

September 17, 2009

Peter Gintautas  
Colorado Oil & Gas Conservation Comm.  
PO Box 108  
Trinidad, CO 81082

Lab Work Order: 09-7065  
Client Project ID:

Dear Peter Gintautas:

Enclosed are the analytical results for the samples shown in the Laboratory Work Order Summary.

THE INVOICE WILL BE MAILED FROM OUR NEW JERSEY OFFICE UNDER SEPARATE COVER.

The enclosed data for testing performed at Accutest Laboratory (formerly Evergreen Analytical) have been reviewed for quality assurance. A case narrative is included to describe any anomalies associated with the samples or data.

Accutest will dispose of all samples 44 days from the sample receipt date. If you want samples returned, please advise us by mail or fax as soon as possible.

A copy of this project report and supporting data will be retained for a period of five years unless we are otherwise advised by you. A document retrieval charge will apply.

Thank you for using the services of Accutest Laboratories. If you have any questions concerning the analytical data, please contact me. Please direct other questions to Client Services.

Sincerely,



Joseph J. Egry IV/ Tiffany Pham  
Quality Assurance

## WORK ORDER Summary

Evergreen Analytical, Inc.

09-7065

Rpt To: Peter Gintautas

Email To: peter.gintautas@state.co.us

Colorado Oil &amp; Gas Conservation

Comm.

PO Box 108

Trinidad, CO 81082

(719) 846-3091

Client Project ID:

QC Level: LEVEL 1

9/2/2009 4:58:08 PM

Comments: PDF and EDD in COGCC format.

Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Test Code	Test Name	Hold	MS	Date Due	Hold Time
09-7065-01A	Complaint-200216061 Bar WW	Groundwater	9/01/09 0945	9/02/09	ANIONS_W *	300.0: DW Anions by IC	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	9/03/09
09-7065-01A	Complaint-200216061 Bar WW	Groundwater	9/01/09 0945	9/02/09	C/A_BAL	Cation / Anion Balance calculation	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	
09-7065-01B	Complaint-200216061 Bar WW	Groundwater	9/01/09 0945	9/02/09	F_W	Fluoride	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	9/29/09
09-7065-01C	Complaint-200216061 Bar WW	Groundwater	9/01/09 0945	9/02/09	200.7_D *	200.7: Dissolved Metals	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	2/28/10
09-7065-01C	Complaint-200216061 Bar WW	Groundwater	9/01/09 0945	9/02/09	SAR_W ^	Sodium Adsorption Ratio for Water	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	2/28/10
09-7065-01D	Complaint-200216061 Bar WW	Groundwater	9/01/09 0945	9/02/09	200.8_D *	200.8: Dissolved Metals	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	2/28/10
09-7065-01E	Complaint-200216061 Bar WW	Groundwater	9/01/09 0945	9/02/09	ALK_WGRP *	Alkalinity	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	9/15/09
09-7065-01F	Complaint-200216061 Bar WW	Groundwater	9/01/09 0945	9/02/09	COND_W	Specific Conductance @ 25°C	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	9/29/09
09-7065-01F	Complaint-200216061 Bar WW	Groundwater	9/01/09 0945	9/02/09	PH_DW	EL50.1 pH	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	9/02/09
09-7065-01F	Complaint-200216061 Bar WW	Groundwater	9/01/09 0945	9/02/09	TDS_W	Total Dissolved Solids (TDS)	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	9/08/09
09-7065-01G	Complaint-200216061 Bar WW	Groundwater	9/01/09 0945	9/02/09	MEEP_W * ^	RSK175M: MEE	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	9/15/09
09-7065-01H	Complaint-200216061 Bar WW	Groundwater	9/01/09 0945	9/02/09	8260SUB ^	8260B Subcontracted	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	9/08/09
09-7065-02A	Complaint-200217388	Groundwater	9/01/09 1032	9/02/09	ANIONS_W *	300.0: DW Anions by IC	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	9/03/09
09-7065-02A	Complaint-200217388	Groundwater	9/01/09 1032	9/02/09	C/A_BAL	Cation / Anion Balance calculation	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	
09-7065-02B	Complaint-200217388	Groundwater	9/01/09 1032	9/02/09	F_W	Fluoride	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	9/29/09

Definitions: \* - Test Code has a Select List

**WORK ORDER Summary****Evergreen Analytical, Inc.****09-7065****Rpt To:** Peter Gintautas**Email To:** peter.gintautas@state.co.us

Colorado Oil &amp; Gas Conservation

Comm.

PO Box 108

Trinidad, CO 81082

(719) 846-3091

9/2/2009 4:58:08 PM

**Client Project ID:****QC Level:** LEVEL I

09-7065-02C	Complaint-200217388	Groundwater	9/01/09 1032	9/02/09	200.7_D *	200.7: Dissolved Metals	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	2/28/10
09-7065-02C	Complaint-200217388	Groundwater	9/01/09 1032	9/02/09	SAR_W ^	Sodium Adsorption Ratio for Water	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	2/28/10
09-7065-02D	Complaint-200217388	Groundwater	9/01/09 1032	9/02/09	200.8_D *	200.8: Dissolved Metals	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	2/28/10
09-7065-02E	Complaint-200217388	Groundwater	9/01/09 1032	9/02/09	ALK_WGRP *	Alkalinity	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	9/15/09
09-7065-02F	Complaint-200217388	Groundwater	9/01/09 1032	9/02/09	COND_W	Specific Conductance @ 25°C	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	9/29/09
09-7065-02F	Complaint-200217388	Groundwater	9/01/09 1032	9/02/09	PH_DW	El50.1 pH	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	9/02/09
09-7065-02F	Complaint-200217388	Groundwater	9/01/09 1032	9/02/09	TDS_W	Total Dissolved Solids (TDS)	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	9/08/09
09-7065-02G	Complaint-200217388	Groundwater	9/01/09 1032	9/02/09	MEEP_W *	RSK175M: MEE	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	9/15/09
09-7065-02H	Complaint-200217388	Groundwater	9/01/09 1032	9/02/09	8260SUB	8260B Subcontracted	<input type="checkbox"/>	<input type="checkbox"/>	9/17/09	9/08/09

**Definitions:** \* - Test Code has a Select List

# CHAIN OF CUSTODY RECORD / ANALYTICAL SERVICES AGREEMENT \*\*

Page 1 of 1

Quality Data on Time ®

## CLIENT INFORMATION

Mail Original Report to: Peter GintantusAttn: CCCCAddress: PO Box 108City: Trinidad, CO State: CO Zip: 81002Tel # 719-846-3091 Fax # \_\_\_\_\_E-mail: peter.gintantus@statecolorado.govREPORT ALSO BY ☐ FAX ☒ PDF ☒ EDD FAXED CONFIRMATION OF SAMPLE RECEIPT REQUIRED? ☒ YESREPORT CHROMATOGRAMS: ☒ YESMail Invoice to: Peter Gintantus

Attn: \_\_\_\_\_

Address: PO Box 108City: Trinidad, CO State: CO Zip: 81002Tel # 719-846-3091 Fax # \_\_\_\_\_

Project ID # \_\_\_\_\_

P.O. # PHA-1009 quoteSampler: Grout at 10'

NOTE: Identify Known Hazards Below

SAMPLE IDENTIFICATION	DATE SAMPLED	TIME
Complaint 2002/10/06/1		
Bar WU	10/21/09	11
Complaint 2002/7/3/03		
Gate 1	10/22/11	3

No. of Containers

MATRIX	ANALYSES (check analysis)
1) Drinking Water or 2) Discharge Water or 3) Ground Water (circle one)	
Soil / Solid / Air / Gas	
Oil / Sludge / Wipe	

300.0  
F  
200.7 Dissolved  
200.8 Dissolved  
Alkalinity - Total, HCO<sub>3</sub>, CO<sub>3</sub>  
Conductivity  
TDS  
SAR eq/L  
Anion-Cation Balance  
Methane Ethane Ethene  
B260 + TICs  
pH

For Laboratory Use Only  
WO # 09-7065  
B.O.F. # \_\_\_\_\_  
C/S (O) \_\_\_\_\_  
C/S (I) CLC / WPS  
Temp. 22.9 / ice \_\_\_\_\_  
Seals Present N / NA  
Samples Pres N / NA  
Headspace Y N / NA  
By NO

Complaint 2002/10/06/1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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Instructions: \*\* Important Note: See reverse side hereof for terms and conditions.

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
<u>PA</u>	<u>10/21/09</u>					<u>NO</u>	<u>9-2-07</u>

**Evergreen Analytical, Inc.**

**Date:** 18-Sep-09

**Lab Order:** 09-7065

**Client Project ID**

## **CASE NARRATIVE**

### **SAMPLE RECEIVING**

Custody seals were present and intact.

The temperature of the sample(s) upon arrival was 2.9°C.

Sample(s) were received in good condition and in the proper container.

The pH samples were received out of holding time.

VOC sample(s) were marked as preserved on the bottle labels.

VOC sample(s) were received with no headspace present. NJO

### **QUALITY ASSURANCE (QA)**

Analyses performed on samples in this work order by EAL meet the requirements of the EAL Quality Assurance Program unless otherwise explained. Analyses of RCRA samples meet the requirements of NELAC and Utah Rule R444-14 unless otherwise explained. TP

### **CLIENT SERVICES**

Due to a personnel shortage the VOA samples were sent to Accutest Northern California for analysis.  
PM

### **GENERAL CHEMISTRY**

Method SM4500-F C: The flagged Fluoride result for sample Complaint-200217388 (09-7065-02) only applies to drinking waters that exceed the MCL (MCL = 4.0 mg/L). There are no other anomalies to report. JKD/MM/TP

Method E150.1: The pH samples were received and analyzed outside the method specified holding times (H). There are no other anomalies to report. TP

### **METALS ANALYSIS**

Method E200.7\_D: The matrix spike and matrix spike duplicate (MS/MSD; on another client's sample) recoveries of Potassium and Sodium, and the MSD recovery of Calcium are outside the QC limits due to the high concentration of these analytes in the sample versus the low concentration of the spike. The laboratory control spike (LCS) recoveries of these analytes are within QC limits, proving the analysis is in control. There are no other anomalies to report. JT/TP/JE

**Evergreen Analytical, Inc.**

**Date:** 18-Sep-09

**Lab Order:** 09-7065

**Client Project ID**

**CASE NARRATIVE**

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**GAS CHROMATOGRAPHY**

Method RSK175: There are no anomalies to report. AS

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09/14/09

## Technical Report for

Accutest Mountain States

COGCCCOT: PHA-1009

COGCCCOT1898

Accutest Job Number: D7065

Sampling Date: 09/01/09

### Report to:

Accutest Mountain States  
4036 Youngfield St.  
Wheat Ridge, CO 80033-3862  
carl@evergreenanalytical.com

ATTN: Carl Smits

Total number of pages in report: 22



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

*Laurie Glantz-Murphy*  
Laurie Glantz-Murphy  
Laboratory Director

Client Service contact: Laurie Glantz-Murphy 408-588-0200

Certifications: CA (08258CA)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.  
Test results relate only to samples analyzed.

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Accutest Laboratories

## Sample Summary

Accutest Mountain States

Job No: D7065

COGCCCOT: PHA-1009  
Project No: COGCCCOT1898

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
D7065-1	09/01/09	09:45 PG	09/02/09	AQ	Ground Water	COMPLAINT 200216061 BARR WW
D7065-1F	09/01/09	09:45 PG	09/02/09	AQ	Ground Water	COMPLAINT 200216061 BARR WW
D7065-2	09/01/09	10:32 PG	09/02/09	AQ	Ground Water	COMPLAINT 200217388
D7065-2F	09/01/09	10:32 PG	09/02/09	AQ	Ground Water	COMPLAINT 200217388



## SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Accutest Mountain States

Job No D7065

Site: COGCCCOT: PHA-1009

Report Date 9/14/2009 5:30:07 PM

2 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were collected on 09/01/2009 and were received at Accutest on 09/02/2009 properly preserved and intact. These Samples received an Accutest job number of D7065. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

### Volatiles by GCMS By Method SW846 8260B

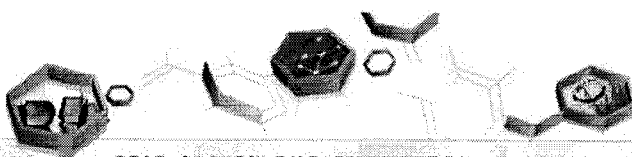
Matrix AQ	Batch ID: VN310
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- \* All samples were analyzed within the recommended method holding time.
- \* All method blanks for this batch meet method specific criteria.
- \* Sample(s) C7278-3MS, C7278-3MSD were used as the QC samples indicated.
- \* Blank Spike Recovery for 2-Chloroethyl vinyl ether is outside of in-house control limits.
- \* Matrix Spike/Matrix Spike Duplicate Recovery(s) for 2-Chloroethyl vinyl ether are outside control limits due to acid preservation.

Matrix AQ	Batch ID: VN311
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- \* All samples were analyzed within the recommended method holding time.
- \* All method blanks for this batch meet method specific criteria.
- \* Sample(s) C7294-2MS, C7294-2MSD were used as the QC samples indicated.
- \* Matrix Spike/Matrix Spike Duplicate Recovery(s) for 2-Chloroethyl vinyl ether are outside control limits due to acid preservation.

Accutest Laboratories Northern California (ALNCA) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALNCA and as stated on the COC. ALNCA certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALNCA Quality Manual except as noted above. This report is to be used in its entirety. ALNCA is not responsible for any assumptions of data quality if partial data packages are used



IT'S ALL IN THE CHEMISTRY

## Sample Results

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## Report of Analysis

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## Report of Analysis

Page 1 of 2

Client Sample ID: COMPLAINT 200216061 BARR WW  
 Lab Sample ID: D7065-1  
 Matrix: AQ - Ground Water  
 Method: SW846 8260B  
 Project: COGCCCOT: PHA-1009

Date Sampled: 09/01/09

Date Received: 09/02/09

Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N09222.D	1	09/09/09	TF	n/a	n/a	VN311
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

## VOA HSL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	10	ug/l	
71-43-2	Benzene	ND	1.0	0.30	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.30	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.30	ug/l	
75-00-3	Chloroethane	ND	1.0	0.30	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	0.50	ug/l	
75-15-0	Carbon disulfide	ND	1.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.30	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.30	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.30	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
591-78-6	2-Hexanone	ND	20	10	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	5.0	1.5	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	20	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	20	5.0	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

Page 2 of 2

Client Sample ID:	COMPLAINT 200216061 BARR WW		
Lab Sample ID:	D7065-1	Date Sampled:	09/01/09
Matrix:	AQ - Ground Water	Date Received:	09/02/09
Method:	SW846 8260B	Percent Solids:	n/a
Project:	COGCCCOT: PHA-1009		

## VOA HSL List

CAS No.	Compound	Result	RL	MDL	Units	Q
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		60-130%
2037-26-5	Toluene-D8	108%		60-130%
460-00-4	4-Bromofluorobenzene	93%		60-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	17.16	1.5	ug/l	J
	Total TIC, Volatile		1.5	ug/l	J

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Page 1 of 2

Client Sample ID:	COMPLAINT 200217388	Date Sampled:	09/01/09
Lab Sample ID:	D7065-2	Date Received:	09/02/09
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	COGCCCOT: PHA-1009		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N09194.D	1	09/08/09	TF	n/a	n/a	VN310
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

## VOA HSL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	10	ug/l	
71-43-2	Benzene	ND	1.0	0.30	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.30	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.30	ug/l	
75-00-3	Chloroethane	ND	1.0	0.30	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	0.50	ug/l	
75-15-0	Carbon disulfide	ND	1.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.30	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.30	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.30	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
591-78-6	2-Hexanone	ND	20	10	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	5.0	1.5	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	20	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	20	5.0	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

Page 2 of 2

Client Sample ID:	COMPLAINT 200217388		
Lab Sample ID:	D7065-2	Date Sampled:	09/01/09
Matrix:	AQ - Ground Water	Date Received:	09/02/09
Method:	SW846 8260B	Percent Solids:	n/a
Project:	COGCCCOT: PHA-1009		

## VOA HSL List

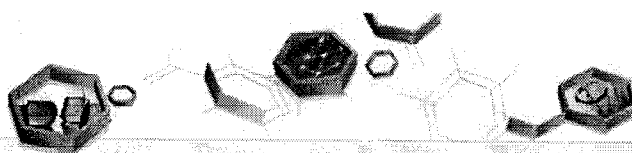
CAS No.	Compound	Result	RL	MDL	Units	Q
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		60-130%
2037-26-5	Toluene-D8	110%		60-130%
460-00-4	4-Bromofluorobenzene	94%		60-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
7446-09-5	Sulfur dioxide	4.69	8.4	ug/l	JN
	Total TIC, Volatile		8.4	ug/l	J

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## GC/MS Volatiles

### QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries



# Method Blank Summary

Page 1 of 2

Job Number: D7065  
 Account: ALMS Accutest Mountain States  
 Project: COGCCCOT: PHA-1009

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN310-MB	N09182.D	1	09/08/09	TF	n/a	n/a	VN310

The QC reported here applies to the following samples:

Method: SW846 8260B

D7065-2

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	10	ug/l	
71-43-2	Benzene	ND	1.0	0.30	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.30	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.30	ug/l	
75-00-3	Chloroethane	ND	1.0	0.30	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	0.50	ug/l	
75-15-0	Carbon disulfide	ND	1.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.30	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.30	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.30	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
591-78-6	2-Hexanone	ND	20	10	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	5.0	1.5	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	20	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	20	5.0	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

**Method Blank Summary**

Page 2 of 2

Job Number: D7065  
 Account: ALMS Accutest Mountain States  
 Project: COGCCCOT: PHA-1009

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN310-MB	N09182.D	1	09/08/09	TF	n/a	n/a	VN310

The QC reported here applies to the following samples:

Method: SW846 8260B

D7065-2

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	92% 60-130%
2037-26-5	Toluene-D8	110% 60-130%
460-00-4	4-Bromofluorobenzene	92% 60-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	unknown	17.15	1.1	ug/l	J
	Total TIC, Volatile		1.1	ug/l	J

## Method Blank Summary

Page 1 of 2

Job Number: D7065  
 Account: ALMS Accutest Mountain States  
 Project: COGCCCOT: PHA-1009

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN311-MB	N09211.D	1	09/09/09	TF	n/a	n/a	VN311

The QC reported here applies to the following samples:

Method: SW846 8260B

D7065-1

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	10	ug/l	
71-43-2	Benzene	ND	1.0	0.30	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.30	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.30	ug/l	
75-00-3	Chloroethane	ND	1.0	0.30	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	0.50	ug/l	
75-15-0	Carbon disulfide	ND	1.0	0.20	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.30	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.30	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.30	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
591-78-6	2-Hexanone	ND	20	10	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	5.0	1.5	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	20	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	20	5.0	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.20	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	

## Method Blank Summary

Page 2 of 2

Job Number: D7065  
 Account: ALMS Accutest Mountain States  
 Project: COCCCCOT: PHA-1009

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN311-MB	N09211.D	1	09/09/09	TF	n/a	n/a	VN311

The QC reported here applies to the following samples:

Method: SW846 8260B

D7065-1

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.0	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	93% 60-130%
2037-26-5	Toluene-D8	109% 60-130%
460-00-4	4-Bromofluorobenzene	92% 60-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

**Blank Spike Summary**

Page 1 of 2

Job Number: D7065

Account: ALMS Accutest Mountain States

Project: COGCCCOT: PHA-1009

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN310-BS	N09183.D	1	09/08/09	TF	n/a	n/a	VN310

The QC reported here applies to the following samples:

Method: SW846 8260B

D7065-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	80	75.6	95	60-130
71-43-2	Benzene	20	21.4	107	60-130
75-27-4	Bromodichloromethane	20	19.1	96	60-130
75-25-2	Bromoform	20	16.5	83	60-130
108-90-7	Chlorobenzene	20	22.4	112	60-130
75-00-3	Chloroethane	20	21.1	106	60-130
67-66-3	Chloroform	20	19.8	99	60-130
110-75-8	2-Chloroethyl vinyl ether	20	8.4	42* a	60-130
75-15-0	Carbon disulfide	20	16.0	80	60-130
56-23-5	Carbon tetrachloride	20	17.3	87	60-130
75-34-3	1,1-Dichloroethane	20	20.6	103	60-130
75-35-4	1,1-Dichloroethylene	20	17.4	87	60-130
107-06-2	1,2-Dichloroethane	20	16.6	83	60-130
78-87-5	1,2-Dichloropropane	20	21.8	109	60-130
124-48-1	Dibromochloromethane	20	19.3	97	60-130
156-59-2	cis-1,2-Dichloroethylene	20	20.8	104	60-130
10061-01-5	cis-1,3-Dichloropropene	20	21.2	106	60-130
541-73-1	m-Dichlorobenzene	20	23.7	119	60-130
95-50-1	o-Dichlorobenzene	20	23.3	117	60-130
106-46-7	p-Dichlorobenzene	20	23.2	116	60-130
156-60-5	trans-1,2-Dichloroethylene	20	20.3	102	60-130
10061-02-6	trans-1,3-Dichloropropene	20	21.4	107	60-130
100-41-4	Ethylbenzene	20	22.9	115	60-130
591-78-6	2-Hexanone	80	81.0	101	60-130
108-10-1	4-Methyl-2-pentanone	80	74.0	93	60-130
74-83-9	Methyl bromide	20	16.6	83	60-130
74-87-3	Methyl chloride	20	17.9	90	60-130
75-09-2	Methylene chloride	20	18.9	95	60-130
78-93-3	Methyl ethyl ketone	80	77.5	97	60-130
100-42-5	Styrene	20	22.6	113	60-130
71-55-6	1,1,1-Trichloroethane	20	18.6	93	60-130
79-34-5	1,1,2,2-Tetrachloroethane	20	23.7	119	60-130
79-00-5	1,1,2-Trichloroethane	20	21.9	110	60-130
127-18-4	Tetrachloroethylene	20	20.4	102	60-130
108-88-3	Toluene	20	21.3	107	60-130
79-01-6	Trichloroethylene	20	20.4	102	60-130

**Blank Spike Summary**

Page 2 of 2

Job Number: D7065

Account: ALMS Accutest Mountain States

Project: COGCCCOT: PHA-1009

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN310-BS	N09183.D	1	09/08/09	TF	n/a	n/a	VN310

The QC reported here applies to the following samples:

Method: SW846 8260B

D7065-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-01-4	Vinyl chloride	20	15.0	75	60-130
108-05-4	Vinyl Acetate	20	17.9	90	60-130
1330-20-7	Xylene (total)	60	68.9	115	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	94%	60-130%
2037-26-5	Toluene-D8	107%	60-130%
460-00-4	4-Bromofluorobenzene	96%	60-130%

(a) Outside of in-house control limits.

**Blank Spike Summary**

Page 1 of 2

Job Number: D7065

Account: ALMS Accutest Mountain States

Project: COGCCCOT: PHA-1009

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN311-BS	N09212.D	1	09/09/09	TF	n/a	n/a	VN311

The QC reported here applies to the following samples:

Method: SW846 8260B

D7065-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	80	70.9	89	60-130
71-43-2	Benzene	20	20.6	103	60-130
75-27-4	Bromodichloromethane	20	18.6	93	60-130
75-25-2	Bromoform	20	16.1	81	60-130
108-90-7	Chlorobenzene	20	21.6	108	60-130
75-00-3	Chloroethane	20	20.0	100	60-130
67-66-3	Chloroform	20	19.2	96	60-130
110-75-8	2-Chloroethyl vinyl ether	20	15.4	77	60-130
75-15-0	Carbon disulfide	20	15.0	75	60-130
56-23-5	Carbon tetrachloride	20	16.6	83	60-130
75-34-3	1,1-Dichloroethane	20	19.7	99	60-130
75-35-4	1,1-Dichloroethylene	20	16.4	82	60-130
107-06-2	1,2-Dichloroethane	20	15.9	80	60-130
78-87-5	1,2-Dichloropropane	20	21.4	107	60-130
124-48-1	Dibromochloromethane	20	18.9	95	60-130
156-59-2	cis-1,2-Dichloroethylene	20	20.3	102	60-130
10061-01-5	cis-1,3-Dichloropropene	20	20.6	103	60-130
541-73-1	m-Dichlorobenzene	20	22.8	114	60-130
95-50-1	o-Dichlorobenzene	20	22.8	114	60-130
106-46-7	p-Dichlorobenzene	20	22.1	111	60-130
156-60-5	trans-1,2-Dichloroethylene	20	19.5	98	60-130
10061-02-6	trans-1,3-Dichloropropene	20	20.8	104	60-130
100-41-4	Ethylbenzene	20	22.2	111	60-130
591-78-6	2-Hexanone	80	78.9	99	60-130
108-10-1	4-Methyl-2-pentanone	80	72.9	91	60-130
74-83-9	Methyl bromide	20	18.1	91	60-130
74-87-3	Methyl chloride	20	17.2	86	60-130
75-09-2	Methylene chloride	20	18.2	91	60-130
78-93-3	Methyl ethyl ketone	80	74.3	93	60-130
100-42-5	Styrene	20	22.0	110	60-130
71-55-6	1,1,1-Trichloroethane	20	17.7	89	60-130
79-34-5	1,1,2,2-Tetrachloroethane	20	22.8	114	60-130
79-00-5	1,1,2-Trichloroethane	20	21.2	106	60-130
127-18-4	Tetrachloroethylene	20	20.0	100	60-130
108-88-3	Toluene	20	20.5	103	60-130
79-01-6	Trichloroethylene	20	19.5	98	60-130

**Blank Spike Summary**

Page 2 of 2

Job Number: D7065

Account: ALMS Accutest Mountain States

Project: COGCCCOT: PHA-1009

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN311-BS	N09212.D	1	09/09/09	TF	n/a	n/a	VN311

The QC reported here applies to the following samples:

Method: SW846 8260B

D7065-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-01-4	Vinyl chloride	20	14.5	73	60-130
108-05-4	Vinyl Acetate	20	16.5	83	60-130
1330-20-7	Xylene (total)	60	66.8	111	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	96%	60-130%
2037-26-5	Toluene-D8	106%	60-130%
460-00-4	4-Bromofluorobenzene	99%	60-130%



## Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 2

Job Number: D7065

Account: ALMS Accutest Mountain States

Project: COGCCCOT: PHA-1009

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C7278-3MS	N09202.D	1	09/08/09	TF	n/a	n/a	VN310
C7278-3MSD	N09203.D	1	09/08/09	TF	n/a	n/a	VN310
C7278-3	N09186.D	1	09/08/09	TF	n/a	n/a	VN310

The QC reported here applies to the following samples:

Method: SW846 8260B

D7065-2

CAS No.	Compound	C7278-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		80	68.5	86	68.0	85	1	60-130/25
71-43-2	Benzene	ND		20	20.9	105	20.4	102	2	60-130/25
75-27-4	Bromodichloromethane	ND		20	18.9	95	18.5	93	2	60-130/25
75-25-2	Bromoform	ND		20	16.2	81	15.8	79	2	60-130/25
108-90-7	Chlorobenzene	ND		20	21.8	109	21.1	106	3	60-130/25
75-00-3	Chloroethane	ND		20	20.4	102	20.2	101	1	60-130/25
67-66-3	Chloroform	ND		20	19.7	99	19.4	97	2	60-130/25
110-75-8	2-Chloroethyl vinyl ether	ND		20	ND	0* a	ND	0* a	nc	60-130/25
75-15-0	Carbon disulfide	ND		20	15.3	77	15.0	75	2	60-130/25
56-23-5	Carbon tetrachloride	ND		20	16.7	84	16.4	82	2	60-130/25
75-34-3	1,1-Dichloroethane	1.6		20	21.6	100	21.3	99	1	60-130/25
75-35-4	1,1-Dichloroethylene	2.9		20	19.2	82	19.0	81	1	60-130/25
107-06-2	1,2-Dichloroethane	ND		20	16.3	82	16.0	80	2	60-130/25
78-87-5	1,2-Dichloropropane	ND		20	21.6	108	21.2	106	2	60-130/25
124-48-1	Dibromochloromethane	ND		20	19.1	96	18.7	94	2	60-130/25
156-59-2	cis-1,2-Dichloroethylene	1.8		20	22.1	102	21.7	100	2	60-130/25
10061-01-5	cis-1,3-Dichloropropene	ND		20	20.5	103	19.9	100	3	60-130/25
541-73-1	m-Dichlorobenzene	ND		20	22.6	113	22.4	112	1	60-130/25
95-50-1	o-Dichlorobenzene	ND		20	22.8	114	22.5	113	1	60-130/25
106-46-7	p-Dichlorobenzene	ND		20	22.0	110	21.8	109	1	60-130/25
156-60-5	trans-1,2-Dichloroethylene	0.31	J	20	19.8	97	19.5	96	2	60-130/25
10061-02-6	trans-1,3-Dichloropropene	ND		20	20.4	102	20.0	100	2	60-130/25
100-41-4	Ethylbenzene	ND		20	22.2	111	21.6	108	3	60-130/25
591-78-6	2-Hexanone	ND		80	79.3	99	78.9	99	1	60-130/25
108-10-1	4-Methyl-2-pentanone	ND		80	73.7	92	73.9	92	0	60-130/25
74-83-9	Methyl bromide	ND		20	13.5	68	17.0	85	23	60-130/25
74-87-3	Methyl chloride	ND		20	18.2	91	17.1	86	6	60-130/25
75-09-2	Methylene chloride	ND		20	18.4	92	18.3	92	1	60-130/25
78-93-3	Methyl ethyl ketone	ND		80	75.1	94	75.2	94	0	60-130/25
100-42-5	Styrene	ND		20	20.1	101	20.3	102	1	60-130/25
71-55-6	1,1,1-Trichloroethane	ND		20	18.0	90	17.6	88	2	60-130/25
79-34-5	1,1,2,2-Tetrachloroethane	ND		20	23.0	115	23.1	116	0	60-130/25
79-00-5	1,1,2-Trichloroethane	ND		20	21.6	108	21.1	106	2	60-130/25
127-18-4	Tetrachloroethylene	8.6		20	26.4	89	25.7	86	3	60-130/25
108-88-3	Toluene	ND		20	20.5	103	20.1	101	2	60-130/25
79-01-6	Trichloroethylene	46.5		20	64.4	90	63.0	83	2	60-130/25

**Matrix Spike/Matrix Spike Duplicate Summary**

Page 2 of 2

Job Number: D7065

Account: ALMS Accutest Mountain States

Project: COGCCCOT: PHA-1009

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C7278-3MS	N09202.D	1	09/08/09	TF	n/a	n/a	VN310
C7278-3MSD	N09203.D	1	09/08/09	TF	n/a	n/a	VN310
C7278-3	N09186.D	1	09/08/09	TF	n/a	n/a	VN310

The QC reported here applies to the following samples:

Method: SW846 8260B

D7065-2

CAS No.	Compound	C7278-3 ug/l	Spike Q	ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	ND	20	14.9	75	14.0	70	6		60-130/25
108-05-4	Vinyl Acetate	ND	20	16.6	83	15.7	79	6		60-130/25
1330-20-7	Xylene (total)	ND	60	66.5	111	64.7	108	3		60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C7278-3	Limits
1868-53-7	Dibromofluoromethane	97%	96%	93%	60-130%
2037-26-5	Toluene-D8	107%	106%	108%	60-130%
460-00-4	4-Bromofluorobenzene	98%	97%	92%	60-130%

(a) Outside control limits due to acid preservation.

## Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 2

Job Number: D7065

Account: ALMS Accutest Mountain States

Project: COGCCCOT: PHA-1009

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C7294-2MS	N09231.D	1	09/09/09	TF	n/a	n/a	VN311
C7294-2MSD	N09232.D	1	09/09/09	TF	n/a	n/a	VN311
C7294-2	N09218.D	1	09/09/09	TF	n/a	n/a	VN311

The QC reported here applies to the following samples:

Method: SW846 8260B

D7065-1

CAS No.	Compound	C7294-2	Spike	MS	MS	MSD	MSD	RPD	Limits	
		ug/l								Q
67-64-1	Acetone	ND		80	65.3	82	67.2	84	3	60-130/25
71-43-2	Benzene	ND		20	20.7	104	21.1	106	2	60-130/25
75-27-4	Bromodichloromethane	ND		20	18.7	94	19.1	96	2	60-130/25
75-25-2	Bromoform	ND		20	16.5	83	16.7	84	1	60-130/25
108-90-7	Chlorobenzene	ND		20	21.6	108	22.2	111	3	60-130/25
75-00-3	Chloroethane	ND		20	20.9	105	20.4	102	2	60-130/25
67-66-3	Chloroform	0.76	J	20	20.1	97	20.6	99	2	60-130/25
110-75-8	2-Chloroethyl vinyl ether	ND		20	ND	0* a	ND	0* a	nc	60-130/25
75-15-0	Carbon disulfide	ND		20	14.9	75	15.2	76	2	60-130/25
56-23-5	Carbon tetrachloride	ND		20	16.5	83	16.6	83	1	60-130/25
75-34-3	1,1-Dichloroethane	2.6		20	22.4	99	22.9	102	2	60-130/25
75-35-4	1,1-Dichloroethylene	38.6		20	53.9	77	53.0	72	2	60-130/25
107-06-2	1,2-Dichloroethane	ND		20	16.3	82	16.6	83	2	60-130/25
78-87-5	1,2-Dichloropropane	ND		20	21.5	108	21.9	110	2	60-130/25
124-48-1	Dibromochloromethane	ND		20	19.0	95	19.6	98	3	60-130/25
156-59-2	cis-1,2-Dichloroethylene	6.3		20	26.5	101	27.1	104	2	60-130/25
10061-01-5	cis-1,3-Dichloropropene	ND		20	20.4	102	20.7	104	1	60-130/25
541-73-1	m-Dichlorobenzene	ND		20	22.6	113	23.1	116	2	60-130/25
95-50-1	o-Dichlorobenzene	ND		20	22.6	113	23.2	116	3	60-130/25
106-46-7	p-Dichlorobenzene	ND		20	22.0	110	22.4	112	2	60-130/25
156-60-5	trans-1,2-Dichloroethylene	ND		20	19.2	96	19.8	99	3	60-130/25
10061-02-6	trans-1,3-Dichloropropene	ND		20	20.4	102	21.1	106	3	60-130/25
100-41-4	Ethylbenzene	ND		20	22.0	110	22.5	113	2	60-130/25
591-78-6	2-Hexanone	ND		80	80.0	100	82.7	103	3	60-130/25
108-10-1	4-Methyl-2-pentanone	ND		80	73.0	91	75.7	95	4	60-130/25
74-83-9	Methyl bromide	ND		20	17.8	89	18.7	94	5	60-130/25
74-87-3	Methyl chloride	ND		20	20.2	101	18.6	93	8	60-130/25
75-09-2	Methylene chloride	ND		20	18.4	92	18.9	95	3	60-130/25
78-93-3	Methyl ethyl ketone	ND		80	73.8	92	76.8	96	4	60-130/25
100-42-5	Styrene	ND		20	18.6	93	19.1	96	3	60-130/25
71-55-6	1,1,1-Trichloroethane	ND		20	17.6	88	18.1	91	3	60-130/25
79-34-5	1,1,2,2-Tetrachloroethane	ND		20	22.9	115	23.7	119	3	60-130/25
79-00-5	1,1,2-Trichloroethane	ND		20	21.7	109	22.1	111	2	60-130/25
127-18-4	Tetrachloroethylene	32.9		20	51.7	94	50.8	90	2	60-130/25
108-88-3	Toluene	ND		20	20.3	102	20.9	105	3	60-130/25
79-01-6	Trichloroethylene	25.1		20	44.8	99	44.2	96	1	60-130/25

**Matrix Spike/Matrix Spike Duplicate Summary**

Page 2 of 2

Job Number: D7065  
 Account: ALMS Accutest Mountain States  
 Project: COGCCCOT: PHA-1009

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C7294-2MS	N09231.D	1	09/09/09	TF	n/a	n/a	VN311
C7294-2MSD	N09232.D	1	09/09/09	TF	n/a	n/a	VN311
C7294-2	N09218.D	1	09/09/09	TF	n/a	n/a	VN311

The QC reported here applies to the following samples:

Method: SW846 8260B

D7065-1

CAS No.	Compound	C7294-2 ug/l	Spike Q	ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-01-4	Vinyl chloride	ND	20	16.5	83	15.0	75	10		60-130/25
108-05-4	Vinyl Acetate	ND	20	16.4	82	16.2	81	1		60-130/25
1330-20-7	Xylene (total)	ND	60	66.2	110	68.0	113	3		60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C7294-2	Limits
1868-53-7	Dibromofluoromethane	97%	97%	95%	60-130%
2037-26-5	Toluene-D8	107%	107%	108%	60-130%
460-00-4	4-Bromofluorobenzene	99%	98%	92%	60-130%

(a) Outside control limits due to acid preservation.

**Evergreen Analytical, Inc.**  
4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

028

**Client Sample ID:** Complaint-200216061 Barr WW  
**Client Project ID:**  
**Date Collected:** 9/1/09 0945  
**Date Received:** 9/2/09

**Lab Work Order** 09-7065  
**Lab Sample ID:** 09-7065-01  
**Sample Matrix:** Groundwater

**ANIONS BY IC**

**Method:** E300.0

**Prep Method:**

**Date Prepared:** 9/2/09  
**Date Analyzed:** 9/2/09 1422

**Method Blank:** MB 09/02/09

**Dilution Factor:** 1  
**Lab Fraction ID:** 09-7065-01A

Analytes	CAS Number	Result	LQL	Units
Chloride	7647-14-5	17.5	0.50	mg/L
Nitrite-N		U	0.0040	mg/L
Bromide	7647-15-6	0.276	0.050	mg/L
Nitrate-N		0.0488	0.010	mg/L

**Date Prepared:** 9/2/09  
**Date Analyzed:** 9/2/09 1744

**Method Blank:** MB 09/02/09

**Dilution Factor:** 10  
**Lab Fraction ID:** 09-7065-01A

Analytes	CAS Number	Result	LQL	Units
Sulfate	7778-80-2	268	5.0	mg/L

  
\_\_\_\_\_  
**Analyst**

  
\_\_\_\_\_  
**Approved**

**Qualifiers:** B - Analyte detected in the associated Method Blank, value not subtracted from result  
E - Extrapolated value. Value exceeds calibration range  
H - Sample analysis exceeded analytical holding time  
J - Indicates an estimated value when the compound is detected, but is below the LQL  
S - Spike Recovery outside accepted limits  
U - Compound analyzed for but not detected  
X - See case narrative  
\* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

**Definitions:** NA - Not Applicable  
LQL - Lower Quantitation Limit  
Surr - Surrogate

**Print Date:** 9/3/09

**Evergreen Analytical, Inc.**  
4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

029

**Client Sample ID:** Complaint-200217388  
**Client Project ID:**  
**Date Collected:** 9/1/09 1032  
**Date Received:** 9/2/09

**Lab Work Order** 09-7065  
**Lab Sample ID:** 09-7065-02  
**Sample Matrix:** Groundwater

**ANIONS BY IC**

**Method: E300.0**

**Prep Method:**

**Date Prepared:** 9/2/09  
**Date Analyzed:** 9/2/09 1434

**Method Blank:** MB 09/02/09

**Dilution Factor:** 1  
**Lab Fraction ID:** 09-7065-02A

Analytes	CAS Number	Result	LQL	Units
Chloride	7647-14-5	31.5	0.50	mg/L
Nitrite-N		U	0.0040	mg/L
Bromide	7647-15-6	0.341	0.050	mg/L
Nitrate-N		U	0.010	mg/L

**Date Prepared:** 9/2/09  
**Date Analyzed:** 9/2/09 1757

**Method Blank:** MB 09/02/09

**Dilution Factor:** 5  
**Lab Fraction ID:** 09-7065-02A

Analytes	CAS Number	Result	LQL	Units
Sulfate	7778-80-2	109	2.5	mg/L

  
Analyst

  
Approved

**Qualifiers:** B - Analyte detected in the associated Method Blank, value not subtracted from result  
E - Extrapolated value. Value exceeds calibration range  
H - Sample analysis exceeded analytical holding time  
J - Indicates an estimated value when the compound is detected, but is below the LQL  
S - Spike Recovery outside accepted limits  
U - Compound analyzed for but not detected  
X - See case narrative  
\* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

**Definitions:** NA - Not Applicable  
LQL - Lower Quantitation Limit  
Surr - Surrogate

Print Date: 9/3/09

030

**Evergreen Analytical, Inc.**  
4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

Client Sample ID: Complaint-200216061 Barr WW  
Client Project ID:  
Date Collected: 9/1/09  
Date Received: 9/2/09

Lab Work Order: 09-7065  
Lab Sample ID: 09-7065-01  
Sample Matrix: Groundwater

**DISSOLVED METALS**

Method: E200.7, Rev. 4.4

Prep Method: E200.7/SW3010A

Date Prepared: 9/4/09  
Date Analyzed: 9/8/09

Lab File ID: 090809AM  
Method Blank: MB-20667

Dilution Factor: 1  
Lab Fraction ID: 09-7065-01C

Analytes	CAS Number	Result	LQL	Units
Barium	7440-39-3	0.0464	0.00200	mg/L
Beryllium	7440-41-7	U	0.000450	mg/L
Boron	7440-42-8	0.0604	0.0200	mg/L
Calcium	7440-70-2	38.2	0.387	mg/L
Chromium	7440-47-3	U	0.0100	mg/L
Cobalt	7440-48-4	U	0.00500	mg/L
Copper	7440-50-8	U	0.00500	mg/L
Iron	7439-89-6	U	0.0700	mg/L
Lithium	7439-93-2	0.00385	0.00200	mg/L
Magnesium	7439-95-4	6.11	0.150	mg/L
Manganese	7439-96-5	0.117	0.00500	mg/L
Nickel	7440-02-0	U	0.0300	mg/L
Potassium	7440-09-7	1.65	0.340	mg/L
Sodium	7440-23-5	187	0.400	mg/L
Strontium	7440-24-6	1.27	0.000500	mg/L
Zinc	7440-66-6	U	0.0300	mg/L

  
\_\_\_\_\_  
Analyst

  
\_\_\_\_\_  
Approved

Qualifiers: B - Analyte detected in the associated Method Blank, value not subtracted from result  
E - Extrapolated value. Value exceeds calibration range  
H - Sample analysis exceeded analytical holding time  
J - Indicates an estimated value when the compound is detected, but is below the LQL  
S - Spike Recovery outside accepted limits  
U - Compound analyzed for but not detected  
X - See case narrative  
\* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

Definitions: NA - Not Applicable  
LQL - Lower Quantitation Limit  
Surr - Surrogate

Print Date: 9/17/2009

**Evergreen Analytical, Inc.**  
4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

031

Client Sample ID: Complaint-200217388  
Client Project ID:  
Date Collected: 9/1/09  
Date Received: 9/2/09

Lab Work Order: 09-7065  
Lab Sample ID: 09-7065-02  
Sample Matrix: Groundwater

**DISSOLVED METALS**

Method: E200.7, Rev. 4.4

Prep Method: E200.7/SW3010A


Date Prepared: 9/4/09  
Date Analyzed: 9/8/09

Lab File ID: 090809AM  
Method Blank: MB-20667

Dilution Factor: 1  
Lab Fraction ID: 09-7065-02C

Analytes	CAS Number	Result	LQL	Units
Barium	7440-39-3	0.0204	0.00200	mg/L
Beryllium	7440-41-7	U	0.000450	mg/L
Boron	7440-42-8	0.0478	0.0200	mg/L
Calcium	7440-70-2	6.96	0.387	mg/L
Chromium	7440-47-3	U	0.0100	mg/L
Cobalt	7440-48-4	U	0.00500	mg/L
Copper	7440-50-8	U	0.00500	mg/L
Iron	7439-89-6	U	0.0700	mg/L
Lithium	7439-93-2	0.00391	0.00200	mg/L
Magnesium	7439-95-4	U	0.150	mg/L
Manganese	7439-96-5	U	0.00500	mg/L
Nickel	7440-02-0	U	0.0300	mg/L
Potassium	7440-09-7	U	0.340	mg/L
Sodium	7440-23-5	121	0.400	mg/L
Strontium	7440-24-6	0.158	0.000500	mg/L
Zinc	7440-66-6	0.186	0.0300	mg/L

  
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Analyst

  
\_\_\_\_\_  
Approved

Qualifiers: B - Analyte detected in the associated Method Blank, value not subtracted from result  
E - Extrapolated value. Value exceeds calibration range  
H - Sample analysis exceeded analytical holding time  
J - Indicates an estimated value when the compound is detected, but is below the LQL  
S - Spike Recovery outside accepted limits  
U - Compound analyzed for but not detected  
X - See case narrative  
\* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

Definitions: NA - Not Applicable  
LQL - Lower Quantitation Limit  
Surr - Surrogate

Print Date: 9/17/2009



032

**Evergreen Analytical, Inc.**  
4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

Client Sample ID: Complaint-200216061 Barr WW  
Client Project ID:  
Date Collected: 9/1/09  
Date Received: 9/2/09

Lab Work Order: 09-7065  
Lab Sample ID: 09-7065-01  
Sample Matrix: Groundwater

**DISSOLVED METALS**

Method: E200.8

Prep Method: E200.8

Date Prepared: 9/10/09  
Date Analyzed: 9/11/09

Lab File ID: 091109AQ\09-7065-01D.08  
Method Blank: MB-20736

Dilution Factor: 1  
Lab Fraction ID: 09-7065-01D

Analytes	CAS Number	Result	LQL	Units
Antimony	7440-36-0	U	0.00200	mg/L
Arsenic	7440-38-2	U	0.00200	mg/L
Cadmium	7440-43-9	U	0.000500	mg/L
Lead	7439-92-1	U	0.00100	mg/L
Molybdenum	7439-98-7	U	0.00500	mg/L
Selenium	7782-49-2	U	0.00200	mg/L
Silver	7440-22-4	U	0.000200	mg/L
Thallium	7440-28-0	U	0.00100	mg/L
Uranium	7440-61-1	U	0.00100	mg/L

**SODIUM ADSORPTION RATIO**

Method: USDA


Prep Method:

Date Prepared: 9/8/09  
Date Analyzed: 9/14/09

Dilution Factor: 1  
Lab Fraction ID: 09-7065-01C

Analytes	CAS Number	Result	LQL	Units
Sodium-Adsorption-Ratio		7.4	0.10	ratio

  
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Analyst

  
\_\_\_\_\_  
Approved

**Qualifiers:** B - Analyte detected in the associated Method Blank, value not subtracted from result  
E - Extrapolated value. Value exceeds calibration range  
H - Sample analysis exceeded analytical holding time  
J - Indicates an estimated value when the compound is detected, but is below the LQL  
S - Spike Recovery outside accepted limits  
U - Compound analyzed for but not detected  
X - See case narrative  
\* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

**Definitions:** NA - Not Applicable  
LQL - Lower Quantitation Limit  
Surr - Surrogate

Print Date: 09/17/09

033

**Evergreen Analytical, Inc.**  
4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

Client Sample ID: Complaint-200217388  
Client Project ID:  
Date Collected: 9/1/09  
Date Received: 9/2/09

Lab Work Order: 09-7065  
Lab Sample ID: 09-7065-02  
Sample Matrix: Groundwater

**DISSOLVED METALS**

Method: E200.8

Prep Method: E200.8

Date Prepared: 9/10/09  
Date Analyzed: 9/11/09

Lab File ID: 091109AQ\09-7065-02D.08  
Method Blank: MB-20736

Dilution Factor: 1  
Lab Fraction ID: 09-7065-02D

Analytes	CAS Number	Result	LQL	Units
Antimony	7440-36-0	U	0.00200	mg/L
Arsenic	7440-38-2	U	0.00200	mg/L
Cadmium	7440-43-9	U	0.000500	mg/L
Lead	7439-92-1	U	0.00100	mg/L
Molybdenum	7439-98-7	U	0.00500	mg/L
Selenium	7782-49-2	0.00419	0.00200	mg/L
Silver	7440-22-4	U	0.000200	mg/L
Thallium	7440-28-0	U	0.00100	mg/L
Uranium	7440-61-1	U	0.00100	mg/L

**SODIUM ADSORPTION RATIO**

Method: USDA

Prep Method:

Date Prepared: 9/8/09  
Date Analyzed: 9/14/09

Dilution Factor: 1  
Lab Fraction ID: 09-7065-02C

Analytes	CAS Number	Result	LQL	Units
Sodium-Adsorption-Ratio		12	0.10	ratio

  
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Analyst

  
\_\_\_\_\_  
Approved

**Qualifiers:** B - Analyte detected in the associated Method Blank, value not subtracted from result  
E - Extrapolated value. Value exceeds calibration range  
H - Sample analysis exceeded analytical holding time  
J - Indicates an estimated value when the compound is detected, but is below the LQL  
S - Spike Recovery outside accepted limits  
U - Compound analyzed for but not detected  
X - See case narrative  
\* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

**Definitions:** NA - Not Applicable  
LQL - Lower Quantitation Limit  
Surr - Surrogate

Print Date: 09/17/09

# ACCUTEST MOUNTAIN STATES LABORATORY

4036 Youngfield St., Wheat Ridge, CO 80033  
(303)425-6021

## Anion-Cation (Ion) Balance - Method 1030, Standard Methods, 20th Ed.

EAL Sample ID	09-7065-01		09-7065-02		09-		09-		09-	
Client Sample ID	Complaint-200216061		Complaint 200217388							
Sample Result	mg/L	Meq/L	mg/L	Meq/L	mg/L	Meq/L	mg/L	Meq/L	mg/L	Meq/L
<i>Anions</i>										
Cl	17.5	0.494	31.5	0.889		0.000		0.000		0.000
SO <sub>4</sub>	268	5.580	109	2.269		0.000		0.000		0.000
HCO <sub>3</sub> as CaCO <sub>3</sub>	249	4.976	133	2.658		0.000		0.000		0.000
CO <sub>3</sub> as CaCO <sub>3</sub>		0.000		0.000		0.000		0.000		0.000
NO <sub>3</sub>		0.000		0.000		0.000		0.000		0.000
NO <sub>3</sub> as N	0.0488	0.003		0.000		0.000		0.000		0.000
Bromide	0.276	0.003	0.341	0.004		0.000		0.000		0.000
<b>Cations Total</b>		<b>11.056</b>		<b>5.820</b>		<b>0.000</b>		<b>0.000</b>		<b>0.000</b>
<i>Cations</i>										
Ca	38.2	1.906	7.0	0.347		0.000		0.000		0.000
Mg	6.11	0.503		0.000		0.000		0.000		0.000
K	1.65	0.042		0.000		0.000		0.000		0.000
Na	187	8.134	121	5.263		0.000		0.000		0.000
Other		0.000		0.000		0.000		0.000		0.000
<b>Cations Total</b>		<b>10.585</b>		<b>5.610</b>		<b>0.000</b>		<b>0.000</b>		<b>0.000</b>
<b>Ion Balance</b>										
<b>% Difference</b>		<b>2.18</b>		<b>1.83</b>						

$$\% \text{ difference} = 100 \times \frac{(\text{sum cations} - \text{sum anions})}{(\text{sum cations} + \text{sum anions})}$$

Approved

**Evergreen Analytical, Inc.**  
4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

035

Client Sample ID: Complaint-200216061 Barr WW  
Client Project ID:  
Date Collected: 9/1/09 0945  
Date Received: 9/2/09

Lab Work Order 09-7065  
Lab Sample ID: 09-7065-01  
Sample Matrix: Groundwater

**ALKALINITY**

Method: SM2320B

Prep Method:

Date Prepared: 9/3/09  
Date Analyzed: 9/3/09

Lab File ID: 56  
Method Blank: MBLK 9/3/09

Dilution Factor: 1  
Lab Fraction ID: 09-7065-01E

Analytes	CAS Number	Result	LQL	Units
Total Alkalinity		249	5.0	mg/L CaCO3
Bicarbonate		249	5.0	mg/L CaCO3
Carbonate		U	5.0	mg/L CaCO3

**SPECIFIC CONDUCTANCE @ 25°C**

Method: SM2510 B

Prep Method:

Date Prepared: 9/2/09  
Date Analyzed: 9/2/09

Lab File ID: 72

Dilution Factor: 1  
Lab Fraction ID: 09-7065-01F

Analytes	CAS Number	Result	LQL	Units
Specific Conductance		937	1.00	µmhos/cm

**FLUORIDE**

Method: SM 4500-F C

Prep Method:

Date Prepared: 9/4/09  
Date Analyzed: 9/4/09

Lab File ID: 15  
Method Blank: MBLK 090409

Dilution Factor: 1  
Lab Fraction ID: 09-7065-01B

Analytes	CAS Number	Result	LQL	Units
Fluoride	16984-48-8	0.82	0.20	mg/L

**E150.1 PH**

Method: E150.1

Prep Method:

Date Prepared: 9/2/09  
Date Analyzed: 9/2/09 1240

Dilution Factor: 1  
Lab Fraction ID: 09-7065-01F

Analytes	CAS Number	Result	LQL	Units
pH		7.86 H	1.00	pH Units

  
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Analyst

  
\_\_\_\_\_  
Approved

**Qualifiers:** B - Analyte detected in the associated Method Blank, value not subtracted from result  
E - Extrapolated value. Value exceeds calibration range  
H - Sample analysis exceeded analytical holding time  
J - Indicates an estimated value when the compound is detected, but is below the LQL  
S - Spike Recovery outside accepted limits  
U - Compound analyzed for but not detected  
X - See case narrative  
\* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

**Definitions:** NA - Not Applicable  
LQL - Lower Quantitation Limit  
Surr - Surrogate

Print Date: 9/11/2009

036

**Evergreen Analytical, Inc.**  
4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

**Client Sample ID:** Complaint-200216061 Barr WW  
**Client Project ID:**  
**Date Collected:** 9/1/09 0945  
**Date Received:** 9/2/09

**Lab Work Order** 09-7065  
**Lab Sample ID:** 09-7065-01  
**Sample Matrix:** Groundwater

**TOTAL DISSOLVED SOLIDS (TDS)**

**Method: SM 2540C**


**Prep Method:**


**Date Prepared:** 9/3/09  
**Date Analyzed:** 9/3/09

**Lab File ID:** 14  
**Method Blank:** MBLK 09/03/09

**Dilution Factor:** 1  
**Lab Fraction ID:** 09-7065-01F

Analytes	CAS Number	Result	LQL	Units
Total Dissolved Solids		712	10.0	mg/L

  
\_\_\_\_\_  
**Analyst**

  
\_\_\_\_\_  
**Approved**

**Qualifiers:** B - Analyte detected in the associated Method Blank, value not subtracted from result  
E - Extrapolated value. Value exceeds calibration range  
H - Sample analysis exceeded analytical holding time  
J - Indicates an estimated value when the compound is detected, but is below the LQL  
S - Spike Recovery outside accepted limits  
U - Compound analyzed for but not detected  
X - See case narrative  
\* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

**Definitions:** NA - Not Applicable  
LQL - Lower Quantitation Limit  
Surr - Surrogate

Print Date: 9/11/2009

**Evergreen Analytical, Inc.**  
 4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
 (303) 425-6021

**Client Sample ID:** Complaint-200217388  
**Client Project ID:**  
**Date Collected:** 9/1/09 1032  
**Date Received:** 9/2/09

**Lab Work Order** 09-7065  
**Lab Sample ID:** 09-7065-02  
**Sample Matrix:** Groundwater

### ALKALINITY

**Method:** SM2320B

**Prep Method:**

**Date Prepared:** 9/3/09  
**Date Analyzed:** 9/3/09

**Lab File ID:** 57  
**Method Blank:** MBLK 9/3/09

**Dilution Factor:** 1  
**Lab Fraction ID:** 09-7065-02E

Analytes	CAS Number	Result	LQL	Units
Total Alkalinity		133	5.0	mg/L CaCO <sub>3</sub>
Bicarbonate		128	5.0	mg/L CaCO <sub>3</sub>
Carbonate		U	5.0	mg/L CaCO <sub>3</sub>

### SPECIFIC CONDUCTANCE @ 25°C

**Method:** SM2510 B

**Prep Method:**

**Date Prepared:** 9/2/09  
**Date Analyzed:** 9/2/09

**Lab File ID:** 73

**Dilution Factor:** 1  
**Lab Fraction ID:** 09-7065-02F

Analytes	CAS Number	Result	LQL	Units
Specific Conductance		542	1.00	µmhos/cm

### FLUORIDE

**Method:** SM 4500-F C

**Prep Method:**

**Date Prepared:** 9/4/09  
**Date Analyzed:** 9/4/09

**Lab File ID:** 16  
**Method Blank:** MBLK 090409

**Dilution Factor:** 1  
**Lab Fraction ID:** 09-7065-02B

Analytes	CAS Number	Result	LQL	Units
Fluoride	16984-48-8	4.7 *	0.20	mg/L

### E150.1 PH

**Method:** E150.1

**Prep Method:**

**Date Prepared:** 9/2/09  
**Date Analyzed:** 9/2/09 1240

**Dilution Factor:** 1  
**Lab Fraction ID:** 09-7065-02F

Analytes	CAS Number	Result	LQL	Units
pH		8.59 H	1.00	pH Units

  
 Analyst

  
 Approved

**Qualifiers:** B - Analyte detected in the associated Method Blank, value not subtracted from result  
 E - Extrapolated value. Value exceeds calibration range  
 H - Sample analysis exceeded analytical holding time  
 J - Indicates an estimated value when the compound is detected, but is below the LQL  
 S - Spike Recovery outside accepted limits  
 U - Compound analyzed for but not detected  
 X - See case narrative  
 \* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

**Definitions:** NA - Not Applicable  
 LQL - Lower Quantitation Limit  
 Surr - Surrogate

Print Date: 9/11/2009

**Evergreen Analytical, Inc.**  
4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

0308

**Client Sample ID:** Complaint-200217388  
**Client Project ID:**  
**Date Collected:** 9/1/09 1032  
**Date Received:** 9/2/09

**Lab Work Order** 09-7065  
**Lab Sample ID:** 09-7065-02  
**Sample Matrix:** Groundwater

**TOTAL DISSOLVED SOLIDS (TDS)**

**Method:** SM 2540C

**Prep Method:**

**Date Prepared:** 9/3/09

**Lab File ID:** 15

**Dilution Factor:** 1

**Date Analyzed:** 9/3/09

**Method Blank:** MBLK 09/03/09

**Lab Fraction ID:** 09-7065-02F

Analytes	CAS Number	Result	LQL	Units
Total Dissolved Solids		380	10.0	mg/L

  
\_\_\_\_\_  
**Analyst**

  
\_\_\_\_\_  
**Approved**

**Qualifiers:** B - Analyte detected in the associated Method Blank, value not subtracted from result  
E - Extrapolated value. Value exceeds calibration range  
H - Sample analysis exceeded analytical holding time  
J - Indicates an estimated value when the compound is detected, but is below the LQL  
S - Spike Recovery outside accepted limits  
U - Compound analyzed for but not detected  
X - See case narrative  
\* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

**Definitions:** NA - Not Applicable  
LQL - Lower Quantitation Limit  
Surr - Surrogate

Print Date: 9/11/2009

# Evergreen Analytical, Inc.

4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

Client Sample ID: Complaint-200216061 Barr WW  
Client Project ID:  
Date Collected: 9/1/09  
Date Received: 9/2/09

Lab Work Order: 09-7065  
Lab Sample ID: 09-7065-01  
Sample Matrix: Groundwater

## RSKSOP-175M HEADSPACE

Method: RSKSOP175M

Prep Method: RSKSOP175M

Date Prepared: 9/4/09  
Date Analyzed: 9/4/09

Lab File ID: FB489  
Method Blank: GB090409

Dilution Factor: 1  
Lab Fraction ID: 09-7065-01G

Analytes	CAS Number	Result	LQL	Units
Ethane	74-84-0	U	0.0016	mg/L
Ethene	74-85-1	U	0.0024	mg/L
Methane	74-82-8	0.28	0.00080	mg/L

AS

Analyst

Jim

Approved

**Qualifiers:** B - Analyte detected in the associated Method Blank, value not subtracted from result  
E - Extrapolated value. Value exceeds calibration range  
H - Sample analysis exceeded analytical holding time  
J - Indicates an estimated value when the compound is detected, but is below the LQL  
S - Spike Recovery outside accepted limits  
U - Compound analyzed for but not detected  
X - See case narrative  
\* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

**Definitions:** NA - Not Applicable  
LQL - Lower Quantitation Limit  
Surr - Surrogate

Print Date: 09/08/09



# Evergreen Analytical, Inc.

4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

Client Sample ID: Complaint-200217388  
Client Project ID:  
Date Collected: 9/1/09  
Date Received: 9/2/09

Lab Work Order: 09-7065  
Lab Sample ID: 09-7065-02  
Sample Matrix: Groundwater

## RSKSOP-175M HEADSPACE /

Method: RSKSOP175M

Prep Method: RSKSOP175M

Date Prepared: 9/4/09  
Date Analyzed: 9/4/09

Lab File ID: FB490  
Method Blank: GB090409

Dilution Factor: 1  
Lab Fraction ID: 09-7065-02G

Analytes	CAS Number	Result	LQL	Units
Ethane	74-84-0	0.0094	0.0016	mg/L
Ethene	74-85-1	U	0.0024	mg/L

Date Prepared: 9/4/09  
Date Analyzed: 9/4/09

Lab File ID: FB491  
Method Blank: GB090409

Dilution Factor: 10  
Lab Fraction ID: 09-7065-02G

Analytes	CAS Number	Result	LQL	Units
Methane	74-82-8	2.9	0.0080	mg/L

AS

Analyst

Jim

Approved

**Qualifiers:** B - Analyte detected in the associated Method Blank, value not subtracted from result  
E - Extrapolated value. Value exceeds calibration range  
H - Sample analysis exceeded analytical holding time  
J - Indicates an estimated value when the compound is detected, but is below the LQL  
S - Spike Recovery outside accepted limits  
U - Compound analyzed for but not detected  
X - See case narrative  
\* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

**Definitions:** NA - Not Applicable  
LQL - Lower Quantitation Limit  
Surr - Surrogate

Print Date: 09/08/09

## **QUALITY ASSURANCE REPORTS**

**METHOD BLANKS (MB)**

**LABORATORY CONTROL SPIKES (LCS)**

**MATRIX SPIKES (MS/MSD)\***

**DUPLICATES (DUP)\***

- **For Metals or Wet Chemistry analyses: only included if requested.**

Work Order: 09-7065  
Client Project ID:

# ANALYTICAL QC SUMMARY REPORT

TestNo: E300.0

Sample ID: MB 09/02/09	Sample Type: MBLK	TestCode: ANIONS_W	Run ID: IC-DX120_090902A	Prep Date: 9/2/09	Units: mg/L
Batch ID: R49744	TestNo: E300.0	FileID:	Analysis Date: 9/2/09	SeqNo: 903942	
Analyte	Result	LQ L	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	U	0.50			
Nitrite-N	U	0.0040			
Bromide	U	0.050			
Nitrate-N	U	0.010			
Sulfate	U	0.50			

Sample ID: LCS ALLT218076	Sample Type: LCS	TestCode: ANIONS_W	Run ID: IC-DX120_090902A	Prep Date: 9/2/09	Units: mg/L
Batch ID: R49744	TestNo: E300.0	FileID:	Analysis Date: 9/2/09	SeqNo: 903941	
Analyte	Result	LQ L	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Chloride	18.81	2.5	20	0	94.1 90 110 0 0
Nitrite-N	5.999	0.020	6.09	0	98.5 90 110 0 0
Bromide	20.09	0.25	20	0	100 90 110 0 0
Nitrate-N	4.443	0.050	4.518	0	98.3 90 110 0 0
Sulfate	29.15	2.5	30	0	97.2 90 110 0 0

## Qualifiers:

- U - Not detected at or above the Reporting Limit
- J - Analyte detected below quantitation limits
- S - Spike Recovery outside acceptance limits
- E - Extrapolated value, value exceeds calibration range.
- R - RPD outside acceptance limits
- B - Analyte detected in the associated Method Blank
- H - Prep or analytical holding time exceeded
- X - See case narrative

Work Order: 09-7065

Client Project ID:

## ANALYTICAL QC SUMMARY REPORT

BatchID: 20667

Sample ID: MB-20667	SampleType: MBLK	TestCode: 200.7_D	Run ID: ICP-OPTIMA 5300 DV_090908B	Prep Date: 09/04/09	Units: mg/L						
Batch ID: 20667	TestNo: E200.7, Rev.	FileID: 090809AM	Analysis Date: 09/08/09	SeqNo: 906459							
Analyte	Result	LQI	SPK value	SPK Ref Val	%REC	Lowlimit	Highlimit	RPD Ref Val	%RPD	RPDLimit	Qual

Barium	U	0.00200									
Beryllium	U	0.000450									
Boron	U	0.0200									
Calcium	U	0.387									
Cobalt	U	0.00500									
Copper	U	0.00500									
Iron	U	0.0700									
Lithium	U	0.00200									
Magnesium	U	0.150									
Manganese	U	0.00500									
Nickel	U	0.0300									
Potassium	U	0.340									
Sodium	U	0.400									
Strontium	U	0.000500									
Zinc	U	0.0300									

Sample ID: LCS-20667	Sample Type: LCS	TestCode: 200.7_D	Run ID: ICP-OPTIMA 5300 DV_090908B	Prep Date: 09/04/09	Units: mg/L						
Batch ID: 20667	TestNo: E200.7, Rev.	FieldID: 090809AM	Analysis Date: 09/08/09	SeqNo: 906460							
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Barium	4.992	0.00200	5	0	99.8	85	115	0	0		
Beryllium	0.04459	0.000450	0.05	0	89.2	85	115	0	0		
Boron	2.014	0.0200	2	0.01266	101	85	115	0	0		
Calcium	10.3	0.387	10	0	103	85	115	0	0		
Cobalt	1.944	0.00500	2	0	97.2	85	115	0	0		
Copper	1.89	0.00500	2	0	94.5	85	115	0	0		
Iron	4.86	0.0700	5	0	97.2	85	115	0	0		
Lithium	1.911	0.00200	2	0	95.6	85	115	0	0		
Magnesium	9.652	0.150	10	0	96.5	85	115	0	0		

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 H - Prep or analytical holding time exceeded  
 X - See case narrative

Work Order: 09-7065  
Client Project ID:

## ANALYTICAL QC SUMMARY REPORT

BatchID: 20667

Sample ID: LCS-20667		SampType: LCS		TestCode: 200.7_D		Run ID: ICP-OPTIMA 5300 DV_090908B		Prep Date: 09/04/09		Units: mg/L	
Batch ID: 20667		TestNo: E200.7, Rev.		FileID: 090809AM		Analysis Date: 09/08/09		SeqNo: 906460			
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	1.897	0.00500	2	0	94.9	85	115	0	0		
Nickel	1.96	0.0300	2	0	98	85	115	0	0		
Potassium	9.7	0.340	10	0	97	85	115	0	0		
Sodium	9.381	0.400	10	0	93.8	85	115	0	0		
Strontium	0.4651	0.000500	0.5	0	93	85	115	0	0		
Zinc	1.956	0.0300	2	0	97.8	85	115	0	0		
Sample ID: 09-6988-01AMS      SampType: MS      TestCode: 6010_D      Run ID: ICP-OPTIMA 5300 DV_090907A      Prep Date: 09/04/09      Units: mg/L											
Batch ID: 20667		TestNo: SW6010B		FileID: 090709AM		Analysis Date: 09/07/09		SeqNo: 905660			
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.07048	0.00056	0.0625	0.0069	102	75	125	0	0		B
Boron	3.169	0.025	2.5	0.3438	113	75	125	0	0		
Calcium	28.47	0.48	12.5	12.91	124	75	125	0	0		
Chromium	2.514	0.013	2.5	0.00605	101	75	125	0	0		
Cobalt	2.409	0.0063	2.5	0	96.3	75	125	0	0		
Copper	2.743	0.0063	2.5	0.01747	109	75	125	0	0		
Iron	7.01	0.088	6.25	0.3697	106	75	125	0	0		
Lithium	2.708	0.0025	2.5	0.01009	108	75	125	0	0		
Magnesium	13.1	0.19	12.5	0.5974	100	75	125	0	0		
Manganese	2.348	0.0063	2.5	0.01549	93.3	75	125	0	0		
Nickel	2.423	0.038	2.5	0.004755	96.9	75	125	0	0		
Potassium	332.2	0.43	12.5	269.6	501	75	125	0	0		S
Sodium	362.3	0.50	12.5	298.8	508	75	125	0	0		S
Strontium	0.8021	0.00063	0.625	0.1269	108	75	125	0	0		
Zinc	2.474	0.038	2.5	0.09444	95.2	75	125	0	0		

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Work Order: 09-7065  
Client Project ID:

## ANALYTICAL QC SUMMARY REPORT

BatchID: 20667

Sample ID: 09-6988-01AMS	Sample Type: MS	TestCode: 6010_D	Run ID: ICP-OPTIMA 5300 DV_090908B	Prep Date: 09/04/09	Units: mg/L
Batch ID: 20667	TestNo: SW6010B	FileID: 090809AM	Analysis Date: 09/08/09	SeqNo: 906465	
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC Lowlimit Highlimit RPD Ref Val %RPD RPDlimit Qual
Barium	6.542	0.0013	6.25	0.06858	104 75 125 0 0

Sample ID: 09-6988-01AMS	Sample Type: MSD	TestCode: 6010_D	Run ID: ICP-OPTIMA 5300 DV_090907A	Prep Date: 09/04/09	Units: mg/L
Batch ID: 20667	TestNo: SW6010B	FileID: 090709AM	Analysis Date: 09/07/09	SeqNo: 906661	
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC Lowlimit Highlimit RPD Ref Val %RPD RPDlimit Qual
Beryllium	0.0715	0.00056	0.0625	0.0069	103 75 125 0.07048 1.44 20 B
Boron	3.201	0.025	2.5	0.3438	114 75 125 3.169 0.996 20
Calcium	28.6	0.48	12.5	12.91	126 75 125 28.47 0.452 20 S
Chromium	2.527	0.013	2.5	0.00605	101 75 125 2.514 0.490 20
Cobalt	2.424	0.0063	2.5	0	96.9 75 125 2.409 0.618 20
Copper	2.763	0.0063	2.5	0.01747	110 75 125 2.743 0.745 20
Iron	7.044	0.088	6.25	0.3697	107 75 125 7.01 0.486 20
Lithium	2.743	0.0025	2.5	0.01009	109 75 125 2.708 1.28 20
Magnesium	13.24	0.19	12.5	0.5974	101 75 125 13.1 1.09 20
Manganese	2.36	0.0063	2.5	0.01549	93.8 75 125 2.348 0.512 20
Nickel	2.439	0.038	2.5	0.004755	97.6 75 125 2.423 0.657 20
Potassium	334.8	0.43	12.5	269.6	522 75 125 332.2 0.800 20 S
Sodium	367.2	0.50	12.5	298.8	547 75 125 362.3 1.35 20
Strontium	0.8102	0.00063	0.625	0.1269	109 75 125 0.8021 1.01 20
Zinc	2.5	0.038	2.5	0.09444	96.2 75 125 2.474 1.03 20

Sample ID: 09-6988-01AMS	Sample Type: MSD	TestCode: 6010_D	Run ID: ICP-OPTIMA 5300 DV_090908B	Prep Date: 09/04/09	Units: mg/L
Batch ID: 20667	TestNo: SW6010B	FileID: 090809AM	Analysis Date: 09/08/09	SeqNo: 906466	
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC Lowlimit Highlimit RPD Ref Val %RPD RPDlimit Qual
Barium	6.505	0.0013	6.25	0.06858	103 75 125 6.542 0.561 20

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Evergreen Analytical, Inc.

Date: 17-Sep-09

Work Order: 09-7065  
Client Project ID:

## ANALYTICAL QC SUMMARY REPORT

BatchID: 20736

Sample ID: MB-20736	Sample Type: MBLK	Test Code: 200.8_D	Run ID: ICPMS_090911A	Prep Date: 09/10/09	Units: mg/L
Batch ID: 20736	Test No: E200.8	File ID: 091109AQIMB-20736.074	Analysis Date: 09/11/09	SeqNo: 909031	
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Antimony	U	0.00200			
Arsenic	U	0.00200			
Cadmium	U	0.000500			
Lead	U	0.00100			
Molybdenum	U	0.00500			
Selenium	U	0.00200			
Silver	U	0.000200			
Thallium	U	0.00100			
Uranium	U	0.00100			

Sample ID: LCS-20736	Sample Type: LCS	Test Code: 200.8_D	Run ID: ICPMS_090911A	Prep Date: 09/10/09	Units: mg/L
Batch ID: 20736	Test No: E200.8	File ID: 091109AQLCS-20736.075	Analysis Date: 09/11/09	SeqNo: 909032	
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Antimony	0.1165	0.00200	0.125	0	93.2 85 115 0 0
Arsenic	0.2509	0.00200	0.25	0	100 85 115 0 0
Cadmium	0.02448	0.000500	0.025	0	97.9 85 115 0 0
Lead	0.1306	0.00100	0.125	0.000765	104 85 115 0 0
Molybdenum	0.2522	0.00500	0.25	0	101 85 115 0 0
Selenium	0.05149	0.00200	0.05	0	103 85 115 0 0
Silver	0.1225	0.000200	0.125	0.00002	98 85 115 0 0
Thallium	0.1279	0.00100	0.125	0	102 85 115 0 0
Uranium	0.1284	0.00100	0.125	0	103 85 115 0 0

Sample ID: 09-7039-01CMS	Sample Type: MS	Test Code: 200.8_PD	Run ID: ICPMS_090911A	Prep Date: 09/10/09	Units: mg/L
Batch ID: 20736	Test No: E200.8	File ID: 091109AQIMB-7039-01CMS.0	Analysis Date: 09/11/09	SeqNo: 909045	
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Antimony	0.1161	0.00200	0.125	0.00024	92.9 70 130 0 0

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Work Order: 09-7065  
Client Project ID:

## ANALYTICAL QC SUMMARY REPORT

BatchID: 20736

Sample ID: 09-7039-01CMS		Sample Type: MS		Test Code: 200.8_PD		Run ID: ICPMS_090911A		Prep Date: 09/10/09		Units: mg/L	
Batch ID: 20736		Test No: E200.8		File ID: 091109AQI09-7039-01CMS.0		Analysis Date: 09/11/09		SeqNo: 909045			
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.2651	0.00200	0.25	0	106	70	130	0	0		
Cadmium	0.02466	0.000500	0.025	0.000795	95.4	70	130	0	0		
Lead	0.1346	0.00100	0.125	0.004715	104	70	130	0	0		
Molybdenum	0.2671	0.00500	0.25	0.001905	107	70	130	0	0		
Selenium	0.05593	0.00200	0.05	0.003185	105	70	130	0	0		
Silver	0.1205	0.000200	0.125	0.000025	96.4	70	130	0	0		
Thallium	0.1287	0.00100	0.125	0.00041	103	70	130	0	0		
Uranium	0.1471	0.00100	0.125	0.007365	112	70	130	0	0		

Sample ID: 09-7039-01CMSD		Sample Type: MSD		Test Code: 200.8_PD		Run ID: ICPMS_090911A		Prep Date: 09/10/09		Units: mg/L	
Batch ID: 20736		Test No: E200.8		File ID: 091109AQI09-7039-01CMSD.		Analysis Date: 09/11/09		SeqNo: 909047			
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.1167	0.00200	0.125	0.00024	93.4	70	130	0.1161	0.554	20	
Arsenic	0.2593	0.00200	0.25	0	104	70	130	0.2651	2.20	20	
Cadmium	0.02491	0.000500	0.025	0.000795	96.4	70	130	0.02466	1.01	20	
Lead	0.1355	0.00100	0.125	0.004715	105	70	130	0.1346	0.696	20	
Molybdenum	0.2669	0.00500	0.25	0.001905	107	70	130	0.2671	0.0749	20	
Selenium	0.05535	0.00200	0.05	0.003185	104	70	130	0.05593	1.03	20	
Silver	0.1186	0.000200	0.125	0.000025	94.9	70	130	0.1205	1.64	20	
Thallium	0.1297	0.00100	0.125	0.00041	104	70	130	0.1287	0.724	20	
Uranium	0.1455	0.00100	0.125	0.007365	110	70	130	0.1471	1.11	20	

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Work Order: 09-7065  
Client Project ID:

## ANALYTICAL QC SUMMARY REPORT

TestCode: ALK\_WGRP

Sample ID	MBLK 9/3/09	Sample Type: MBLK	TestCode: ALK_WGRP	Run ID: ALK_090903A	Prep Date: 9/3/2009	Units: mg/L CaCO3
	Batch ID: R49754	TestNo: SM2320B	FileID: 47		Analysis Date: 9/3/2009	SeqNo: 904221
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Total Alkalinity U 5.0

Sample ID	LCS	Sample Type: LCS	TestCode: ALK_WGRP	Run ID: ALK_090903A	Prep Date: 9/3/2009	Units: mg/L CaCO3
	Batch ID: R49754	TestNo: SM2320B	FileID: 48		Analysis Date: 9/3/2009	SeqNo: 904222
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Alkalinity	103.7	5.0	100	0	104	90 110 0 0

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Work Order: 09-7065

Client Project ID:

## ANALYTICAL QC SUMMARY REPORT

TestCode: COND\_W

Sample ID	LCS	SamplType: LCS	TestCode: COND_W	Run ID: COND_090902A	Prep Date: 9/2/2009	Units: µmhos/cm
		Batch ID: R49741	TestNo: SM2510 B	FileID: 66	Analysis Date: 9/2/2009	SeqNo: 903803
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit RPD RefVal %RPD RPDLimit Qual
Specific Conductance	105.3	1.00	99.7	0	106	90 110 0 0

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Work Order: 09-7065  
Client Project ID:

## ANALYTICAL QC SUMMARY REPORT

TestCode: F\_W

Sample ID	MBLK 090409	SampType: MBLK	TestCode: F_W	Run ID: F_090904A	Prep Date: 9/4/2009	Units: mg/L
		Batch ID: R49782	TestNo: SM 4500-F C	FileID: 52	Analysis Date: 9/4/2009	SeqNo: 904752
Analyte		Result	LQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD RefVal %RPD RPDLimit Qual

Fluoride U 0.20

Sample ID	LCS	SampType: LCS	TestCode: F_W	Run ID: F_090904A	Prep Date: 9/4/2009	Units: mg/L
		Batch ID: R49782	TestNo: SM 4500-F C	FileID: 53	Analysis Date: 9/4/2009	SeqNo: 904753
Analyte		Result	LQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD RefVal %RPD RPDLimit Qual
Fluoride		9.948	0.20	10	0	99.5 95 105 0 0

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Work Order: 09-7065  
Client Project ID:

## ANALYTICAL QC SUMMARY REPORT

TestCode: PH\_DW

Sample ID	LCS-R49728	Sample Type	LCS	TestCode	PH_DW	Run ID	PH_090902B	Prep Date	9/2/2009	Units	pH Units
	Batch ID: R49728		TestNo: E150.1		FileID:			Analysis Date	9/2/2009	SeqNo:	903590
Analyte	Result	LQ	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
pH	7.96	1.00	8	0	99.5	99.3	100.7	0	0		

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Work Order: 09-7065  
Client Project ID:

## ANALYTICAL QC SUMMARY REPORT

TestCode: TDS\_W

Sample ID	MBLK 09/03/09	SampType: MBLK	TestCode: TDS_W	Run ID: ANALYTICAL BALANCE_090904B	Prep Date: 9/3/2009	Units: mg/L
	Batch ID: R49787	TestNo: SM 2540C	FileID: 1	Analysis Date: 9/3/2009	SeqNo: 904851	
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC LowLimit	HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids	U	10.0				

Sample ID	LCS	SampType: LCS	TestCode: TDS_W	Run ID: ANALYTICAL BALANCE_090904B	Prep Date: 9/3/2009	Units: mg/L
	Batch ID: R49787	TestNo: SM 2540C	FileID: 2	Analysis Date: 9/3/2009	SeqNo: 904852	
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC LowLimit	HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Dissolved Solids	401	10.0	400	0	100	90 110 0 0

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Evergreen Analytical, Inc.

Date: 08-Sep-09

Work Order: 09-7065  
Client Project ID:

## ANALYTICAL QC SUMMARY REPORT

TestCode: MEEP\_W

Sample ID: GB090409	SampleType: MBLK	TestCode: MEEP_W	Run ID: FID4_090904A	Prep Date: 09/04/09	Units: mg/L
Batch ID: GAS090409	TestNo: RSKSOP175	FileID: FB480	Analysis Date: 09/04/09	SeqNo: 906047	
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Ethane U 0.0016  
Ethene U 0.0024  
Methane U 0.00080

Sample ID: LCS090409	SampleType: LCS	TestCode: MEEP_W	Run ID: FID4_090904A	Prep Date: 09/04/09	Units: mg/L
Batch ID: GAS090409	TestNo: RSKSOP175	FileID: FB482	Analysis Date: 09/04/09	SeqNo: 906048	
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Ethane 1.196 0.016 0.9548 0 125 70 130 0 0  
Ethene 1.308 0.024 1.11 0 118 70 140 0 0  
Methane 0.607 0.0080 0.5094 0 119 70 130 0 0

Sample ID: LCS090409	SampleType: LCS	TestCode: MEEP_W	Run ID: FID4_090904A	Prep Date: 09/04/09	Units: mg/L
Batch ID: GAS090409	TestNo: RSKSOP175	FileID: FB483	Analysis Date: 09/04/09	SeqNo: 906049	
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Ethane 1.207 0.016 0.9548 0 126 70 130 1.196 0.918 30  
Ethene 1.322 0.024 1.11 0 119 70 140 1.308 1.01 30  
Methane 0.6131 0.0080 0.5094 0 120 70 130 0.607 0.999 30

Sample ID: 09-7004-01DMS	SampleType: MS	TestCode: MEEP_W	Run ID: FID4_090904A	Prep Date: 09/04/09	Units: mg/L
Batch ID: GAS090409	TestNo: RSKSOP175	FileID: FB498	Analysis Date: 09/04/09	SeqNo: 906039	
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Ethane 1.133 0.016 0.9548 0 119 70 130 0 0  
Ethene 1.251 0.024 1.11 0 113 70 140 0 0  
Methane 0.5746 0.0080 0.5094 0.008257 111 70 130 0 0

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Work Order: 09-7065  
Client Project ID:

## ANALYTICAL QC SUMMARY REPORT

TestCode: MEEP\_W

Sample ID: 09-7004-01DMS	SampleType: MSD	TestCode: MEEP_W	Run ID: FID4_090904A	Prep Date: 09/04/09	Units: mg/L						
Batch ID: GAS090409	TestNo: RSKSOP175	FileID: FB499	Analysis Date: 09/04/09	SeqNo: 906040							
Analyte	Result	LOL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethane	1.153	0.016	0.9548	0	121	70	130	1.133	1.75	30	
Ethene	1.284	0.024	1.11	0	116	70	140	1.251	2.59	30	
Methane	0.5864	0.0080	0.5094	0.008257	113	70	130	0.5746	2.03	30	

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