTAL ALKALINITY AS CaCO3

Method EPA310.1

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: AK130826-1MB

Sample Matrix: WATER

% Moisture: N/A

Prep Batch: AK130826-1

QCBatchID: AK130826-1-1

Run ID: AK130826-1A

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 LOD/LOQ	Flag
AK130826-1MB	8/26/2013	08/26/2013	N/A	1	5	5	U

Comments:

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

Data Package ID: *ak1308382-1*

Date Printed: Thursday, August 29, 2013

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TOTAL ALKALINITY AS CaCO₃

Method EPA310.1

Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: AK130826-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 08/26/2013

Date Analyzed: 08/26/2013

Prep Batch: AK130826-1

QCBatchID: AK130826-1-1

Run ID: AK130826-1A

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	98.7	5		99	85 - 115

Data Package ID: *ak1308382-1*

Date Printed: Thursday, August 29, 2013

ALS Environmental -- FC

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Nitrate/Nitrite as N

Method EPA353.2 Revision 2.0

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: NN130828-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 28-Aug-13

Date Analyzed: 28-Aug-13

Prep Method: NONE

Prep Batch: NN130828-1

QCBatchID: NN130828-1-1

Run ID: NN130828-1A

Cleanup: NONE

Basis: N/A

File Name: 0828NOX.FDT

Sample Aliquot: 5 ml

Final Volume: 5 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit LOD/LOQ	Result Qualifier	EPA Qualifier
1-005	NITRATE/NITRITE AS N	1	0.01	0.01	U	

Data Package ID: *nn1308382-1*

Nitrate/Nitrite as N

Method EPA353.2 Revision 2.0

Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: NN130828-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 08/28/2013

Date Analyzed: 08/28/2013

Prep Method: NONE

Prep Batch: NN130828-1

QCBatchID: NN130828-1-1

Run ID: NN130828-1A

Cleanup: NONE

Basis: N/A

File Name: 0828NOX.FDT

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
1-005	NITRATE/NITRITE AS N	0.5	0.511	0.01		102	90 - 110%

Data Package ID: *nn1308382-1*

Date Printed: Thursday, August 29, 2013

ALS Environmental -- FC

LIMS Version: 6.657

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pH

Method EPA150.1

Duplicate Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Field ID:	Peterson Water Well
Lab ID:	1308382-1D

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 08/21/2013

Date Extracted: 08/23/2013

Date Analyzed: 08/23/2013

Prep Batch: ph130823-2

QCBatchID: ph130823-2-2

Run ID: pH130823-1A

Cleanup: NONE

Basis: As Received

File Name:

Sample Aliquot: 20 ml

Final Volume: 20 ml

Result Units: pH

Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
10-29-7	PH	8.48		8.49		0.1	1		0.2

Data Package ID: *ph1308382-1*

Date Printed: Thursday, August 29, 2013

ALS Environmental -- FC

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LIMS Version: 6.657

Specific Conductance in Water

Method EPA120.1

Duplicate Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Field ID:	Peterson Water Well
Lab ID:	1308382-1D

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 08/21/2013

Date Extracted: 08/23/2013

Date Analyzed: 08/23/2013

Prep Batch: sc130823-1

QCBatchID: sc130823-1-1

Run ID: SC130823-1A

Cleanup: NONE

Basis: As Received

File Name:

Sample Aliquot: 45 ml

Final Volume: 45 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	2270		2260		1	1	0	10

Data Package ID: sc1308382-1

Date Printed: Thursday, August 29, 2013

ALS Environmental -- FC

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LIMS Version: 6.657

Total Dissolved Solids

Method EPA160.1

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: TD130828-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 28-Aug-13

Date Analyzed: 29-Aug-13

Prep Method: METHOD

Prep Batch: TD130828-1

QCBatchID: TD130828-1-2

Run ID: TD130829-1A

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	RptLimit LOD/LOQ	Result Qualifier	EPA Qualifier
10-33-3	TOTAL DISSOLVED SOLIDS	1	20	20	U	

Data Package ID: *td1308382-1*

Total Dissolved Solids

Method EPA160.1

Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: TD130828-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 08/28/2013

Date Analyzed: 08/29/2013

Prep Method: METHOD

Prep Batch: TD130828-1

QCBatchID: TD130828-1-2

Run ID: TD130829-1A

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	416	20		104	85 - 115%

Data Package ID: *td1308382-1*

Date Printed: Thursday, August 29, 2013

ALS Environmental -- FC

LIMS Version: 6.657

Page 1 of 1

Ion Chromatography

Method EPA300.0 Revision 2.1

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: IC130826-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 26-Aug-13

Date Analyzed: 26-Aug-13

Prep Method: NONE

Prep Batch: IC130826-1

QCBatchID: IC130826-1-1

Run ID: IC130826-1A1

Cleanup: NONE

Basis: N/A

File Name: 30826_040.dxd

Sample Aliquot: 5 ml

Final Volume: 5 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit LOD/LOQ	Result Qualifier	EPA Qualifier
16984-48-8	FLUORIDE	1	0.1	0.1	U	
16887-00-6	CHLORIDE	1	0.2	0.2	U	
24959-67-9	BROMIDE	1	0.2	0.2	U	
14808-79-8	SULFATE	1	1	1	U	

Data Package ID: ic1308382-1

Ion Chromatography

Method EPA300.0 Revision 2.1

Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: IC130826-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 08/26/2013

Date Analyzed: 08/26/2013

Prep Method: NONE

Prep Batch: IC130826-1

QCBatchID: IC130826-1-1

Run ID: IC130826-1A1

Cleanup: NONE

Basis: N/A

File Name: 30826_013.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	1.93	0.1		97	90 - 110%
16887-00-6	CHLORIDE	5	5.01	0.2		100	90 - 110%
24959-67-9	BROMIDE	5	5.26	0.2		105	90 - 110%
14808-79-8	SULFATE	20	21.1	1		105	90 - 110%

Data Package ID: *ic1308382-1*

Date Printed: Friday, August 30, 2013

ALS Environmental -- FC

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LIMS Version: 6.657

Ion Chromatography

Method EPA300.0 Revision 2.1

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1308382
Client Name: COGCC
ClientProject ID: Peterson Water Well 200276485

Field ID: Peterson Water Well	Sample Matrix: WATER	Prep Batch: IC130826-1	Sample Aliquot: 5 ml
LabID: 1308382-1MS	% Moisture: N/A	QCBatchID: IC130826-1-1	Final Volume: 5 ml
	Date Collected: 21-Aug-13	Run ID: IC130826-1A1	Result Units: MG/L
	Date Extracted: 26-Aug-13	Cleanup: NONE	File Name: 30826_042.dxd
	Date Analyzed: 26-Aug-13	Basis: As Received	
	Prep Method: NONE		

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
16984-48-8	FLUORIDE	0.46		4.34		0.2	4	97	85 - 115%
24959-67-9	BROMIDE	1		11.3		0.4	10	103	85 - 115%

Field ID: Peterson Water Well	Sample Matrix: WATER	Prep Batch: IC130826-1	Sample Aliquot: 5 ml
LabID: 1308382-1MSD	% Moisture: N/A	QCBatchID: IC130826-1-1	Final Volume: 5 ml
	Date Collected: 21-Aug-13	Run ID: IC130826-1A1	Result Units: MG/L
	Date Extracted: 26-Aug-13	Cleanup: NONE	File Name: 30826_043.dxd
	Date Analyzed: 26-Aug-13	Basis: As Received	
	Prep Method: NONE		

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
16984-48-8	FLUORIDE	4.32		4	97	0.2	15	1
24959-67-9	BROMIDE	11.1		10	101	0.4	15	2

Data Package ID: ic1308382-1



Metals

Case Narrative

COGCC

Peterson Water Well -- 200276485

Work Order Number: 1308382

1. This report consists of 1 water sample.
2. The sample was received cool and intact by ALS on 08/21/13.
3. The sample was to be analyzed for dissolved metals. The sample was filtered through a 0.45 micron filter and preserved with nitric acid to a pH less than 2 prior to analysis.
4. The sample was prepared and analyzed based on Methods for the Determination of Metals in Environmental Samples – Supplement 1 procedures.

For analysis by ICP-MS, the sample was digested following method 200.2 and the current revision of SOP 806.

5. Analysis by ICP-MS followed method 200.8 and the current revision of SOP 827.
6. All standards and solutions are NIST traceable and were used within their recommended shelf life.
7. The sample was prepared and analyzed within the established hold time.

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

8. General quality control procedures.
 - A filter (method) blank and laboratory control sample were filtered, preserved, and digested at the same time as the sample.
 - The preparation (method) blank associated with this digestion batch was below the reporting limit for the requested analytes.
 - All laboratory control sample criteria were met.



- All initial and continuing calibration blanks were below the reporting limit for the requested analytes.
- All initial and continuing calibration verifications were within the acceptance criteria for the requested analytes.
- The interference check samples associated with Method 200.8 were analyzed.

9. Matrix specific quality control procedures.

Per method requirements, matrix QC was performed for this analysis. 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.

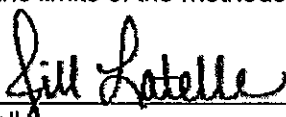
10. It is a standard practice that samples for ICP-MS are analyzed at a dilution.

11. Sodium Adsorption Ration (SAR) was determined by calculation based on a reference from the client. Calcium, magnesium, and sodium concentrations were determined by ICP, Method 200.7.

$$SAR = Na / (((Ca + Mg) / 2)^{1/2})$$

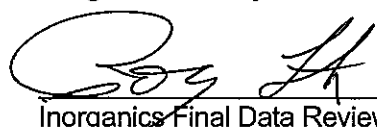
The analyte results are the me/L concentrations based on conversions from their mg/L concentrations. Please note that the SAR value is unitless.

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.



Jill Latelle
Inorganics Primary Data Reviewer

8/28/13
Date



Bob Ak
Inorganics Final Data Reviewer

8/28/13
Date



Inorganic Data Reporting Qualifiers

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

- Result qualifier -- If the analyte was analyzed for but not detected a "U" is entered.
- QC qualifier -- Specified entries and their meanings are as follows:
 - E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.
 - M - Duplicate injection precision was not met.
 - N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.
 - Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.
 - * - Duplicate analysis (relative percent difference) not within control limits.
 - S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1308382

Client Name: COGCC

Client Project Name: Peterson Water Well

Client Project Number: 200276485

Client PO Number: PHA 14-09

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Peterson Water Well	1308382-1		WATER	21-Aug-13	11:00



225 Commerce Drive, Fort Collins, Colorado 80524
 TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

Form 202r8

*Time Zone (Circle): EST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analytes below.

Comments:		QC PACKAGE (check below)	
Pb, Ag, Cations/Metals = Ca, Fe, Mg, Mn, K, Na, Ba, B, Cr, Se, Sr - Lab Filter Metals in Cation/Anion Balance email pdf, EDS and invoice to rick.allison@stapco.us		LEVEL I (Standard QC)	X
		LEVEL III (Std QC + forms)	
		LEVEL IV (Std QC + forms + raw data)	
Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035			



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: COGCC

Workorder No: 1308382

Project Manager: ARW

Initials: LAS Date: 8/21/13

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
<u>5</u> Are the COC and bottle labels complete and legible?		YES	<u>NO</u> *
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>4.8</u>			
No. of custody seals on cooler: <u>0</u>			
External µR/hr reading: <u>N/A</u>			
Background µR/hr reading: <u>11</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.

*5 COC did not list sample date/time.
Bottle labels have date = 8/21/13 and time = 1355 JAW 8/21/13
time = 1100.

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

Project Manager Signature / Date: [Signature] 8/23/13

Dissolved Metals by 200.8

Method EPA200.8 Revision 5.4

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Field ID: Peterson Water Well

Lab ID: 1308382-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 21-Aug-13

Date Extracted: 26-Aug-13

Date Analyzed: 27-Aug-13

Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP130826-7

QCBatchID: IP130826-7-2

Run ID: IM130827-10A2

Cleanup: NONE

Basis: As Received

File Name: 022SMPL.

Analyst: Ross Miller

Sample Aliquot: 50 G

Final Volume: 50 G

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	Result Qualifier	EPA Qualifier
7440-38-2	ARSENIC	10	0.002	0.002	U	
7440-39-3	BARIUM	10	0.008	0.001		
7440-42-8	BORON	10	0.068	0.05		
7440-70-2	CALCIUM	10	15	1		
7440-47-3	CHROMIUM	10	0.01	0.01	U	
7439-89-6	IRON	10	0.1	0.1	U	
7439-92-1	LEAD	10	0.0005	0.0005	U	
7439-95-4	MAGNESIUM	10	2.3	0.1		
7439-96-5	MANGANESE	10	0.036	0.002		
7440-09-7	POTASSIUM	10	2.6	1		
7782-49-2	SELENIUM	10	0.001	0.001	U	
7440-23-5	SODIUM	10	500	1		
	SODIUM ADSORPTION RATIO	10	32	0.26		
7440-24-6	STRONTIUM	10	0.36	0.001		

Data Package ID: im1308382-1

Metals by 200.8

Method EPA200.8 Revision 5.4

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: F130823-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 26-Aug-13

Date Analyzed: 27-Aug-13

Prep Method: EPA200.2 Rev 2.8

Prep Batch: IP130826-7

QCBatchID: IP130826-7-2

Run ID: IM130827-10A2

Cleanup: NONE

Basis: N/A

File Name: 013SMPL.

Sample Aliquot: 50 g

Final Volume: 50 g

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit LOD/LOQ	Result Qualifier	EPA Qualifier
7440-38-2	ARSENIC	10	0.002	0.002	U	
7440-39-3	BARIUM	10	0.001	0.001	U	
7440-42-8	BORON	10	0.05	0.05	U	
7440-70-2	CALCIUM	10	1	1	U	
7440-47-3	CHROMIUM	10	0.01	0.01	U	
7439-89-6	IRON	10	0.1	0.1	U	
7439-92-1	LEAD	10	0.0005	0.0005	U	
7439-95-4	MAGNESIUM	10	0.1	0.1	U	
7439-96-5	MANGANESE	10	0.002	0.002	U	
7440-09-7	POTASSIUM	10	1	1	U	
7782-49-2	SELENIUM	10	0.001	0.001	U	
7440-23-5	SODIUM	10	1	1	U	
7440-24-6	STRONTIUM	10	0.001	0.001	U	

Data Package ID: *im1308382-1*

Date Printed: Wednesday, August 28, 2013

ALS Environmental -- FC

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LIMS Version: 6.657

Metals by 200.8

Method EPA200.8 Revision 5.4

Laboratory Control Sample

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: FM130823-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 08/26/2013

Date Analyzed: 08/27/2013

Prep Method: EPA200.22.8

Prep Batch: IP130826-7

QCBatchID: IP130826-7-2

Run ID: IM130827-10A2

Cleanup: NONE

Basis: N/A

File Name: 015SMPL.

Sample Aliquot: 50 g

Final Volume: 50 g

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
7440-38-2	ARSENIC	0.1	0.0897	0.002		90	85 - 115%
7440-39-3	BARIUM	0.1	0.0954	0.001		95	85 - 115%
7440-42-8	BORON	1	0.891	0.05		89	85 - 115%
7440-70-2	CALCIUM	10	8.84	1		88	85 - 115%
7440-47-3	CHROMIUM	0.5	0.461	0.01		92	85 - 115%
7439-89-6	IRON	5	4.8	0.1		96	85 - 115%
7439-92-1	LEAD	0.05	0.0489	0.0005		98	85 - 115%
7439-95-4	MAGNESIUM	10	9.11	0.1		91	85 - 115%
7439-96-5	MANGANESE	0.2	0.183	0.002		91	85 - 115%
7440-09-7	POTASSIUM	5	4.86	1		97	85 - 115%
7782-49-2	SELENIUM	0.1	0.0986	0.001		99	85 - 115%
7440-23-5	SODIUM	10	9.72	1		97	85 - 115%
7440-24-6	STRONTIUM	0.1	0.0931	0.001		93	85 - 115%

Data Package ID: *im1308382-1*

Date Printed: Wednesday, August 28, 2013

ALS Environmental -- FC

Page 1 of 1

LIMS Version: 6.657



Dissolved Gasses

Case Narrative

COGCC

Peterson Water Well -- 200276485

Work Order Number: 1308382

1. This report consists of 1 water sample. The sample was received cool and intact by ALS on 08/21/2013.

The sample was free of headspace prior to analysis.

The sample had a pH < 2 at the time of analysis.

2. The sample was prepared and analyzed according to method RSK-175 procedures and the current revision of SOP 449.
3. The preparation batch included a method blank, laboratory control sample, laboratory control sample duplicate, sample duplicate, and matrix spike. Since a sample from this order number was not the selected matrix spike sample, results are not included in this report. The following is a list of samples used for the matrix QC:

Sample ID	QC Type	Batch ID
1308382-1	DUP	HC130830-99

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.

All preparation QC were within the acceptance criteria.

4. The sample was associated with one or more of the following analytical QC: initial calibrations, initial calibration verifications (ICV), and continuing calibration verifications (CCV).
5. All analytical QC were within the acceptance criteria.
6. Sample dilutions were not required for the requested analysis.



7. The sample was prepared and analyzed within the established holding time.
8. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in the current revision of SOP 939.

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.

Mindy Norton

Mindy Norton
Organics Primary Data Reviewer

8/30/13

Date

Dan Shenneman

Organics Final Data Reviewer

08/30/13

Date



ALS
Data Qualifier Flags
Chromatography and Mass Spectrometry

- U or ND:** This flag indicates that the compound was analyzed for but not detected.
- J:** This flag indicates an estimated value. This flag is used as follows : (1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the reporting limit (RL) but greater than the method detection limit (MDL); (3) when the data indicate the presence of a compound that meets the identification criteria, and the result is less than the RL but greater than the MDL; and (4) the reported value is estimated.
- B:** This flag is used when the analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user. This flag shall be used for a tentatively identified compound (TIC) as well as for a positively identified target compound.
- E:** This flag identifies compounds whose concentration exceeds the upper level of the calibration range.
- A:** This flag indicates that a tentatively identified compound is a suspected aldol-condensation product.
- X:** This flag indicates that the analyte was diluted below an accurate quantitation level.
- *:** This flag indicates that a spike recovery is outside the control criteria.
- +:** This flag indicates that the relative percent difference (RPD) exceeds the control criteria.

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1308382

Client Name: COGCC

Client Project Name: Peterson Water Well

Client Project Number: 200276485

Client PO Number: PHA 14-09

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Peterson Water Well	1308382-1		WATER	21-Aug-13	11:00

Chain-of-Custody

[illegible]



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: COGCC

Workorder No: 1308382

Project Manager: ARW

Initials: LAS Date: 8/21/13

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
<u>5</u> Are the COC and bottle labels complete and legible?		YES	<u>NO</u> *
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>4.8</u>			
No. of custody seals on cooler: <u>0</u>			
External µR/hr reading: <u>N/A</u>			
Background µR/hr reading: <u>11</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.

*5 COC did not list sample date/time.
Bottle labels have date = 8/21/13 and time = 1355 JAW 8/21/13
time = 1100.

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

Project Manager Signature / Date: [Signature] 8/23/13

Dissolved Gasses

Method RSK175

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: HC130830-99MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 30-Aug-13

Date Analyzed: 30-Aug-13

Prep Method: METHOD

Prep Batch: HC130830-99

QCBatchID: HC130830-99-1

Run ID: HC130830-999A

Cleanup: NONE

Basis: N/A

File Name: 06010.dat

Sample Aliquot: 38.5 ml

Final Volume: 38.5 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit LOD/LOQ	Result Qualifier	EPA Qualifier
74-82-8	METHANE	1	1	1	U	
74-84-0	ETHANE	1	2	2	U	
74-98-6	PROPANE	1	1	1	U	

Data Package ID: MEE1308382-1

Dissolved Gasses

Method RSK175

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Field ID: Peterson Water Well

Lab ID: 1308382-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 21-Aug-13

Date Extracted: 30-Aug-13

Date Analyzed: 30-Aug-13

Prep Method: METHOD

Prep Batch: HC130830-99

QCBatchID: HC130830-99-1

Run ID: HC130830-999A

Cleanup: NONE

Basis: As Received

File Name: 06012.dat

Analyst: Joel F. Nolte

Sample Aliquot: 38.5 ML

Final Volume: 38.5 ML

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	Result Qualifier	EPA Qualifier
74-82-8	METHANE	1	30	1		
74-84-0	ETHANE	1	2	2	U	
74-98-6	PROPANE	1	1	1	U	

Data Package ID: MEE1308382-1

Date Printed: Friday, August 30, 2013

ALS Environmental -- FC

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Dissolved Gasses

Method RSK175

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: HC130830-99LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 08/30/2013

Date Analyzed: 08/30/2013

Prep Method: METHOD

Prep Batch: HC130830-99

QCBatchID: HC130830-99-1

Run ID: HC130830-999A

Cleanup: NONE

Basis: N/A

File Name: 06009.dat

Sample Aliquot: 38.5 ml

Final Volume: 38.5 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
74-82-8	METHANE	142	127	1		90	80 - 120%
74-84-0	ETHANE	267	235	2		88	80 - 120%
74-98-6	PROPANE	391	332	1		85	80 - 120%

Lab ID: HC130830-99LCSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 08/30/2013

Date Analyzed: 08/30/2013

Prep Method: METHOD

Prep Batch: HC130830-99

QCBatchID: HC130830-99-1

Run ID: HC130830-999A

Cleanup: NONE

Basis: N/A

File Name: 06029.dat

Sample Aliquot: 38.5 ml

Final Volume: 38.5 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
74-82-8	METHANE	142	119	1		84	25	6
74-84-0	ETHANE	267	229	2		86	25	2
74-98-6	PROPANE	391	328	1		84	25	1

Data Package ID: MEE1308382-1

Date Printed: Friday, August 30, 2013

ALS Environmental -- FC

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Dissolved Gasses

Method RSK175

Duplicate Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Field ID: Peterson Water Well

Lab ID: 1308382-1D

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 08/21/2013

Date Extracted: 08/30/2013

Date Analyzed: 08/30/2013

Prep Batch: HC130830-99

QCBatchID: HC130830-99-1

Run ID: HC130830-999A

Cleanup: NONE

Basis: As Received

File Name: 06013.dat

Sample Aliquot: 38.5 ml

Final Volume: 38.5 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
74-82-8	METHANE	30		30.2		1	1	2	25
74-84-0	ETHANE	2	U	2	U	2	1		25
74-98-6	PROPANE	1	U	1	U	1	1		25

Data Package ID: MEE1308382-1

Date Printed: Friday, August 30, 2013

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Total Extractable Petroleum Hydrocarbons (Diesel)

Case Narrative

COGCC

Peterson Water Well -- 200276485

Work Order Number: 1308382

1. This report consists of 1 water sample. The sample was received cool and intact by ALS on 08/21/2013.
2. The water sample was extracted by adding hexane to the water sample and shaking the resulting two phase solution according to the current revision of SOP 603, which was developed at ALS. The hydrocarbons partition into the hexane layer, which is then removed for analysis.
3. The sample was analyzed following the current revision of SOP 406 generally based on SW-846 Methods 8000C and 8015D. TEPH is a multicomponent mixture and is quantitated by summing the entire carbon range, rather than individual peaks. The carbon range integrated in this test extends from C10 to C28.
4. All initial and continuing calibration criteria were met.
5. The method blank associated with this project was below the MDL for diesel range organics.
6. All laboratory control sample and laboratory control sample duplicate recoveries and RPDs were within the acceptance criteria.
7. Sample 1308382-1 was designated as the quality control sample for this analysis.

All matrix spike and matrix spike duplicate recoveries and RPDs were within the acceptance criteria.

8. The sample was extracted and analyzed within the established holding time.



9. All surrogate recoveries were within acceptable limits with the following exception:

Surrogate	Sample	Direction
O-terphenyl	LCS	High

The sample was non-detect for TEPH/DRO. All spike recoveries in the batch were within limits. No further action was taken.

10. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in the current revision of SOP 939.

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.

Mindy Norton
Mindy Norton
Organics Primary Data Reviewer

8/29/13
Date

Joe NOLTE
Organics Final Data Reviewer

8/29/13
Date



ALS
Data Qualifier Flags
Fuels

- G:** This flag indicates that a pattern resembling gasoline was detected in this sample.
- D:** This flag indicates that a pattern resembling diesel was detected in this sample.
- M:** This flag indicates that a pattern resembling motor oil was detected in this sample.
- C:** This flag indicates that a pattern resembling crude oil was detected in this sample.
- 4:** This flag indicates that a pattern resembling JP-4 was detected in this sample.
- 5:** This flag indicates that a pattern resembling JP-5 was detected in this sample.
- H:** This flag indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.
- L:** This flag indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.
- Z:** This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
gasoline
JP-8
diesel
mineral spirits
motor oil
Stoddard solvent
bunker C
- Multiple flags may be used to indicate the presence of more than one product or component.



ALS
Data Qualifier Flags
Chromatography and Mass Spectrometry

- U or ND:** This flag indicates that the compound was analyzed for but not detected.
- J:** This flag indicates an estimated value. This flag is used as follows : (1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the reporting limit (RL) but greater than the method detection limit (MDL); (3) when the data indicate the presence of a compound that meets the identification criteria, and the result is less than the RL but greater than the MDL; and (4) the reported value is estimated.
- B:** This flag is used when the analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user. This flag shall be used for a tentatively identified compound (TIC) as well as for a positively identified target compound.
- E:** This flag identifies compounds whose concentration exceeds the upper level of the calibration range.
- A:** This flag indicates that a tentatively identified compound is a suspected aldol-condensation product.
- X:** This flag indicates that the analyte was diluted below an accurate quantitation level.
- *:** This flag indicates that a spike recovery is outside the control criteria.
- +:** This flag indicates that the relative percent difference (RPD) exceeds the control criteria.

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1308382

Client Name: COGCC

Client Project Name: Peterson Water Well

Client Project Number: 200276485

Client PO Number: PHA 14-09

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Peterson Water Well	1308382-1		WATER	21-Aug-13	11:00

Chain-of-Custody

[illegible]



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: COGCC

Workorder No: 1308382

Project Manager: ARW

Initials: LAS Date: 8/21/13

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
<u>5</u> Are the COC and bottle labels complete and legible?		YES	<u>NO</u> *
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>4.8</u>			
No. of custody seals on cooler: <u>0</u>			
External µR/hr reading: <u>N/A</u>			
Background µR/hr reading: <u>11</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.

*5 COC did not list sample date/time.
Bottle labels have date = 8/21/13 and time = 1355 JAW 8/21/13
time = 1100.

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

Project Manager Signature / Date: [Signature] 8/23/13

Diesel Range Organics

Method SW8015MD

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: EX130827-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 27-Aug-13

Date Analyzed: 27-Aug-13

Prep Method: METHOD

Prep Batch: EX130827-1

QCBatchID: EX130827-1-1

Run ID: HC130827-3A

Cleanup: NONE

Basis: N/A

File Name: F3F47177

Sample Aliquot: 160 ml

Final Volume: 4 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit LOD/LOQ	Result Qualifier	EPA Qualifier
68334-30-5	Diesel Range Organics	1	0.5	0.5	U	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
84-15-1	O-TERPHENYL	1.16		1.25	93	51 - 97

Data Package ID: HCD1308382-1

Date Printed: Thursday, August 29, 2013

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Diesel Range Organics

Method SW8015M Revision D

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Field ID:	Peterson Water Well
Lab ID:	1308382-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 21-Aug-13

Date Extracted: 27-Aug-13

Date Analyzed: 27-Aug-13

Prep Method: METHOD

Prep Batch: EX130827-1

QCBatchID: EX130827-1-1

Run ID: HC130827-3A

Cleanup: NONE

Basis: As Received

File Name: F3F47182

Analyst: Joel F. Nolte

Sample Aliquot: 160 ML

Final Volume: 4 ML

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	Result Qualifier	EPA Qualifier
68334-30-5	Diesel Range Organics	1	0.5	0.5	U	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
84-15-1	O-TERPHENYL	1.05		1.25	84	51 - 97

Data Package ID: HCD1308382-1

Diesel Range Organics

Method SW8015MD

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: EX130827-1LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 08/27/2013

Date Analyzed: 08/27/2013

Prep Method: METHOD

Prep Batch: EX130827-1

QCBatchID: EX130827-1-1

Run ID: HC130827-3A

Cleanup: NONE

Basis: N/A

File Name: F3F47180

Sample Aliquot: 160 ml

Final Volume: 4 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
68334-30-5	Diesel Range Organics	10	10.4	0.5		104	36 - 150%

Lab ID: EX130827-1LCSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 08/27/2013

Date Analyzed: 08/27/2013

Prep Method: METHOD

Prep Batch: EX130827-1

QCBatchID: EX130827-1-1

Run ID: HC130827-3A

Cleanup: NONE

Basis: N/A

File Name: F3F47181

Sample Aliquot: 160 ml

Final Volume: 4 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
68334-30-5	Diesel Range Organics	10	10.3	0.5		103	20	1

Surrogate Recovery LCS/LCSD

CASNO	Target Analyte	Spike Added	LCS % Rec.	LCS Flag	LCSD % Rec.	LCSD Flag	Control Limits
84-15-1	O-TERPHENYL	1.25	100	*	97		51 - 97

Data Package ID: HCD1308382-1

Date Printed: Thursday, August 29, 2013

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Diesel Range Organics

Method SW8015MD

Matrix Spike And Matrix Spike Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Field ID:	Peterson Water Well
LabID:	1308382-1MS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 21-Aug-13
Date Extracted: 27-Aug-13
Date Analyzed: 27-Aug-13
Prep Method: METHOD

Prep Batch: EX130827-1
QCBatchID: EX130827-1-1
Run ID: HC130827-3A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 160 ml
Final Volume: 4 ml
Result Units: MG/L
File Name: F3F47183

CASNO	Target Analyte	Sample Result	Samp Qual	MS Result	MS Qual	Reporting Limit	Spike Added	MS % Rec.	Control Limits
68334-30-5	Diesel Range Organics	0.5	U	10.1		0.5	10	101	36 - 150%

Field ID:	Peterson Water Well
LabID:	1308382-1MSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 21-Aug-13
Date Extracted: 27-Aug-13
Date Analyzed: 27-Aug-13
Prep Method: METHOD

Prep Batch: EX130827-1
QCBatchID: EX130827-1-1
Run ID: HC130827-3A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 160 ml
Final Volume: 4 ml
Result Units: MG/L
File Name: F3F47184

CASNO	Target Analyte	MSD Result	MSD Qual	Spike Added	MSD % Rec.	Reporting Limit	RPD Limit	RPD
68334-30-5	Diesel Range Organics	9.82		10	98	0.5	20	3

Surrogate Recovery MS/MSD

CASNO	Target Analyte	Spike Added	MS % Rec.	MS Flag	MSD % Rec.	MSD Flag	Control Limits
84-15-1	O-TERPHENYL	1.25	94		89		51 - 97

Data Package ID: HCD1308382-1

Date Printed: Thursday, August 29, 2013

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Total Volatile Petroleum Hydrocarbons (Gasoline) Case Narrative

COGCC

Peterson Water Well -- 200276485

Work Order Number: 1308382

1. This report consists of 1 water sample. The sample was received cool and intact by ALS on 08/21/2013.

The water sample was free of head space prior to analysis.

The sample had a pH < 2 at the time of analysis.

2. The sample was prepared and analyzed according to SW-846, 3rd Edition procedures. Specifically, the water sample was prepared by heating and purging 5ml using purge and trap procedures based on Method 5030C. The calibration curve was also prepared using the heated purge.
3. The sample was analyzed following the current revision of SOP 425 generally based on SW-846 Methods 8000C and 8015D. TVPH is a multicomponent mixture and is quantitated by summing the entire carbon range, rather than individual peaks. The carbon range integrated in this test extends from C6 to C10.
4. All initial and continuing calibration criteria were met.
5. The method blank associated with this project was below the MDL for gasoline range organics.
6. All laboratory control sample and laboratory control sample duplicate recoveries and RPDs were within the acceptance criteria.
7. Per method requirements, matrix QC was performed for this analysis. 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.



8. The sample was extracted and analyzed within the established holding time.
9. All surrogate recoveries were within acceptance criteria.
10. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in the current revision of SOP 939.

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.

Mindy Norton

Mindy Norton
Organics Primary Data Reviewer

8/28/13

Date

Joan Naez

Organics Final Data Reviewer

8/28/13

Date



ALS
Data Qualifier Flags
Fuels

- G:** This flag indicates that a pattern resembling gasoline was detected in this sample.
- D:** This flag indicates that a pattern resembling diesel was detected in this sample.
- M:** This flag indicates that a pattern resembling motor oil was detected in this sample.
- H:** This flag indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.
- L:** This flag indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.
- Z:** This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
gasoline
JP-4
JP-8
diesel
mineral spirits
motor oil
Stoddard solvent
bunker C
- Multiple flags may be used to indicate the presence of more than one product or component.



ALS
Data Qualifier Flags
Chromatography and Mass Spectrometry

- U or ND:** This flag indicates that the compound was analyzed for but not detected.
- J:** This flag indicates an estimated value. This flag is used as follows : (1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the reporting limit (RL) but greater than the method detection limit (MDL); (3) when the data indicate the presence of a compound that meets the identification criteria, and the result is less than the RL but greater than the MDL; and (4) the reported value is estimated.
- B:** This flag is used when the analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user. This flag shall be used for a tentatively identified compound (TIC) as well as for a positively identified target compound.
- E:** This flag identifies compounds whose concentration exceeds the upper level of the calibration range.
- A:** This flag indicates that a tentatively identified compound is a suspected aldol-condensation product.
- X:** This flag indicates that the analyte was diluted below an accurate quantitation level.
- *:** This flag indicates that a spike recovery is outside the control criteria.
- +:** This flag indicates that the relative percent difference (RPD) exceeds the control criteria.

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1308382

Client Name: COGCC

Client Project Name: Peterson Water Well

Client Project Number: 200276485

Client PO Number: PHA 14-09

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Peterson Water Well	1308382-1		WATER	21-Aug-13	11:00

Chain-of-Custody

[illegible]



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: COGCC

Workorder No: 1308382

Project Manager: ARW

Initials: LAS Date: 8/21/13

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
<u>5</u> Are the COC and bottle labels complete and legible?		YES	<u>NO</u> *
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>4.8</u>			
No. of custody seals on cooler: <u>0</u>			
External µR/hr reading: <u>N/A</u>			
Background µR/hr reading: <u>11</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.

*5 COC did not list sample date/time.
Bottle labels have date = 8/21/13 and time = 1355 JAW 8/21/13
time = 1100.

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

Project Manager Signature / Date: [Signature] 8/23/13

Gasoline Range Organics

Method SW8015D

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: HC130822-66MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 22-Aug-13

Date Analyzed: 22-Aug-13

Prep Method: SW5030 Rev C

Prep Batch: HC130822-66

QCBatchID: HC130822-66-1

Run ID: HC130822-6A

Cleanup: NONE

Basis: N/A

File Name: 09832.dat

Sample Aliquot: 5 ml

Final Volume: 5 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit LOD/LOQ	Result Qualifier	EPA Qualifier
8006-61-9	GASOLINE RANGE ORGANICS	1	0.1	0.1	U	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
193533-92-5	2,3,4-TRIFLUOROTOLUENE	0.0858		0.1	86	74 - 129

Data Package ID: HCG1308382-1

Date Printed: Wednesday, August 28, 2013

ALS Environmental -- FC

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LIMS Version: 6.657

Gasoline Range Organics

Method SW8015 Revision D

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Field ID:	Peterson Water Well
Lab ID:	1308382-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 21-Aug-13

Date Extracted: 22-Aug-13

Date Analyzed: 22-Aug-13

Prep Method: SW5030 Rev C

Prep Batch: HC130822-66

QCBatchID: HC130822-66-1

Run ID: HC130822-6A

Cleanup: NONE

Basis: As Received

File Name: 09834.dat

Analyst: Joel F. Nolte

Sample Aliquot: 5 ML

Final Volume: 5 ML

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	Result Qualifier	EPA Qualifier
8006-61-9	GASOLINE RANGE ORGANICS	1	0.1	0.1	U	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
193533-92-5	2,3,4-TRIFLUOROTOLUENE	0.0874		0.1	87	74 - 129

Data Package ID: HCG1308382-1

Gasoline Range Organics

Method SW8015D

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: HC130822-66LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 08/22/2013

Date Analyzed: 08/22/2013

Prep Method: SW5030C

Prep Batch: HC130822-66

QCBatchID: HC130822-66-1

Run ID: HC130822-6A

Cleanup: NONE

Basis: N/A

File Name: 09831.dat

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
8006-61-9	GASOLINE RANGE ORGANICS	1	0.985	0.1		98	79 - 118%

Lab ID: HC130822-66LCSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 08/22/2013

Date Analyzed: 08/22/2013

Prep Method: SW5030C

Prep Batch: HC130822-66

QCBatchID: HC130822-66-1

Run ID: HC130822-6A

Cleanup: NONE

Basis: N/A

File Name: 09842.dat

Sample Aliquot: 5 ml

Final Volume: 5 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
8006-61-9	GASOLINE RANGE ORGANICS	1	0.97	0.1		97	20	2

Surrogate Recovery LCS/LCSD

CASNO	Target Analyte	Spike Added	LCS % Rec.	LCS Flag	LCSD % Rec.	LCSD Flag	Control Limits
193533-92-	2,3,4-TRIFLUOROTOLUENE	0.1	93		94		74 - 129

Data Package ID: HCG1308382-1

Date Printed: Wednesday, August 28, 2013

ALS Environmental -- FC

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GC/MS Volatiles

Case Narrative

COGCC

Peterson Water Well -- 200276485

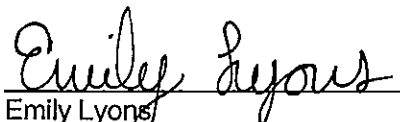
Work Order Number: 1208382

1. This report consists of 1 water sample. The sample was received cool and intact by ALS on 08/21/13. The water sample was free of headspace and had a pH < 2 at the time of analysis.
2. The sample was prepared according to SW-846, 3rd Edition procedures. Specifically, the water sample was prepared using purge and trap procedures based on Method 5030C.
3. The sample was analyzed using GC/MS with an RTX-624, RTX-VMS, or equivalent capillary column according to the current revision of SOP 525 based on SW-846 Method 8260. All positive results were quantitated against the initial calibration standards using the internal standard technique. The identification of positive results was achieved by a comparison of the retention time and mass spectrum of the sample versus the daily calibration standard.
4. All initial calibration criteria were met.
5. All initial calibrations are verified by comparing a second source standard calibration verification (ICV) against the calibration curve. All criteria for initial calibration verification were met.
6. All compounds in the continuing calibration verification had a %D of less than 20%.
7. Methylene chloride, acetone and 2-butanone are common laboratory contaminants. In order to minimize the levels of these compounds detected in the gc/ms analysis, ALS has designated its volatile laboratory as a restricted access area. In addition, the laboratory has been equipped with a dedicated, air intake and exhaust system that operates under positive pressure in order to minimize cross contamination of these compounds. Due to fluctuations in ambient laboratory conditions, reported sample values for common laboratory contaminants may be due to lab contamination even if the compound in question is not detected in the associated method blank. All method blank criteria were met.



8. All laboratory control sample and laboratory control sample duplicate recoveries and RPDs were within the acceptance criteria.
9. 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.
10. The sample was analyzed within the established holding time.
11. All surrogate recoveries were within acceptance criteria.
12. All internal standard recoveries were within acceptance criteria.
13. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in the current revision of SOP 939.

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.




Emily Lyons

Organics Primary Data Reviewer

8/28/13

Date



Organics Final Data Reviewer

8/28/13

Date



ALS
Data Qualifier Flags
Chromatography and Mass Spectrometry

- U or ND:** This flag indicates that the compound was analyzed for but not detected.
- J:** This flag indicates an estimated value. This flag is used as follows : (1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the reporting limit (RL) but greater than the method detection limit (MDL); (3) when the retention time data indicate the presence of a compound that meets the GC identification criteria, and the result is less than the RL but greater than the MDL; and (4) the reported value is estimated.
- B:** This flag is used when the analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user. This flag shall be used for a tentatively identified compound (TIC) as well as for a positively identified target compound.
- E:** This flag identifies compounds whose concentration exceeds the upper level of the calibration range.
- A:** This flag indicates that a tentatively identified compound is a suspected aldol-condensation product.
- X:** This flag indicates that the analyte was diluted below an accurate quantitation level.
- *:** This flag indicates that a spike recovery is equal to or outside the control criteria used.
- +:** This flag indicates that the relative percent difference (RPD) equals or exceeds the control criteria.

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1308382

Client Name: COGCC

Client Project Name: Peterson Water Well

Client Project Number: 200276485

Client PO Number: PHA 14-09

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Peterson Water Well	1308382-1		WATER	21-Aug-13	11:00

Chain-of-Custody

[illegible]



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: COGCC

Workorder No: 1308382

Project Manager: ARW

Initials: LAS Date: 8/21/13

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
<u>5</u> Are the COC and bottle labels complete and legible?		YES	<u>NO</u> *
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>4.8</u>			
No. of custody seals on cooler: <u>0</u>			
External µR/hr reading: <u>N/A</u>			
Background µR/hr reading: <u>11</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.

*5 COC did not list sample date/time.
Bottle labels have date = 8/21/13 and time = 1355 JAW 8/21/13
time = 1100.

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

Project Manager Signature / Date: [Signature] 8/23/13

GC/MS Volatiles

Method SW8260_25C

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: VL130823-2MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 23-Aug-13

Date Analyzed: 23-Aug-13

Prep Method: SW5030 Rev C

Prep Batch: VL130823-2

QCBatchID: VL130823-2-2

Run ID: VL130823-2A

Cleanup: NONE

Basis: N/A

File Name: B82933

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	RptLimit LOD/LOQ	Result Qualifier	EPA Qualifier
75-71-8	DICHLORODIFLUOROMETHANE	1	1	1	U	
74-87-3	CHLOROMETHANE	1	1	1	U	
75-01-4	VINYL CHLORIDE	1	1	1	U	
74-83-9	BROMOMETHANE	1	1	1	U	
75-00-3	CHLOROETHANE	1	1	1	U	
75-69-4	TRICHLOROFLUOROMETHANE	1	1	1	U	
75-35-4	1,1-DICHLOROETHENE	1	1	1	U	
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROET	1	1	1	U	
67-64-1	ACETONE	1	10	10	U	
74-88-4	IODOMETHANE	1	1	1	U	
75-15-0	CARBON DISULFIDE	1	1	1	U	
75-09-2	METHYLENE CHLORIDE	1	1	1	U	
156-60-5	TRANS-1,2-DICHLOROETHENE	1	1	1	U	
1634-04-4	METHYL TERTIARY BUTYL ETHER	1	1	1	U	
75-34-3	1,1-DICHLOROETHANE	1	1	1	U	
108-05-4	VINYL ACETATE	1	2	2	U	
156-59-2	CIS-1,2-DICHLOROETHENE	1	1	1	U	
78-93-3	2-BUTANONE	1	10	10	U	
74-97-5	BROMOCHLOROMETHANE	1	1	1	U	
67-66-3	CHLOROFORM	1	1	1	U	
71-55-6	1,1,1-TRICHLOROETHANE	1	1	1	U	
594-20-7	2,2-DICHLOROPROPANE	1	1	1	U	
56-23-5	CARBON TETRACHLORIDE	1	1	1	U	
563-58-6	1,1-DICHLOROPROPENE	1	1	1	U	
107-06-2	1,2-DICHLOROETHANE	1	1	1	U	
71-43-2	BENZENE	1	1	1	U	
79-01-6	TRICHLOROETHENE	1	1	1	U	

Data Package ID: VL1308382-1

Date Printed: Tuesday, August 27, 2013

ALS Environmental -- FC

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GC/MS Volatiles

Method SW8260_25C

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: VL130823-2MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 23-Aug-13

Date Analyzed: 23-Aug-13

Prep Method: SW5030 Rev C

Prep Batch: VL130823-2

QCBatchID: VL130823-2-2

Run ID: VL130823-2A

Cleanup: NONE

Basis: N/A

File Name: B82933

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

78-87-5	1,2-DICHLOROPROPANE	1	1	1	U	
74-95-3	DIBROMOMETHANE	1	1	1	U	
75-27-4	BROMODICHLOROMETHANE	1	1	1	U	
10061-01-5	CIS-1,3-DICHLOROPROPENE	1	1	1	U	
108-10-1	4-METHYL-2-PENTANONE	1	10	10	U	
108-88-3	TOLUENE	1	1	1	U	
10061-02-6	TRANS-1,3-DICHLOROPROPENE	1	1	1	U	
79-00-5	1,1,2-TRICHLOROETHANE	1	1	1	U	
591-78-6	2-HEXANONE	1	10	10	U	
127-18-4	TETRACHLOROETHENE	1	1	1	U	
142-28-9	1,3-DICHLOROPROPANE	1	1	1	U	
124-48-1	DIBROMOCHLOROMETHANE	1	1	1	U	
106-93-4	1,2-DIBROMOETHANE	1	1	1	U	
544-10-5	1-CHLOROHEXANE	1	1	1	U	
108-90-7	CHLOROBENZENE	1	1	1	U	
630-20-6	1,1,1,2-TETRACHLOROETHANE	1	1	1	U	
100-41-4	ETHYLBENZENE	1	1	1	U	
136777-61-2	M+P-XYLENE	1	1	1	U	
95-47-6	O-XYLENE	1	1	1	U	
100-42-5	STYRENE	1	1	1	U	
75-25-2	BROMOFORM	1	1	1	U	
98-82-8	ISOPROPYLBENZENE	1	1	1	U	
96-18-4	1,2,3-TRICHLOROPROPANE	1	1	1	U	
79-34-5	1,1,2,2-TETRACHLOROETHANE	1	1	1	U	
108-86-1	BROMOBENZENE	1	1	1	U	
103-65-1	N-PROPYLBENZENE	1	1	1	U	
95-49-8	2-CHLOROTOLUENE	1	1	1	U	
108-67-8	1,3,5-TRIMETHYLBENZENE	1	1	1	U	
106-43-4	4-CHLOROTOLUENE	1	1	1	U	

Data Package ID: VL1308382-1

GC/MS Volatiles

Method SW8260_25C

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: VL130823-2MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 23-Aug-13

Date Analyzed: 23-Aug-13

Prep Method: SW5030 Rev C

Prep Batch: VL130823-2

QCBatchID: VL130823-2-2

Run ID: VL130823-2A

Cleanup: NONE

Basis: N/A

File Name: B82933

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

98-06-6	TERT-BUTYLBENZENE	1	1	1	U	
95-63-6	1,2,4-TRIMETHYLBENZENE	1	1	1	U	
135-98-8	SEC-BUTYLBENZENE	1	1	1	U	
541-73-1	1,3-DICHLOROBENZENE	1	1	1	U	
99-87-6	P-ISOPROPYLTOLUENE	1	1	1	U	
106-46-7	1,4-DICHLOROBENZENE	1	1	1	U	
104-51-8	N-BUTYLBENZENE	1	1	1	U	
95-50-1	1,2-DICHLOROBENZENE	1	1	1	U	
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	1	2	2	U	
120-82-1	1,2,4-TRICHLOROBENZENE	1	1	1	U	
87-68-3	HEXACHLOROBUTADIENE	1	1	1	U	
91-20-3	NAPHTHALENE	1	1	1	U	
87-61-6	1,2,3-TRICHLOROBENZENE	1	1	1	U	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	26.3		25	105	85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	26.2		25	105	84 - 118
2037-26-5	TOLUENE-D8	24.2		25	97	85 - 115

Data Package ID: VL1308382-1

Date Printed: Tuesday, August 27, 2013

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GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Field ID:	
Lab ID:	VL130823-2MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 23-Aug-13

Date Analyzed: 23-Aug-13

Prep Batch: VL130823-2

QCBatchID: VL130823-2-2

Run ID: VL130823-2A

Cleanup: NONE

Basis: As Received

Sample Aliquot: 10 ml

Final Volume: 10 ml

Clean DF: 1

File Name: B82933

CASNO	Retention Time	Target Analyte	Dilution Factor	Result	Units	Qualifier
		NONE DETECTED	1			U

Data Package ID: VL1308382-1

GC/MS Volatiles

Method SW8260_25 Revision C

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Field ID: Peterson Water Well

Lab ID: 1308382-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 21-Aug-13

Date Extracted: 23-Aug-13

Date Analyzed: 23-Aug-13

Prep Method: SW5030 Rev C

Prep Batch: VL130823-2

QCBatchID: VL130823-2-2

Run ID: VL130823-2A

Cleanup: NONE

Basis: As Received

File Name: B82939

Analyst: Steven D. White

Sample Aliquot: 10 ML

Final Volume: 10 ML

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	Result Qualifier	EPA Qualifier
75-71-8	DICHLORODIFLUOROMETHANE	1	1	1	U	
74-87-3	CHLOROMETHANE	1	1	1	U	
75-01-4	VINYL CHLORIDE	1	1	1	U	
74-83-9	BROMOMETHANE	1	1	1	U	
75-00-3	CHLOROETHANE	1	1	1	U	
75-69-4	TRICHLOROFLUOROMETHANE	1	1	1	U	
75-35-4	1,1-DICHLOROETHENE	1	1	1	U	
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	1	1	1	U	
67-64-1	ACETONE	1	10	10	U	
74-88-4	IODOMETHANE	1	1	1	U	
75-15-0	CARBON DISULFIDE	1	1	1	U	
75-09-2	METHYLENE CHLORIDE	1	1	1	U	
156-60-5	TRANS-1,2-DICHLOROETHENE	1	1	1	U	
1634-04-4	METHYL TERTIARY BUTYL ETHER	1	1	1	U	
75-34-3	1,1-DICHLOROETHANE	1	1	1	U	
108-05-4	VINYL ACETATE	1	2	2	U	
156-59-2	CIS-1,2-DICHLOROETHENE	1	1	1	U	
78-93-3	2-BUTANONE	1	10	10	U	
74-97-5	BROMOCHLOROMETHANE	1	1	1	U	
67-66-3	CHLOROFORM	1	1	1	U	
71-55-6	1,1,1-TRICHLOROETHANE	1	1	1	U	
594-20-7	2,2-DICHLOROPROPANE	1	1	1	U	
56-23-5	CARBON TETRACHLORIDE	1	1	1	U	
563-58-6	1,1-DICHLOROPROPENE	1	1	1	U	
107-06-2	1,2-DICHLOROETHANE	1	1	1	U	
71-43-2	BENZENE	1	1	1	U	
79-01-6	TRICHLOROETHENE	1	1	1	U	

Data Package ID: VL1308382-1

GC/MS Volatiles

Method SW8260_25 Revision C

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Field ID: Peterson Water Well

Lab ID: 1308382-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 21-Aug-13

Date Extracted: 23-Aug-13

Date Analyzed: 23-Aug-13

Prep Method: SW5030 Rev C

Prep Batch: VL130823-2

QCBatchID: VL130823-2-2

Run ID: VL130823-2A

Cleanup: NONE

Basis: As Received

File Name: B82939

Analyst: Steven D. White

Sample Aliquot: 10 ML

Final Volume: 10 ML

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	Result Qualifier	EPA Qualifier
78-87-5	1,2-DICHLOROPROPANE	1	1	1	U	
74-95-3	DIBROMOMETHANE	1	1	1	U	
75-27-4	BROMODICHLOROMETHANE	1	1	1	U	
10061-01-5	CIS-1,3-DICHLOROPROPENE	1	1	1	U	
108-10-1	4-METHYL-2-PENTANONE	1	10	10	U	
108-88-3	TOLUENE	1	1	1	U	
10061-02-6	TRANS-1,3-DICHLOROPROPENE	1	1	1	U	
79-00-5	1,1,2-TRICHLOROETHANE	1	1	1	U	
591-78-6	2-HEXANONE	1	10	10	U	
127-18-4	TETRACHLOROETHENE	1	1	1	U	
142-28-9	1,3-DICHLOROPROPANE	1	1	1	U	
124-48-1	DIBROMOCHLOROMETHANE	1	1	1	U	
106-93-4	1,2-DIBROMOETHANE	1	1	1	U	
544-10-5	1-CHLOROHEXANE	1	1	1	U	
108-90-7	CHLOROBENZENE	1	1	1	U	
630-20-6	1,1,1,2-TETRACHLOROETHANE	1	1	1	U	
100-41-4	ETHYLBENZENE	1	1	1	U	
136777-61-2	M+P-XYLENE	1	1	1	U	
95-47-6	O-XYLENE	1	1	1	U	
100-42-5	STYRENE	1	1	1	U	
75-25-2	BROMOFORM	1	1	1	U	
98-82-8	ISOPROPYLBENZENE	1	1	1	U	
96-18-4	1,2,3-TRICHLOROPROPANE	1	1	1	U	
79-34-5	1,1,2,2-TETRACHLOROETHANE	1	1	1	U	
108-86-1	BROMOBENZENE	1	1	1	U	
103-65-1	N-PROPYLBENZENE	1	1	1	U	
95-49-8	2-CHLOROTOLUENE	1	1	1	U	

Data Package ID: VL1308382-1

GC/MS Volatiles

Method SW8260_25 Revision C

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Field ID: Peterson Water Well

Lab ID: 1308382-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 21-Aug-13

Date Extracted: 23-Aug-13

Date Analyzed: 23-Aug-13

Prep Method: SW5030 Rev C

Prep Batch: VL130823-2

QCBatchID: VL130823-2-2

Run ID: VL130823-2A

Cleanup: NONE

Basis: As Received

File Name: B82939

Analyst: Steven D. White

Sample Aliquot: 10 ML

Final Volume: 10 ML

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	RptLimit\ LOD\LOQ	Result Qualifier	EPA Qualifier
108-67-8	1,3,5-TRIMETHYLBENZENE	1	1	1	U	
106-43-4	4-CHLOROTOLUENE	1	1	1	U	
98-06-6	TERT-BUTYLBENZENE	1	1	1	U	
95-63-6	1,2,4-TRIMETHYLBENZENE	1	1	1	U	
135-98-8	SEC-BUTYLBENZENE	1	1	1	U	
541-73-1	1,3-DICHLOROBENZENE	1	1	1	U	
99-87-6	P-ISOPROPYLTOLUENE	1	1	1	U	
106-46-7	1,4-DICHLOROBENZENE	1	1	1	U	
104-51-8	N-BUTYLBENZENE	1	1	1	U	
95-50-1	1,2-DICHLOROBENZENE	1	1	1	U	
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	1	2	2	U	
120-82-1	1,2,4-TRICHLOROBENZENE	1	1	1	U	
87-68-3	HEXACHLOROBUTADIENE	1	1	1	U	
91-20-3	NAPHTHALENE	1	1	1	U	
87-61-6	1,2,3-TRICHLOROBENZENE	1	1	1	U	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	25.9		25	104	85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	25.9		25	104	84 - 118
2037-26-5	TOLUENE-D8	24.1		25	96	85 - 115

Data Package ID: VL1308382-1

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Field ID: Peterson Water Well

Lab ID: 1308382-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 21-Aug-13

Date Extracted: 23-Aug-13

Date Analyzed: 23-Aug-13

Prep Batch: VL130823-2

QCBatchID: VL130823-2-2

Run ID: VL130823-2A

Cleanup: NONE

Basis: As Received

Sample Aliquot: 10 ml

Final Volume: 10 ml

Clean DF: 1

File Name: B82939

CASNO	Retention Time	Target Analyte	Dilution Factor	Result	Units	Qualifier
		NONE DETECTED	1			U

Data Package ID: VL1308382-1

GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: VL130823-2LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 08/23/2013

Date Analyzed: 08/23/2013

Prep Method: SW5030C

Prep Batch: VL130823-2

QCBatchID: VL130823-2-2

Run ID: VL130823-2A

Cleanup: NONE

Basis: N/A

File Name: B82930

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
75-71-8	DICHLORODIFLUOROMETHANE	10	9.63	1		96	63 - 125%
74-87-3	CHLOROMETHANE	10	9.99	1		100	73 - 122%
75-01-4	VINYL CHLORIDE	10	10.7	1		107	72 - 123%
74-83-9	BROMOMETHANE	10	9.92	1		99	68 - 123%
75-00-3	CHLOROETHANE	10	11.5	1		115	74 - 124%
75-69-4	TRICHLOROFLUOROMETHANE	10	9.89	1		99	74 - 124%
75-35-4	1,1-DICHLOROETHENE	10	9.82	1		98	77 - 119%
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETH	10	10.2	1		102	79 - 122%
67-64-1	ACETONE	40	45.1	10		113	62 - 142%
74-88-4	IODOMETHANE	10	10.1	1		101	72 - 126%
75-15-0	CARBON DISULFIDE	10	10.1	1		101	76 - 121%
75-09-2	METHYLENE CHLORIDE	10	9.4	1		94	71 - 130%
156-60-5	TRANS-1,2-DICHLOROETHENE	10	10.5	1		105	82 - 117%
1634-04-4	METHYL TERTIARY BUTYL ETHER	20	19.5	1		97	77 - 119%
75-34-3	1,1-DICHLOROETHANE	10	10.5	1		105	83 - 119%
108-05-4	VINYL ACETATE	10	10.4	2		104	76 - 121%
156-59-2	CIS-1,2-DICHLOROETHENE	10	10.2	1		102	83 - 117%
78-93-3	2-BUTANONE	40	41.8	10		104	70 - 135%
74-97-5	BROMOCHLOROMETHANE	10	10.4	1		104	83 - 121%
67-66-3	CHLOROFORM	10	9.91	1		99	82 - 119%
71-55-6	1,1,1-TRICHLOROETHANE	10	9.72	1		97	80 - 120%
594-20-7	2,2-DICHLOROPROPANE	10	9.25	1		93	83 - 125%
56-23-5	CARBON TETRACHLORIDE	10	9.84	1		98	77 - 122%
563-58-6	1,1-DICHLOROPROPENE	10	10.5	1		105	84 - 118%
107-06-2	1,2-DICHLOROETHANE	10	10	1		100	74 - 128%
71-43-2	BENZENE	10	10	1		100	83 - 117%

Data Package ID: VL1308382-1

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GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: VL130823-2LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 08/23/2013

Date Analyzed: 08/23/2013

Prep Method: SW5030C

Prep Batch: VL130823-2

QCBatchID: VL130823-2-2

Run ID: VL130823-2A

Cleanup: NONE

Basis: N/A

File Name: B82930

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
79-01-6	TRICHLOROETHENE	10	10.6	1		106	83 - 117%
78-87-5	1,2-DICHLOROPROPANE	10	10.9	1		109	84 - 120%
74-95-3	DIBROMOMETHANE	10	10.3	1		103	79 - 122%
75-27-4	BROMODICHLOROMETHANE	10	9.85	1		99	76 - 122%
10061-01-5	CIS-1,3-DICHLOROPROPENE	10	10.6	1		106	81 - 120%
108-10-1	4-METHYL-2-PENTANONE	40	39	10		98	73 - 125%
108-88-3	TOLUENE	10	9.46	1		95	82 - 113%
10061-02-6	TRANS-1,3-DICHLOROPROPENE	10	9.31	1		93	81 - 114%
79-00-5	1,1,2-TRICHLOROETHANE	10	9.65	1		96	78 - 116%
591-78-6	2-HEXANONE	40	38.4	10		96	71 - 124%
127-18-4	TETRACHLOROETHENE	10	9.36	1		94	84 - 117%
142-28-9	1,3-DICHLOROPROPANE	10	9.62	1		96	80 - 115%
124-48-1	DIBROMOCHLOROMETHANE	10	9.04	1		90	82 - 118%
106-93-4	1,2-DIBROMOETHANE	10	9.54	1		95	79 - 114%
544-10-5	1-CHLOROHEXANE	10	9.42	1		94	80 - 117%
108-90-7	CHLOROBENZENE	10	9.68	1		97	81 - 113%
630-20-6	1,1,1,2-TETRACHLOROETHANE	10	9.11	1		91	78 - 113%
100-41-4	ETHYLBENZENE	10	9.88	1		99	81 - 113%
136777-61-	M+P-XYLENE	20	18.9	1		94	82 - 115%
95-47-6	O-XYLENE	10	9.47	1		95	81 - 115%
100-42-5	STYRENE	10	9.51	1		95	78 - 118%
75-25-2	BROMOFORM	10	9.13	1		91	70 - 120%
98-82-8	ISOPROPYLBENZENE	10	9.21	1		92	80 - 113%
96-18-4	1,2,3-TRICHLOROPROPANE	10	8.83	1		88	78 - 117%
79-34-5	1,1,2,2-TETRACHLOROETHANE	10	8.86	1		89	75 - 121%
108-86-1	BROMOBENZENE	10	8.99	1		90	81 - 114%
103-65-1	N-PROPYLBENZENE	10	9.02	1		90	79 - 116%

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GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: VL130823-2LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 08/23/2013

Date Analyzed: 08/23/2013

Prep Method: SW5030C

Prep Batch: VL130823-2

QCBatchID: VL130823-2-2

Run ID: VL130823-2A

Cleanup: NONE

Basis: N/A

File Name: B82930

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
95-49-8	2-CHLOROTOLUENE	10	9.13	1		91	79 - 116%
108-67-8	1,3,5-TRIMETHYLBENZENE	10	9.05	1		91	78 - 116%
106-43-4	4-CHLOROTOLUENE	10	9.3	1		93	78 - 115%
98-06-6	TERT-BUTYLBENZENE	10	9.35	1		94	76 - 120%
95-63-6	1,2,4-TRIMETHYLBENZENE	10	9.06	1		91	80 - 117%
135-98-8	SEC-BUTYLBENZENE	10	8.83	1		88	78 - 115%
541-73-1	1,3-DICHLOROBENZENE	10	9.11	1		91	79 - 115%
99-87-6	P-ISOPROPYLTOLUENE	10	8.84	1		88	77 - 116%
106-46-7	1,4-DICHLOROBENZENE	10	9.11	1		91	82 - 114%
104-51-8	N-BUTYLBENZENE	10	9.08	1		91	79 - 117%
95-50-1	1,2-DICHLOROBENZENE	10	8.66	1		87	82 - 114%
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	10	7.55	2		76	73 - 125%
120-82-1	1,2,4-TRICHLOROBENZENE	10	8.05	1		80	75 - 120%
87-68-3	HEXACHLOROBUTADIENE	10	8.98	1		90	71 - 124%
91-20-3	NAPHTHALENE	10	8	1		80	71 - 131%
87-61-6	1,2,3-TRICHLOROBENZENE	10	8.31	1		83	70 - 131%

Data Package ID: VL1308382-1

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GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: VL130823-2LCSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 08/23/2013

Date Analyzed: 08/23/2013

Prep Method: SW5030C

Prep Batch: VL130823-2

QCBatchID: VL130823-2-2

Run ID: VL130823-2A

Cleanup: NONE

Basis: N/A

File Name: B82931

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
75-71-8	DICHLORODIFLUOROMETHANE	10	10.2	1		102	20	6
74-87-3	CHLOROMETHANE	10	9.99	1		100	20	0
75-01-4	VINYL CHLORIDE	10	10.7	1		107	20	0
74-83-9	BROMOMETHANE	10	9.93	1		99	20	0
75-00-3	CHLOROETHANE	10	11.5	1		115	20	0
75-69-4	TRICHLOROFLUOROMETHANE	10	10.1	1		101	20	2
75-35-4	1,1-DICHLOROETHENE	10	10	1		100	20	2
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETH	10	10.4	1		104	20	2
67-64-1	ACETONE	40	47.9	10		120	30	6
74-88-4	IODOMETHANE	10	10	1		100	20	1
75-15-0	CARBON DISULFIDE	10	10.2	1		102	20	2
75-09-2	METHYLENE CHLORIDE	10	9.78	1		98	20	4
156-60-5	TRANS-1,2-DICHLOROETHENE	10	10.5	1		105	20	0
1634-04-4	METHYL TERTIARY BUTYL ETHER	20	20.9	1		104	20	7
75-34-3	1,1-DICHLOROETHANE	10	10.6	1		106	20	1
108-05-4	VINYL ACETATE	10	11.5	2		115	20	10
156-59-2	CIS-1,2-DICHLOROETHENE	10	10.2	1		102	20	1
78-93-3	2-BUTANONE	40	46.1	10		115	30	10
74-97-5	BROMOCHLOROMETHANE	10	10.8	1		108	20	4
67-66-3	CHLOROFORM	10	10.2	1		102	20	3
71-55-6	1,1,1-TRICHLOROETHANE	10	9.89	1		99	20	2
594-20-7	2,2-DICHLOROPROPANE	10	9.41	1		94	20	2
56-23-5	CARBON TETRACHLORIDE	10	9.95	1		100	20	1
563-58-6	1,1-DICHLOROPROPENE	10	10.6	1		106	20	1
107-06-2	1,2-DICHLOROETHANE	10	11.1	1		111	20	10
71-43-2	BENZENE	10	10.2	1		102	20	2
79-01-6	TRICHLOROETHENE	10	11	1		110	20	3

Data Package ID: VL1308382-1

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GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: VL130823-2LCSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 08/23/2013

Date Analyzed: 08/23/2013

Prep Method: SW5030C

Prep Batch: VL130823-2

QCBatchID: VL130823-2-2

Run ID: VL130823-2A

Cleanup: NONE

Basis: N/A

File Name: B82931

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
78-87-5	1,2-DICHLOROPROPANE	10	11.2	1		112	20	3
74-95-3	DIBROMOMETHANE	10	11.1	1		111	20	7
75-27-4	BROMODICHLOROMETHANE	10	10.2	1		102	20	4
10061-01-5	CIS-1,3-DICHLOROPROPENE	10	11.2	1		112	20	5
108-10-1	4-METHYL-2-PENTANONE	40	40.6	10		102	30	4
108-88-3	TOLUENE	10	9.44	1		94	20	0
10061-02-6	TRANS-1,3-DICHLOROPROPENE	10	9.72	1		97	20	4
79-00-5	1,1,2-TRICHLOROETHANE	10	10	1		100	20	4
591-78-6	2-HEXANONE	40	40.9	10		102	30	6
127-18-4	TETRACHLOROETHENE	10	9.24	1		92	20	1
142-28-9	1,3-DICHLOROPROPANE	10	10.1	1		101	20	5
124-48-1	DIBROMOCHLOROMETHANE	10	9.45	1		94	20	4
106-93-4	1,2-DIBROMOETHANE	10	10.1	1		101	20	6
544-10-5	1-CHLOROHEXANE	10	9.31	1		93	20	1
108-90-7	CHLOROBENZENE	10	9.69	1		97	20	0
630-20-6	1,1,1,2-TETRACHLOROETHANE	10	9.19	1		92	20	1
100-41-4	ETHYLBENZENE	10	9.8	1		98	20	1
136777-61-	M+P-XYLENE	20	18.7	1		93	20	1
95-47-6	O-XYLENE	10	9.52	1		95	20	1
100-42-5	STYRENE	10	9.65	1		97	20	1
75-25-2	BROMOFORM	10	9.09	1		91	20	0
98-82-8	ISOPROPYLBENZENE	10	9.15	1		92	20	1
96-18-4	1,2,3-TRICHLOROPROPANE	10	9.46	1		95	20	7
79-34-5	1,1,2,2-TETRACHLOROETHANE	10	9.12	1		91	20	3
108-86-1	BROMOBENZENE	10	9.19	1		92	20	2
103-65-1	N-PROPYLBENZENE	10	8.89	1		89	20	1
95-49-8	2-CHLOROTOLUENE	10	8.92	1		89	20	2

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GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1308382

Client Name: COGCC

ClientProject ID: Peterson Water Well 200276485

Lab ID: VL130823-2LCSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 08/23/2013

Date Analyzed: 08/23/2013

Prep Method: SW5030C

Prep Batch: VL130823-2

QCBatchID: VL130823-2-2

Run ID: VL130823-2A

Cleanup: NONE

Basis: N/A

File Name: B82931

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
108-67-8	1,3,5-TRIMETHYLBENZENE	10	8.79	1		88	20	3
106-43-4	4-CHLOROTOLUENE	10	9.08	1		91	20	2
98-06-6	TERT-BUTYLBENZENE	10	9.04	1		90	20	3
95-63-6	1,2,4-TRIMETHYLBENZENE	10	8.97	1		90	20	1
135-98-8	SEC-BUTYLBENZENE	10	8.7	1		87	20	1
541-73-1	1,3-DICHLOROBENZENE	10	8.99	1		90	20	1
99-87-6	P-ISOPROPYLTOLUENE	10	8.68	1		87	20	2
106-46-7	1,4-DICHLOROBENZENE	10	8.99	1		90	20	1
104-51-8	N-BUTYLBENZENE	10	8.93	1		89	20	2
95-50-1	1,2-DICHLOROBENZENE	10	8.69	1		87	20	0
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	10	8.14	2		81	20	8
120-82-1	1,2,4-TRICHLOROBENZENE	10	8.23	1		82	20	2
87-68-3	HEXACHLOROBUTADIENE	10	8.43	1		84	20	6
91-20-3	NAPHTHALENE	10	8.36	1		84	20	4
87-61-6	1,2,3-TRICHLOROBENZENE	10	8.26	1		83	20	1

Surrogate Recovery LCS/LCSD

CASNO	Target Analyte	Spike Added	LCS % Rec.	LCS Flag	LCSD % Rec.	LCSD Flag	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	25	101		102		85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	25	100		102		84 - 118
2037-26-5	TOLUENE-D8	25	100		98		85 - 115

Data Package ID: VL1308382-1

Date Printed: Tuesday, August 27, 2013

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