

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303)894-2100 Fax:(303)894-2109



DE	ET	OE	ES

SUNDRY NOTICE

Submit original plus one copy. This form is to be used for general, technical and environmental sundry Information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form.) Identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b.)

1. OGCC Operator Number: 10071	4. Contact Name Scot Donato
2. Name of Operator: Bill Barrett Corporation	Phone: 303-812-8191
3. Address: 1099 18th Street, Suite 2300	Fax: 303-291-0420
City Denver State: CO Zip 80127	

Complete the Attachment Checklist

OP OGCC

5. API Number	OGCC Facility ID Number Project 2059
6. Well/Facility Name:	7. Well/Facility Number Water Well Permit #167281
8. Location (QtrQtr, Sec, Twp, Rng, Meridian):	
9. County: Garfield	10. Field Name: Mamm Creek
11. Federal, Indian or State Lease Number:	

Survey Plat		
Directional Survey		
Surface Eqpm Diagram		
Technical Info Page	X	
Other		

General Notice

☐ CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qtr is substantive and requires a new permit)

Change of Surface Footage from Exterior Section Lines:		FNL/FSL		FEL/FWL
Change of Surface Footage to Exterior Section Lines:				
Change of Bottomhole Footage from Exterior Section Lines:				
Change of Bottomhole Footage to Exterior Section Lines:				

Bottomhole location Qtr/Qtr, Sec, Twp, Rng, Mer

Latitude Distance to nearest property line Distance to nearest bldg, public rd, utility or RR

Longitude Distance to nearest lease line Is location in a High Density Area (rule 603b)? Yes/No

Ground Elevation Distance to nearest well same formation Surface owner consultation date:

attach directional survey

GPS DATA:

Date of Measurement PDOP Reading Instrument Operator's Name

☐ CHANGE SPACING UNIT

Formation	Formation Code	Spacing order number	Unit Acreage	Unit configuration

☐ Remove from surface bond
Signed surface use agreement attached

☐ CHANGE OF OPERATOR (prior to drilling):

Effective Date:

Plugging Bond: ☐ Blanket ☐ Individual

☐ CHANGE WELL NAME

From:

To:

Effective Date:

NUMBER

☐ ABANDONED LOCATION:

Was location ever built? ☐ Yes ☐ No

Is site ready for Inspection? ☐ Yes ☐ No

Date Ready for Inspection:

☐ NOTICE OF CONTINUED SHUT IN STATUS

Date well shut in or temporarily abandoned:

Has Production Equipment been removed from site? ☐ Yes ☐ No

MIT required if shut in longer than two years. Date of last MIT

☐ SPUD DATE:

☐ REQUEST FOR CONFIDENTIAL STATUS (6 mos from date casing set)

☐ SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK

*submit cbl and cement job summaries

Method used	Cementing tool setting/perf depth	Cement volume	Cement top	Cement bottom	Date

☐ RECLAMATION:

Attach technical page describing final reclamation procedures per Rule 1004.

Final reclamation will commence on approximately

☐ Final reclamation is completed and site is ready for inspection.

Technical Engineering/Environmental Notice

☐ Notice of Intent

Approximate Start Date:

☐ Report of Work Done

Date Work Completed:

Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)

<input type="checkbox"/> Intent to Recomplete (submit form 2)	<input type="checkbox"/> Request to Vent or Flare	<input type="checkbox"/> E&P Waste Disposal
<input type="checkbox"/> Change Drilling Plans	<input type="checkbox"/> Repair Well	<input type="checkbox"/> Beneficial Reuse of E&P Waste
<input type="checkbox"/> Gross Interval Changed?	<input type="checkbox"/> Rule 502 variance requested	<input type="checkbox"/> Status Update/Change of Remediation Plans
<input type="checkbox"/> Casing/Cementing Program Change	<input checked="" type="checkbox"/> Other: Water Well Data Transmittal	for Spills and Releases

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed: Date: 06/19/2010 Email: ddennison@billbarrettcorp.com

Print Name: Doug Dennison Title: Environemntal/Governmental Affairs Liaison

COGCC Approved: Title Date:

CONDITIONS OF APPROVAL, IF ANY:

TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY

1.	OGCC Operator Number:	10071	API Number:	
2.	Name of Operator:	Bill Barrett Corporation	OGCC Facility ID #	Proj. 2059
3.	Well/Facility Name:		Well/Facility Number:	Water Well Permit #167281
4.	Location (QtrQtr, Sec, Twp, Rng, Meridian):			

This form is to be completed whenever a Sundry Notice is submitted requiring detailed report of work to be performed or completed. This form shall be transmitted within 30 days of work completed as a "subsequent" report and must accompany Form 4, page 1.

5. DESCRIBE PROPOSED OR COMPLETED OPERATIONS

Attached are a summary of the analytical results and the lab reports for samples collected from the domestic and irrigation wells owned by Marty Miller from December 2009 through May 2010. Electronic data deliverables for these samples were also transmitted with this Form 4, Sundry Notice.

Table 1 Historical Analytical Results
Marty Miller Domestic Well

Date	12/16/09	1/13/10	2/11/10	2/11/10	3/9/10	4/16/10	5/24/10	units
Sample ID	MILL1	MILL1	MILL1	MILL2	MILL1	MILL1	MILL1	
Lab Report ID			L444689	L444689			L460792	
			(L444692 BART)	(L444692 BART)	L448644	L454754	(L444692 BART)	
	L437010	L440263						
Collection Location	Hydrant at well	Hydrant at well	Hydrant at well	In house-post filter	Hydrant at well	Hydrant at well	Hydrant at well	
Organics								
Benzene	ND	NR	NR	NR	NR	NR	NR	µg/L
Toluene	ND	NR	NR	NR	NR	NR	NR	µg/L
Ethylbenzene	ND	NR	NR	NR	NR	NR	NR	µg/L
Total Xylene	ND	NR	NR	NR	NR	NR	NR	µg/L
Oil & Grease	NR	NR	NR	NR	NR	NR	NR	mg/L
Methane	2.5	6.9	NR	6.8	2.2	4.2	10	mg/L
Anions								
Chloride	48	NR	NR	NR	NR	NR	NR	mg/L
Nitrate	ND	NR	NR	NR	NR	NR	NR	mg/L
Nitrite	ND	NR	NR	NR	NR	NR	NR	mg/L
Sulfate	38	NR	NR	NR	NR	NR	NR	mg/L
Fluoride	3.5	NR	NR	NR	NR	NR	NR	mg/L
Bromide	1.2	NR	NR	NR	NR	NR	NR	mg/L
Total Metals								
Calcium	6.2	NR	NR	NR	NR	NR	NR	mg/L
Iron	ND	NR	NR	NR	NR	NR	NR	mg/L
Potassium	0.62	NR	NR	NR	NR	NR	NR	mg/L
Magnesium	1.7	NR	NR	NR	NR	NR	NR	mg/L
Manganese	ND	NR	NR	NR	NR	NR	NR	mg/L
Selenium	0.024	NR	NR	NR	NR	NR	NR	mg/L
Sodium	180	NR	NR	NR	NR	NR	NR	mg/L
Water Quality								
Temperature (Field)	9.95	11.97	11.01	10.83	11.31	12.1	12.29	°C
Specific Conductance (Field)	760	NR	NR	NR	NR	NR	NR	µmohs/cm
Specific Conductance (Lab)	0.737	0.747	0.753	0.499	0.813	0.761	0.803	mS/cm
Dissolved Oxygen (Field)	0.96	0.87	2.72	2.07	3.15	0.54	0.7	mg/L
pH (Lab)	8.6	NR	NR	NR	NR	NR	NR	
pH (Field)	8.19	8.5	8.67	8.55	8.55	8.9	8.78	
Total Dissolved Solids (Field)	470	NR	NR	NR	NR	NR	NR	mg/L
Total Dissolved Solids (Lab)	0.5	0.5	0.5	0.3	0.5	0.5	0.5	g/L
Turbidity (Field)	9.7	9.6	17.1	5.9	11.7	40.8	90	NTU
Bacteria								
Sulfate Reducing Bacteria	NR	NR	ND	ND	NR	NR	ND	CFU/mL
Iron Related Bacteria	NR	NR	2,300	9,000	NR	NR	9,000	CFU/mL
Slime Forming Bacteria	NR	NR	12,500	12,500	NR	NR	700,000	CFU/mL

ND - Analysis performed, constituent

NR - Specific Constituent Analysis

µg/L - micrograms per Liter

mg/L - milligrams per Liter

°C - degrees Celcius

µmohs/cm - micromohs per

mS/cm - milliSiemens per centimeter (equivalent to 1,000

g/L - grams per Liter

NTU - Nephthelometric Turbidity

CFU/mL - Colony Forming Units per milliliter

Table 2 Isotopic Analytical Results
Marty Miller Domestic Well

[illegible]

Table 3 Volatile Organic (EPA 8260B) Compound Analytical Results
Marty Miller Domestic Well

Date	2/11/10	2/11/10	DL	Units
Sample ID	MILL1	MILL2		
Lab Report ID	L444689	L444689		
Collection Location	Hydrant at well	In house-post filter	DL	Units
Acetone	ND	ND	0.050	mg/L
Acrolein	ND	ND	0.050	mg/L
Acrylonitrile	ND	ND	0.010	mg/L
Benzene	ND	ND	0.0010	mg/L
Bromobenzene	ND	ND	0.0010	mg/L
Bromodichloromethane	ND	ND	0.0010	mg/L
Bromoform	ND	ND	0.0010	mg/L
Bromomethane	ND	ND	0.0050	mg/L
n-Butylbenzene	ND	ND	0.0010	mg/L
sec-Butylbenzene	ND	ND	0.0010	mg/L
tert-Butylbenzene	ND	ND	0.0010	mg/L
Carbon tetrachloride	ND	ND	0.0010	mg/L
Chlorobenzene	ND	ND	0.0010	mg/L
Chlorodibromomethane	ND	ND	0.0010	mg/L
Chloroethane	ND	ND	0.0050	mg/L
2-Chloroethyl vinyl ether	ND	ND	0.050	mg/L
Chloroform	ND	ND	0.0050	mg/L
Chloromethane	ND	ND	0.0025	mg/L
2-Chlorotoluene	ND	ND	0.0010	mg/L
4-Chlorotoluene	ND	ND	0.0010	mg/L
1,2-Dibromo-3-Chloropropane	ND	ND	0.0050	mg/L
1,2-Dibromoethane	ND	ND	0.0010	mg/L
Dibromomethane	ND	ND	0.0010	mg/L
1,2-Dichlorobenzene	ND	ND	0.0010	mg/L
1,3-Dichlorobenzene	ND	ND	0.0010	mg/L
1,4-Dichlorobenzene	ND	ND	0.0010	mg/L
Dichlorodifluoromethane	ND	ND	0.0050	mg/L
1,1-Dichloroethane	ND	ND	0.0010	mg/L
1,2-Dichloroethane	ND	ND	0.0010	mg/L
1,1-Dichloroethene	ND	ND	0.0010	mg/L
cis-1,2-Dichloroethene	ND	ND	0.0010	mg/L
trans-1,2-Dichloroethene	ND	ND	0.0010	mg/L
1,2-Dichloropropane	ND	ND	0.0010	mg/L
1,1-Dichloropropene	ND	ND	0.0010	mg/L
1,3-Dichloropropane	ND	ND	0.0010	mg/L
cis-1,3-Dichloropropene	ND	ND	0.0010	mg/L
trans-1,3-Dichloropropene	ND	ND	0.0010	mg/L
2,2-Dichloropropane	ND	ND	0.0010	mg/L
Di-isopropyl ether	ND	ND	0.0010	mg/L
Ethylbenzene	ND	ND	0.0010	mg/L
Hexachloro-1,3-butadiene	ND	ND	0.0010	mg/L
Isopropylbenzene	ND	ND	0.0010	mg/L
p-Isopropyltoluene	ND	ND	0.0010	mg/L
2-Butanone (MEK)	ND	ND	0.010	mg/L
Methylene Chloride	ND	ND	0.0050	mg/L
4-Methyl-2-pentanone (MIBK)	ND	ND	0.010	mg/L
Methyl tert-butyl ether	ND	ND	0.0010	mg/L
Naphthalene	ND	ND	0.0050	mg/L
n-Propylbenzene	ND	ND	0.0010	mg/L
Styrene	ND	ND	0.0010	mg/L
1,1,1,2-Tetrachloroethane	ND	ND	0.0010	mg/L
1,1,2,2-Tetrachloroethane	ND	ND	0.0010	mg/L
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ND	0.0010	mg/L
Tetrachloroethene	ND	ND	0.0010	mg/L
Toluene	ND	ND	0.0050	mg/L
1,2,3-Trichlorobenzene	ND	ND	0.0010	mg/L
1,2,4-Trichlorobenzene	ND	ND	0.0010	mg/L
1,1,1-Trichloroethane	ND	ND	0.0010	mg/L
1,1,2-Trichloroethane	ND	ND	0.0010	mg/L
Trichloroethene	ND	ND	0.0010	mg/L
Trichlorofluoromethane	ND	ND	0.0050	mg/L
1,2,3-Trichloropropane	ND	ND	0.0010	mg/L
1,2,4-Trimethylbenzene	ND	ND	0.0010	mg/L
1,2,3-Trimethylbenzene	ND	ND	0.0010	mg/L
1,3,5-Trimethylbenzene	ND	ND	0.0010	mg/L
Vinyl chloride	ND	ND	0.0010	mg/L
Xylenes, Total	ND	ND	0.003	mg/L

DL - Detection Limit = the lowest concentration that can be detected for each analysis

ND - Analysis performed, constituent Not Detected

mg/L - milligram per Liter

Table 4 Historical Analytical Results
Marty Miller Irrigation Well

Date	3/9/10	units
Sample ID	MILL3	
Lab Report ID	L448644	
Collection Location	Well fitting	
Organics		
Benzene	NR	µg/L
Toluene	NR	µg/L
Ethylbenzene	NR	µg/L
Total Xylene	NR	µg/L
Oil & Grease	NR	mg/L
Methane	0.55	mg/L
Anions		
Chloride	NR	mg/L
Nitrate	NR	mg/L
Nitrite	NR	mg/L
Sulfate	NR	mg/L
Fluoride	NR	mg/L
Bromide	NR	mg/L
Total Metals		
Calcium	NR	mg/L
Iron	NR	mg/L
Potassium	NR	mg/L
Magnesium	NR	mg/L
Manganese	NR	mg/L
Selenium	NR	mg/L
Sodium	NR	mg/L
Water Quality		
Temperature (Field)	1.11	°C
Specific Conductance (L	NR	µmohs/cm
Specific Conductance (F	1.061	mS/cm
Dissolved Oxygen (Field	3.24	mg/L
pH (Lab)	NR	
pH (Field)	7.66	
Total Dissolved Solids (L	NR	mg/L
Total Dissolved Solids (F	0.7	g/L
Turbidity (Field)	15.1	NTU
Bacteria		
Sulfate Reducing Bacter	NR	CFU/mL
Iron Reducing Bacteria	NR	CFU/mL
Slime Forming Bacteria	NR	CFU/mL

ND - Analysis performed,
 NR - Specific Constituent
 µg/L - micrograms per Liter
 mg/L - milligrams per Liter
 °C - degrees Celcius
 µmohs/cm - micromohs per
 mS/cm - milliSiemens per centimeter (equivalent to
 g/L - grams per Liter
 NTU - Nephthelometric Turbidity
 CFU/mL - Colony Forming Units

Table 5 Isotopic Analytical Results
Marty Miller Irrigation Well

Date	3/9/10	
Sample ID	MILL3	
Lab Job #	12642	
Collection Location	Well fitting	units
Gases		
Argon	1.27	%
Oxygen	18.17	%
Carbon Dioxide	3.52	%
Nitrogen	61.74	%
Organic Gases		
Methane	15.27	%
Ethane	0.0279	%
Ethylene	0.0004	%
Propane	0.0032	%
isobutane	0.0004	%
n-butane	0	%
isopentane	0	%
n-pentane	0	%
Hexanes+	0.0004	%
Isotopes		
delta C13 of Methane	-51.26	per mil
delta D of Methane	-186.2	per mil
delta C13 of Ethane	0	per mil
delta C13 of Propane	0	per mil
delta D in water	0	per mil
delta O18 in water	0	per mil
delta 13C DIC in water	0	per mil



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Ken Kreie
Cordilleran Compliance - GJ, CO
826 21 1/2 Road

Grand Junction, CO 81505

Report Summary

Wednesday December 23, 2009

Report Number: L437010

Samples Received: 12/17/09

Client Project: MILLER WELL

Description: Bill Barrett

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

John D. Blackman, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

This report may not be reproduced, except in full, without written approval from Environmental Science Corp.

Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

2 Samples Reported: 12/23/09 14:00 Printed: 12/23/09 14:01

Page 1 of 10



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ken Kreie
Cordilleran Compliance - GJ, CO
826 21 1/2 Road
Grand Junction, CO 81505

December 23, 2009

Date Received : December 17, 2009
Description : Bill Barrett

Sample ID : MILL 1

Collected By : Stuart Hall
Collection Date : 12/16/09 12:30

ESC Sample # : L437010-01

Site ID :

Project # : MILLER WELL

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	1.2	1.0	mg/l	9056	12/18/09	1
Chloride	48.	1.0	mg/l	9056	12/18/09	1
Fluoride	3.5	0.10	mg/l	9056	12/18/09	1
Nitrate	BDL	0.10	mg/l	9056	12/18/09	1
Nitrite	BDL	0.10	mg/l	9056	12/18/09	1
Sulfate	38.	5.0	mg/l	9056	12/18/09	1
Methane	2.5	0.10	mg/l	RSK175	12/21/09	10
pH	8.6		su	9040C	12/19/09	1
Specific Conductance	760		umhos/cm	9050A	12/21/09	1
Dissolved Solids	470	10.	mg/l	2540C	12/23/09	1
Calcium	6.2	0.50	mg/l	6010B	12/18/09	1
Iron	BDL	0.10	mg/l	6010B	12/18/09	1
Magnesium	1.7	0.10	mg/l	6010B	12/18/09	1
Manganese	BDL	0.010	mg/l	6010B	12/18/09	1
Potassium	0.62	0.50	mg/l	6010B	12/18/09	1
Selenium	0.024	0.020	mg/l	6010B	12/18/09	1
Sodium	180	0.50	mg/l	6010B	12/18/09	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/23/09 14:00 Printed: 12/23/09 14:01
L437010-01 (PH) - 8.6@13.0c



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ken Kreie
Cordilleran Compliance - GJ, CO
826 21 1/2 Road
Grand Junction, CO 81505

December 23, 2009

Date Received : December 17, 2009
Description : Bill Barrett

Sample ID : MILL 1

Collected By : Stuart Hall
Collection Date : 12/16/09 12:30

ESC Sample # : L437010-02

Site ID :

Project # : MILLER WELL

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l	8260B	12/21/09	1
Toluene	BDL	0.0050	mg/l	8260B	12/21/09	1
Ethylbenzene	BDL	0.0010	mg/l	8260B	12/21/09	1
Total Xylenes	BDL	0.0030	mg/l	8260B	12/21/09	1
Methyl tert-butyl ether	BDL	0.0010	mg/l	8260B	12/21/09	1
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	12/21/09	1
Dibromofluoromethane	116.		% Rec.	8260B	12/21/09	1
4-Bromofluorobenzene	92.3		% Rec.	8260B	12/21/09	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/23/09 14:00 Printed: 12/23/09 14:01

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L437010-01	WG455823	SAMP	pH	R1048288	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
12/23/09 at 14:01:10

TSR Signing Reports: 151
R5 - Desired TAT

Client sends unpreserved vials for all projects; Run BTEXM by 8260 on separate dash. DO NOT
RUSH ALK!!!

Sample: L437010-01 Account: CORCOMGCO Received: 12/17/09 09:00 Due Date: 12/24/09 00:00 RPT Date: 12/23/09 14:00
Total=\$313.50
Sample: L437010-02 Account: CORCOMGCO Received: 12/17/09 09:00 Due Date: 12/24/09 00:00 RPT Date: 12/23/09 14:00



YOUR LAB OF CHOICE

Cordilleran Compliance - GJ, CO
Ken Kreie
826 21 1/2 Road
Grand Junction, CO 81505

Quality Assurance Report
Level II

L437010

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

December 23, 2009

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Bromide	< 1	mg/l			WG455641	12/17/09 23:22
Chloride	< 1	mg/l			WG455641	12/17/09 23:22
Fluoride	< .1	mg/l			WG455641	12/17/09 23:22
Nitrate	< .1	mg/l			WG455641	12/17/09 23:22
Nitrite	< .1	mg/l			WG455641	12/17/09 23:22
Sulfate	< 5	mg/l			WG455641	12/17/09 23:22
Calcium	< .5	mg/l			WG455717	12/18/09 13:47
Iron	< .1	mg/l			WG455717	12/18/09 13:47
Magnesium	< .1	mg/l			WG455717	12/18/09 13:47
Manganese	< .01	mg/l			WG455717	12/18/09 13:47
Potassium	< .5	mg/l			WG455717	12/18/09 13:47
Selenium	< .02	mg/l			WG455717	12/18/09 13:47
Sodium	< .5	mg/l			WG455717	12/18/09 13:47
pH	6.50	su			WG455823	12/19/09 10:07
Methane	< .01	mg/l			WG456242	12/21/09 13:35
Specific Conductance	1.10	umhos/cm			WG455976	12/21/09 15:15
Benzene	< .001	mg/l			WG456186	12/21/09 09:09
Ethylbenzene	< .001	mg/l			WG456186	12/21/09 09:09
Methyl tert-butyl ether	< .001	mg/l			WG456186	12/21/09 09:09
Toluene	< .005	mg/l			WG456186	12/21/09 09:09
Total Xylenes	< .003	mg/l			WG456186	12/21/09 09:09
4-Bromofluorobenzene		% Rec.	96.12	75-128	WG456186	12/21/09 09:09
Dibromofluoromethane		% Rec.	115.1	79-125	WG456186	12/21/09 09:09
Toluene-d8		% Rec.	99.51	87-114	WG456186	12/21/09 09:09
Dissolved Solids	< 10	mg/l			WG456290	12/23/09 13:30

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Chloride	mg/l	140.	140.		2.17	20	L437034-02	WG455641
Nitrate	mg/l	0.540	0.540		0	20	L437034-02	WG455641
Chloride	mg/l	70.0	70.0		0.570	20	L437034-03	WG455641
Nitrate	mg/l	12.0	11.0		4.44	20	L437034-03	WG455641
Calcium	mg/l	25.0	25.5		0.393	20	L436972-16	WG455717
Iron	mg/l	0	0		0	20	L436972-16	WG455717
Magnesium	mg/l	13.0	13.2		0.760	20	L436972-16	WG455717
Manganese	mg/l	0.0340	0.0340		1.48	20	L436972-16	WG455717
Potassium	mg/l	1.10	1.13		6.39	20	L436972-16	WG455717
Selenium	mg/l	0	0.00190		NA	20	L436972-16	WG455717
Sodium	mg/l	12.0	12.8		2.37	20	L436972-16	WG455717
pH	su	7.50	7.50		0	1	L436752-01	WG455823
pH	su	8.40	8.40		0	1	L437120-01	WG455823

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Cordilleran Compliance - GJ, CO
Ken Kreie
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report
Level II

L437010

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

December 23, 2009

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Specific Conductance	umhos/cm	580.	590.		1.71	20	L436176-01	WG455976
Specific Conductance	umhos/cm	1100	1100		0.0909	20	L437120-03	WG455976

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Bromide	mg/l	40	38.5	96.3	90-110	WG455641
Chloride	mg/l	40	38.4	96.0	90-110	WG455641
Fluoride	mg/l	8	8.07	101.	90-110	WG455641
Nitrate	mg/l	8	8.17	102.	90-110	WG455641
Nitrite	mg/l	8	8.07	101.	90-110	WG455641
Sulfate	mg/l	40	37.9	94.8	90-110	WG455641
Calcium	mg/l	11.3	11.0	97.3	85-115	WG455717
Iron	mg/l	1.13	1.08	95.6	85-115	WG455717
Magnesium	mg/l	11.3	11.1	98.2	85-115	WG455717
Manganese	mg/l	1.13	1.10	97.3	85-115	WG455717
Potassium	mg/l	11.3	11.2	99.1	85-115	WG455717
Selenium	mg/l	1.13	1.06	93.8	85-115	WG455717
Sodium	mg/l	11.3	11.3	100.	85-115	WG455717
pH	su	9.68	9.70	100.	97.9-100.8	WG455823
Methane	mg/l	.339	0.349	103.	70-130	WG456242
Specific Conductance	umhos/cm	406	400.	98.5	85-115	WG455976
Benzene	mg/l	.025	0.0238	95.3	67-126	WG456186
Ethylbenzene	mg/l	.025	0.0202	80.7	76-129	WG456186
Methyl tert-butyl ether	mg/l	.025	0.0274	110.	51-142	WG456186
Toluene	mg/l	.025	0.0233	93.1	72-122	WG456186
Total Xylenes	mg/l	.075	0.0616	82.2	75-128	WG456186
4-Bromofluorobenzene				95.05	75-128	WG456186
Dibromofluoromethane				111.7	79-125	WG456186
Toluene-d8				100.5	87-114	WG456186
Dissolved Solids	mg/l	8800	8780	99.8	85-115	WG456290

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Bromide	mg/l	38.5	38.5	96.0	90-110	0	20	WG455641
Chloride	mg/l	38.4	38.4	96.0	90-110	0	20	WG455641
Fluoride	mg/l	8.06	8.07	101.	90-110	0.124	20	WG455641
Nitrate	mg/l	8.17	8.17	102.	90-110	0	20	WG455641
Nitrite	mg/l	8.05	8.07	101.	90-110	0.248	20	WG455641
Sulfate	mg/l	37.8	37.9	94.0	90-110	0.264	20	WG455641
pH	su	9.70	9.70	100.	97.9-100.8	0	20	WG455823

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Cordilleran Compliance - GJ, CO
Ken Kreie
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report
Level II

L437010

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

December 23, 2009

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Methane	mg/l	0.330	0.349	97.0	70-130	5.40	25	WG456242
Specific Conductance	umhos/	400.	400.	98.0	85-115	0	20	WG455976
Benzene	mg/l	0.0252	0.0238	101.	67-126	5.38	20	WG456186
Ethylbenzene	mg/l	0.0220	0.0202	88.0	76-129	8.87	20	WG456186
Methyl tert-butyl ether	mg/l	0.0271	0.0274	108.	51-142	1.24	20	WG456186
Toluene	mg/l	0.0249	0.0233	100.	72-122	6.85	20	WG456186
Total Xylenes	mg/l	0.0673	0.0616	90.0	75-128	8.80	20	WG456186
4-Bromofluorobenzene				98.53	75-128			WG456186
Dibromofluoromethane				111.7	79-125			WG456186
Toluene-d8				102.4	87-114			WG456186
Dissolved Solids	mg/l	8680	8780	99.0	85-115	1.14	20	WG456290

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
Bromide	mg/l	50.1	1.00	50	98.2	80-120	L437013-02	WG455641
Chloride	mg/l	86.3	38.0	50	96.6	80-120	L437013-02	WG455641
Fluoride	mg/l	5.71	0.690	5	100.	80-120	L437013-02	WG455641
Nitrate	mg/l	5.76	0.740	5	100.	80-120	L437013-02	WG455641
Nitrite	mg/l	4.96	0	5	99.2	80-120	L437013-02	WG455641
Sulfate	mg/l	171.	120.	50	102.	80-120	L437013-02	WG455641
Calcium	mg/l	35.8	25.5	11.3	91.2	75-125	L436972-16	WG455717
Iron	mg/l	1.08	0	1.13	95.6	75-125	L436972-16	WG455717
Magnesium	mg/l	24.0	13.2	11.3	95.6	75-125	L436972-16	WG455717
Manganese	mg/l	1.14	0.0340	1.13	97.9	75-125	L436972-16	WG455717
Potassium	mg/l	12.5	1.13	11.3	101.	75-125	L436972-16	WG455717
Selenium	mg/l	1.09	0.00190	1.13	96.3	75-125	L436972-16	WG455717
Sodium	mg/l	24.0	12.8	11.3	99.1	75-125	L436972-16	WG455717
Methane	mg/l	0.332	0	.339	98.0	70-130	RSK175	WG456242
Benzene	mg/l	0.0229	0	.025	91.4	16-158	L436925-01	WG456186
Ethylbenzene	mg/l	0.0204	0	.025	81.4	29-150	L436925-01	WG456186
Methyl tert-butyl ether	mg/l	0.0268	0	.025	107.	24-167	L436925-01	WG456186
Toluene	mg/l	0.0229	0	.025	91.6	22-152	L436925-01	WG456186
Total Xylenes	mg/l	0.0628	0	.075	83.7	27-151	L436925-01	WG456186
4-Bromofluorobenzene					94.32	75-128		WG456186
Dibromofluoromethane					110.8	79-125		WG456186
Toluene-d8					101.2	87-114		WG456186

Analyte	Units	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
		MSD	Ref	%Rec					
Bromide	mg/l	49.7	50.1	97.4	80-120	0.802	20	L437013-02	WG455641
Chloride	mg/l	86.0	86.3	96.0	80-120	0.348	20	L437013-02	WG455641
Fluoride	mg/l	5.69	5.71	100.	80-120	0.351	20	L437013-02	WG455641
Nitrate	mg/l	5.71	5.76	99.4	80-120	0.872	20	L437013-02	WG455641
Nitrite	mg/l	4.92	4.96	98.4	80-120	0.810	20	L437013-02	WG455641
Sulfate	mg/l	170.	171.	100.	80-120	0.587	20	L437013-02	WG455641

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Cordilleran Compliance - GJ, CO
Ken Kreie
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report
Level II

L437010

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

December 23, 2009

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
Calcium	mg/l	36.2	35.8	94.7	75-125	1.11	20	L436972-16	WG455717	
Iron	mg/l	1.08	1.08	95.6	75-125	0	20	L436972-16	WG455717	
Magnesium	mg/l	24.2	24.0	97.3	75-125	0.830	20	L436972-16	WG455717	
Manganese	mg/l	1.14	1.14	97.9	75-125	0	20	L436972-16	WG455717	
Potassium	mg/l	12.7	12.5	102.	75-125	1.59	20	L436972-16	WG455717	
Selenium	mg/l	1.08	1.09	95.4	75-125	0.922	20	L436972-16	WG455717	
Sodium	mg/l	24.4	24.0	103.	75-125	1.65	20	L436972-16	WG455717	
Methane	mg/l	0.345	0.332	102.	70-130	3.69	25	RSK175	WG456242	
Benzene	mg/l	0.0232	0.0229	92.7	16-158	1.38	21	L436925-01	WG456186	
Ethylbenzene	mg/l	0.0210	0.0204	84.1	29-150	3.24	24	L436925-01	WG456186	
Methyl tert-butyl ether	mg/l	0.0271	0.0268	108.	24-167	1.14	22	L436925-01	WG456186	
Toluene	mg/l	0.0232	0.0229	92.8	22-152	1.27	22	L436925-01	WG456186	
Total Xylenes	mg/l	0.0640	0.0628	85.3	27-151	1.84	23	L436925-01	WG456186	
4-Bromofluorobenzene				93.37	75-128				WG456186	
Dibromofluoromethane				110.7	79-125				WG456186	
Toluene-d8				100.8	87-114				WG456186	

Batch number /Run number / Sample number cross reference

WG455641: R1044748: L437010-01
WG455717: R1047448: L437010-01
WG455823: R1048288: L437010-01
WG456242: R1049348: L437010-01
WG455976: R1049988: L437010-01
WG456186: R1050148: L437010-02
WG456290: R1054428: L437010-01

* * Calculations are performed prior to rounding of reported values .
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Cordilleran Compliance - GJ, CO
Ken Kreie
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report
Level II

L437010

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

December 23, 2009

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Lab #: 176967 Job #: 12371
 Sample Name: MILL 1 Co. Lab#:
 Company: Cordilleran, Div. of Olsson Assoc.
 Date Sampled: 12/16/2009
 Container: Dissolved Gas Bottle
 Field/Site Name:
 Location:
 Formation/Depth:
 Sampling Point:
 Date Received: 12/21/2009 Date Reported: 1/12/2010

Component	Chemical mol. %	Delta 13C per mil	Delta D per mil	Delta 15N per mil
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	1.02			
Oxygen -----	2.39			
Nitrogen -----	62.19			
Carbon Dioxide -----	0.24			
Methane -----	33.73	-50.94	-196.3	
Ethane -----	0.379	-27.09		
Ethylene -----	nd			
Propane -----	0.0459	-25.28		
Iso-butane -----	0.0036			
N-butane -----	0.0003			
Iso-pentane -----	nd			
N-pentane -----	nd			
Hexanes + -----	nd			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 350
 Specific gravity, calculated: 0.837

Remarks: Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.70
 *Addition of helium negates the ability to detect native helium or hydrogen.

Ethane and propane isotopes obtained online via GC-C-IRMS.

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %. Chemical analysis based on standards accurate to within 2%



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Ken Kreie
Cordilleran Compliance - GJ, CO
826 21 1/2 Road - DO NOT USE

Grand Junction, CO 81505

Report Summary

Wednesday January 20, 2010

Report Number: L440236

Samples Received: 01/14/10

Client Project:

Description: Bill Barrett

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

John D. Blackman, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

This report may not be reproduced, except in full, without written approval from Environmental Science Corp.

Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

1 Samples Reported: 01/20/10 15:25 Printed: 01/20/10 15:25

Page 1 of 4



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ken Kreie
Cordilleran Compliance - GJ, CO
826 21 1/2 Road - DO NOT USE
Grand Junction, CO 81505

January 20, 2010

Date Received : January 14, 2010
Description : Bill Barrett

Sample ID : MILL 1

Collected By : Ken Kreie
Collection Date : 01/13/10 11:35

ESC Sample # : L440236-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Methane	6.9	0.20	mg/l	RSK175	01/20/10	20

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 01/20/10 15:25 Printed: 01/20/10 15:26

Summary of Remarks For Samples Printed
01/20/10 at 15:26:03

TSR Signing Reports: 151
R5 - Desired TAT

Client sends unpreserved vials for all projects; Run BTEXM by 8260 on separate dash. DO NOT
RUSH ALK!!!

Sample: L440236-01 Account: CORCOMGCO Received: 01/14/10 09:00 Due Date: 01/21/10 00:00 RPT Date: 01/20/10 15:25



YOUR LAB OF CHOICE

Cordilleran Compliance - GJ, CO
Ken Kreie
826 21 1/2 Road - DO NOT USE
Grand Junction, CO 81505

Quality Assurance Report
Level II

L440236

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

January 20, 2010

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Methane	< .01	mg/l			WG459758	01/20/10 14:27

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Methane	mg/l	.339	0.344	101.	70-130	WG459758

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Methane	mg/l	0.341	0.344	100.	70-130	0.924	25	WG459758

Batch number /Run number / Sample number cross reference

WG459758: R1081028: L440236-01

* * Calculations are performed prior to rounding of reported values .
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Cordilleran Compliance - GJ, CO

Ken Kreie

826 21 1/2 Road - DO NOT USE

Grand Junction, CO 81505

Quality Assurance Report

Level II

L440236

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

January 20, 2010

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Ken Kreie
Cordilleran Compliance - GJ, CO
826 21 1/2 Road

Grand Junction, CO 81505

Report Summary

Tuesday February 16, 2010

Report Number: L444689

Samples Received: 02/12/10

Client Project:

Description: Miller Domestic

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

John D. Blackman, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

This report may not be reproduced, except in full, without written approval from Environmental Science Corp.

Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

2 Samples Reported: 02/16/10 11:12 Printed: 02/16/10 11:12

Page 1 of 13



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ken Kreie
Cordilleran Compliance - GJ, CO
826 21 1/2 Road
Grand Junction, CO 81505

February 16, 2010

Date Received : February 12, 2010
Description : Miller Domestic

Sample ID : MILL 2

Collected By : Stuart Hall
Collection Date : 02/11/10 09:35

ESC Sample # : L444689-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Methane	6800	200	ug/l	RSK175	02/15/10	20
Volatile Organics						
Acetone	BDL	50.	ug/l	8260B	02/13/10	1
Acrolein	BDL	50.	ug/l	8260B	02/13/10	1
Acrylonitrile	BDL	10.	ug/l	8260B	02/13/10	1
Benzene	BDL	1.0	ug/l	8260B	02/13/10	1
Bromobenzene	BDL	1.0	ug/l	8260B	02/13/10	1
Bromodichloromethane	BDL	1.0	ug/l	8260B	02/13/10	1
Bromoform	BDL	1.0	ug/l	8260B	02/13/10	1
Bromomethane	BDL	5.0	ug/l	8260B	02/13/10	1
n-Butylbenzene	BDL	1.0	ug/l	8260B	02/13/10	1
sec-Butylbenzene	BDL	1.0	ug/l	8260B	02/13/10	1
tert-Butylbenzene	BDL	1.0	ug/l	8260B	02/13/10	1
Carbon tetrachloride	BDL	1.0	ug/l	8260B	02/13/10	1
Chlorobenzene	BDL	1.0	ug/l	8260B	02/13/10	1
Chlorodibromomethane	BDL	1.0	ug/l	8260B	02/13/10	1
Chloroethane	BDL	5.0	ug/l	8260B	02/13/10	1
2-Chloroethyl vinyl ether	BDL	50.	ug/l	8260B	02/13/10	1
Chloroform	BDL	5.0	ug/l	8260B	02/13/10	1
Chloromethane	BDL	2.5	ug/l	8260B	02/13/10	1
2-Chlorotoluene	BDL	1.0	ug/l	8260B	02/13/10	1
4-Chlorotoluene	BDL	1.0	ug/l	8260B	02/13/10	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	8260B	02/13/10	1
1,2-Dibromoethane	BDL	1.0	ug/l	8260B	02/13/10	1
Dibromomethane	BDL	1.0	ug/l	8260B	02/13/10	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	8260B	02/13/10	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	8260B	02/13/10	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	8260B	02/13/10	1
Dichlorodifluoromethane	BDL	5.0	ug/l	8260B	02/13/10	1
1,1-Dichloroethane	BDL	1.0	ug/l	8260B	02/13/10	1
1,2-Dichloroethane	BDL	1.0	ug/l	8260B	02/13/10	1
1,1-Dichloroethene	BDL	1.0	ug/l	8260B	02/13/10	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	02/15/10	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	02/13/10	1
1,2-Dichloropropane	BDL	1.0	ug/l	8260B	02/13/10	1
1,1-Dichloropropene	BDL	1.0	ug/l	8260B	02/13/10	1
1,3-Dichloropropane	BDL	1.0	ug/l	8260B	02/13/10	1
cis-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	02/13/10	1
trans-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	02/13/10	1
2,2-Dichloropropane	BDL	1.0	ug/l	8260B	02/13/10	1
Di-isopropyl ether	BDL	1.0	ug/l	8260B	02/13/10	1
Ethylbenzene	BDL	1.0	ug/l	8260B	02/13/10	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	8260B	02/13/10	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ken Kreie
Cordilleran Compliance - GJ, CO
826 21 1/2 Road
Grand Junction, CO 81505

February 16, 2010

Date Received : February 12, 2010
Description : Miller Domestic

Sample ID : MILL 2

Collected By : Stuart Hall
Collection Date : 02/11/10 09:35

ESC Sample # : L444689-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Isopropylbenzene	BDL	1.0	ug/l	8260B	02/13/10	1
p-Isopropyltoluene	BDL	1.0	ug/l	8260B	02/13/10	1
2-Butanone (MEK)	BDL	10.	ug/l	8260B	02/13/10	1
Methylene Chloride	BDL	5.0	ug/l	8260B	02/13/10	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	8260B	02/13/10	1
Methyl tert-butyl ether	BDL	1.0	ug/l	8260B	02/13/10	1
Naphthalene	BDL	5.0	ug/l	8260B	02/13/10	1
n-Propylbenzene	BDL	1.0	ug/l	8260B	02/13/10	1
Styrene	BDL	1.0	ug/l	8260B	02/13/10	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	02/13/10	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	02/13/10	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	1.0	ug/l	8260B	02/13/10	1
Tetrachloroethene	BDL	1.0	ug/l	8260B	02/13/10	1
Toluene	BDL	5.0	ug/l	8260B	02/13/10	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	8260B	02/13/10	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	8260B	02/13/10	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	8260B	02/13/10	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	8260B	02/13/10	1
Trichloroethene	BDL	1.0	ug/l	8260B	02/15/10	1
Trichlorofluoromethane	BDL	5.0	ug/l	8260B	02/13/10	1
1,2,3-Trichloropropane	BDL	1.0	ug/l	8260B	02/13/10	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	8260B	02/13/10	1
1,2,3-Trimethylbenzene	BDL	1.0	ug/l	8260B	02/13/10	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	8260B	02/13/10	1
Vinyl chloride	BDL	1.0	ug/l	8260B	02/13/10	1
Xylenes, Total	BDL	3.0	ug/l	8260B	02/13/10	1
Surrogate Recovery						
Toluene-d8	102.		% Rec.	8260B	02/13/10	1
Dibromofluoromethane	104.		% Rec.	8260B	02/13/10	1
4-Bromofluorobenzene	110.		% Rec.	8260B	02/13/10	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 02/16/10 11:12 Printed: 02/16/10 11:12



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ken Kreie
Cordilleran Compliance - GJ, CO
826 21 1/2 Road
Grand Junction, CO 81505

February 16, 2010

Date Received : February 12, 2010
Description : Miller Domestic

Sample ID : MILL 1

Collected By : Stuart Hall
Collection Date : 02/11/10 10:50

ESC Sample # : L444689-02

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Volatile Organics						
Acetone	BDL	50.	ug/l	8260B	02/13/10	1
Acrolein	BDL	50.	ug/l	8260B	02/13/10	1
Acrylonitrile	BDL	10.	ug/l	8260B	02/13/10	1
Benzene	BDL	1.0	ug/l	8260B	02/13/10	1
Bromobenzene	BDL	1.0	ug/l	8260B	02/13/10	1
Bromodichloromethane	BDL	1.0	ug/l	8260B	02/13/10	1
Bromoform	BDL	1.0	ug/l	8260B	02/13/10	1
Bromomethane	BDL	5.0	ug/l	8260B	02/13/10	1
n-Butylbenzene	BDL	1.0	ug/l	8260B	02/13/10	1
sec-Butylbenzene	BDL	1.0	ug/l	8260B	02/13/10	1
tert-Butylbenzene	BDL	1.0	ug/l	8260B	02/13/10	1
Carbon tetrachloride	BDL	1.0	ug/l	8260B	02/13/10	1
Chlorobenzene	BDL	1.0	ug/l	8260B	02/13/10	1
Chlorodibromomethane	BDL	1.0	ug/l	8260B	02/13/10	1
Chloroethane	BDL	5.0	ug/l	8260B	02/13/10	1
2-Chloroethyl vinyl ether	BDL	50.	ug/l	8260B	02/13/10	1
Chloroform	BDL	5.0	ug/l	8260B	02/13/10	1
Chloromethane	BDL	2.5	ug/l	8260B	02/13/10	1
2-Chlorotoluene	BDL	1.0	ug/l	8260B	02/13/10	1
4-Chlorotoluene	BDL	1.0	ug/l	8260B	02/13/10	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	8260B	02/13/10	1
1,2-Dibromoethane	BDL	1.0	ug/l	8260B	02/13/10	1
Dibromomethane	BDL	1.0	ug/l	8260B	02/13/10	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	8260B	02/13/10	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	8260B	02/13/10	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	8260B	02/13/10	1
Dichlorodifluoromethane	BDL	5.0	ug/l	8260B	02/13/10	1
1,1-Dichloroethane	BDL	1.0	ug/l	8260B	02/13/10	1
1,2-Dichloroethane	BDL	1.0	ug/l	8260B	02/13/10	1
1,1-Dichloroethene	BDL	1.0	ug/l	8260B	02/13/10	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	02/15/10	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	8260B	02/13/10	1
1,2-Dichloropropane	BDL	1.0	ug/l	8260B	02/13/10	1
1,1-Dichloropropene	BDL	1.0	ug/l	8260B	02/13/10	1
1,3-Dichloropropane	BDL	1.0	ug/l	8260B	02/13/10	1
cis-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	02/13/10	1
trans-1,3-Dichloropropene	BDL	1.0	ug/l	8260B	02/13/10	1
2,2-Dichloropropane	BDL	1.0	ug/l	8260B	02/13/10	1
Di-isopropyl ether	BDL	1.0	ug/l	8260B	02/13/10	1
Ethylbenzene	BDL	1.0	ug/l	8260B	02/13/10	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	8260B	02/13/10	1
Isopropylbenzene	BDL	1.0	ug/l	8260B	02/13/10	1
p-Isopropyltoluene	BDL	1.0	ug/l	8260B	02/13/10	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ken Kreie
Cordilleran Compliance - GJ, CO
826 21 1/2 Road
Grand Junction, CO 81505

February 16, 2010

Date Received : February 12, 2010
Description : Miller Domestic

Sample ID : MILL 1

Collected By : Stuart Hall
Collection Date : 02/11/10 10:50

ESC Sample # : L444689-02

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2-Butanone (MEK)	BDL	10.	ug/l	8260B	02/13/10	1
Methylene Chloride	BDL	5.0	ug/l	8260B	02/13/10	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	8260B	02/13/10	1
Methyl tert-butyl ether	BDL	1.0	ug/l	8260B	02/13/10	1
Naphthalene	BDL	5.0	ug/l	8260B	02/13/10	1
n-Propylbenzene	BDL	1.0	ug/l	8260B	02/13/10	1
Styrene	BDL	1.0	ug/l	8260B	02/13/10	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	02/13/10	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	8260B	02/13/10	1
1,1,2-Trichloro-1,2,2-trifluoro	BDL	1.0	ug/l	8260B	02/13/10	1
Tetrachloroethene	BDL	1.0	ug/l	8260B	02/13/10	1
Toluene	BDL	5.0	ug/l	8260B	02/13/10	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	8260B	02/13/10	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	8260B	02/13/10	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	8260B	02/13/10	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	8260B	02/13/10	1
Trichloroethene	BDL	1.0	ug/l	8260B	02/15/10	1
Trichlorofluoromethane	BDL	5.0	ug/l	8260B	02/13/10	1
1,2,3-Trichloropropane	BDL	1.0	ug/l	8260B	02/13/10	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	8260B	02/13/10	1
1,2,3-Trimethylbenzene	BDL	1.0	ug/l	8260B	02/13/10	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	8260B	02/13/10	1
Vinyl chloride	BDL	1.0	ug/l	8260B	02/13/10	1
Xylenes, Total	BDL	3.0	ug/l	8260B	02/13/10	1
Surrogate Recovery						
Toluene-d8	103.		% Rec.	8260B	02/13/10	1
Dibromofluoromethane	108.		% Rec.	8260B	02/13/10	1
4-Bromofluorobenzene	110.		% Rec.	8260B	02/13/10	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 02/16/10 11:12 Printed: 02/16/10 11:12

Summary of Remarks For Samples Printed
02/16/10 at 11:12:30

TSR Signing Reports: 151
R3 - Rush: Two Day

Client sends unpreserved vials for all projects; Run BTEXM by 8260 on separate dash. DO NOT
RUSH ALK!!!

Sample: L444689-01 Account: CORCOMGCO Received: 02/12/10 09:00 Due Date: 02/16/10 00:00 RPT Date: 02/16/10 11:12
Dissolved Methane
Sample: L444689-02 Account: CORCOMGCO Received: 02/12/10 09:00 Due Date: 02/16/10 00:00 RPT Date: 02/16/10 11:12



YOUR LAB OF CHOICE

Cordilleran Compliance - GJ, CO
Ken Kreie
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report
Level II

L444689

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

February 16, 2010

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG463166	02/13/10 00:22
1,1,1-Trichloroethane	< .001	mg/l			WG463166	02/13/10 00:22
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG463166	02/13/10 00:22
1,1,2-Trichloroethane	< .001	mg/l			WG463166	02/13/10 00:22
1,1,2-Trichloro-1,2,2-trifluoroethane	< .001	mg/l			WG463166	02/13/10 00:22
1,1-Dichloroethane	< .001	mg/l			WG463166	02/13/10 00:22
1,1-Dichloroethene	< .001	mg/l			WG463166	02/13/10 00:22
1,1-Dichloropropene	< .001	mg/l			WG463166	02/13/10 00:22
1,2,3-Trichlorobenzene	< .001	mg/l			WG463166	02/13/10 00:22
1,2,3-Trichloropropane	< .001	mg/l			WG463166	02/13/10 00:22
1,2,3-Trimethylbenzene	< .001	mg/l			WG463166	02/13/10 00:22
1,2,4-Trichlorobenzene	< .001	mg/l			WG463166	02/13/10 00:22
1,2,4-Trimethylbenzene	< .001	mg/l			WG463166	02/13/10 00:22
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG463166	02/13/10 00:22
1,2-Dibromoethane	< .001	mg/l			WG463166	02/13/10 00:22
1,2-Dichlorobenzene	< .001	mg/l			WG463166	02/13/10 00:22
1,2-Dichloroethane	< .001	mg/l			WG463166	02/13/10 00:22
1,2-Dichloropropane	< .001	mg/l			WG463166	02/13/10 00:22
1,3,5-Trimethylbenzene	< .001	mg/l			WG463166	02/13/10 00:22
1,3-Dichlorobenzene	< .001	mg/l			WG463166	02/13/10 00:22
1,3-Dichloropropane	< .001	mg/l			WG463166	02/13/10 00:22
1,4-Dichlorobenzene	< .001	mg/l			WG463166	02/13/10 00:22
2,2-Dichloropropane	< .001	mg/l			WG463166	02/13/10 00:22
2-Butanone (MEK)	< .01	mg/l			WG463166	02/13/10 00:22
2-Chloroethyl vinyl ether	< .001	mg/l			WG463166	02/13/10 00:22
2-Chlorotoluene	< .001	mg/l			WG463166	02/13/10 00:22
4-Chlorotoluene	< .001	mg/l			WG463166	02/13/10 00:22
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG463166	02/13/10 00:22
Acetone	< .05	mg/l			WG463166	02/13/10 00:22
Acrolein	< .05	mg/l			WG463166	02/13/10 00:22
Acrylonitrile	< .01	mg/l			WG463166	02/13/10 00:22
Benzene	< .001	mg/l			WG463166	02/13/10 00:22
Bromobenzene	< .001	mg/l			WG463166	02/13/10 00:22
Bromodichloromethane	< .001	mg/l			WG463166	02/13/10 00:22
Bromoform	< .001	mg/l			WG463166	02/13/10 00:22
Bromomethane	< .005	mg/l			WG463166	02/13/10 00:22
Carbon tetrachloride	< .001	mg/l			WG463166	02/13/10 00:22
Chlorobenzene	< .001	mg/l			WG463166	02/13/10 00:22
Chlorodibromomethane	< .001	mg/l			WG463166	02/13/10 00:22
Chloroethane	< .001	mg/l			WG463166	02/13/10 00:22
Chloroform	< .005	mg/l			WG463166	02/13/10 00:22
Chloromethane	< .001	mg/l			WG463166	02/13/10 00:22
cis-1,3-Dichloropropene	< .001	mg/l			WG463166	02/13/10 00:22
Di-isopropyl ether	< .001	mg/l			WG463166	02/13/10 00:22
Dibromomethane	< .001	mg/l			WG463166	02/13/10 00:22
Dichlorodifluoromethane	< .005	mg/l			WG463166	02/13/10 00:22
Ethylbenzene	< .001	mg/l			WG463166	02/13/10 00:22
Hexachloro-1,3-butadiene	< .001	mg/l			WG463166	02/13/10 00:22
Isopropylbenzene	< .001	mg/l			WG463166	02/13/10 00:22
Methyl tert-butyl ether	< .001	mg/l			WG463166	02/13/10 00:22
Methylene Chloride	< .005	mg/l			WG463166	02/13/10 00:22
n-Butylbenzene	< .001	mg/l			WG463166	02/13/10 00:22
n-Propylbenzene	< .001	mg/l			WG463166	02/13/10 00:22
Naphthalene	< .005	mg/l			WG463166	02/13/10 00:22
p-Isopropyltoluene	< .001	mg/l			WG463166	02/13/10 00:22
sec-Butylbenzene	< .001	mg/l			WG463166	02/13/10 00:22
Styrene	< .001	mg/l			WG463166	02/13/10 00:22
tert-Butylbenzene	< .001	mg/l			WG463166	02/13/10 00:22
Tetrachloroethene	< .001	mg/l			WG463166	02/13/10 00:22

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Cordilleran Compliance - GJ, CO
Ken Kreie
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report
Level II

L444689

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

February 16, 2010

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Toluene	< .005	mg/l			WG463166	02/13/10 00:22
trans-1,2-Dichloroethene	< .001	mg/l			WG463166	02/13/10 00:22
trans-1,3-Dichloropropene	< .001	mg/l			WG463166	02/13/10 00:22
Trichlorofluoromethane	< .005	mg/l			WG463166	02/13/10 00:22
Vinyl chloride	< .001	mg/l			WG463166	02/13/10 00:22
Xylenes, Total	< .003	mg/l			WG463166	02/13/10 00:22
4-Bromofluorobenzene		% Rec.	106.5	75-128	WG463166	02/13/10 00:22
Dibromofluoromethane		% Rec.	103.4	79-125	WG463166	02/13/10 00:22
Toluene-d8		% Rec.	101.2	87-114	WG463166	02/13/10 00:22
Methane	< .01	mg/l			WG463388	02/15/10 14:53
cis-1,2-Dichloroethene	< .001	mg/l			WG463396	02/15/10 20:10
Trichloroethene	< .001	mg/l			WG463396	02/15/10 20:10
4-Bromofluorobenzene		% Rec.	105.9	75-128	WG463396	02/15/10 20:10
Dibromofluoromethane		% Rec.	97.20	79-125	WG463396	02/15/10 20:10
Toluene-d8		% Rec.	101.2	87-114	WG463396	02/15/10 20:10

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0266	106.	75-134	WG463166
1,1,1-Trichloroethane	mg/l	.025	0.0226	90.3	67-137	WG463166
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0233	93.1	72-128	WG463166
1,1,2-Trichloroethane	mg/l	.025	0.0241	96.5	79-123	WG463166
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	.025	0.0223	89.2	51-149	WG463166
1,1-Dichloroethane	mg/l	.025	0.0209	83.5	67-133	WG463166
1,1-Dichloroethene	mg/l	.025	0.0187	74.7	60-130	WG463166
1,1-Dichloropropene	mg/l	.025	0.0188	75.4	68-132	WG463166
1,2,3-Trichlorobenzene	mg/l	.025	0.0244	97.6	63-138	WG463166
1,2,3-Trichloropropane	mg/l	.025	0.0257	103.	68-130	WG463166
1,2,3-Trimethylbenzene	mg/l	.025	0.0222	88.7	70-127	WG463166
1,2,4-Trichlorobenzene	mg/l	.025	0.0248	99.1	65-137	WG463166
1,2,4-Trimethylbenzene	mg/l	.025	0.0235	94.2	72-135	WG463166
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0269	108.	55-134	WG463166
1,2-Dibromoethane	mg/l	.025	0.0232	92.8	75-126	WG463166
1,2-Dichlorobenzene	mg/l	.025	0.0239	95.6	75-122	WG463166
1,2-Dichloroethane	mg/l	.025	0.0227	90.8	63-137	WG463166
1,2-Dichloropropane	mg/l	.025	0.0227	90.6	74-122	WG463166
1,3,5-Trimethylbenzene	mg/l	.025	0.0228	91.3	73-134	WG463166
1,3-Dichlorobenzene	mg/l	.025	0.0240	96.0	73-131	WG463166
1,3-Dichloropropane	mg/l	.025	0.0233	93.1	77-119	WG463166
1,4-Dichlorobenzene	mg/l	.025	0.0237	94.9	70-121	WG463166
2,2-Dichloropropane	mg/l	.025	0.0235	94.1	46-151	WG463166
2-Butanone (MEK)	mg/l	.125	0.118	94.0	53-132	WG463166
2-Chloroethyl vinyl ether	mg/l	.125	0.149	119.	0-171	WG463166
2-Chlorotoluene	mg/l	.025	0.0232	92.8	74-128	WG463166
4-Chlorotoluene	mg/l	.025	0.0239	95.7	74-130	WG463166
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.125	100.	60-142	WG463166
Acetone	mg/l	.125	0.120	96.0	48-134	WG463166
Acrolein	mg/l	.125	0.0777	62.1	6-182	WG463166
Acrylonitrile	mg/l	.125	0.115	92.1	60-140	WG463166
Benzene	mg/l	.025	0.0189	75.7	67-126	WG463166
Bromobenzene	mg/l	.025	0.0227	90.9	76-123	WG463166
Bromodichloromethane	mg/l	.025	0.0257	103.	68-133	WG463166
Bromoform	mg/l	.025	0.0276	110.	60-139	WG463166
Bromomethane	mg/l	.025	0.0171	68.5	45-175	WG463166

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Cordilleran Compliance - GJ, CO
Ken Kreie
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report
Level II

L444689

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

February 16, 2010

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Carbon tetrachloride	mg/l	.025	0.0222	88.8	64-141	WG463166
Chlorobenzene	mg/l	.025	0.0226	90.5	77-125	WG463166
Chlorodibromomethane	mg/l	.025	0.0264	106.	73-138	WG463166
Chloroethane	mg/l	.025	0.0217	86.7	49-155	WG463166
Chloroform	mg/l	.025	0.0231	92.6	66-126	WG463166
Chloromethane	mg/l	.025	0.0166	66.4	45-152	WG463166
cis-1,3-Dichloropropene	mg/l	.025	0.0237	94.8	73-131	WG463166
Di-isopropyl ether	mg/l	.025	0.0239	95.5	63-139	WG463166
Dibromomethane	mg/l	.025	0.0231	92.5	73-125	WG463166
Dichlorodifluoromethane	mg/l	.025	0.0272	109.	39-189	WG463166
Ethylbenzene	mg/l	.025	0.0220	88.1	76-129	WG463166
Hexachloro-1,3-butadiene	mg/l	.025	0.0241	96.3	67-135	WG463166
Isopropylbenzene	mg/l	.025	0.0245	98.0	73-132	WG463166
Methyl tert-butyl ether	mg/l	.025	0.0238	95.1	51-142	WG463166
Methylene Chloride	mg/l	.025	0.0205	82.1	64-125	WG463166
n-Butylbenzene	mg/l	.025	0.0235	94.0	63-142	WG463166
n-Propylbenzene	mg/l	.025	0.0227	90.9	71-132	WG463166
Naphthalene	mg/l	.025	0.0241	96.2	56-145	WG463166
p-Isopropyltoluene	mg/l	.025	0.0253	101.	68-138	WG463166
sec-Butylbenzene	mg/l	.025	0.0242	96.7	70-135	WG463166
Styrene	mg/l	.025	0.0252	101.	78-130	WG463166
tert-Butylbenzene	mg/l	.025	0.0251	101.	72-134	WG463166
Tetrachloroethene	mg/l	.025	0.0185	73.9	67-135	WG463166
Toluene	mg/l	.025	0.0203	81.1	72-122	WG463166
trans-1,2-Dichloroethene	mg/l	.025	0.0182	72.7	67-129	WG463166
trans-1,3-Dichloropropene	mg/l	.025	0.0245	98.1	66-137	WG463166
Trichlorofluoromethane	mg/l	.025	0.0218	87.3	54-156	WG463166
Vinyl chloride	mg/l	.025	0.0179	71.8	55-153	WG463166
Xylenes, Total	mg/l	.075	0.0673	89.8	75-128	WG463166
4-Bromofluorobenzene				102.2	75-128	WG463166
Dibromofluoromethane				103.2	79-125	WG463166
Toluene-d8				103.0	87-114	WG463166
Methane	mg/l	.339	0.267	78.7	70-130	WG463388
cis-1,2-Dichloroethene	mg/l	.025	0.0239	95.7	72-128	WG463396
Trichloroethene	mg/l	.025	0.0240	96.0	74-126	WG463396
4-Bromofluorobenzene				105.2	75-128	WG463396
Dibromofluoromethane				97.02	79-125	WG463396
Toluene-d8				98.66	87-114	WG463396

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
1,1,1,2-Tetrachloroethane	mg/l	0.0297	0.0266	119.	75-134	10.9	20	WG463166
1,1,1-Trichloroethane	mg/l	0.0257	0.0226	103.	67-137	12.9	20	WG463166
1,1,2,2-Tetrachloroethane	mg/l	0.0260	0.0233	104.	72-128	11.3	20	WG463166
1,1,2-Trichloroethane	mg/l	0.0255	0.0241	102.	79-123	5.52	20	WG463166
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.0255	0.0223	102.	51-149	13.5	20	WG463166
1,1-Dichloroethane	mg/l	0.0242	0.0209	97.0	67-133	14.6	20	WG463166
1,1-Dichloroethene	mg/l	0.0218	0.0187	87.0	60-130	15.4	20	WG463166
1,1-Dichloropropene	mg/l	0.0208	0.0188	83.0	68-132	9.92	20	WG463166
1,2,3-Trichlorobenzene	mg/l	0.0291	0.0244	116.	63-138	17.5	20	WG463166
1,2,3-Trichloropropane	mg/l	0.0285	0.0257	114.	68-130	10.4	20	WG463166
1,2,3-Trimethylbenzene	mg/l	0.0259	0.0222	104.	70-127	15.5	20	WG463166
1,2,4-Trichlorobenzene	mg/l	0.0295	0.0248	118.	65-137	17.5	20	WG463166
1,2,4-Trimethylbenzene	mg/l	0.0251	0.0235	100.	72-135	6.31	20	WG463166

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Cordilleran Compliance - GJ, CO
Ken Kreie
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report
Level II

L444689

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

February 16, 2010

Analyte	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
1,2-Dibromo-3-Chloropropane	mg/l	0.0307	0.0269	123.	55-134	13.1	20	WG463166
1,2-Dibromoethane	mg/l	0.0250	0.0232	100.	75-126	7.55	20	WG463166
1,2-Dichlorobenzene	mg/l	0.0278	0.0239	111.	75-122	15.1	20	WG463166
1,2-Dichloroethane	mg/l	0.0251	0.0227	100.	63-137	10.0	20	WG463166
1,2-Dichloropropane	mg/l	0.0242	0.0227	97.0	74-122	6.40	20	WG463166
1,3,5-Trimethylbenzene	mg/l	0.0250	0.0228	100.	73-134	8.93	20	WG463166
1,3-Dichlorobenzene	mg/l	0.0262	0.0240	105.	73-131	8.85	20	WG463166
1,3-Dichloropropane	mg/l	0.0245	0.0233	98.0	77-119	5.08	20	WG463166
1,4-Dichlorobenzene	mg/l	0.0268	0.0237	107.	70-121	12.2	20	WG463166
2,2-Dichloropropane	mg/l	0.0267	0.0235	107.	46-151	12.5	20	WG463166
2-Butanone (MEK)	mg/l	0.137	0.118	110.	53-132	15.5	20	WG463166
2-Chloroethyl vinyl ether	mg/l	0.166	0.149	133.	0-171	11.1	27	WG463166
2-Chlorotoluene	mg/l	0.0254	0.0232	102.	74-128	9.07	20	WG463166
4-Chlorotoluene	mg/l	0.0260	0.0239	104.	74-130	8.44	20	WG463166
4-Methyl-2-pentanone (MIBK)	mg/l	0.147	0.125	117.	60-142	15.9	20	WG463166
Acetone	mg/l	0.141	0.120	112.	48-134	15.7	20	WG463166
Acrolein	mg/l	0.0919	0.0777	74.0	6-182	16.8	39	WG463166
Acrylonitrile	mg/l	0.134	0.115	107.	60-140	15.1	20	WG463166
Benzene	mg/l	0.0213	0.0189	85.0	67-126	11.9	20	WG463166
Bromobenzene	mg/l	0.0249	0.0227	100.	76-123	9.08	20	WG463166
Bromodichloromethane	mg/l	0.0285	0.0257	114.	68-133	10.4	20	WG463166
Bromoform	mg/l	0.0292	0.0276	117.	60-139	5.56	20	WG463166
Bromomethane	mg/l	0.0195	0.0171	78.0	45-175	12.7	20	WG463166
Carbon tetrachloride	mg/l	0.0259	0.0222	104.	64-141	15.3	20	WG463166
Chlorobenzene	mg/l	0.0249	0.0226	100.	77-125	9.57	20	WG463166
Chlorodibromomethane	mg/l	0.0287	0.0264	115.	73-138	8.31	20	WG463166
Chloroethane	mg/l	0.0223	0.0217	89.0	49-155	2.80	20	WG463166
Chloroform	mg/l	0.0264	0.0231	106.	66-126	13.3	20	WG463166
Chloromethane	mg/l	0.0188	0.0166	75.0	45-152	12.4	20	WG463166
cis-1,3-Dichloropropene	mg/l	0.0263	0.0237	105.	73-131	10.3	20	WG463166
Di-isopropyl ether	mg/l	0.0263	0.0239	105.	63-139	9.67	20	WG463166
Dibromomethane	mg/l	0.0251	0.0231	100.	73-125	8.13	20	WG463166
Dichlorodifluoromethane	mg/l	0.0304	0.0272	121.	39-189	11.1	24	WG463166
Ethylbenzene	mg/l	0.0241	0.0220	96.0	76-129	8.86	20	WG463166
Hexachloro-1,3-butadiene	mg/l	0.0293	0.0241	117.	67-135	19.6	20	WG463166
Isopropylbenzene	mg/l	0.0273	0.0245	109.	73-132	10.8	20	WG463166
Methyl tert-butyl ether	mg/l	0.0263	0.0238	105.	51-142	9.96	20	WG463166
Methylene Chloride	mg/l	0.0231	0.0205	92.0	64-125	11.9	20	WG463166
n-Butylbenzene	mg/l	0.0276	0.0235	110.	63-142	15.9	20	WG463166
n-Propylbenzene	mg/l	0.0247	0.0227	99.0	71-132	8.43	20	WG463166
Naphthalene	mg/l	0.0287	0.0241	115.	56-145	17.7	20	WG463166
p-Isopropyltoluene	mg/l	0.0278	0.0253	111.	68-138	9.34	20	WG463166
sec-Butylbenzene	mg/l	0.0264	0.0242	106.	70-135	8.92	20	WG463166
Styrene	mg/l	0.0274	0.0252	110.	78-130	8.36	20	WG463166
tert-Butylbenzene	mg/l	0.0273	0.0251	109.	72-134	8.28	20	WG463166
Tetrachloroethene	mg/l	0.0207	0.0185	83.0	67-135	11.2	20	WG463166
Toluene	mg/l	0.0224	0.0203	90.0	72-122	10.0	20	WG463166
trans-1,2-Dichloroethene	mg/l	0.0198	0.0182	79.0	67-129	8.71	20	WG463166
trans-1,3-Dichloropropene	mg/l	0.0269	0.0245	108.	66-137	9.30	20	WG463166
Trichlorofluoromethane	mg/l	0.0248	0.0218	99.0	54-156	12.7	20	WG463166
Vinyl chloride	mg/l	0.0206	0.0179	82.0	55-153	13.8	20	WG463166
Xylenes, Total	mg/l	0.0734	0.0673	98.0	75-128	8.66	20	WG463166
4-Bromofluorobenzene				97.22	75-128			WG463166
Dibromofluoromethane				104.3	79-125			WG463166
Toluene-d8				101.8	87-114			WG463166
Methane	mg/l	0.273	0.267	80.0	70-130	2.20	25	WG463388

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Cordilleran Compliance - GJ, CO
Ken Kreie
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report
Level II

L444689

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

February 16, 2010

Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
cis-1,2-Dichloroethene	mg/l	0.0240	0.0239	96.0	72-128	0.221	20	WG463396
Trichloroethene	mg/l	0.0242	0.0240	97.0	74-126	0.722	20	WG463396
4-Bromofluorobenzene				105.5	75-128			WG463396
Dibromofluoromethane				98.68	79-125			WG463396
Toluene-d8				100.2	87-114			WG463396

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
cis-1,2-Dichloroethene	mg/l	0.0227	0	.025	90.7	29-156	L444322-04	WG463396
Trichloroethene	mg/l	0.0224	0	.025	89.5	18-163	L444322-04	WG463396
4-Bromofluorobenzene					102.5	75-128		WG463396
Dibromofluoromethane					95.29	79-125		WG463396
Toluene-d8					96.70	87-114		WG463396

1,1,1,2-Tetrachloroethane	mg/l	0.463	0	.025	92.7	45-152	L444680-01	WG463166
1,1,1-Trichloroethane	mg/l	0.518	0	.025	104.	31-161	L444680-01	WG463166
1,1,2,2-Tetrachloroethane	mg/l	0.410	0	.025	82.1	49-149	L444680-01	WG463166
1,1,2-Trichloroethane	mg/l	0.430	0	.025	86.0	46-145	L444680-01	WG463166
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.506	0	.025	101.	14-168	L444680-01	WG463166
1,1-Dichloroethane	mg/l	0.474	0.00101	.025	94.6	30-159	L444680-01	WG463166
1,1-Dichloroethene	mg/l	0.452	0	.025	90.4	10-162	L444680-01	WG463166
1,1-Dichloropropene	mg/l	0.443	0	.025	88.7	14-162	L444680-01	WG463166
1,2,3-Trichlorobenzene	mg/l	0.444	0.00272	.025	88.3	32-143	L444680-01	WG463166
1,2,3-Trichloropropane	mg/l	0.424	0	.025	84.8	48-148	L444680-01	WG463166
1,2,3-Trimethylbenzene	mg/l	0.449	0	.025	89.9	36-141	L444680-01	WG463166
1,2,4-Trichlorobenzene	mg/l	0.428	0.00142	.025	85.3	27-142	L444680-01	WG463166
1,2,4-Trimethylbenzene	mg/l	0.414	0.000632	.025	82.6	29-153	L444680-01	WG463166
1,2-Dibromo-3-Chloropropane	mg/l	0.419	0	.025	83.9	37-148	L444680-01	WG463166
1,2-Dibromoethane	mg/l	0.426	0	.025	85.1	41-149	L444680-01	WG463166
1,2-Dichlorobenzene	mg/l	0.433	0	.025	86.7	40-139	L444680-01	WG463166
1,2-Dichloroethane	mg/l	0.498	0.00485	.025	98.7	29-167	L444680-01	WG463166
1,2-Dichloropropane	mg/l	0.416	0	.025	83.1	39-148	L444680-01	WG463166
1,3,5-Trimethylbenzene	mg/l	0.440	0	.025	88.0	33-149	L444680-01	WG463166
1,3-Dichlorobenzene	mg/l	0.408	0.000460	.025	81.4	32-148	L444680-01	WG463166
1,3-Dichloropropane	mg/l	0.417	0.00137	.025	83.2	44-142	L444680-01	WG463166
1,4-Dichlorobenzene	mg/l	0.414	0.00122	.025	82.6	32-136	L444680-01	WG463166
2,2-Dichloropropane	mg/l	0.494	0	.025	98.8	14-158	L444680-01	WG463166
2-Butanone (MEK)	mg/l	2.00	0	.125	80.0	32-151	L444680-01	WG463166
2-Chloroethyl vinyl ether	mg/l	0.299	0	.125	12.0	0-175	L444680-01	WG463166
2-Chlorotoluene	mg/l	0.424	0.000711	.025	84.7	35-147	L444680-01	WG463166
4-Chlorotoluene	mg/l	0.416	0.000759	.025	83.0	33-147	L444680-01	WG463166
4-Methyl-2-pentanone (MIBK)	mg/l	1.95	0	.125	77.9	40-160	L444680-01	WG463166
Acetone	mg/l	2.10	0.213	.125	75.6	25-157	L444680-01	WG463166
Acrolein	mg/l	2.35	0	.125	94.1	0-179	L444680-01	WG463166
Acrylonitrile	mg/l	1.93	0	.125	77.2	37-162	L444680-01	WG463166
Benzene	mg/l	0.427	0.000875	.025	85.3	16-158	L444680-01	WG463166
Bromobenzene	mg/l	0.425	0	.025	85.0	37-147	L444680-01	WG463166
Bromodichloromethane	mg/l	0.502	0.000809	.025	100.	45-147	L444680-01	WG463166
Bromoform	mg/l	0.448	0	.025	89.7	38-152	L444680-01	WG463166
Bromomethane	mg/l	0.568	0.00413	.025	113.	0-191	L444680-01	WG463166
Carbon tetrachloride	mg/l	0.526	0	.025	105.	22-168	L444680-01	WG463166
Chlorobenzene	mg/l	0.430	0	.025	86.0	33-148	L444680-01	WG463166
Chlorodibromomethane	mg/l	0.473	0	.025	94.6	48-151	L444680-01	WG463166
Chloroethane	mg/l	0.494	0.00306	.025	98.3	4-176	L444680-01	WG463166
Chloroform	mg/l	0.500	0.00564	.025	98.9	37-147	L444680-01	WG463166
Chloromethane	mg/l	0.351	0	.025	70.2	10-174	L444680-01	WG463166

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Cordilleran Compliance - GJ, CO
Ken Kreie
826 21 1/2 Road

Quality Assurance Report
Level II

Grand Junction, CO 81505

February 16, 2010

L444689

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
cis-1,3-Dichloropropene	mg/l	0.469	0	.025	93.7	35-148	L444680-01	WG463166
Di-isopropyl ether	mg/l	0.439	0	.025	87.9	39-160	L444680-01	WG463166
Dibromomethane	mg/l	0.455	0	.025	91.0	36-152	L444680-01	WG463166
Dichlorodifluoromethane	mg/l	0.722	0	.025	144.	0-200	L444680-01	WG463166
Ethylbenzene	mg/l	0.413	0	.025	82.6	29-150	L444680-01	WG463166
Hexachloro-1,3-butadiene	mg/l	0.514	0	.025	103.	28-144	L444680-01	WG463166
Isopropylbenzene	mg/l	0.436	0	.025	87.2	35-147	L444680-01	WG463166
Methyl tert-butyl ether	mg/l	0.431	0	.025	86.1	24-167	L444680-01	WG463166
Methylene Chloride	mg/l	0.439	0.00129	.025	87.6	23-151	L444680-01	WG463166
n-Butylbenzene	mg/l	0.450	0	.025	90.0	22-151	L444680-01	WG463166
n-Propylbenzene	mg/l	0.425	0	.025	85.0	26-150	L444680-01	WG463166
Napthalene	mg/l	0.416	0.00294	.025	82.6	24-160	L444680-01	WG463166
p-Isopropyltoluene	mg/l	0.423	0	.025	84.6	28-151	L444680-01	WG463166
sec-Butylbenzene	mg/l	0.425	0.000544	.025	84.8	32-149	L444680-01	WG463166
Styrene	mg/l	0.415	0	.025	83.0	38-149	L444680-01	WG463166
tert-Butylbenzene	mg/l	0.431	0	.025	86.2	36-149	L444680-01	WG463166
Tetrachloroethene	mg/l	0.397	0	.025	79.3	13-157	L444680-01	WG463166
Toluene	mg/l	0.425	0.00245	.025	84.5	22-152	L444680-01	WG463166
trans-1,2-Dichloroethene	mg/l	0.430	0.00481	.025	84.9	11-160	L444680-01	WG463166
trans-1,3-Dichloropropene	mg/l	0.477	0.00168	.025	95.1	33-153	L444680-01	WG463166
Trichlorofluoromethane	mg/l	0.609	0.000845	.025	122.	10-177	L444680-01	WG463166
Vinyl chloride	mg/l	0.496	0.0288	.025	93.5	0-179	L444680-01	WG463166
Xylenes, Total	mg/l	1.25	0.00178	.075	83.2	27-151	L444680-01	WG463166

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
cis-1,2-Dichloroethene	mg/l	0.0221	0.0227	88.4	29-156	2.57	22	L444322-04	WG463396
Trichloroethene	mg/l	0.0222	0.0224	88.9	18-163	0.666	21	L444322-04	WG463396
4-Bromofluorobenzene				105.6	75-128				WG463396
Dibromofluoromethane				97.06	79-125				WG463396
Toluene-d8				98.46	87-114				WG463396
1,1,1,2-Tetrachloroethane	mg/l	0.485	0.463	97.0	45-152	4.49	21	L444680-01	WG463166
1,1,1-Trichloroethane	mg/l	0.554	0.518	111.	31-161	6.85	23	L444680-01	WG463166
1,1,2,2-Tetrachloroethane	mg/l	0.409	0.410	81.8	49-149	0.382	22	L444680-01	WG463166
1,1,2-Trichloroethane	mg/l	0.453	0.430	90.7	46-145	5.23	20	L444680-01	WG463166
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.540	0.506	108.	14-168	6.45	24	L444680-01	WG463166
1,1-Dichloroethane	mg/l	0.482	0.474	96.2	30-159	1.71	21	L444680-01	WG463166
1,1-Dichloroethene	mg/l	0.466	0.452	93.2	10-162	3.07	23	L444680-01	WG463166
1,1-Dichloropropene	mg/l	0.463	0.443	92.6	14-162	4.38	23	L444680-01	WG463166
1,2,3-Trichlorobenzene	mg/l	0.458	0.444	91.0	32-143	2.95	33	L444680-01	WG463166
1,2,3-Trichloropropane	mg/l	0.436	0.424	87.2	48-148	2.85	23	L444680-01	WG463166
1,2,3-Trimethylbenzene	mg/l	0.461	0.449	92.1	36-141	2.51	25	L444680-01	WG463166
1,2,4-Trichlorobenzene	mg/l	0.463	0.428	92.2	27-142	7.78	30	L444680-01	WG463166
1,2,4-Trimethylbenzene	mg/l	0.406	0.414	81.1	29-153	1.78	27	L444680-01	WG463166
1,2-Dibromo-3-Chloropropane	mg/l	0.433	0.419	86.6	37-148	3.25	27	L444680-01	WG463166
1,2-Dibromoethane	mg/l	0.455	0.426	90.9	41-149	6.62	21	L444680-01	WG463166
1,2-Dichlorobenzene	mg/l	0.469	0.433	93.7	40-139	7.83	23	L444680-01	WG463166
1,2-Dichloroethane	mg/l	0.513	0.498	102.	29-167	2.89	21	L444680-01	WG463166
1,2-Dichloropropane	mg/l	0.438	0.416	87.6	39-148	5.31	20	L444680-01	WG463166
1,3,5-Trimethylbenzene	mg/l	0.435	0.440	87.0	33-149	1.14	26	L444680-01	WG463166
1,3-Dichlorobenzene	mg/l	0.408	0.408	81.5	32-148	0.126	24	L444680-01	WG463166
1,3-Dichloropropane	mg/l	0.440	0.417	87.7	44-142	5.26	20	L444680-01	WG463166
1,4-Dichlorobenzene	mg/l	0.446	0.414	88.9	32-136	7.32	23	L444680-01	WG463166
2,2-Dichloropropane	mg/l	0.553	0.494	110.	14-158	11.2	23	L444680-01	WG463166
2-Butanone (MEK)	mg/l	2.15	2.00	85.9	32-151	7.12	26	L444680-01	WG463166
2-Chloroethyl vinyl ether	mg/l	0.324	0.299	13.0	0-175	8.09	75	L444680-01	WG463166

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Cordilleran Compliance - GJ, CO
Ken Kreie
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report
Level II

L444689

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

February 16, 2010

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
2-Chlorotoluene	mg/l	0.441	0.424	88.1	35-147	3.92	24	L444680-01	WG463166
4-Chlorotoluene	mg/l	0.429	0.416	85.6	33-147	3.06	25	L444680-01	WG463166
4-Methyl-2-pentanone (MIBK)	mg/l	2.10	1.95	84.2	40-160	7.73	28	L444680-01	WG463166
Acetone	mg/l	2.17	2.10	78.4	25-157	3.28	26	L444680-01	WG463166
Acrolein	mg/l	2.24	2.35	89.8	0-179	4.77	39	L444680-01	WG463166
Acrylonitrile	mg/l	2.06	1.93	82.4	37-162	6.50	24	L444680-01	WG463166
Benzene	mg/l	0.456	0.427	91.1	16-158	6.62	21	L444680-01	WG463166
Bromobenzene	mg/l	0.427	0.425	85.5	37-147	0.552	23	L444680-01	WG463166
Bromodichloromethane	mg/l	0.538	0.502	107.	45-147	6.88	20	L444680-01	WG463166
Bromoform	mg/l	0.473	0.448	94.5	38-152	5.25	20	L444680-01	WG463166
Bromomethane	mg/l	0.594	0.568	118.	0-191	4.49	35	L444680-01	WG463166
Carbon tetrachloride	mg/l	0.549	0.526	110.	22-168	4.27	24	L444680-01	WG463166
Chlorobenzene	mg/l	0.451	0.430	90.2	33-148	4.79	22	L444680-01	WG463166
Chlorodibromomethane	mg/l	0.499	0.473	99.8	48-151	5.27	21	L444680-01	WG463166
Chloroethane	mg/l	0.499	0.494	99.2	4-176	0.913	27	L444680-01	WG463166
Chloroform	mg/l	0.523	0.500	103.	37-147	4.48	21	L444680-01	WG463166
Chloromethane	mg/l	0.367	0.351	73.4	10-174	4.48	28	L444680-01	WG463166
cis-1,3-Dichloropropene	mg/l	0.500	0.469	100.	35-148	6.43	21	L444680-01	WG463166
Di-isopropyl ether	mg/l	0.455	0.439	91.1	39-160	3.59	21	L444680-01	WG463166
Dibromomethane	mg/l	0.469	0.455	93.8	36-152	3.10	20	L444680-01	WG463166
Dichlorodifluoromethane	mg/l	0.684	0.722	137.	0-200	5.29	26	L444680-01	WG463166
Ethylbenzene	mg/l	0.437	0.413	87.4	29-150	5.68	24	L444680-01	WG463166
Hexachloro-1,3-butadiene	mg/l	0.544	0.514	109.	28-144	5.51	33	L444680-01	WG463166
Isopropylbenzene	mg/l	0.451	0.436	90.2	35-147	3.44	25	L444680-01	WG463166
Methyl tert-butyl ether	mg/l	0.468	0.431	93.7	24-167	8.40	22	L444680-01	WG463166
Methylene Chloride	mg/l	0.462	0.439	92.1	23-151	5.02	21	L444680-01	WG463166
n-Butylbenzene	mg/l	0.487	0.450	97.4	22-151	7.86	29	L444680-01	WG463166
n-Propylbenzene	mg/l	0.423	0.425	84.6	26-150	0.482	25	L444680-01	WG463166
Naphthalene	mg/l	0.445	0.416	88.3	24-160	6.66	37	L444680-01	WG463166
p-Isopropyltoluene	mg/l	0.431	0.423	86.3	28-151	1.96	27	L444680-01	WG463166
sec-Butylbenzene	mg/l	0.428	0.425	85.5	32-149	0.807	26	L444680-01	WG463166
Styrene	mg/l	0.425	0.415	85.0	38-149	2.30	23	L444680-01	WG463166
tert-Butylbenzene	mg/l	0.450	0.431	89.9	36-149	4.28	26	L444680-01	WG463166
Tetrachloroethene	mg/l	0.423	0.397	84.5	13-157	6.34	24	L444680-01	WG463166
Toluene	mg/l	0.463	0.425	92.1	22-152	8.56	22	L444680-01	WG463166
trans-1,2-Dichloroethene	mg/l	0.450	0.430	89.1	11-160	4.70	23	L444680-01	WG463166
trans-1,3-Dichloropropene	mg/l	0.509	0.477	101.	33-153	6.40	22	L444680-01	WG463166
Trichlorofluoromethane	mg/l	0.628	0.609	125.	10-177	3.15	24	L444680-01	WG463166
Vinyl chloride	mg/l	0.493	0.496	92.9	0-179	0.575	26	L444680-01	WG463166
Xylenes, Total	mg/l	1.28	1.25	85.1	27-151	2.30	23	L444680-01	WG463166

Batch number /Run number / Sample number cross reference

WG463166: R1115548: L444689-01 02
WG463388: R1115728: L444689-01
WG463396: R1116168: L444689-01 02

* * Calculations are performed prior to rounding of reported values .
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Cordilleran Compliance - GJ, CO
Ken Kreie
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report
Level II

L444689

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

February 16, 2010

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Lab #: 178254 Job #: 12440
 Sample Name: Mill1 Co. Lab#:
 Company: Cordilleran, Div. of Olsson Assoc.
 Date Sampled: 1/13/2010
 Container: Dissolved Gas Bottle
 Field/Site Name: 009-2532
 Location: Miller
 Formation/Depth:
 Sampling Point:
 Date Received: 1/14/2010 Date Reported: 2/05/2010

Component	Chemical mol. %	Delta 13C per mil	Delta D per mil	Delta 15N per mil
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.761			
Oxygen -----	0.16			
Nitrogen -----	47.78			
Carbon Dioxide -----	0.14			
Methane -----	50.45	-51.78	-198.6	
Ethane -----	0.622	-27.61		
Ethylene -----	nd			
Propane -----	0.0756	-25.39		
Iso-butane -----	0.0064			
N-butane -----	0.0012			
Iso-pentane -----	0.0007			
N-pentane -----	0.0012			
Hexanes + -----	0.0010			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 524
 Specific gravity, calculated: 0.764

Remarks: Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.59
 *Addition of helium negates the ability to detect native helium or hydrogen.
 ** ethane and propane isotopes obtained online via GC-C-IRMS

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %. Chemical analysis based on standards accurate to within 2%



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Ken Kreie
Olsson Associates - GJ, CO
826 21 1/2 Road

Grand Junction, CO 81505

Report Summary

Monday February 22, 2010

Report Number: L444692

Samples Received: 02/12/10

Client Project:

Description: Miller Domestic

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

John D. Blackman, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

This report may not be reproduced, except in full, without written approval from Environmental Science Corp.

Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ken Kreie
Olsson Associates - GJ, CO
826 21 1/2 Road
Grand Junction, CO 81505

February 22, 2010

Date Received : February 12, 2010
Description : Miller Domestic

Sample ID : MILL 2

Collected By : Stuart Hall
Collection Date : 02/11/10 09:35

ESC Sample # : L444692-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Iron Related Bacteria	Present			BART	02/22/10	1
Sulfate Reducing Bacteria	Absent			BART	02/22/10	1
Slime Forming Bacteria	Present			BART	02/22/10	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 02/22/10 14:41 Printed: 02/22/10 14:41

L444692-01 (IRB) - Approximate IRB Population 9000cfu/ml

L444692-01 (SLYM) - Approximate SLYM Population 12500cfu/ml



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ken Kreie
Olsson Associates - GJ, CO
826 21 1/2 Road
Grand Junction, CO 81505

February 22, 2010

Date Received : February 12, 2010
Description : Miller Domestic

Sample ID : MILL 1

Collected By : Stuart Hall
Collection Date : 02/11/10 10:50

ESC Sample # : L444692-02

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Iron Related Bacteria	Present			BART	02/22/10	1
Sulfate Reducing Bacteria	Absent			BART	02/22/10	1
Slime Forming Bacteria	Present			BART	02/22/10	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 02/22/10 14:41 Printed: 02/22/10 14:41

L444692-02 (IRB) - Approximate IRB Population 2300cfu/ml

L444692-02 (SLYM) - Approximate SLYM Population 12500cfu/ml

Summary of Remarks For Samples Printed
02/22/10 at 14:41:44

TSR Signing Reports: 151
R5 - Desired TAT

Client sends unpreserved vials for all projects; Run BTEXM by 8260 on separate dash. DO NOT
RUSH ALK!!!

Sample: L444692-01 Account: CORCOMGCO Received: 02/12/10 11:20 Due Date: 02/26/10 00:00 RPT Date: 02/22/10 14:41

Sample: L444692-02 Account: CORCOMGCO Received: 02/12/10 11:20 Due Date: 02/19/10 00:00 RPT Date: 02/22/10 14:41



Olsson Associates - GJ, CO
Ken Kreie
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report
Level II

L444692

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

February 22, 2010

Batch number /Run number / Sample number cross reference

: R1125090: L444692-01 02

* * Calculations are performed prior to rounding of reported values .
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Olsson Associates - GJ, CO
Ken Kreie
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report
Level II

L444692

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

February 22, 2010

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Lab #: 179831 Job #: 12538
 Sample Name: MILL2 Co. Lab#:
 Company: Cordilleran, Div. of Olsson Assoc.
 Date Sampled: 2/11/2010
 Container: Dissolved Gas Bottle
 Field/Site Name: 009-2532
 Location: Miller
 Formation/Depth:
 Sampling Point:
 Date Received: 2/12/2010 Date Reported: 2/18/2010

Component	Chemical mol. %	Delta 13C per mil	Delta D per mil	Delta 15N per mil
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.911			
Oxygen -----	2.36			
Nitrogen -----	51.93			
Carbon Dioxide -----	0.18			
Methane -----	44.00	-51.94	-203.5	
Ethane -----	0.565	-27.63		
Ethylene -----	nd			
Propane -----	0.0547			
Iso-butane -----	0.0007			
N-butane -----	0.0007			
Iso-pentane -----	0.0010			
N-pentane -----	0.0014			
Hexanes + -----	nd			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 457

Specific gravity, calculated: 0.794

Remarks: Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.72

*Addition of helium negates the ability to detect native helium or hydrogen.

** ethane isotopes obtained online via GC-C-IRMS

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %. Chemical analysis based on standards accurate to within 2%



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Ken Kreie
Olsson Associates - GJ, CO
826 21 1/2 Road - DO NOT USE
Grand Junction, CO 81505

Report Summary

Tuesday March 16, 2010

Report Number: L448644

Samples Received: 03/10/10

Client Project: 009-2532

Description: Bill Barrett

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Darren Reeder , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ken Kreie
Olsson Associates - GJ, CO
826 21 1/2 Road - DO NOT USE
Grand Junction, CO 81505

March 16, 2010

Date Received : March 10, 2010
Description : Miller Followup

Sample ID : MILL 1

Collected By : Stuart Hall
Collection Date : 03/09/10 11:15

ESC Sample # : L448644-01

Site ID :

Project # : 009-2532

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Methane	2.2	0.10	mg/l	RSK175	03/16/10	10

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

.

Reported: 03/16/10 17:25 Printed: 03/16/10 17:25



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ken Kreie
Olsson Associates - GJ, CO
826 21 1/2 Road - DO NOT USE
Grand Junction, CO 81505

March 16, 2010

Date Received : March 10, 2010
Description : Miller Followup

Sample ID : MILL 3

Collected By : Stuart Hall
Collection Date : 03/09/10 12:00

ESC Sample # : L448644-02

Site ID :

Project # : 009-2532

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Methane	0.55	0.010	mg/l	RSK175	03/12/10	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 03/16/10 17:25 Printed: 03/16/10 17:25



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ken Kreie
Olsson Associates - GJ, CO
826 21 1/2 Road - DO NOT USE
Grand Junction, CO 81505

March 16, 2010

Date Received : March 10, 2010
Description : Miller Followup

Sample ID : TATE 1

Collected By : Stuart Hall
Collection Date : 03/09/10 13:00

ESC Sample # : L448644-03

Site ID :

Project # : 009-2532

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Methane	2.1	0.10	mg/l	RSK175	03/16/10	10

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

.

Reported: 03/16/10 17:25 Printed: 03/16/10 17:25



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ken Kreie
Olsson Associates - GJ, CO
826 21 1/2 Road - DO NOT USE
Grand Junction, CO 81505

March 16, 2010

Date Received : March 10, 2010
Description : Miller Followup

Sample ID : PIPE 1

Collected By : Stuart Hall
Collection Date : 03/09/10 14:00

ESC Sample # : L448644-04

Site ID :

Project # : 009-2532

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Methane	2.6	0.10	mg/l	RSK175	03/16/10	10

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 03/16/10 17:25 Printed: 03/16/10 17:25

Summary of Remarks For Samples Printed
03/16/10 at 17:25:36

TSR Signing Reports: 151
R5 - Desired TAT

Client sends unpreserved vials for all projects; Run BTEXM by 8260 on separate dash. DO NOT
RUSH ALK!!!

Sample: L448644-01 Account: CORCOMGCO Received: 03/10/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/16/10 17:25

Sample: L448644-02 Account: CORCOMGCO Received: 03/10/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/16/10 17:25
changed sample id per client-stuart hall. 3/10/10 JB

Sample: L448644-03 Account: CORCOMGCO Received: 03/10/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/16/10 17:25

Sample: L448644-04 Account: CORCOMGCO Received: 03/10/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/16/10 17:25



YOUR LAB OF CHOICE

Olsson Associates - GJ, CO
Ken Kreie
826 21 1/2 Road - DO NOT USE

Grand Junction, CO 81505

Quality Assurance Report
Level II

L448644

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

March 16, 2010

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed		
		Units	% Rec					
Methane	< .01	mg/l			WG467434	03/12/10 14:31		
Methane	< .01	mg/l			WG467941	03/16/10 13:01		
Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch		
		Known Val	Result					
Methane	mg/l	.339	0.369	109.	70-130	WG467434		
Methane	mg/l	.339	0.387	114.	70-130	WG467941		
Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Methane	mg/l	0.369	0.369	109.	70-130	0.156	25	WG467434
Methane	mg/l	0.392	0.387	116.	70-130	1.27	25	WG467941

Batch number /Run number / Sample number cross reference

WG467434: R1143588: L448644-02
WG467941: R1146749: L448644-01 03 04

* * Calculations are performed prior to rounding of reported values .
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Olsson Associates - GJ, CO
Ken Kreie
826 21 1/2 Road - DO NOT USE

Grand Junction, CO 81505

Quality Assurance Report
Level II

L448644

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

March 16, 2010

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Lab #: 181180 Job #: 12642
 Sample Name: MILL1 Co. Lab#:
 Company: Olsson Associates
 Date Sampled: 3/09/2010
 Container: Dissolved Gas Bottle
 Field/Site Name: Miller Follow-Up
 Location:
 Formation/Depth:
 Sampling Point:
 Date Received: 3/10/2010 Date Reported: 4/14/2010

Component	Chemical mol. %	Delta 13C per mil	Delta D per mil	Delta 15N per mil
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.699			
Oxygen -----	1.93			
Nitrogen -----	41.79			
Carbon Dioxide -----	0.13			
Methane -----	54.58	-51.79	-203.8	
Ethane -----	0.762	-27.64		
Ethylene -----	0.0003			
Propane -----	0.0959	-24.75		
Iso-butane -----	0.0084			
N-butane -----	0.0013			
Iso-pentane -----	nd			
N-pentane -----	nd			
Hexanes + -----	0.0003			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 569

Specific gravity, calculated: 0.749

Remarks: Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.62

*Addition of helium negates the ability to detect native helium or hydrogen.

** ethane and propane isotopes obtained online via GC-C-IRMS

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %. Chemical analysis based on standards accurate to within 2%

Lab #: 181181

Job #: 12642

Sample Name: MILL3

Co. Lab#:

Company: Olsson Associates

Date Sampled: 3/09/2010

Container: Dissolved Gas Bottle

Field/Site Name: Miller Follow-Up

Location:

Formation/Depth:

Sampling Point:

Date Received: 3/10/2010

Date Reported: 4/14/2010

Component	Chemical mol. %	Delta 13C per mil	Delta D per mil	Delta 15N per mil
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	1.27			
Oxygen -----	18.17			
Nitrogen -----	61.74			
Carbon Dioxide -----	3.52			
Methane -----	15.27	-51.26	-186.2	
Ethane -----	0.0279			
Ethylene -----	0.0004			
Propane -----	0.0032			
Iso-butane -----	0.0004			
N-butane -----	nd			
Iso-pentane -----	nd			
N-pentane -----	nd			
Hexanes + -----	0.0004			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 155

Specific gravity, calculated: 0.954

Remarks: Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.77

*Addition of helium negates the ability to detect native helium or hydrogen.

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %. Chemical analysis based on standards accurate to within 2%

Lab #: 181182

Job #: 12642

Sample Name: TATE1

Co. Lab#:

Company: Olsson Associates

Date Sampled: 3/09/2010

Container: Dissolved Gas Bottle

Field/Site Name: Miller Follow-Up

Location:

Formation/Depth:

Sampling Point:

Date Received: 3/10/2010

Date Reported: 4/14/2010

Component	Chemical mol. %	Delta 13C per mil	Delta D per mil	Delta 15N per mil
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.708			
Oxygen -----	1.51			
Nitrogen -----	41.11			
Carbon Dioxide -----	0.14			
Methane -----	55.66	-51.85	-204.8	
Ethane -----	0.765	-27.26		
Ethylene -----	0.0003			
Propane -----	0.0963	-24.72		
Iso-butane -----	0.0084			
N-butane -----	0.0011			
Iso-pentane -----	nd			
N-pentane -----	nd			
Hexanes + -----	0.0003			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 580

Specific gravity, calculated: 0.744

Remarks: Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.64

*Addition of helium negates the ability to detect native helium or hydrogen.

** ethane and propane isotopes obtained online via GC-C-IRMS

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %. Chemical analysis based on standards accurate to within 2%

Lab #: 181183

Job #: 12642

Sample Name: PIPE1

Co. Lab#:

Company: Olsson Associates

Date Sampled: 3/09/2010

Container: Dissolved Gas Bottle

Field/Site Name: Miller Follow-Up

Location:

Formation/Depth:

Sampling Point:

Date Received: 3/10/2010

Date Reported: 4/14/2010

Component	Chemical mol. %	Delta 13C per mil	Delta D per mil	Delta 15N per mil
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.707			
Oxygen -----	1.68			
Nitrogen -----	40.94			
Carbon Dioxide -----	0.14			
Methane -----	55.66	-51.85	-205.4	
Ethane -----	0.767	-27.23		
Ethylene -----	0.0003			
Propane -----	0.0964	-24.66		
Iso-butane -----	0.0083			
N-butane -----	0.0010			
Iso-pentane -----	nd			
N-pentane -----	nd			
Hexanes + -----	0.0003			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 580

Specific gravity, calculated: 0.744

Remarks: Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.64

*Addition of helium negates the ability to detect native helium or hydrogen.

** ethane and propane isotopes obtained online via GC-C-IRMS

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %. Chemical analysis based on standards accurate to within 2%



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Ken Kreie
Olsson Associates - GJ, CO
826 21 1/2 Road
Grand Junction, CO 81505

Report Summary

Tuesday April 20, 2010

Report Number: L454754

Samples Received: 04/17/10

Client Project: 009-2532

Description: Bill Barrett

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

T. Alan Harvill , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences.
Where applicable, sampling conducted by ESC is performed per guidance provided
in laboratory standard operating procedures: 060302, 060303, and 060304.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ken Kreie
Olsson Associates - GJ, CO
826 21 1/2 Road
Grand Junction, CO 81505

April 20, 2010

Date Received : April 17, 2010
Description : Bill Barrett

Sample ID : MILL1

Collected By : Stuart Hall
Collection Date : 04/16/10 10:35

ESC Sample # : L454754-01

Site ID :

Project # : 009-2532

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Methane	4.2	0.10	mg/l	RSK175	04/20/10	10

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 04/20/10 17:00 Printed: 04/20/10 17:01

Summary of Remarks For Samples Printed
04/20/10 at 17:01:02

TSR Signing Reports: 151
R5 - Desired TAT

Client sends unpreserved vials for all projects; Run BTEXM by 8260 on separate dash. DO NOT
RUSH ALK!!!

Sample: L454754-01 Account: CORCOMGCO Received: 04/17/10 09:00 Due Date: 04/23/10 00:00 RPT Date: 04/20/10 17:00



YOUR LAB OF CHOICE

Olsson Associates - GJ, CO
Ken Kreie
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report
Level II

L454754

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

April 20, 2010

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Methane	< .01	mg/l			WG474097	04/20/10 15:38

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Methane	mg/l	.339	0.387	114.	70-130	WG474097

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Methane	mg/l	0.393	0.387	116.	70-130	1.46	25	WG474097

Batch number /Run number / Sample number cross reference

WG474097: R1190334: L454754-01

* * Calculations are performed prior to rounding of reported values .
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Olsson Associates - GJ, CO
Ken Kreie
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report
Level II

L454754

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

April 20, 2010

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Lab #: 184594 Job #: 12854
 Sample Name: MILL 1 Co. Lab#:
 Company: Olsson Associates
 Date Sampled: 4/16/2010
 Container: Dissolved Gas Bottle
 Field/Site Name: Miller Follow-Up
 Location:
 Formation/Depth:
 Sampling Point:
 Date Received: 4/22/2010 Date Reported: 5/26/2010

Component	Chemical mol. %	Delta 13C per mil	Delta D per mil	Delta 15N per mil
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.749			
Oxygen -----	1.74			
Nitrogen -----	39.39			
Carbon Dioxide -----	0.18			
Methane -----	56.94	-51.76	-209.1	
Ethane -----	0.875	-26.93		
Ethylene -----	nd			
Propane -----	0.112	-25.06		
Iso-butane -----	0.0095			
N-butane -----	nd			
Iso-pentane -----	nd			
N-pentane -----	nd			
Hexanes + -----	nd			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 596
 Specific gravity, calculated: 0.740

Remarks: Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.70
 *Addition of helium negates the ability to detect native helium or hydrogen.
 Ethane and propane isotopes obtained online via GC-C-IRMS

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %. Chemical analysis based on standards accurate to within 2%



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Ken Kreie
Olsson Associates - GJ, CO
826 21 1/2 Road
Grand Junction, CO 81505

Report Summary

Thursday May 27, 2010

Report Number: L460792

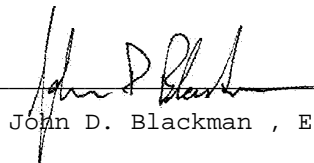
Samples Received: 05/25/10

Client Project:

Description: Miller Follow-up

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


John D. Blackman , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ken Kreie
Olsson Associates - GJ, CO
826 21 1/2 Road
Grand Junction, CO 81505

May 27, 2010

Date Received : May 25, 2010
Description : Miller Follow-up

Sample ID : MILL1

Collected By : Ken Kreie
Collection Date : 05/24/10 13:25

ESC Sample # : L460792-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Methane	10.	0.40	mg/l	RSK175	05/27/10	40

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 05/27/10 16:21 Printed: 05/27/10 16:21

Summary of Remarks For Samples Printed
05/27/10 at 16:21:56

TSR Signing Reports: 151
R5 - Desired TAT

Client sends unpreserved vials for all projects; Run BTEXM by 8260 on separate dash. DO NOT
RUSH ALK!!!

Sample: L460792-01 Account: CORCOMGCO Received: 05/25/10 09:00 Due Date: 06/02/10 00:00 RPT Date: 05/27/10 16:21
Dissolved Methane. Refer to L460796



YOUR LAB OF CHOICE

Olsson Associates - GJ, CO
Ken Kreie
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report
Level II

L460792

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

May 27, 2010

		Laboratory Blank					
Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed	
Methane	< .01	mg/l			WG480462	05/27/10 14:04	
		Laboratory Control Sample					
Analyte	Units	Known Val	Result	% Rec	Limit	Batch	
Methane	mg/l	.339	0.335	98.9	70-130	WG480462	
		Laboratory Control Sample Duplicate					
Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit Batch
Methane	mg/l	0.345	0.335	102.	70-130	2.85	25 WG480462
		Matrix Spike					
Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp Batch
Methane	mg/l	19.8	6.85	.339	95.4	70-130	L460965-03 WG480462
		Matrix Spike Duplicate					
Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit Ref Samp Batch
Methane	mg/l	17.3	19.8	77.3	70-130	13.2	25 L460965-03 WG480462

Batch number /Run number / Sample number cross reference

WG480462: R1235889: L460792-01

* * Calculations are performed prior to rounding of reported values .
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Olsson Associates - GJ, CO
Ken Kreie
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report
Level II

L460792

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

May 27, 2010

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Ken Kreie
Olsson Associates - GJ, CO
826 21 1/2 Road
Grand Junction, CO 81505

Report Summary

Monday June 07, 2010

Report Number: L460796

Samples Received: 05/25/10

Client Project:

Description: Miller Follow up

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

Darren Reeder , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

This report may not be reproduced, except in full, without written approval from ESC Lab Sciences. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ken Kreie
Olsson Associates - GJ, CO
826 21 1/2 Road
Grand Junction, CO 81505

June 07, 2010

Date Received : May 25, 2010
Description : Miller Follow up

Sample ID : MILLI

Collected By : Ken Kreie
Collection Date : 05/24/10 13:25

ESC Sample # : L460796-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Iron Related Bacteria	Present			BART	06/07/10	1
Sulfate Reducing Bacteria	Absent			BART	06/07/10	1
Slime Forming Bacteria	Present			BART	06/07/10	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

.

Reported: 06/07/10 12:19 Printed: 06/07/10 12:19

L460796-01 (IRB) - IRB Population Estimates= 9000 cfu/ml

L460796-01 (SLYM) - SLYM Population Estimates= 700,000 cfu/ml

Summary of Remarks For Samples Printed
06/07/10 at 12:19:25

TSR Signing Reports: 151
R5 - Desired TAT

Client sends unpreserved vials for all projects; Run BTEXM by 8260 on separate dash. DO NOT
RUSH ALK!!!

Sample: L460796-01 Account: CORCOMGCO Received: 05/25/10 09:00 Due Date: 06/02/10 00:00 RPT Date: 06/07/10 12:19
Refer to L460792



Olsson Associates - GJ, CO
Ken Kreie
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report
Level II

L460796

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

June 07, 2010

Batch number /Run number / Sample number cross reference

: R1246193: L460796-01

* * Calculations are performed prior to rounding of reported values .
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



YOUR LAB OF CHOICE

Olsson Associates - GJ, CO
Ken Kreie
826 21 1/2 Road

Grand Junction, CO 81505

Quality Assurance Report
Level II

L460796

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

June 07, 2010

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Lab #: 187956 Job #: 13107
 Sample Name: MILL 1 Co. Lab#:
 Company: Olsson Associates
 Date Sampled: 5/24/2010
 Container: Dissolved Gas Bottle
 Field/Site Name: 009-2532
 Location: Miller Residence
 Formation/Depth:
 Sampling Point:
 Date Received: 6/09/2010 Date Reported: 6/16/2010

Component	Chemical mol. %	Delta 13C per mil	Delta D per mil	Delta 15N per mil
Carbon Monoxide -----	nd			
Hydrogen Sulfide -----	nd			
Helium -----	nd			
Hydrogen -----	nd			
Argon -----	0.657			
Oxygen -----	0.48			
Nitrogen -----	37.26			
Carbon Dioxide -----	0.12			
Methane -----	60.42	-51.87	-208.9	
Ethane -----	0.928	-27.03		
Ethylene -----	nd			
Propane -----	0.124	-24.30		
Iso-butane -----	0.0113			
N-butane -----	0.0017			
Iso-pentane -----	nd			
N-pentane -----	nd			
Hexanes + -----	nd			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 632

Specific gravity, calculated: 0.723

Remarks: Analysis is of gas extracted from water by headspace equilibration. Analysis has been corrected for helium added to create headspace. Helium dilution factor = 0.57

*Addition of helium negates the ability to detect native helium or hydrogen.

** ethane and propane isotope data obtained online via GC-C-IRMS

nd = not detected. na = not analyzed. Isotopic composition of carbon is relative to VPDB. Isotopic composition of hydrogen is relative to VSMOW. Calculations for BTU and specific gravity per ASTM D3588. Chemical compositions are normalized to 100%. Mol. % is approximately equal to vol. %.