

Kerr McGee
Water Well Samples in GWA 318A
Sample Location: KMG-Barclay-3N66W27-Barclay

Twp	Rng	SEC	QtrQtr	API number	OG Well Name	OG Well QQ
3N	66W	27	NWSW	123 24429	Barclay 33-27	NWSW

Owner Name	Barclay Farms	Well Address (if different)	
Address	13017 WCR 30		
	Platteville, CO 80651		

DWR PermitNo	WellDepth	Aquifer	Lat	Long	(Lat/Long in NAD 83)
44369			40.20896	-104.86781	

Field Information

Date	Seq	Conductivity (uS/cm)	pH (su)	Sampler	Comments
3/7/2007	0	1014	9	Becci Treitz	

Laboratory Analysis

SDG	LabSampleNum	Lab Name	Field Sample Name	Data Packet Sent
NQC1052	NQC1052-01	Test America	KMG-Barclay-3N66W27-Barclay	5/31/2007

Parameter	TextResult	Qual	Units	Limit	Method	Dilution
Alkalinity as CaCO3	236		mg/L	10	EPA 310.1	1
Bicarbonate	221		mg/L	10	SM 2320B	1
Calcium	3.10		mg/L	1	SW846 6010B	1
Carbonate	15.6	H	mg/L	10	SM 2320B	1
Chloride	47.7		mg/L	10	EPA 300.0	10
Fluoride	0.827		mg/L	0.1	EPA 300.0	1
Iron	<0.0500		mg/L	0.05	SW846 6010B	1
Magnesium	<1.00		mg/L	1	SW846 6010B	1
Manganese	<0.0150		mg/L	0.015	SW846 6010B	1
Methane	2.220	pH	mg/L	0.026	RSK 175	1
Nitrate-N	<0.100	M8	mg/L	0.1	EPA 300.0	1
Nitrite-N	<0.100		mg/L	0.1	EPA 300.0	1
pH, Lab	8.60	HTI	pH Un	0.1	EPA 150.1	1
Potassium	2.22		mg/L	1	SW846 6010B	1
Selenium	<0.0100		mg/L	0.01	SW846 6010B	1
Sodium	212		mg/L	10	SW846 6010B	10
Specific Conductance	1040		umho/	10	120.1	1
Sulfate	192		mg/L	10	EPA 300.0	10
Total Dissolved Solids	670		mg/L	100	EPA 160.1	1

**RECEIVED**

JUN 7 2007

COGCC

June 5, 2007

Barclay Farms
13017 WCR 30
Platteville, CO 80651

Kerr-McGee Oil & Gas OnShore LP
1999 Broadway, Suite 3700, Denver, Colorado 80202
303-296-3600 • Fax 303-296-3601

RE: Water Supply Sampling**Dear Barclay Farms:**

Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee) contracted LT Environmental, Inc. (LTE) to collect a water sample from your water well in Weld County, Colorado on March 7, 2007. The sampling activities were conducted per requirements set forth by the Colorado Oil and Gas Conservation Commission (COGCC).

The water sample was collected in laboratory-supplied containers and submitted to TestAmerica Analytical Testing Corporation (Test America) in Nashville, Tennessee and Isotech in Champaign, Illinois for analysis of various water quality parameters. The results from TestAmerica are listed in Table 1 and the results from Isotech are listed in Table 2. The laboratory analytical reports are provided as attachments to this letter.

For comparison purposes, a regulatory limit for each analyte is included where applicable. The regulatory limit shown is the most stringent of the Colorado Primary Drinking Water Standards, Colorado Groundwater Standards, or Colorado Secondary Drinking Water Standards. The regulatory limit presented may not be the applicable standard for your water use.

Sample ID: KMG-Barclay-3N66W27-Barclay**Sample Date: 3/7/2007****Laboratory Measurements:****Table 1: TestAmerica Data (Water)**

Analyte	Result	Regulatory Limit	Units
pH	8.60	6.5-8.5	pH Units
Conductivity	1040	NA	umhos/cm
Methane	2.220	NA	mg/L
Alkalinity as CaCO3	236	NA	mg/L
Bicarbonate	221	NA	mg/L
Carbonate	15.6	NA	mg/L
Calcium	3.10	NA	mg/L
Chloride	47.7	250	mg/L

Analyte	Result	Regulatory Limit	Units
Fluoride	0.827	2.0	mg/L
Iron	<0.0500	0.3	mg/L
Magnesium	<1.00	NA	mg/L
Manganese	<0.0150	0.05	mg/L
Nitrate as N	<0.100	10	mg/L
Nitrite as N	<0.100	1	mg/L
Potassium	2.22	NA	mg/L
Selenium	<0.0100	0.02	mg/L
Sodium	212	NA	mg/L
Sulfate	192	250	mg/L
TDS	670	500	mg/L

Table 2: Isotech Data (Gas Composition and Isotopes) Sample Date: 3/7/2007

Analyte	Result	Regulatory Limits	Units
Helium	NA0.007	NA	%
Hydrogen	NA0	NA	%
Argon	1.07	NA	%
Oxygen	15.46	NA	%
Carbon Dioxide	0.049	NA	%
Nitrogen	79.43	NA	%
Carbon Monoxide	0	NA	%
Methane	3.36	NA	%
Ethane	0.328	NA	%
Propane	0.167	NA	%
iso-butane	0.046	NA	%
n-butane	0.049	NA	%
iso-pentane	0.0197	NA	%
n-pentane	0.0097	NA	%
Hexanes	0.0057	NA	%
δ^{13} of Methane	-45.49	NA	per mil
δD of Methane	-232	NA	per mil
δ^{13} of Ethane	NA-29.25	NA	per mil

Analyte	Result	Regulatory Limits	Units
δ^{13} of Propane	NA-26.41	NA	per mil

Notes:

NA – Not Applicable

umhos/cm – micromhos per centimeter

N – Nitrogen

TDS – Total Dissolved Solids

mg/L – milligrams per Liter (~ parts per million)

ND – Not Detected above laboratory reporting limit

Dissolved methane was detected in your well at a concentration of 2.220 mg/L. Attached is a copy of a document entitled "How Well Do You Know Your Water Well?", which is available on the COGCC website (<http://oil-gas.state.co.us/>). Page 14 contains a discussion of methane in groundwater, and it states that, "methane levels up to 7 mg/L usually are not a concern but should be monitored for changes."

As per COGCC, methane alone is physiologically inert and non-toxic to humans. The presence of methane in drinking water does not present a known health hazard to humans or animals by ingestion. Methane gas dissolved in water "exsolves" when exposed to the atmosphere and dissipates rapidly because it is lighter than air. If the methane occurs at a high enough concentration and if it is allowed to accumulate in a confined space, such as a well pit, crawl space, closet, etc., then an explosion hazard could exist.

The laboratory data indicates that the methane gas is thermogenic. A copy of this letter and the associated laboratory reports is also being provided to Randall Ferguson, Environmental Protection Specialist with the COGCC (303-894-2100 X118). The COGCC may investigate the source of the thermogenic gas in the water sample.

Kerr-McGee appreciates your cooperation in this sampling effort. If you have any questions, please contact me at 720-264-2715.

Sincerely,

Kerr-McGee Oil & Gas Onshore LP



Paul D. Schneider, P.G.

Staff Environmental & Regulatory Analyst

Attachments

cc: Randall Ferguson, COGCC ✓

March 19, 2007

4:47:03PM

Client: LT Environmental Inc. (7724)
4600 West 60th Avenue
Arvada, CO 80003
Attn: Becci Treitz

Work Order: NQC1052
Project Name: KMG06205
Project Nbr: KMG06205 / KMG06205.21
P/O Nbr:
Date Received: 03/08/07

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
KMG-Barclay-3N66W27-Barclay	NQC1052-01	03/07/07 14:55

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accreditation.

This material is intended only for the use of the individual(s) or entity to whom it is addressed, and may contain information that is privileged and confidential. If you are not the intended recipient, or the employee or agent responsible for delivering this material to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this material is strictly prohibited. If you have received this material in error, please notify us immediately at 615-726-0177.

Additional Laboratory Comments:

See Data Qualifiers and Definitions at end of this report for further explanation.

Other anomalies noted at sample log-in are outlined in accompanying LF-1 form (Cooler Receipt) and/or CSF-12 (Sample nonconformance/COC revision form).

For batch 7031522 on chloride and sulfate, there are no results reported for MS/MSD. The sample used NQC 1052.01 required dilution due to the sample matrix. Because of this, the spike compounds were diluted below the detection limit.

Colorado Certification Number: No Cert. No.

The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

Estimated uncertainty is available upon request.

This report has been electronically signed.

Report Approved By:



Dorothy Roberts

Project Management

Client LT Environmental Inc. (7724)
4600 West 60th Avenue
Arvada, CO 80003
Attn Becci Treitz

Work Order: NQC1052
Project Name: KMG06205
Project Number: KMG06205 / KMG06205.21
Received: 03/08/07 07:45

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date /Time	Method	Batch
Sample ID: NQC1052-01 (KMG-Barclay-3N66W27-Barclay - Ground Water) Sampled: 03/07/07 14:55								
General Chemistry Parameters								
Alkalinity, Total (CaCO ₃)	236		mg/L	10.0	1	03/08/07 15:13	EPA 310.1	7031508
Bicarbonate Alkalinity	221		mg/L	10.0	1	03/08/07 15:13	SM 2320B	7031510
Carbonate	15.6	H	mg/L	10.0	1	03/08/07 15:13	SM 2320B	7031511
Chloride	47.7		mg/L	10.0	10	03/15/07 06:52	EPA 300.0	7031522
Fluoride	0.827		mg/L	0.100	1	03/08/07 19:00	EPA 300.0	7031522
Nitrate as N	ND	M8	mg/L	0.100	1	03/08/07 19:00	EPA 300.0	7031522
Nitrite as N	ND		mg/L	0.100	1	03/08/07 19:00	EPA 300.0	7031522
pH	8.60	HTI	pH Units	0.100	1	03/09/07 11:12	EPA 150.1	7031678
Specific conductance	1040		umho/cm	10.0	1	03/15/07 11:48	120.1	7032645
Sulfate	192		mg/L	10.0	10	03/16/07 09:04	EPA 300.0	7031522
Total Dissolved Solids	670		mg/L	100	1	03/10/07 15:20	EPA 160.1	7031497
Temperature of pH determination	23.4	HTI	°C	NA	1	03/09/07 11:10	EPA 170.1	7031680
Methane, Ethane, and Ethene by GC								
Methane	2220	pH	ug/L	26.0	1	03/09/07 15:53	RSK 175	7031670
Surr: Acetylene (76-122%)	93 %					03/09/07 15:53	RSK 175	7031670
Dissolved Metals by EPA Method 6010B								
Calcium	3.10		mg/L	1.00	1	03/12/07 21:06	SW846 6010B	7032046
Iron	ND		mg/L	0.0500	1	03/12/07 21:06	SW846 6010B	7032046
Magnesium	ND		mg/L	1.00	1	03/12/07 21:06	SW846 6010B	7032046
Manganese	ND		mg/L	0.0150	1	03/12/07 21:06	SW846 6010B	7032046
Potassium	2.22		mg/L	1.00	1	03/12/07 21:06	SW846 6010B	7032046
Selenium	ND		mg/L	0.0100	1	03/12/07 21:06	SW846 6010B	7032046
Sodium	212		mg/L	10.0	10	03/13/07 10:17	SW846 6010B	7032046

Client LT Environmental Inc. (7724)
4600 West 60th Avenue
Arvada, CO 80003
Attn Becci Treitz

Work Order: NQC1052
Project Name: KMG06205
Project Number: KMG06205 / KMG06205.21
Received: 03/08/07 07:45

SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracted	Extracted Vol	Date	Analyst	Extraction Method
Dissolved Metals by EPA Method 6010B							
SW846 6010B	7032046	NQC1052-01	50.00	50.00	03/12/07 08:35	JMR	EPA 3010A Dissolve
SW846 6010B	7032046	NQC1052-01	50.00	50.00	03/12/07 08:35	JMR	EPA 3010A Dissolve
SW846 6010B	7032046	NQC1052-01	50.00	50.00	03/12/07 08:35	JMR	EPA 3010A Dissolve
SW846 6010B	7032046	NQC1052-01	50.00	50.00	03/12/07 08:35	JMR	EPA 3010A Dissolve
SW846 6010B	7032046	NQC1052-01	50.00	50.00	03/12/07 08:35	JMR	EPA 3010A Dissolve
SW846 6010B	7032046	NQC1052-01	50.00	50.00	03/12/07 08:35	JMR	EPA 3010A Dissolve
SW846 6010B	7032046	NQC1052-01	50.00	50.00	03/12/07 08:35	JMR	EPA 3010A Dissolve

Client LT Environmental Inc. (7724)
4600 West 60th Avenue
Arvada, CO 80003
Attn Becci Treitz

Work Order: NQC1052
Project Name: KMG06205
Project Number: KMG06205 / KMG06205.21
Received: 03/08/07 07:45

PROJECT QUALITY CONTROL DATA

Blank

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
General Chemistry Parameters						
7031497-BLK1						
Total Dissolved Solids	<5.00		mg/L	7031497	7031497-BLK1	03/10/07 15:20
7031508-BLK1						
Alkalinity, Total (CaCO ₃)	<5.00		mg/L	7031508	7031508-BLK1	03/08/07 15:13
7031510-BLK1						
Bicarbonate Alkalinity	<5.00		mg/L	7031510	7031510-BLK1	03/08/07 15:13
7031522-BLK1						
Chloride	<0.500		mg/L	7031522	7031522-BLK1	03/15/07 05:59
Fluoride	<0.0500		mg/L	7031522	7031522-BLK1	03/08/07 14:59
Nitrate as N	0.0650		mg/L	7031522	7031522-BLK1	03/08/07 14:59
Nitrite as N	<0.0500		mg/L	7031522	7031522-BLK1	03/08/07 14:59
Sulfate	<0.500		mg/L	7031522	7031522-BLK1	03/08/07 14:59
7032645-BLK1						
Specific conductance	<10.0		umho/cm	7032645	7032645-BLK1	03/15/07 11:48
Methane, Ethane, and Ethene by GC						
7031670-BLK1						
Methane	<5.00		ug/L	7031670	7031670-BLK1	03/09/07 12:14
Surrogate: Acetylene	97%			7031670	7031670-BLK1	03/09/07 12:14
Dissolved Metals by EPA Method 6010B						
7032046-BLK1						
Calcium	<0.100		mg/L	7032046	7032046-BLK1	03/13/07 10:05
Iron	<0.0430		mg/L	7032046	7032046-BLK1	03/12/07 20:20
Magnesium	<0.100		mg/L	7032046	7032046-BLK1	03/12/07 20:20
Manganese	<0.00500		mg/L	7032046	7032046-BLK1	03/12/07 20:20
Potassium	<0.500		mg/L	7032046	7032046-BLK1	03/12/07 20:20
Selenium	<0.00500		mg/L	7032046	7032046-BLK1	03/12/07 20:20
Sodium	<0.600		mg/L	7032046	7032046-BLK1	03/12/07 20:20

Client LT Environmental Inc. (7724)
4600 West 60th Avenue
Arvada, CO 80003
Attn Becci Treitz

Work Order: NQC1052
Project Name: KMG06205
Project Number: KMG06205 / KMG06205.21
Received: 03/08/07 07:45

PROJECT QUALITY CONTROL DATA

Duplicate

Analyte	Orig. Val.	Duplicate	Q	Units	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/ Time
General Chemistry Parameters									
7031497-DUP1									
Total Dissolved Solids	28.0	29.0		mg/L	4	20	7031497	NQC1059-05	03/10/07 15:20
7031508-DUP1									
Alkalinity, Total (CaCO ₃)	646	649		mg/L	0.5	20	7031508	NQC1059-01	03/08/07 15:13
7031510-DUP1									
Bicarbonate Alkalinity	416	418		mg/L	0.5	20	7031510	NQC1061-01	03/08/07 15:13
7031522-DUP1									
Chloride	47.7	47.9		mg/L	0.4	20	7031522	NQC1052-01	03/15/07 07:06
Fluoride	0.827	0.830		mg/L	0.4	19	7031522	NQC1052-01	03/08/07 19:43
Nitrate as N	ND	ND		mg/L		20	7031522	NQC1052-01	03/08/07 19:43
Nitrite as N	ND	ND		mg/L		20	7031522	NQC1052-01	03/08/07 19:43
Sulfate	192	192		mg/L	0	20	7031522	NQC1052-01	03/16/07 09:21
7031678-DUP1									
pH	6.80	6.80		pH Units	0	200	7031678	NQC1040-03	03/09/07 11:12
7032645-DUP1									
Specific conductance	456	455		umho/cm	0.2	10	7032645	NQC1639-01	03/15/07 11:48

Client LT Environmental Inc. (7724)
4600 West 60th Avenue
Arvada, CO 80003
Attn Becci Treitz

Work Order: NQC1052
Project Name: KMG06205
Project Number: KMG06205 / KMG06205.21
Received: 03/08/07 07:45

PROJECT QUALITY CONTROL DATA LCS

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/ Time
General Chemistry Parameters								
7031497-BS1								
Total Dissolved Solids	100	103		ug/mL	103%	90 - 110	7031497	03/10/07 15:20
7031508-BS1								
Alkalinity, Total (CaCO ₃)	100	98.6		ug/mL	99%	90 - 110	7031508	03/08/07 15:13
7031510-BS1								
Bicarbonate Alkalinity	100	98.6		ug/mL	99%	90 - 110	7031510	03/08/07 15:13
7031522-BS1								
Chloride	3.00	2.97		ug/mL	99%	90 - 110	7031522	03/15/07 06:08
Fluoride	2.00	2.00		ug/mL	100%	90 - 110	7031522	03/08/07 18:16
Nitrate as N	3.00	3.01		ug/mL	100%	90 - 110	7031522	03/08/07 18:16
Nitrite as N	3.00	3.25		ug/mL	108%	90 - 110	7031522	03/08/07 18:16
Sulfate	15.0	14.5		ug/mL	97%	90 - 110	7031522	03/08/07 18:16
7032645-BS1								
Specific conductance	1410	1390		umho/cm	99%	90 - 110	7032645	03/15/07 11:48
Methane, Ethane, and Ethene by GC								
7031670-BS1								
Methane	1330	1350		ug/L	102%	85 - 120	7031670	03/09/07 13:49
Surrogate: Acetylene	4320	3840			89%	76 - 122	7031670	03/09/07 13:49
Dissolved Metals by EPA Method 6010B								
7032046-BS1								
Calcium	5.00	4.94		mg/L	99%	80 - 120	7032046	03/13/07 10:11
Iron	1.00	1.04		mg/L	104%	80 - 120	7032046	03/12/07 20:25
Magnesium	5.00	5.12		mg/L	102%	80 - 120	7032046	03/12/07 20:25
Manganese	0.500	0.516		mg/L	103%	80 - 120	7032046	03/12/07 20:25
Potassium	5.00	4.80		mg/L	96%	80 - 120	7032046	03/12/07 20:25
Selenium	0.0500	0.0580		mg/L	116%	80 - 120	7032046	03/12/07 20:25
Sodium	5.00	5.10		mg/L	102%	80 - 120	7032046	03/12/07 20:25

Client LT Environmental Inc. (7724)
4600 West 60th Avenue
Arvada, CO 80003
Attn Becci Treitz

Work Order: NQC1052
Project Name: KMG06205
Project Number: KMG06205 / KMG06205.21
Received: 03/08/07 07:45

PROJECT QUALITY CONTROL DATA

LCS Dup

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/ Time
General Chemistry Parameters												
7031497-BSD1												
Total Dissolved Solids		118	L1	ug/mL	100	118%	90 - 110	14	20	7031497		03/10/07 15:20
7031508-BSD1												
Alkalinity, Total (CaCO3)		99.2		ug/mL	100	99%	90 - 110	0.6	20	7031508		03/08/07 15:13
7031510-BSD1												
Bicarbonate Alkalinity		99.2		ug/mL	100	99%	90 - 110	0.6	20	7031510		03/08/07 15:13
Dissolved Metals by EPA Method 6010B												
7032046-BSD1												
Calcium		5.79		mg/L	5.00	116%	80 - 120	16	20	7032046		03/12/07 20:30
Iron		1.04		mg/L	1.00	104%	80 - 120	0	20	7032046		03/12/07 20:30
Magnesium		5.13		mg/L	5.00	103%	80 - 120	0.2	20	7032046		03/12/07 20:30
Manganese		0.518		mg/L	0.500	104%	80 - 120	0.4	20	7032046		03/12/07 20:30
Potassium		4.73		mg/L	5.00	95%	80 - 120	1	20	7032046		03/12/07 20:30
Selenium		0.0568		mg/L	0.0500	114%	80 - 120	2	20	7032046		03/12/07 20:30
Sodium		5.15		mg/L	5.00	103%	80 - 120	1	20	7032046		03/12/07 20:30

Client LT Environmental Inc. (7724)
4600 West 60th Avenue
Arvada, CO 80003
Attn Becci Treitz

Work Order: NQC1052
Project Name: KMG06205
Project Number: KMG06205 / KMG06205.21
Received: 03/08/07 07:45

PROJECT QUALITY CONTROL DATA

Matrix Spike

Analyte	Orig. Val.	MS Val	Q	Units	Spike Conc	% Rec.	Target Range	Batch	Sample Spiked	Analyzed Date/ Time
General Chemistry Parameters										
7031508-MS1										
Alkalinity, Total (CaCO3)	394	488		ug/mL	100	94%	90 - 110	7031508	NQC1059-02	03/08/07 15:13
7031510-MS1										
Bicarbonate Alkalinity	450	550		ug/mL	100	100%	80 - 120	7031510	NQC1068-01	03/08/07 15:13
7031522-MS1										
Chloride	47.7	0.00	H2,	ug/mL	3.00	-1590%	80 - 120	7031522	NQC1052-01	03/16/07 11:28
Fluoride	0.827	2.84		ug/mL	2.00	101%	80 - 120	7031522	NQC1052-01	03/08/07 19:14
Nitrate as N	ND	2.32	M8	ug/mL	3.00	77%	80 - 120	7031522	NQC1052-01	03/08/07 19:14
Nitrite as N	ND	3.36		ug/mL	3.00	112%	80 - 120	7031522	NQC1052-01	03/08/07 19:14
Sulfate	192	0.00	H2,	ug/mL	15.0	-1280%	80 - 120	7031522	NQC1052-01	03/16/07 11:28
7032645-MS1										
Specific conductance	1040	1140		umho/cm	101	99%	0 - 200	7032645	NQC1052-01	03/15/07 11:48
Methane, Ethane, and Ethene by GC										
7031670-MS1										
Methane	897	2260		ug/L	1330	102%	60 - 141	7031670	NQC1035-01	03/09/07 13:39
Surrogate: Acetylene		1860		ug/L	2160	86%	76 - 122	7031670	NQC1035-01	03/09/07 13:39
Dissolved Metals by EPA Method 6010B										
7032046-MS1										
Iron	11.4	12.5		mg/L	1.00	110%	75 - 125	7032046	NQC1059-01	03/12/07 21:15
Manganese	10.8	11.4		mg/L	0.500	120%	75 - 125	7032046	NQC1059-01	03/13/07 10:28
Selenium	ND	0.0581		mg/L	0.0500	116%	75 - 125	7032046	NQC1059-01	03/12/07 21:15

Client LT Environmental Inc. (7724)
4600 West 60th Avenue
Arvada, CO 80003
Attn Becci Treitz

Work Order: NQC1052
Project Name: KMG06205
Project Number: KMG06205 / KMG06205.21
Received: 03/08/07 07:45

PROJECT QUALITY CONTROL DATA

Matrix Spike Dup

Analyte	Orig. Val.	Duplicate	Q	Units	Spike Conc	% Rec.	Target Range	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
General Chemistry Parameters												
7031508-MSD1												
Alkalinity, Total (CaCO3)	394	491		ug/mL	100	97%	90 - 110	0.6	20	7031508	NQC1059-02	03/08/07 15:13
7031510-MSD1												
Bicarbonate Alkalinity	450	548		ug/mL	100	98%	80 - 120	0.4	20	7031510	NQC1068-01	03/08/07 15:13
7031522-MSD1												
Chloride	47.7	0.00	H2	ug/mL	3.00	-1590%	80 - 120		20	7031522	NQC1052-01	03/16/07 11:28
Fluoride	0.827	2.84		ug/mL	2.00	101%	80 - 120	0	19	7031522	NQC1052-01	03/08/07 19:29
Nitrate as N	ND	2.38	M8	ug/mL	3.00	79%	80 - 120	3	20	7031522	NQC1052-01	03/08/07 19:29
Nitrite as N	ND	3.35		ug/mL	3.00	112%	80 - 120	0.3	20	7031522	NQC1052-01	03/08/07 19:29
Sulfate	192	0.00	H2	ug/mL	15.0	-1280%	80 - 120		20	7031522	NQC1052-01	03/08/07 19:29
7032645-MSD1												
Specific conductance	1040	1140		umho/cm	101	99%	0 - 200	0	10	7032645	NQC1052-01	03/15/07 11:48
Methane, Ethane, and Ethene by GC												
7031670-MSD1												
Methane	897	2350		ug/L	1330	109%	60 - 141	4	29	7031670	NQC1035-01	03/09/07 13:42
Surrogate Acetylene		1850		ug/L	2160	86%	76 - 122			7031670	NQC1035-01	03/09/07 13:42
Dissolved Metals by EPA Method 6010B												
7032046-MSD1												
Iron	11.4	12.2		mg/L	1.00	80%	75 - 125	2	20	7032046	NQC1059-01	03/12/07 21:20
Manganese	10.8	11.0	MHA	mg/L	0.500	40%	75 - 125	4	20	7032046	NQC1059-01	03/13/07 10:31
Selenium	ND	0.0575		mg/L	0.0500	115%	75 - 125	1	20	7032046	NQC1059-01	03/12/07 21:20

Client LT Environmental Inc. (7724)
4600 West 60th Avenue
Arvada, CO 80003
Attn Becci Treitz

Work Order: NQC1052
Project Name: KMG06205
Project Number: KMG06205 / KMG06205.21
Received: 03/08/07 07:45

CERTIFICATION SUMMARY

TestAmerica - Nashville, TN

Method	Matrix	AIHA	Nelac	Colorado
120.1	Water			
EPA 150.1	Water	N/A	X	
EPA 160.1	Water	N/A	X	
EPA 170.1	Water	N/A		
EPA 300.0	Water	N/A	X	
EPA 310.1	Water	N/A	X	
RSK 175	Water	N/A	X	
SM 2320B	Water	N/A		
SW846 6010B	Water	N/A	X	N/A

Client LT Environmental Inc. (7724)
4600 West 60th Avenue
Arvada, CO 80003
Attn Becci Treitz

Work Order: NQC1052
Project Name: KMG06205
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Received: 03/08/07 07:45

DATA QUALIFIERS AND DEFINITIONS

H Sample analysis performed past method-specified holding time.
H2 Initial analysis within holding time. Reanalysis for the required dilution or confirmation was past holding time.
HTI The holding time for this test is immediate. The laboratory measurement, therefore, may not be suitable for compliance purposes.
L1 Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above acceptance limits.
M8 The MS and/or MSD were below the acceptance limits. See Blank Spike (LCS).
MHA Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
MNR No results were reported for the MS/MSD. The sample used for the MS/MSD required dilution due to the sample matrix. Because of this, the spike compounds were diluted below the detection limit.
pH pH >2
ND Not detected at the reporting limit (or method detection limit if shown)

METHOD MODIFICATION NOTES



Nashville Division

COOLER RECEIPT FORM

BC#



NQC1052

Cooler Received/Opened On 03/08/2007 @ 0745

1. Indicate the Airbill Tracking Number (last 4 digits for Fedex only) and Name of Courier below: 41697

Fed-Ex

2. Temperature of representative sample or temperature blank when opened: 1.7 Degrees Celsius
(indicate IR Gun ID#)

Raynger ST

3. Were custody seals on outside of cooler?..... YES ☒ NO ☒ NA ☐

a. If yes, how many and where: NA

4. Were the seals intact, signed, and dated correctly?..... YES ☐ NO ☒ NA ☐

5. Were custody papers inside cooler?..... YES ☒ NO ☐ NA ☐

I certify that I opened the cooler and answered questions 1-5 (initial)..... PM

6. Were custody seals on containers: YES ☐ NO ☒ and Intact YES ☐ NO ☒ NA ☐

were these signed, and dated correctly?..... YES ☐ NO ☒ NA ☐

7. What kind of packing material used? Bubblewrap Peanuts Vermiculite Foam Insert

Plastic bag Paper Other _____ None

8. Cooling process: Ice Ice-pack Ice (direct contact) Dry Ice Other None

9. Did all containers arrive in good condition (unbroken)?..... YES ☒ NO ☐ NA ☐

10. Were all container labels complete (#, date, signed, pres., etc)?..... YES ☒ NO ☐ NA ☐

11. Did all container labels and tags agree with custody papers?..... YES ☒ NO ☐ NA ☐

12. a. Were VOA vials received?..... YES ☒ NO ☐ NA ☐

b. Was there any observable head space present in any VOA vial?..... YES ☐ NO ☒ NA ☐

I certify that I unloaded the cooler and answered questions 6-12 (initial)..... [Signature]

13. a. On preserved bottles did the pH test strips suggest that preservation reached the correct pH level? YES ☐ NO ☒ NA ☐

b. Did the bottle labels indicate that the correct preservatives were used?..... YES ☒ NO ☐ NA ☐

If preservation in-house was needed, record standard ID of preservative used here _____

14. Was residual chlorine present?..... YES ☐ NO ☒ NA ☐

I certify that I checked for chlorine and pH as per SOP and answered questions 13-14 (initial)..... JL

15. Were custody papers properly filled out (ink, signed, etc)?..... YES ☒ NO ☐ NA ☐

16. Did you sign the custody papers in the appropriate place?..... YES ☒ NO ☐ NA ☐

17. Were correct containers used for the analysis requested?..... YES ☒ NO ☐ NA ☐

18. Was sufficient amount of sample sent in each container?..... YES ☒ NO ☐ NA ☐

I certify that I entered this project into LIMS and answered questions 15-18 (initial)..... JL

I certify that I attached a label with the unique LIMS number to each container (initial)..... JL

19. Were there Non-Conformance issues at login YES NO Was a PIPE generated YES NO # _____

BIS = Broken in shipment
Cooler Receipt Form

LF-1
End of Form

Revised 3/9/06

TEST AMERICA

2690 FOSTER CREIGHTON, NASHVILLE, TN 37204 PHONE 600-765-0980 FAX# 616-726-1404

- ☐ 7602 Commerce Drive, Watertown, WI 53094 Phone 800-833-7036
- ☐ 704 Enterprise Drive, Cedar Falls, IA 50613 Phone 319-277-2401
- ☐ 14500 Trinity Blvd., Suite 106, Fort Worth, TX 76155 Phone 817-571-6600
- ☐ 3601 South Dixie Drive, Dayton, OH 45439 Phone 800-577-9039
- ☐ 1380 Buckhorn Parkway, Buffalo Grove, IL 60089 Phone 847-868-7766
- ☐ 1110 Elston Drive, Suite A, Colorado Springs, CO 80907 Phone 719-593-9911
- ☐ Other _____

Customer Company

LT Environmental, Inc.

4600 West 60th Avenue

Arvada, CO 80003

lyreitz@ltenv.com

TELEPHONE

FAX

(303) 433-9788 (303) 433-1432

TURNDOWN TIME (CALENDAR DAYS)

☒ STANDARD (10 DAY)

☐ 5 DAYS

☐ 3 DAYS

☐ 2 DAYS

☐ 24 HOURS

☐ RESULTS NEEDED ON WEEKEND

TEMPERATURE ON RECEIPT C°

SPECIAL INSTRUCTIONS OR NOTES :

No preservatives, Lab filter

NAC1052

03/19/07 23.59

NOTE: ADJUST pH (Standard and Cyt)

PRODUCT (CONJUGATE) Requested by

Company Name

ORIGINAL INK PRINT (If Ink, handwritten)

Sample Name (if any)

Chris Purcell

Lab Reference

REQUESTED ANALYSIS if more than one method is listed, circle one

Container PID Readings or Laboratory Notes

LAB USE ONLY	SAMPLING		MATERIAL	PRESERVATIVE				NO OF CONT.
	DATE	TIME		HCL	H+HCl	H+HCl	OTHER	

KMG-Barclay-3N6GW27-Barclay

3/19/07

GW

X

5

<input checked="" type="checkbox"/>	Dissolved Metals (Calcium, Magnesium, Manganese, Potassium, Selenium, Sodium, Iron) SW 6010/6020 (LAB FILTERED)
<input checked="" type="checkbox"/>	Dissolved Methane RSK 173
<input checked="" type="checkbox"/>	Major Anions (Chloride, fluoride) EPA 300.0 or SW4500
<input checked="" type="checkbox"/>	HCO ₃ , CO ₃ (Alkalinity) EPA 300
<input checked="" type="checkbox"/>	Nitrate, Nitrite, Sulfate EPA 300.0 or SW4500
<input checked="" type="checkbox"/>	TDS 160.1
<input checked="" type="checkbox"/>	Specific Conductance 120.1
<input checked="" type="checkbox"/>	pH EPA 150.1

NAC1052

Requested by (Signature)

Received by (Signature)

Date

1610

Requested by (Signature)

Received by (Signature)

Date

3/19/07

Requested by (Signature)

Received by (Signature)

Date

03/19/07

DISTRIBUTION: Whole with test report. Given to Field Person and Put in Cooler

03/19/07



ISOTECH[®]

Web Page www.isotechlabs.com Email mail@isotechlabs.com

Isotech Laboratories, Inc. 1308 Parkland Court, Champaign IL 61821-1826 Telephone (217) 398-3490 Fax (217) 398-3493

Lab #: 114270 Job #: 8236
Sample Name/Number: KMG-Barclay-3N66W27-barclay
Company: LT Environmental
Date Sampled: 3/07/2007
Container: Round Plastic Bottle
Field/Site Name: KMG 06205.21
Location:
Formation/Depth:
Sampling Point:
Date Received: 3/26/2007 Date Reported: 4/19/2007

Component	Chemical mol. %	Chemical	Delta 13C per mil	Delta D per mil	Delta 15N per mil
		Air Free vol. %			
Carbon Monoxide -----	nd	nd			
Hydrogen Sulfide -----	nd	nd			
Helium -----	0.0070	0.027			
Hydrogen -----	nd	nd			
Argon -----	1.07	1.45			
Oxygen -----	15.46				
Nitrogen -----	79.42	83.10			
Carbon Dioxide -----	0.05	0.19			
Methane -----	3.36	12.82	-45.49	-232.0	
Ethane -----	0.33	1.26	-29.25		
Ethylene -----	nd	nd			
Propane -----	0.17	0.65	-26.41		
Iso-butane -----	0.046	0.18			
N-butane -----	0.049	0.19			
Iso-pentane -----	0.020	0.076			
N-pentane -----	0.0097	0.037			
Hexanes + -----	0.0057	0.022			

Total BTU/cu.ft. dry @ 60deg F & 14.7psia, calculated: 49
Specific gravity, calculated: 0.982

Remarks:

carbon isotopes obtained online via GC-C-IRMS
hydrogen isotopes obtained online via GC-P-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 percent. Mol. % is approximately equal to vol. %