

WORK ORDER Summary**Evergreen Analytical, Inc.****08-0585****Rpt To:** John Axelsson**Email To:** john.axelsson@state.co.usColorado Oil & Gas Conservation
Comm.**Email To:** randall.ferguson@state.co.us9203 E. 155th Dr
Brighton, CO 80602
(303) 637-7178

2/11/2008 11:05:15 AM

Client Project ID: Nelson WW Complaint**QC Level:** Level I**Comments:** Report EDD (Randall) and PDF (John).

Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Test Code	Test Name	Hold	MS	Date Due	Hold Time
08-0585-01A	Nelson WW	Groundwater	1/29/08 1130	1/30/08	8021_W *	8021: BTEX	<input type="checkbox"/>	<input type="checkbox"/>	2/04/08	2/12/08
08-0585-01B	Nelson WW	Groundwater	1/29/08 1130	1/30/08	6010_D *	6010: Dissolved Metals	<input type="checkbox"/>	<input type="checkbox"/>	2/13/08	7/27/08
08-0585-01B	Nelson WW	Groundwater	1/29/08 1130	1/30/08	6020_D *	6020: Dissolved Metals	<input type="checkbox"/>	<input type="checkbox"/>	2/13/08	7/27/08
08-0585-01C	Nelson WW	Groundwater	1/29/08 1130	1/30/08	ANIONS_W *	300.0: Anions by IC	<input type="checkbox"/>	<input type="checkbox"/>	2/13/08	1/31/08
08-0585-01D	Nelson WW	Groundwater	1/29/08 1130	1/30/08	MEEP_W *	RSK175M: Methane	<input type="checkbox"/>	<input type="checkbox"/>	2/13/08	2/12/08
08-0585-01E	Nelson WW	Groundwater	1/29/08 1130	1/30/08	ALK_WGRP *	Alkalinity	<input type="checkbox"/>	<input type="checkbox"/>	2/13/08	2/12/08
08-0585-01E	Nelson WW	Groundwater	1/29/08 1130	1/30/08	COND_W	Specific Conductance @ 25°C	<input type="checkbox"/>	<input type="checkbox"/>	2/13/08	2/26/08
08-0585-01E	Nelson WW	Groundwater	1/29/08 1130	1/30/08	PH_DW	E150.1 pH	<input type="checkbox"/>	<input type="checkbox"/>	2/13/08	1/30/08
08-0585-01E	Nelson WW	Groundwater	1/29/08 1130	1/30/08	TDS_W	Total Dissolved Solids (TDS)	<input type="checkbox"/>	<input type="checkbox"/>	2/13/08	2/05/08
08-0585-01F	Nelson WW	Groundwater	1/29/08 1130	1/30/08	F_W	Fluoride	<input type="checkbox"/>	<input type="checkbox"/>	2/13/08	2/26/08

Evergreen Analytical, Inc.

Date: 11-Feb-08

Client Project ID: Nelson WW Complaint

Lab Order: 08-0585

CASE NARRATIVE**SAMPLE RECEIVING**

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

Custody seals were not present.

The temperature of the sample(s) upon arrival was 4.7 °C.

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

The pH sample was received out of holding time.

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

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

QUALITY ASSURANCE

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. KSH

CLIENT SERVICES

There are no anomalies to report. RAK/KEO

GENERAL CHEMISTRY

As noted above, the pH sample required analysis out of holding time. Due to high chloride levels requiring dilutions to separate the nitrite peak, the detection limit for nitrite-N has been raised for this sample. There are no other anomalies to report. JML/RAK

METALS ANALYSIS

There are no anomalies to report. WKH

GAS CHROMATOGRAPHY

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

Method MEEP_W: The matrix spike (MS) and matrix spike duplicate (MSD) recoveries are below the QC limits. This is assumed due to possible sample matrix interference, since the laboratory control spike (LCS) recoveries are within QC limits. There are no other anomalies to report. LC

Evergreen Analytical, Inc.

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

Client Sample ID: Nelson WW
Client Project ID: Nelson WW Complaint
Date Collected: 1/29/08
Date Received: 1/30/08

Lab Work Order: 08-0585
Lab Sample ID: 08-0585-01A
Sample Matrix: Groundwater

AROMATIC VOLATILE ORGANICS

Method: SW8021B

Prep Method: SW5030B

Date Prepared: 1/31/08

Lab File ID: TVB40131\008R

Dilution Factor: 1

Date Analyzed: 1/31/08

Method Blank: MB4013008-2

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	103	QC Limits: 60-140	%REC



Analyst



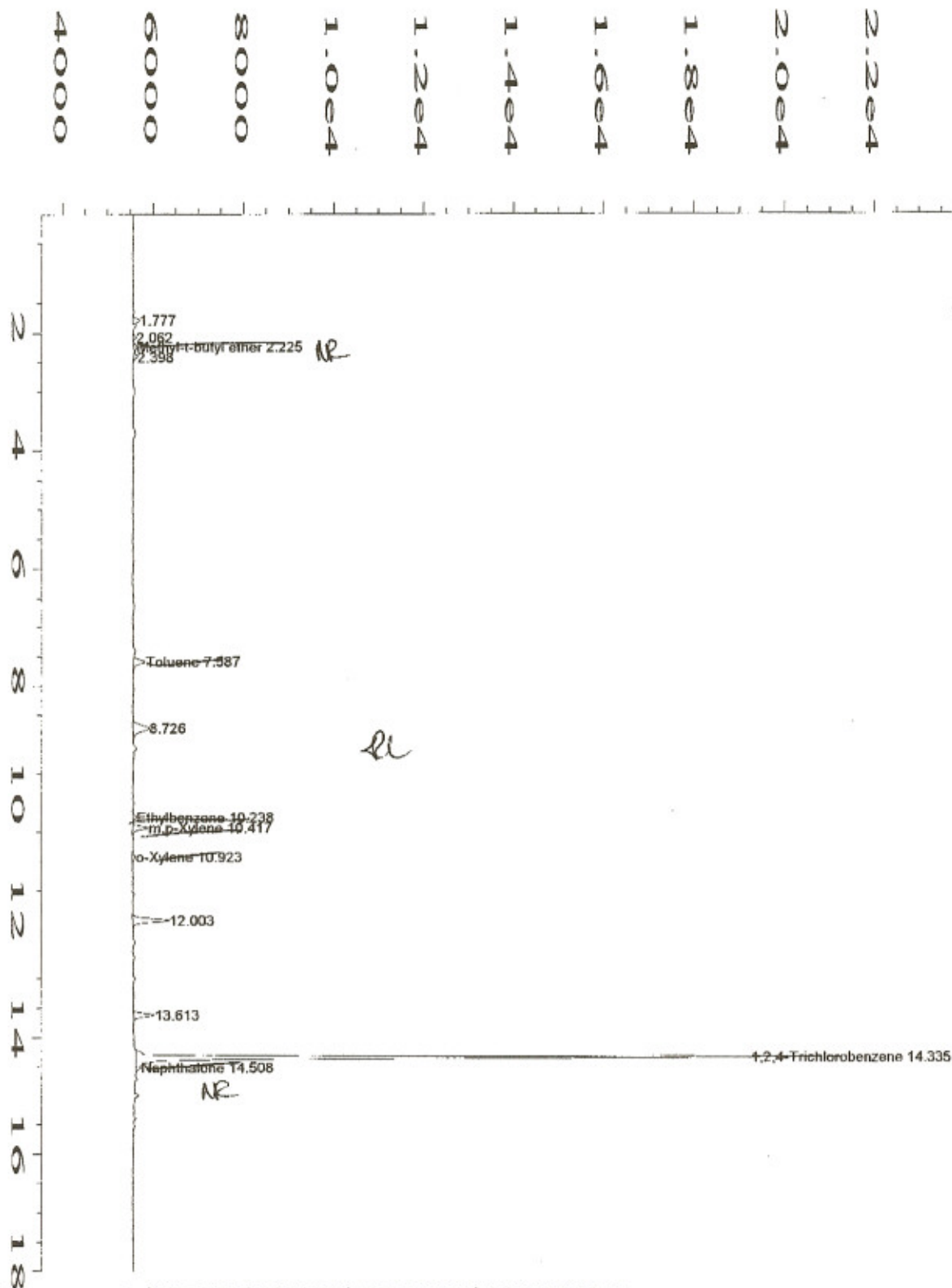
Approved

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: D - 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), TCEP limit, or if compound is undetected, LQL exceeds MCL.

Definitions: LQL - Lower Quantitation Limit
Surr - Surrogate

Print Date: 2/1/08



Data File Name	: C:\HPCHEM\1\DATA\TVB40131\008R0101.D	Page Number	: 1
Operator	: Andrea E./Marcus S.	Vial Number	: 8
Instrument	: TVHBTEX4	Injection Number	: 1
Sample Name	: 08-0585-01A	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TS40717D.MTH
Acquired on	: 31 Jan 08 07:10 PM	Analysis Method	: BS40128.MTH
Report Created on:	: 31 Jan 08 07:29 PM	Sample Amount	: 0
Last Recalib on	: 29 JAN 08 09:58 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: SAMP		
	DF=1		

Evergreen Analytical, Inc.

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

Client Project ID Nelson WW Complaint

Lab Order: 08-0585

Units: mg/L

RSKSOP-175M Headspace

Methane

Method: RSKSOP175M

Prep Method: RSKSOP175M

Lab ID	Client ID	Matrix	Date Received	Collection Date	Date Prepared	Date Analyzed	Results	LQL	DF
08-0585-01D	Nelson WW	Groundwater	1/30/08	1/29/08	2/7/08	2/7/08	0.0011	0.00080	1

Comments:

LAL

Analyst



Approved

Qualifiers: J - Indicates an estimated value when the compound is detected, but is below the LQL
H - Sample analysis exceeded analytical holding time
U - Compound analyzed for but not detected
X - See case narrative
*-Value exceeds Maximum Contamination Level(MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

Definitions: DF - Dilution Factor
LQL - Lower Quantitation Limit

Print Date: 2/8/08

Evergreen Analytical, Inc.

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

Client Sample ID: Nelson WW
Client Project ID: Nelson WW Complaint
Date Collected: 1/29/08 1130
Date Received: 1/30/08

Lab Work Order 08-0585
Lab Sample ID: 08-0585-01
Sample Matrix: Groundwater

ANIONS BY IC

Method: E300.0

Prep Method:

Date Prepared: 1/30/08
Date Analyzed: 1/30/08 1707

Method Blank: METHOD BLANK

Dilution Factor: 5
Lab Fraction ID: 08-0585-01C

Analytes	CAS Number	Result	LQL	Units
Bromide	7647-15-6	10.5	0.25	mg/L
Nitrate-N		1.89	0.050	mg/L
Sulfate	7778-80-2	47.3	2.5	mg/L


Date Prepared: 1/30/08
Date Analyzed: 1/30/08 1653

Method Blank: METHOD BLANK

Dilution Factor: 50
Lab Fraction ID: 08-0585-01C

Analytes	CAS Number	Result	LQL	Units
Chloride	7647-14-5	1860	25	mg/L
Nitrite-N		U	0.20	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: 1/31/08

Evergreen Analytical, Inc.

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

Client Sample ID: Nelson WW
Client Project ID: Nelson WW Complaint
Date Collected: 1/29/08
Date Received: 1/30/08

Lab Work Order: 08-0585
Lab Sample ID: 08-0585-01
Sample Matrix: Groundwater

DISSOLVED METALS

Method: SW6010B

Prep Method: E200.7/SW3010A

Date Prepared: 2/5/08
Date Analyzed: 2/5/08

Lab File ID: 020508PM
Method Blank: MB-14671

Dilution Factor: 1
Lab Fraction ID: 08-0585-01B

Analytes	CAS Number	Result	LQL	Units
Calcium	7440-70-2	640	0.39	mg/L
Iron	7439-89-6	U	0.070	mg/L
Magnesium	7439-95-4	230	0.15	mg/L
Manganese	7439-96-5	0.019	0.0050	mg/L
Potassium	7440-09-7	34	0.34	mg/L
Sodium	7440-23-5	180	0.40	mg/L

DISSOLVED METALS

Method: SW6020

Prep Method: SW6020

Date Prepared: 2/5/08
Date Analyzed: 2/7/08

Lab File ID: 080207A.B\035SMPL.D
Method Blank: MB-14660

Dilution Factor: 1
Lab Fraction ID: 08-0585-01B

Analytes	CAS Number	Result	LQL	Units
Selenium	7782-49-2	0.0094	0.0050	mg/L

MB

Analyst

WJF

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: 2/11/2008

Evergreen Analytical, Inc.

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

Client Sample ID: Nelson WW
Client Project ID: Nelson WW Complaint
Date Collected: 1/29/08 1130
Date Received: 1/30/08

Lab Work Order: 08-0585
Lab Sample ID: 08-0585-01
Sample Matrix: Groundwater

ALKALINITY

Method: SM2320B

Prep Method:

Date Prepared: 2/1/08

Lab File ID: 64

Dilution Factor: 1

Date Analyzed: 2/1/08

Method Blank: MBLK

Lab Fraction ID: 08-0585-01E

Analytes	CAS Number	Result	LQL	Units
Total Alkalinity		275	5.0	mg/L CaCO ₃
Bicarbonate		275	5.0	mg/L CaCO ₃
Carbonate		U	5.0	mg/L CaCO ₃

SPECIFIC CONDUCTANCE @ 25°C

Method: SM2510 B

Prep Method:

Date Prepared: 1/31/08

Lab File ID: 58

Dilution Factor: 1

Date Analyzed: 1/31/08

Lab Fraction ID: 08-0585-01E

Analytes	CAS Number	Result	LQL	Units
Specific Conductance		5740	1.00	µmhos/cm

FLUORIDE

Method: SM 4500-F C

Prep Method:

Date Prepared: 2/1/08

Lab File ID: 15

Dilution Factor: 1

Date Analyzed: 2/1/08

Method Blank: MBLK

Lab Fraction ID: 08-0585-01F

Analytes	CAS Number	Result	LQL	Units
Fluoride	16984-48-8	0.21	0.20	mg/L

E150.1 PH

Method: E150.1

Prep Method:

Date Prepared: 1/30/08

Dilution Factor: 1

Date Analyzed: 1/30/08 1515

Lab Fraction ID: 08-0585-01E

Analytes	CAS Number	Result	LQL	Units
pH		6.68 H	1.00	pH Units


Analyst


Approved

Qualifiers: B - Analyte detected in the associated Method Blank, value not subtracted from result
F - 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: 2/5/08

Evergreen Analytical, Inc.

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

Client Sample ID: Nelson WW
Client Project ID: Nelson WW Complaint
Date Collected: 1/29/08 1130
Date Received: 1/30/08

Lab Work Order: 08-0585
Lab Sample ID: 08-0585-01
Sample Matrix: Groundwater

TOTAL DISSOLVED SOLIDS (TDS)

Method: SM 2540C

Prep Method:

Date Prepared: 2/4/08
Date Analyzed: 2/4/08

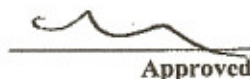
Lab File ID: 8
Method Blank: MBLK

Dilution Factor: 1
Lab Fraction ID: 08-0585-01E

Analytes	CAS Number	Result	LQL	Units
Total Dissolved Solids		4100	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: 2/5/08

