

WORK ORDER Summary

Evergreen Analytical, Inc.

08-3556

Rpt To: John Axelson

Email To: john.axelson@state.co.us

Colorado Oil & Gas Conservation
Comm.9203 E. 155th Dr
Brighton, CO 80602
(303) 637-7178

5/23/2008 3:30:33 PM

Client Project ID: Markham WW

QC Level: LEVEL I+

Comments Report EDD and PDF.

Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Test Code	Test Name	Hold	MS	Date Due	Hold Time
08-3556-01A	Markham WW	Groundwater	5/23/08 1000	5/23/08	8021_W *	8021: BTEX	<input type="checkbox"/>	<input type="checkbox"/>	5/29/08	6/06/08
08-3556-01B	Markham WW	Groundwater	5/23/08 1000	5/23/08	200.7_T *	200.7: Total Metals	<input type="checkbox"/>	<input type="checkbox"/>	6/09/08	11/19/08
08-3556-01B	Markham WW	Groundwater	5/23/08 1000	5/23/08	200.8_TR *	200.8: Total Metals	<input type="checkbox"/>	<input type="checkbox"/>	6/09/08	11/19/08
08-3556-01C	Markham WW	Groundwater	5/23/08 1000	5/23/08	ANIONS_NonDW *	300.0: Anions by IC	<input type="checkbox"/>	<input type="checkbox"/>	6/09/08	5/25/08
08-3556-01C	Markham WW	Groundwater	5/23/08 1000	5/23/08	C/A_BAL	Cation / Anion Balance calculation	<input type="checkbox"/>	<input type="checkbox"/>	6/09/08	
08-3556-01D	Markham WW	Groundwater	5/23/08 1000	5/23/08	MEEP_W *	RSK175M: Methane	<input type="checkbox"/>	<input type="checkbox"/>	6/09/08	6/06/08
08-3556-01E	Markham WW	Groundwater	5/23/08 1000	5/23/08	F_W	Fluoride	<input type="checkbox"/>	<input type="checkbox"/>	6/09/08	6/20/08
08-3556-01F	Markham WW	Groundwater	5/23/08 1000	5/23/08	ALK_WGRP *	Alkalinity	<input type="checkbox"/>	<input type="checkbox"/>	6/09/08	6/06/08
08-3556-01F	Markham WW	Groundwater	5/23/08 1000	5/23/08	COND_W	Specific Conductance @ 25°C	<input type="checkbox"/>	<input type="checkbox"/>	6/09/08	6/20/08
08-3556-01F	Markham WW	Groundwater	5/23/08 1000	5/23/08	PH_DW	E150.1 pH	<input type="checkbox"/>	<input type="checkbox"/>	6/09/08	5/24/08
08-3556-01F	Markham WW	Groundwater	5/23/08 1000	5/23/08	TDS_W	Total Dissolved Solids (TDS)	<input type="checkbox"/>	<input type="checkbox"/>	6/09/08	5/30/08

Definitions: * - Test Code has a Select List

Evergreen Analytical, Inc.

Date: 07-Jun-08

Client Project ID: Markham WW

Lab Order: 08-3556

CASE NARRATIVE

SAMPLE RECEIVING

Sample(s) were hand delivered to the laboratory by the client.

The temperature of the sample(s) upon arrival was 8.4 °C.

Sample(s) were received in good condition, in the proper container, and within holding times.

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

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

QUALITY ASSURANCE (QA)

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

CLIENT SERVICES

There are no anomalies to report. EKH

GENERAL CHEMISTRY

The anion sample required a dilution due to matrix interference affecting nitrate. This raised the reporting limit for nitrate. There are no other anomalies to report. JML/MM

METALS ANALYSIS

There are no anomalies to report. WKH

GAS CHROMATOGRAPHY

Method 8021_W: There are no anomalies to report. MDS

Method RSK175M: There are no anomalies to report. MDS

Evergreen Analytical, Inc.

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

Client Sample ID: Markham WW
Client Project ID: Markham WW
Date Collected: 5/23/08
Date Received: 5/23/08

Lab Work Order 08-3556
Lab Sample ID: 08-3556-01A
Sample Matrix: Groundwater

AROMATIC VOLATILE ORGANICS

Method: SW8021B

Prep Method: SW5030B

Date Prepared: 5/23/08

Lab File ID: TVB20523\014R

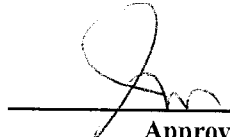
Dilution Factor: 1

Date Analyzed: 5/23/08

Method Blank: MB2052308

Analytes	CAS Number	Result	LQL	Units
Benzene	71-43-2	U	1.0	µg/L
Toluene	108-88-3	U	2.0	µg/L
Ethylbenzene	100-41-4	U	2.0	µg/L
m,p-Xylene	1330-20-7	U	2.0	µg/L
o-Xylene	95-47-6	U	2.0	µg/L
Surr: 1,2,4-Trichlorobenzene (S)	120-82-1	92	QC Limits: 60-140	%REC


Analyst

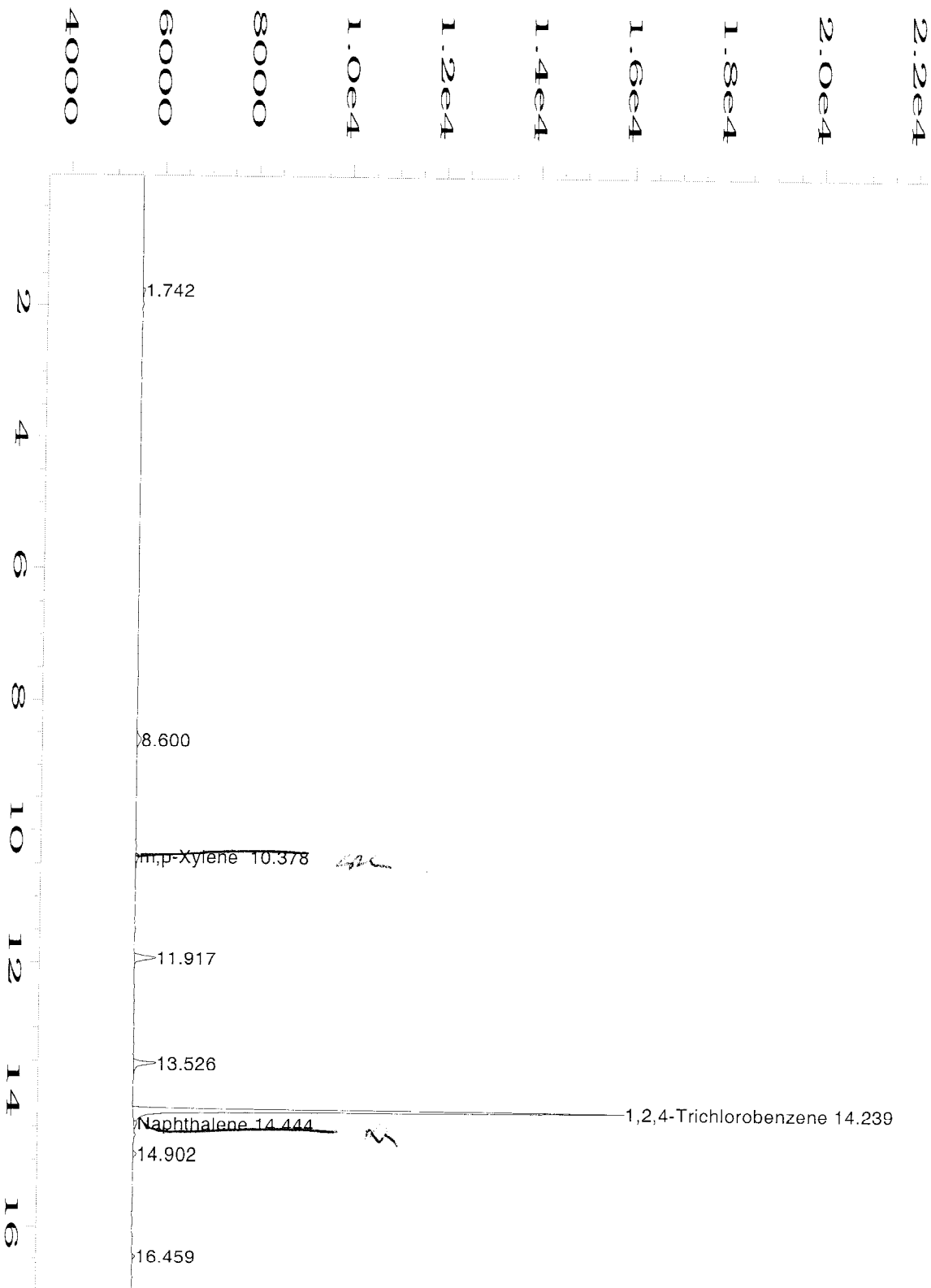

Approved

Notes: Total Xylenes consist of three isomers, two of which co-elute. The Xylene RL is for a single peak. Confirmation analysis was not performed.

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

Definitions: LQL - Lower Quantitation Limit
Surr - Surrogate

Print Date: 5/27/08



Data File Name	: C:\HPCHEM\2\DATA\TVB20523\014R0101.D	Page Number	: 1
Operator	: Marcus Stephenson	Vial Number	: 14
Instrument	: TVHBTEX2	Injection Number	: 1
Sample Name	: 08-3556-01A	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TW21201I.MTH
Acquired on	: 23 May 08 06:08 PM	Analysis Method	: BW20516.MTH
Report Created on:	23 May 08 06:26 PM	Sample Amount	: 0
Last Recalib on	: 19 MAY 08 01:56 PM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: SAMP		
	DF=1		
	T1=602		

Evergreen Analytical, Inc.

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

Client Sample ID: Markham WW
Client Project ID: Markham WW
Date Collected: 5/23/08
Date Received: 5/23/08

Lab Work Order 08-3556
Lab Sample ID: 08-3556-01
Sample Matrix: Groundwater

TOTAL METALS

Method: E200.7, Rev. 4.4

Prep Method: E200.7, Rev. 4.4

Date Prepared: 5/29/08
Date Analyzed: 5/30/08

Lab File ID: 053008PM
Method Blank: MB-15636

Dilution Factor: 1
Lab Fraction ID: 08-3556-01B

Analytes	CAS Number	Result	LQL	Units
Calcium	7440-70-2	6.15	0.387	mg/L
Iron	7439-89-6	18.1	0.0700	mg/L
Magnesium	7439-95-4	3.07	0.150	mg/L
Manganese	7439-96-5	0.299	0.00500	mg/L
Potassium	7440-09-7	2.88	0.340	mg/L
Sodium	7440-23-5	287	0.400	mg/L

TOTAL METALS

Method: E200.8

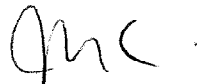
Prep Method: E200.8

Date Prepared: 6/3/08
Date Analyzed: 6/3/08

Lab File ID: 080603A.B\098SMPL.D
Method Blank: MB-15658

Dilution Factor: 1
Lab Fraction ID: 08-3556-01B

Analytes	CAS Number	Result	LQL	Units
Selenium	7782-49-2	U	0.00200	mg/L



Analyst



Approved

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

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

Print Date: 6/5/2008

Evergreen Analytical, Inc.

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

Client Sample ID: Markham WW
Client Project ID: Markham WW
Date Collected: 5/23/08 1000
Date Received: 5/23/08

Lab Work Order 08-3556
Lab Sample ID: 08-3556-01
Sample Matrix: Groundwater

ANIONS BY IC

Method: E300.0

Prep Method:

Date Prepared: 5/23/08

Date Analyzed: 5/23/08 1816

Method Blank: MB 5/23/08

Dilution Factor: 1

Lab Fraction ID: 08-3556-01C

Analytes	CAS Number	Result	LQL	Units
Bromide	7647-15-6	0.64	0.20	mg/L
Sulfate	7778-80-2	U	0.50	mg/L

Date Prepared: 5/23/08

Date Analyzed: 5/23/08 1518

Method Blank: MB 5/23/08

Dilution Factor: 2

Lab Fraction ID: 08-3556-01C

Analytes	CAS Number	Result	LQL	Units
Chloride	7647-14-5	73.7	1.0	mg/L
Nitrite		U	0.40	mg/L

Date Prepared: 5/23/08

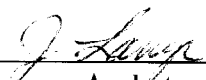
Date Analyzed: 5/23/08 1803

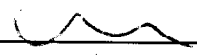
Method Blank: MB 5/23/08

Dilution Factor: 5

Lab Fraction ID: 08-3556-01C

Analytes	CAS Number	Result	LQL	Units
Nitrate		U	1.0	mg/L


Analyst


Approved

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

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

Print Date: 5/27/08

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

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

EAL Sample ID	08-3556-01		08-		08-		08-		08-	
Client Sample ID	Markham WW									
Sample Result	mg/L	Meq/L	mg/L	Meq/L	mg/L	Meq/L	mg/L	Meq/L	mg/L	Meq/L
<i>Anions</i>										
Cl	73.7	2.079		0.000		0.000		0.000		0.000
SO ₄		0.000		0.000		0.000		0.000		0.000
HCO ₃ as CaCO ₃	579	11.570		0.000		0.000		0.000		0.000
CO ₃ as CaCO ₃		0.000		0.000		0.000		0.000		0.000
NO ₃		0.000		0.000		0.000		0.000		0.000
NO ₃ as N		0.000		0.000		0.000		0.000		0.000
Br	0.64	0.008		0.000		0.000		0.000		0.000
Anions Total		13.656		0.000		0.000		0.000		0.000
<i>Cations</i>										
Ca	6.2	0.307		0.000		0.000		0.000		0.000
Mg	3.07	0.253		0.000		0.000		0.000		0.000
K	2.88	0.074		0.000		0.000		0.000		0.000
Na	287	12.484		0.000		0.000		0.000		0.000
Other		0.000		0.000		0.000		0.000		0.000
Cations Total		13.117		0.000		0.000		0.000		0.000
Ion Balance										
% Difference		2.02								

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

RAK

 Approved

Evergreen Analytical, Inc.

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

Client Sample ID: Markham WW
Client Project ID: Markham WW
Date Collected: 5/23/08 1000
Date Received: 5/23/08

Lab Work Order 08-3556
Lab Sample ID: 08-3556-01
Sample Matrix: Groundwater

ALKALINITY

Method: SM2320B

Prep Method:

Date Prepared: 5/27/08
Date Analyzed: 5/27/08

Lab File ID: 67
Method Blank: MBLK 5/27/08

Dilution Factor: 1
Lab Fraction ID: 08-3556-01F

Analytes	CAS Number	Result	LQL	Units
Total Alkalinity		579	5.0	mg/L CaCO ₃
Bicarbonate		542	5.0	mg/L CaCO ₃
Carbonate		37.0	5.0	mg/L CaCO ₃

SPECIFIC CONDUCTANCE @ 25°C

Method: SM2510 B

Prep Method:

Date Prepared: 5/23/08
Date Analyzed: 5/23/08

Lab File ID: 79

Dilution Factor: 1
Lab Fraction ID: 08-3556-01F

Analytes	CAS Number	Result	LQL	Units
Specific Conductance		1200	1.00	µmhos/cm

FLUORIDE

Method: SM 4500-F C

Prep Method:

Date Prepared: 6/3/08
Date Analyzed: 6/3/08

Lab File ID: 8
Method Blank: MBLK

Dilution Factor: 1
Lab Fraction ID: 08-3556-01E

Analytes	CAS Number	Result	LQL	Units
Fluoride	16984-48-8	3.3	0.20	mg/L

E150.1 PH

Method: E150.1

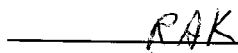
Prep Method:

Date Prepared: 5/23/08
Date Analyzed: 5/23/08 1430

Dilution Factor: 1
Lab Fraction ID: 08-3556-01F

Analytes	CAS Number	Result	LQL	Units
pH		8.64	1.00	pH Units


Analyst


Approved

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

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

Print Date: 6/5/2008

Evergreen Analytical, Inc.

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

Client Sample ID: Markham WW
Client Project ID: Markham WW
Date Collected: 5/23/08 1000
Date Received: 5/23/08

Lab Work Order 08-3556
Lab Sample ID: 08-3556-01
Sample Matrix: Groundwater

TOTAL DISSOLVED SOLIDS (TDS)

Method: SM 2540C

Prep Method:

Date Prepared: 5/27/08
Date Analyzed: 5/27/08

Lab File ID: 20
Method Blank: MBLK 05/27/08

Dilution Factor: 1
Lab Fraction ID: 08-3556-01F

Analytes	CAS Number	Result	LQL	Units
Total Dissolved Solids		788	10.0	mg/L


Analyst


Approved

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

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

Print Date: 6/5/2008

Evergreen Analytical, Inc.

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

Client Sample ID: Markham WW	Lab Work Order 08-3556
Client Project ID: Markham WW	Lab Sample ID: 08-3556-01D
Date Collected: 5/23/08	Sample Matrix: Groundwater
Date Received: 5/23/08	Lab File ID: GAS0527010
Date Prepared: 5/27/08	Method Blank: GB052708
Date Analyzed: 5/27/08	Prep Factor: 1.000
Percent Moisture NA	Dilution Factor: 20.00

Method: RSKSOP175M

RSKSOP-175M HEADSPACE

Prep Method: RSKSOP175M

Analytes	CAS Number	Result	Units: mg/L LQL
Methane	74-82-8	14	0.016



Analyst



Approved

Qualifiers: See the case narrative for a discussion

B - Analyte detected in the Method Blank, value not subtracted from result
E - Extrapolated value. Value exceeds calibration range
H - Prep or Analytical holding time exceeded
S - Spike Recovery outside acceptance limits
X - See case narrative
* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

Qualifiers: U - Analyte not detected at or above the reporting limit

J - Estimated value below the LQL

Definitions: NA - Not Applicable
LQL - Lower Quantitation Limit
MDL - Method Detection Limit
Surr - Surrogate Standard

Print Date: 5/27/08

QUALITY ASSURANCE REPORTS

METHOD BLANKS (MB)

LABORATORY CONTROL SPIKES (LCS)

MATRIX SPIKES (MS/MSD)*

DUPLICATES (DUP)*

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

Work Order: 08-3556

Client Project ID: Markham WW

ANALYTICAL QC SUMMARY REPORT

BatchID: R39394

Sample ID: MB2052308	SampType: MBLK	TestCode: 8021_W	Run ID: TVHBTEX2_080523A	Prep Date: 5/23/08	Units: µg/L						
	Batch ID: R39394	TestNo: SW8021B	FileID: TVB20523\003R	Analysis Date: 5/23/08	SeqNo: 691342						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	U	1.0									
Toluene	U	2.0									
Ethylbenzene	U	2.0									
m,p-Xylene	U	2.0									
o-Xylene	U	2.0									
Surr: 1,2,4-Trichlorobenzene (S)	96.41	0	100	0	96.4	60	140	0	0		

Sample ID: LCS2052308	SampType: LCS	TestCode: 8021_W	Run ID: TVHBTEX2_080523A	Prep Date: 5/23/08	Units: µg/L						
	Batch ID: R39394	TestNo: SW8021B	FileID: TVB20523\004R	Analysis Date: 5/23/08	SeqNo: 691343						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	27.59	1.0	25.5	0	108	70	130	0	0		
Toluene	186.5	2.0	183.6	0	102	70	130	0	0		
Ethylbenzene	39.54	2.0	36.8	0	107	70	130	0	0		
m,p-Xylene	154.5	2.0	136.3	0	113	70	130	0	0		
o-Xylene	61.28	2.0	57.2	0	107	70	130	0	0		
Surr: 1,2,4-Trichlorobenzene (S)	116.9	0	100	0	117	60	140	0	0		

Sample ID: 08-3547-02AMS	SampType: MS	TestCode: 8021_W	Run ID: TVHBTEX2_080523A	Prep Date: 5/23/08	Units: µg/L						
	Batch ID: R39394	TestNo: SW8021B	FileID: TVB20523\006R	Analysis Date: 5/23/08	SeqNo: 691345						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	29.35	1.0	25.5	1.507	109	70	130	0	0		
Toluene	234	2.0	183.6	51.3	99.5	70	130	0	0		
Ethylbenzene	52.68	2.0	36.8	12.44	109	62	130	0	0		
m,p-Xylene	240.7	2.0	136.3	80.32	118	70	134	0	0		
o-Xylene	93.1	2.0	57.2	31.3	108	63	130	0	0		
Surr: 1,2,4-Trichlorobenzene (S)	115.1	0	100	0	115	60	140	0	0		

Qualifiers:

- U - Not detected at or above the Reporting Limit
- J - Analyte detected below quantitation limits
- S - Spike Recovery outside acceptance limits
- E - Extrapolated value, value exceeds calibration range.

- R - RPD outside acceptance limits
- B - Analyte detected in the associated Method Blank
- H - Prep or analytical holding time exceeded
- X - See case narrative

Work Order: 08-3556
Client Project ID: Markham WW

ANALYTICAL QC SUMMARY REPORT

BatchID: R39394

Sample ID: 08-3547-02AMSD	SampType: MSD	TestCode: 8021_W	Run ID: TVHBTEX2_080523A	Prep Date: 5/23/08	Units: µg/L						
	Batch ID: R39394	TestNo: SW8021B	FileID: TVB20523\007R	Analysis Date: 5/23/08	SeqNo: 691346						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	29.63	1.0	25.5	1.507	110	70	130	29.35	0.949	30	
Toluene	237	2.0	183.6	51.3	101	70	130	234	1.27	30	
Ethylbenzene	53.49	2.0	36.8	12.44	112	62	130	52.68	1.54	30	
m,p-Xylene	243.6	2.0	136.3	80.32	120	70	134	240.7	1.17	30	
o-Xylene	94.34	2.0	57.2	31.3	110	63	130	93.1	1.32	30	
Surr: 1,2,4-Trichlorobenzene (S)	114.8	0	100	0	115	60	140	0	0	0	

Qualifiers:

U - Not detected at or above the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside acceptance limits
E - Extrapolated value, value exceeds calibration range.

R - RPD outside acceptance limits
B - Analyte detected in the associated Method Blank
H - Prep or analytical holding time exceeded
X - See case narrative

Evergreen Analytical, Inc.

Date: 05-Jun-08

Work Order: 08-3556

Client Project ID: Markham WW

ANALYTICAL QC SUMMARY REPORT

BatchID: 15636

Sample ID: MB-15636	SampType: MBLK	TestCode: 200.7_T	Run ID: ICP-OPTIMA 5300 DV_080530A	Prep Date: 5/29/2008	Units: mg/L						
	Batch ID: 15636	TestNo: E200.7, Rev.	FileID: 053008PM	Analysis Date: 5/30/2008	SeqNo: 693572						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Calcium	U	0.387									
Iron	U	0.0700									
Magnesium	U	0.150									
Manganese	U	0.00500									
Potassium	U	0.340									
Sodium	U	0.400									

Sample ID: LCS-15636	SampType: LCS	TestCode: 200.7_T	Run ID: ICP-OPTIMA 5300 DV_080530A	Prep Date: 5/29/2008	Units: mg/L						
	Batch ID: 15636	TestNo: E200.7, Rev.	FileID: 053008PM	Analysis Date: 5/30/2008	SeqNo: 693573						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Calcium	10.36	0.387	10	0	104	74	120	0	0		
Iron	5.213	0.0700	5	0	104	76.6	115	0	0		
Magnesium	10.38	0.150	10	0	104	76.7	120	0	0		
Manganese	1.955	0.00500	2	0	97.8	72.4	109	0	0		
Potassium	10.34	0.340	10	0	103	70.9	115	0	0		
Sodium	10.53	0.400	10	0	105	80	120	0	0		

Qualifiers:

U - Not detected at or above the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside acceptance limits
 E - Extrapolated value, value exceeds calibration range.

R - RPD outside acceptance limits
 B - Analyte detected in the associated Method Blank
 H - Prep or analytical holding time exceeded
 X - See case narrative

Evergreen Analytical, Inc.

Date: 05-Jun-08

Work Order: 08-3556

Client Project ID: Markham WW

ANALYTICAL QC SUMMARY REPORT

BatchID: 15658

Sample ID: MB-15658	SampType: MBLK	TestCode: 200.8_TR	Run ID: ICPMS_080603A				Prep Date: 6/3/2008		Units: mg/L		
	Batch ID: 15658	TestNo: E200.8	FileID: 080603A.B\091SMPL.D				Analysis Date: 6/3/2008		SeqNo: 694615		
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	U	0.00200									

Sample ID: LCS-15658	SampType: LCS	TestCode: 200.8_TR	Run ID: ICPMS_080603A				Prep Date: 6/3/2008		Units: mg/L		
	Batch ID: 15658	TestNo: E200.8	FileID: 080603A.B\092SMPL.D				Analysis Date: 6/3/2008		SeqNo: 694616		
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	0.02235	0.00200	0.02	0	112	85	115	0	0		

Sample ID: 08-3556-01BMS	SampType: MS	TestCode: 200.8_TR	Run ID: ICPMS_080603A				Prep Date: 6/3/2008		Units: mg/L		
Client ID: Markham WW	Batch ID: 15658	TestNo: E200.8	FileID: 080603A.B\099SMPL.D				Analysis Date: 6/3/2008		SeqNo: 694620		
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	0.02401	0.00200	0.02	0.001856	120	70	130	0	0		

Sample ID: 08-3556-01BMSD	SampType: MSD	TestCode: 200.8_TR	Run ID: ICPMS_080603A				Prep Date: 6/3/2008		Units: mg/L		
Client ID: Markham WW	Batch ID: 15658	TestNo: E200.8	FileID: 080603A.B\100SMPL.D				Analysis Date: 6/3/2008		SeqNo: 694621		
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	0.02318	0.00200	0.02	0.001856	116	70	130	0.02401	3.50	20	

Qualifiers:

U - Not detected at or above the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside acceptance limits
E - Extrapolated value, value exceeds calibration range.

R - RPD outside acceptance limits
B - Analyte detected in the associated Method Blank
H - Prep or analytical holding time exceeded
X - See case narrative

Work Order: 08-3556

Client Project ID: Markham WW

ANALYTICAL QC SUMMARY REPORT

TestCode: ANIONS_NonDW

Sample ID: MB 5/23/08		SampType: MBLK		TestCode: ANIONS_Non		Run ID: IC-DX120_080523A		Prep Date: 5/23/08		Units: mg/L	
		Batch ID: R39415		TestNo: E300.0		FileID:		Analysis Date: 5/23/08		SeqNo: 691574	
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	U	0.50									
Nitrite	U	0.20									
Bromide	U	0.20									
Nitrate	U	0.20									
Sulfate	U	0.50									

Sample ID: LCS ALLT218024		SampType: LCS		TestCode: ANIONS_Non		Run ID: IC-DX120_080523A		Prep Date: 5/23/08		Units: mg/L	
		Batch ID: R39415		TestNo: E300.0		FileID:		Analysis Date: 5/23/08		SeqNo: 691573	
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	18.91	2.5	20	0	94.6	90	110	0	0		
Nitrite	18.83	1.0	20	0	94.2	90	110	0	0		
Bromide	19.57	1.0	20	0	97.9	90	110	0	0		
Nitrate	19.25	1.0	20	0	96.3	90	110	0	0		
Sulfate	29.47	2.5	30	0	98.2	90	110	0	0		

Qualifiers:

U - Not detected at or above the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside acceptance limits
 E - Extrapolated value, value exceeds calibration range.

R - RPD outside acceptance limits
 B - Analyte detected in the associated Method Blank
 H - Prep or analytical holding time exceeded
 X - See case narrative

Evergreen Analytical, Inc.

Date: 05-Jun-08

Work Order: 08-3556

Client Project ID: Markham WW

ANALYTICAL QC SUMMARY REPORT

TestCode: ALK_WGRP

Sample ID	MBLK 5/27/08	SampType:	MBLK	TestCode:	ALK_WGRP	Run ID:	ALK_080527A	Prep Date:	5/27/2008	Units:	mg/L CaCO₃
		Batch ID:	R39402	TestNo:	SM2320B	FileID:	47	Analysis Date:	5/27/2008	SeqNo:	691442
Analyte		Result		LQL		SPK value		SPK Ref Val		%REC	
								LowLimit		HighLimit	
								RPD Ref Val		%RPD	
								RPDLimit		Qual	

Total Alkalinity	U	5.0
------------------	---	-----

Sample ID	LCS	SampType:	LCS	TestCode:	ALK_WGRP	Run ID:	ALK_080527A	Prep Date:	5/27/2008	Units:	mg/L CaCO₃
		Batch ID:	R39402	TestNo:	SM2320B	FileID:	48	Analysis Date:	5/27/2008	SeqNo:	691443
Analyte		Result		LQL		SPK value		SPK Ref Val		%REC	
								LowLimit		HighLimit	
								RPD Ref Val		%RPD	
								RPDLimit		Qual	

Total Alkalinity	99.69	5.0	100	0	99.7	90	110	0	0
------------------	-------	-----	-----	---	------	----	-----	---	---

Qualifiers:

U - Not detected at or above the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside acceptance limits

E - Extrapolated value, value exceeds calibration range.

R - RPD outside acceptance limits

B - Analyte detected in the associated Method Blank

H - Prep or analytical holding time exceeded

X - See case narrative

Work Order: 08-3556

Client Project ID: Markham WW

ANALYTICAL QC SUMMARY REPORT

TestCode: COND_W

Sample ID	LCS	SampType: LCS	TestCode: COND_W	Run ID: COND_080523A	Prep Date: 5/23/2008	Units: µmhos/cm						
		Batch ID: R39380	TestNo: SM2510 B	FileID: 68	Analysis Date: 5/23/2008	SeqNo: 690975						
Analyte		Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance		97.8	1.00	99.4	0	98.4	90	110	0	0		

Qualifiers:

U - Not detected at or above the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside acceptance limits
E - Extrapolated value, value exceeds calibration range.

R - RPD outside acceptance limits
B - Analyte detected in the associated Method Blank
H - Prep or analytical holding time exceeded
X - See case narrative

Work Order: 08-3556

Client Project ID: Markham WW

ANALYTICAL QC SUMMARY REPORT

TestCode: F_W

Sample ID	MBLK	SampType: MBLK	TestCode: F_W	Run ID: F_080603A	Prep Date: 6/3/2008	Units: mg/L						
		Batch ID: R39565	TestNo: SM 4500-F C	FileID: 1	Analysis Date: 6/3/2008	SeqNo: 694212						
Analyte		Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Fluoride	U	0.20
----------	---	------

Sample ID	MBLK	SampType:	MBLK	TestCode:	F_W	Run ID:	F_080603A	Prep Date:	6/3/2008	Units:	mg/L		
		Batch ID:	R39565	TestNo:	SM 4500-F C	FileID:	79	Analysis Date:	6/3/2008	SeqNo:	694237		
Analyte		Result		LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Fluoride	U	0.20
----------	---	------

Sample ID	LCS	SampType: LCS	TestCode: F_W	Run ID: F_080603A	Prep Date: 6/3/2008	Units: mg/L						
		Batch ID: R39565	TestNo: SM 4500-F C	FileID: 2	Analysis Date: 6/3/2008	SeqNo: 694213						
Analyte		Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Fluoride	10.03	0.20	10	0	100	95	105	0	0
----------	-------	------	----	---	-----	----	-----	---	---

Sample ID	LCS	SampType: LCS	TestCode: F_W	Run ID: F_080603A	Prep Date: 6/3/2008	Units: mg/L						
		Batch ID: R39565	TestNo: SM 4500-F C	FileID: 80	Analysis Date: 6/3/2008	SeqNo: 694238						
Analyte		Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Fluoride	9.96	0.20	10	0	99.6	95	105	0	0
----------	------	------	----	---	------	----	-----	---	---

Qualifiers:

U - Not detected at or above the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside acceptance limits
 E - Extrapolated value, value exceeds calibration range.

R - RPD outside acceptance limits
 B - Analyte detected in the associated Method Blank
 H - Prep or analytical holding time exceeded
 X - See case narrative

Work Order: 08-3556

Client Project ID: Markham WW

ANALYTICAL QC SUMMARY REPORT

TestCode: PH_DW

Sample ID	LCS-R39379	SampType: LCS	TestCode: PH_DW	Run ID: PH_080523B	Prep Date: 5/23/2008	Units: pH Units					
		Batch ID: R39379	TestNo: E150.1	FileID:	Analysis Date: 5/23/2008	SeqNo: 690973					
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.96	1.00	8	0	99.5	99.3	100.7	0	0		

Qualifiers:

U - Not detected at or above the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside acceptance limits
E - Extrapolated value, value exceeds calibration range.

R - RPD outside acceptance limits
B - Analyte detected in the associated Method Blank
H - Prep or analytical holding time exceeded
X - See case narrative

Work Order: 08-3556

Client Project ID: Markham WW

ANALYTICAL QC SUMMARY REPORT

TestCode: TDS_W

Sample ID	MBLK 05/27/08	SampType: MBLK	TestCode: TDS_W	Run ID: ANALYTICAL BALANCE_080527B	Prep Date: 5/27/2008	Units: mg/L					
		Batch ID: R39444	TestNo: SM 2540C	FileID: 1	Analysis Date: 5/27/2008	SeqNo: 691978					
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids	U	10.0
------------------------	---	------

Sample ID	LCS	SampType:	LCS	TestCode:	TDS_W	Run ID:	ANALYTICAL BALANCE_080527B			Prep Date:	5/27/2008	Units:	mg/L
		Batch ID:	R39444	TestNo:	SM 2540C	FileID:	2			Analysis Date:	5/27/2008	SeqNo:	691979
Analyte		Result:		LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Dissolved Solids	397	10.0	400	0	99.2	90	110	0	0
------------------------	-----	------	-----	---	------	----	-----	---	---

Qualifiers:

U - Not detected at or above the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside acceptance limits
E - Extrapolated value, value exceeds calibration range.

R - RPD outside acceptance limits
B - Analyte detected in the associated Method Blank
H - Prep or analytical holding time exceeded
X - See case narrative

Work Order: 08-3556

Client Project ID: Markham WW

ANALYTICAL QC SUMMARY REPORT

BatchID: GAS052708

Sample ID: GB052708	SampType: MBLK	TestCode: MEEP_W	Run ID: FID4_080527A	Prep Date: 5/27/08	Units: mg/L						
	Batch ID: GAS052708	TestNo: RSKSOP175	FileID: GAS0527004	Analysis Date: 5/27/08	SeqNo: 691591						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	U	0.0080									
---------	---	--------	--	--	--	--	--	--	--	--	--

Sample ID: LCS052708	SampType: LCS	TestCode: MEEP_W	Run ID: FID4_080527A	Prep Date: 5/27/08	Units: mg/L						
	Batch ID: GAS052708	TestNo: RSKSOP175	FileID: GAS0527005	Analysis Date: 5/27/08	SeqNo: 691592						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	0.5741	0.0080	0.5094	0	113	70	130	0	0		
---------	--------	--------	--------	---	-----	----	-----	---	---	--	--

Sample ID: LCSD052708	SampType: LCSD	TestCode: MEEP_W	Run ID: FID4_080527A	Prep Date: 5/27/08	Units: mg/L						
	Batch ID: GAS052708	TestNo: RSKSOP175	FileID: GAS0527006	Analysis Date: 5/27/08	SeqNo: 691593						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	0.5743	0.0080	0.5094	0	113	70	130	0.5741	0.0412	30	
---------	--------	--------	--------	---	-----	----	-----	--------	--------	----	--

Sample ID: 08-3442-01DMS	SampType: MS	TestCode: MEEP_W	Run ID: FID4_080527A	Prep Date: 5/27/08	Units: mg/L						
	Batch ID: GAS052708	TestNo: RSKSOP175	FileID: GAS0527012	Analysis Date: 5/27/08	SeqNo: 691587						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	0.5452	0.0080	0.5094	0	107	70	130	0	0		
---------	--------	--------	--------	---	-----	----	-----	---	---	--	--

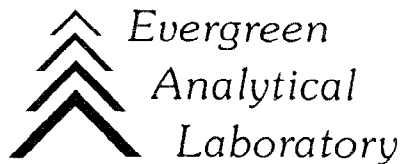
Sample ID: 08-3442-01DMSD	SampType: MSD	TestCode: MEEP_W	Run ID: FID4_080527A	Prep Date: 5/27/08	Units: mg/L						
	Batch ID: GAS052708	TestNo: RSKSOP175	FileID: GAS0527013	Analysis Date: 5/27/08	SeqNo: 691588						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methane	0.5402	0.0080	0.5094	0	106	70	130	0.5452	0.916	30	
---------	--------	--------	--------	---	-----	----	-----	--------	-------	----	--

Qualifiers:

U - Not detected at or above the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside acceptance limits
E - Extrapolated value, value exceeds calibration range.

R - RPD outside acceptance limits
B - Analyte detected in the associated Method Blank
H - Prep or analytical holding time exceeded
X - See case narrative



June 07, 2008

John Axelson
Colorado Oil & Gas Conservation Comm.
9203 E. 155th Dr
Brighton, CO 80602

Lab Work Order: 08-3556
Client Project ID: Markham WW

Dear John Axelson:

Enclosed are the analytical results for the samples shown in the Laboratory Work Order Summary. The invoice is included with this report or has been mailed to another party as indicated on the chain of custody.


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

EAL will dispose of all samples one month from the date of this letter. If you want samples returned, please advise us by mail or fax as soon as possible.

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

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

Sincerely,


Carl Smits / Kaprie Hollman
Quality Assurance